

# Global Fixed Income Programs Annual Review

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# Executive Summary

- Integrating Investment Beliefs into Program
- Strong excess performance of Global Fixed Income
- Low cost internal management of assets
- Expanded the Global Fixed Income team and enhanced skill sets
- Staying the course with long term investment philosophy

## Global Fixed Income Programs Annual Review

## Review Outline

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## Global Fixed Income Programs Annual Review

## 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	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 Roles<sup>1</sup>

As defined through the Asset Liability Management Process:

## Global Fixed Income (GFI)

Global Fixed Income serves as an economic diversifier to equity risk and a reliable source of income.

- Global Fixed Income accounts for \$53.2 billion or 17.7% of the Total Fund, which is 1.3% below Policy target.

## Inflation Assets

Inflation Assets provide liquid and strong protection against inflation.

- Inflation Assets accounts for \$16.5 billion or 5.5% of the Total Fund, which is 0.5% below Policy target.

## Liquidity

Liquidity exhibits safety and capital preservation properties as well as to provide an effective risk protection during financial crisis.

- Liquidity accounts for \$4.6 billion or 1.5% of the Total Fund, which is 0.5% below Policy target.

# Program Investment Philosophy

- CalPERS' long-term investment horizon
- Active management adds value
- Costs matter
- Active management is human capital intensive

# Investment Decision Process

- Primary Drivers and Decisions

- Assess stage of economic cycle

- Manage interest rate risk

- Manage sector risk

- Security selection

- Weekly senior team meeting

- GFI Annual Long-Term Sector Spreads Meetings



# Policy Benchmarks

## Global Fixed Income Policy Benchmark

- 90% Barclays Long Liabilities
- 10% Barclays International Fixed Income Index GDP Weighted ex-U.S.

## Inflation Assets Policy Benchmark

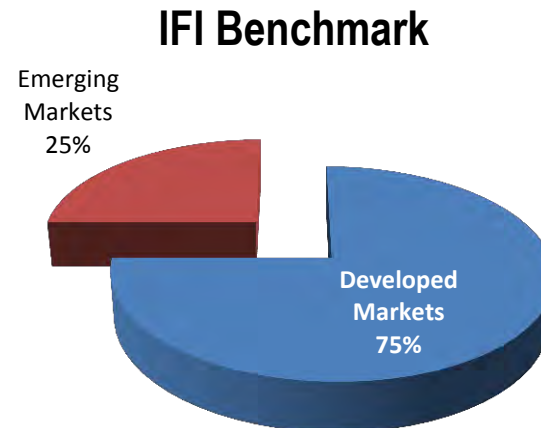
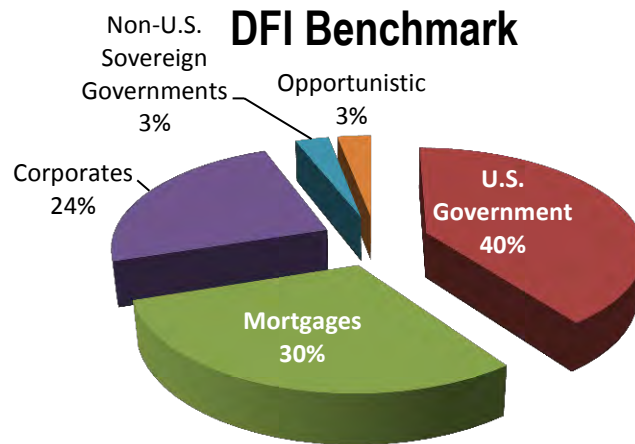
- 75% Global ILB Custom Index
- 25% Standard & Poor's GSCI Total Return Index

## Liquidity Policy Benchmark

- 75% Barclays Treasury 2-10 Year
- 25% 1-Month Treasury Bill

# Program Characteristics – Global Fixed Income

- Benchmark:
  - 90% U.S. Fixed Income Securities (DFI)
  - 10% Non-U.S. Fixed Income Securities (IFI).
- 90.2% of Global Fixed Income is managed internally<sup>1</sup>



## Program Characteristics – Inflation Assets

- Benchmark:
  - 75% Global Inflation-Linked Bonds (ILB)
  - 25% Commodities
- U.S. inflation-linked bonds (TIPS) comprise 2/3 of ILB and the remaining 1/3 is non-U.S. government ILB
- Commodities benchmark is the GSCI Total Return Index which is concentrated in hydrocarbons

