



## AGENDA

### RETIREMENT BOARD MEETING

SPECIAL BOARD MEETING  
February 25, 2016  
9:00 a.m.

Retirement Board Conference Room  
The Willows Office Park  
1355 Willow Way, Suite 221  
Concord, California

THE RETIREMENT BOARD MAY DISCUSS AND TAKE ACTION ON THE FOLLOWING:

1. Pledge of Allegiance.
2. Accept comments from the public.
3. Approve minutes from the December 16, 2015 Board meeting.

#### *CLOSED SESSION*

4. The Board will continue in closed session pursuant to Govt. Code Section 54956.81 to consider the sale of a particular pension fund investment.

#### *OPEN SESSION*

5. Presentation from Cortex and Verus on governance issues.
6. Consider and take possible action to adopt governance models from Cortex and Verus presentation regarding:
  - a. Strategic Rebalancing
  - b. Tactical Rebalancing
  - c. Opportunistic Investments
  - d. Investment Manager Structure
  - e. Investment Manager Hiring
  - f. Investment Manager Termination
7. Consider and take possible action to authorize a search to identify prospective liquidity mandate managers.
8. Review of total portfolio performance for period ending December 31, 2015.
9. Consider and take possible action to add or remove managers from the Watch List.
10. Consider authorizing the attendance of Board and/or staff:
  - a. ARES EIF 27<sup>th</sup> Annual Meeting and Energy Industry Conference, May 9-11, 2016, San Diego, CA. (Note: Conflict with SACRS)

The Retirement Board will provide reasonable accommodations for persons with disabilities planning to attend Board meetings who contact the Retirement Office at least 24 hours before a meeting.

- b. NCPERS 2016 Annual Conference & Exhibition, May 14-19, 2016, San Diego, CA.
- c. PRJ 28<sup>th</sup> Annual Southern California Public Retirement Seminar, March 24<sup>th</sup>, 2016, Lakewood, CA.
- d. Siguler Guff & Company's 2016 Annual Conference, May 4-5, 2016, New York, NY. (Note: Conflict with meeting)
- e. 2016 CRCEA Spring Conference, April 11-13, 2016, Bakersfield, CA. (Note: Conflict with meeting)

11. Miscellaneous

- a. Staff Report
- b. Outside Professionals' Report
- c. Trustees' comments



## MINUTES

### RETIREMENT BOARD MEETING MINUTES

SPECIAL MEETING  
December 16, 2015  
9:00 a.m.

Retirement Board Conference Room  
The Willows Office Park  
1355 Willow Way, Suite 221  
Concord, California

Present: Debora Allen, Candace Andersen, Jerry Holcombe, Louie Kroll, John Phillips, Todd Smithey, Jerry Telles and Russell Watts

Absent: Scott Gordon, Brian Hast, Will Pigeon and Gabe Rodrigues

Staff: Gail Strohl, Retirement Chief Executive Officer, Timothy Price, Retirement Chief Investment Officer; Karen Levy, Retirement General Counsel; Wrally Dutkiewicz, Retirement Compliance Officer; Tim Hoppe, Retirement Benefits Manager; Alexis Cox, Retirement Benefits Manager; and Christina Dunn, Retirement Administrative/HR Manager

Outside Professional Support: None                      Representing:

#### **1. Pledge of Allegiance**

Holcombe led all in the *Pledge of Allegiance*.

#### **2. Accept comments from the public**

No members of the public offered comment

#### **CLOSED SESSION**

The Board moved into closed session pursuant to Govt. Code Section 54956.81.

The Board moved into open session.

#### **3. There was no reportable action related to Govt. Code Section 54956.81.**

It was the consensus of the Board to move to Item 6.

#### **6. Consider authorizing the attendance of Board and/or staff:**

- a. It was **M/S/C** to authorize the attendance of 5 Board members at The Pension Bridge Annual, Pension Bridge, April 5-6, 2016, San Francisco, CA. (Yes: Allen, Andersen, Holcombe, Phillips, Smithey, Telles and Watts).

An amended motion was **M/S/C** to authorize the attendance of 6 Board members at The Pension Bridge Annual, Pension Bridge, April 5-6, 2016, San Francisco, CA. (Yes: Allen, Andersen, Holcombe, Phillips, Smithey, Telles and Watts).

**4. Consider and take possible action to adopt the 2016 CCCERA Budget**

Strohl distributed a revised budget noting the changes were related to a few cells that were formatted incorrectly. She reviewed the executive summary noting the total proposed budget is \$11.2 million, which is an increase of \$0.4 million compared to the 2015 budget. She stated the increase is largely due to new and delayed hires anticipating being hired in 2016.

She reported there were several division accomplishments mostly due to becoming an independent district. She also briefly reviewed division goals. She reviewed the amounts budgeted for salary and benefits including temporary salaries. She reviewed her proposed staffing additions for 2016; a Business Analyst, an Executive Assistant, and an Investment Officer. It was noted the total depreciation listed in the 2016 Proposed Capital Budget should be \$272,947, not \$2,272,947.

It was **M/S/C** to adopt the 2016 CCCERA Budget correcting the total depreciation in the Capital Budget to \$272,947. (Yes: Allen, Andersen, Holcombe, Phillips, Smithey, Telles and Watts)

**5. Review of SACRS legislative proposal regarding Operating Authority legislation**

Strohl reviewed the SACRS legislative proposal regarding Operating Authority legislation. Levy noted SACRS is only requesting a preliminary position from the systems at this time.

The Board directed staff to not take a position on the legislative proposal at this time.

**7. Miscellaneous**

(a) Staff Report –

Strohl reported McLagan will be at the first meeting in January to present the investment compensation study results and Koff and Joe Wiley will be at the second meeting in January to continue the discussion on the total compensation and classification study.

(b) Outside Professionals' Report -

None

(c) Trustees' comments –

None

It was **M/S/C** to adjourn the meeting. (Yes: Allen, Andersen, Holcombe, Phillips, Smithey, Telles and Watts)

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## MEMORANDUM

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**TO:** CCCERA BOARD OF RETIREMENT  
**FROM:** TOM IANNUCCI, CORTEX & SCOTT WHALEN, VERUS  
**SUBJECT:** BOARD GOVERNANCE SESSION  
**DATE:** FEBRUARY 25, 2016

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Verus and Cortex have been working with Senior Management of CCCERA to design a governance workshop to be held at the February 25, 2016 meeting of the Retirement Board. This memorandum provides an overview of the design, objectives, and approach to the workshop.

### *Workshop Objectives*

In designing the workshop, the following goals were established:

1. To build a greater understanding of alternative governance models available to the CCCERA Board.
2. To agree on a preferred model to guide decision-making within the CCCERA investment program.
3. Based on the Board's preferred model, to identify specific delegations of investment authority to CCCERA staff and related boundaries.
4. To establish a foundation for developing accountability metrics in the future that will enable the Board to effectively oversee any activities or decisions it has delegated to CCCERA staff.

### *Workshop Approach*

Tom Iannucci of Cortex and Scott Whalen of Verus will jointly deliver the bulk of the workshop. Tom Iannucci will deliver the opening session. He will focus on presenting best practices and alternative board governance models for allocating decision-making authority within an investment program.

The remainder of the workshop will be more practical in nature and will be facilitated by Scott Whalen. Scott will facilitate a discussion with the Board to identify the Board's preferred governance model. He will then work with the Board to apply the preferred model to specific investment decisions within CCCERA, and define the respective roles of the Board and investment staff with respect to each decision. Senior management and Tom Iannucci will participate in the discussions, as appropriate.

Both Scott and Tom will be using Power Point slide materials, which will be made available at the workshop. Please see attached agenda.

## ***Workshop Agenda***

### *Part 1: Introduction*

- Workshop agenda
- Goals for the day

Presenter: CCCERA Senior Management

### *Part 2: Investments – Where We've Been & Where We Are*

A brief reminder of the evolution of the CCCERA investment program from investment policy and operational standpoints, ultimately leading to the newly adopted asset allocation policy and strategy:

Presenter: Scott Whalen

### *Part 3: Refresher on Governance*

- Relationship between strategy and governance.
- Roles and responsibilities – background concepts
- Assessment of alternative board governance models

Presenter: Tom Iannucci

### *Part 4: Implementing a Governance Structure for CCCERA*

This part of the workshop will be practical in nature and designed to arrive at decisions around the Board's preferred governance model and corresponding delegations of authority regarding four aspects of CCCERA's new investment strategy:

- 1) Asset allocation to meet Fund goals:
  - Policy and strategic asset allocation
  - Sub-allocation
- 2) Manager structure and selection:
  - Public markets and Private Markets
- 3) Manager termination in public markets
- 4) Rebalancing

Presenters: Scott Whalen and Tom Iannucci

### *Part 5: Wrap Up and Next Steps*

This section will summarize any decisions made during the Workshop and confirm issues that are outstanding. Potential next steps arising out of the discussions will also be confirmed.

Presenter: S. Whalen

# Investment Strategy & Board Governance

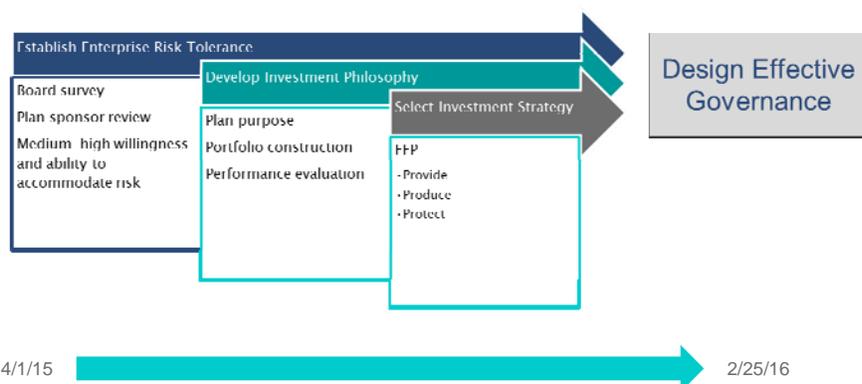
Prepared for:  
Contra Costa County Employees  
Retirement Association

Scott Whalen, Verus Investments  
Tom Iannucci, Cortex Applied Research  
February 25, 2016

## Contents

- Introduction
- Governance Fundamentals
- Model Evaluation
- Real World Application

## How We Got Here: Accomplishments to Date



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## Investment Philosophy

- Purpose
  - Keep the promise
- Portfolio construction
  - Diversify across asset classes and risk factors
  - Passive over active (in most cases)
  - The illiquidity premium is real
  - Market dislocations provide opportunity
  - Keep it simple
- Performance evaluation
  - Patience is key
  - Evaluation structure should reflect long-term horizon
  - Evaluation structure should align with Plan goals

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## Session Objectives

- Gain clear and intuitive understanding of alternative governance models
- Identify preferred model in order to establish investment decision-making framework
- Identify specific areas to delegated authority / establish preliminary authority boundaries
- Provide foundation for future development of accountability metrics

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**GOVERNANCE  
FUNDAMENTALS**

## The Well-Aligned Investment Organization



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## The Well-Aligned Investment Organization



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## Internal Governance & Management

1. **Internal roles & responsibilities**
2. Policy framework
3. Reporting & monitoring framework
4. Meeting operations
5. Fiduciary knowledge

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## Internal Governance & Management

1. **Internal roles & responsibilities:**
  - **Roles and accountabilities of the board, committees, management, and consultants**
2. Policy framework
3. Reporting & monitoring framework
4. Meeting operations
5. Fiduciary knowledge

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## The Challenge

- How should a public fund Board define the investment-related roles of the Board and Management so as to ensure the fund is managed most effectively for the *long-run*:
  - Prudence
  - Risk-control
  - Performance
  - Cost effectiveness
  - Timeliness

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## Risk Control

1. Asset allocation risk:
  - Funded status and/or contribution volatility
  - Liquidity
  - Asset class concentration risk
2. Fiduciary risk:
  - Process risk:
    - Failure to have policies/procedures
    - Failure to follow them
  - Inappropriate investments:
    - Self-dealing
    - Friends/acquaintances
    - Inappropriate local investments
3. Fortitude risk:
  - Lack of fortitude (continually shifting investment strategy over time)

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## Investment Risks (cont'd)

4. Excessive investment costs:
  - Manager fees
  - Transition and transaction fees
5. Human resources risk
  - Loss of investment staff and experience
  - Loss of institutional knowledge
  - Insufficient investment staff and resources
  - Insufficiently motivated staff
6. Manager risk:
  - We hire unskilled managers
  - We fire skilled managers
  - We hire fraudulent managers
  - Our managers become fraudulent

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## Background Concepts

1. Delegation & fiduciary duty
2. Prudence standard
3. Accountability
4. The anatomy of decisions

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## 1. Delegation & Fiduciary Duty

- Unless specifically prohibited by governing statute, trustees may delegate any task, provided they do so prudently:
  - Select the delegate
  - Provide direction
  - Oversee/supervise

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## 2. Prudence Standard

- Fiduciaries are not required nor expected to:
  - Achieve the *best* performance
  - Select the *best* managers
  - Perform in the *top quartile* among peers
  - *Never* experience poor performance
- Fiduciaries *are* expected to establish and follow a *prudent process*; i.e. prudence is process.

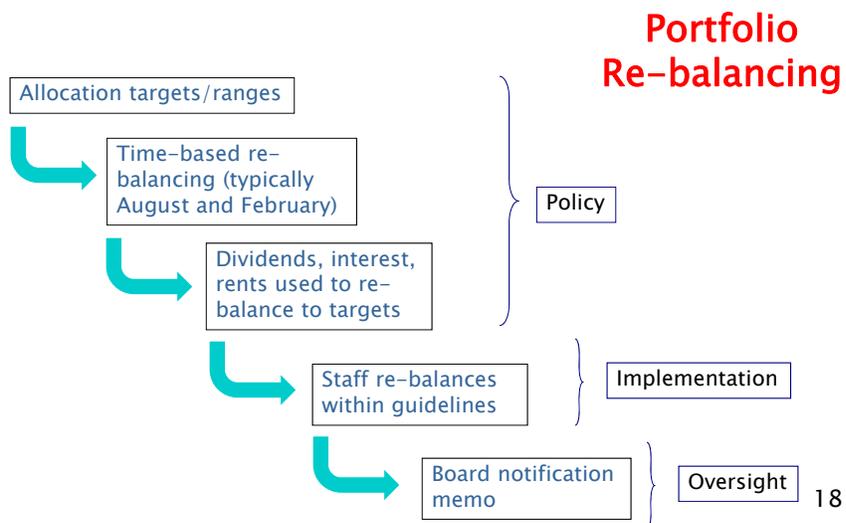
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### 3. Accountability

- To hold someone *legitimately* accountable for their performance:
  - Clear goals must be established
  - Adequate *resources and authority* must be provided
  - Specific pre-determined consequences must be established
  - Overseer must have access to requisite information and reporting
- This applies to :
  - Plan sponsor relative to retirement boards
  - Retirement boards relative to their staff

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### 4. Anatomy of Decisions



## Anatomy of Decisions (cont'd)

- Separating decisions into their component parts facilitates:
  - A greater focus on policy/process/oversight.
  - Greater independence and accountability:
    - Party who runs an operation should not also be responsible for overseeing one's own performance.
  - Matching decisions to the parties with the expertise/time to carry them out.

*Above promotes stronger performance and risk management, especially if sophistication is high.*

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## 3 Basic Models ... a Spectrum

### Board-Dominant Model

- Board approves or involved in virtually every investment decision.
- Staff and consultant provide recommendations but have little or no discretionary authority

### Team-Based Model

- Board & staff collaborate but fulfill unique and distinct roles:
  - Board: policy/beta
  - Staff: implements/alpha
- Measurable accountability

### Staff-Dominant Model

- Staff has full authority over implementation (e.g. mgr. selection/TAA)
- Staff drives board policy decisions
- Board is detached from investment policy and implementation

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## Board-Dominant Model:

- Board is explicitly or implicitly accountable for every investment decision, and therefore every aspect of investment performance:
  - Staff likely makes recommendations, but is not accountable for investment outcomes in any clear or meaningful way
- Enforcing accountability is difficult/impossible
- Typically few, or no, investment staff

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## Staff-Dominant Model

- “Rubber-stamp board” model
- Board delegates implementation to staff
- Board is detached from policy decisions
- Staff is accountable for investment performance, but will diffuse accountability to include the Board

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## Team-Based Model

- Duties are allocated based on whether they involve policy, implementation, or oversight.
- Board is accountable for certain aspects of investment performance:
  - Value added by asset/liability mismatch
- Staff is accountable for:
  - Value added by manager selection
  - Value added by TAA
- Staff does not oversee their own performance
- Board “trusts, but verifies”

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## ASSESSING THE MODELS

## Board & Staff–Dominant Models

- When scandals occur, they tend to be associated with above models
- Poor investment execution also tends to be associated with above models

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## Team–based Model

Very clear and distinct roles:

- Board sets:
  - Investment policy and risk tolerance
  - Investment objectives (performance/risk/costs)
  - Parameters for manager selection, active management, tactical asset allocation, rebalancing, and other operational/tactical decisions
- Management:
  - Recommends policy to the Board
  - Accountable for implementing the investment policy
  - Accountable for achieving agreed–upon performance objectives subject to policy/parameters set by the Board

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## Team-based Model (cont'd)

- Board then supervises/oversees:
  - Compliance with policy
  - Compliance with parameters
  - Achievement of objectives (performance/risk/costs)
- Keys to success of the team-based model:
  - A strong staff **AND** a strong board:
    - But strong in their respective roles on the team
  - Ability of the board to “trust, but verify”
    - Transparency and regular/relevant reporting to Board
    - Independent checks and balances

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## Prudent Delegation & Oversight

### Example A – Rebalancing

- Policy controls:
  - Establish a re-balancing policy with parameters on how re-balancing is to occur
- Compliance reporting/monitoring:
  - Staff required to report back to the Board on re-balancing activities undertaken
  - Board may receive independent reports confirming re-balancing policy was implemented:
    - Consultant/Auditor

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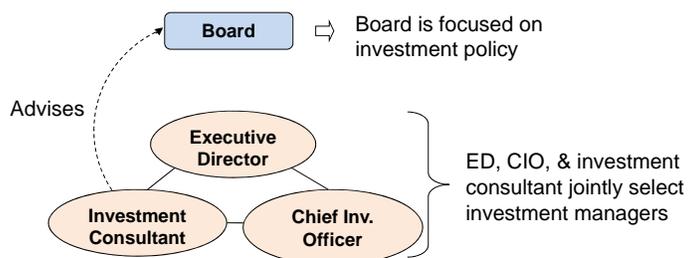
## Example B: Manager Selection

- Policy controls:
  - Asset allocation, ranges, limits, prohibited investments
  - Establish a manager selection policy:
    - Minimum qualifications and selection criteria
    - Selection process and controls (ex. manager selection requires unanimous agreement of CIO/Consultant/CEO)
  - Establish performance benchmarks and require independent performance measurement
- Board receives reports confirming:
  - Managers were selected in accordance with policy:
    - Prepared by Staff/Consultant/Auditor
  - Manager performance in aggregate is meeting expectations
- Board may also have added transparency:
  - Access to staff/consultant analysis of prospective managers

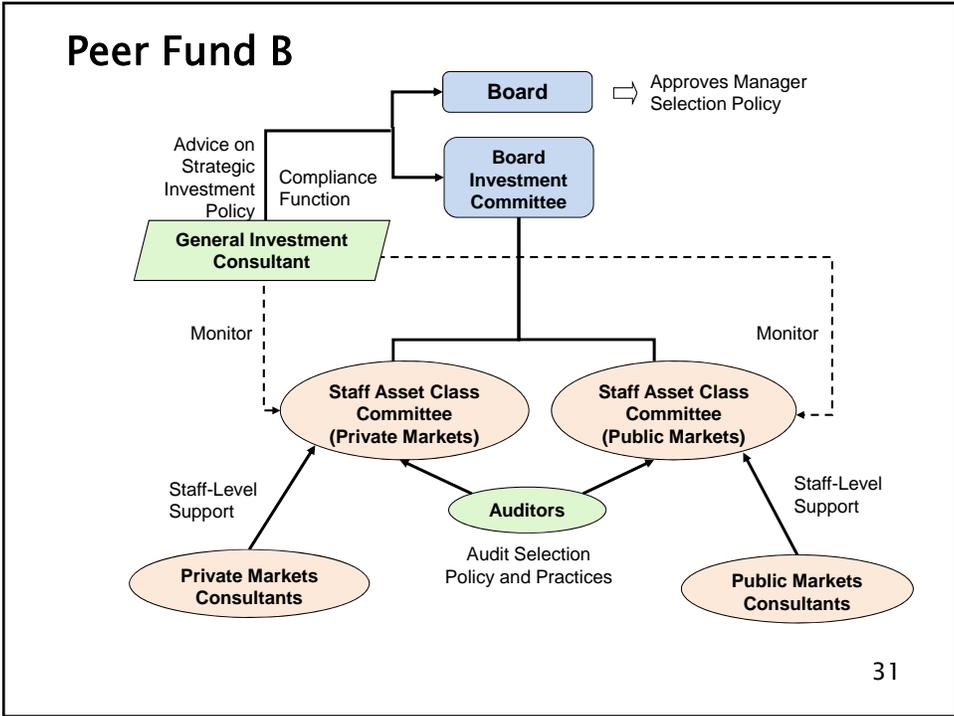
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## Peer Fund A

- Allows Board to focus on policy & strategy
- Increased clarity in accountabilities
- Creates conditions for incentive compensation aligned with performance



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**REAL WORLD APPLICATION**

## Application to CCCERA

- With the previous discussion as background, the rest of the workshop will focus on defining roles and responsibilities in key areas of CCCERA's investment program

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## Decision Points

- Which model does the Board prefer?

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Board-  
Dominant  
Model

Team-  
Based  
Model

Staff-  
Dominant  
Model

- Specific decisions on Authority & Responsibility:
  - Rebalancing
  - Opportunistic investing
  - Managing managers
    - Manager structure
    - Hire/fire decisions

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## Prospective Benefits of Delegating Authority

- Board remains well informed due to continuation of relevant, detailed discussion
- More detailed and more relevant reporting provides better information to Board for meeting fiduciary obligations
- More time for Board to spend on addressing critical policy and process issues
- Authority and responsibility reside with fully-dedicated expert resources
- Higher level of decision-maker accountability
- Staff flexibility provides opportunity for additional value capture

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## Rebalancing

- Scenario 1 - Back to target
- Scenario 2 - Tactically away from target

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## Rebalancing

### Scenario 1 – Back to target

- Policy will remain largely unchanged, i.e., allowable ranges around policy targets

#### Current Policy

- Staff discretion within pre-defined guidelines
- Fairly broad ranges
- Time-based re-balancing
- Board memo for notification purposes
- Minimal accountability



#### Recommended revisions

- No change
- Tighter primary ranges
- Time-based re-balancing with valuation-based overlay
- Detailed board memo with reasons behind re-balance decision
- Outcome-based reporting to provide accountability

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## Rebalancing

### Scenario 2 – Tactically away from target

- Recommended policy revision provides additional flexibility for staff to use judgment during dislocated markets
  - Broader secondary ranges
  - Opportunistic re-balancing based on valuation and momentum metrics during extreme market conditions
  - Detailed board memo with reasons behind re-balance decision
  - Outcome-based reporting to provide accountability

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## Opportunistic Investing

- Move from a separate opportunistic “bucket” approach to an approach that integrates the assessment of specific valuation-based opportunities into the overall investment strategy

### Current policy

- Specifically defined allocation bucket with a 0% target and a 5% maximum
- Targets a rate of return in excess of the Total Fund return target

### Recommended revisions

- Allocation limits on individual and total opportunistic investments will remain
- Strict, pre-defined evaluation processes and criteria must be applied to each opportunity before any investment is made
- Staff will have discretion to invest within these clearly defined policy guidelines
- Documentation will be presented to the Board in the form of a detailed research report

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## Managing Managers

- Scenario 1 – Manager structure
- Scenario 2 – Hire
- Scenario 3 – Fire

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## Managing Managers Scenario 1 – Manager structure

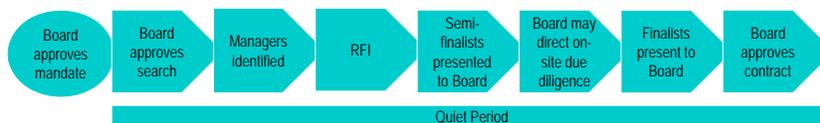
- Strategic vision of how to access alpha and beta within the strategic asset allocation
  - Well-defined, clearly articulated, and detailed plan aligned with broad Investment Philosophy established by the Board
  - Detailed plan document presented to the Board
  - Plan review whenever plan or managers change

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## Managing Managers Scenario 2 – Manager hires

- Current Board-centric process can be adjusted to rely on Board for policy guidelines and staff/consultant for analysis and selection

### Current policy / process



### Recommended revisions



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## Managing Managers

### Scenario 3 – Manager fires

- Manager terminations currently follow a potentially lengthy and unspecified review process, which may negatively impact performance

#### Current policy / process

•Manager may be placed under review for a variety of reasons, e.g.:

- Poor performance
- Style drift
- Organizational change
- Compliance issues

•Staff notifies manager of “review” status

•Managers under review evaluated quarterly, and decision made to:

- Remove from review
- Remain under review or
- Terminate

#### Recommended revisions

•Managers may be terminated for any reason at any time, but emphasis will be placed on performance relative to pre-defined expectations and organizational changes

•Performance reporting will be geared toward expectations in light of a manager’s strategy and prevailing market conditions and also the manager’s purpose within a broader portfolio context

•An exception-based documentation trail will be maintained for managers of concern, which will be reported to the Board quarterly

•Staff will have the authority to terminate a manager and will present a detailed report to the Board following termination

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## Decision Points

- Model preference established
- Specific decisions on delegation of authority:
  1. Rebalancing to target
  2. Tactical re-balancing
  3. Opportunistic investing
  4. Manager structure
  5. Manager hires
  6. Manager termination

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## Next Steps

- Develop authority constraints around general authority levels granted today
- Develop evaluation metrics
- Complete draft Investment Policy Statement

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# Memorandum

**To:** Contra Costa County Employee Retirement Association  
**From:** Ed Hoffman, CFA, FRM  
**Subject:** Conduct RFI and RFP for short-term government/credit mandate  
**Date:** February 25, 2016

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## Executive Summary

With the recent approval to adopt the Functionally Focused Portfolio (FFP) asset allocation, the plan will be allocating approximately 24% to a customized short-term government/credit fixed income portfolio. Because this mandate will be customized to meet the unique liquidity and liability needs of the Plan, a standard product offering from the leading fixed income managers will not likely be sufficient. We recommend conducting a Request For Information (RFI) to the general investment community to understand the full range of approaches and innovative solutions available and then conducting a formal Request For Proposal (RFP) to conduct in-depth analysis of those firms demonstrating unique capabilities in their RFI responses.

## Goals of the Mandate

As discussed during the Investment Strategy Development workshop, the short-term government/credit mandate serves multiple purposes. Its primary goal is to effectively hedge four years of projected benefit payments and expenses, which will require a low volatility, highly liquid investment style. Our analysis suggests this is best accomplished via a short-term government/credit mandate; however, we will consider alternative approaches if the marketplace identifies better solutions. While ensuring the benefit payments and expenses are appropriately hedged, we believe a positive return can be generated as the assets do not need to be simply invested in cash.

A second goal for this mandate is to provide optionality to the Plan in the event of a market correction. Recognizing that market corrections provide attractive valuations entry points that generate future returns, the mandate must be flexible to allow the Plan to opportunistically allocate to other asset classes when and if needed.

An important third goal of the mandate relates to the robust reporting and close integration with Staff the selected providers must offer. Because of the frequent cash flows into and out of the

mandate and the disciplined approach to the investment style, Staff will need reporting designed to address the cash flow projections, quality of the exposures in the strategy, risk exposure reporting, and worst-case scenario analysis, among others.

### **The RFI & RFP Process**

The RFI and RFP process has been designed to identify innovative solutions providers and conduct in-depth analysis of the most likely candidates. The RFI is the first stage of this process designed to open this opportunity to any and all interested providers. Preliminary discussions indicate strong interest not just from the typical fixed income managers but also from other firms with unique capabilities along the dimensions outlined above. We believe the RFI will allow the firms to efficiently state their reasons why they should be included in the RFP and effectively self-select whether to continue in the process.

The RFP is the second phase which will allow those firms identified in the RFI process to provide more detail about their capabilities, their philosophical approach to the mandate, their personnel and expertise managing such mandates, their performance history, their expected fees, and their reporting capabilities. This second phase will be more fully evaluated once the RFI is underway as we expect some level of discovery during the first phase.

### **Conclusion**

We are seeking the Board's approval to begin the RFI phase immediately. CCCERA will post the RFI to their website and Verus and Staff will inform the investment community of its availability. We will then begin collecting responses to evaluate the candidates and provide the Board with an update on our status at future meetings before proceeding with the RFP phase.



**PERSPECTIVES  
THAT DRIVE  
ENTERPRISE  
SUCCESS**



**PERIOD ENDING: DECEMBER 31, 2015**

Investment Performance Review for

**Contra Costa County Employees' Retirement Association**

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[VERUSINVESTMENTS.COM](https://www.verusinvestments.com)

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LOS ANGELES 310-297-1777

SAN FRANCISCO 415-362-3484

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Investment Landscape **TAB I**

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Investment Performance  
Review **TAB II**

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Risk Dashboard **TAB III**



**PERSPECTIVES**  
**THAT DRIVE**  
**ENTERPRISE**  
**SUCCESS**

1<sup>ST</sup> QUARTER 2016  
Investment Landscape

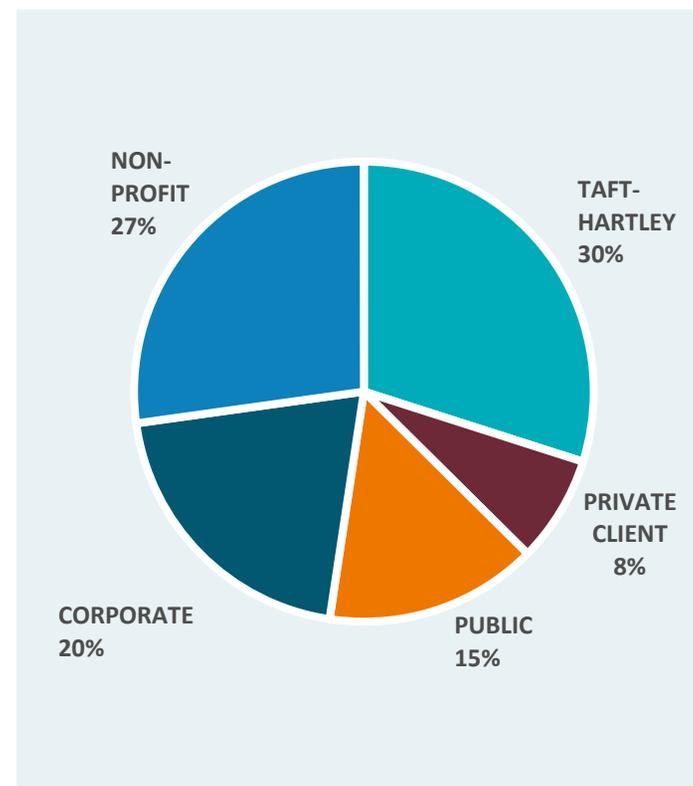
# An update on Verus

2016 marks our 30<sup>th</sup> anniversary

Since 1986, Verus has provided high quality services to institutional investors, growing our depth of investment team and expertise as the capital markets have become exponentially more complex. Some highlights of our recent achievements:

- In 2011, we brought in an investment team headed by Jeffrey Scott, CFA, former Chief Investment Officer of the Alaska Permanent Fund Corporation, to lead our expansion into full discretionary investment services (“OCIO”). Today, this team manages over \$19 billion in institutional assets.
- In April 2015, in recognition of our evolution and continued investment into capital markets research, risk analytics and portfolio management capabilities, we rebranded from Wurts & Associates to Verus.
- In December 2015, we closed our merger with Strategic Investment Solutions, growing our total staff to more than 100 professionals. We now have offices in Seattle, Los Angeles and San Francisco, and serve clients across the US, in Canada and in South America.
- In January 2016 we expanded our ownership base from 11 to 22 employee-owners.
- Throughout all of these years, we are pleased to have continued to be rated highly for overall quality of service. We have ranked in the top quartile of the Greenwich Associates annual institutional investor survey 10 of the past 11 years.
- Today our suite of offerings includes non-discretionary consulting, risk advisory, private markets consulting, discretionary management, and outsourced CIO services.

**\$337 BILLION IN ASSETS / 148 RELATIONSHIPS\***



*\*Estimated discretionary and non-discretionary regulatory assets under management as of 1/1/2016; chart reflects client breakdown by number of relationships*

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Fixed income rates & credit 17

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Equity 25

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Other assets 37

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Appendix 44

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# 1<sup>st</sup> quarter summary

## THE ECONOMIC CLIMATE

- Global growth has benefited from improvements in Europe and Japan, but headwinds persist in emerging market economies. U.S. real GDP growth fell slightly quarter-over-quarter to 2.0%. *p.7, 15*
- There is continuing global disinflationary pressure from falling commodity prices and excess manufacturing capacity. Despite this, inflation in the U.S. and other developed markets rose slightly in Q4. *p.12, 15*
- Some emerging market economies are experiencing economic depression. China continues to moderate with real GDP growth falling to 6.9%. *p.13, 14*

## MARKET PORTFOLIO IMPACTS

- The U.S. dollar rose in Q4 to a level not seen since 2003. Appreciation hit investors with unhedged equity exposure, commodity markets, and earnings of international businesses. *p.26, 41*
- Risk assets have broadly suffered, with particular recent weakness in equity markets and credit fixed income, especially high yield energy. *p.22, 26, 43*

## THE INVESTMENT CLIMATE

- Sentiment across risk markets seems to be shifting in a more bearish direction. *p.28, 43*
- Developed countries may have limited ability to stimulate growth and inflation with lower interest rates. *p.16*
- The Federal Reserve implemented a 25 bps rate hike in December. Underlying weakness in the domestic economy may lead to policy shifts. *p.6*

## ASSET ALLOCATION ISSUES

- High yield spreads widened in Q4, with energy leading the way. There is a potential for market concerns to begin to affect higher quality credit. *p.22, 43*
- Market sentiment towards risk assets in general suggests careful consideration of risk exposures in all asset classes is warranted. *p.28*
- U.S. dollar strength may be at a secular high, which could have implications for currency hedging decisions. *p.41*

We are increasingly concerned over the behavior of risk assets and are watching economic and market developments carefully for signs of more sustained weakness

# Economic environment

# U.S. economics summary

- U.S. real GDP growth moved slightly downward to 2.0% quarter-over-quarter. The Atlanta Fed GDPNow model forecasts continued weaker growth of 1.2% real for Q4, as of December 31<sup>st</sup>. This figure is much lower than economist forecasts.
- Realized headline inflation ticked up during the quarter to 0.5%, while inflation expectations were relatively unchanged.
- The Federal Reserve implemented a 25 bps rate hike in December. This move was generally expected and priced in. Initial Fed expectations of further rises may be tempered by market conditions.
- The job market continued to tighten, as unemployment rates declined. Broader measures of unemployment (U-6) have improved alongside stricter measures of unemployment (U-3).
- Household borrowing has been muted since the crisis, but credit growth is beginning to pick up. Households seem to be healing and disposable income is rising with the help of lower gas prices.

	Most Recent	12 Months Prior
GDP ( <i>annual YoY</i> )	2.1% <i>9/30/15</i>	2.9% <i>9/30/14</i>
Inflation ( <i>CPI</i> )	0.5% <i>11/30/15</i>	1.3% <i>11/30/14</i>
Expected Inflation ( <i>5yr-5yr forward</i> )	1.8% <i>12/31/15</i>	2.1% <i>12/31/14</i>
Fed Funds Rate	0.2% <i>12/31/15</i>	0.06% <i>12/31/14</i>
10 Year Rate	2.3% <i>12/31/15</i>	2.2% <i>12/31/14</i>
U-3 Unemployment	5.0% <i>12/31/15</i>	5.6% <i>12/31/14</i>
U-6 Unemployment	9.9% <i>12/31/15</i>	11.2% <i>12/31/14</i>

Weakening GDP but stronger than many developed markets

Slight inflation uptick in Q4 as initial oil effects dissipate but still lower year on year

# U.S. economics – GDP growth

Real GDP came in at 2% in the third quarter, and 2.1% on a year-over-year basis. Growth was hindered by a contraction in inventory builds and continued weakness in exports. GDP forward expectations have come down materially over the past year. Furthermore, the Atlanta Fed GDPNow model forecasts continued weaker growth of 1.2% real for Q4, as of December 31<sup>st</sup>, though this figure is much lower than economist forecasts.

The U.S. economy has faced headwinds, particularly in

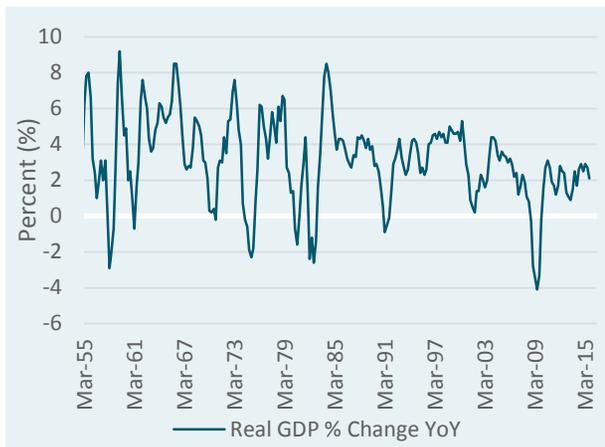
the manufacturing sector, following a stronger dollar and slow global growth. The service sector has shown greater signs of health.

The domestic economy is relatively self-sufficient and highly concentrated in services rather than manufacturing, which suggests the U.S. consumer will likely dictate the direction of growth. Domestic growth remains more robust than in most developed countries.

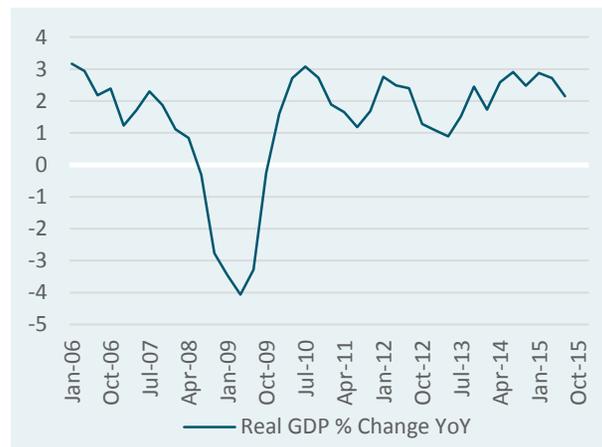
U.S. remains a relative economic bright spot

Recent weakness in forward expectations

**LONG-TERM U.S. GDP GROWTH**



**MEDIUM-TERM U.S. GDP GROWTH**



**GDP COMPONENTS**



Source: FRED, as of 9/30/15

Source: FRED, as of 9/30/15

Source: FRED

# U.S. economics – unemployment

The U.S. labor market continued to strengthen. U-6 unemployment (broader definition) and U-3 unemployment (stricter definition) moved downward to 9.9% and 5.0% in December, respectively. The participation rate improved in Q4.

Finishing off a strong year for employment, December's nonfarm payrolls beat expectations coming in at 292,000 vs 200,000 expected. Wages for the month were flat, resulting in an annualized growth figure of

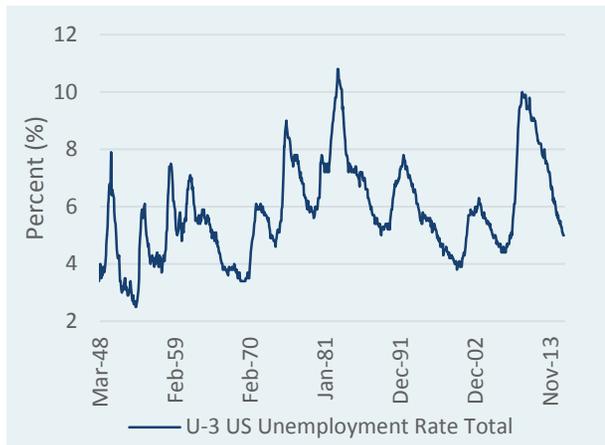
2.5% - a disappointment relative to expectations.

In previous quarters we discussed a secular decline in the aggregate U.S. labor participation rate. This movement appears a negative indicator - possibly a sign of underlying economic weakness and structural slack in the labor force. However, if we focus in on the specific demographic of full time workers ages 25 to 54, we see a less extreme picture.

