



---

***Global Equity & Global Fixed Income Programs  
Consultant Review***

*Andrew Junkin, CFA, CAIA, President, Wilshire Consulting  
Steve Foresti, Chief Investment Officer, Wilshire Consulting  
Patrick Lighaam, Managing Director*

*September 19, 2016*

---

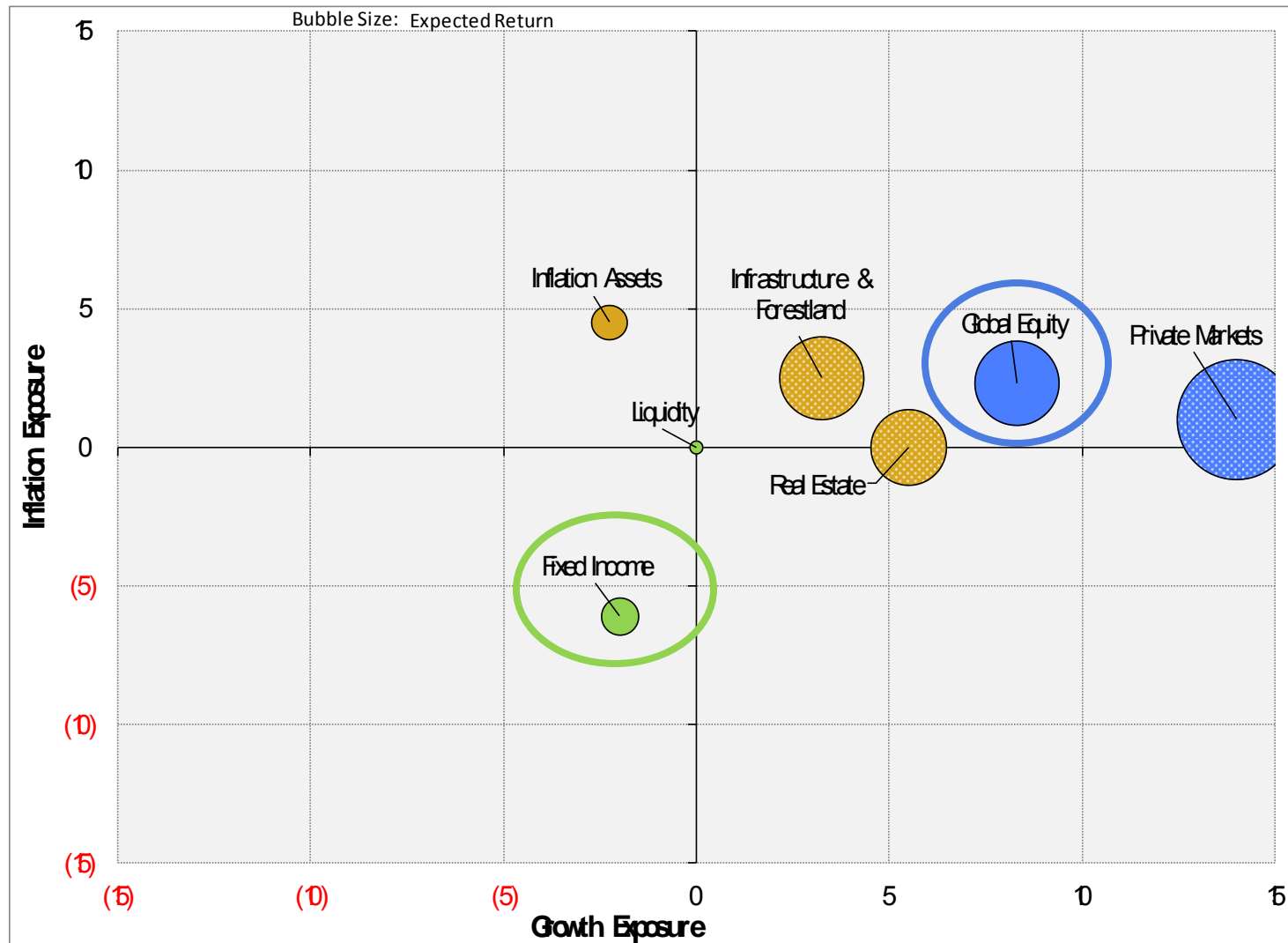
# ***Program Roles in Asset Allocation***