# Program Characteristics – Liquidity

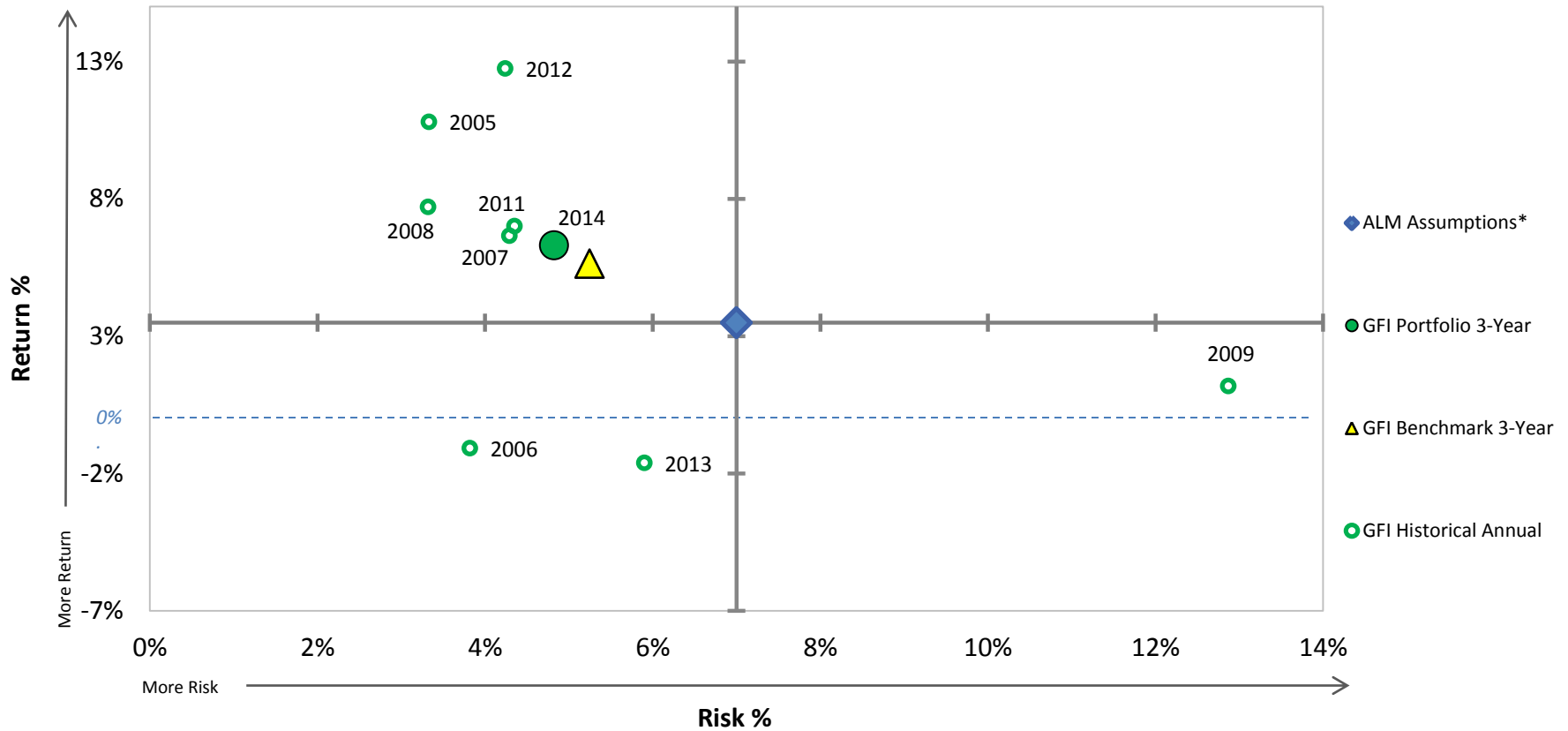
- Benchmark:
  - 75% U.S. Treasuries of 2-10 Year Maturities
  - 25% U.S. Treasury Bills of 1-Month Maturity

## II. Investment Review

- a. Global Fixed Income**
- b. Inflation Assets
- c. Liquidity

# ALM Assumptions Validation – Global Fixed Income

Risk vs. Return



# Past Year Environment Review – Global Fixed Income

- Improved U.S. economy
- G3 policy supports fixed income
- Risk taking rewarded, spreads tighten
- Rising geopolitical challenges

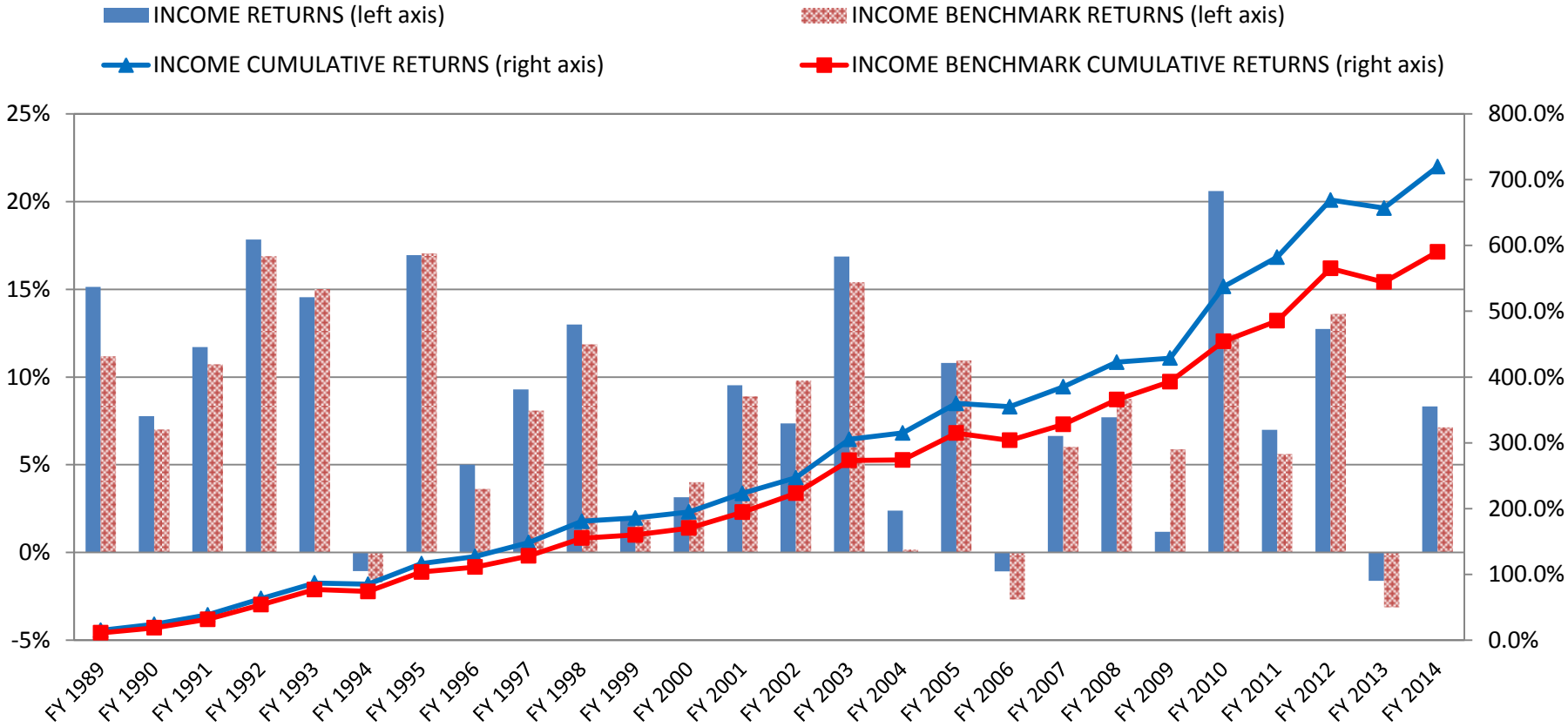
# Program Performance Review – Global Fixed Income