Continued job market improvement

Demographic changes may be primary driver of declining participation

UNEMPLOYMENT SINCE 1948



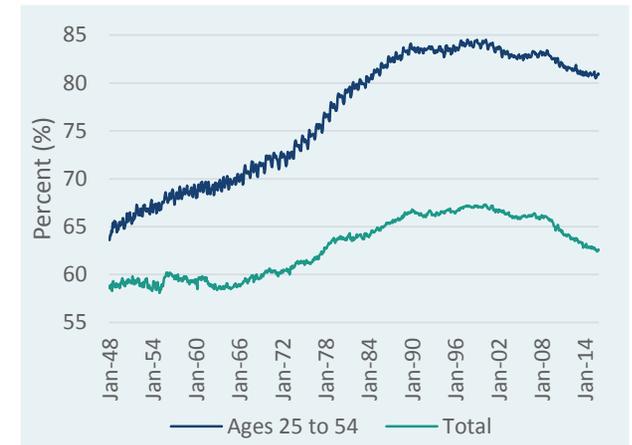
Source: Bloomberg, as of 11/30/15

MORE RECENT UNEMPLOYMENT & U6



Source: FRED, as of 11/1/15

LABOR FORCE PARTICIPATION RATE



Source: FRED, as of 12/1/15

# U.S. economics – the consumer

Although household borrowing has been relatively muted in the recent recovery, credit growth is beginning to pick up. Households are healing from the deleveraging process of recent years and disposable income is rising as employment strengthens.

Consumer spending has been bolstered by the oil price decline. Drivers saved around \$540 on average in 2015 due to the drop in gas prices. J.P. Morgan estimates consumers have spent approximately 80% of that

savings. The personal savings rate ticked up slightly in Q4 to 5.5%, but remains in a normal range.

Real disposable income growth remains at a normal level as of November, at 2.7%.

Consumer behavior appears conservative, but stronger spending and credit growth could soon be realized as the labor market tightens. Higher student loan debt remains a drag on spending for younger consumers.

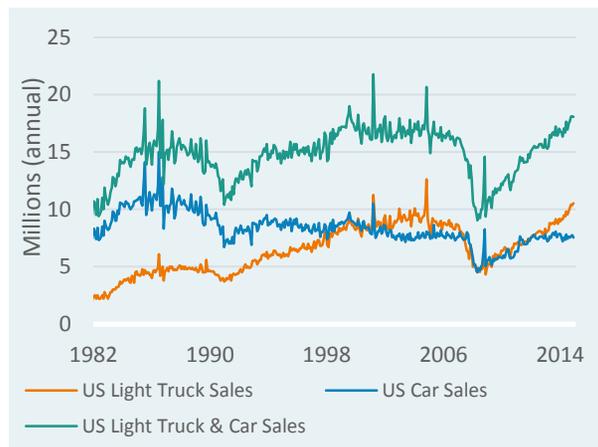
Credit growth has begun to pick up, and has room for expansion

**CREDIT GROWTH**



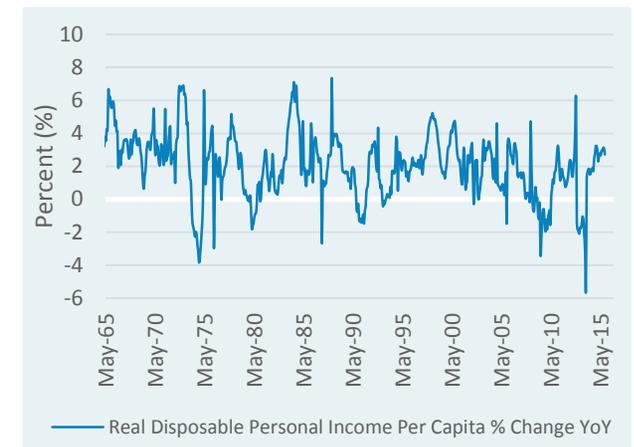
Source: FRED, as of 11/1/15

**AUTO SALES**



Source: FRED, as of 11/30/15

**GROWTH OF DISPOSABLE INCOME**



Source: FRED, as of 11/1/15

# U.S. economics – sentiment

Consumer and market sentiment surveys were mixed in Q4, but remain in a normal range.

The Bloomberg consumer comfort index had been significantly below average since December 2007. This index now sits at the bottom end of a normal range. The University of Michigan Consumer Sentiment Survey rose in December to the highest level since July. The average in 2015 was the highest annual average in 11 years.

The Citi Economic Surprise index recently dropped to levels not seen since 2012, but continues to recover to normal levels.

The U.S. consumer appears to have been on a steady recovery since the great recession. While business borrowing has since picked up significantly, the consumer remains hesitant to accumulate debt. We continue to believe sentiment may be vulnerable to a stream of bad news.

Sentiment and comfort indices mixed in Q4

CONSUMER COMFORT INDEX



Source: Bloomberg, as of 12/1/15 (see Appendix)

CONSUMER SENTIMENT



Source: University of Michigan, as of 12/31/15 (see Appendix)

ECONOMIC SURPRISE



Source: Bloomberg, as of 12/31/15 (see Appendix)

# U.S. economics – housing

The U.S. housing market has normalized in terms of pricing, rate of new home construction, and rate of home sales. New home construction climbed 10.5% in November from a month earlier. Construction of single family homes, which reflect two thirds of the market, reached an eight-year high in November.

Despite continued pent up demand for housing, the construction of multi-family homes continues to outpace single-family homes, further providing

evidence that Americans remain constrained in their ability to borrow. The recent policy change from the Fed may push lending rates higher and reduce demand for mortgages. A slower than expected rate-rise process may provide ongoing support.

Home prices have risen faster than wages, which is a hurdle to homeownership. High student loan levels may be continuing to act as a drag on first-time purchasers.

## HOME AFFORDABILITY



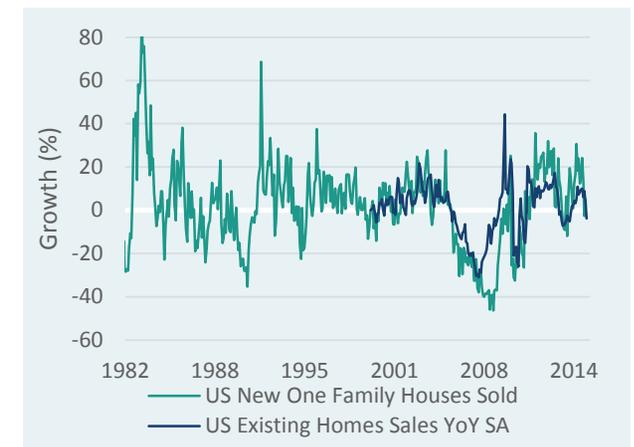
Source: National Association of Realtors, as of 11/30/15

## HOMEOWNERSHIP RATE



Source: FRED, as of 7/1/15

## NEW & EXISTING HOME SALES



Source: Bloomberg, as of 11/30/15

# U.S. economics – inflation

Inflation expectations remained stable in the 4<sup>th</sup> quarter, as measured by the U.S. TIPS 10yr Breakeven Rate and the U. of Michigan Inflation Expectations Survey. Headline inflation ticked up to 0.5% in November, while Core CPI remains around 2%. Inflation drag from the initial oil price decline is coming off the year-over-year inflation calculation, which could result in upward pressure to CPI.

The continuing oil price decline, ongoing global industrial overcapacity, especially in China, and dollar

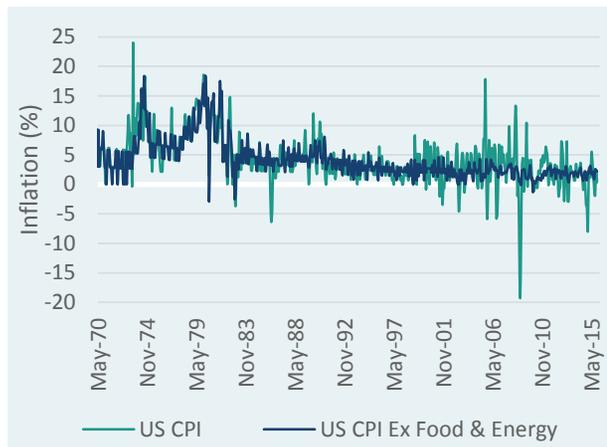
strength pose further challenges for inflation. There is some positive pressure on inflation from an increasingly tight labor market, and a lower commodity price base. Further appreciation of the dollar is currently an inflation headwind but may fuel inflation if this trend reverses.

Domestic inflation is an input to Federal Reserve policy, and further spillover of global disinflation trends to the US could be expected to influence rate hike decisions.

Effects of initial oil price decline falling off CPI print

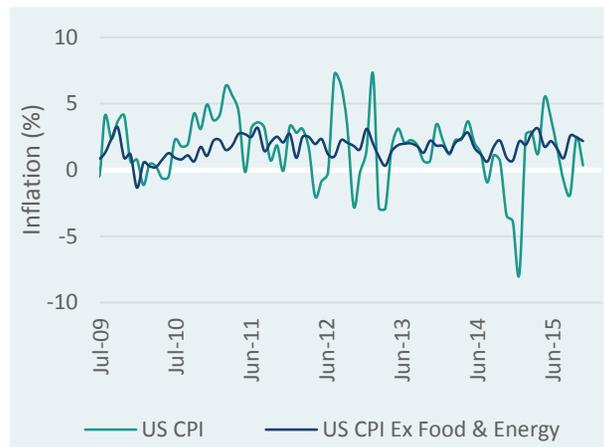
Global downward pressures

**LONG-TERM U.S. CPI**



Source: FRED, as of 11/1/15

**MEDIUM-TERM U.S. CPI**



Source: FRED, as of 11/1/15

**MARKET EXPECTATIONS OF INFLATION**



Source: Bloomberg, University of Michigan, as of 12/31/15

# International economics – current

- Global GDP growth remains mild, while Japan and the Eurozone saw marginal improvement. Slowing external demand may prove a challenge.
- China economic growth continues to cause concern. Real GDP growth is reported at 6.9%, though the accuracy of this figure is debated. Government stimulus may have helped mitigate the slowdown, but quickly rising debt-to-GDP might lead to problems.
- Japan did not enter a technical recession in Q3 as previously thought. Q3 Real GDP was revised up from -0.8% to +1% QoQ.
- Japan achieved positive year-over-year base wage growth of 0.3% in 2015, which is the first positive growth seen in 10 years.
- Total wages remain flat. The country continues its struggle to generate inflation.
- Global unemployment continues to decrease, while the BRIC nations remain an exception.
- Commodity markets remain challenging, which has affected emerging market equity and currency markets.
- Eurozone growth slowed in Q3 as exports weakened. Germany, a major contributor to export growth in the area, led the way.
- Puerto Rico defaulted on approximately \$174 million of debt payments on January 4<sup>th</sup>, as widely expected.

Area	GDP (Real, YoY)	Inflation (CPI)	Unemployment
United States	2.1% 9/30/15	0.5% 11/30/15	5.0% 11/30/15
Western Europe	1.8% 9/30/15	0.2% 12/31/15	8.9% 9/30/15
Japan	1.6% 9/30/15	0.3% 11/30/15	3.4% 9/30/15
BRIC Nations	4.7% 9/30/15	4.2% 9/30/15	5.1% 9/30/15
Brazil	(4.5%) 9/30/15	10.5% 11/30/15	7.6% 9/30/15
Russia	(4.1%) 9/30/15	15.0% 11/30/15	5.3% 9/30/15
India	7.4% 9/30/15	4.6% 9/30/15	8.6% 12/31/14
China	6.9% 9/30/15	1.5% 11/30/15	4.0% 9/30/15

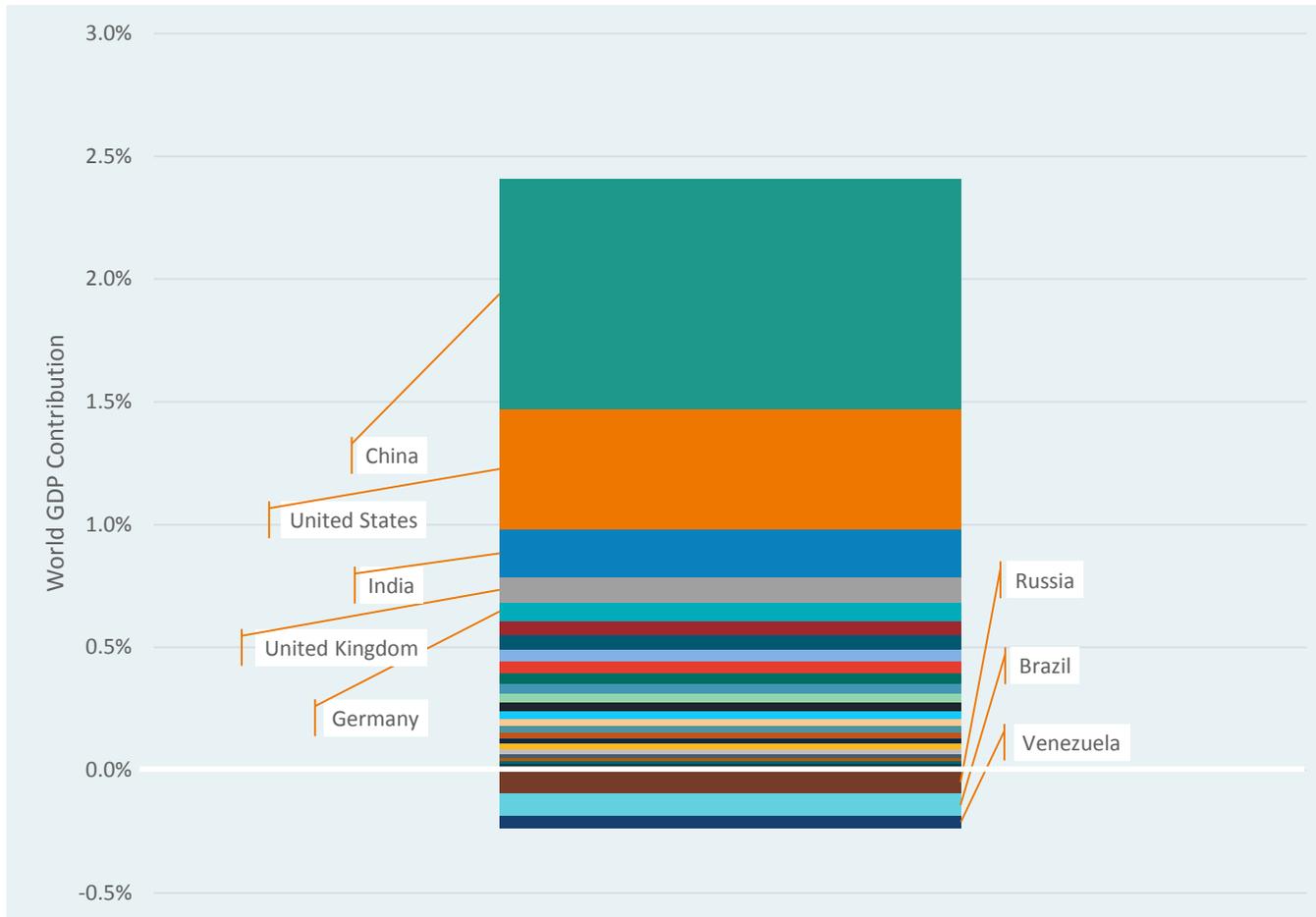
In developed markets mild positive progress continues

Concern over further China weakness

Emerging market challenges continue

# Global growth environment

REAL GDP GROWTH BY CONTRIBUTION



China is the second largest contributor to world GDP, but is the largest contributor to GDP growth

Developed economies not necessarily contributing the most to growth

Source: World Bank, as of 12/31/15

# International economics

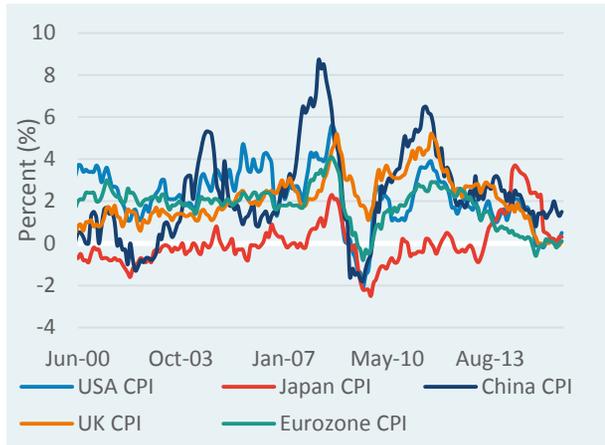
Global growth has benefited from improvements in Europe and Japan. Developed economies produced slowing to flat growth, improving employment, and subdued inflation. Many economies experienced a slight inflation uptick in Q4. Further improvement may be realized as the initial oil price decline falls out of annual CPI calculations. Consumer confidence in the Eurozone continues to improve from the lows of the financial crisis.

Emerging market economies exhibited disparate

growth. These economies have struggled, with the exception of India. Commodity production has been a key driver of growth for many countries, along with high government spending. Global excess manufacturing capacity is negatively affecting inventory builds and has had a dampening effect on demand.

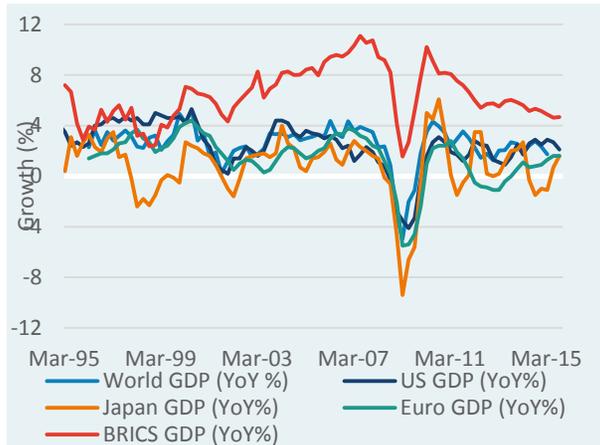
Emerging market economic health is increasingly important to the global economy, as emerging markets drive approximately 60% of global growth and compose approximately 60% of global commodity consumption.

**INTERNATIONAL INFLATION (CPI)**



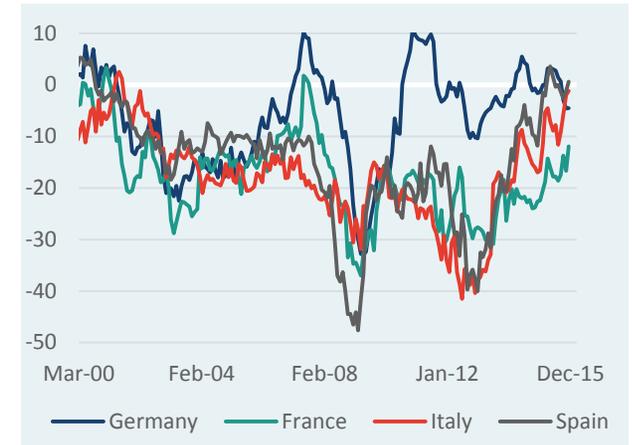
Source: Bloomberg, as of 11/30/15

**REAL GDP GROWTH**



Source: Bloomberg, as of 9/30/15

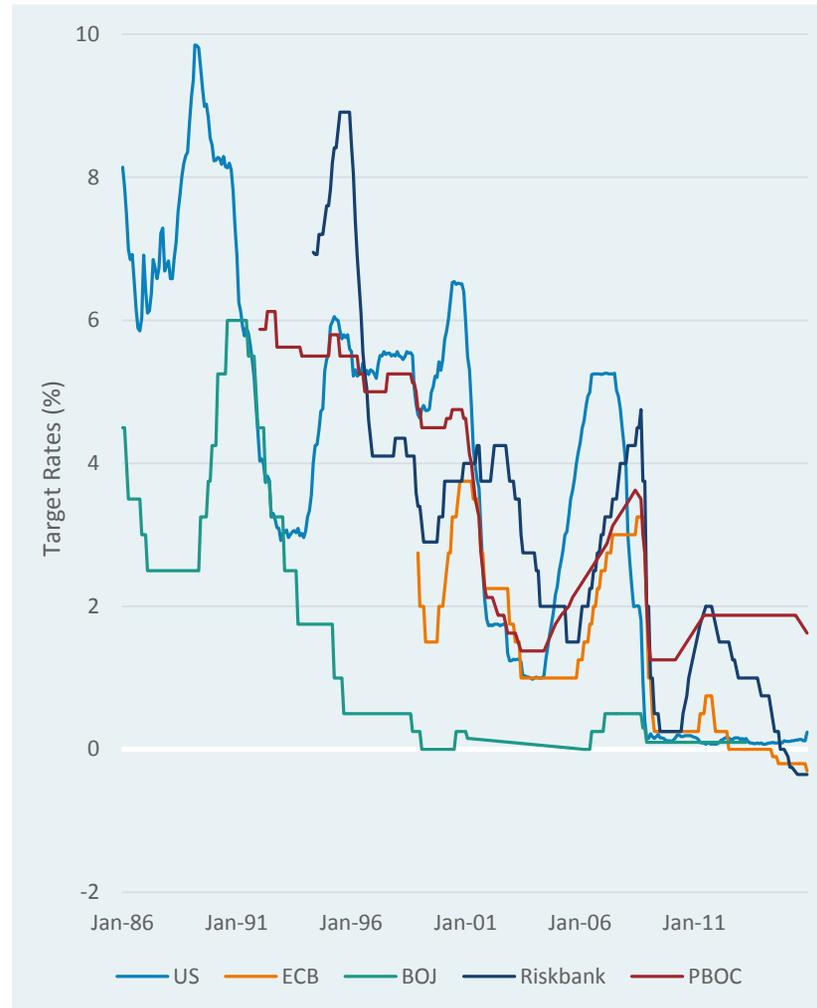
**CONSUMER CONFIDENCE**



Source: Bloomberg, as of 11/30/15

# Limitations of monetary policy

- Central banks have the ability to stimulate investment by lowering interest rates through open market operations. In the U.S., policymakers target the federal funds rate to either encourage or discourage borrowing.
- Given the recent regime shift of global policy rates to all time lows, many near zero or even negative, policymakers may find it difficult to make further rate cuts.
- In the case of another global financial crisis, central banks may have limited power to respond with stimulative monetary policy as rates can only go so low. In extreme cases, central banks are paying to lend money to investors.
- If central banks are unable to lower rates and reduce financial stability, global markets may suffer.



Central bank policy rates reaching all time lows, creating challenges for central banks

Source: Bloomberg, as of 12/31/15

# Fixed income rates & credit

# Interest rate environment

- The Federal Reserve implemented a long anticipated rate hike in December. Policy in Europe and Japan remains accommodative.
- Interest rates decreased broadly across developed markets in Q4, with the exception of the U.S and Germany.
- U.S. interest rates remain high relative to other developed markets
- The ECB lowered the deposit facility rate to a level of -0.30% in December, despite earlier comments by Mario Draghi that rates would not go any lower. Markets were disappointed by this policy decision and yields climbed on the news. The ECB continues to suggest looser policy may be available if needed.
- While initial expectations were for further U.S. rate rises, more recent news suggests these may be delayed. A move towards slower rate rises, or even the reintroduction of looser monetary policy, could lead to a market reassessment of relative currency values, and a weaker dollar.
- Many central banks have few policy tools available to them in the event of further economic weakness

Area	Short Term (3M)	10 Year
United States	0.17%	2.27%
Germany	(0.55%)	0.63%
France	(0.46%)	0.99%
Spain	(0.18%)	1.77%
Italy	(0.12%)	1.59%
Greece	2.10%	8.07%
UK	0.51%	1.96%
Japan	(0.04%)	0.27%
Australia	2.11%	2.88%
China	2.14%	2.83%
Brazil	15.03%	16.51%
Russia*	11.79%	10.39%

\*Shortest term rate for Russia is 1Y

Interest rates fell in Q4  
Diverging monetary policies could be detrimental to countries with high debt burdens

Source: Bloomberg, as of 12/31/15

# Monetary divergence

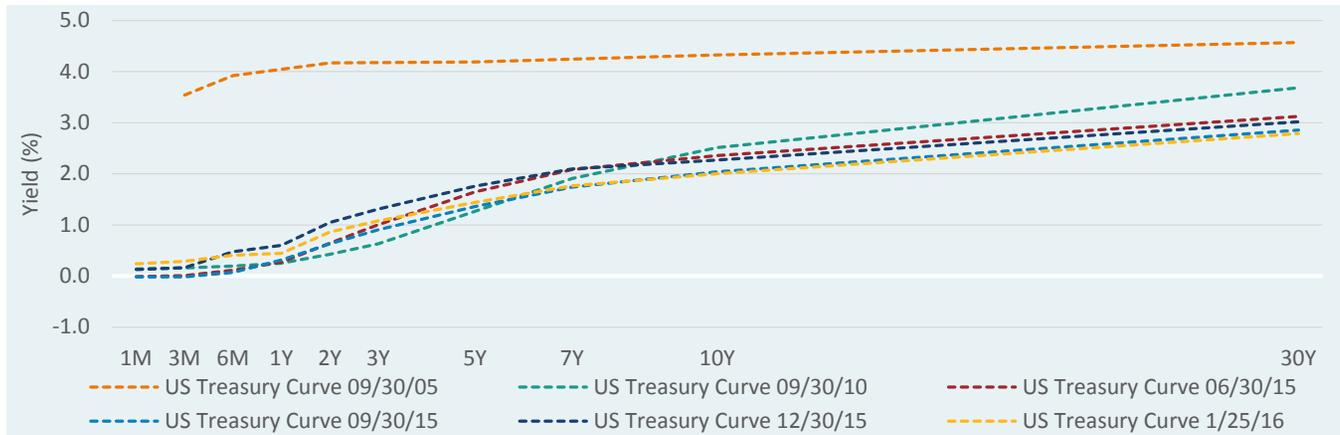
- During Q4, the Fed raised interest rates for the first time since 2006. The decision was in contrast to the policy decisions of other central banks including Europe, Japan and China in 2015.
- Two weeks prior to the Fed's decision, the ECB made announcements of plans to further expand European stimulus in the form of a rate cut, and extension of the QE program to March 2017. In the final weeks of the year the Bank of Japan decided to leave the monetary base unchanged, but added several other accommodative measures.
- If markets allow a continuation of this divergence, it could support dollar strength. However, continued weakness in markets or economic data could reverse this trend.
- The U.K. remains somewhere in the middle, echoing the desire to tighten alongside the Fed but not seeing convincing signs from domestic and global data.
- The key concern is whether deflationary pressure, continuing commodity down-cycle effects, and overcapacity will cause continued loosening in monetary policy globally. This change in direction could require substantive changes in market behaviors.



Source: Bloomberg, as of 12/31/15

# Global yield curve

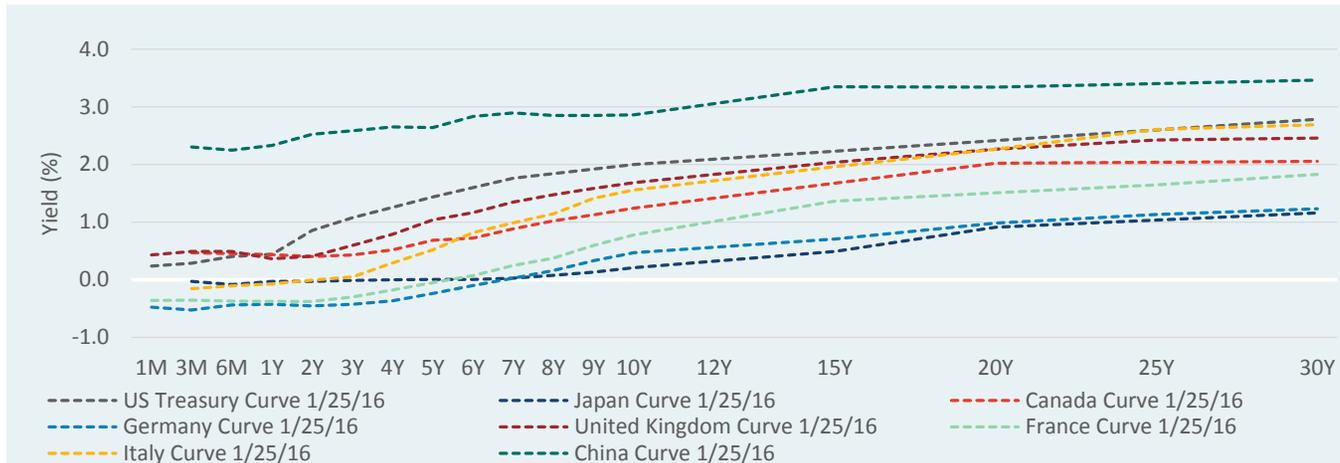
## U.S. YIELD CURVE



U.S. Treasury curve shifted up in anticipation of the Fed's decision

Foreign developed interest rates broadly decreased in Q4

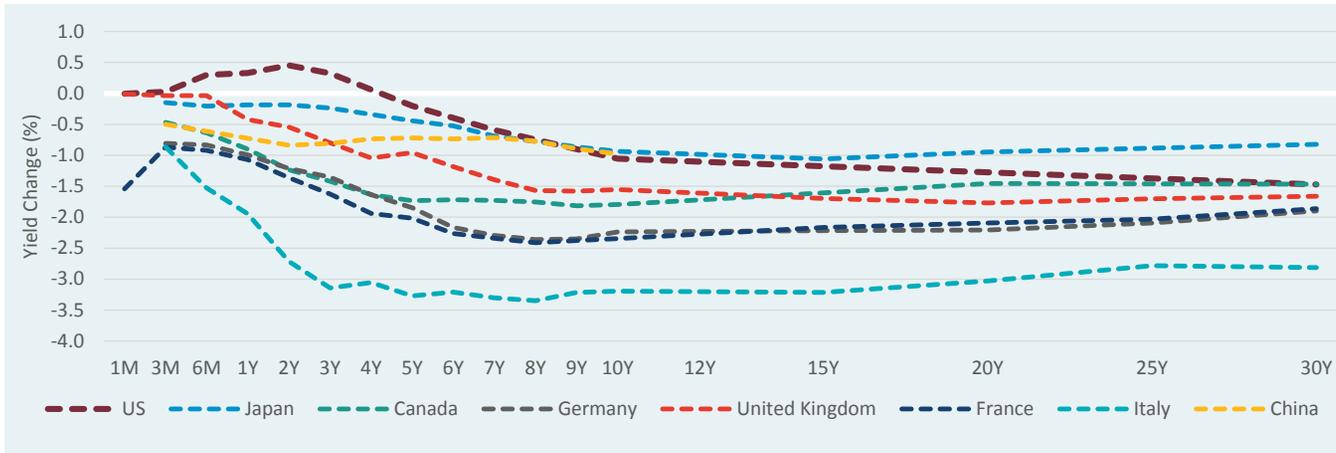
## GLOBAL GOVERNMENT YIELD CURVES



Source: Bloomberg, as of 12/31/15

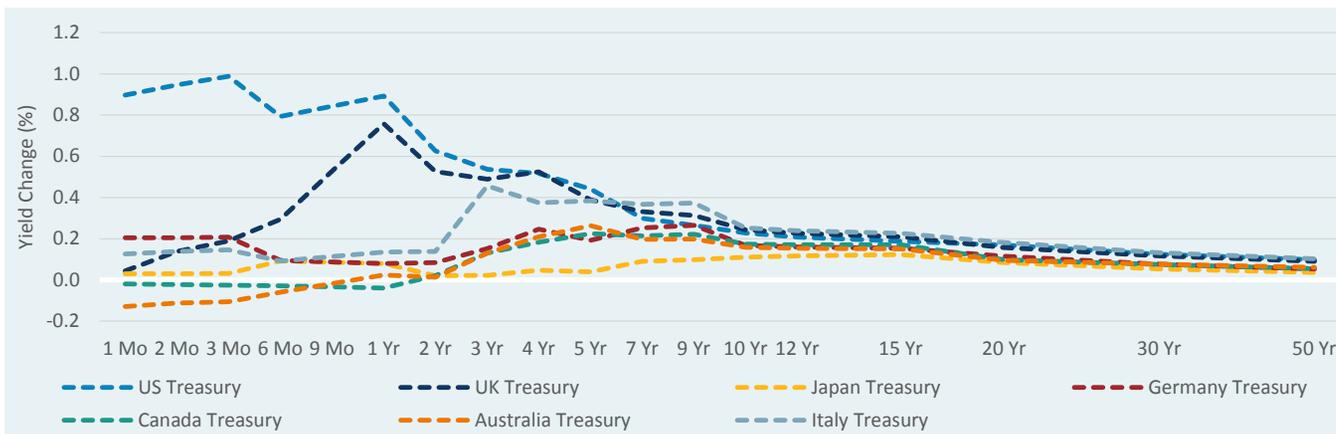
# Global yield curve changes

INTERNATIONAL YIELD CURVE CHANGES OVER LAST FIVE YEARS



Forward curves imply flat or modestly higher rates in most countries, with the exception of the U.S.

EXPECTED INTEREST RATE CHANGES ONE YEAR FORWARD IMPLIED BY MARKET PRICING



Source: Bloomberg, as of 12/31/15

# Credit environment

While consumer credit appeared to pick up in Q4, business borrowing slowed. Recent widening of spreads, high M&A activity, increasing leverage, and relatively less restrictive covenants, increase concern over credit markets.

Domestic credit spreads widened further during the quarter, led by the energy sector. However most spreads remain in a broadly normal range. Higher credit spreads make further corporate leveraging difficult leading to higher financing costs for equity buybacks

and M&A activity, which may be a headwind to equity prices. Emerging market economies have experienced great pain, reflected in wider CDS spreads following the drop in the price of oil.

In the past, a broad sell-off in the high yield market might have created risks of broader contagion as banks were primary holders of credit; however, banks have largely divested from this asset class. Nonetheless the possibility of broader impact on the credit market from high yield weakness remains worrying.

Broad concerns across credit spectrum, particularly in energy high yield

## CREDIT SPREADS



Source: Barclays Capital Indices, Bloomberg, as of 12/31/15

## EMERGING MARKET SPREADS



Source: Bloomberg, as of 12/31/15

## SPREADS

Market	Credit Spread (12/31/2015)	Credit Spread (1 Year Ago)
Long US Corporate	2.1%	1.7%
US Aggregate	1.1%	1.0%
US High Yield	7.1%	5.3%
US High Yield Energy	13.6%	9.3%
US Bank Loans	3.9%	3.9%

Source: Barclays, Credit Suisse, Bloomberg, as of 12/31/15

# Issuance and default

Investment grade issuance increased in 2015, while issuance of bank loans and high yield continued to contract.

Defaults are rising in the high yield market, driven by the energy sector. Hedges put in place by energy-related companies are largely rolling off, revealing the true financial effects of lower commodity prices. Bankruptcies may have knock-on effects on lenders.

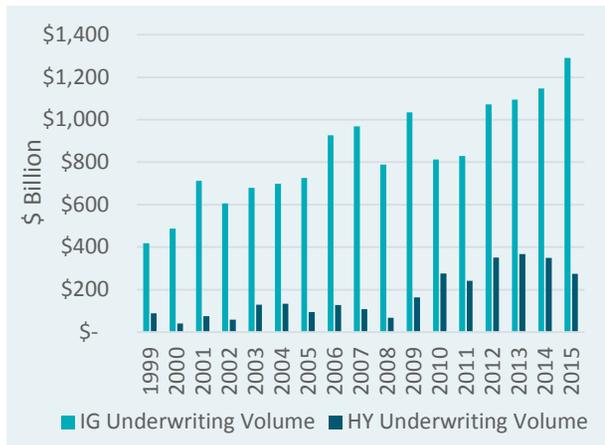
the high yield market. Though small, this portion of the market could be negatively affected if energy market turbulence persists. Aggregate defaults remain in a normal range year-over-year.

With continued issues in the credit market, investors should take care to understand and control the degree of credit exposure in portfolios, particularly in the high yield space.

Defaults rising but for now remain near average

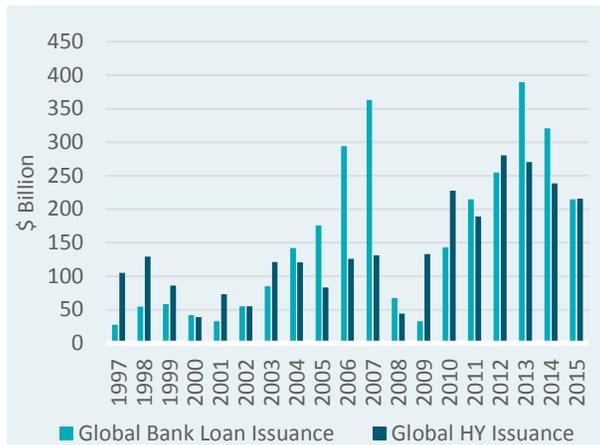
Energy-related high yield issuers make up about 15% of

**IG & HIGH YIELD ISSUANCE**



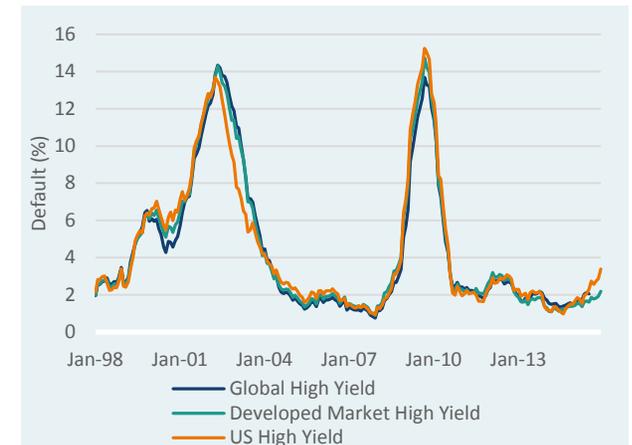
Source: Bloomberg, as of 12/31/15

**BANK LOAN & GLOBAL HY ISSUANCE**



Source: BofA Merrill Lynch Global Research, as of 12/31/15

**HY DEFAULT TRENDS (ROLLING 1 YEAR)**



Source: Credit Suisse, BofA, as of 12/31/15

# Continued role of fixed income

- Investors have lately questioned the role of fixed income. An environment of lower yields, the prospect of rising yields, and higher duration, arguably lessen the attractiveness of this asset class.
- Investors typically hold fixed income instruments for five primary reasons: equity risk protection, capital preservation, income, credit premium, and tenor premium. Although at current levels of risk premia and pricing some of these benefits may be less effective than in the past, broadly they remain intact.
- Although rising rates imposes a downward pressure on bond prices, investors have the opportunity to reinvest capital on instruments offering higher interest.
- Tenor risk and credit risk, although potentially paired with increased defaults, will continue to offer higher returns.

Fixed income instruments have provided a safe haven during equity down markets

## EQUITY RISK PROTECTION



## CREDIT PREMIA



## TENOR PREMIA



Source: Bloomberg, as of 10/31/15

# Equity

# Equity environment

- The current low inflation, low interest rate environment remains accommodative for risk assets, but economic and market concerns persist.
- S&P 500 earnings fell 4.3% in Q3 while sales fell 3.8%. Earnings beat estimates by 4.9% while sales missed by -0.1%.
- The technology sector has been a major contributor to U.S. business margin expansion since 2009. Apple generated an estimated 22% of S&P 500 margin growth.
- While energy and mining sectors weighed on the broader indices, measuring returns on an ex-energy basis may be inappropriate as this excludes firms negatively impacted and includes the firms feeling positive effects.
- Size and value factors underperformed in Q4.
- Emerging market equity continued to experience volatility and losses. The effects of a lower price of oil has translated to broad currency depreciation.
- Japan on both a hedged and unhedged basis performed exceptionally well. While there remain doubts around the pace of reform, our ongoing view that structural change will drive benefits to investors remains intact.

	QTD Total Return (unhedged)	QTD Total Return (hedged)	YTD Total Return (unhedged)	YTD Total Return (hedged)	1 Year Total Return (unhedged)	1 Year Total Return (hedged)
US Large Cap (Russell 1000)	6.5%		0.9%		0.9%	
US Small Cap (Russell 2000)	3.6%		(4.4%)		(4.4%)	
US Large Value (Russell 1000 Value)	5.6%		(3.8%)		(3.8%)	
US Large Growth (Russell 1000 Growth)	7.3%		5.7%		5.7%	
International Large (MSCI EAFE)	4.7%	6.4%	0.8%	5.0%	0.8%	5.0%
Eurozone (Euro Stoxx 50)	3.6%	5.5%	(0.1%)	6.2%	(0.1%)	6.2%
UK (FTSE 100)	1.1%	0.8%	(6.4%)	(9.6%)	(6.4%)	(9.6%)
Japan (NIKKEI 225)	8.7%	9.6%	9.9%	10.7%	9.9%	10.7%
Emerging Markets (MSCI Emerging Markets)	0.7%	0.9%	(14.9%)	(8.2%)	(14.9%)	(8.2%)

Negative sentiment and economic challenges may cause ongoing concerns

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 12/31/15

# Domestic equity historical return

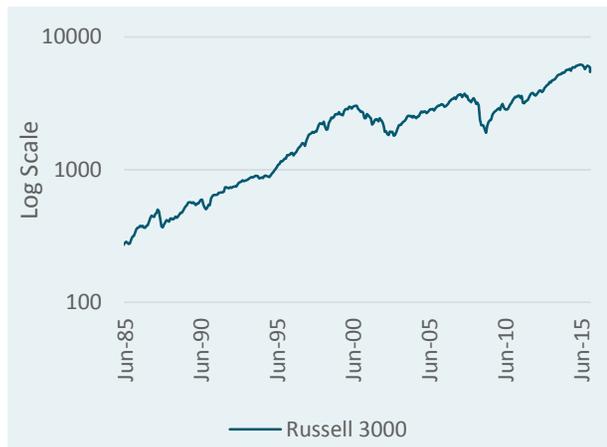
The U.S. equity market has performed exceptionally well since the global financial crisis, but equities were range-bound in 2015.