---



## Role of Programs in Total Fund

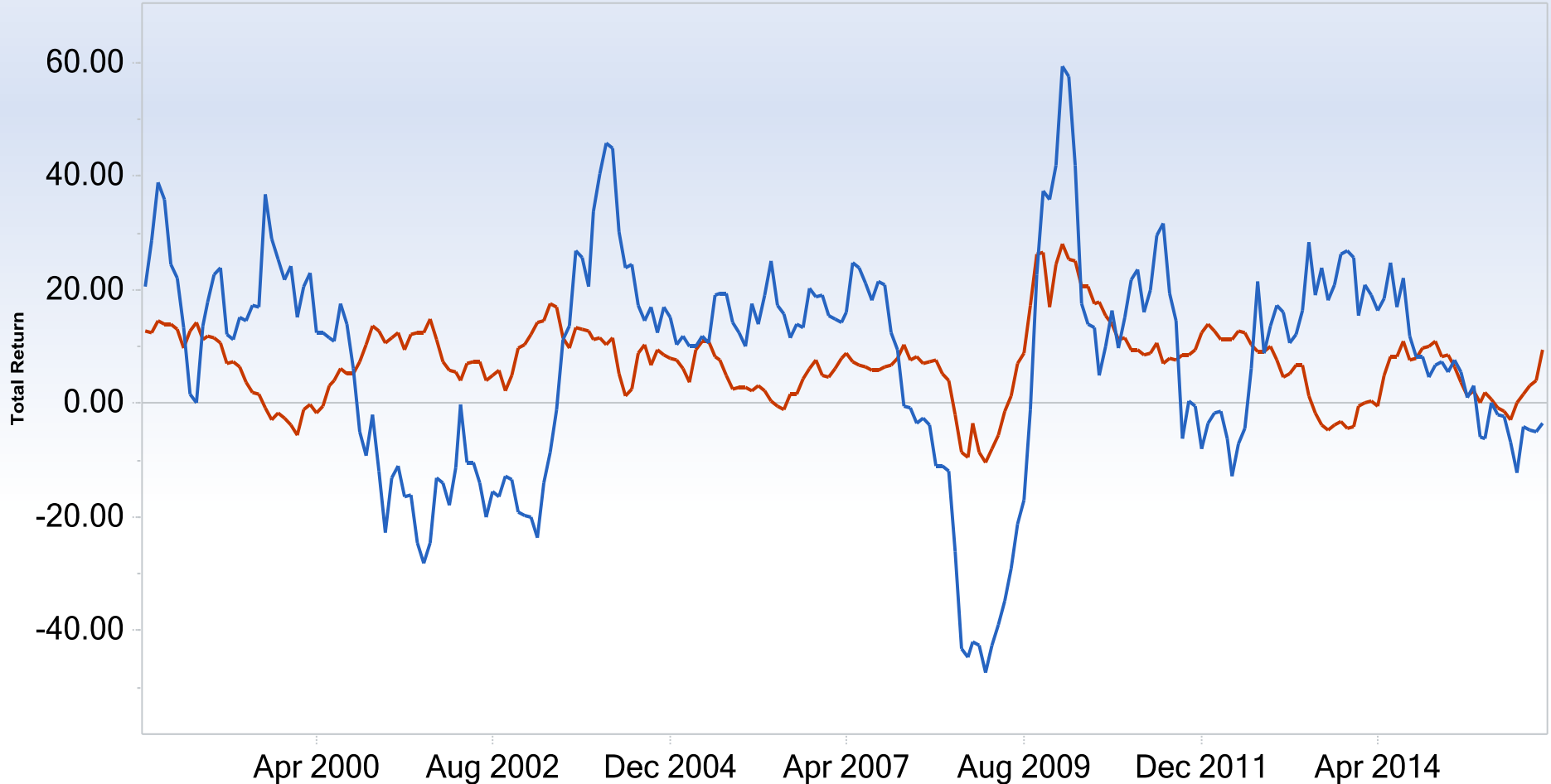
- Global Equity: provides growth exposure and return potential
- Fixed Income: provides stability and income



# Global Fixed Income and Global Equity Diversifiers for CalPERS



**12-Month Rolling Return**  
**December 31, 1997 - June 30, 2016**

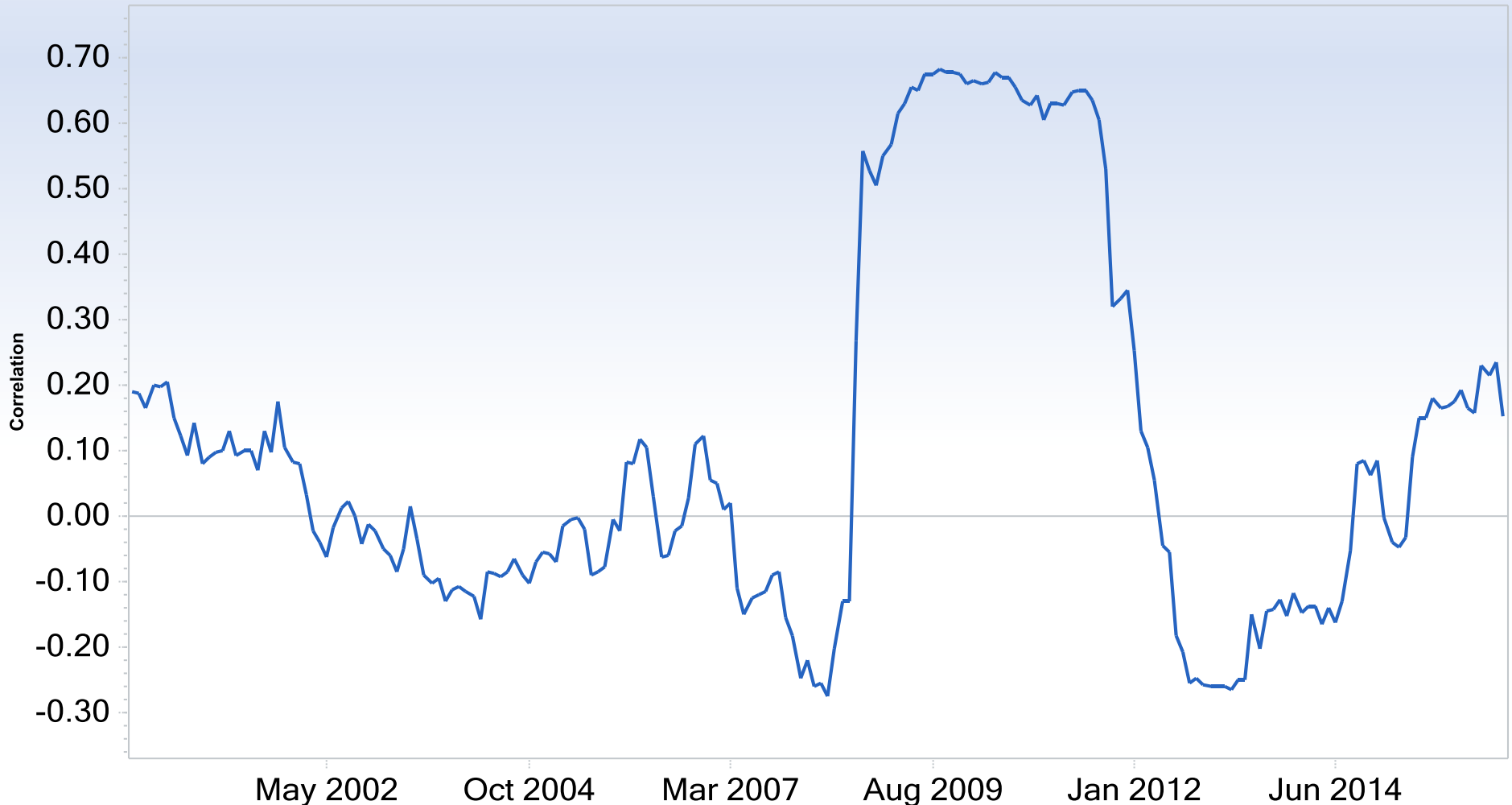


— Global Equity (SX2JA1)      — Global Fixed Income (SJEKA1)