As of June 30, 2014	1-YR	3-YR	5-YR	10-YR	20-YR	Since Inception*
	Net Return	Net Return	Net Return	Net Return	Net Return	Net Return
<b>INCOME</b>	<b>8.3%</b>	<b>6.3%</b>	<b>9.2%</b>	<b>7.0%</b>	<b>7.7%</b>	<b>8.4%</b>
BENCHMARK	7.1%	5.6%	7.0%	6.3%	7.1%	7.7%
Excess Return	1.2%	0.7%	2.2%	0.7%	0.6%	0.7%

- Strong long-term excess returns in all time periods.



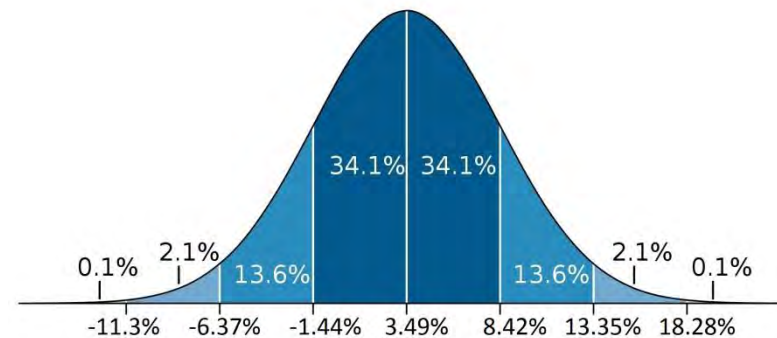
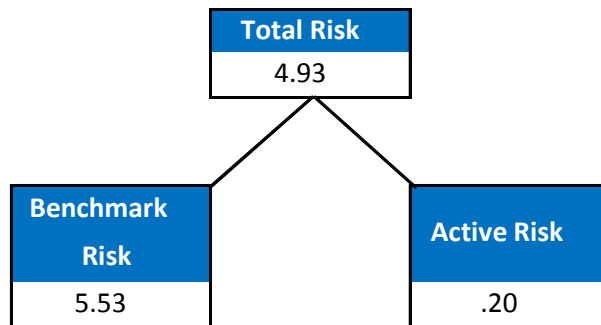
# Program Performance Review – Global Fixed Income Cumulative Return



# Risk Profile – Global Fixed Income

As of June 30, 2014

- Income Forecast Risk is 4.93%
- Forecast Tracking Error is 0.20%
- 10-Day Value-at-Risk is \$776 million
- 10-Day Expected Shortfall is \$963 million



Forecasted Distribution of Returns\*

# Portfolio Positioning – Global Fixed Income<sup>1</sup>

## Additional Risk Measures

Program/Sector	MV (bn)	NAV			Duration			Yield		
		Port	Bench	Active	Port	Bench	Active	Port	Bench	Active
DFI	\$47.9	90.0%	90.0%	0.0%	7.8	8.9	-1.1	3.1%	3.0%	0.1%
US Government	\$16.0	30.1%	35.9%	-5.8%	10.5	11.8	-1.3	2.5%	2.6%	-0.1%
Corporates	\$12.3	23.1%	21.7%	1.4%	10.4	10.6	-0.2	4.1%	3.9%	0.2%
Mortgages	\$11.6	21.8%	27.1%	-5.3%	4.3	4.2	0.1	2.6%	2.5%	0.1%
Sovereign	\$2.0	3.7%	2.6%	1.1%	10.2	10.5	-0.3	4.2%	4.3%	0.0%
Opportunistic	\$4.3	8.1%	2.7%	5.4%	1.2	2.4	-1.2	4.0%	5.4%	-1.4%
Cash Securities	\$1.7	3.2%	0.0%	3.2%	0.1	0.0	0.1	1.1%	0.0%	1.1%
IFI	\$5.3	10.0%	10.0%	0.0%	6.4	6.6	-0.2	3.2%	2.8%	0.4%
GFI	\$53.2				7.6	8.7	-1.1	3.1%	3.0%	0.1%