Equities provide exposure to economic growth, and should be held over the long-term. Short-term attempts to time the market, done poorly, can detract from long-term returns. A systematic rebalancing policy can be very helpful to long-term performance by avoiding emotional buying or selling which can damage performance. Domestic equity fundamentals have

shown some weakening as of late. Other developed equity markets may provide better opportunities for investing new money, although concerns are warranted for risk assets as a whole.

Equity exposure remains an integral part of the portfolio and is the primary means for investors to access long term productive capacity of the economy.

## LONG-TERM PERFORMANCE



Source: FRED, as of 1/21/16

## INTERMEDIATE RETURN



Source: FRED, as of 1/21/16

## DOWNSIDE EVENTS



Source: FRED, as of 1/21/16

# Domestic equity recent

Domestic equities rallied in Q4, but retraced gains early in the new year. Worries over slowing growth in the U.S. and a hard landing in China continued to weigh on risk assets. The timing of rate hikes in 2016 may add additional uncertainty. Nearly seven years in length, the current bull market has extended longer than most. It is important to remember that bull markets do not die of old age, but rather due to a shifting environment. There are concerns we may be in the process of such a shift today.

S&P 500 earnings fell 4.3% in Q3 while sales fell 3.8%. Earnings beat estimates by 4.9% while sales missed by -0.1%.

Domestic growth and weakening corporate earnings may cause uncertainty in the short term. Market technical factors also provide some grounds for concern, with all major domestic equity indices showing poor technical market signals.

Signs of weakness are evident in domestic equity markets

## SHORT TERM PERFORMANCE (3YR)



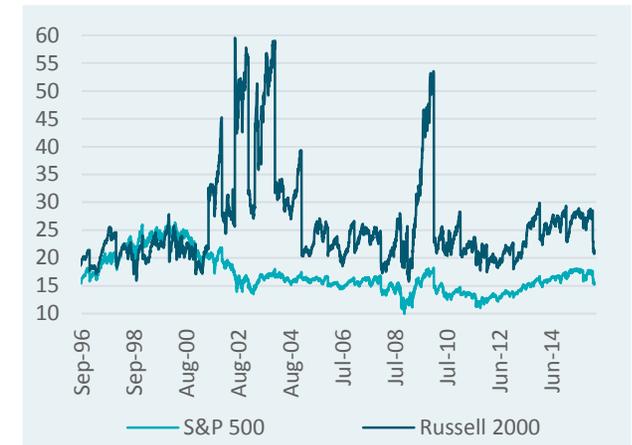
Source: Russell Investments, as of 1/21/16

## SMALL/LARGE & GROWTH/VALUE



Source: Russell Investments, as of 12/31/15

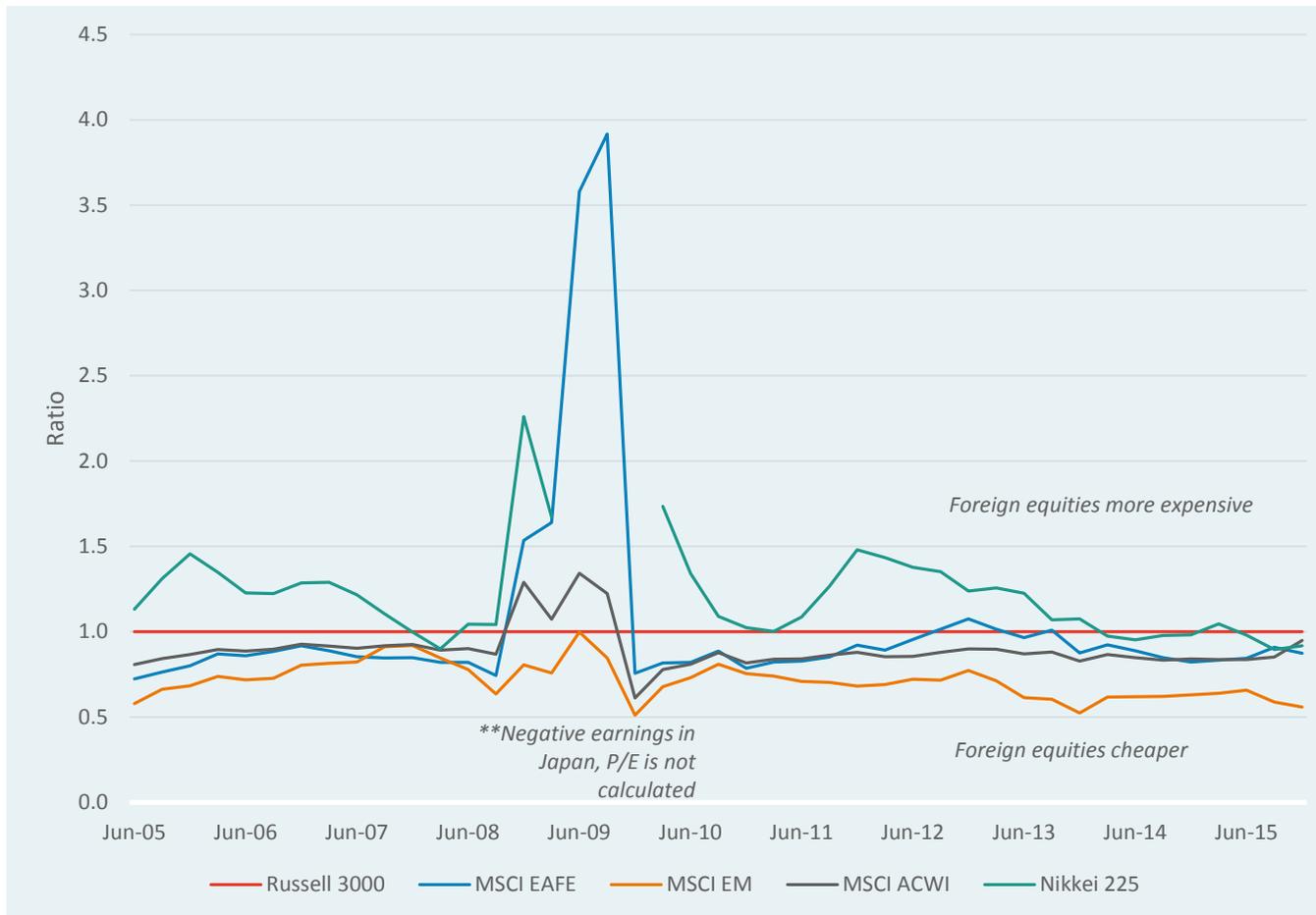
## FORWARD P/E



Source: Standard & Poor's, Russell Investments, as of 1/21/16

# Relative valuations

RUSSELL 3000 P/E DIVIDED BY FOREIGN INDEX P/E



On a P/E basis foreign equity markets appear relatively cheap compared to the U.S.

This has, however, often been the case and may not be indicative of future performance

Source: Russell Investments, MSCI, Nikkei, as of 12/31/15. Note negative earnings for Japan for certain periods cause a gap in the Japan series

# Equity volatility

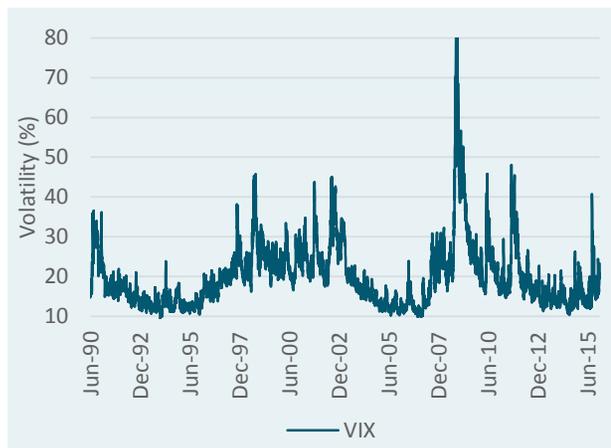
After significantly spiking in August, the VIX remained relatively range-bound through the remainder of the quarter. Closing 2015 near the high end of the range, an increase in volatility levels in early January may be sustained in the coming months. Disparate views on the impact and magnitude of a China slowdown, uncertainty surrounding the path of Fed rate hikes, and broad pain caused by a low commodity base have fueled greater price uncertainty.

Volatility in domestic indices is marginally lower than international indices with emerging markets remaining the most volatile. Geopolitical tensions and volatile commodities prices are likely to impact emerging market volatility in the coming months.

Volatility levels typically exhibit muted behavior during bull markets and spike during market downturns, which makes it important to monitor volatility.

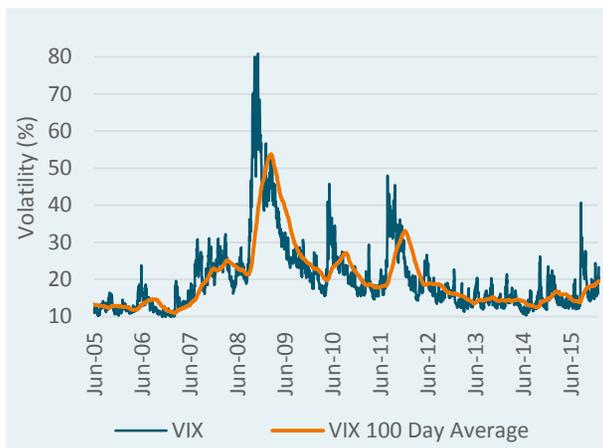
Equity volatility in both developed and EM has increased

## LONG-TERM VOLATILITY



Source: CBOE, as of 12/31/15

## INTERMEDIATE-TERM VOLATILITY



Source: CBOE, as of 12/31/15

## INTERNATIONAL EQUITY VOLATILITY



Source: MSCI, as of 12/31/15

# Domestic equity size and style

Small cap equities trailed large cap in Q4, and growth continues to outperform value. Over the past three years investors have been reward for taking on exposure to size, but punished for taking on exposure to value.

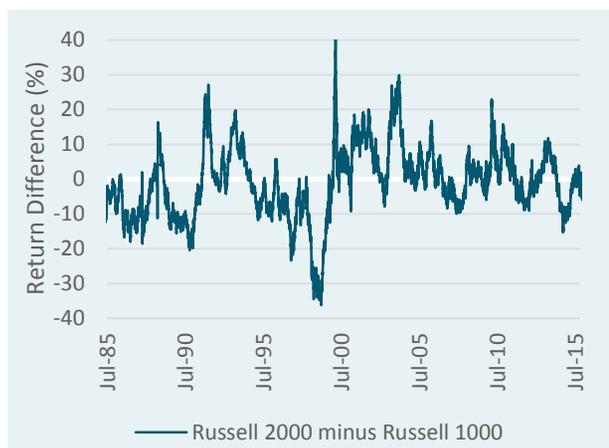
Appreciation of the U.S. dollar contributed to small cap outperformance as larger firms with foreign currency receipts received currencies worth less relative to the U.S. dollar. Growth beat value by a significant margin in 2015, outperforming by 9.6% in 2015.

Style performance is often displayed in cumulative terms; however, it is necessary to understand the degree of periodicity in these returns.

In the context of investment style factors, it should be noted that most of the embedded risk is primarily equity risk; however, factor awareness and management can be important in portfolio construction.

Size and value risk factors suffered losses in Q4

**SMALL CAP VS LARGE CAP (YOY)**



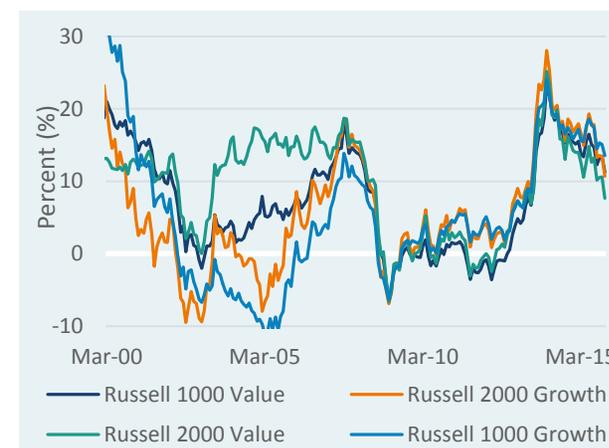
Source: Russell Investments, as of 12/31/15

**VALUE VS GROWTH (YOY)**



Source: Russell Investments, as of 12/31/15

**ROLLING 5 YEAR RETURN**



Source: Russell Investments, as of 12/31/15

# Domestic equity valuations

Domestic equity valuations rose slightly in Q4 on both a trailing and forward P/E basis, but have fallen back to a normal range since the beginning of the year.

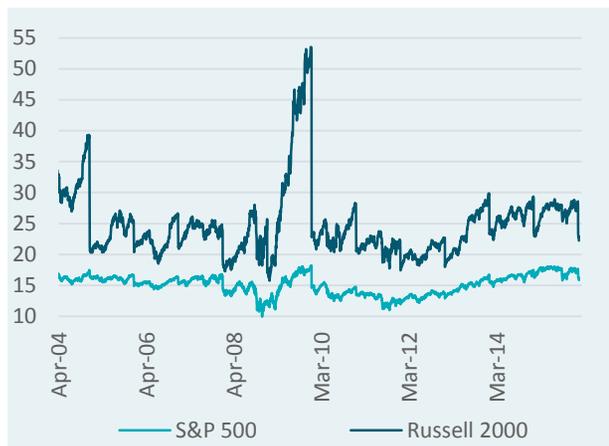
Stronger profit margin and earnings growth, and a general economic recovery since the 2008 have justified an expansion of equity valuations. Nominal equity returns are driven by dividends, earnings growth, valuation expansion, and inflation (prices keeping up with higher input costs). Dividend yields are currently low relative to history, profit margins are

strong relative to history, valuations are somewhat above average, and inflation is near record lows. This environment is not particularly accommodative for the fundamental drivers of long-term nominal equity returns.

The spread between S&P 500 dividend yield and the U.S. 10yr Treasury yield remains wide. Continued interest rate hikes could help bring this spread back to an average level.

Valuations rose slightly in Q4, and remain somewhat high

12 MONTH FORWARD P/E



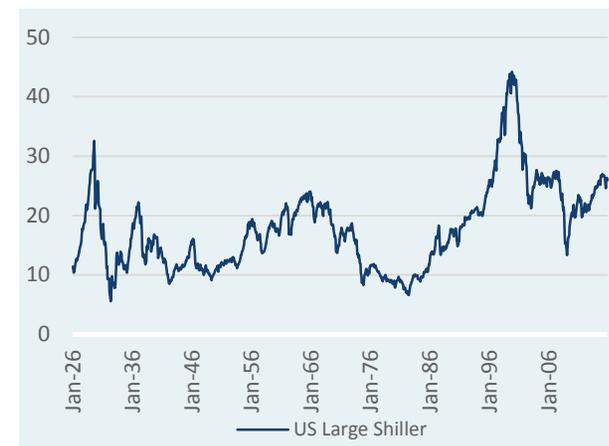
Source: Standard & Poor's, Russell Investments, as of 1/7/15

EQUITY YIELD LESS BOND YIELD



Source: Standard & Poor's, Bloomberg, as of 12/31/15

SHILLER P/E LONG-TERM



Source: Shiller, as of 12/31/15

# International equity historical return

International developed market equities, in general, have lagged their U.S. counterparts since the lows of 2009. International developed small cap equities outperformed significantly during this time. Currency hedging decisions continue to have a material impact on performance as of late.

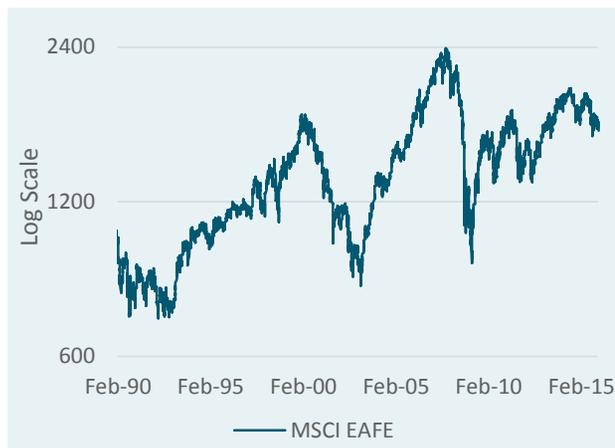
Emerging markets were relatively range-bound between 2010 and early 2015, but since early 2015 have moved into bear market territory. Growth concerns in China and a lower oil price have

contributed to poor returns. Currency volatility makes it necessary for investors to understand the nature of unhedged exposures to international equities. At times the return from currency exposure can be as large or larger than the equity return. Investors should think of these two exposure sets as separate investment decisions.

Despite volatility, it is important to remember that emerging market exposure has typically bolstered portfolio performance significantly over the long run.

Significant concerns in emerging markets continue

**EAFE LONG TERM (USD)**



Source: MSCI, as of 12/31/15

**EMERGING MARKETS LONG TERM (USD)**



Source: MSCI, as of 12/31/15

**EM EFFECT ON GLOBAL EQUITY PORTFOLIO**



Source: MSCI, as of 12/31/15

# International equity recent

Developed international equity performance was mixed in 2015. Currency fluctuations have overwhelmed positive equity returns in many markets, but added to returns in others.

European equities have typically underperformed U.S. equities in terms of earnings growth. This trend has reversed as European companies have outperformed. European equities appear less vulnerable than domestic equities, following aggressive financial engineering in the United States.

Severe foreign currency drawdowns experienced earlier in 2015 appear to have moderated in many countries during Q4. The price of oil and other commodities will likely be important in determining the future trend of foreign exchange rates.

Emerging markets were volatile in Q4 on the back of further downward oil price pressure, China growth concerns, and currency movement.

Positive Q4 performance

Currency exposure had significant impact

## SHORT-TERM PERFORMANCE



Source: MSCI, as of 1/25/16

## CUMULATIVE RETURN



Source: MSCI, as of 1/25/16

## 12 MONTH FORWARD P/E



Source: MSCI, as of 1/25/16

# International equity valuations

International equity valuations remain more attractive than domestic equities. Europe appears slightly cheap relative to history. Japan valuations are at the low end of the historical range, further contributing to our belief that Japan deserves a neutral or perhaps overweight position in portfolios. Emerging market valuations appear relatively attractive, though most likely priced appropriately due to greater accompanying risks. Investors should be aware of value traps in this space.

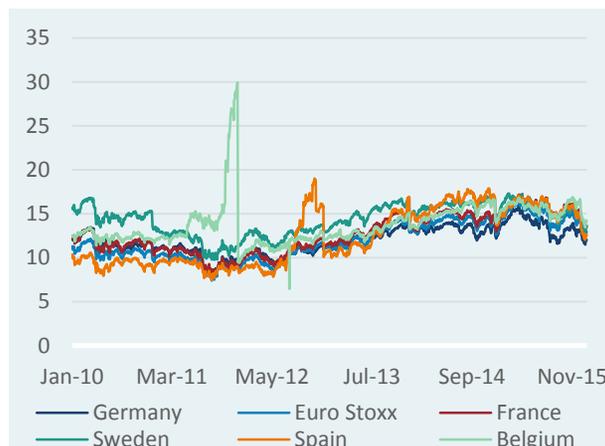
Corporate earnings in European markets have improved while U.S. companies struggle, but European equities continue to lag their U.S. counterparts. In contrast to a tighter business environment in the U.S., conditions in Europe may offer more room to run in terms of labor market slack, easy monetary conditions, and devalued currencies. Large valuation differences exist between individual countries in Europe, which may suggest active management is preferable.

12 MONTH FORWARD P/E



Source: MSCI, as of 1/25/16

COUNTRY VALUATIONS



Source: Bloomberg, as of 1/25/16

EQUITY YIELD LESS BOND YIELD



Source: MSCI, as of 1/25/16

# Emerging market equity

Emerging market equities continue a steep selloff in the face of decelerating Chinese growth and oil volatility. 2015 was a year of FX reserve net outflows for many countries which has been rare, given the steady accumulation of currency reserves in recent decades.

If allowed by current market environments U.S. interest rate hikes might result in further emerging market outflows; however, continued quantitative easing in other developed nations may counteract these effects, and in the current environment U.S. rate hikes are not certain.

Brazil was downgraded to junk rating by Fitch. The country continues to fight higher inflation with high interest rates, and is feeling economic pain from a budget deficit and less competitive currency.

Chinese officials recently initiated a widespread crackdown on corruption, involving a large number of private sector and government officials. Luxury goods markets have felt much pain following this initiative, as an estimated 50% of global luxury spending comes from Chinese consumers.

Energy price movement continues to have impact

China remains in the spotlight

## LONG TERM PERFORMANCE



Source: MSCI, as of 12/31/15

## ROLLING 3 YEAR RETURN



Source: MSCI, as of 12/31/15

## FORWARD P/E



Source: MSCI, as of 1/21/16

# Other assets

# Other asset volatility

Despite the highly anticipated rate hike at the end of the fourth quarter, fixed income volatility has remained relatively low. The end of 2015 was characterized by relatively range-bound trading as domestic investors experienced a flight to quality which was offset by the sell-off in global sovereign funds.

Foreign exchange volatility has remained relatively high based on activity from central banks and weaker commodity prices. The uncertainty around monetary

policy decisions and global financial stability has introduced increased volatility in this space.

The volatility of commodities has spiked based on the recent price movements in oil. The price moving to levels last seen in 2009 has created a significant amount of volatility. Contrary to expectations, the price of gold has remained relatively stagnant over the last 12-18 months.

## FIXED INCOME VOLATILITY



Source: Merrill Lynch, as of 12/31/15 (see Appendix)

## FX VOLATILITY



Source: JP Morgan, Russell Investments, as of 12/31/15

## COMMODITY VOLATILITY



Source: Bloomberg, as of 12/31/15

# Real estate & REITs

Real estate assets provide high exposure to the general business cycle. The recovery from the economic crisis has benefited the real estate market, which has shown significant recovery.

Real estate fundamentals remain strong with lower and declining vacancy rates across all property types. NOI is strongest in apartments, while industrial has shown increased strength recently. Low interest rates have

been accretive to returns for the asset class.

REITs have been volatile, trading with the uncertainty of future FED rate activity, which resulted in a discount to fund NAV though November.

Cap rates continue to trend downward, while spreads to Treasuries remain above historical averages.

Some opportunities but careful selection needed

REAL ESTATE & THE BUSINESS CYCLE



Source: NCREIF, as of 9/30/15

REAL ESTATE VACANCY BY TYPE



Source: NCREIF, as of 9/30/15

CAP RATE SPREADS



Source: NCREIF, as of 9/1/15

# Commodities

The Bloomberg Commodity Index returned -10.5% in Q4, driven by energy and industrial metals. OPEC dropped its oil production quotas in December, and oil inventory levels continue to climb as producers struggle to generate cash flow. Large inventory builds, along with the lifting of sanctions against Iran (a source of supply), may also act as headwinds.

Oil prices continue to fluctuate, which has impacted credit spreads, energy-related equities, and the health of many energy-exporting countries.

Significant bankruptcies of energy firms would traditionally help balance supply and help prices; however, large sums of money being dedicated to the distressed credit space may mean that assets, while written down, stay in production thereby prolonging the price pain.

Commodities are typically held in portfolios to provide inflation sensitivity. Despite commodities moving in an undesirable direction over the past year, they continue to fulfill this role.

Commodity cycle weakness persists

## 3 YR ROLLING RETURNS



## COMMODITY CORRELATION (3YR ROLLING)



## COMMODITY CUMULATIVE RETURNS



Source: Standard & Poor's, Bloomberg, as of 12/31/15

Source: MPI, as of 12/31/15 - correlation to Bloomberg Commodity

Source: S&P Dow Jones, as of 12/31/15

# Currency

The trade-weighted U.S. dollar extended its rise in Q4, strengthening to a level not seen since 2003. Dollar movement has a widespread impact, including: gains/losses for unhedged foreign equity exposure, commodity price volatility (many commodities are denominated in USD), and revenue volatility for businesses who pay or receive payment in non-U.S. dollars.

When measured and managed using unhedged benchmarks, international equity portfolios hold

significant exposure to a currency portfolio derived from the size and structure of the equity markets concerned. Despite recent dollar moderation, the trend towards U.S. dollar strength has made this a negative contribution for investors recently.

Treating currency as an independent market allows investors additional insight. Although returns from this exposure have typically been positive, recent price movements have tipped rolling one year return from currency beta into slightly negative territory.

Short term questions over continuing dollar strength

**LONG-TERM TRADE WEIGHTED USD**



Source: FRED, as of 1/1/16

**EFFECT OF CURRENCY (1YR ROLLING)**



Source: MSCI, as of 12/31/15

**CURRENCY MARKET BEHAVIOR**



Source: Russell Investments, as of 12/31/15

# MLPs – a complex set of exposures

A Master Limited Partnership (MLP) is a tax advantaged fund which derives most cash flows from investments in commodities and natural resources. These funds are often involved in midstream activities such as the transportation and storage of commodities (ex: oil pipelines and storage). MLPs generally hold exposure to toll-road type investments which are expected to earn fees somewhat independent of commodity prices due to take-or-pay contracts with commodity producing firms.

As commodity prices have fallen, MLP valuations have followed. Many investors point to the fact that MLP contracts are more exposed to commodity *volume* than they are to commodity *price*, and claim that MLP valuations have fallen too far (are currently undervalued). However take-or-pay contracts do not fully protect MLP returns were the counterparty to become insolvent. There may be value in the MLP space, but the risk exposures are complex and it is difficult to forecast how MLPs will react to the commodity sell-off.

It is difficult to forecast how MLPs will react to the effects of lower oil on the energy ecosystem

**ALERIAN MLP INDEX**



Source: Alerian, as of 1/15/15

**MLPS & COMMODITY PERFORMANCE (1YR)**



Source: Bloomberg, Alerian, as of 12/31/15 (note difference in end date)

**ENERGY HY CREDIT DEFAULT SWAP**



Source: Bloomberg, as of 1/22/15

# Welcome to 2016

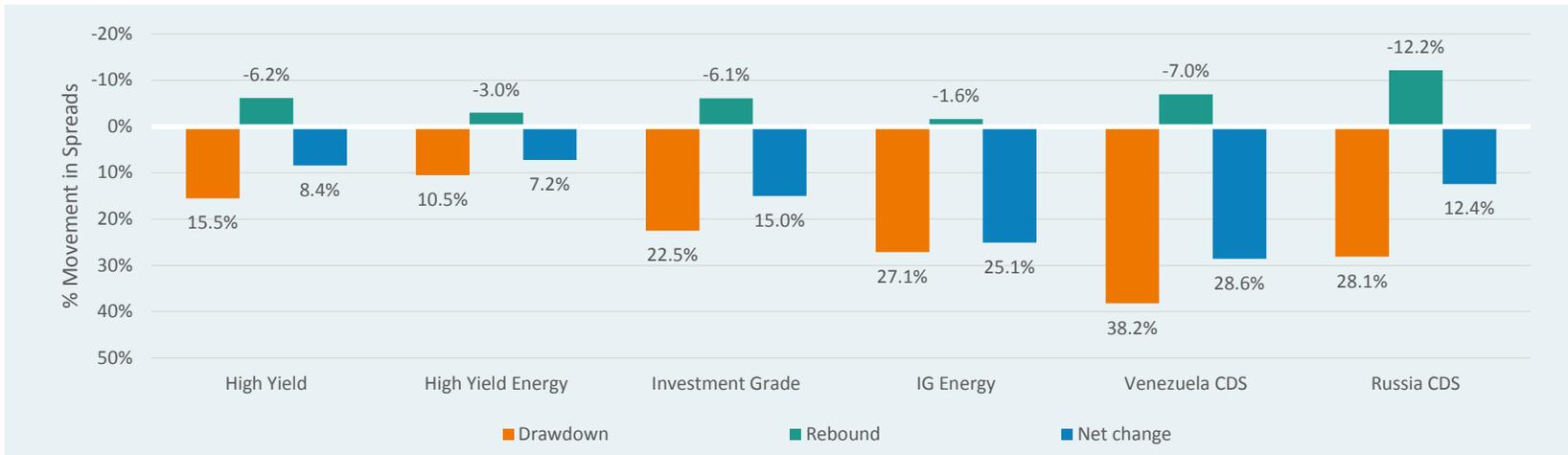
## EQUITY DRAWDOWN AND RECOVERY



Significant equity market drawdowns in January

Credit spreads moved wider with the drop in oil but have since compressed slightly

## SPREAD EXPANSION AND COMPRESSION



Source: Bloomberg, as of 1/22/2016 Returns are for the period observed during from 1/1/2016 to 1/22/2016. Indices are stated in USD and returns are gross.

# Appendix

# Periodic table of returns – December 2015

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	5-Year	10-Year
Real Estate	74.8	16.6	38.4	23.2	35.2	38.7	66.4	31.8	14.0	25.9	56.3	26.0	34.5	32.6	39.8	5.2	79.0	29.1	14.3	18.6	43.3	13.5	10.1	13.5	8.5
Large Cap Growth	32.9	8.1	37.8	23.1	32.9	27.0	43.1	22.8	8.4	10.3	48.5	22.2	21.4	26.9	16.2	1.4	37.2	26.9	7.8	18.1	38.8	13.2	5.7	12.5	8.0
Large Cap Equity	26.3	6.4	37.2	22.4	31.8	20.3	33.2	12.2	7.3	6.7	47.3	20.7	20.1	23.5	15.8	-6.5	34.5	24.5	2.6	17.9	34.5	13.0	0.9	12.4	8.0
US Bonds	23.8	4.4	31.0	21.6	30.5	19.3	27.3	11.6	3.3	1.6	46.0	18.3	14.0	22.2	11.8	-21.4	32.5	19.2	1.5	17.5	33.5	11.8	0.6	11.3	7.4
Cash	19.3	3.2	28.5	21.4	22.4	16.2	26.5	7.0	2.8	1.0	39.2	16.5	7.5	18.4	11.6	-25.9	28.4	16.8	0.4	16.4	33.1	6.0	0.0	10.7	6.8
Hedge Funds of Funds	18.9	2.6	25.7	16.5	16.2	15.6	24.3	6.0	2.5	-5.9	30.0	14.5	7.1	16.6	10.9	-28.9	27.2	16.7	0.1	16.3	32.5	5.6	-0.4	9.2	6.2
International Equity	18.1	0.4	19.6	14.4	13.9	8.7	21.3	4.1	-2.4	-6.0	29.9	14.3	6.3	15.5	10.3	-33.8	23.3	16.1	-2.1	15.3	23.3	4.9	-0.8	7.7	5.6
Small Cap Growth	13.4	-1.5	18.5	11.3	12.9	4.9	20.9	-3.0	-5.6	-11.4	29.7	12.9	5.3	15.1	7.0	-35.6	20.6	15.5	-2.9	14.6	12.1	4.2	-1.4	4.2	4.7
60/40 Global Portfolio	10.2	-1.8	15.2	10.3	10.6	1.2	13.2	-7.3	-9.1	-15.5	25.2	11.4	4.7	13.3	7.0	-36.8	19.7	13.1	-4.2	11.5	11.0	3.4	-2.5	3.6	4.5
Large Cap Value	9.7	-2.0	11.6	9.9	9.7	-2.5	11.4	-7.8	-9.2	-15.7	23.9	9.1	4.6	10.4	5.8	-37.6	18.9	10.2	-5.5	10.5	9.0	2.8	-3.8	3.2	3.6
Small Cap Equity	3.1	-2.4	11.1	6.4	5.2	-5.1	7.3	-14.0	-12.4	-20.5	11.6	6.9	4.6	9.1	4.4	-38.4	11.5	8.2	-5.7	4.8	0.1	0.0	-4.4	2.1	3.0
Small Cap Value	2.9	-2.9	7.5	6.0	2.1	-6.5	4.8	-22.4	-19.5	-21.7	9.0	6.3	4.2	4.8	-0.2	-38.5	5.9	6.5	-11.7	4.2	-2.0	-1.8	-7.5	0.0	2.3
Emerging Markets Equity	1.4	-3.5	5.7	5.1	-3.4	-25.3	-0.8	-22.4	-20.4	-27.9	4.1	4.3	3.2	4.3	-1.6	-43.1	0.2	5.7	-13.3	0.1	-2.3	-4.5	-14.9	-4.8	1.1
Commodities	-1.1	-7.3	-5.2	3.6	-11.6	-27.0	-1.5	-30.6	-21.2	-30.3	1.0	1.4	2.4	2.1	-9.8	-53.2	-16.9	0.1	-18.2	-1.1	-9.5	-17.0	-24.7	-13.5	-6.4

WORST

BEST

- Large Cap Equity
- Small Cap Growth
- Commodities
- Large Cap Value
- International Equity
- Real Estate
- Large Cap Growth
- Emerging Markets Equity
- Hedge Funds of Funds
- US Bonds
- 60% MSCI ACWI/40% BC Global Bond
- Small Cap Equity
- Cash
- Small Cap Value

Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Growth, Russell 2000, Russell 2000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, BC Agg, T-Bill 90 Day, Bloomberg Comm Index, NCREIF Property, HFRI FOF, MSCI ACWI, BC Global Bond.

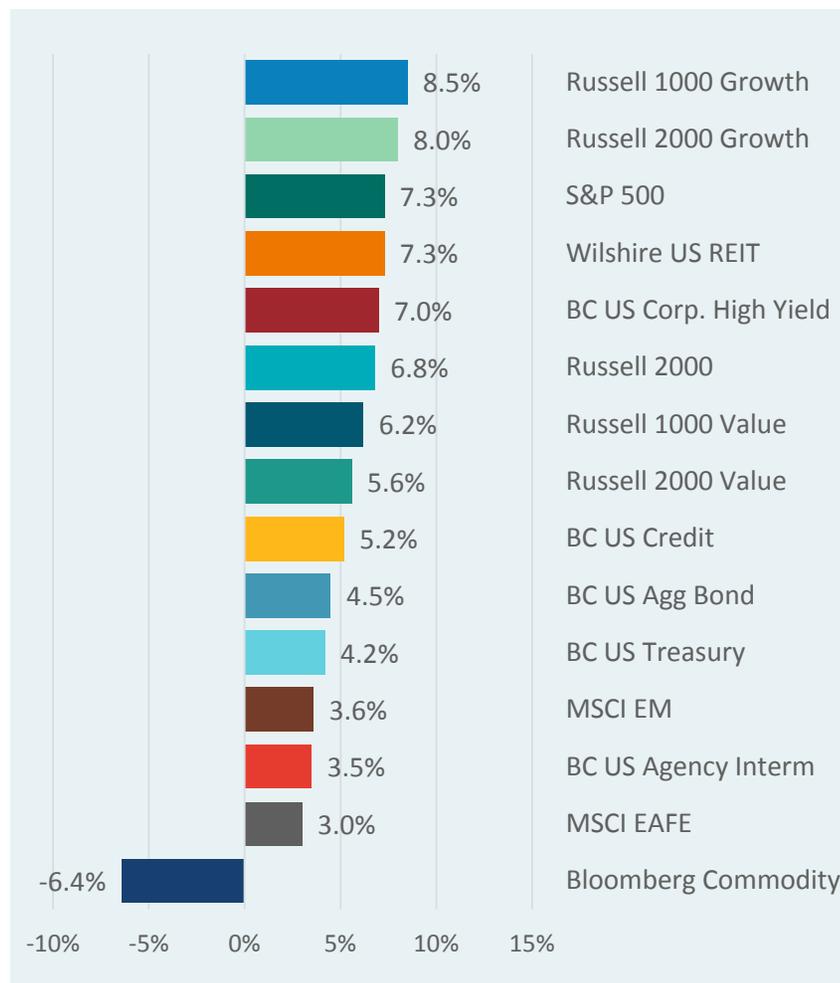
# Major asset class returns

ONE YEAR ENDING DECEMBER



Source: Morningstar, Verus, as of 12/31/15

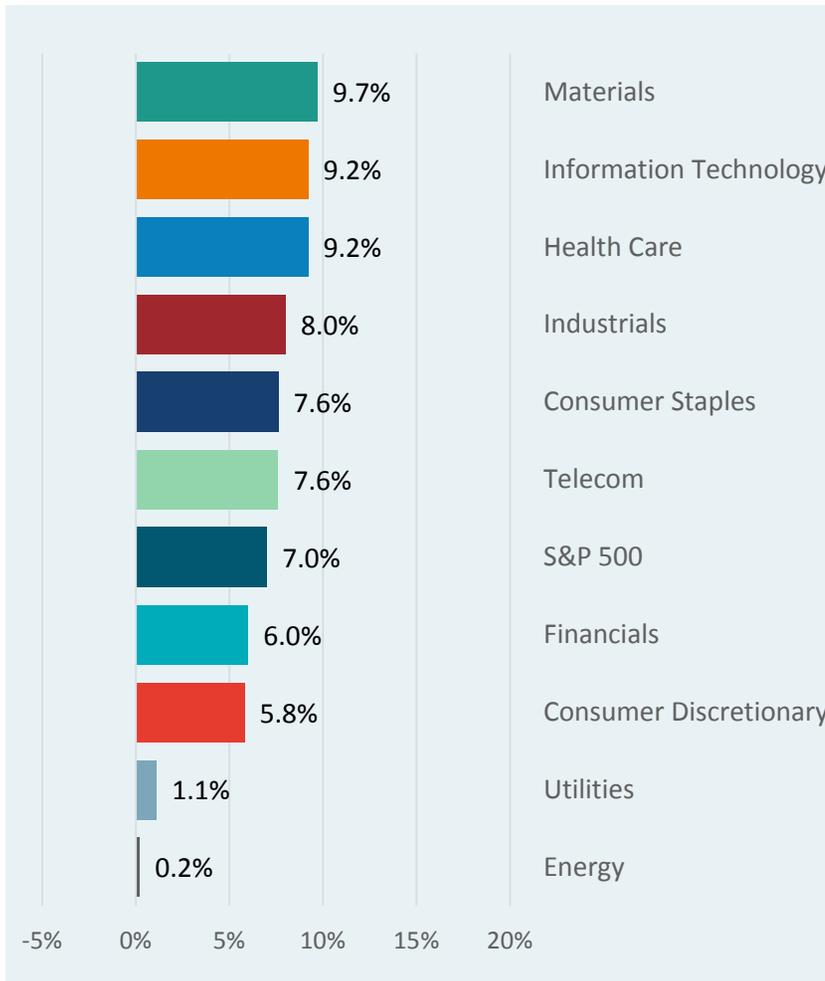
TEN YEARS ENDING DECEMBER



Source: Morningstar, Verus, as of 12/31/15

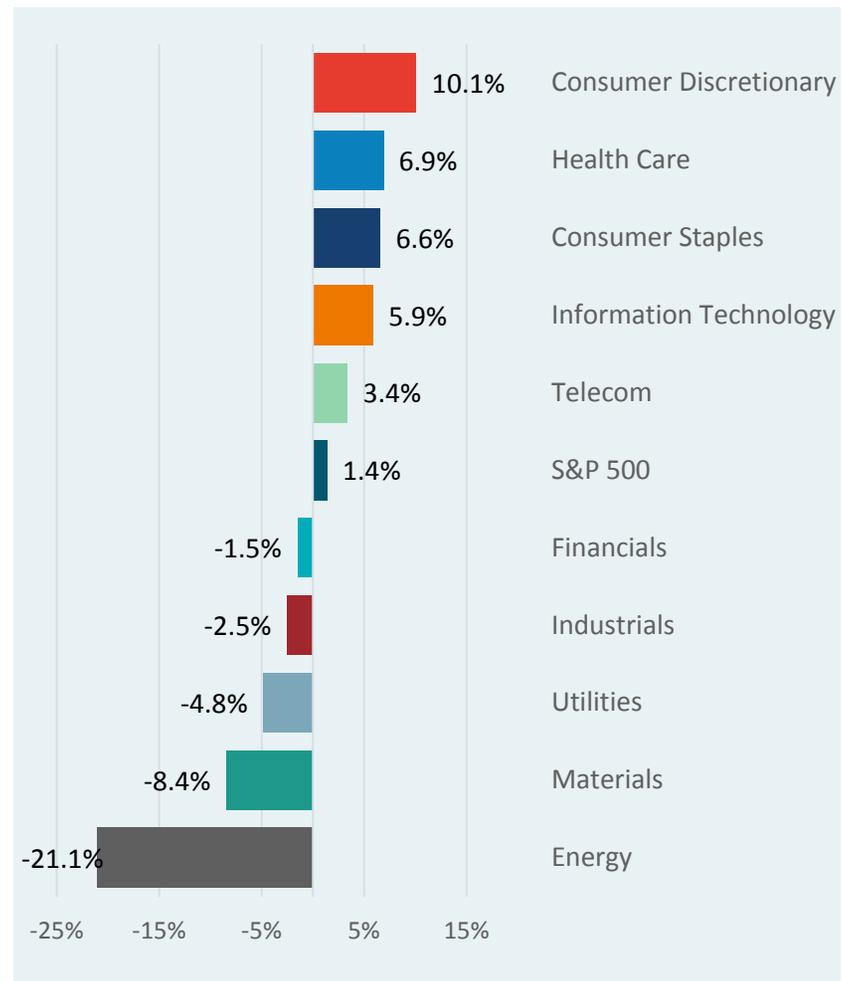
# S&P 500 and S&P 500 sector returns

4<sup>TH</sup> QUARTER



Source: Morningstar as of 12/31/15

2015 CALENDAR YEAR



Source: Morningstar as of 12/31/15

# Detailed index returns

## DOMESTIC EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Core Index</b>							
S&P 500	(1.6)	7.0	1.4	1.4	15.1	12.6	7.3
S&P 500 Equal Weighted	(2.3)	5.0	(2.2)	(2.2)	15.1	12.4	8.5
DJ Industrial Average	(1.5)	7.7	0.2	0.2	12.7	11.3	7.7
Russell Top 200	(1.4)	7.7	2.4	2.4	15.4	12.9	7.2
Russell 1000	(1.8)	6.5	0.9	0.9	15.0	12.4	7.4
Russell 2000	(5.0)	3.6	(4.4)	(4.4)	11.7	9.2	6.8
Russell 3000	(2.1)	6.3	0.5	0.5	14.7	12.2	7.4
Russell Mid Cap	(2.7)	3.6	(2.4)	(2.4)	14.2	11.4	8.0
<b>Style Index</b>							
Russell 1000 Growth	(1.5)	7.3	5.7	5.7	16.8	13.5	8.5
Russell 1000 Value	(2.2)	5.6	(3.8)	(3.8)	13.1	11.3	6.2
Russell 2000 Growth	(4.8)	4.3	(1.4)	(1.4)	14.3	10.7	8.0
Russell 2000 Value	(5.3)	2.9	(7.5)	(7.5)	9.1	7.7	5.6