# Global Fixed Income and Global Equity Significant Diversification Benefits



**Global Fixed Income (SJEKA1)  
36-Month Rolling Correlation with Global Equity (SX2JA1)  
December 31, 1999 - June 30, 2016**





## *Investment Beliefs*

- Staff shows strong awareness and incorporation of all 10 CalPERS Investment Beliefs
- Examples of adherence to the Investment Beliefs include:
  - #8 “Costs matter and need to be effectively managed”; through the combination of cost effective internally and externally managed portfolios
  - #5 “CalPERS must articulate its investment goals and performance measures and ensure clear accountability for their execution”; through the significant effort to assess absolute and relative returns and risks; both before and after investments are made
  - #10 “Strong processes and teamwork and deep resources are needed to achieve CalPERS goals and objectives” ; through the recruitment and retention of qualified and diverse candidates and via staff expansions in certain vital areas (e.g. Portfolio Priorities)
  - #7 “CalPERS will take risk only where we have a strong belief we will be rewarded for it”; through a very disciplined portfolio construction process that enables deliberate risk taking
  - #2 “A long time investment horizon is a responsibility and an advantage”; through managing volatility and implementing strategies that are expected to provide excess returns over long periods of time
  - #4 “Long-term value creation requires effective management of three forms of capital: financial, physical and human”; through ESG related efforts but also by effectively managing resources to balancing these objectives between internally and externally managed portfolios



## *ESG Integration*

- As long-term investors, CalPERS believes that ESG factors have the same relevance to investment analysis as traditional financial criteria, which is why ESG is integrated into the investment decision-making process within GE and GFI
  - ESG efforts are led by the Governance and Sustainability Sub-Committee that reports directly to the Investment Strategy Group
  - The Sub-Committee is responsible for performing various activities aimed at integrating, engaging, and advocating for effective management of ESG risks and opportunities
- Both Programs evaluate their external partners (through a detailed ESG questionnaire) and convey the importance of considering the impact of ESG risks and opportunities within their respective portfolios
- CalPERS has access to data from the MSCI and Sustainalytics ESG platforms which provide quantitative data across more than 200 ESG indicators
- CalPERS rates highly relative to asset management and asset owner peers for the ability of Staff to observe ESG risks across individual strategies and the aggregate portfolio, for the ability to implement positive inclusionary screens through indexed portfolios and for the insights available to initiate discussions with its partners to better understand ESG considerations

---

# ***Global Equity Review***

---





## Global Equity Program

- Structured, cost-conscious approach
  - Index-oriented strategies (~60%)
  - Alternative beta (~15%)
  - Internally managed (~80%)

Managed	Index Oriented	Active				Total
		Traditional	Alt Beta	Activist	Emerging Managers	
Internally	58.7%	8.1%	11.1%	0.0%	0.0%	77.9%
Externally	0.0%	16.4%	3.4%	0.5%	1.7%	22.1%
Total	58.7%	24.5%	14.5%	0.5%	1.7%	100.0%

- Recent allocation shifts (since 06/2015)
  - Into Alternative Beta
  - Out of Activist strategies

Managed	Index Oriented	Active				Total
		Traditional	Alt Beta	Activist	Emerging Managers	
Internally	-6.7%	-0.3%	2.1%	0.0%	0.0%	-4.8%
Externally	0.0%	2.4%	2.8%	-1.1%	0.8%	4.8%
Total	-6.7%	2.1%	4.9%	-1.1%	0.8%	0.0%



# SWOT Analysis – Global Equity Program

## Strengths

- Experienced MID
- Experienced Team
- Innovative, risk-controlled investment approach
- Strong performance following GFC and proven diversification benefits relative to Global Fixed Income
- Centralized execution platform

## Weaknesses

- Organization structure
- Compensation constraints
- Promotion restrictions

## Global Equity Program

## Opportunities

- Enhancement of Global Equity characteristics related to role in asset allocation
- Providing support and expertise in asset allocation related activities such as “Portfolio Priorities” project and Asset Allocation
- Committee and subcommittee governance structure enhancements