# Forward-Looking Commentary – Global Fixed Income

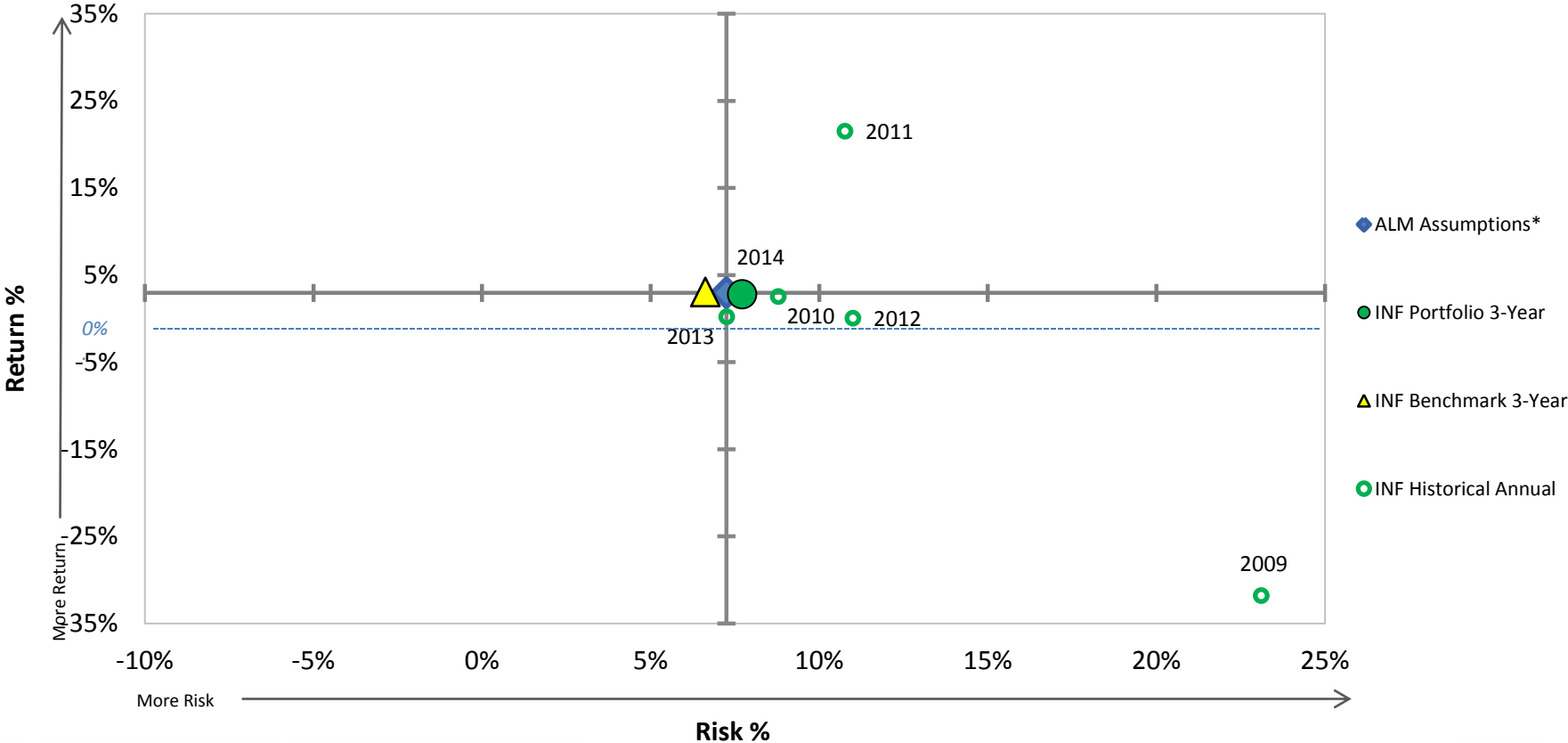
- Broadening U.S. expansion
- Fed may commence tightening cycle
- Global economic de-synchronization with U.S. outperforming
- Geopolitical uncertainty

## II. Investment Review

- a. Global Fixed Income
- b. Inflation Assets**
- c. Liquidity

# ALM Assumptions Validation – Inflation Assets

Risk vs. Return



\*Capital Markets Assumptions used in the 2013 ALM Workshop, demonstrated by the solid horizontal and vertical lines.

## Past Year Environment Review – Inflation Assets

- U.S. inflation was benign
- Eurozone inflation has fallen to 0.3% from 3.0% in late 2011
- UK inflation moderated in the past fiscal year