## INTERNATIONAL EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Broad Index</b>							
MSCI EAFE	(1.4)	4.7	(0.8)	(0.8)	5.0	3.6	3.0
MSCI AC World ex US	(1.9)	3.2	(5.7)	(5.7)	1.5	1.1	2.9
MSCI EM	(2.2)	0.7	(14.9)	(14.9)	(6.8)	(4.8)	3.6
MSCI EAFE Small Cap	0.7	6.8	9.6	9.6	10.4	6.3	4.6
<b>Style Index</b>							
MSCI EAFE Growth	(0.8)	6.7	4.1	4.1	6.8	4.6	4.0
MSCI EAFE Value	(1.9)	2.7	(5.7)	(5.7)	3.1	2.6	2.0
<b>Regional Index</b>							
MSCI UK	(3.9)	0.7	(7.6)	(7.6)	1.8	3.5	3.1
MSCI Japan	0.3	9.3	9.6	9.6	10.2	4.4	0.9
MSCI Euro	(3.5)	3.4	(2.8)	(2.8)	4.6	3.0	2.2
MSCI EM Asia	(0.7)	3.5	(9.8)	(9.8)	(1.2)	(0.8)	5.8
MSCI EM Latin American	(4.3)	(2.7)	(31.0)	(31.0)	(19.4)	(14.4)	1.2

## FIXED INCOME

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Broad Index</b>							
BC US Treasury US TIPS	(0.8)	(0.6)	(1.4)	(1.4)	(2.3)	2.6	3.9
BC US Treasury Bills	0.0	(0.0)	0.1	0.1	0.1	0.1	1.3
BC US Agg Bond	(0.3)	(0.6)	0.6	0.6	1.4	3.2	4.5
<b>Duration</b>							
BC US Treasury 1-3 Yr	(0.1)	(0.4)	0.6	0.6	0.5	0.7	2.4
BC US Treasury Long	(0.0)	(1.4)	(1.2)	(1.2)	2.6	7.7	6.7
BC US Treasury	(0.2)	(0.9)	0.8	0.8	1.0	2.9	4.2
<b>Issuer</b>							
BC US MBS	(0.0)	(0.1)	1.5	1.5	2.0	3.0	4.6
BC US Corp. High Yield	(2.5)	(2.1)	(4.5)	(4.5)	1.7	5.0	7.0
BC US Agency Interm	(0.2)	(0.5)	1.2	1.2	0.9	1.6	3.5
BC US Credit	(0.8)	(0.5)	(0.8)	(0.8)	1.5	4.4	5.2

## OTHER

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Index</b>							
Bloomberg Commodity	(3.1)	(10.5)	(24.7)	(24.7)	(17.3)	(13.5)	(6.4)
Wilshire US REIT	1.9	7.5	4.2	4.2	11.8	12.4	7.3
<b>Regional Index</b>							
JPM EMBI Global Div	(1.4)	1.3	1.2	1.2	1.0	5.4	6.9
JPM GBI-EM Global Div	(2.2)	0.0	(14.9)	(14.9)	(10.0)	(3.5)	4.3

Source: Morningstar, as of 12/31/15

# Definitions

**Bloomberg US Weekly Consumer Comfort Index** - tracks the public's economic attitudes each week, providing a high-frequency read on consumer sentiment. The index, based on cell and landline telephone interviews with a random, representative national sample of U.S. adults, tracks Americans' ratings of the national economy, their personal finances and the buying climate on a weekly basis, with views of the economy's direction measured separately each month. ([www.langerresearch.com](http://www.langerresearch.com))

**University of Michigan Consumer Sentiment Index** - A survey of consumer attitudes concerning both the present situation as well as expectations regarding economic conditions conducted by the University of Michigan. For the preliminary release approximately three hundred consumers are surveyed while five hundred are interviewed for the final figure. The level of consumer sentiment is related to the strength of consumer spending. ([www.Bloomberg.com](http://www.Bloomberg.com))

**Citi Economic Surprise Index** - objective and quantitative measures of economic news. Defined as weighted historical standard deviations of data surprises (actual releases vs Bloomberg survey median). A positive reading of the Economic Surprise Index suggests that economic releases have on balance been beating consensus. The indices are calculated daily in a rolling three-month window. The weights of economic indicators are derived from relative high-frequency spot FX impacts of 1 standard deviation data surprises. The indices also employ a time decay function to replicate the limited memory of markets. ([www.Bloomberg.com](http://www.Bloomberg.com))

**Merrill Lynch Option Volatility Estimate (MOVE) Index** – a yield curve weighted index comprised of a weighted set of 1-month Treasury options, including 2.5.10 and 30 year tenor contracts. This index is an indicator of the expected (implied) future volatility in the rate markets.

# Notices & disclosures

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# Contra Costa County Employees' Retirement Association

Investment Performance Review  
Period Ending: December 31, 2015



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# Executive Summary

**To:** Contra Costa County Employees' Retirement Association  
**From:** Verus  
**Date:** February 25, 2016  
**Re:** Quarterly Review – Period Ending December 31, 2015

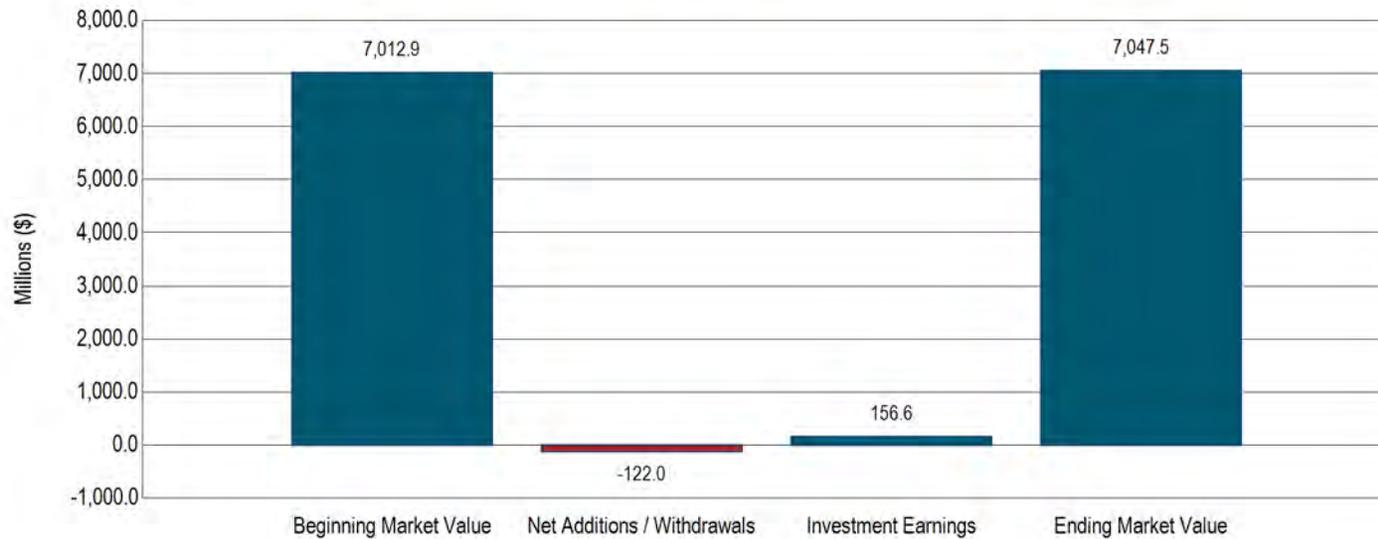
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- The CCCERA Total Fund returned 2.3% for the fourth quarter, below the 2.5% return of the median public fund, above the 0.4% return of the CPI +4%, and below the 2.7% return of the policy index. CCCERA's Total Fund performance trails the CPI +4% on a year-to-date. The Total Fund is above the median, the CPI +4%, and the policy index over all other trailing time periods.
- CCCERA domestic equities returned 4.7% for the quarter, below the 6.3% return of the Russell 3000 Index while ranking in the 49<sup>th</sup> percentile of all cap domestic equity portfolios.
- CCCERA international equities returned 4.4% for the quarter, below the 4.7% return of the MSCI EAFE and above the 3.3% return of the MSCI ACWI ex-US while ranking in the 61<sup>st</sup> percentile of MSCI ACWI ex-US portfolios.
- CCCERA global equities returned 6.1% for the quarter, above the 5.0% return of the MSCI ACWI while ranking in the 23<sup>rd</sup> percentile of global equity portfolios.
- CCCERA domestic fixed income, excluding the Allianz high yield portfolio, returned 0.0% for the quarter, above both the -0.5% return of the Barclays U.S. Universal and the -0.6% return of the Barclays US Aggregate while ranking in the 6<sup>th</sup> percentile of domestic core fixed income portfolios.
- The Allianz high yield portfolio returned -1.6% for the quarter, above the -2.2% return of the ML High Yield index while ranking in the 61<sup>st</sup> percentile of domestic high yield fixed income portfolios.
- CCCERA global fixed income returned -0.9% for the quarter, in-line with the -0.9% return of the Barclays Global Aggregate Index while ranking in the 60<sup>th</sup> percentile of global fixed income portfolios.
- CCCERA inflation hedging investments returned -1.1% for the quarter, below the 0.4% return of the CPI+4% benchmark.
- CCCERA real estate returned 1.8% for the quarter, below the 4.6% return of the Real Estate Benchmark.
- The total equity allocation stood at 44.7% at the end of the fourth quarter, below the current target of 46.6%. Total global fixed income stood at 24.5%, above the target of 23.6%. High yield fixed income stood at 4.7% and inflation hedging assets stood at 4.8%, both below their respective targets of 5.0%. Real estate stood at 12.1%, below the target of 12.5%. Alternative investments stood at 7.7%, above the target 6.0%. Opportunistic stood at 0.3%, below the target of 0.8%. Cash stood at 1.1%, above the target of 0.5%.

**Portfolio Reconciliation**

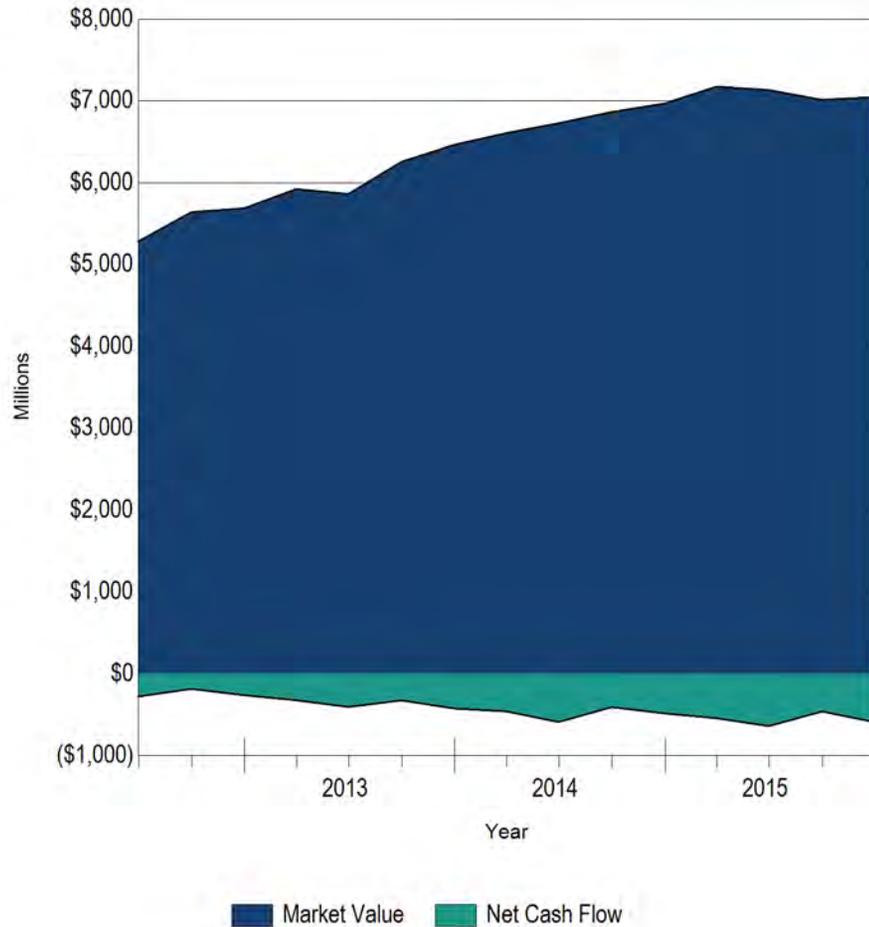
Sources of Portfolio Growth	Last Three Months	Year-To-Date
Beginning Market Value	\$7,012,917,358	\$6,968,229,116
Net Additions/Withdrawals	-\$122,003,611	-\$65,925,220
Investment Earnings	\$156,592,086	\$145,201,936
<b>Ending Market Value</b>	<b>\$7,047,505,832</b>	<b>\$7,047,505,832</b>

**Change in Market Value  
Last Three Months**

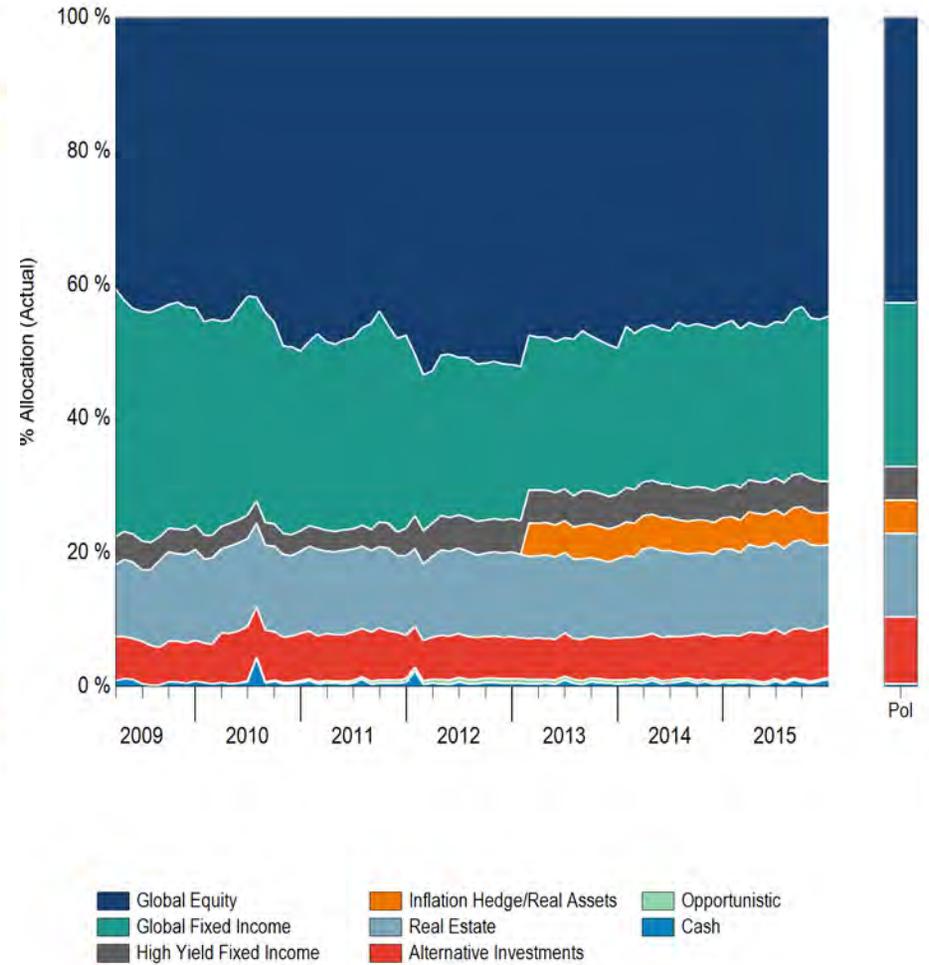


Contributions and withdrawals may include intra-account transfers between managers/funds.

Market Value History  
 Cumulative Cash Flows



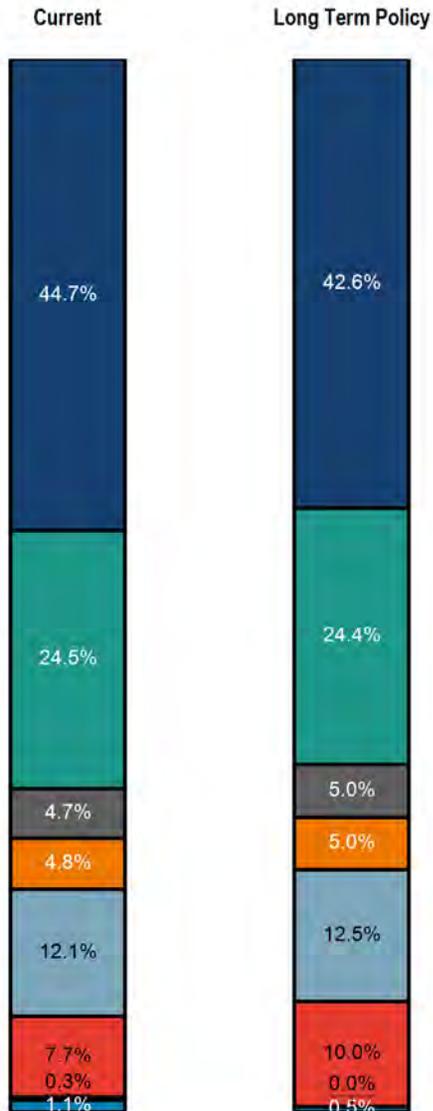
Asset Allocation History



Total Fund

Asset Allocation vs. Long Term Target Policy

Period Ending: December 31, 2015



Allocation vs. Long Term Target

	Current Balance	Current Allocation	Long Term Target	Difference	Long Term Target Range	Within IPS Range?
Global Equity	\$3,151,883,505	44.7%	42.6%	\$149,646,021	40.0% - 55.0%	Yes
Global Fixed Income	\$1,729,951,600	24.5%	24.4%	\$10,360,177	20.0% - 30.0%	Yes
High Yield Fixed Income	\$333,193,329	4.7%	5.0%	-\$19,181,963	2.0% - 9.0%	Yes
Inflation Hedge/Real Assets	\$341,104,388	4.8%	5.0%	-\$11,270,904	0.0% - 10.0%	Yes
Real Estate	\$851,548,142	12.1%	12.5%	-\$29,390,087	10.0% - 16.0%	Yes
Alternative Investments	\$542,766,161	7.7%	10.0%	-\$161,984,422	5.0% - 12.0%	Yes
Opportunistic	\$20,766,344	0.3%	0.0%	\$20,766,344	0.0% - 5.0%	Yes
Cash	\$76,292,364	1.1%	0.5%	\$41,054,834	0.0% - 1.0%	No
<b>Total</b>	<b>\$7,047,505,832</b>	<b>100.0%</b>	<b>100.0%</b>			

Allocation vs. Current Targets

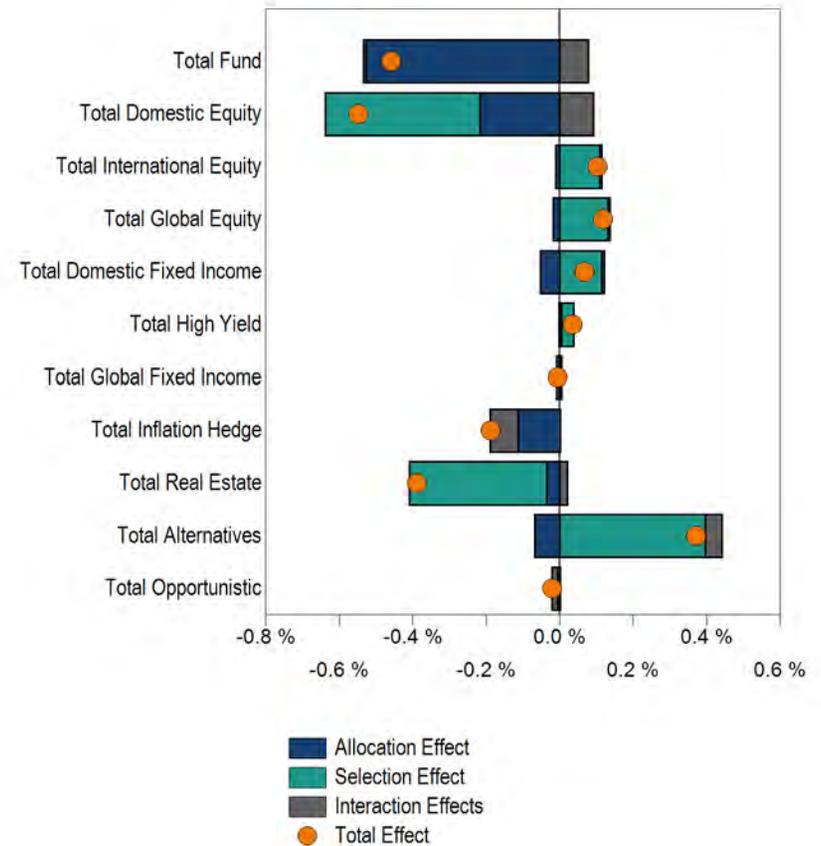
	Current Balance	Current Allocation	Current Target	Difference
Global Equity	\$3,151,883,505	44.7%	46.6%	-\$132,254,213
Global Fixed Income	\$1,729,951,600	24.5%	23.6%	\$66,740,224
High Yield Fixed Income	\$333,193,329	4.7%	5.0%	-\$19,181,963
Inflation Hedge/Real Assets	\$341,104,388	4.8%	5.0%	-\$11,270,904
Real Estate	\$851,548,142	12.1%	12.5%	-\$29,390,087
Alternative Investments	\$542,766,161	7.7%	6.0%	\$119,915,812
Opportunistic	\$20,766,344	0.3%	0.8%	-\$35,613,703
Cash	\$76,292,364	1.1%	0.5%	\$41,054,834
<b>Total</b>	<b>\$7,047,505,832</b>	<b>100.0%</b>	<b>100.0%</b>	

# Total Fund Executive Summary (Gross of Fees)

Period Ending: December 31, 2015

	QTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>Total Fund</b>	<b>2.3</b>	<b>2.4</b>	<b>2.4</b>	<b>8.9</b>	<b>8.7</b>	<b>6.7</b>
Policy Index	2.7	0.6	0.6	8.2	8.4	--
CPI + 4%	0.4	4.8	4.8	5.0	5.6	5.9
InvestorForce Public DB > \$1B Gross Rank	61	7	7	13	3	5
<b>Total Domestic Equity</b>	<b>4.7</b>	<b>1.1</b>	<b>1.1</b>	<b>15.3</b>	<b>12.9</b>	<b>7.9</b>
Russell 3000	6.3	0.5	0.5	14.7	12.2	7.4
eA US All Cap Equity Gross Rank	49	36	36	35	27	54
<b>Total International Equity</b>	<b>4.4</b>	<b>-1.2</b>	<b>-1.2</b>	<b>5.3</b>	<b>4.1</b>	<b>2.9</b>
MSCI ACWI ex USA Gross	3.3	-5.3	-5.3	1.9	1.5	3.4
MSCI EAFE Gross	4.7	-0.4	-0.4	5.5	4.1	3.5
eA All ACWI ex-US Equity Gross Rank	61	61	61	53	53	95
<b>Total Global Equity</b>	<b>6.1</b>	<b>2.2</b>	<b>2.2</b>	<b>10.0</b>	<b>6.9</b>	<b>--</b>
MSCI ACWI	5.0	-2.4	-2.4	7.7	6.1	--
eA All Global Equity Gross Rank	23	31	31	50	68	--
<b>Total Domestic Fixed Income</b>	<b>0.0</b>	<b>1.7</b>	<b>1.7</b>	<b>3.4</b>	<b>5.4</b>	<b>5.9</b>
Barclays U.S. Universal	-0.5	0.4	0.4	1.5	3.5	4.7
Barclays Aggregate	-0.6	0.6	0.6	1.4	3.2	4.5
eA US Core Fixed Inc Gross Rank	6	9	9	3	3	8
<b>Total High Yield</b>	<b>-1.6</b>	<b>-3.5</b>	<b>-3.5</b>	<b>2.0</b>	<b>5.2</b>	<b>7.1</b>
BofA ML High Yield Master II	-2.2	-4.6	-4.6	1.6	4.8	6.8
eA US High Yield Fixed Inc Gross Rank	61	68	68	68	59	39
<b>Total Global Fixed Income</b>	<b>-0.9</b>	<b>-3.0</b>	<b>-3.0</b>	<b>-2.1</b>	<b>1.1</b>	<b>3.0</b>
Barclays Global Aggregate	-0.9	-3.2	-3.2	-1.7	0.9	3.7
eA All Global Fixed Inc Gross Rank	60	59	59	81	79	97

Attribution Effects  
3 Months Ending December 31, 2015



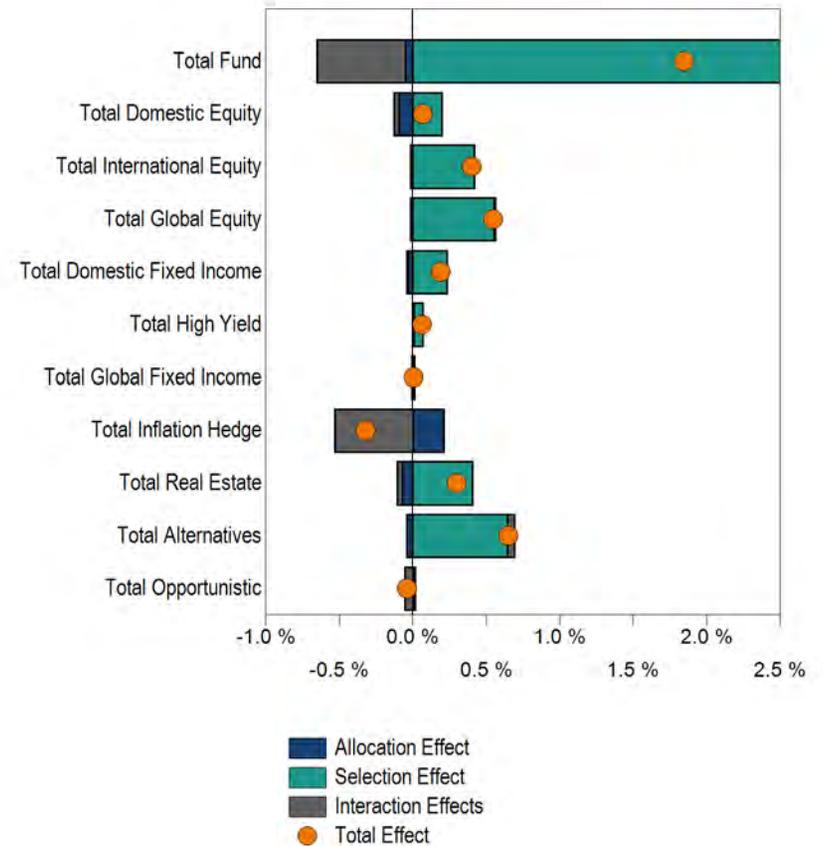
Policy Index (as of 4/1/2012): 27.7% Russell 3000, 10.6% MSCI ACWI ex-US (Gross), 12.3% MSCI ACWI (Net), 19.6% Barclays U.S. Aggregate, 5% Bank of America High Yield Master II, 4% Barclays Global Aggregate, 13.5% Real Estate Benchmark, 6.8% S&P 500 +4% (Lagged), 0.5% 91-Day T-Bills. Real Estate Benchmark: 40% Wilshire REIT, 50% NCREIF Property Index, 10% FTSE/EPRA NAREIT Developed ex-USA.

# Total Fund Executive Summary (Gross of Fees)

Period Ending: December 31, 2015

	QTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>Total Inflation Hedge</b>	<b>-1.1</b>	<b>-5.6</b>	<b>-5.6</b>	<b>-1.7</b>	<b>--</b>	<b>--</b>
CPI + 4%	0.4	4.8	4.8	5.0	--	--
<b>Total Real Estate</b>	<b>1.8</b>	<b>11.3</b>	<b>11.3</b>	<b>14.1</b>	<b>13.9</b>	<b>7.0</b>
Real Estate Benchmark	4.6	8.2	8.2	11.3	12.2	8.3
NCREIF-ODCE	3.3	15.0	15.0	13.8	13.7	6.5
NCREIF Property Index	2.9	13.3	13.3	12.0	12.2	7.8
<b>Total Alternatives</b>	<b>0.1</b>	<b>13.2</b>	<b>13.2</b>	<b>15.2</b>	<b>13.8</b>	<b>12.6</b>
S&P 500 Index +4% (Lagged)	-5.5	3.4	3.4	16.9	17.8	11.1
<b>Total Opportunistic</b>	<b>-3.6</b>	<b>-10.1</b>	<b>-10.1</b>	<b>4.5</b>	<b>3.9</b>	<b>--</b>
CPI + 4%	0.4	4.8	4.8	5.0	5.6	--

Attribution Effects  
1 Year Ending December 31, 2015

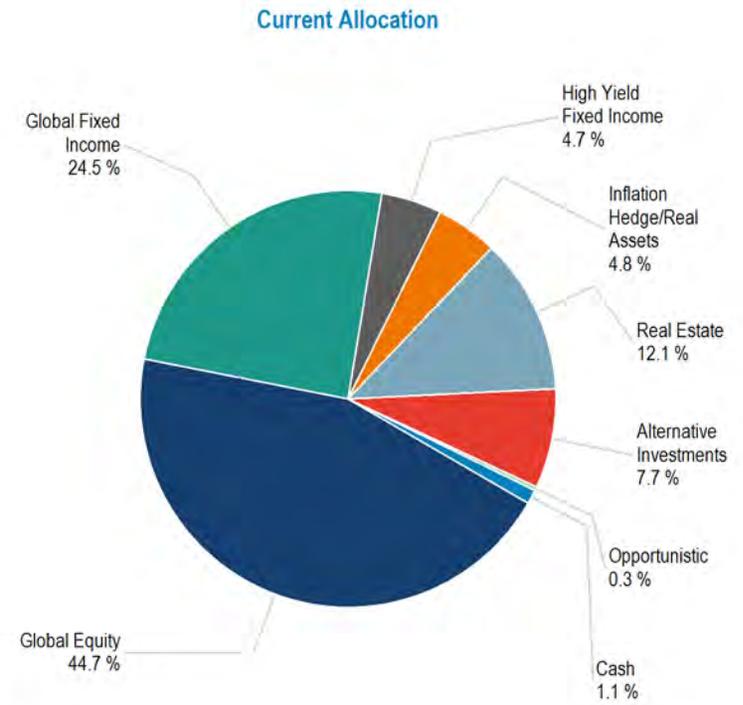


Policy Index (as of 4/1/2012): 27.7% Russell 3000, 10.6% MSCI ACWI ex-US (Gross), 12.3% MSCI ACWI (Net), 19.6% Barclays U.S. Aggregate, 5% Bank of America High Yield Master II, 4% Barclays Global Aggregate, 13.5% Real Estate Benchmark, 6.8% S&P 500 +4% (Lagged), 0.5% 91-Day T-Bills. Real Estate Benchmark: 40% Wilshire REIT, 50% NCREIF Property Index, 10% FTSE/EPRA NAREIT Developed ex-USA.

# Total Fund Executive Summary (Net of Fees)

Period Ending: December 31, 2015

	QTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>Total Fund</b>	<b>2.2</b>	<b>1.9</b>	<b>1.9</b>	<b>8.2</b>	<b>8.0</b>	<b>6.1</b>
<i>Policy Index</i>	2.7	0.6	0.6	8.2	8.4	--
<i>CPI + 4%</i>	0.4	4.8	4.8	5.0	5.6	5.9
<b>Total Domestic Equity</b>	<b>4.6</b>	<b>0.6</b>	<b>0.6</b>	<b>14.8</b>	<b>12.5</b>	<b>7.5</b>
<i>Russell 3000</i>	6.3	0.5	0.5	14.7	12.2	7.4
<b>Total International Equity</b>	<b>4.3</b>	<b>-1.6</b>	<b>-1.6</b>	<b>4.9</b>	<b>3.7</b>	<b>2.4</b>
<i>MSCI ACWI ex USA Gross</i>	3.3	-5.3	-5.3	1.9	1.5	3.4
<i>MSCI EAFE Gross</i>	4.7	-0.4	-0.4	5.5	4.1	3.5
<b>Total Global Equity</b>	<b>6.0</b>	<b>1.6</b>	<b>1.6</b>	<b>9.3</b>	<b>6.3</b>	<b>--</b>
<i>MSCI ACWI</i>	5.0	-2.4	-2.4	7.7	6.1	--
<b>Total Domestic Fixed Income</b>	<b>-0.1</b>	<b>1.4</b>	<b>1.4</b>	<b>3.0</b>	<b>5.0</b>	<b>5.4</b>
<i>Barclays U.S. Universal</i>	-0.5	0.4	0.4	1.5	3.5	4.7
<i>Barclays Aggregate</i>	-0.6	0.6	0.6	1.4	3.2	4.5
<b>Total High Yield</b>	<b>-1.6</b>	<b>-3.9</b>	<b>-3.9</b>	<b>1.6</b>	<b>4.9</b>	<b>7.0</b>
<i>BofA ML High Yield Master II</i>	-2.2	-4.6	-4.6	1.6	4.8	6.8
<b>Total Global Fixed Income</b>	<b>-0.9</b>	<b>-3.3</b>	<b>-3.3</b>	<b>-2.3</b>	<b>0.9</b>	<b>2.8</b>
<i>Barclays Global Aggregate</i>	-0.9	-3.2	-3.2	-1.7	0.9	3.7
<b>Total Inflation Hedge</b>	<b>-1.2</b>	<b>-6.5</b>	<b>-6.5</b>	<b>-2.6</b>	<b>--</b>	<b>--</b>
<i>CPI + 4%</i>	0.4	4.8	4.8	5.0	--	--

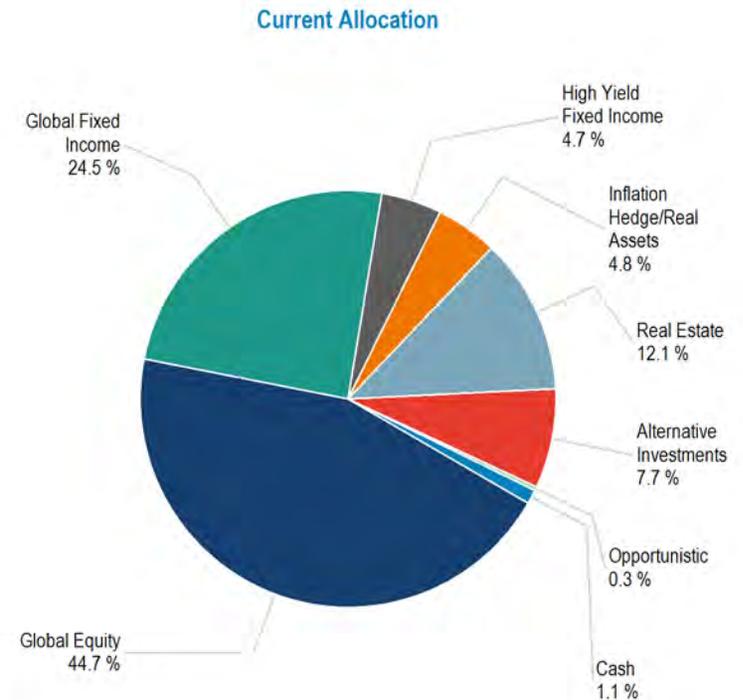


*Policy Index (as of 4/1/2012): 27.7% Russell 3000, 10.6% MSCI ACWI ex-US (Gross), 12.3% MSCI ACWI (Net), 19.6% Barclays U.S. Aggregate, 5% Bank of America High Yield Master II, 4% Barclays Global Aggregate, 13.5% Real Estate Benchmark, 6.8% S&P 500 +4% (Lagged), 0.5% 91-Day T-Bills. Real Estate Benchmark: 40% Wilshire REIT, 50% NCREIF Property Index, 10% FTSE/EPRA NAREIT Developed ex-USA.*

# Total Fund Executive Summary (Net of Fees)

Period Ending: December 31, 2015

	QTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>Total Real Estate</b>	<b>1.7</b>	<b>10.4</b>	<b>10.4</b>	<b>12.7</b>	<b>12.6</b>	<b>5.9</b>
Real Estate Benchmark	4.6	8.2	8.2	11.3	12.2	8.3
NCREIF-ODCE	3.3	15.0	15.0	13.8	13.7	6.5
NCREIF Property Index	2.9	13.3	13.3	12.0	12.2	7.8
<b>Total Alternatives</b>	<b>0.1</b>	<b>11.8</b>	<b>11.8</b>	<b>13.2</b>	<b>11.6</b>	<b>10.1</b>
S&P 500 Index +4% (Lagged)	-5.5	3.4	3.4	16.9	17.8	11.1
<b>Total Opportunistic</b>	<b>-3.6</b>	<b>-10.1</b>	<b>-10.1</b>	<b>4.5</b>	<b>3.8</b>	<b>--</b>
CPI + 4%	0.4	4.8	4.8	5.0	5.6	--



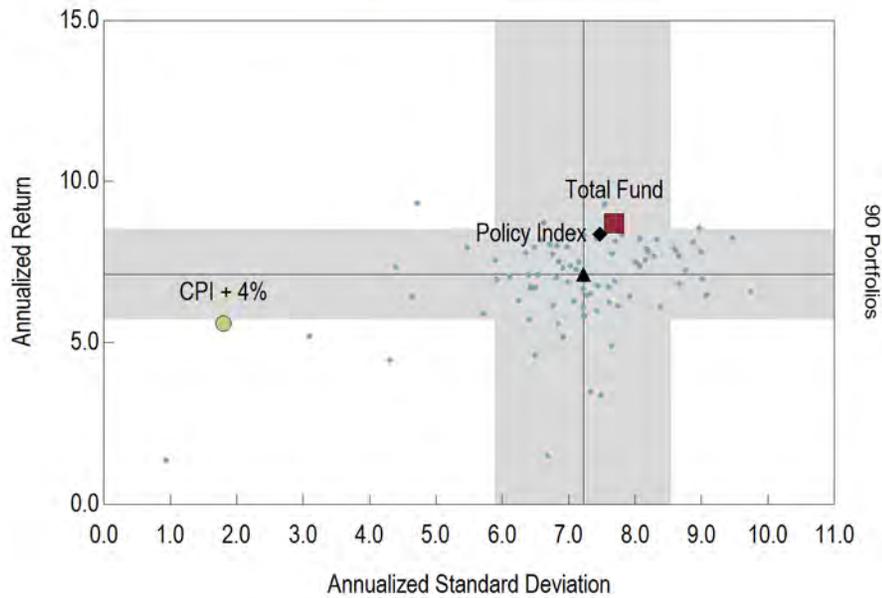
Policy Index (as of 4/1/2012): 27.7% Russell 3000, 10.6% MSCI ACWI ex-US (Gross), 12.3% MSCI ACWI (Net), 19.6% Barclays U.S. Aggregate, 5% Bank of America High Yield Master II, 4% Barclays Global Aggregate, 13.5% Real Estate Benchmark, 6.8% S&P 500 +4% (Lagged), 0.5% 91-Day T-Bills. Real Estate Benchmark: 40% Wilshire REIT, 50% NCREIF Property Index, 10% FTSE/EPRA NAREIT Developed ex-USA.