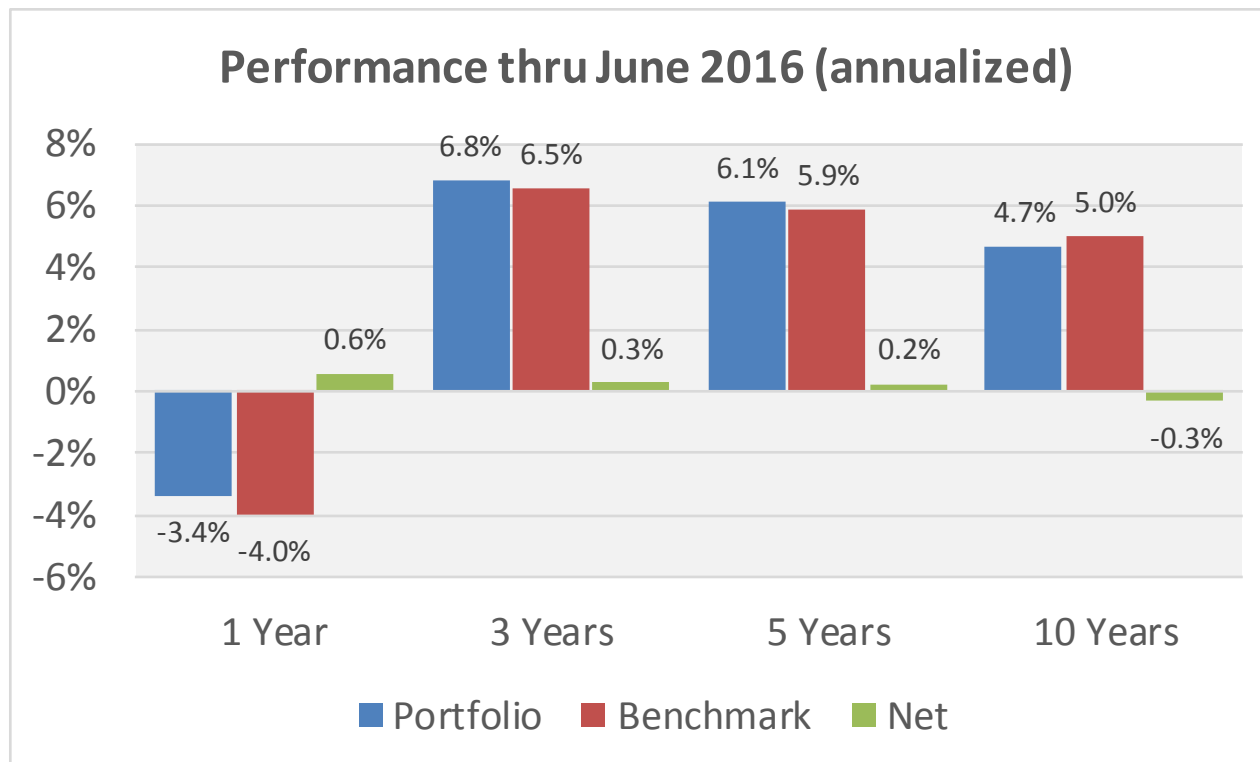
## Threats

- Senior turnover and recruiting
- Growing complexity of portfolio concepts such as smart beta and enhancements of Global Equity characteristics
- Additional INVO committee responsibilities



## Global Equity Performance

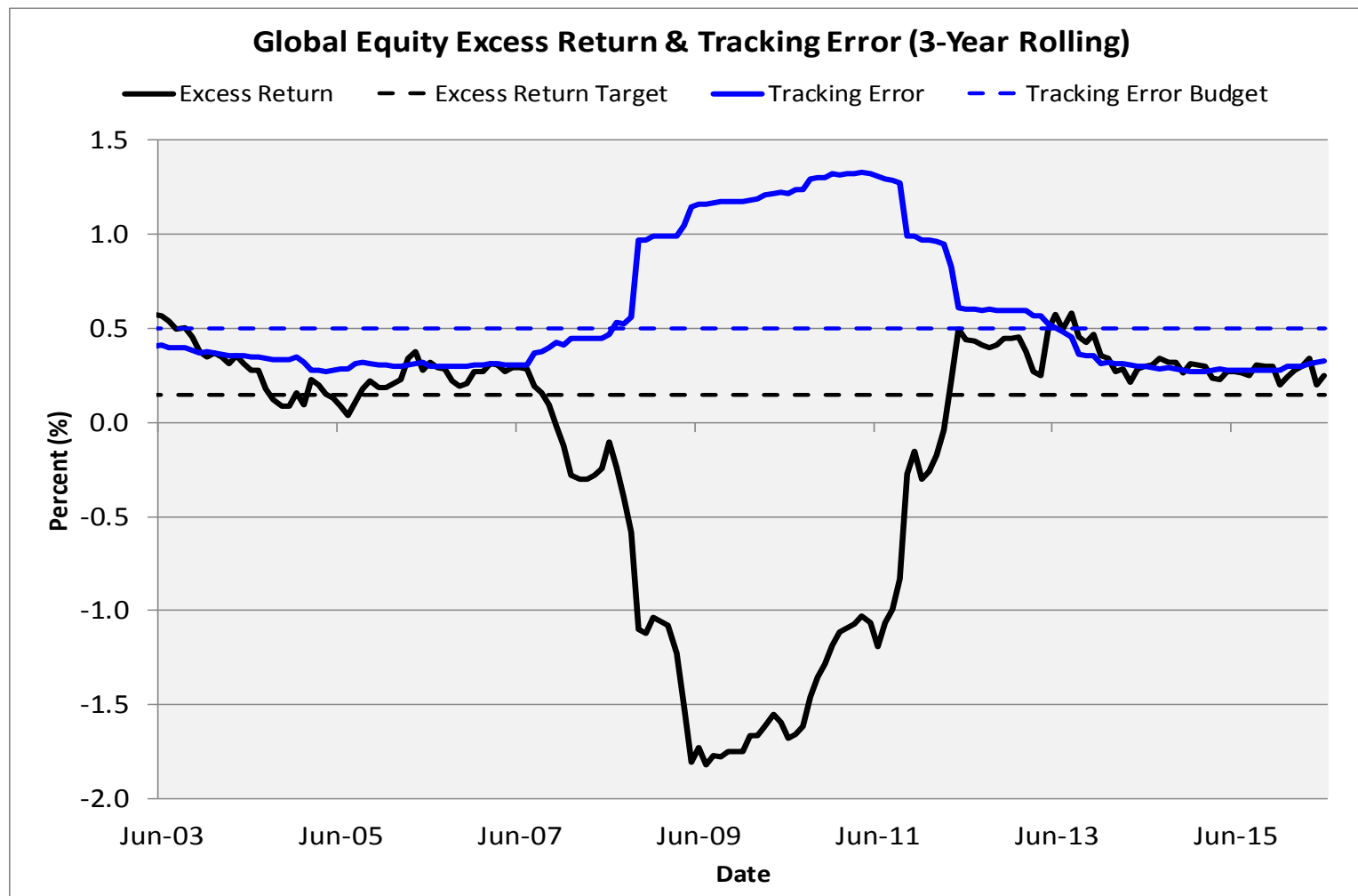
- Recent Performance
  - Difficult environment for the Global Equity asset class in past year (index down -4.0%)
  - Strong relative results for the GE Program over the 1, 3 and 5 year periods (> 15 bps excess return target)
- Longer-term (10 year) relative underperformance continues to reflect significant underperformance during the Global Financial Crisis, but all other periods generated outperformance