## Program Performance Review – Inflation Assets

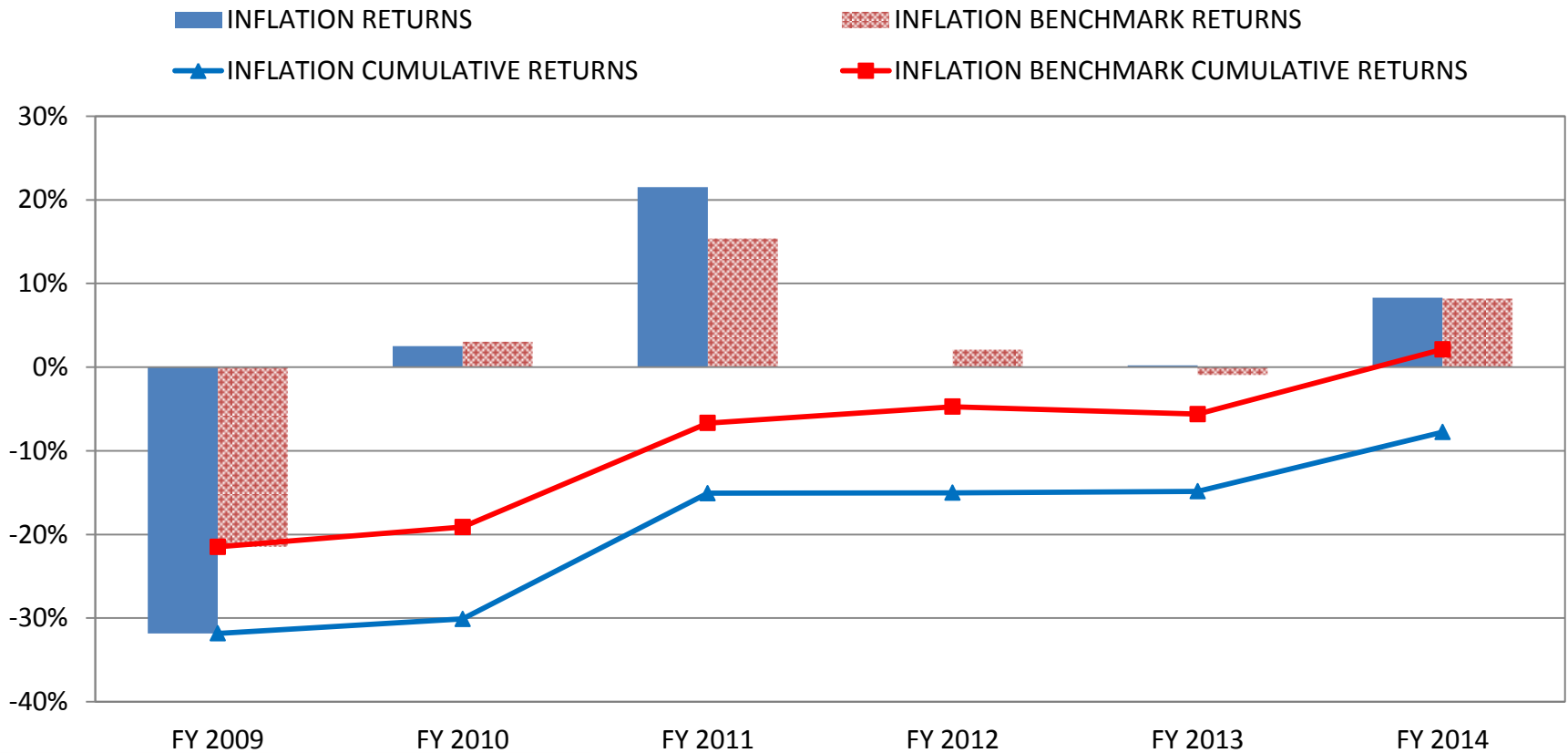
As of June 30, 2014	1-YR	3-YR	5-YR
	Net Return	Net Return	Net Return
<b>INFLATION</b>	<b>8.3%</b>	<b>2.8%</b>	<b>6.2%</b>
BENCHMARK	8.2%	3.1%	5.4%
Excess Return	0.1%	(0.3%)	0.8%

- Inflation Assets underperformed over a 3-year period due to the underperformance of Commodities



# Program Performance Review – Inflation Assets

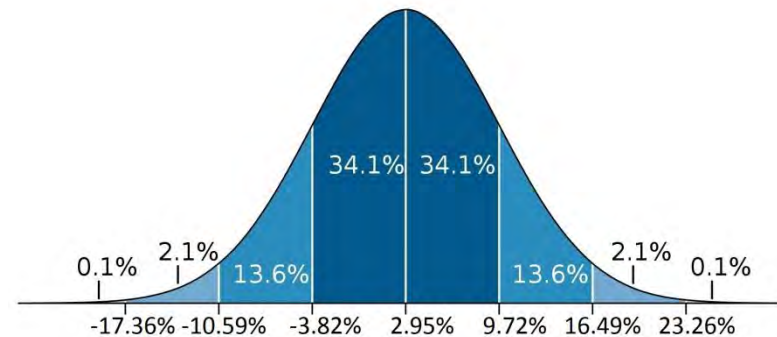
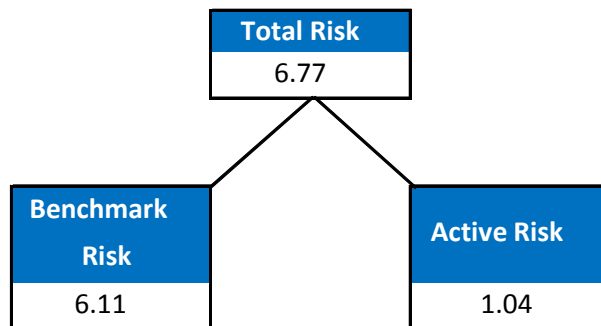
## Cumulative Return



# Risk Profile – Inflation Assets

As of June 30, 2014

- Inflation Forecast Risk is 6.77%
- Forecast Tracking Error is 1.04%
- 10-Day Value-at-Risk is \$222 million
- 10-Day Expected Shortfall is \$277 million



Forecasted Distribution of Returns\*

# Portfolio Positioning – Inflation Assets<sup>1</sup>

## Additional Risk Measures

Program/Sector	MV (bn)	NAV			Duration		
		Fund	Bench	Active	Fund	Bench	Active
Inflation-Linked Bonds	\$12.5	75.8%	75.0%	0.8%	7.8	8.2	-0.4
Commodities	\$4	24.2%	25.0%	-0.8%	0.0	0.0	0.0
Inflation Assets	\$16.5						

- Inflation-Linked Bonds continued active management
- Commodities shift towards passive management
- Neutral outlook for sector allocation