Total Fund  
Risk Analysis - 5 Years (Gross of Fees)

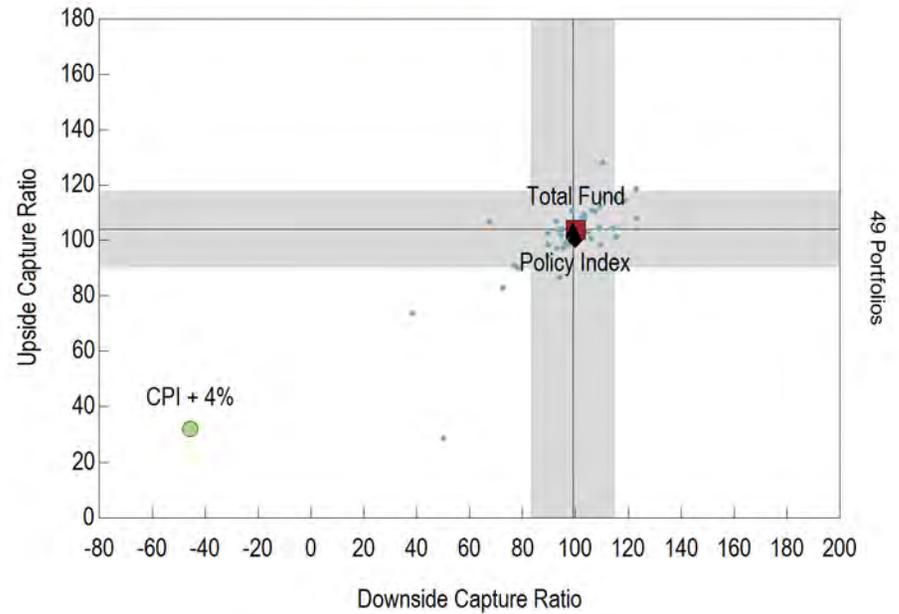
Period Ending: December 31, 2015

	Anlzd Ret	Ann Excess BM Return	Anlzd Std Dev	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Info Ratio	Up Mkt Cap Ratio	Down Mkt Cap Ratio
Total Fund	8.70%	0.33%	7.68%	0.17%	1.02	1.01%	0.98	1.13	0.33	103.70%	100.08%

Risk vs. Return



Up Markets vs. Down Markets



- Total Fund
- ◆ Policy Index
- CPI + 4%
- ▲ Universe Median
- 68% Confidence Interval
- InvestorForce Public DB > \$1B Gross

- Total Fund
- ◆ Policy Index
- CPI + 4%
- ▲ Universe Median
- 68% Confidence Interval
- InvestorForce Public DB > \$1B Gross

Total Fund  
Performance Summary (Gross of Fees)

Period Ending: December 31, 2015

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2015	2014	2013	2012	2011
<b>Total Fund</b>	<b>7,047,505,832</b>	<b>100.0</b>	<b>2.3</b>	<b>2.4</b>	<b>2.4</b>	<b>8.9</b>	<b>8.7</b>	<b>6.7</b>	<b>2.4</b>	<b>8.4</b>	<b>16.4</b>	<b>14.3</b>	<b>2.7</b>
<i>Policy Index</i>			2.7	0.6	0.6	8.2	8.4	--	0.6	9.0	15.6	14.6	2.8
<i>CPI + 4%</i>			0.4	4.8	4.8	5.0	5.6	5.9	4.8	4.8	5.6	5.8	7.1
<i>InvestorForce Public DB &gt; \$1B Gross Rank</i>			61	7	7	13	3	5	7	6	33	13	9
<b>Total Domestic Equity</b>	<b>1,541,044,287</b>	<b>21.9</b>	<b>4.7</b>	<b>1.1</b>	<b>1.1</b>	<b>15.3</b>	<b>12.9</b>	<b>7.9</b>	<b>1.1</b>	<b>11.4</b>	<b>36.2</b>	<b>18.2</b>	<b>1.1</b>
<i>Russell 3000</i>			6.3	0.5	0.5	14.7	12.2	7.4	0.5	12.6	33.6	16.4	1.0
<i>eA US All Cap Equity Gross Rank</i>			49	36	36	35	27	54	36	36	41	24	34
<b>Intech Large Cap Core</b>	<b>296,607,282</b>	<b>4.2</b>	<b>5.7</b>	<b>3.8</b>	<b>3.8</b>	<b>16.5</b>	<b>13.5</b>	<b>--</b>	<b>3.8</b>	<b>14.7</b>	<b>32.7</b>	<b>15.3</b>	<b>3.6</b>
<i>S&amp;P 500</i>			7.0	1.4	1.4	15.1	12.6	--	1.4	13.7	32.4	16.0	2.1
<i>eA US Large Cap Core Equity Gross Rank</i>			56	16	16	24	25	--	16	31	54	54	25
<b>PIMCO Stocks+ Absolute Return</b>	<b>232,375,016</b>	<b>3.3</b>	<b>7.6</b>	<b>-1.2</b>	<b>-1.2</b>	<b>13.8</b>	<b>12.7</b>	<b>7.4</b>	<b>-1.2</b>	<b>13.6</b>	<b>31.4</b>	<b>20.6</b>	<b>2.3</b>
<i>S&amp;P 500</i>			7.0	1.4	1.4	15.1	12.6	7.3	1.4	13.7	32.4	16.0	2.1
<i>eA US Large Cap Core Equity Gross Rank</i>			9	73	73	71	46	67	73	45	68	4	36
<b>Jackson Square Partners</b>	<b>315,984,758</b>	<b>4.5</b>	<b>9.0</b>	<b>6.1</b>	<b>6.1</b>	<b>17.8</b>	<b>15.8</b>	<b>8.8</b>	<b>6.1</b>	<b>13.9</b>	<b>35.4</b>	<b>16.9</b>	<b>8.9</b>
<i>Russell 1000 Growth</i>			7.3	5.7	5.7	16.8	13.5	8.5	5.7	13.0	33.5	15.3	2.6
<i>eA US Large Cap Growth Equity Gross Rank</i>			12	37	37	28	6	43	37	31	40	37	3
<b>Robeco Boston Partners</b>	<b>299,239,459</b>	<b>4.2</b>	<b>4.8</b>	<b>-3.9</b>	<b>-3.9</b>	<b>13.9</b>	<b>12.6</b>	<b>8.2</b>	<b>-3.9</b>	<b>12.0</b>	<b>37.4</b>	<b>21.6</b>	<b>0.9</b>
<i>Russell 1000 Value</i>			5.6	-3.8	-3.8	13.1	11.3	6.2	-3.8	13.5	32.5	17.5	0.4
<i>eA US Large Cap Value Equity Gross Rank</i>			67	65	65	44	24	26	65	55	24	5	46
<b>Emerald Advisers</b>	<b>196,357,423</b>	<b>2.8</b>	<b>-1.0</b>	<b>4.1</b>	<b>4.1</b>	<b>18.8</b>	<b>14.6</b>	<b>9.9</b>	<b>4.1</b>	<b>7.3</b>	<b>50.3</b>	<b>18.5</b>	<b>-0.6</b>
<i>Russell 2000 Growth</i>			4.3	-1.4	-1.4	14.3	10.7	8.0	-1.4	5.6	43.3	14.6	-2.9
<i>eA US Small Cap Growth Equity Gross Rank</i>			92	19	19	10	11	16	19	21	27	22	42
<b>Ceredex</b>	<b>200,480,349</b>	<b>2.8</b>	<b>-0.4</b>	<b>-4.4</b>	<b>-4.4</b>	<b>10.4</b>	<b>--</b>	<b>--</b>	<b>-4.4</b>	<b>3.3</b>	<b>36.5</b>	<b>19.0</b>	<b>--</b>
<i>Russell 2000 Value</i>			2.9	-7.5	-7.5	9.1	--	--	-7.5	4.2	34.5	18.1	--
<i>eA US Small Cap Value Equity Gross Rank</i>			91	52	52	67	--	--	52	74	66	38	--
<b>Total International Equity</b>	<b>740,282,947</b>	<b>10.5</b>	<b>4.4</b>	<b>-1.2</b>	<b>-1.2</b>	<b>5.3</b>	<b>4.1</b>	<b>2.9</b>	<b>-1.2</b>	<b>0.3</b>	<b>17.8</b>	<b>18.5</b>	<b>-11.5</b>
<i>MSCI ACWI ex USA Gross</i>			3.3	-5.3	-5.3	1.9	1.5	3.4	-5.3	-3.4	15.8	17.4	-13.3
<i>MSCI EAFE Gross</i>			4.7	-0.4	-0.4	5.5	4.1	3.5	-0.4	-4.5	23.3	17.9	-11.7
<i>eA All ACWI ex-US Equity Gross Rank</i>			61	61	61	53	53	95	61	17	69	63	43
<b>Pyrford</b>	<b>367,010,016</b>	<b>5.2</b>	<b>3.8</b>	<b>-2.9</b>	<b>-2.9</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>-2.9</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>MSCI ACWI ex USA Value</i>			1.4	-10.1	-10.1	--	--	--	-10.1	--	--	--	--
<i>eA ACWI ex-US Value Equity Gross Rank</i>			41	59	59	--	--	--	59	--	--	--	--

Individual closed end funds are not shown in performance summary table.

Total Fund  
Performance Summary (Gross of Fees)

Period Ending: December 31, 2015

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2015	2014	2013	2012	2011
William Blair	372,738,334	5.3	5.0	0.5	0.5	6.3	5.3	--	0.5	-1.2	20.9	24.3	-13.2
<i>MSCI ACWI ex USA Growth</i>			5.0	-1.3	-1.3	3.5	2.1	--	-1.3	-2.6	15.5	16.7	-14.2
<i>eA ACWI ex-US Growth Equity Gross Rank</i>			68	69	69	57	44	--	69	37	44	6	55
International Equity Transition	534,597	0.0											
<b>Total Global Equity</b>	<b>870,556,271</b>	<b>12.4</b>	<b>6.1</b>	<b>2.2</b>	<b>2.2</b>	<b>10.0</b>	<b>6.9</b>	<b>--</b>	<b>2.2</b>	<b>5.2</b>	<b>23.7</b>	<b>11.1</b>	<b>-5.6</b>
<i>MSCI ACWI</i>			5.0	-2.4	-2.4	7.7	6.1	--	-2.4	4.2	22.8	16.1	-7.3
<i>eA All Global Equity Gross Rank</i>			23	31	31	50	68	--	31	44	64	90	40
Artisan Partners	290,204,390	4.1	7.8	9.2	9.2	12.7	--	--	9.2	3.9	26.1	--	--
<i>MSCI ACWI</i>			5.0	-2.4	-2.4	7.7	--	--	-2.4	4.2	22.8	--	--
<i>eA All Global Equity Gross Rank</i>			8	4	4	17	--	--	4	56	51	--	--
First Eagle	287,765,432	4.1	4.8	0.2	0.2	7.3	--	--	0.2	4.5	17.9	13.9	--
<i>MSCI ACWI</i>			5.0	-2.4	-2.4	7.7	--	--	-2.4	4.2	22.8	16.1	--
<i>eA All Global Equity Gross Rank</i>			50	49	49	77	--	--	49	51	80	78	--
Intech Global Low Vol	22,342,698	0.3	4.5	4.1	4.1	12.9	--	--	4.1	11.2	24.2	--	--
<i>MSCI ACWI</i>			5.0	-2.4	-2.4	7.7	--	--	-2.4	4.2	22.8	--	--
<i>eA All Global Equity Gross Rank</i>			60	18	18	16	--	--	18	14	62	--	--
JP Morgan Global Opportunities	270,243,751	3.8	5.9	-2.9	-2.9	9.6	7.4	--	-2.9	6.7	26.9	19.2	-9.0
<i>MSCI ACWI</i>			5.0	-2.4	-2.4	7.7	6.1	--	-2.4	4.2	22.8	16.1	-7.3
<i>eA All Global Equity Gross Rank</i>			27	75	75	54	62	--	75	30	46	32	63
<b>Total Domestic Fixed Income</b>	<b>1,440,690,461</b>	<b>20.4</b>	<b>0.0</b>	<b>1.7</b>	<b>1.7</b>	<b>3.4</b>	<b>5.4</b>	<b>5.9</b>	<b>1.7</b>	<b>7.3</b>	<b>1.3</b>	<b>9.7</b>	<b>7.2</b>
<i>Barclays U.S. Universal</i>			-0.5	0.4	0.4	1.5	3.5	4.7	0.4	5.6	-1.3	5.5	7.4
<i>Barclays Aggregate</i>			-0.6	0.6	0.6	1.4	3.2	4.5	0.6	6.0	-2.0	4.2	7.8
<i>eA US Core Fixed Inc Gross Rank</i>			6	9	9	3	3	8	9	8	2	5	71
AFL-CIO	241,295,637	3.4	-0.6	1.6	1.6	2.0	3.8	5.0	1.6	6.6	-1.9	4.7	8.3
<i>Barclays Aggregate</i>			-0.6	0.6	0.6	1.4	3.2	4.5	0.6	6.0	-2.0	4.2	7.8
<i>eA US Core Fixed Inc Gross Rank</i>			74	15	15	29	48	49	15	25	78	80	23
Goldman Sachs Core Plus	334,802,991	4.8	-0.4	0.8	0.8	2.1	4.3	--	0.8	6.0	-0.4	7.9	7.6
<i>Barclays Aggregate</i>			-0.6	0.6	0.6	1.4	3.2	--	0.6	6.0	-2.0	4.2	7.8
<i>eA US Core Plus Fixed Inc Gross Rank</i>			45	36	36	35	47	--	36	47	49	59	43
GSAM Workout Portfolio	4,078	0.0											
Lord Abbett	334,032,022	4.7	-0.5	0.0	0.0	2.0	4.5	--	0.0	6.7	-0.6	8.6	8.2
<i>Barclays Aggregate</i>			-0.6	0.6	0.6	1.4	3.2	--	0.6	6.0	-2.0	4.2	7.8
<i>eA US Core Fixed Inc Gross Rank</i>			71	94	94	29	10	--	94	18	18	8	27

Individual closed end funds are not shown in performance summary table.

Total Fund  
Performance Summary (Gross of Fees)

Period Ending: December 31, 2015

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2015	2014	2013	2012	2011
PIMCO Fixed Income	405,573,417	5.8	0.0	0.5	0.5	1.7	3.7	5.6	0.5	6.3	-1.6	8.5	5.0
<i>Barclays Aggregate</i>			-0.6	0.6	0.6	1.4	3.2	4.5	0.6	6.0	-2.0	4.2	7.8
<i>eA US Core Fixed Inc Gross Rank</i>			6	75	75	61	56	12	75	34	61	8	97
<b>Total High Yield</b>	<b>333,193,329</b>	<b>4.7</b>	<b>-1.6</b>	<b>-3.5</b>	<b>-3.5</b>	<b>2.0</b>	<b>5.2</b>	<b>7.1</b>	<b>-3.5</b>	<b>1.2</b>	<b>8.8</b>	<b>14.1</b>	<b>6.4</b>
<i>BofA ML High Yield Master II</i>			-2.2	-4.6	-4.6	1.6	4.8	6.8	-4.6	2.5	7.4	15.6	4.4
<i>eA US High Yield Fixed Inc Gross Rank</i>			61	68	68	68	59	39	68	83	28	73	19
Allianz Global Investors	333,193,329	4.7	-1.6	-3.5	-3.5	2.0	5.2	7.1	-3.5	1.2	8.8	14.1	6.4
<i>BofA ML High Yield Master II</i>			-2.2	-4.6	-4.6	1.6	4.8	6.8	-4.6	2.5	7.4	15.6	4.4
<i>eA US High Yield Fixed Inc Gross Rank</i>			61	68	68	68	59	39	68	83	28	73	21
<b>Total Global Fixed Income</b>	<b>289,261,140</b>	<b>4.1</b>	<b>-0.9</b>	<b>-3.0</b>	<b>-3.0</b>	<b>-2.1</b>	<b>1.1</b>	<b>3.0</b>	<b>-3.0</b>	<b>0.4</b>	<b>-3.5</b>	<b>6.7</b>	<b>5.6</b>
<i>Barclays Global Aggregate</i>			-0.9	-3.2	-3.2	-1.7	0.9	3.7	-3.2	0.6	-2.6	4.3	5.6
<i>eA All Global Fixed Inc Gross Rank</i>			60	59	59	81	79	97	59	77	83	68	40
Lazard	289,261,140	4.1	-0.9	-3.0	-3.0	-2.1	1.1	--	-3.0	0.4	-3.5	6.7	5.6
<i>Barclays Global Aggregate</i>			-0.9	-3.2	-3.2	-1.7	0.9	--	-3.2	0.6	-2.6	4.3	5.6
<i>eA All Global Fixed Inc Gross Rank</i>			60	59	59	81	79	--	59	77	83	68	40
<b>Total Inflation Hedge</b>	<b>341,104,388</b>	<b>4.8</b>	<b>-1.1</b>	<b>-5.6</b>	<b>-5.6</b>	<b>-1.7</b>	<b>--</b>	<b>--</b>	<b>-5.6</b>	<b>-0.6</b>	<b>1.3</b>	<b>--</b>	<b>--</b>
<i>CPI + 4%</i>			0.4	4.8	4.8	5.0	--	--	4.8	4.8	5.6	--	--
PIMCO All Asset Fund	114,900,599	1.6	0.2	-8.0	-8.0	--	--	--	-8.0	1.7	--	--	--
<i>CPI + 4%</i>			0.4	4.8	4.8	--	--	--	4.8	4.8	--	--	--
Wellington Real Total Return	189,910,086	2.7	-2.0	-4.9	-4.9	--	--	--	-4.9	-2.5	--	--	--
<i>CPI + 4%</i>			0.4	4.8	4.8	--	--	--	4.8	4.8	--	--	--
<b>Total Real Estate</b>	<b>851,548,142</b>	<b>12.1</b>	<b>1.8</b>	<b>11.3</b>	<b>11.3</b>	<b>14.1</b>	<b>13.9</b>	<b>7.0</b>	<b>11.3</b>	<b>20.6</b>	<b>10.5</b>	<b>16.7</b>	<b>10.4</b>
<i>Real Estate Benchmark</i>			4.6	8.2	8.2	11.3	12.2	8.3	8.2	18.8	7.1	13.6	13.6
<i>NCREIF-ODCE</i>			3.3	15.0	15.0	13.8	13.7	6.5	15.0	12.5	13.9	10.9	16.0
<i>NCREIF Property Index</i>			2.9	13.3	13.3	12.0	12.2	7.8	13.3	11.8	11.0	10.5	14.3
Adelante	118,047,742	1.7	5.9	5.1	5.1	13.2	13.3	7.2	5.1	33.4	3.6	17.7	9.2
<i>Wilshire REIT</i>			7.5	4.2	4.2	11.8	12.4	7.3	4.2	31.8	1.9	17.6	9.2
INVESCO International REIT	75,878,750	1.1	0.0	-2.9	-2.9	1.7	4.6	--	-2.9	2.8	5.4	42.3	-16.5
<i>FTSE EPRA/NAREIT Developed ex-USA</i>			1.1	-3.2	-3.2	2.0	4.5	--	-3.2	3.2	6.1	38.6	-15.3
Willows Office Property	10,000,000	0.1	0.0	4.8	4.8	14.4	11.0	4.3	4.8	32.8	7.5	6.3	6.1
<i>NCREIF Property Index</i>			2.9	13.3	13.3	12.0	12.2	7.8	13.3	11.8	11.0	10.5	14.3

Individual closed end funds are not shown in performance summary table.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: December 31, 2015

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2015	2014	2013	2012	2011
<b>Total Fund</b>	<b>7,047,505,832</b>	<b>100.0</b>	<b>2.2</b>	<b>1.9</b>	<b>1.9</b>	<b>8.2</b>	<b>8.0</b>	<b>6.1</b>	<b>1.9</b>	<b>7.7</b>	<b>15.6</b>	<b>13.6</b>	<b>2.1</b>
<i>Policy Index</i>			2.7	0.6	0.6	8.2	8.4	--	0.6	9.0	15.6	14.6	2.8
<i>CPI + 4%</i>			0.4	4.8	4.8	5.0	5.6	5.9	4.8	4.8	5.6	5.8	7.1
<b>Total Domestic Equity</b>	<b>1,541,044,287</b>	<b>21.9</b>	<b>4.6</b>	<b>0.6</b>	<b>0.6</b>	<b>14.8</b>	<b>12.5</b>	<b>7.5</b>	<b>0.6</b>	<b>11.0</b>	<b>35.7</b>	<b>17.8</b>	<b>0.8</b>
<i>Russell 3000</i>			6.3	0.5	0.5	14.7	12.2	7.4	0.5	12.6	33.6	16.4	1.0
Intech Large Cap Core	296,607,282	4.2	5.6	3.3	3.3	16.0	13.1	--	3.3	14.2	32.2	14.8	3.3
<i>S&amp;P 500</i>			7.0	1.4	1.4	15.1	12.6	--	1.4	13.7	32.4	16.0	2.1
PIMCO Stocks+ Absolute Return	232,375,016	3.3	7.6	-1.4	-1.4	13.5	12.4	7.1	-1.4	13.2	31.0	20.3	2.0
<i>S&amp;P 500</i>			7.0	1.4	1.4	15.1	12.6	7.3	1.4	13.7	32.4	16.0	2.1
Jackson Square Partners	315,984,758	4.5	8.8	5.6	5.6	17.4	15.3	8.3	5.6	13.4	35.0	16.4	8.4
<i>Russell 1000 Growth</i>			7.3	5.7	5.7	16.8	13.5	8.5	5.7	13.0	33.5	15.3	2.6
Robeco Boston Partners	299,239,459	4.2	4.7	-4.2	-4.2	13.6	12.3	7.8	-4.2	11.6	37.0	21.2	0.6
<i>Russell 1000 Value</i>			5.6	-3.8	-3.8	13.1	11.3	6.2	-3.8	13.5	32.5	17.5	0.4
Emerald Advisers	196,357,423	2.8	-1.1	3.5	3.5	18.1	13.9	9.2	3.5	6.6	49.4	17.8	-1.2
<i>Russell 2000 Growth</i>			4.3	-1.4	-1.4	14.3	10.7	8.0	-1.4	5.6	43.3	14.6	-2.9
Ceredex	200,480,349	2.8	-0.6	-5.0	-5.0	9.8	--	--	-5.0	2.7	35.8	18.6	--
<i>Russell 2000 Value</i>			2.9	-7.5	-7.5	9.1	--	--	-7.5	4.2	34.5	18.1	--
<b>Total International Equity</b>	<b>740,282,947</b>	<b>10.5</b>	<b>4.3</b>	<b>-1.6</b>	<b>-1.6</b>	<b>4.9</b>	<b>3.7</b>	<b>2.4</b>	<b>-1.6</b>	<b>0.0</b>	<b>17.4</b>	<b>17.9</b>	<b>-12.0</b>
<i>MSCI ACWI ex USA Gross</i>			3.3	-5.3	-5.3	1.9	1.5	3.4	-5.3	-3.4	15.8	17.4	-13.3
<i>MSCI EAFE Gross</i>			4.7	-0.4	-0.4	5.5	4.1	3.5	-0.4	-4.5	23.3	17.9	-11.7
Pyrford	367,010,016	5.2	3.7	-3.3	-3.3	--	--	--	-3.3	--	--	--	--
<i>MSCI ACWI ex USA Value</i>			1.4	-10.1	-10.1	--	--	--	-10.1	--	--	--	--
William Blair	372,738,334	5.3	4.9	0.0	0.0	5.8	4.8	--	0.0	-1.7	20.4	23.7	-13.7
<i>MSCI ACWI ex USA Growth</i>			5.0	-1.3	-1.3	3.5	2.1	--	-1.3	-2.6	15.5	16.7	-14.2
International Equity Transition	534,597	0.0											
<b>Total Global Equity</b>	<b>870,556,271</b>	<b>12.4</b>	<b>6.0</b>	<b>1.6</b>	<b>1.6</b>	<b>9.3</b>	<b>6.3</b>	<b>--</b>	<b>1.6</b>	<b>4.5</b>	<b>22.9</b>	<b>10.6</b>	<b>-6.1</b>
<i>MSCI ACWI</i>			5.0	-2.4	-2.4	7.7	6.1	--	-2.4	4.2	22.8	16.1	-7.3
Artisan Partners	290,204,390	4.1	7.6	8.4	8.4	11.9	--	--	8.4	3.1	25.2	--	--
<i>MSCI ACWI</i>			5.0	-2.4	-2.4	7.7	--	--	-2.4	4.2	22.8	--	--
First Eagle	287,765,432	4.1	4.7	-0.6	-0.6	6.5	--	--	-0.6	3.7	17.1	13.1	--
<i>MSCI ACWI</i>			5.0	-2.4	-2.4	7.7	--	--	-2.4	4.2	22.8	16.1	--
Intech Global Low Vol	22,342,698	0.3	4.5	3.9	3.9	12.5	--	--	3.9	10.8	23.8	--	--
<i>MSCI ACWI</i>			5.0	-2.4	-2.4	7.7	--	--	-2.4	4.2	22.8	--	--

Individual closed end funds are not shown in performance summary table.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: December 31, 2015

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2015	2014	2013	2012	2011
JP Morgan Global Opportunities	270,243,751	3.8	5.8	-3.3	-3.3	9.1	6.9	--	-3.3	6.2	26.4	18.7	-9.4
MSCI ACWI			5.0	-2.4	-2.4	7.7	6.1	--	-2.4	4.2	22.8	16.1	-7.3
<b>Total Domestic Fixed Income</b>	<b>1,440,690,461</b>	<b>20.4</b>	<b>-0.1</b>	<b>1.4</b>	<b>1.4</b>	<b>3.0</b>	<b>5.0</b>	<b>5.4</b>	<b>1.4</b>	<b>6.7</b>	<b>0.9</b>	<b>9.2</b>	<b>6.8</b>
Barclays U.S. Universal			-0.5	0.4	0.4	1.5	3.5	4.7	0.4	5.6	-1.3	5.5	7.4
Barclays Aggregate			-0.6	0.6	0.6	1.4	3.2	4.5	0.6	6.0	-2.0	4.2	7.8
AFL-CIO	241,295,637	3.4	-0.7	1.1	1.1	1.6	3.3	4.6	1.1	6.1	-2.4	4.3	7.9
Barclays Aggregate			-0.6	0.6	0.6	1.4	3.2	4.5	0.6	6.0	-2.0	4.2	7.8
Goldman Sachs Core Plus	334,802,991	4.8	-0.5	0.6	0.6	1.9	4.1	--	0.6	5.8	-0.6	7.7	7.3
Barclays Aggregate			-0.6	0.6	0.6	1.4	3.2	--	0.6	6.0	-2.0	4.2	7.8
GSAM Workout Portfolio	4,078	0.0											
Lord Abbett	334,032,022	4.7	-0.6	-0.2	-0.2	1.8	4.3	--	-0.2	6.5	-0.8	8.4	8.0
Barclays Aggregate			-0.6	0.6	0.6	1.4	3.2	--	0.6	6.0	-2.0	4.2	7.8
PIMCO Fixed Income	405,573,417	5.8	-0.1	0.3	0.3	1.4	3.4	5.4	0.3	6.0	-1.9	8.2	4.7
Barclays Aggregate			-0.6	0.6	0.6	1.4	3.2	4.5	0.6	6.0	-2.0	4.2	7.8
<b>Total High Yield</b>	<b>333,193,329</b>	<b>4.7</b>	<b>-1.6</b>	<b>-3.9</b>	<b>-3.9</b>	<b>1.6</b>	<b>4.9</b>	<b>7.0</b>	<b>-3.9</b>	<b>0.8</b>	<b>8.4</b>	<b>13.7</b>	<b>6.4</b>
BofA ML High Yield Master II			-2.2	-4.6	-4.6	1.6	4.8	6.8	-4.6	2.5	7.4	15.6	4.4
Allianz Global Investors	333,193,329	4.7	-1.6	-3.9	-3.9	1.6	4.8	6.7	-3.9	0.8	8.4	13.6	6.0
BofA ML High Yield Master II			-2.2	-4.6	-4.6	1.6	4.8	6.8	-4.6	2.5	7.4	15.6	4.4
<b>Total Global Fixed Income</b>	<b>289,261,140</b>	<b>4.1</b>	<b>-0.9</b>	<b>-3.3</b>	<b>-3.3</b>	<b>-2.3</b>	<b>0.9</b>	<b>2.8</b>	<b>-3.3</b>	<b>0.1</b>	<b>-3.8</b>	<b>6.4</b>	<b>5.3</b>
Barclays Global Aggregate			-0.9	-3.2	-3.2	-1.7	0.9	3.7	-3.2	0.6	-2.6	4.3	5.6
Lazard	289,261,140	4.1	-0.9	-3.3	-3.3	-2.3	0.9	--	-3.3	0.1	-3.8	6.4	5.3
Barclays Global Aggregate			-0.9	-3.2	-3.2	-1.7	0.9	--	-3.2	0.6	-2.6	4.3	5.6
<b>Total Inflation Hedge</b>	<b>341,104,388</b>	<b>4.8</b>	<b>-1.2</b>	<b>-6.5</b>	<b>-6.5</b>	<b>-2.6</b>	<b>--</b>	<b>--</b>	<b>-6.5</b>	<b>-1.5</b>	<b>0.3</b>	<b>--</b>	<b>--</b>
CPI + 4%			0.4	4.8	4.8	5.0	--	--	4.8	4.8	5.6	--	--
PIMCO All Asset Fund	114,900,599	1.6	0.0	-8.8	-8.8	--	--	--	-8.8	0.8	--	--	--
CPI + 4%			0.4	4.8	4.8	--	--	--	4.8	4.8	--	--	--
Wellington Real Total Return	189,910,086	2.7	-2.1	-5.4	-5.4	--	--	--	-5.4	-3.1	--	--	--
CPI + 4%			0.4	4.8	4.8	--	--	--	4.8	4.8	--	--	--
<b>Total Real Estate</b>	<b>851,548,142</b>	<b>12.1</b>	<b>1.7</b>	<b>10.4</b>	<b>10.4</b>	<b>12.7</b>	<b>12.6</b>	<b>5.9</b>	<b>10.4</b>	<b>19.1</b>	<b>8.9</b>	<b>15.7</b>	<b>9.4</b>
Real Estate Benchmark			4.6	8.2	8.2	11.3	12.2	8.3	8.2	18.8	7.1	13.6	13.6
NCREIF-ODCE			3.3	15.0	15.0	13.8	13.7	6.5	15.0	12.5	13.9	10.9	16.0
NCREIF Property Index			2.9	13.3	13.3	12.0	12.2	7.8	13.3	11.8	11.0	10.5	14.3
Adelante	118,047,742	1.7	5.8	4.6	4.6	12.7	12.7	6.7	4.6	32.7	3.0	17.2	8.6
Wilshire REIT			7.5	4.2	4.2	11.8	12.4	7.3	4.2	31.8	1.9	17.6	9.2

Individual closed end funds are not shown in performance summary table.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: December 31, 2015

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2015	2014	2013	2012	2011
INVESCO International REIT	75,878,750	1.1	-0.2	-3.5	-3.5	1.1	3.9	--	-3.5	2.2	4.7	41.3	-17.0
<i>FTSE EPRA/NAREIT Developed ex-USA</i>			1.1	-3.2	-3.2	2.0	4.5	--	-3.2	3.2	6.1	38.6	-15.3
Willows Office Property	10,000,000	0.1	0.0	4.8	4.8	14.4	11.0	4.3	4.8	32.8	7.5	6.3	6.1
<i>NCREIF Property Index</i>			2.9	13.3	13.3	12.0	12.2	7.8	13.3	11.8	11.0	10.5	14.3

Individual closed end funds are not shown in performance summary table.

Total Fund  
Closed End Funds - Investment Summary

Period Ending: December 31, 2015

Verus Internal Analysis												
Inception Date	Manager Name/Fund Name	Estimated Market Value as of 12/31/15 <sup>3</sup>	Total Commitment	% Called	Capital Called	Current Qtr. Capital Called	Current Qtr. Distributions	Total Distributions	Remaining Commitment	Distrib./ Paid-In (DPI) <sup>1</sup>	Tot. Value/ Paid-In (TVPI) <sup>2</sup>	Latest Valuation
<b>Fixed Income</b>												
07/01/2006	Torchlight II	\$50,306,294	\$128,000,000	100%	\$128,000,000	\$0	\$5,940,422	\$152,341,552	\$0	1.19	1.58	12/31/2015
12/12/2008	Torchlight III	\$10,503,796	\$75,000,000	100%	\$75,000,000	\$0	\$0	\$98,512,563	\$0	1.31	1.45	12/31/2015
08/01/2012	Torchlight IV	\$53,001,686	\$60,000,000	95%	\$57,000,000	\$9,000,000	\$1,602,241	\$33,808,627	\$3,000,000	0.59	1.52	12/31/2015
03/12/2015	Torchlight V	\$11,170,539	\$75,000,000	0%	\$11,250,000	\$0	\$0	\$0	\$63,750,000	0.00	0.99	12/31/2015
<b>Total Fixed Income</b>		<b>\$124,982,315</b>										
<b>% of Portfolio (Market Value)</b>		<b>1.8%</b>										
<b>Inflation Hedge</b>												
11/27/2013	Aether Real Assets III	\$4,779,324	\$25,000,000	27%	\$6,820,146	\$0	\$0	\$94,227	\$18,179,854	0.01	0.71	09/30/2015
11/27/2013	Aether Real Assets III Surplus	\$15,639,855	\$50,000,000	35%	\$17,655,634	\$3,570,754	\$0	\$221,923	\$32,344,366	0.01	0.90	09/30/2015
06/28/2013	Commonfund	\$17,038,590	\$50,000,000	38%	\$18,750,000	\$1,750,000	\$0	\$0	\$31,250,000	0.00	0.91	09/30/2015
<b>Total Inflation Hedge</b>		<b>\$37,457,769</b>										
<b>% of Portfolio (Market Value)</b>		<b>0.5%</b>										
<b>Opportunistic</b>												
02/18/2010	Oaktree PIF 2009 <sup>3</sup>	\$20,766,344	\$40,000,000	87%	\$34,800,000	\$0	\$1,428,000	\$24,718,579	\$34,800,000	0.71	1.31	09/30/2015
<b>Total Opportunistic</b>		<b>\$20,766,344</b>										
<b>% of Portfolio (Market Value)</b>		<b>0.3%</b>										

<sup>1</sup>(DPI) is equal to (capital returned / capital called)

<sup>2</sup>(TVPI) is equal to (market value + capital returned) / capital called

<sup>3</sup>Latest valuation + capital calls - distributions

Total Fund  
Closed End Funds - Investment Summary

Period Ending: December 31, 2015

Verus Internal Analysis												
Inception Date	Manager Name/Fund Name	Estimated Market Value as of 12/31/15 <sup>3</sup>	Total Commitment	Capital Called	Total % Called	Current Qtr. Capital Called	Current Qtr. Distributions	Total Distributions	Remaining Commitment	Distrib./Paid-In (DPI) <sup>1</sup>	Tot. Value/Paid-In (TVPI) <sup>2</sup>	Latest Valuation
<b>Real Estate</b>												
01/23/2012	Angelo Gordon Realty Fund VIII	\$57,150,841	\$80,000,000	\$74,600,000	93%	\$1,600,000	\$11,200,000	\$46,152,397	\$5,400,000	0.62	1.38	09/30/2015
12/08/2014	Angelo Gordon Realty Fund IX	\$8,287,500	\$65,000,000	\$8,287,500	13%	\$8,287,500	\$0	\$0	\$56,712,500	-	-	-
09/24/1999	DLJ RECP II <sup>6</sup>	\$0	\$40,000,000	\$40,000,000	100%	\$0	-\$3,050,265	\$78,991,824	\$0	1.97	1.97	12/31/2015
06/23/2005	DLJ RECP III	\$44,317,634	\$75,000,000	\$75,000,000	100%	\$0	\$0	\$58,420,451	\$0	0.78	1.37	12/31/2015
02/11/2008	DLJ RECP IV	\$79,338,355	\$100,000,000	\$100,000,000	100%	\$0	-\$4,034,811	\$51,082,344	\$0	0.51	1.30	12/31/2015
07/01/2014	DLJ RECP V	\$41,079,185	\$75,000,000	\$50,310,842	67%	\$18,502,264	\$0	\$15,422,419	\$24,689,158	0.31	1.12	12/31/2015
06/17/1998	Hearthstone II <sup>4</sup>	-\$37,731	\$25,000,000	\$19,925,048	80%	\$0	\$0	\$19,952,734	\$0	1.00	1.00	09/30/2015
02/01/2005	Invesco Real Estate I	\$6,043,890	\$50,000,000	\$46,241,947	92%	\$0	\$0	\$43,616,113	\$3,758,053	0.94	1.07	12/31/2015
11/26/2007	Invesco Real Estate II	\$14,262,997	\$85,000,000	\$78,202,813	92%	\$0	\$3,400,000	\$86,702,813	\$6,797,187	1.11	1.29	12/31/2015
06/30/2013	Invesco Real Estate III	\$20,287,898	\$35,000,000	\$30,475,961	87%	\$770,000	\$4,970,000	\$21,022,850	\$4,524,039	0.69	1.36	12/31/2015
06/30/2014	Invesco Real Estate IV	\$9,008,861	\$35,000,000	\$21,423,457	61%	\$0	\$2,672,649	\$5,646,707	\$13,576,543	0.26	0.68	12/31/2015
07/16/2013	LaSalle Income & Growth VI	\$77,388,612	\$75,000,000	\$71,428,571	95%	\$0	\$68,959	\$12,698,316	\$3,571,429	0.18	1.26	06/30/2015
03/10/2004	Long Wharf Fund II <sup>6</sup>	\$0	\$50,000,000	\$50,000,000	100%	\$0	\$154,133	\$33,414,381	\$0	0.67	0.67	12/31/2015
03/30/2007	Long Wharf Fund III	\$13,036,116	\$75,000,000	\$66,940,230	89%	\$0	\$0	\$76,182,982	\$8,059,770	1.14	1.33	12/31/2015
07/03/2013	Long Wharf Fund IV	\$24,574,365	\$25,000,000	\$25,000,000	100%	\$2,282,501	\$493,194	\$4,695,206	-\$0	0.19	1.17	12/31/2015
12/31/2011	Oaktree REOF V	\$37,087,160	\$50,000,000	\$50,000,000	100%	\$0	\$6,250,000	\$42,500,000	\$0	0.85	1.59	12/31/2015
09/30/2013	Oaktree REOF VI <sup>5</sup>	\$89,875,952	\$80,000,000	\$80,000,000	100%	\$0	\$11,200,000	\$16,841,206	\$0	0.21	1.33	12/31/2015
04/01/2015	Oaktree REOF VII	\$0	\$65,000,000	\$0	0%	\$0	\$0	\$0	\$65,000,000	-	-	-
11/10/2013	Paulson Real Estate Fund II	\$17,986,658	\$20,000,000	\$13,081,096	65%	\$0	\$0	\$0	\$6,918,904	0.00	1.38	09/30/2015
01/25/2012	Siguler Guff DREOF	\$66,160,602	\$75,000,000	\$70,725,000	94%	\$0	\$7,546,250	\$36,012,238	\$4,275,000	0.51	1.44	12/31/2015
08/31/2013	Siguler Guff DREOF II	\$41,772,754	\$70,000,000	\$41,300,000	59%	\$1,400,000	\$40,000	\$601,123	\$28,700,000	0.01	1.03	12/31/2015
<b>Total Closed End Real Estate</b>		<b>\$647,621,649</b>	<b>\$1,250,000,000</b>	<b>\$1,012,942,466</b>	<b>81%</b>			<b>\$649,956,104</b>	<b>\$231,982,582</b>	<b>0.23</b>	<b>0.87</b>	
<b>% of Portfolio (Market Value)</b>		<b>9.3%</b>										

<sup>1</sup>(DPI) is equal to (capital returned / capital called)

<sup>2</sup>(TVPI) is equal to (market value + capital returned) / capital called

<sup>3</sup>Latest valuation + capital calls - distributions

<sup>4</sup>No further capital to be called

<sup>5</sup>Actual capital called is \$85,600,000 which includes recallable distributions