## Global Equity Relative Return and Risk

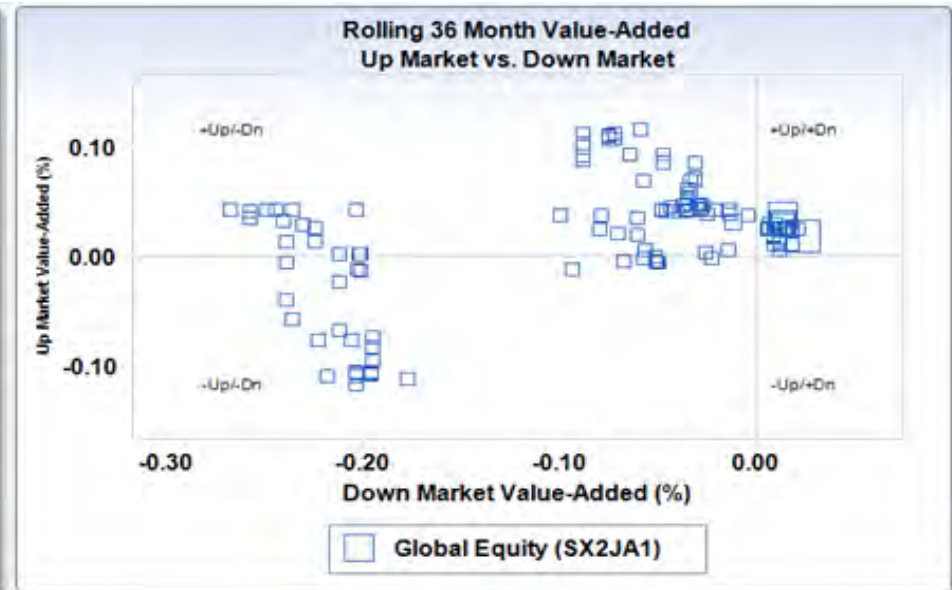
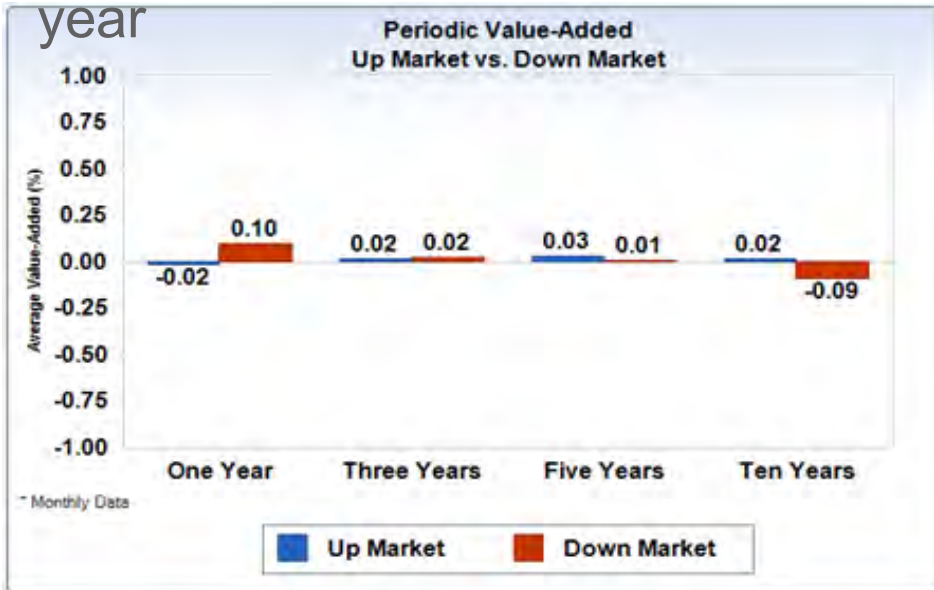
- 3-year rolling excess return and tracking error vs. targets
  - Target excess return = 15 bps (black line)
  - Target tracking error range = 0 to 50 bps (blue line)





# Up/Down Market Performance

Enhancements improved return profile especially during down markets past year





# Global Equity Program Scores

CalPERS Global Equity		Tier
Total Qualitative Score		3rd
<b>Organization</b>	<b>Wt.</b>	<b>Tier</b>
<b>FIRM</b>	<b>20%</b>	<b>4th</b>
Quality and Stability of Senior Management	<b>50%</b>	<b>6th</b>
Quality of Organization		
Ownership/Incentives		
<b>TEAM</b>	<b>50%</b>	<b>3rd</b>
Stability of Investment Professionals		
Quality of Team		
Commitment to Improvement		
<b>Information Gathering</b>	<b>20%</b>	<b>3rd</b>
Information Resources		
Depth of Information		
Breadth of Information		
<b>Forecasting</b>	<b>20%</b>	<b>3rd</b>
Clear & Intuitive Forecasting Approach		
Repeatable Process		
Strength, Clarity, and Intuitiveness of Valuation Methodology		
Forecasting Success		
Unique Forecasting Approach		
<b>Portfolio Construction</b>	<b>20%</b>	<b>2nd</b>
Risk Budgeting/Control		
Defined Buy/Sell Discipline		
Consistency of Portfolio Characteristics		
<b>Implementation</b>	<b>10%</b>	<b>3rd</b>
Resources		
Liquidity		
Compliance/Trading/Monitoring		
<b>Attribution</b>	<b>10%</b>	<b>2nd</b>
Depth of Attribution		
Integration of Attribution		

Strong total score ranking in the 3<sup>rd</sup> decile utilizing Wilshire's manager research scoring framework

- Particularly strong in Information, Portfolio Construction, Performance & Risk Attribution, Information Gathering (Breadth of Information), and Resources available for Program Implementation.
- Broader organizational constraints around long term retention incentives reduces "Firm" score

---

# ***Global Fixed Income Review***

---



## *Global Fixed Income Program*

- Active Investment Process
  - 93% managed internally
  - 7% allocation to external managers
  - Performs well across a full market cycle
  - Some aspects may emphasize sensitivity to “economic growth” factor across the total portfolio
- Manage across the credit spectrum – along with inflation sensitive assets
  - US Treasuries
  - Corporate Credit
  - Mortgages
  - Asset-backed
  - CLOs
- Strong Experienced Team
  - MID most tenured INVO team leader
  - Senior Staff have long-track records
  - Short-term
  - Inflation-linked
  - Currency
  - Commodities
  - TIPs





# SWOT Analysis – Global Fixed Income Program

## Strengths

- Experienced MID
- Experienced Team
- Time-Tested investment process
- Strong performance and proven diversification benefits relative to Global Equity