# Forward-Looking Commentary – Inflation Assets

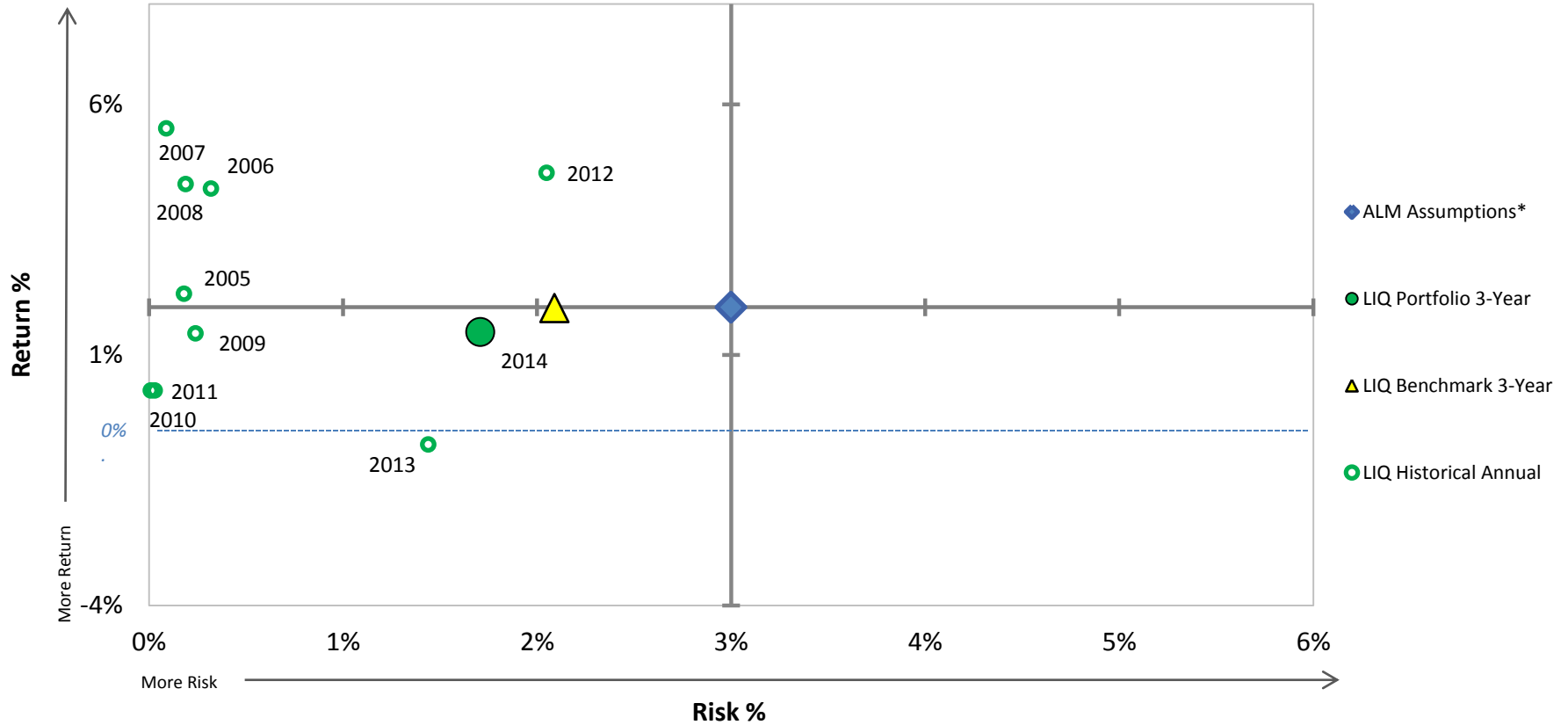
- Low levels of headline inflation in the G7
- Real yields remain historically very low
- Commodities could be challenged by increasing supply
- Rising trend in the U.S. dollar?