<sup>6</sup>Fund paid out it's final distribution during the quarter

Total Fund  
Closed End Funds - Investment Summary

Period Ending: December 31, 2015

Verus Internal Analysis											
Inception Date	Manager Name/Fund Name	Estimated Market Value as of 12/31/15 <sup>3</sup>	Total Commitment	Total % Called	Current Qtr. Capital Called	Current Qtr. Distributions	Total Distributions	Remaining Commitment	Distrib./Paid-In (DPI) <sup>1</sup>	Tot. Value/Paid-In (TVPI) <sup>2</sup>	Latest Valuation
<b>Private Equity &amp; Venture Capital</b>											
03/18/1996	Adams Street Partners	\$117,663,648	\$210,000,000	64%	\$0	\$0	\$66,045,393	\$75,350,375	0.49	1.36	09/30/2015
01/16/2009	Adams Street Partners II	\$21,166,118	\$30,000,000	95%	\$0	\$0	\$25,123,201	\$1,635,000	0.89	1.63	09/30/2015
09/21/2012	Adams Street Partners - Fund 5	\$15,098,244	\$40,000,000	53%	\$0	\$0	\$5,648,154	\$18,812,000	0.27	0.98	09/30/2015
01/18/1996	Adams Street Partners - BFP	\$6,570,287	\$59,565,614	97%	\$0	\$0	\$97,223,119	\$2,048,205	1.69	1.80	09/30/2015
06/14/2004	Bay Area Equity Fund	\$5,185,380	\$10,000,000	100%	\$0	\$0	\$35,310,439	\$0	3.53	4.05	09/30/2015
12/07/2009	Bay Area Equity Fund II	\$10,337,324	\$10,000,000	97%	\$0	\$0	\$1,015,352	\$316,000	0.10	1.17	09/30/2015
11/26/2003	EIF US Power Fund I	\$815,000	\$30,000,000	100%	\$0	\$0	\$64,168,646	\$0	2.14	2.17	09/30/2015
08/16/2005	EIF US Power Fund II	\$39,154,030	\$50,000,000	100%	\$0	\$0	\$41,913,803	\$0	0.84	1.62	09/30/2015
05/30/2007	EIF US Power Fund III	\$54,790,387	\$65,000,000	83%	\$0	\$0	\$25,774,539	\$11,350,026	0.48	1.50	09/30/2015
11/28/2011	EIF US Power Fund IV	\$39,154,030	\$50,000,000	94%	\$0	\$0	\$7,918,685	\$3,117,517	0.17	1.00	09/30/2015
05/24/2011	Pathway 6	\$23,629,601	\$40,000,000	59%	\$477,664	\$477,664	\$2,614,190	\$16,373,759	0.11	1.11	09/30/2015
02/07/2013	Pathway 7	\$22,656,264	\$70,000,000	35%	\$2,000,341	\$210,165	\$1,326,934	\$45,219,417	0.05	0.97	09/30/2015
11/09/1998	Pathway	\$46,320,836	\$125,000,000	97%	\$0	\$6,544,349	\$129,371,203	\$3,884,566	1.07	1.45	09/30/2015
12/26/2008	Pathway 2008	\$23,395,916	\$30,000,000	80%	\$0	\$465,320	\$7,606,925	\$6,108,043	0.32	1.30	09/30/2015
01/31/2008	Carpenter Bancfund	\$26,916,205	\$30,000,000	97%	\$0	\$497,855	\$17,137,847	\$979,074	0.59	1.52	09/30/2015
02/15/2004	Nogales	\$437,117	\$15,000,000	99%	\$0	\$0	\$11,985,887	\$194,897	0.81	0.84	06/30/2015
11/30/2007	Paladin III	\$20,074,289	\$25,000,000	84%	\$0	\$0	\$13,762,604	\$4,089,677	0.66	1.62	09/30/2015
06/11/2014	Ocean Avenue Fund II	\$14,464,326	\$30,000,000	50%	\$4,500,000	\$0	\$589,938	\$15,000,000	0.04	1.00	09/30/2015
06/03/2014	Siguler Guff CCCERA Opportunities	\$45,706,759	\$200,000,000	22%	\$8,496,000	\$4,589,491	\$4,589,491	\$155,017,500	0.10	1.12	09/30/2015
<b>Total Private Equity and Venture Capital</b>		<b>\$533,535,760</b>	<b>\$1,119,565,614</b>	<b>68%</b>	<b>\$15,474,006</b>	<b>\$12,784,845</b>	<b>\$559,126,349</b>	<b>\$359,496,056</b>	<b>0.74</b>	<b>1.44</b>	
<b>% of Portfolio (Market Value)</b>		<b>7.6%</b>									

<sup>1</sup>(DPI) is equal to (capital returned / capital called)

<sup>2</sup>(TVPI) is equal to (market value + capital returned) / capital called

<sup>3</sup>Latest valuation + capital calls - distributions

Total Fund  
Closed End Funds - IRR Summary

Period Ending: December 31, 2015

Fixed Income	Inception	Fund Level (G)	CCCERA (G)	Fund Level (N)	CCCERA (N)	IRR Date
Torchlight II	07/01/2006	-0.2%	-0.0%	-1.6%	-1.4%	12/31/2015
Torchlight III	12/12/2008	-	18.4%	-	13.9%	12/31/2015
Torchlight IV	08/01/2012	-	14.2%	-	11.4%	12/31/2015
Torchlight V	03/12/2015	10.0%	11.4%	-4.5%	-1.3%	12/31/2015
Inflation Hedge	Inception	Fund Level (G)	CCCERA (G)	Fund Level (N)	CCCERA (N)	IRR Date
Aether Real Assets III <sup>4</sup>	11/27/2013	4.9%	4.9%	-5.0%	-5.0%	09/30/2015
Aether Real Assets III Surplus <sup>4</sup>	11/27/2013	6.5%	6.5%	1.9%	1.9%	09/30/2015
CommonFund <sup>1</sup>	06/28/2013	-	-	-	-	-
Opportunistic	Inception	Fund Level (G)	CCCERA (G)	Fund Level (N)	CCCERA (N)	IRR Date
Oaktree PIF	02/18/2010	7.4%	-	7.2%	-	12/31/2015
Real Estate	Inception	Fund Level (G)	CCCERA (G)	Fund Level (N)	CCCERA (N)	IRR Date
Angelo Gordon VIII	01/23/2012	20.4%	21.5%	15.6%	17.0%	12/31/2015
Angelo Gordon IX <sup>1</sup>	12/08/2014	-	-	-	-	-
DLJ RECP II	09/24/1999	28.0%	-	-	19.0%	12/31/2015
DLJ RECP III	06/23/2005	3.0%	-	-	-	12/31/2015
DLJ RECP IV	02/11/2008	6.0%	-	-	3.0%	12/31/2015
DLJ RECP V <sup>1</sup>	07/01/2014	-	-	-	-	-
Hearthstone II	06/17/1998	-	30.1%	-	30.1%	12/31/2015
Invesco Fund I	02/01/2005	2.5%	2.5%	1.4%	1.4%	12/31/2015
Invesco Fund II	11/26/2007	8.4%	7.6%	7.0%	6.8%	12/31/2015
Invesco Fund III	06/30/2013	23.5%	24.8%	22.1%	18.3%	12/31/2015
Invesco Fund IV <sup>1</sup>	06/30/2014	-	-	-	-	-
LaSalle Income & Growth	07/16/2013	23.3%	23.3%	20.6%	20.8%	06/30/2015
Long Wharf II	03/10/2004	-	-	-8.3%	-	12/31/2015
Long Wharf III	03/30/2007	9.8%	9.9%	7.7%	7.7%	12/31/2015
Long Wharf IV	07/03/2013	25.2%	26.1%	17.4%	17.7%	12/31/2015
Oaktree REOF V	12/31/2011	18.6%	-	13.6%	-	12/31/2015
Oaktree REOF VI	09/30/2013	21.6%	-	14.5%	-	12/31/2015
Oaktree REOF VII <sup>1</sup>	04/01/2015	-	-	-	-	-
Paulson <sup>1</sup>	11/10/2013	-	-	-	-	-
Siguler Guff I	01/25/2012	16.5%	17.9%	14.1%	15.6%	09/30/2015
Siguler Guff II	08/31/2013	5.1%	3.9%	1.4%	1.3%	09/30/2015

<sup>1</sup>Manager has yet to report IRR figure due to no capital invested or meaningful distributions.

<sup>2</sup>Fund level data includes CCCERA and all other fund investors.

<sup>3</sup>Net IRR calculated after deductions of management fees and carried interest to the General Partner.

<sup>4</sup>Manager has reported IRR figures, but does not consider them to be meaningful, due to the age of the fund.

Total Fund  
Closed End Funds - IRR Summary

Period Ending: December 31, 2015

Private Equity & Venture Capital	Inception	Fund Level (G)	CCCERA (G)	Fund Level (N)	CCCERA (N)	IRR Date
Adams Street Partners	03/18/1996	-	12.3%	-	9.2%	09/30/2015
Adams Street Partners II	01/16/2009	-	20.6%	-	17.8%	09/30/2015
Adams Street Partners - Fund 5	09/21/2012	-	2.5%	-	-2.0%	09/30/2015
Adams Street Partners - BPF	01/18/1996	-	14.3%	-	11.7%	09/30/2015
Bay Area Equity Fund I	06/14/2004	31.9%	32.4%	24.0%	24.4%	09/30/2015
Bay Area Equity Fund II	12/07/2009	12.0%	11.3%	5.1%	4.9%	09/30/2015
Energy Investor Fund	11/26/2003	33.6%	34.8%	28.6%	28.4%	09/30/2015
Energy Investor Fund II	08/16/2005	7.9%	7.3%	5.0%	4.4%	09/30/2015
Energy Investor Fund III	05/30/2007	8.6%	8.6%	5.9%	8.9%	09/30/2015
Energy Investor Fund IV	11/28/2011	24.3%	25.0%	15.5%	15.3%	09/30/2015
Pathway 6	05/24/2011	13.1%	13.1%	7.5%	7.5%	09/30/2015
<i>Benchmark</i> <sup>4</sup>		7.1%	-	-	-	09/30/2015
Pathway 7 <sup>1</sup>	02/07/2013	-	-	-	-	-
Pathway Private Equity Fund	11/09/1998	10.3%	10.3%	8.4%	8.4%	09/30/2015
<i>Benchmark</i> <sup>5</sup>		8.2%	-	-	-	09/30/2015
Pathway Private Equity Fund 2008	12/26/2008	13.6%	13.6%	9.8%	9.8%	09/30/2015
<i>Benchmark</i> <sup>6</sup>		8.6%	-	-	-	09/30/2015
Carpenter Bancfund	01/31/2008	9.8%	9.6%	8.3%	8.1%	09/30/2015
Nogales	02/15/2004	-4.0%	-4.5%	-8.6%	-8.8%	03/31/2015
Paladin III	11/30/2007	15.7%	-	6.5%	6.7%	09/30/2015
Ocean Avenue	06/11/2014	-	-	8.7%	-	06/30/2015
Siguler Guff CCCERA Opportunities	06/03/2014	-	31.6%	-	24.0%	09/30/2015

<sup>1</sup>Manager has yet to report IRR figure due to no capital invested or meaningful distributions.

<sup>2</sup>Fund level data includes CCCERA and all other fund investors.

<sup>3</sup>Net IRR calculated after deductions of management fees and carried interest to the General Partner.

<sup>4</sup>Private iQ global all private equity median pooled return for vintage years 2011-2014, as of March 31, 2015.

<sup>5</sup>Private iQ global all private equity median pooled return for vintage years 1999-2011, as of March 31, 2015.

<sup>6</sup>Private iQ global all private equity median pooled return for vintage years 2008-2014, as of March 31, 2015.

# Total Fund Performance Analysis - 3 & 5 Years (Net of Fees)

Period Ending: December 31, 2015

## 3 Years

	Anlzd Ret	Ann Excess BM Return	Anlzd Std Dev	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Info Ratio	Up Mkt Cap Ratio	Down Mkt Cap Ratio
Intech Large Cap Core	15.98%	0.85%	9.24%	2.33%	0.90	3.71%	0.85	1.73	0.23	98.51%	58.84%
PIMCO Stocks+ Absolute Return	13.53%	-1.60%	11.11%	-4.05%	1.16	2.38%	0.97	1.21	-0.67	99.80%	158.51%
Jackson Square Partners	17.35%	0.53%	10.98%	-2.79%	1.20	2.84%	0.96	1.58	0.19	108.50%	136.22%
Robeco Boston Partners	13.56%	0.48%	10.69%	0.87%	0.97	2.63%	0.94	1.27	0.18	101.60%	93.29%
Emerald Advisers	18.13%	3.85%	16.47%	4.00%	0.99	6.63%	0.84	1.10	0.58	112.82%	80.50%
Ceredex	9.85%	0.78%	14.11%	0.89%	0.99	4.04%	0.92	0.70	0.19	95.90%	84.26%
William Blair	5.82%	2.27%	10.55%	2.46%	0.95	1.95%	0.97	0.55	1.17	107.00%	80.62%
Artisan Partners	11.85%	4.16%	10.04%	4.51%	0.96	3.68%	0.87	1.18	1.13	126.68%	71.28%
First Eagle	6.50%	-1.19%	7.85%	0.51%	0.78	2.85%	0.94	0.82	-0.42	83.26%	87.20%
Intech Global Low Vol	12.55%	4.86%	8.88%	7.38%	0.67	6.77%	0.55	1.41	0.72	121.60%	45.80%
JP Morgan Global Opportunities	9.10%	1.41%	10.61%	0.93%	1.06	2.21%	0.96	0.85	0.64	107.67%	87.65%
AFL-CIO	1.56%	0.12%	2.87%	0.13%	0.99	0.50%	0.97	0.53	0.24	99.00%	91.10%
Goldman Sachs Core Plus	1.92%	0.47%	2.84%	0.70%	0.84	1.59%	0.71	0.66	0.30	90.23%	54.33%
Lord Abbett	1.80%	0.36%	2.98%	0.40%	0.97	1.14%	0.85	0.59	0.31	94.04%	68.13%
PIMCO Fixed Income	1.40%	-0.05%	3.14%	-0.13%	1.06	0.91%	0.92	0.43	-0.05	94.15%	92.46%
Allianz Global Investors	1.63%	-0.01%	5.31%	0.04%	0.97	0.84%	0.98	0.30	-0.02	95.36%	94.55%
Lazard	-2.34%	-0.61%	4.19%	-0.66%	0.97	1.15%	0.93	-0.57	-0.53	78.30%	100.59%
Adelante	12.68%	0.84%	12.82%	1.89%	0.91	2.26%	0.98	0.99	0.37	93.89%	76.56%
INVESCO International REIT	1.06%	-0.90%	9.55%	-0.82%	0.96	1.23%	0.99	0.11	-0.73	87.89%	99.00%

## 5 Years

	Anlzd Ret	Ann Excess BM Return	Anlzd Std Dev	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Info Ratio	Up Mkt Cap Ratio	Down Mkt Cap Ratio
Intech Large Cap Core	13.10%	0.53%	12.82%	0.92%	0.97	3.30%	0.93	1.02	0.16	100.76%	93.10%
PIMCO Stocks+ Absolute Return	12.42%	-0.15%	14.02%	-1.24%	1.09	2.18%	0.98	0.88	-0.07	105.93%	113.89%
Jackson Square Partners	15.33%	1.79%	13.50%	1.33%	1.03	2.67%	0.96	1.13	0.67	112.59%	97.54%
Robeco Boston Partners	12.29%	1.02%	15.17%	0.18%	1.07	2.88%	0.97	0.81	0.35	112.10%	105.86%
Emerald Advisers	13.91%	3.24%	21.52%	2.10%	1.11	6.69%	0.91	0.64	0.48	126.98%	102.13%
William Blair	4.80%	2.67%	14.60%	2.72%	0.98	2.32%	0.98	0.33	1.15	110.50%	87.58%
JP Morgan Global Opportunities	6.90%	0.81%	14.90%	0.20%	1.10	2.42%	0.98	0.46	0.34	111.36%	103.46%
AFL-CIO	3.33%	0.09%	2.78%	0.24%	0.95	0.56%	0.96	1.18	0.16	99.89%	91.10%
Goldman Sachs Core Plus	4.12%	0.87%	2.83%	1.30%	0.87	1.41%	0.77	1.44	0.62	110.45%	54.33%
Lord Abbett	4.30%	1.05%	2.85%	1.47%	0.87	1.43%	0.77	1.49	0.74	118.91%	68.13%
PIMCO Fixed Income	3.39%	0.14%	2.86%	0.95%	0.75	2.01%	0.57	1.17	0.07	101.66%	92.46%
Allianz Global Investors	4.79%	-0.05%	6.26%	0.26%	0.94	0.97%	0.98	0.76	-0.05	93.77%	90.28%
Lazard	0.87%	-0.03%	4.16%	-0.04%	1.01	1.34%	0.90	0.20	-0.02	97.37%	98.03%
Adelante	12.74%	0.30%	14.30%	1.03%	0.94	1.80%	0.99	0.89	0.16	94.09%	87.79%

Performance Analysis excludes closed end funds and those funds without 3 and 5 years of performance.

# Total Fund Investment Fund Fee Analysis

Period Ending: December 31, 2015

Name	Asset Class	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
Intech Large Cap Core	Global Equity	0.50% of First \$100.0 Mil, 0.45% of Next \$100.0 Mil, 0.35% of Next \$100.0 Mil, 0.30% of Next \$200.0 Mil, 0.25% Thereafter	\$296,607,282	\$1,283,125	0.43%
PIMCO Stocks+ Absolute Return	Global Equity	0.15% of Assets	\$232,375,016	\$348,563	0.15%
Jackson Square Partners	Global Equity	0.50% of First \$100.0 Mil, 0.40% of Next \$150.0 Mil, 0.35% Thereafter	\$315,984,758	\$1,330,947	0.42%
Robeco Boston Partners	Global Equity	0.50% of First \$25.0 Mil, 0.30% Thereafter	\$299,239,459	\$947,718	0.32%
Emerald Advisers	Global Equity	0.75% of First \$10.0 Mil, 0.60% Thereafter	\$196,357,423	\$1,193,145	0.61%
Ceredex	Global Equity	0.85% of First \$10.0 Mil, 0.68% of Next \$40.0 Mil, 0.51% Thereafter	\$200,480,349	\$1,124,450	0.56%
Pyrford	Global Equity	0.70% of First \$50.0 Mil, 0.50% of Next \$50.0 Mil, 0.35% Thereafter	\$367,010,016	\$1,534,535	0.42%
William Blair	Global Equity	0.80% of First \$20.0 Mil, 0.60% of Next \$30.0 Mil, 0.50% of Next \$50.0 Mil, 0.45% of Next \$50.0 Mil, 0.40% of Next \$50.0 Mil, 0.30% Thereafter	\$372,738,334	\$1,533,215	0.41%
Artisan Partners	Global Equity	0.75% of Assets	\$290,204,390	\$2,176,533	0.75%
First Eagle	Global Equity	0.75% of Assets	\$287,765,432	\$2,158,241	0.75%
Intech Global Low Vol	Global Equity	0.25% of First \$100.0 Mil, 0.21% of Next \$100.0 Mil, 0.18% of Next \$100.0 Mil, 0.16% of Next \$200.0 Mil, 0.14% Thereafter	\$22,342,698	\$54,740	0.25%
JP Morgan Global Opportunities	Global Equity	0.50% of First \$100.0 Mil, 0.40% Thereafter	\$270,243,751	\$1,180,975	0.44%
AFL-CIO	Global Fixed Income	0.43% of Assets	\$241,295,637	\$1,037,571	0.43%

Mutual fund fees shown are sourced from Morningstar and are as of the most current prospectus.

Total Fund  
Investment Fund Fee Analysis

Period Ending: December 31, 2015

Name	Asset Class	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
Goldman Sachs Core Plus	Global Fixed Income	0.18% of First \$500.0 Mil, 0.16% Thereafter	\$334,802,991	\$585,905	0.18%
GSAM Workout Portfolio	Global Fixed Income		\$4,078		
Lord Abbett	Global Fixed Income	0.20% of First \$250.0 Mil, 0.15% of Next \$250.0 Mil, 0.13% Thereafter	\$334,032,022	\$626,048	0.19%
PIMCO Fixed Income	Global Fixed Income	0.25% of First \$600.0 Mil, 0.15% Thereafter	\$405,573,417	\$1,013,934	0.25%
Allianz Global Investors	High Yield Fixed Income	0.50% of First \$50.0 Mil, 0.40% of Next \$50.0 Mil, 0.35% Thereafter	\$333,193,329	\$1,266,177	0.38%
Lazard	Global Fixed Income	0.40% of First \$25.0 Mil, 0.30% of Next \$25.0 Mil, 0.25% Thereafter	\$289,261,140	\$773,153	0.27%
PIMCO All Asset Fund	Inflation Hedge/Real Assets	0.87% of Assets	\$114,900,599	\$999,635	0.87%
Wellington Real Total Return	Inflation Hedge/Real Assets	0.55% of Assets	\$189,910,086	\$1,044,505	0.55%

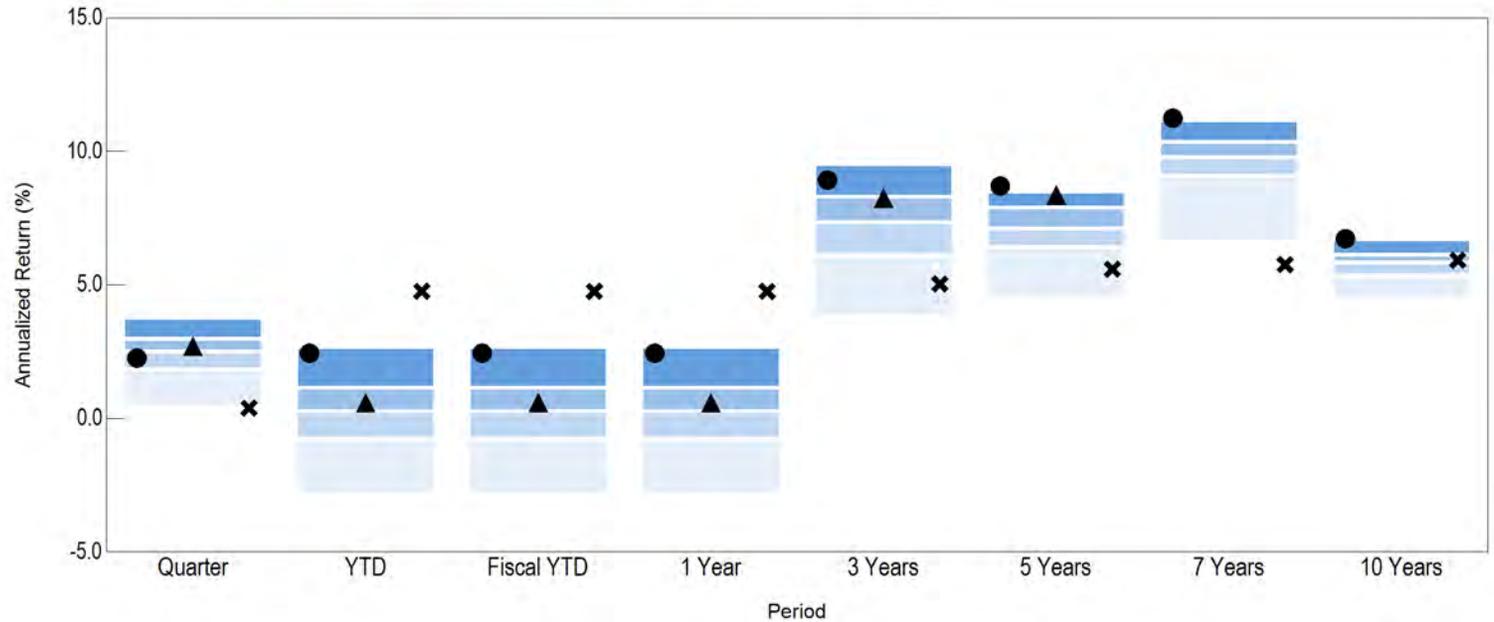
Mutual fund fees shown are sourced from Morningstar and are as of the most current prospectus.

Total Fund

Peer Universe Comparison: Cumulative Performance (Gross of Fees)

Period Ending: December 31, 2015

Total Fund Cumulative Performance vs. InvestorForce Public DB > \$1B Gross



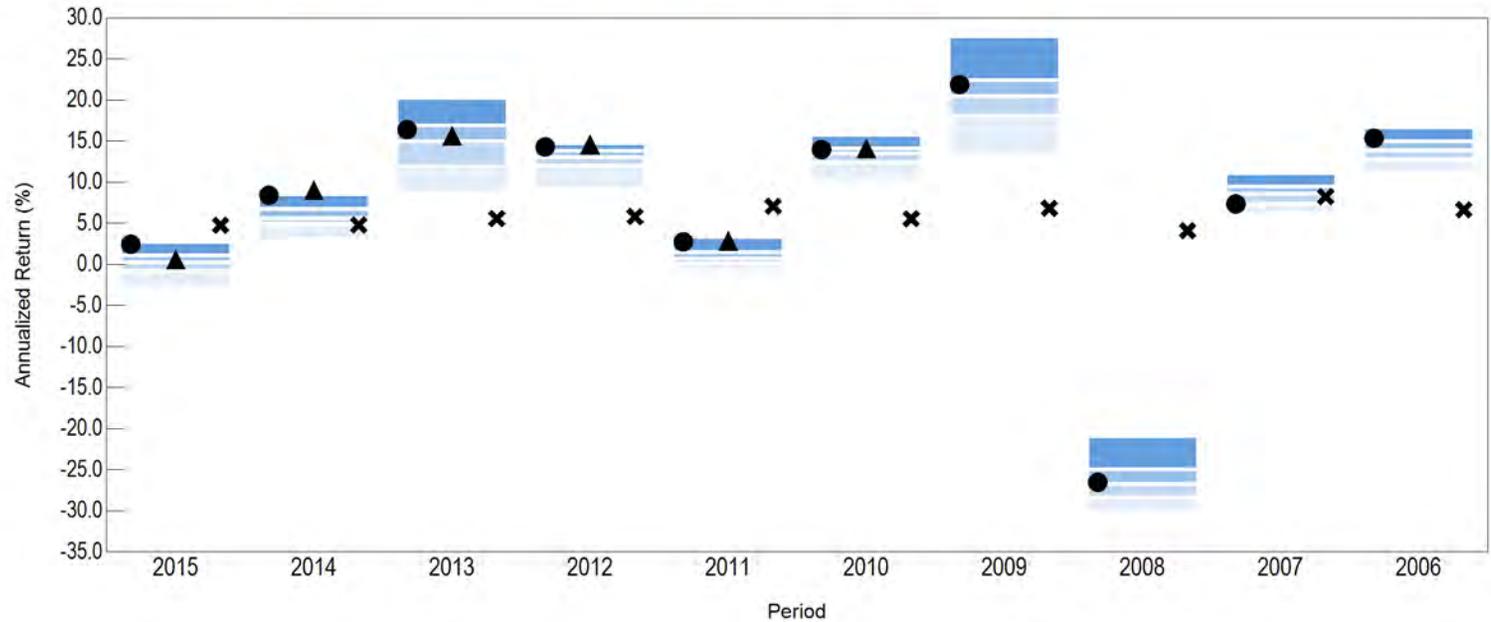
	Quarter		YTD		Fiscal YTD		1 Year		3 Years		5 Years		7 Years		10 Years	
<b>Return (Rank)</b>																
5th Percentile	3.8	2.7	2.7	2.7	9.5	8.5	11.2	6.7	3.8	2.7	2.7	2.7	9.5	8.5	11.2	6.7
25th Percentile	3.0	1.1	1.1	1.1	8.3	7.9	10.4	6.1	3.0	1.1	1.1	1.1	8.3	7.9	10.4	6.1
Median	2.5	0.3	0.3	0.3	7.4	7.1	9.8	5.9	2.5	0.3	0.3	0.3	7.4	7.1	9.8	5.9
75th Percentile	1.9	-0.7	-0.7	-0.7	6.1	6.4	9.1	5.4	1.9	-0.7	-0.7	-0.7	6.1	6.4	9.1	5.4
95th Percentile	0.5	-2.8	-2.8	-2.8	3.8	4.5	6.6	4.5	0.5	-2.8	-2.8	-2.8	3.8	4.5	6.6	4.5
# of Portfolios	104	98	98	98	92	90	79	75	104	98	98	98	92	90	79	75
● Total Fund	2.3 (61)	2.4 (7)	2.4 (7)	2.4 (7)	8.9 (13)	8.7 (3)	11.2 (4)	6.7 (5)	2.3 (61)	2.4 (7)	2.4 (7)	2.4 (7)	8.9 (13)	8.7 (3)	11.2 (4)	6.7 (5)
▲ Policy Index	2.7 (39)	0.6 (40)	0.6 (40)	0.6 (40)	8.2 (28)	8.4 (7)	-- (--)	-- (--)	2.7 (39)	0.6 (40)	0.6 (40)	0.6 (40)	8.2 (28)	8.4 (7)	-- (--)	-- (--)
✕ CPI + 4%	0.4 (96)	4.8 (1)	4.8 (1)	4.8 (1)	5.0 (85)	5.6 (90)	5.8 (98)	5.9 (42)	0.4 (96)	4.8 (1)	4.8 (1)	4.8 (1)	5.0 (85)	5.6 (90)	5.8 (98)	5.9 (42)

Total Fund

Peer Universe Comparison: Consecutive Periods (Gross of Fees)

Period Ending: December 31, 2015

Total Fund Consecutive Periods vs. InvestorForce Public DB > \$1B Gross



	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
<b>5th Percentile</b>	2.7	8.5	20.2	14.7	3.3	15.7	27.7	-21.0	11.0	16.6
<b>25th Percentile</b>	1.1	6.8	17.0	13.9	1.6	14.2	22.5	-24.9	9.5	15.0
<b>Median</b>	0.3	5.7	15.0	13.0	0.8	13.5	20.5	-26.7	8.6	13.9
<b>75th Percentile</b>	-0.7	4.9	12.0	12.1	0.1	12.5	18.1	-28.3	7.4	12.9
<b>95th Percentile</b>	-2.8	3.1	8.7	9.2	-0.9	10.2	13.4	-30.2	6.2	11.2
<b># of Portfolios</b>	98	79	67	74	68	66	66	65	64	64
<b>● Total Fund</b>	2.4 (7)	8.4 (6)	16.4 (33)	14.3 (13)	2.7 (9)	14.0 (29)	21.9 (34)	-26.5 (48)	7.3 (78)	15.4 (19)
<b>▲ Policy Index</b>	0.6 (40)	9.0 (2)	15.6 (43)	14.6 (8)	2.8 (9)	14.1 (27)	-- (--)	-- (--)	-- (--)	-- (--)
<b>× CPI + 4%</b>	4.8 (1)	4.8 (80)	5.6 (99)	5.8 (99)	7.1 (1)	5.6 (99)	6.8 (99)	4.1 (1)	8.2 (53)	6.6 (99)

## **Domestic Equity Managers**

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# Intech Large Cap Core Manager Portfolio Overview

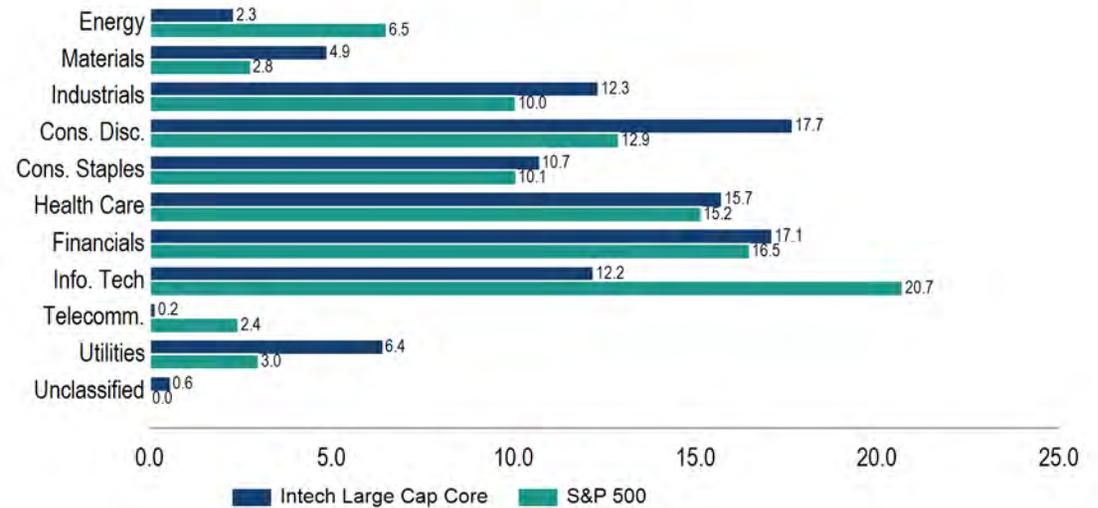
Period Ending: December 31, 2015

Domestic equity large cap core portfolio with high correlation exposure to a broad universe seeking enhanced returns. Primary personnel include Adrian Banner, Vassilios Papathanakos, Joseph Runnels, and Phillip Whitman.

## Characteristics

	Portfolio	S&P 500
Number of Holdings	297	504
Weighted Avg. Market Cap. (\$B)	38.84	128.54
Median Market Cap. (\$B)	17.73	17.46
Price To Earnings	25.29	22.19
Price To Book	5.05	4.25
Price To Sales	2.79	3.00
Return on Equity (%)	19.82	18.03
Yield (%)	1.67	2.17
Beta	0.90	1.00

## Sector Allocation (%) vs S&P 500



## Largest Holdings

	End Weight	Return
KROGER	1.45	16.30
LOCKHEED MARTIN	1.42	5.51
CVS HEALTH	1.39	1.68
CONSTELLATION BRANDS 'A'	1.37	14.03
NORTHROP GRUMMAN	1.30	14.26
FISERV	1.26	5.60
AMERISOURCEBERGEN	1.23	9.56
ANTHEM	1.20	0.07
APPLE	1.17	-4.16
O REILLY AUTOMOTIVE	1.03	1.37

## Top Contributors

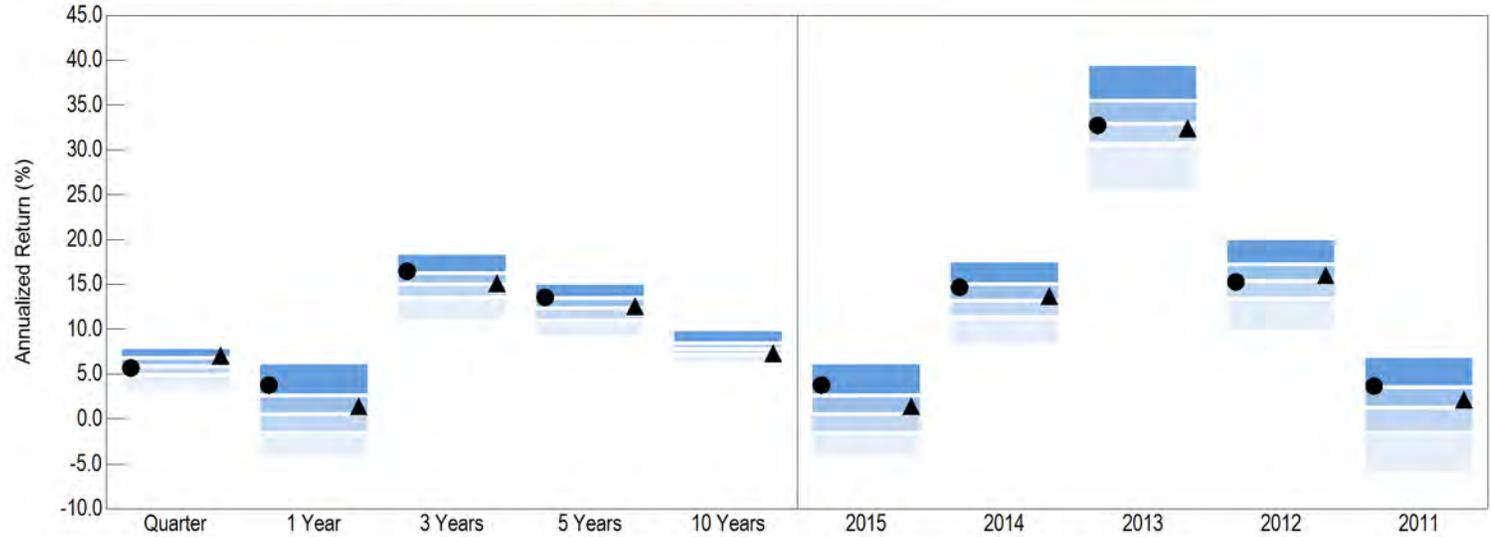
	Avg Wgt	Return	Contribution
KROGER	1.30	16.30	0.21
CONSTELLATION BRANDS 'A'	1.30	14.03	0.18
NORTHROP GRUMMAN	1.27	14.26	0.18
DR PEPPER SNAPPLE GROUP	0.95	18.52	0.18
ALLERGAN	1.09	14.97	0.16
RAYTHEON 'B'	0.98	14.67	0.14
AVAGO TECHNOLOGIES	0.87	16.47	0.14
CARDINAL HEALTH	0.84	16.70	0.14
SOUTHWEST AIRLINES	0.97	13.39	0.13
ROPER TECHNOLOGIES	0.58	21.30	0.12

## Bottom Contributors

	Avg Wgt	Return	Contribution
UNION PACIFIC	0.79	-10.97	-0.09
WESTERN DIGITAL	0.34	-23.79	-0.08
V F	0.98	-8.21	-0.08
FIDELITY NAT.INFO.SVS.	0.84	-9.28	-0.08
F5 NETWORKS	0.42	-16.27	-0.07
UNDER ARMOUR 'A'	0.39	-16.71	-0.07
BEST BUY	0.34	-17.36	-0.06
APPLE	1.30	-4.16	-0.05
RYDER SYSTEM	0.22	-22.78	-0.05
AKAMAI TECHS.	0.20	-23.79	-0.05

Unclassified sector allocation includes cash allocations.