## Weaknesses

- Organization structure
- Compensation constraints
- Promotion restrictions

## Global Fixed Income Program

## Opportunities

- Consolidated cash management
- Risk management
- Expansion of expertise to other areas of Total Fund such as the Opportunistic program

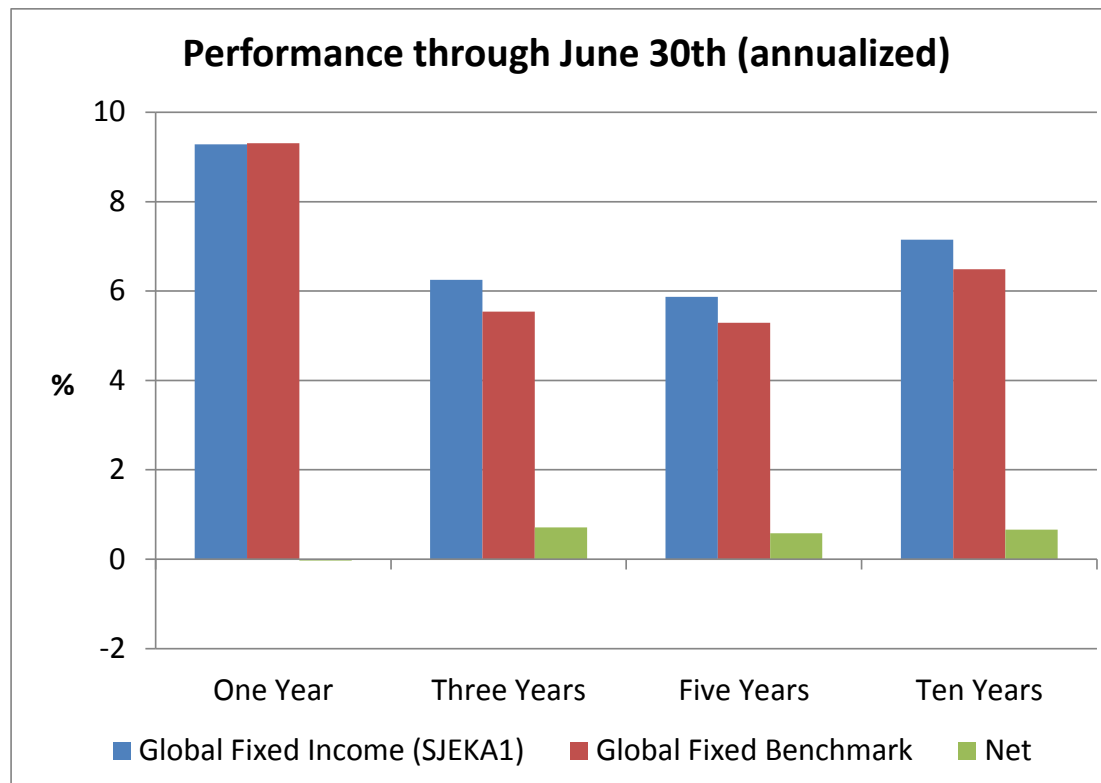
## Threats

- MID succession
- Senior turnover and recruiting
- Growing complexity of internal management functions
- Additional INVO committee responsibilities



## Global Fixed Income Performance

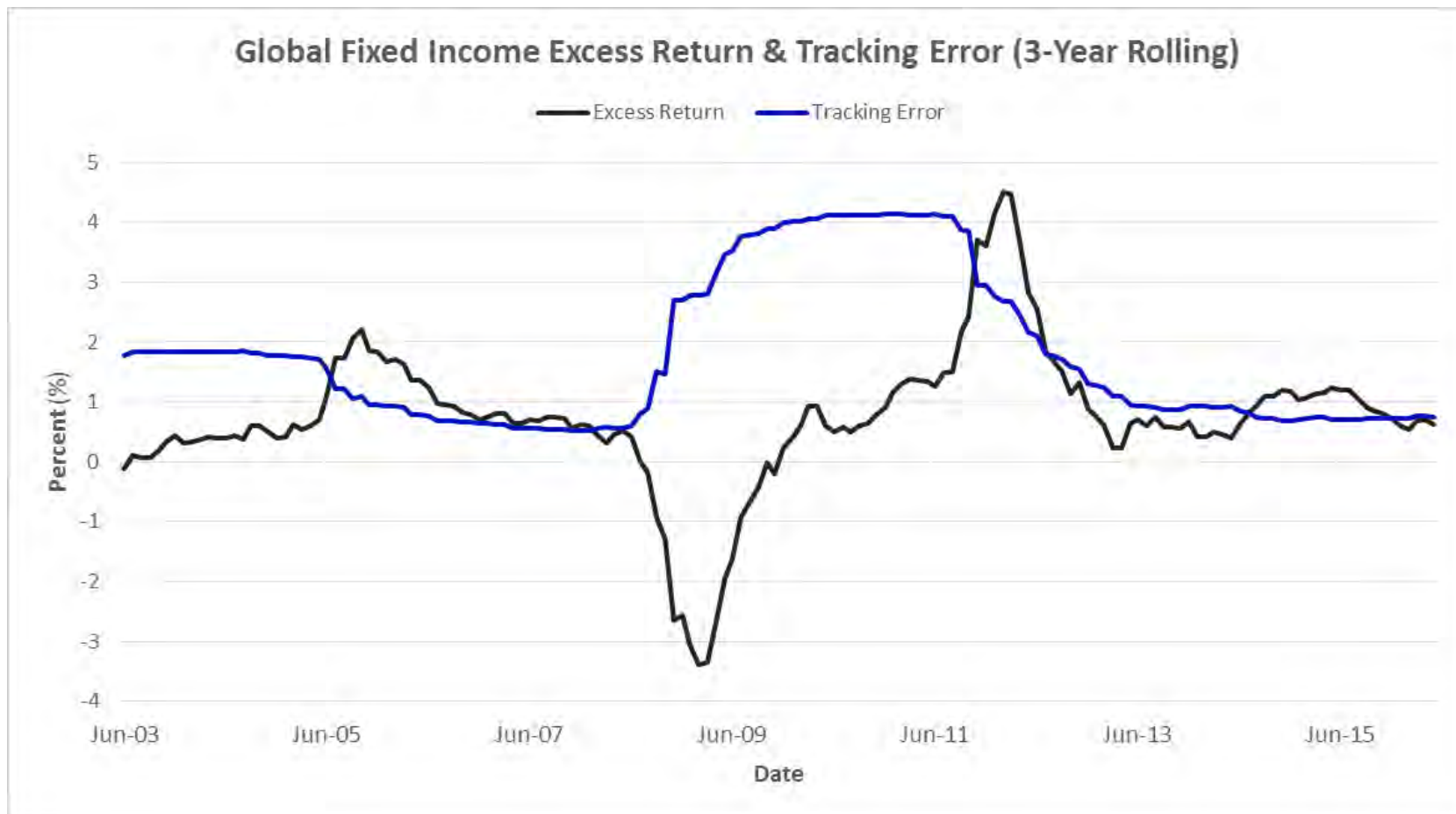
- Recent Performance
  - Very strong market environment for the Global Fixed Income asset class in past year (index up 9.3%)
  - Strong relative results for the GFI Program over the 3, 5 and 10 year periods (> 60 bps excess return target) and in line with policy benchmark in the past year
- Longer-term performance of 7.1% provides strong contribution to Total Fund return and outperformed benchmark by 0.6%