## II. Investment Review

- a. Global Fixed Income
- b. Inflation Assets
- c. Liquidity**

# ALM Assumptions Validation – Liquidity

## Risk vs. Return



## Past Year Environment Review – Liquidity

- Steady U.S. growth and stable inflation
- Financial repression

# Program Performance Review – Liquidity

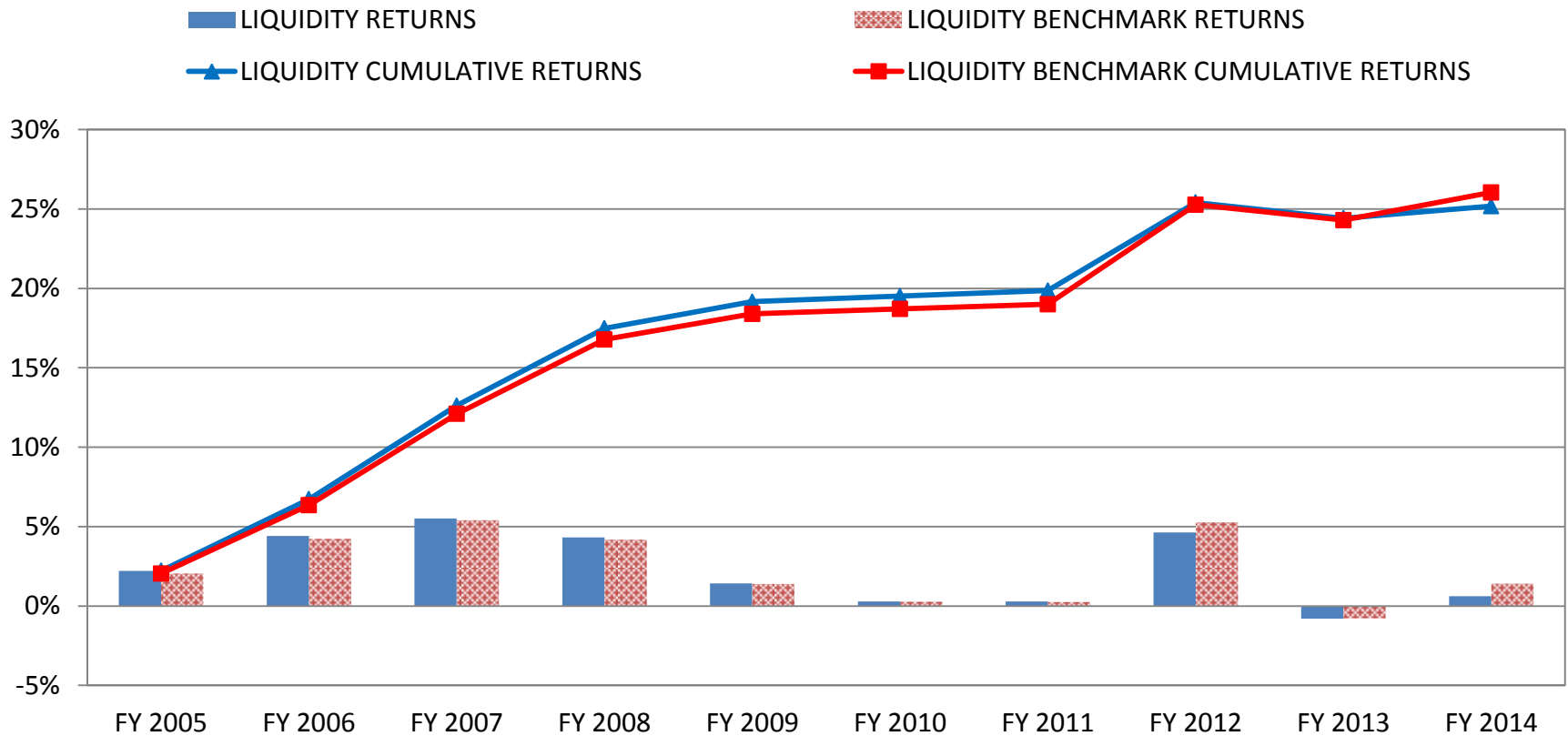
As of June 30, 2014	1-YR	3-YR	5-YR	10-YR	20-YR
	Net Return	Net Return	Net Return	Net Return	Net Return
<b>LIQUIDITY</b>	<b>0.6%</b>	<b>1.5%</b>	<b>1.0%</b>	<b>2.3%</b>	<b>3.5%</b>
BENCHMARK	1.4%	1.9%	1.3%	2.3%	3.4%
Excess Return	(0.8%)	(0.5%)	(0.3%)	(0.1%)	0.2%

- Too much cash



# Program Performance Review – Liquidity

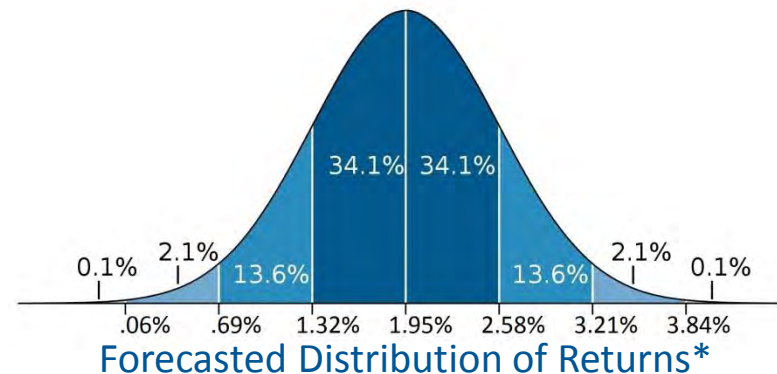
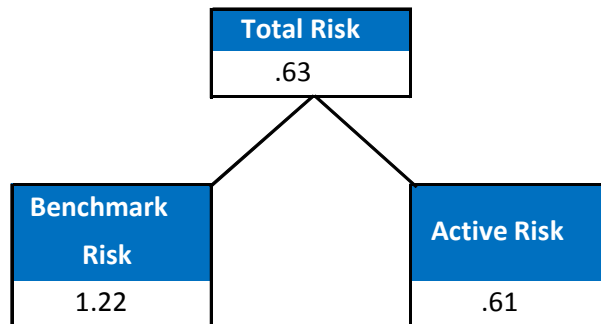
## Cumulative Return



# Risk Profile – Liquidity

As of June 30, 2014

- Liquidity Forecast Risk is .63%
- Forecast Tracking Error is 0.61%
- 10-Day Value-at-Risk is \$18 million
- 10-Day Expected Shortfall is \$23 million



# Portfolio Positioning – Liquidity<sup>1</sup>

## Additional Risk Measures

Program/Sector	MV (bn)	NAV			Duration		
		Fund	Bench	Active	Fund	Bench	Active
U.S. Treasuries 2-10	\$2.2	47.8%	75.0%	-27.2%	4.4	4.4	0.0
Short Term	\$2.4	52.2%	25.0%	27.2%	0.0	0.1	-0.1
Liquidity Program	\$4.6				2.1	3.3	-1.2