Intech Large Cap Core vs. eA US Large Cap Core Equity Gross Universe

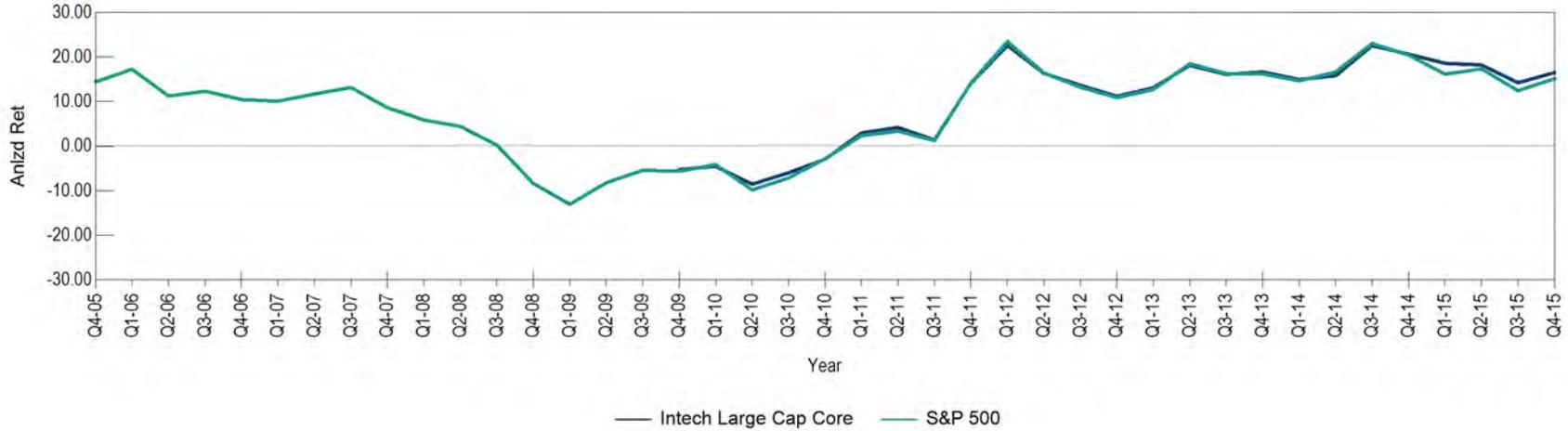


	Quarter	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011
<b>5th Percentile</b>	8.0	6.3	18.5	15.2	9.9	6.3	17.7	39.6	20.1	7.0
<b>25th Percentile</b>	6.8	2.7	16.3	13.5	8.5	2.7	15.1	35.5	17.2	3.6
<b>Median</b>	5.9	0.6	15.1	12.4	7.8	0.6	13.3	32.9	15.4	1.3
<b>75th Percentile</b>	4.9	-1.6	13.6	11.0	7.2	-1.6	11.4	30.8	13.4	-1.5
<b>95th Percentile</b>	3.1	-4.1	10.9	9.1	6.2	-4.1	8.2	25.4	9.8	-5.9
<b># of Portfolios</b>	268	267	262	248	210	267	267	261	254	259
<b>● Intech Large Cap Core</b>	5.7 (56)	3.8 (16)	16.5 (24)	13.5 (25)	-- (--)	3.8 (16)	14.7 (31)	32.7 (54)	15.3 (54)	3.6 (25)
<b>▲ S&amp;P 500</b>	7.0 (20)	1.4 (42)	15.1 (50)	12.6 (48)	7.3 (71)	1.4 (42)	13.7 (42)	32.4 (58)	16.0 (41)	2.1 (40)

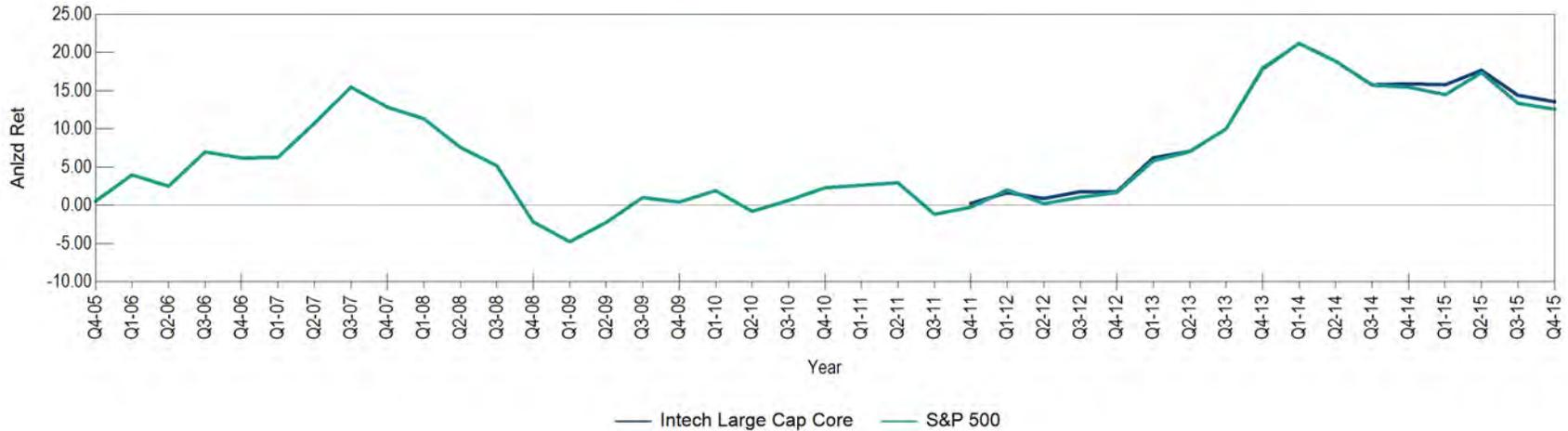
Intech Large Cap Core  
 Manager Performance - Rolling 3 & 5 Year (Gross of Fees)

Period Ending: December 31, 2015

Rolling 3 Year Annualized Return (%)

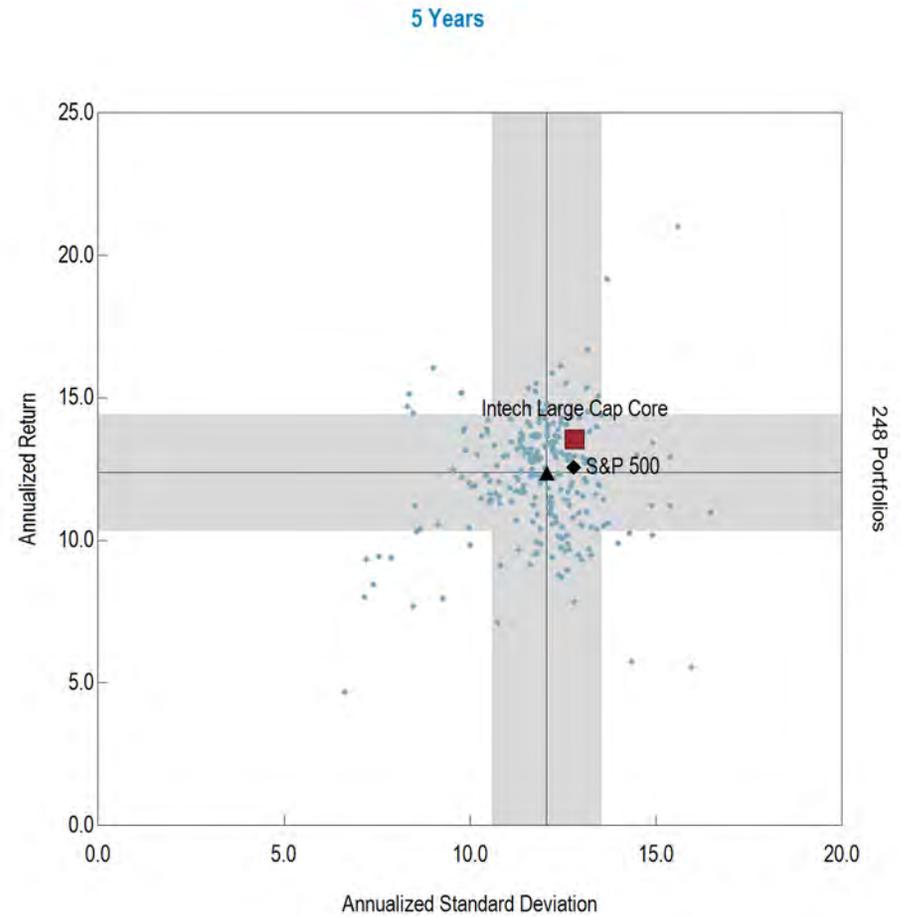
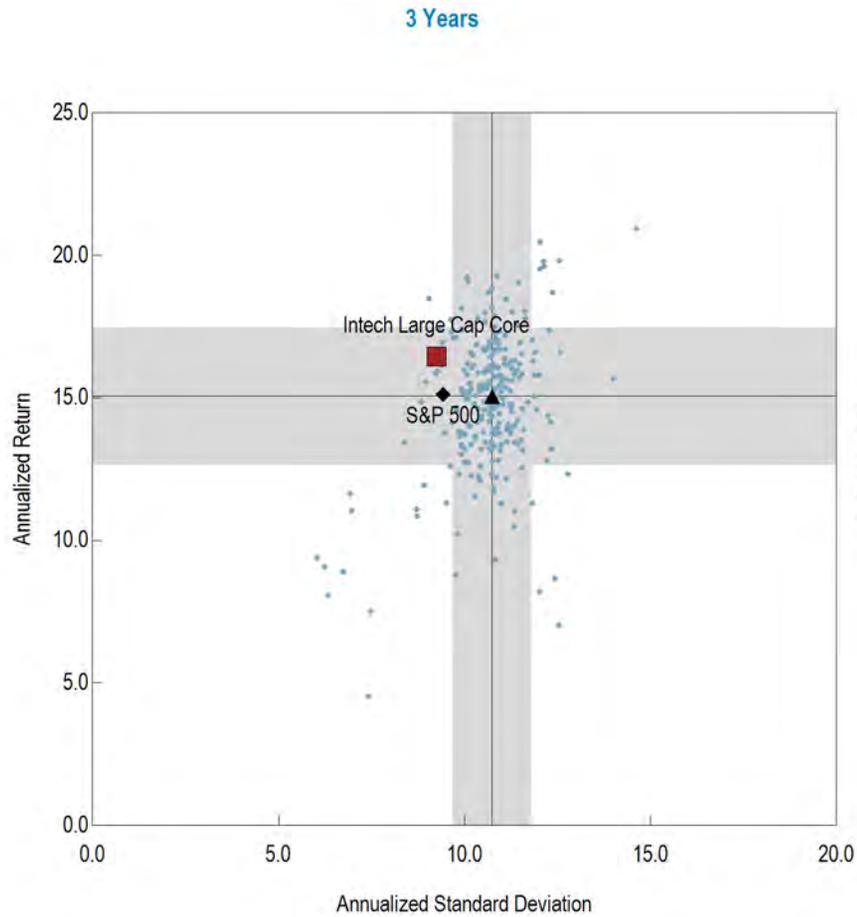


Rolling 5 Year Annualized Return (%)



Intech Large Cap Core  
 Risk vs. Return 3 & 5 Year (Gross of Fees)

Period Ending: December 31, 2015



	<b>3 Years</b>		
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Intech Large Cap Core	16.5%	9.2%	1.8
S&P 500	15.1%	9.4%	1.6
eA US Large Cap Core Equity Gross Median	15.1%	10.7%	1.4

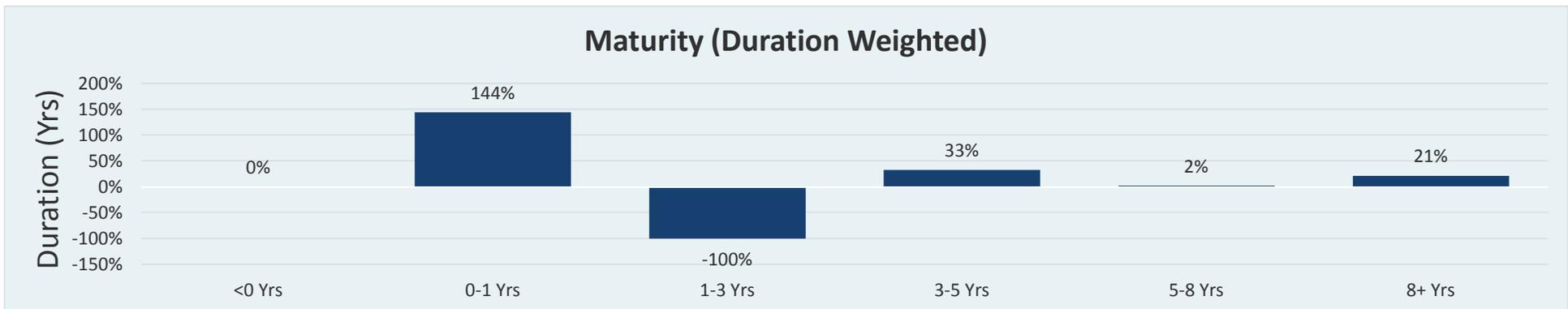
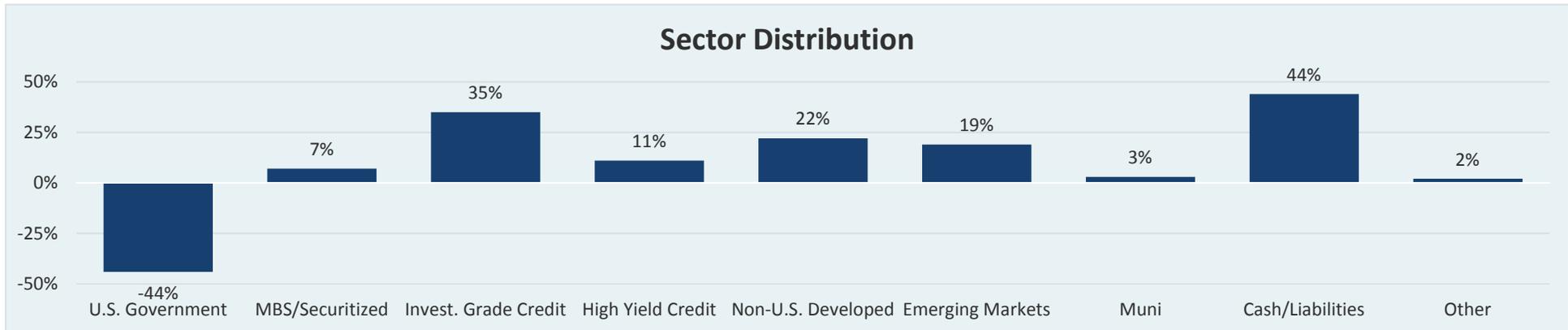
	<b>5 Years</b>		
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Intech Large Cap Core	13.5%	12.8%	1.1
S&P 500	12.6%	12.8%	1.0
eA US Large Cap Core Equity Gross Median	12.4%	12.1%	1.1

# PIMCO Stocks+ Absolute Return Manager Portfolio Overview

Period Ending: December 31, 2015

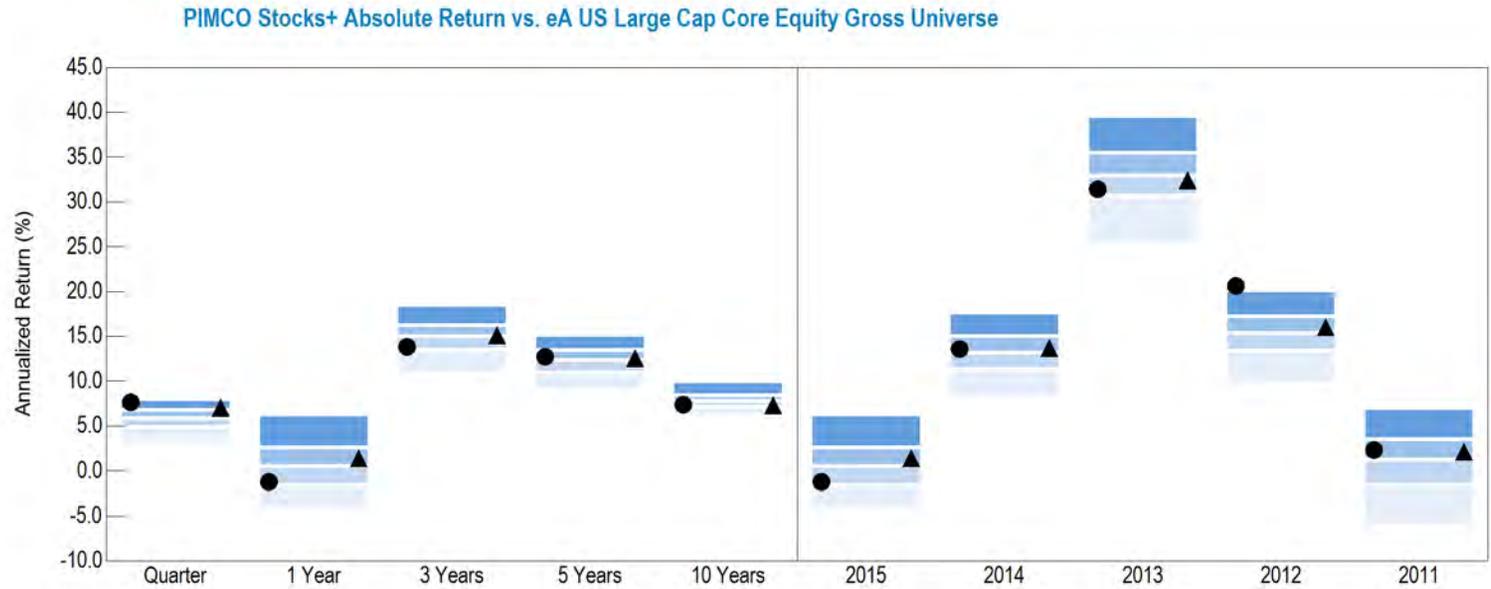
Domestic equity large cap core portfolio with high correlation exposure to a broad universe seeking enhanced returns. Primary personnel include Mohsen Fahmi and Scott Mather.

	<b>PIMCO Stocks+</b>
Effective Duration	-0.63
Futures Adjusted Duration	-0.85
Yield to Maturity	2.42
Average Quality	A



PIMCO Stocks+ Absolute Return  
 Manager Performance Comparisons (Gross of Fees)

Period Ending: December 31, 2015

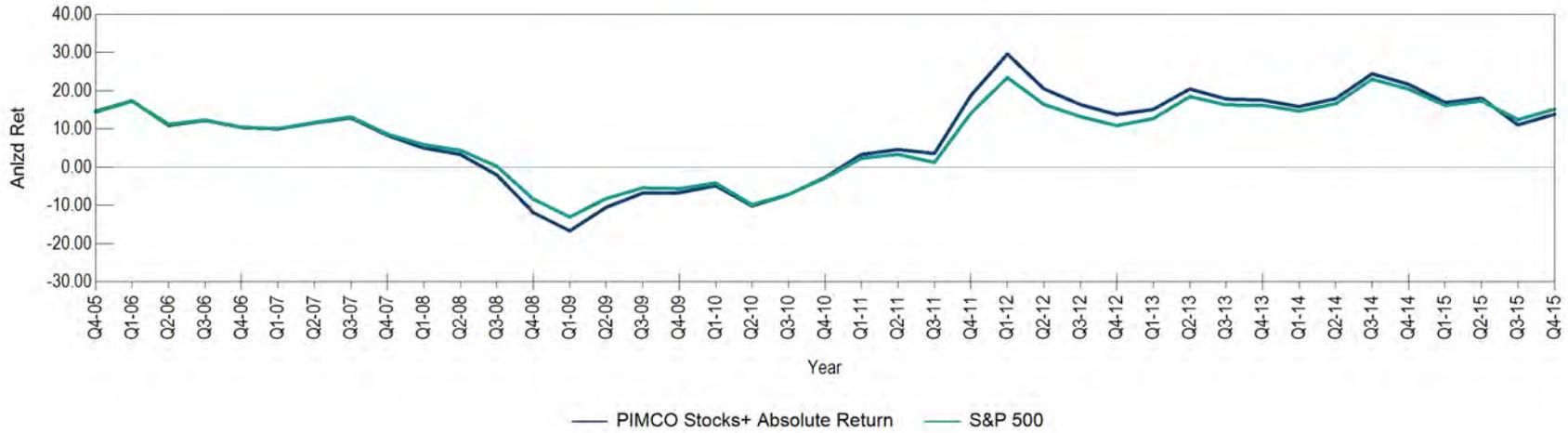


	Quarter	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011
<b>5th Percentile</b>	8.0	6.3	18.5	15.2	9.9	6.3	17.7	39.6	20.1	7.0
<b>25th Percentile</b>	6.8	2.7	16.3	13.5	8.5	2.7	15.1	35.5	17.2	3.6
<b>Median</b>	5.9	0.6	15.1	12.4	7.8	0.6	13.3	32.9	15.4	1.3
<b>75th Percentile</b>	4.9	-1.6	13.6	11.0	7.2	-1.6	11.4	30.8	13.4	-1.5
<b>95th Percentile</b>	3.1	-4.1	10.9	9.1	6.2	-4.1	8.2	25.4	9.8	-5.9
<b># of Portfolios</b>	268	267	262	248	210	267	267	261	254	259
<b>● PIMCO Stocks+ Absolute Return</b>	7.6 (9)	-1.2 (73)	13.8 (71)	12.7 (46)	7.4 (67)	-1.2 (73)	13.6 (45)	31.4 (68)	20.6 (4)	2.3 (36)
<b>▲ S&amp;P 500</b>	7.0 (20)	1.4 (42)	15.1 (50)	12.6 (48)	7.3 (71)	1.4 (42)	13.7 (42)	32.4 (58)	16.0 (41)	2.1 (40)

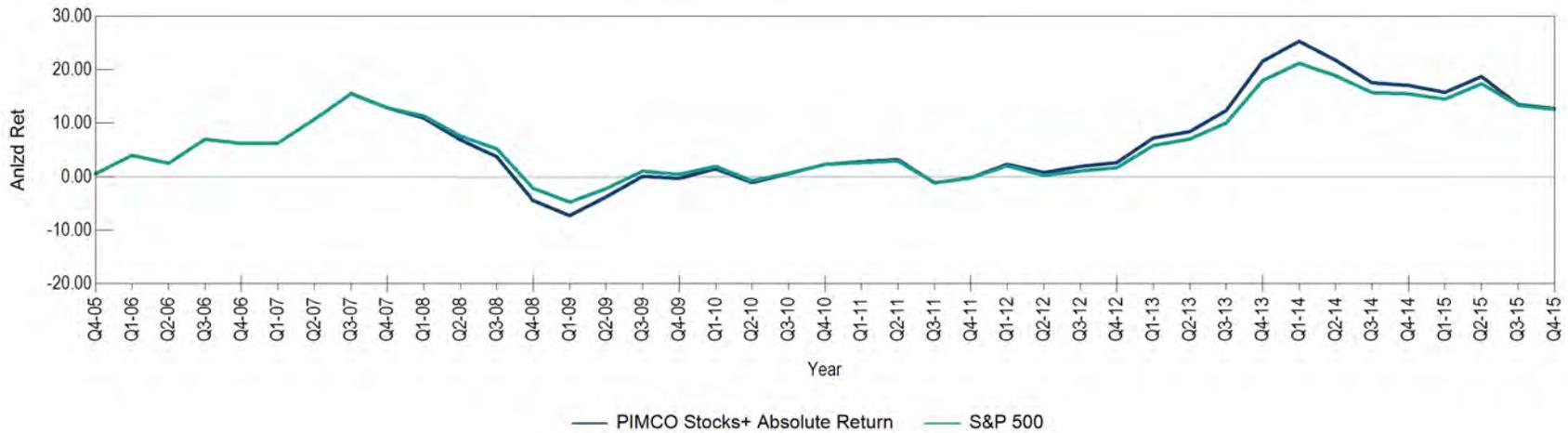
PIMCO Stocks+ Absolute Return  
 Manager Performance - Rolling 3 & 5 Year (Gross of Fees)

Period Ending: December 31, 2015

Rolling 3 Year Annualized Return (%)



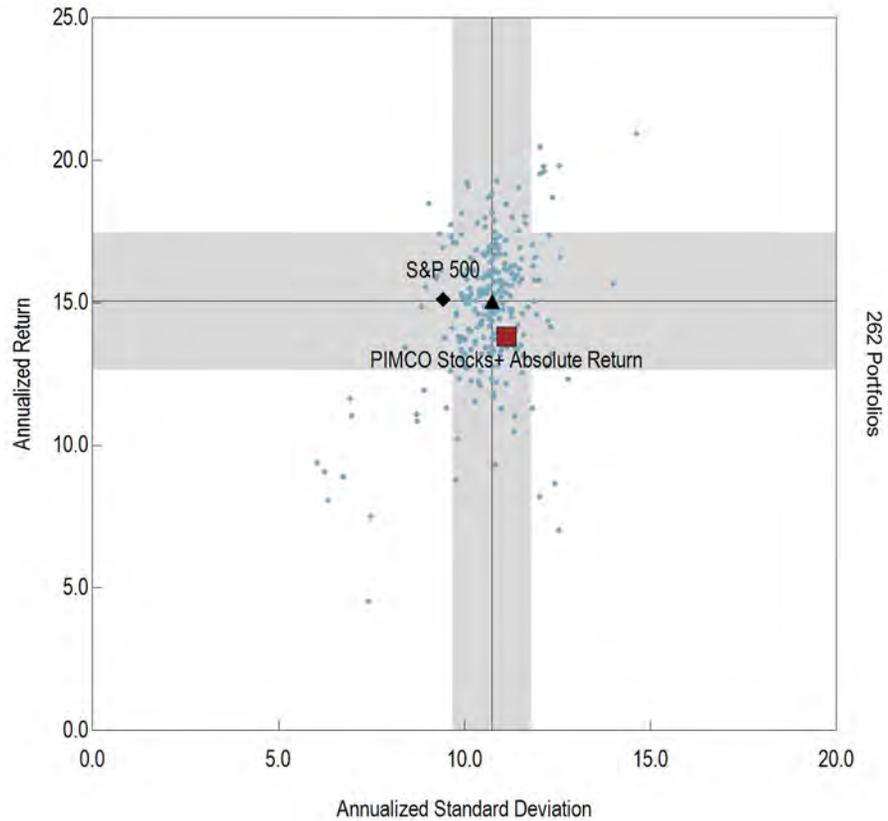
Rolling 5 Year Annualized Return (%)



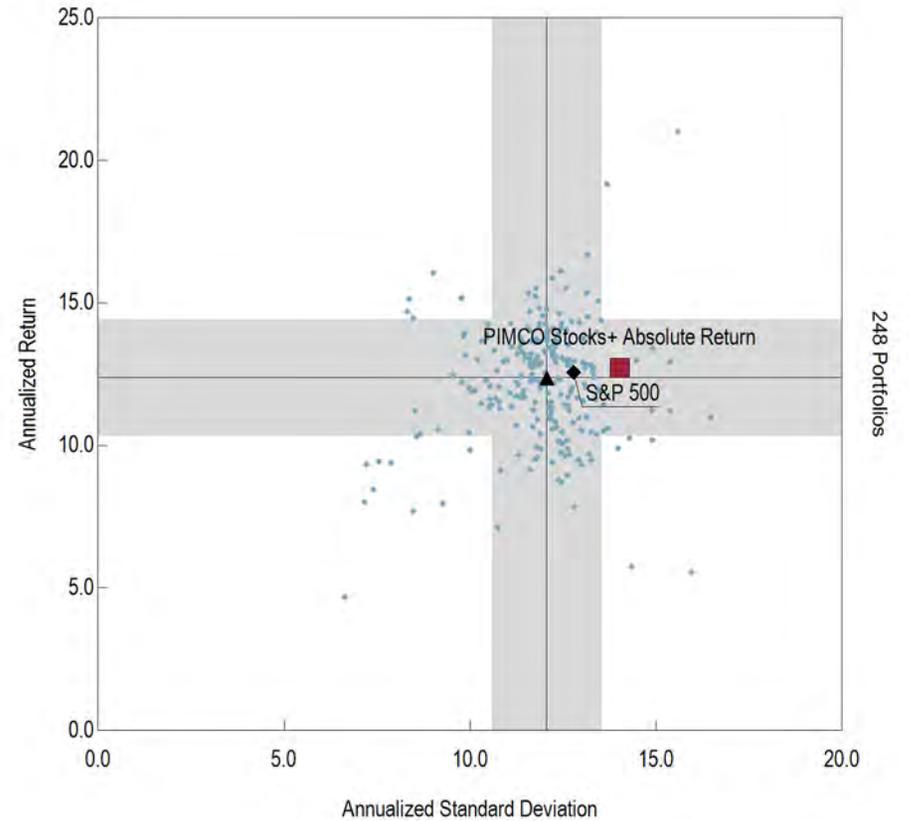
PIMCO Stocks+ Absolute Return  
 Risk vs. Return 3 & 5 Year (Gross of Fees)

Period Ending: December 31, 2015

3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
PIMCO Stocks+ Absolute Return	13.8%	11.1%	1.2
S&P 500	15.1%	9.4%	1.6
eA US Large Cap Core Equity Gross Median	15.1%	10.7%	1.4

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
PIMCO Stocks+ Absolute Return	12.7%	14.0%	0.9
S&P 500	12.6%	12.8%	1.0
eA US Large Cap Core Equity Gross Median	12.4%	12.1%	1.1

# Jackson Square Partners Manager Portfolio Overview

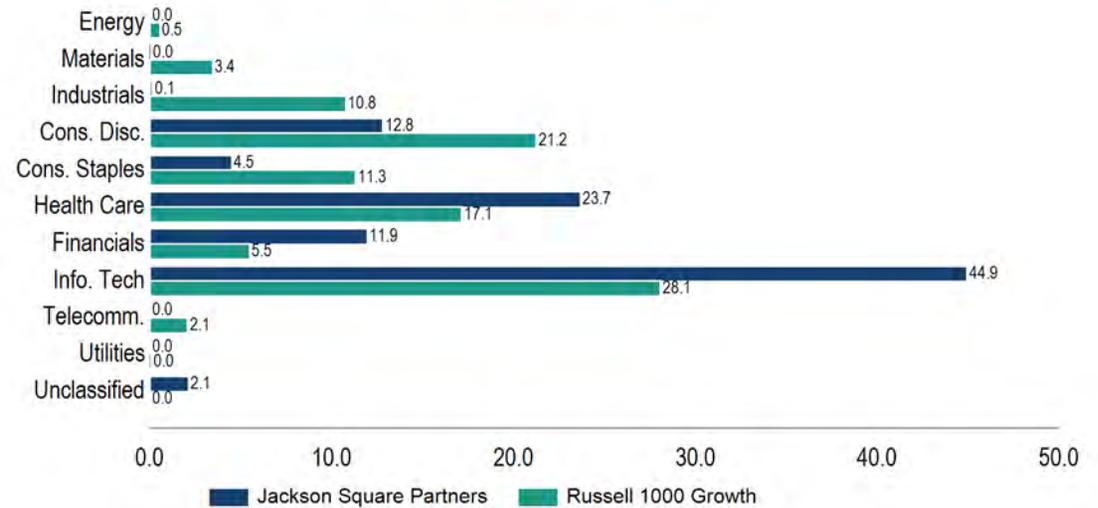
Period Ending: December 31, 2015

Domestic equity large cap growth portfolio concentrated in companies with sustainable long-term growth characteristics. Primary personnel include Jeffrey Van Harte, Christopher Bonavico, Christopher Ericksen, and Daniel Prislin.

## Characteristics

	Portfolio	Russell 1000 Growth
Number of Holdings	33	644
Weighted Avg. Market Cap. (\$B)	95.93	122.90
Median Market Cap. (\$B)	35.64	8.44
Price To Earnings	33.06	25.41
Price To Book	7.48	7.02
Price To Sales	6.66	3.80
Return on Equity (%)	19.85	25.00
Yield (%)	0.97	1.60
Beta	1.20	1.00

## Sector Allocation (%) vs Russell 1000 Growth



## Largest Holdings

	End Weight	Return
VISA 'A'	5.78	11.52
CELGENE	5.65	10.71
ALLERGAN	5.58	14.97
QUALCOMM	4.81	-6.05
WALGREENS BOOTS ALLIANCE	4.49	2.93
MICROSOFT	4.40	26.20
LIBERTY INTACT.QVC GROUP 'A'	4.39	4.16
EQUINIX	4.34	15.54
CROWN CASTLE INTL.	4.30	10.74
MASTERCARD	4.24	8.22

## Top Contributors

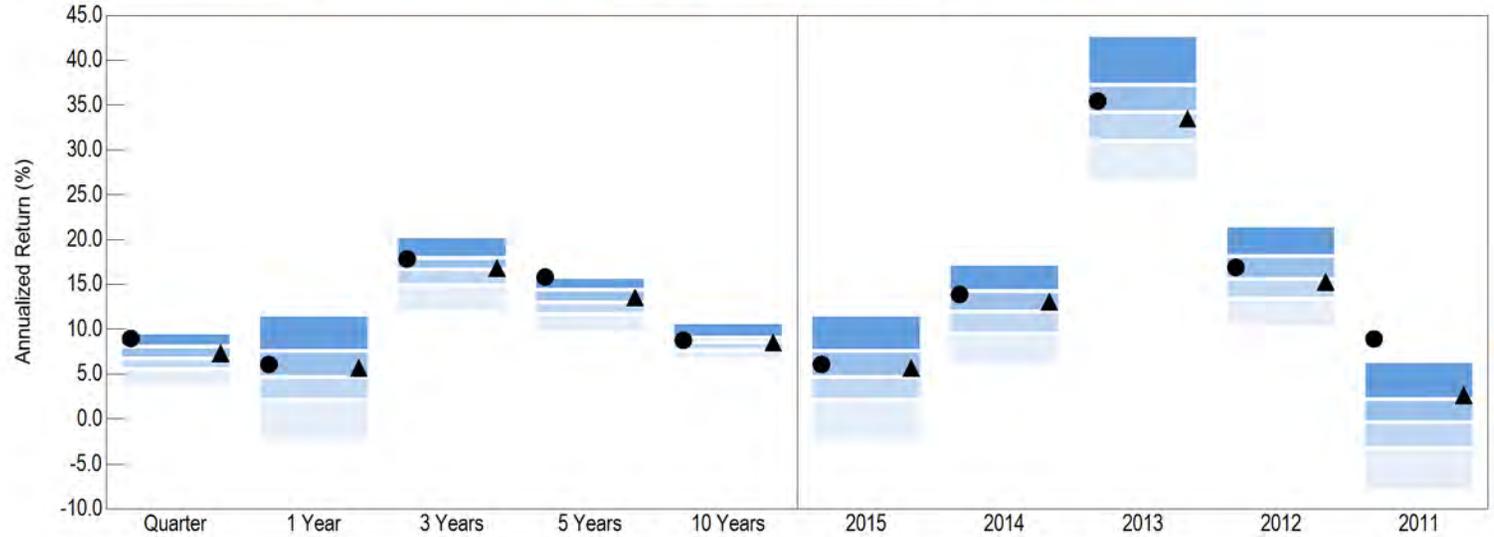
	Avg Wgt	Return	Contribution
MICROSOFT	4.10	26.20	1.07
BAIDU 'A' ADR 10:1	2.80	37.57	1.05
TRIPADVISOR 'A'	2.33	35.27	0.82
ALPHABET 'A'	3.58	21.87	0.78
EQUINIX	4.78	15.54	0.74
ALLERGAN	4.92	14.97	0.74
ALPHABET 'C'	2.78	24.73	0.69
VISA 'A'	5.83	11.52	0.67
CELGENE	5.61	10.71	0.60
PAYPAL HOLDINGS	3.52	16.62	0.59

## Bottom Contributors

	Avg Wgt	Return	Contribution
VALEANT PHARMS. (NYS) INTL.	3.08	-43.01	-1.32
QUALCOMM	5.39	-6.05	-0.33
SYNGENTA SPN.ADR 5:1	0.00	23.44	0.00
DISCOVERY COMMS.'A'	0.77	2.50	0.02
DISCOVERY COMMS.'C'	1.31	3.83	0.05
NIKE 'B'	2.76	1.90	0.05
ELECTRONIC ARTS	3.96	1.43	0.06
SIRONA DENTAL SYSTEMS	0.71	17.39	0.12
WALGREENS BOOTS ALLIANCE	4.53	2.93	0.13
DENTSPLY INTL.	0.74	20.47	0.15

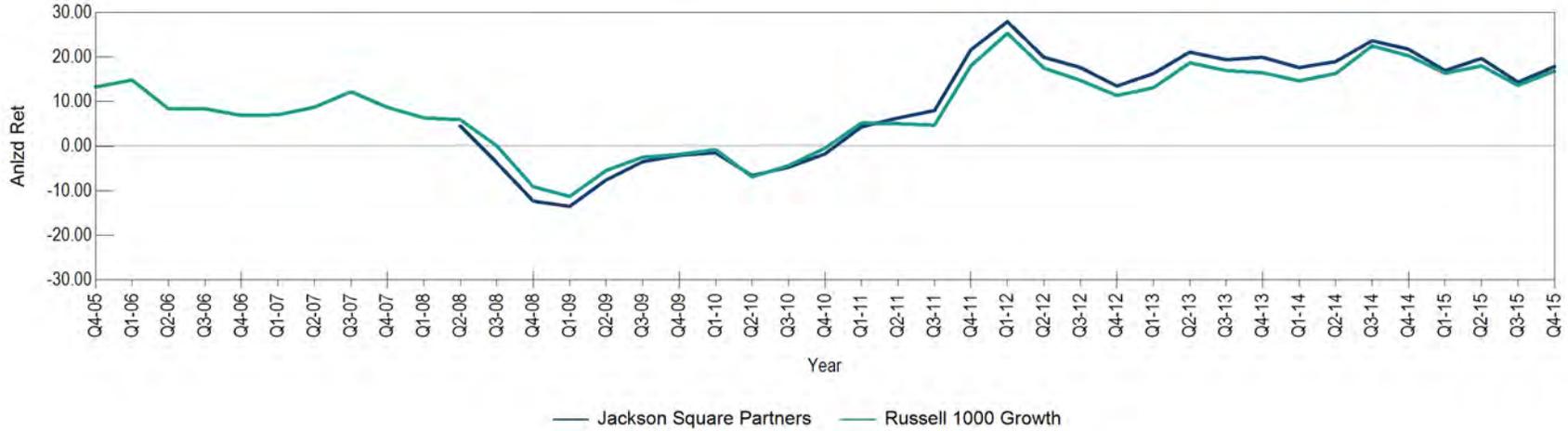
Unclassified sector allocation includes cash allocations.

Jackson Square Partners vs. eA US Large Cap Growth Equity Gross Universe

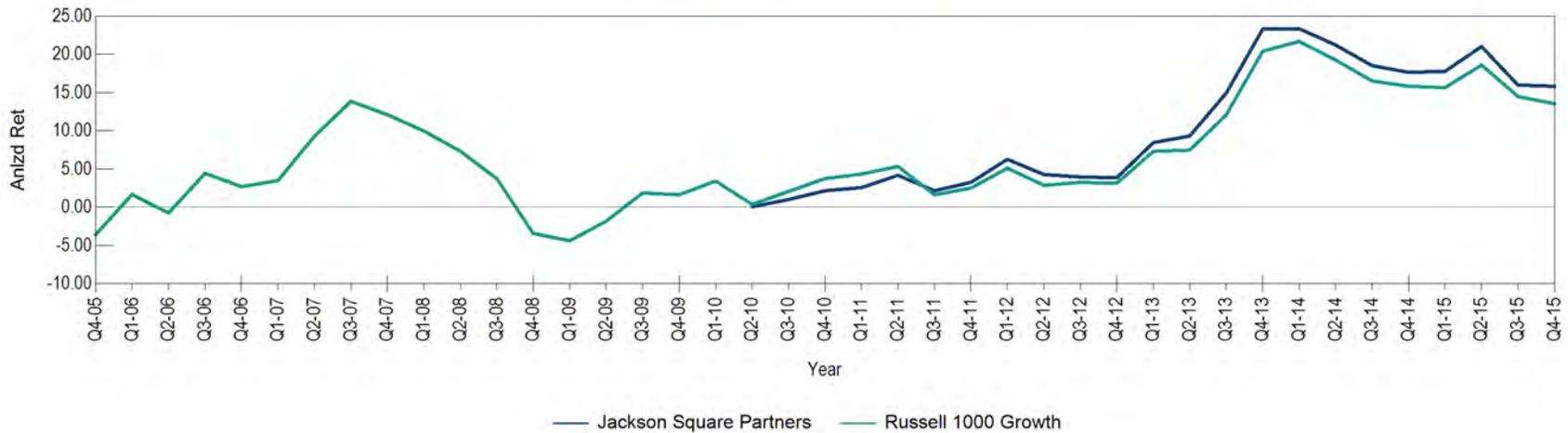


	Quarter	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011
<b>5th Percentile</b>	9.6	11.6	20.3	15.8	10.7	11.6	17.3	42.8	21.6	6.4
<b>25th Percentile</b>	8.1	7.6	18.0	14.4	9.1	7.6	14.3	37.3	18.2	2.2
<b>Median</b>	6.8	4.7	16.7	13.0	8.6	4.7	12.0	34.3	15.7	-0.3
<b>75th Percentile</b>	5.6	2.1	14.9	11.7	7.7	2.1	9.5	31.0	13.4	-3.2
<b>95th Percentile</b>	3.6	-2.4	11.9	9.7	6.6	-2.4	5.8	26.6	10.2	-8.0
<b># of Portfolios</b>	270	270	263	250	208	270	291	274	274	294
<b>● Jackson Square Partners</b>	9.0 (12)	6.1 (37)	17.8 (28)	15.8 (6)	8.8 (43)	6.1 (37)	13.9 (31)	35.4 (40)	16.9 (37)	8.9 (3)
<b>▲ Russell 1000 Growth</b>	7.3 (41)	5.7 (42)	16.8 (48)	13.5 (41)	8.5 (53)	5.7 (42)	13.0 (38)	33.5 (56)	15.3 (55)	2.6 (22)

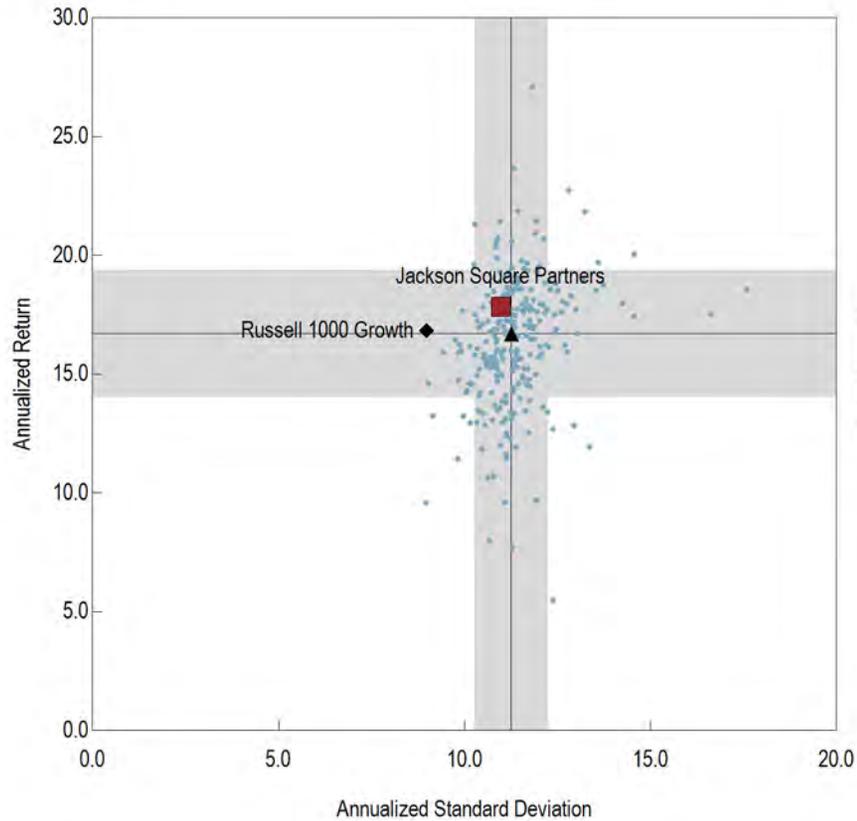
Rolling 3 Year Annualized Return (%)



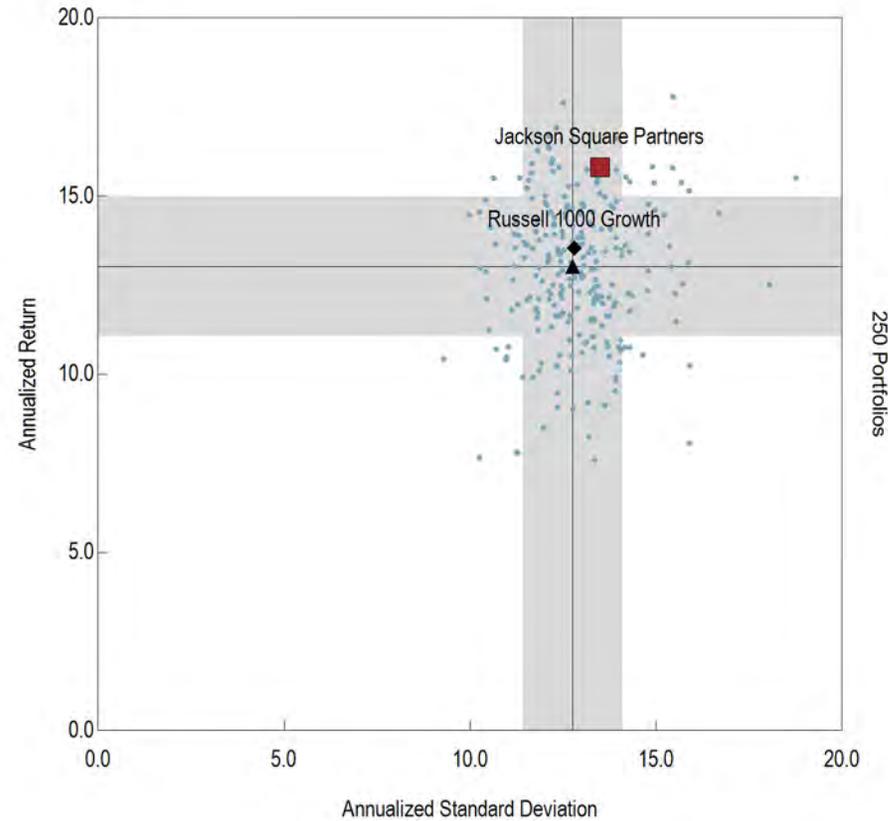
Rolling 5 Year Annualized Return (%)



3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Jackson Square Partners	17.8%	11.0%	1.6
Russell 1000 Growth	16.8%	9.0%	1.9
eA US Large Cap Growth Equity Gross Median	16.7%	11.3%	1.4

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Jackson Square Partners	15.8%	13.5%	1.2
Russell 1000 Growth	13.5%	12.8%	1.1
eA US Large Cap Growth Equity Gross Median	13.0%	12.8%	1.0

# Robeco Boston Partners Manager Portfolio Overview

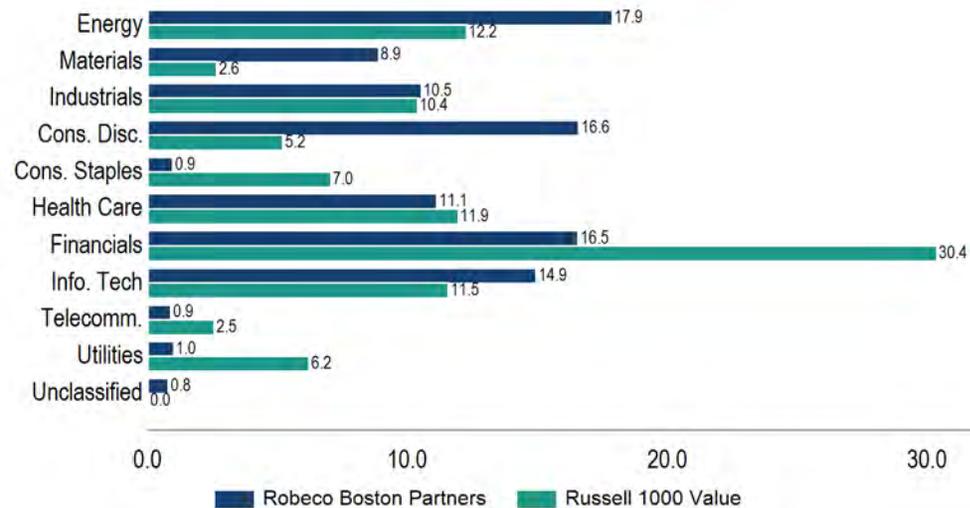
Period Ending: December 31, 2015

Domestic equity large cap value portfolio exhibiting low turnover in companies with low valuations relative to intrinsic value. Primary personnel include Mark Donovan and David Pyle.