# Global Fixed Income Relative Return and Risk



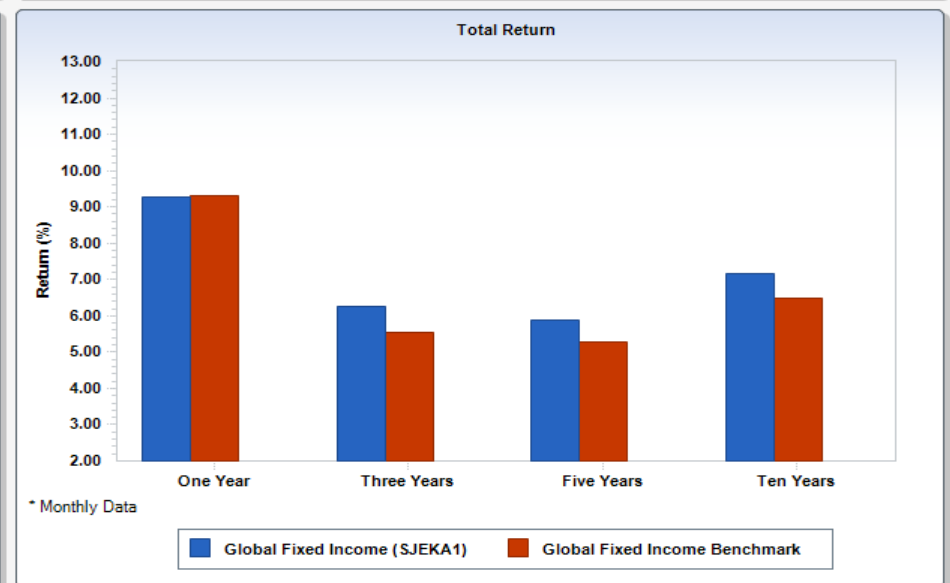
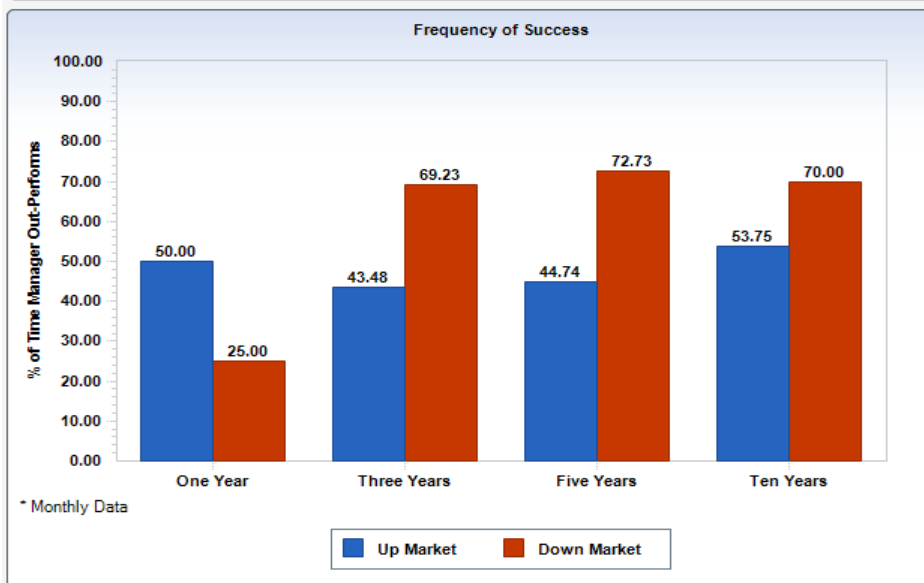
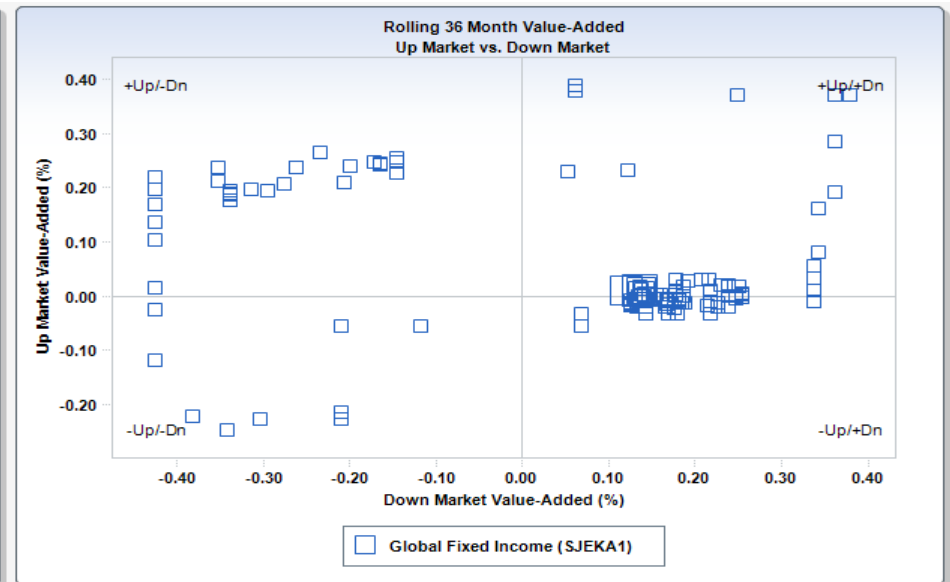
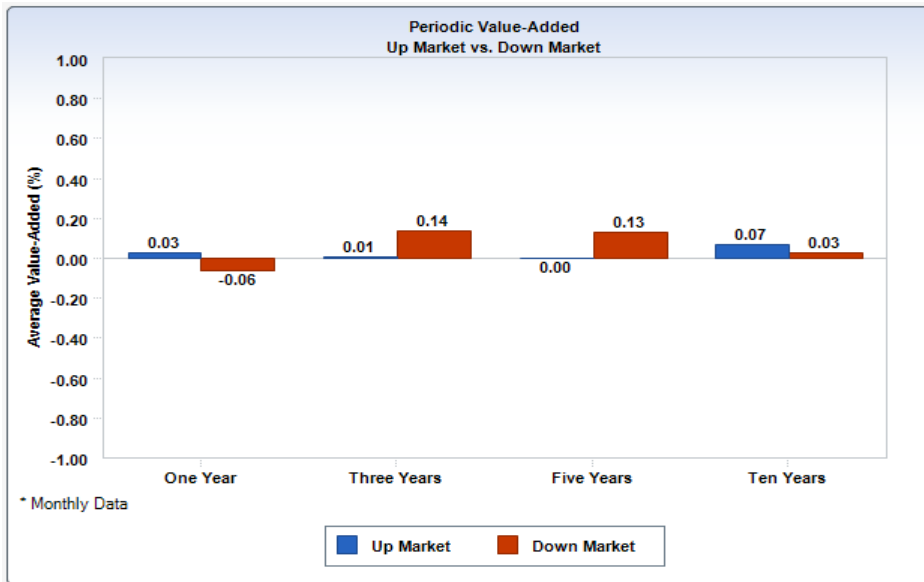
- 3-year rolling excess return and tracking error
  - Excess return consistently positive following financial crisis ranging from 0.4% to 1.2% in more recent 3 year rolling periods
  - Tracking error stable and ranging between 0.7% and 1.0% following the recovery from the financial crisis