# Forward-Looking Commentary – Liquidity

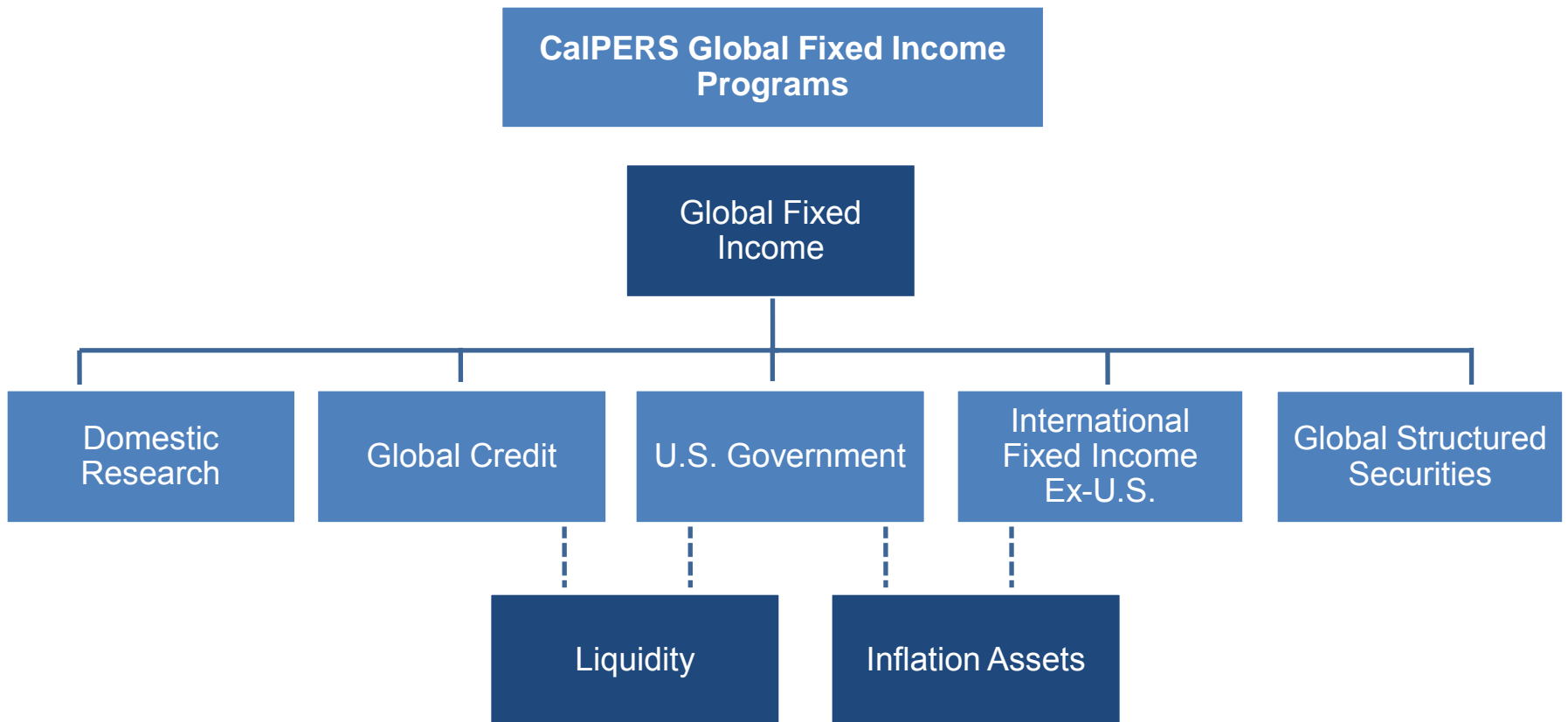
- Bias towards rising interest rates

## III. Business Review

# Business Model

- Long-term investor
- Shifting risks within an economic cycle
- Keep cost low
- Ability to attract and retain investment professionals

# Functional Organizational Chart



# Staffing Overview

## TOTAL PROGRAM <sup>1</sup>

- 57 total positions within Global Fixed Income compared to 50 positions in FY 2012-13

## STAFFING UPDATES <sup>1</sup>

- Hired 3 Portfolio Managers
- Hired 4 Investment Officers

## CURRENT VACANCIES <sup>2</sup>

- 5 Investment Officers



# Strategic Initiatives

INITIATIVES	GOALS
ESG Incorporation	Incorporate ESG into Credit process.
Restructure of Aladdin Reports	Restructure Aladdin Reports to better align with program needs
Investing in CLO Equity Investments	Get approval from Investment Strategy Group for Total Fund opportunistic allocation
Governance	Housing reform, corporate bond market reform, credit rating agencies reform, and derivatives

# Program Expenses

Expense Category	FY 2013-14			FY 2012-13		
	AUM (\$billions)	Fees Paid (\$millions)	Fees Paid <sup>2</sup> (bps)	AUM (\$billions)	Fees Paid (\$millions)	Fees Paid <sup>2</sup> (bps)
Internal Management	\$ 70	\$ 10	1	\$ 58	\$ 8	1
External Management <sup>1</sup>	\$ 4	\$ 12	30	\$ 4	\$ 13	33
Consultants Expense	N/A	\$ 0	0	N/A	\$ 0	0
Technology & Operating Expense	N/A	\$ 8	1	N/A	\$ 7	1
<i>Total Program</i>	<i>\$ 74</i>	<i>\$ 30</i>	<i>4</i>	<i>\$ 62</i>	<i>\$ 28</i>	<i>5</i>

# Conclusion

- Good relative performance
- Effective team
- Continue to look to insource