# Up/Down Market Performance

Positive Relative Performance in both up and down markets





# Global Fixed Income Program Scores

Manager's Score		Tier
<b>Total Qualitative Score</b>		<b>2nd</b>
	<b>Wt.</b>	<b>Tier</b>
<b>Organization</b>	<b>20%</b>	<b>4th</b>
<b>FIRM</b>	<b>50%</b>	<b>6th</b>
Quality and Stability of Senior Management		
Quality of Organization		
Ownership/Incentives		
<b>TEAM</b>	<b>50%</b>	<b>3rd</b>
Stability of Investment Professionals		
Quality of Team		
Commitment to Improvement		
<b>Information Gathering</b>	<b>20%</b>	<b>1st</b>
Information Resources		
Depth of Information		
Breadth of Information		
<b>Forecasting</b>	<b>20%</b>	<b>1st</b>
Clear & Intuitive Forecasting Approach		
Repeatable Process		
Strength, Clarity, and Intuitiveness of Valuation Methodology		
Forecasting Success		
Unique Forecasting Approach		
<b>Portfolio Construction</b>	<b>20%</b>	<b>2nd</b>
Risk Budgeting/Control		
Defined Buy/Sell Discipline		
Consistency of Portfolio Characteristics		
<b>Implementation</b>	<b>10%</b>	<b>3rd</b>
Resources		
Liquidity		
Compliance/Trading/Monitoring		
<b>Attribution</b>	<b>10%</b>	<b>3rd</b>
Depth of Attribution		
Integration of Attribution		

Strong total score ranking in the 2<sup>nd</sup> decile utilizing Wilshire's manager research scoring framework

- Particularly strong in Information Gathering, Forecasting, and Portfolio Construction
- Broader organizational constraints around long term retention incentives reduces "Firm" score



## *Important Information*

This material contains confidential and proprietary information of Wilshire Consulting, and is intended for the exclusive use of the person to whom it is provided. It may not be modified, sold or otherwise provided, in whole or in part, to any other person or entity without prior written permission from Wilshire Consulting. The information contained herein has been obtained from sources believed to be reliable. Wilshire Consulting gives no representations or warranties as to the accuracy of such information, and accepts no responsibility or liability (including for indirect, consequential or incidental damages) for any error, omission or inaccuracy in such information and for results obtained from its use. Information and opinions are as of the date indicated, and are subject to change without notice.

This material is intended for informational purposes only and should not be construed as legal, accounting, tax, investment, or other professional advice.

This presentation represents the current opinion of the firm based on sources deemed reliable. The information and statistical data contained herein are based on sources believed to be reliable. Wilshire does not represent that it is accurate and should not be relied on as such or be the basis for an investment decision. This Presentation is for information purposes only. Past performance is no guarantee of future results.

Any opinions expressed in this Presentation are current only as of the time made and are subject to change without notice. Wilshire assumes no duty to update any such statements. Any holdings of a particular company or security discussed herein are under periodic review by the author and are subject to change at any time, without notice.

This report may include estimates, projections and other "forward-looking statements." Due to numerous factors, actual events may differ substantially from those presented.

This presentation is not to be used or considered as an offer to sell, or a solicitation to an offer to buy, any security. Nothing contained herein should be considered a recommendation or advice to purchase or sell any security. Wilshire, its officers, directors, employees or clients may have positions in securities or investments mentioned in this publication, which positions may change at any time, without notice.

Wilshire® is a registered service mark of Wilshire Associates Incorporated, Santa Monica, California. All other trade names, trademarks, and/or service marks are the property of their respective holders.

Copyright © 2015 Wilshire Associates Incorporated. All rights reserved.