## Characteristics

	Portfolio	Russell 1000 Value
Number of Holdings	90	691
Weighted Avg. Market Cap. (\$B)	40.99	105.87
Median Market Cap. (\$B)	24.69	6.85
Price To Earnings	19.47	19.16
Price To Book	2.94	2.23
Price To Sales	1.89	2.50
Return on Equity (%)	14.37	11.40
Yield (%)	2.11	2.60
Beta	0.97	1.00

## Sector Allocation (%) vs Russell 1000 Value



## Largest Holdings

	End Weight	Return
LIBERTY BROADBAND SR.C	4.47	1.35
CANADIAN NATURAL RES.	4.33	13.12
WESTROCK	3.92	-10.62
CBS 'B'	3.16	18.49
NAVIENT	3.07	3.23
CRANE	2.97	3.29
LEAR	2.91	13.15
OMNICOM GROUP	2.82	15.58
PHILLIPS 66	2.53	7.10
FIFTH THIRD BANCORP	2.53	6.97

## Top Contributors

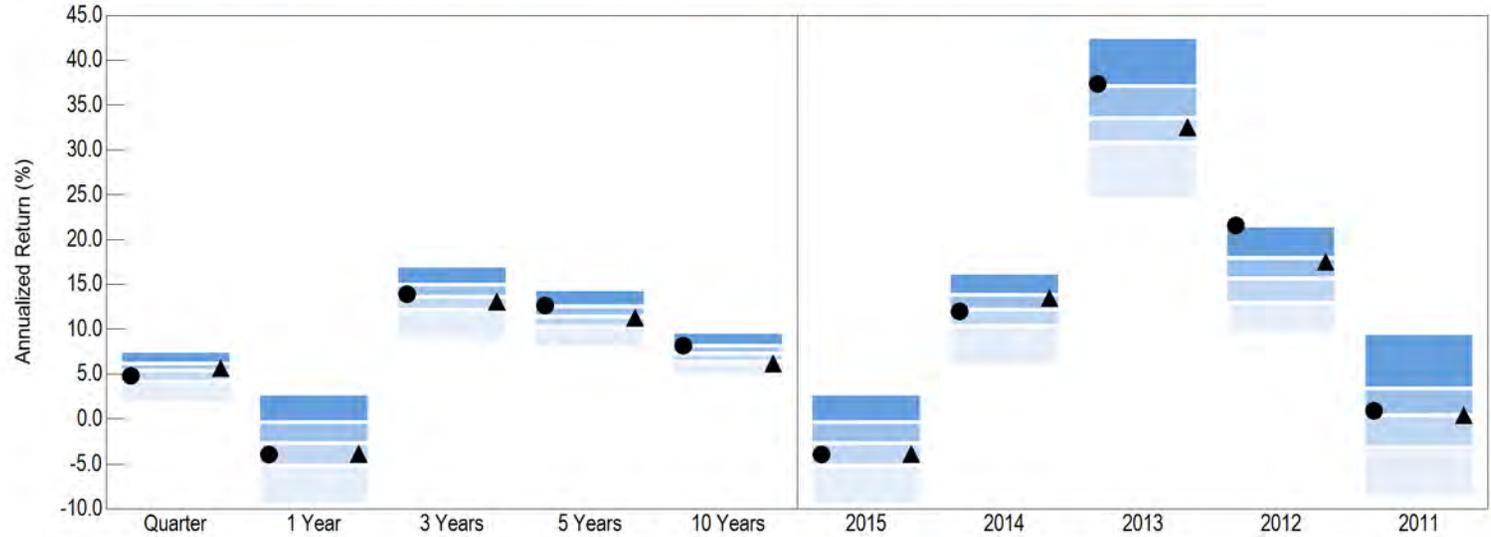
	Avg Wgt	Return	Contribution
MICROSOFT	2.88	26.20	0.76
JP MORGAN CHASE & CO.	4.34	9.08	0.39
ACTIVISION BLIZZARD	1.37	25.32	0.35
JOHNSON & JOHNSON	3.12	10.84	0.34
TYSON FOODS 'A'	1.40	24.10	0.34
WELLS FARGO & CO	3.85	6.59	0.25
MEDTRONIC	1.58	15.47	0.24
RAYTHEON 'B'	1.60	14.67	0.23
ACE	1.70	13.64	0.23
DELTA AIR LINES	1.54	13.27	0.20

## Bottom Contributors

	Avg Wgt	Return	Contribution
WESTERN DIGITAL	0.73	-23.79	-0.17
ANADARKO PETROLEUM	0.89	-19.15	-0.17
TARGET	1.62	-6.98	-0.11
ENERGEN	0.62	-17.76	-0.11
WESTROCK	0.68	-10.62	-0.07
ALLY FINANCIAL	0.81	-8.54	-0.07
MACY'S	0.19	-31.17	-0.06
EQT	0.28	-19.48	-0.05
EOG RES.	2.08	-2.57	-0.05
APPLE	1.22	-4.16	-0.05

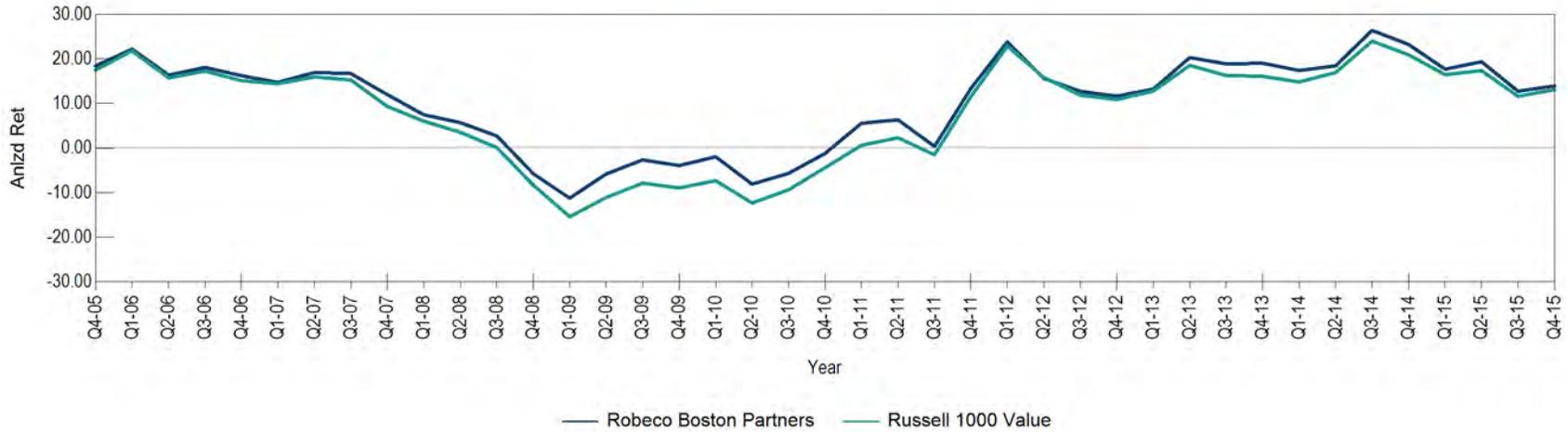
Unclassified sector allocation includes cash allocations.

Robeco Boston Partners vs. eA US Large Cap Value Equity Gross Universe

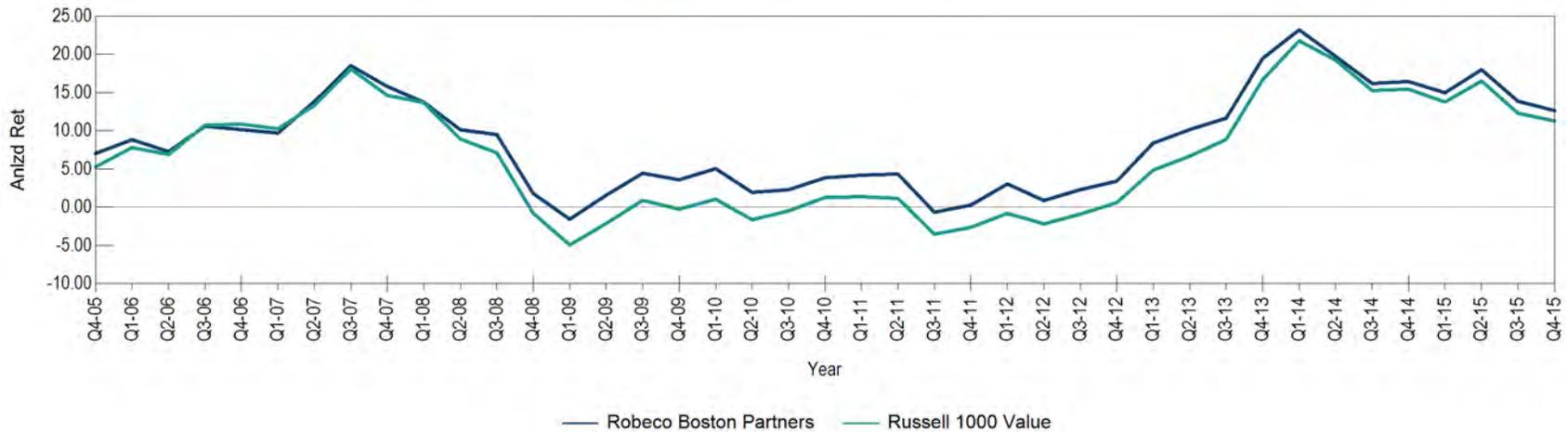


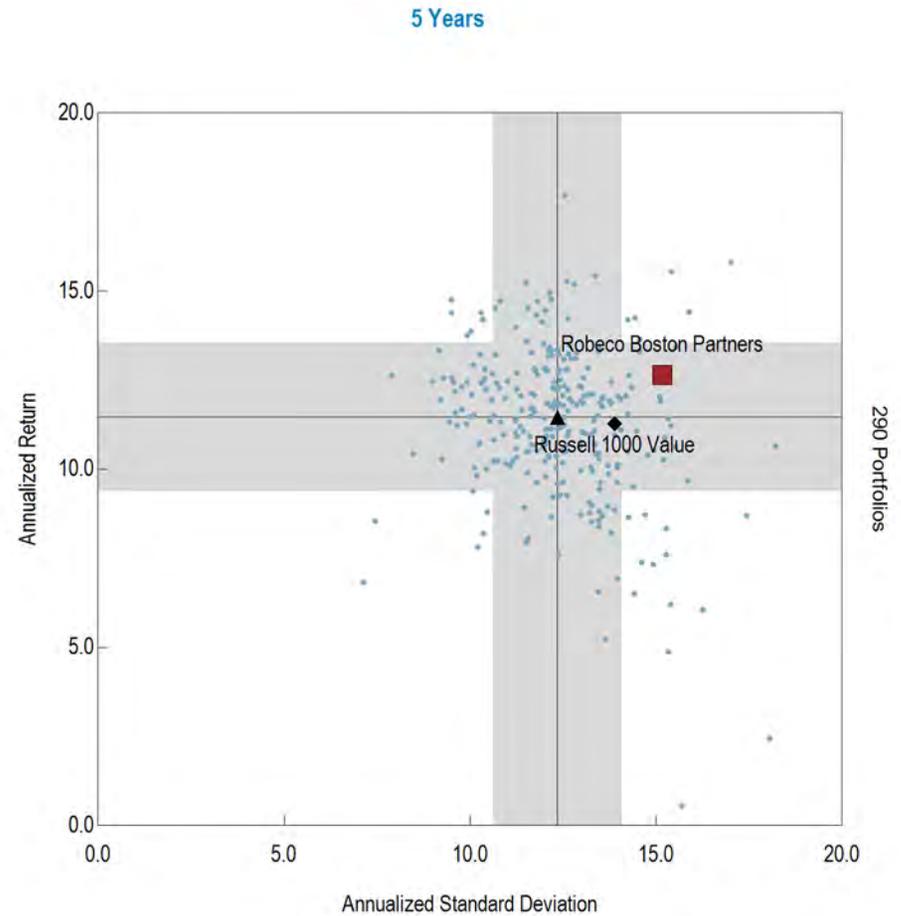
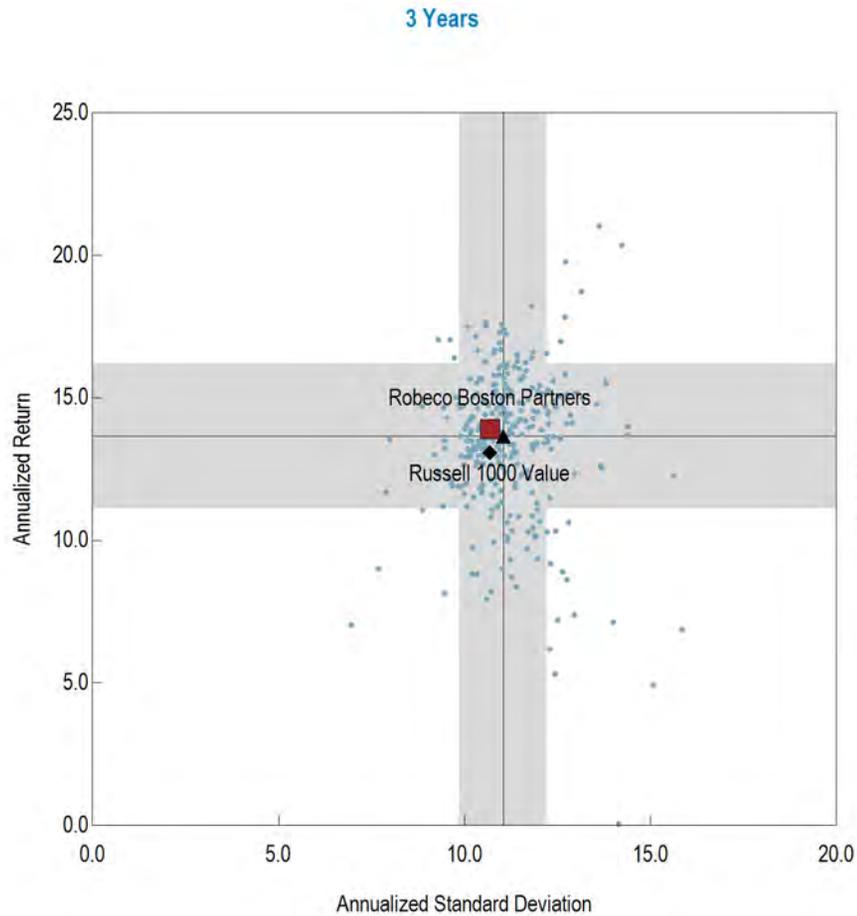
	Return (Rank)											
	Quarter	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011		
5th Percentile	7.5	2.8	17.0	14.4	9.7	2.8	16.3	42.5	21.5	9.5		
25th Percentile	6.2	-0.4	15.0	12.6	8.2	-0.4	13.9	37.2	18.0	3.4		
Median	5.4	-2.6	13.7	11.5	7.3	-2.6	12.2	33.6	15.7	0.5		
75th Percentile	4.2	-5.1	12.3	10.3	6.4	-5.1	10.4	30.8	13.0	-3.1		
95th Percentile	1.9	-9.4	8.8	7.9	4.8	-9.4	5.9	24.6	9.6	-8.6		
# of Portfolios	312	312	303	290	237	312	307	310	303	310		
● Robeco Boston Partners	4.8 (67)	-3.9 (65)	13.9 (44)	12.6 (24)	8.2 (26)	-3.9 (65)	12.0 (55)	37.4 (24)	21.6 (5)	0.9 (46)		
▲ Russell 1000 Value	5.6 (43)	-3.8 (64)	13.1 (65)	11.3 (54)	6.2 (78)	-3.8 (64)	13.5 (33)	32.5 (60)	17.5 (30)	0.4 (51)		

Rolling 3 Year Annualized Return (%)



Rolling 5 Year Annualized Return (%)





**3 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Robeco Boston Partners	13.9%	10.7%	1.3
Russell 1000 Value	13.1%	10.7%	1.2
eA US Large Cap Value Equity Gross Median	13.7%	11.0%	1.2

**5 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Robeco Boston Partners	12.6%	15.2%	0.8
Russell 1000 Value	11.3%	13.9%	0.8
eA US Large Cap Value Equity Gross Median	11.5%	12.4%	0.9

# Emerald Advisers Manager Portfolio Overview

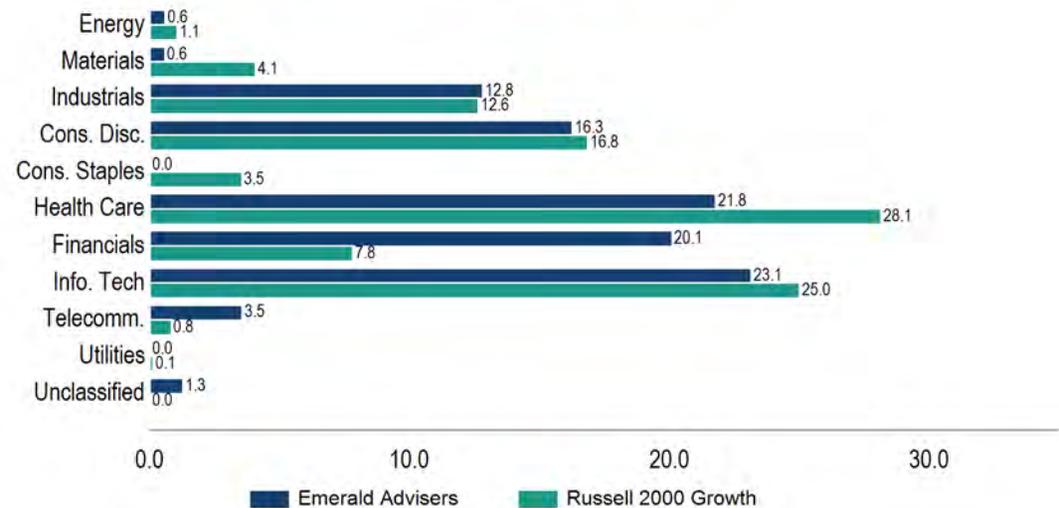
Period Ending: December 31, 2015

Domestic equity small cap growth portfolio of companies with significantly high growth rates. Primary personnel include Kenneth Mertz, Joseph Garner, and Stacey Sears.

## Characteristics

	Portfolio	Russell 2000 Growth
Number of Holdings	116	1,194
Weighted Avg. Market Cap. (\$B)	1.80	2.07
Median Market Cap. (\$B)	1.09	0.74
Price To Earnings	26.54	27.56
Price To Book	5.25	4.96
Price To Sales	4.03	3.38
Return on Equity (%)	15.40	16.59
Yield (%)	0.54	0.52
Beta	0.99	1.00

## Sector Allocation (%) vs Russell 2000 Growth



## Largest Holdings

	End Weight	Return
BANK OF THE OZARKS	2.21	13.40
MICROSTRATEGY	2.08	-8.74
EPAM SYSTEMS	1.97	5.50
APOGEE ENTERPRISES	1.90	-2.35
OPUS BANK	1.82	-3.01
VEEVA SYSTEMS CL.A	1.81	23.24
VONAGE HOLDINGS	1.80	-2.38
WELLCARE HEALTH PLANS	1.80	-9.25
WALKER & DUNLOP	1.77	10.47
ACADIA HEALTHCARE CO.	1.76	-5.75

## Top Contributors

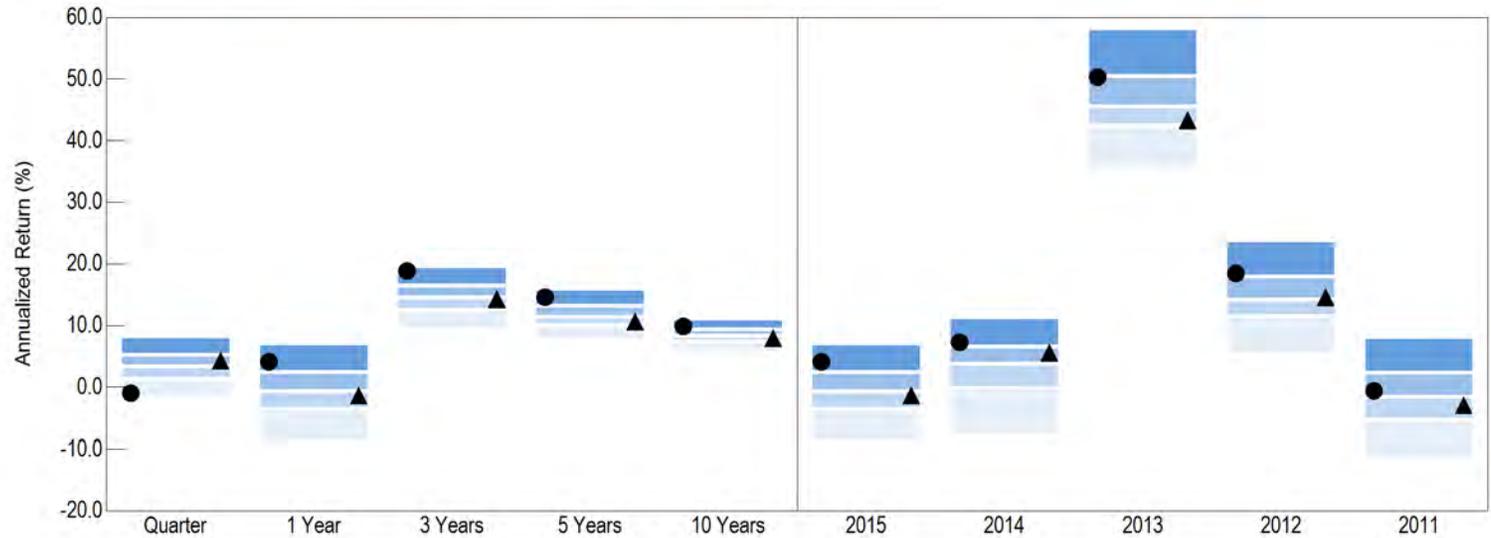
	Avg Wgt	Return	Contribution
8X8	1.51	38.45	0.58
NEUROCRINE BIOSCIENCES	0.96	42.17	0.40
MACROGENICS	0.85	44.58	0.38
GIGAMON	1.03	32.78	0.34
VEEVA SYSTEMS CL.A	1.45	23.24	0.34
ADAMAS PHARMACEUTICALS	0.45	69.18	0.31
BANK OF THE OZARKS	2.25	13.40	0.30
ALARMCOM HOLDINGS	0.60	43.05	0.26
RELYPSA	0.47	53.11	0.25
TREX	1.51	14.13	0.21

## Bottom Contributors

	Avg Wgt	Return	Contribution
CHIMERIX	0.53	-76.57	-0.41
SEQUENTIAL BRANDS GROUP	0.84	-45.34	-0.38
GTT COMMUNICATIONS	1.37	-26.66	-0.37
GLU MOBILE	0.79	-44.39	-0.35
AMICUS THERAPEUTICS	1.03	-30.66	-0.32
MARCUS AND MILLICHAP	0.80	-36.64	-0.29
BOFI HOLDING	0.80	-34.64	-0.28
RED ROBIN	1.50	-18.48	-0.28
GMT.BURGERS	1.50	-18.48	-0.28
QLIK TECHNOLOGIES	1.49	-13.14	-0.20
BURLINGTON STORES	1.19	-15.95	-0.19

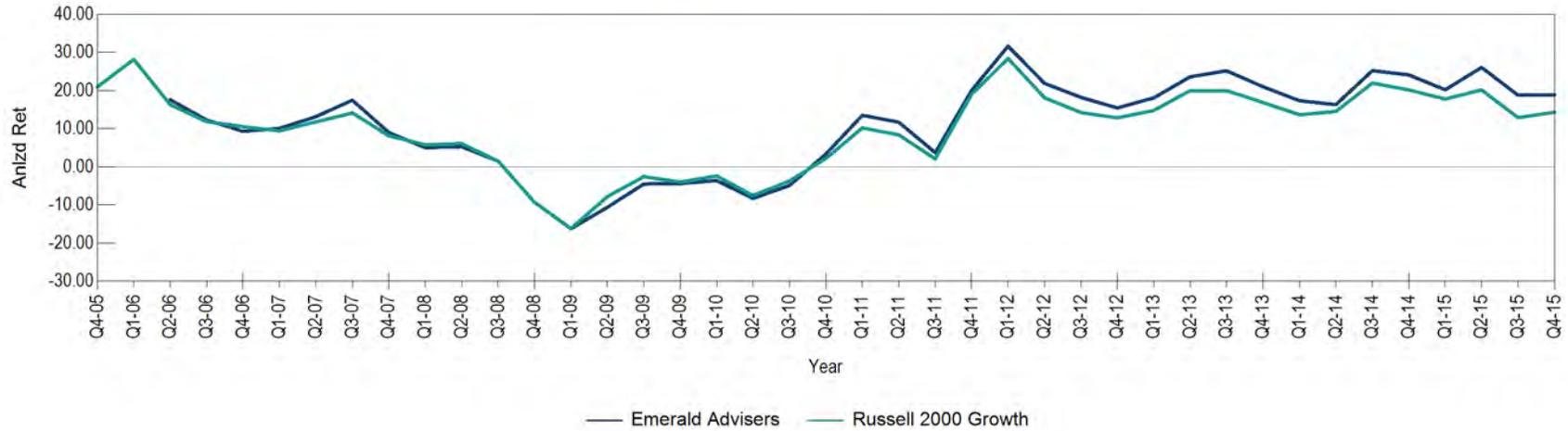
Unclassified sector allocation includes cash allocations.

Emerald Advisers vs. eA US Small Cap Growth Equity Gross Universe

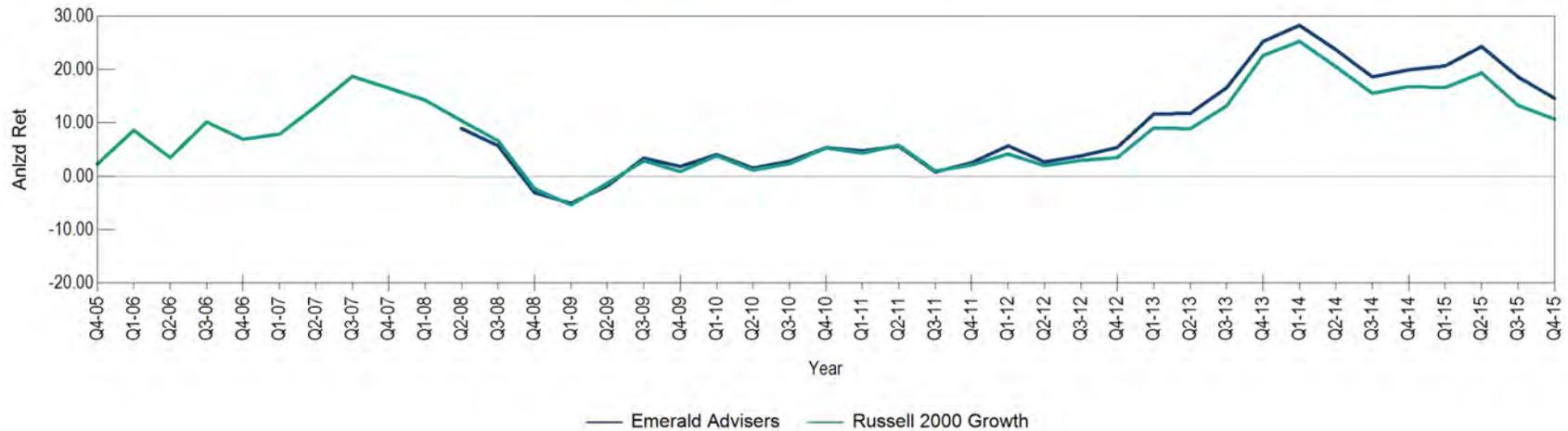


	Quarter	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011
<b>5th Percentile</b>	8.2	7.1	19.6	15.9	11.1	7.1	11.3	58.2	23.8	8.1
<b>25th Percentile</b>	5.3	2.5	16.5	13.2	9.5	2.5	6.7	50.6	18.0	2.4
<b>Median</b>	3.5	-0.6	14.6	11.5	8.4	-0.6	3.9	45.6	14.3	-1.5
<b>75th Percentile</b>	1.4	-3.5	12.7	10.2	7.5	-3.5	-0.1	42.6	11.6	-5.2
<b>95th Percentile</b>	-1.6	-8.7	9.4	7.8	5.8	-8.7	-7.6	35.6	5.4	-11.5
<b># of Portfolios</b>	154	154	148	142	115	154	161	160	162	166
<b>● Emerald Advisers</b>	-1.0 (92)	4.1 (19)	18.8 (10)	14.6 (11)	9.9 (16)	4.1 (19)	7.3 (21)	50.3 (27)	18.5 (22)	-0.6 (42)
<b>▲ Russell 2000 Growth</b>	4.3 (39)	-1.4 (59)	14.3 (56)	10.7 (64)	8.0 (60)	-1.4 (59)	5.6 (32)	43.3 (70)	14.6 (48)	-2.9 (60)

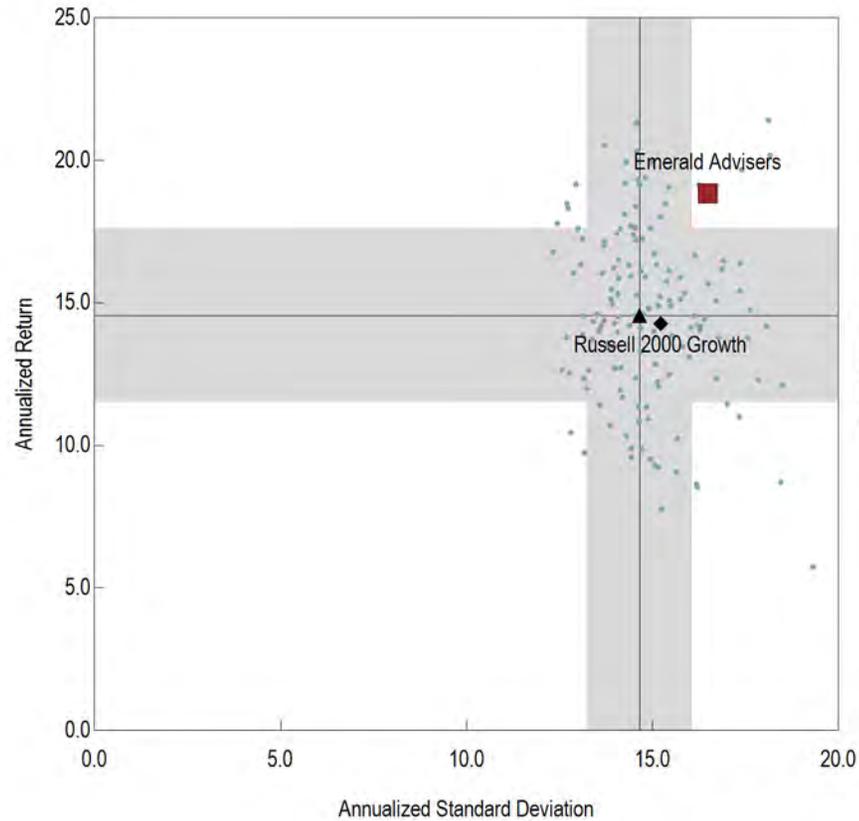
Rolling 3 Year Annualized Return (%)



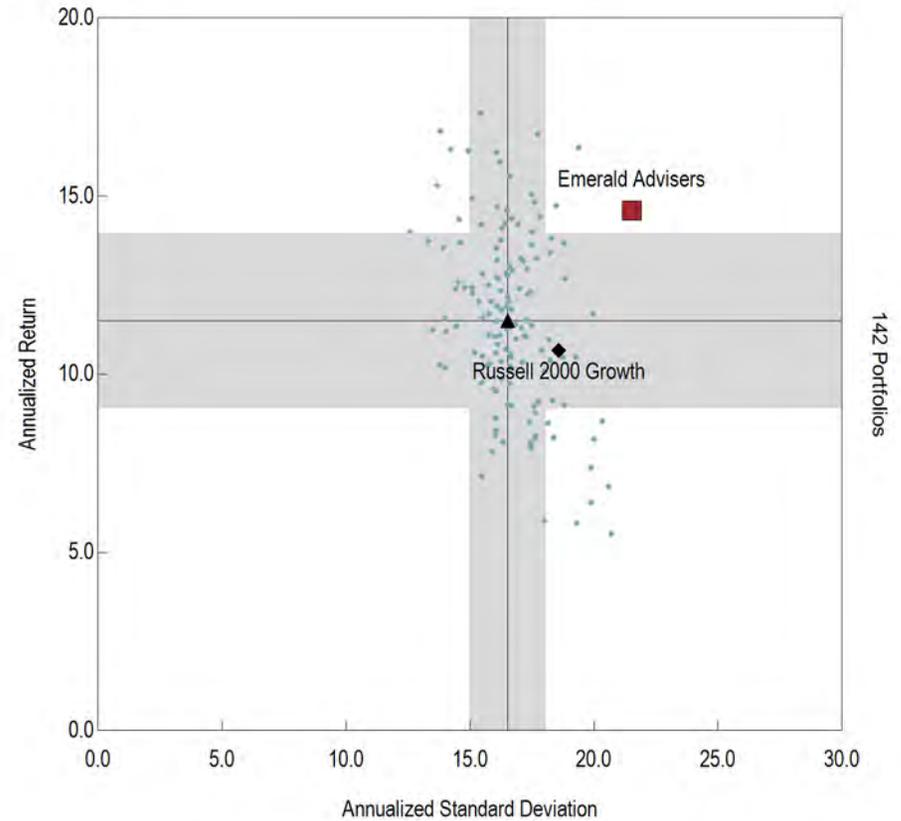
Rolling 5 Year Annualized Return (%)



3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Emerald Advisers	18.8%	16.5%	1.1
Russell 2000 Growth	14.3%	15.2%	0.9
eA US Small Cap Growth Equity Gross Median	14.6%	14.7%	1.0

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Emerald Advisers	14.6%	21.5%	0.7
Russell 2000 Growth	10.7%	18.6%	0.6
eA US Small Cap Growth Equity Gross Median	11.5%	16.5%	0.7

# Ceredex Manager Portfolio Overview

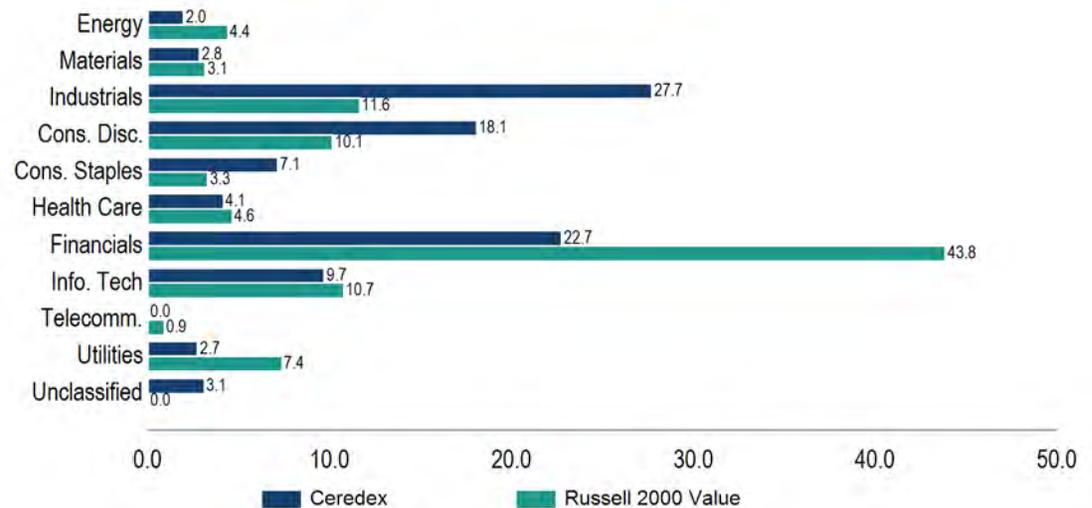
Period Ending: December 31, 2015

Domestic equity small cap value portfolio of companies with dividend yields and low valuations. Primary personnel include Brett Barner and David Maynard.

## Characteristics

	Portfolio	Russell 2000 Value
Number of Holdings	84	1,351
Weighted Avg. Market Cap. (\$B)	1.93	1.65
Median Market Cap. (\$B)	1.49	0.59
Price To Earnings	24.81	19.84
Price To Book	2.60	1.63
Price To Sales	2.09	2.62
Return on Equity (%)	12.65	7.44
Yield (%)	2.50	1.99
Beta	0.99	1.00

## Sector Allocation (%) vs Russell 2000 Value



## Largest Holdings

	End Weight	Return
FAIR ISAAC	4.81	11.48
HANOVER INSURANCE GROUP	3.32	5.27
PROGRESSIVE WASTE SLTN.	3.06	-10.37
HILL-ROM HOLDINGS	2.68	-7.25
AMC ENTERTAINMENT HDG. CL.A	2.65	-3.95
HSN	2.64	-10.86
ENERGIZER HOLDINGS	2.55	-11.38
PLANTRONICS	2.52	-6.47
MEDICAL PROPS.TRUST	2.51	6.09
HERMAN MILLER	2.42	-0.02

## Top Contributors

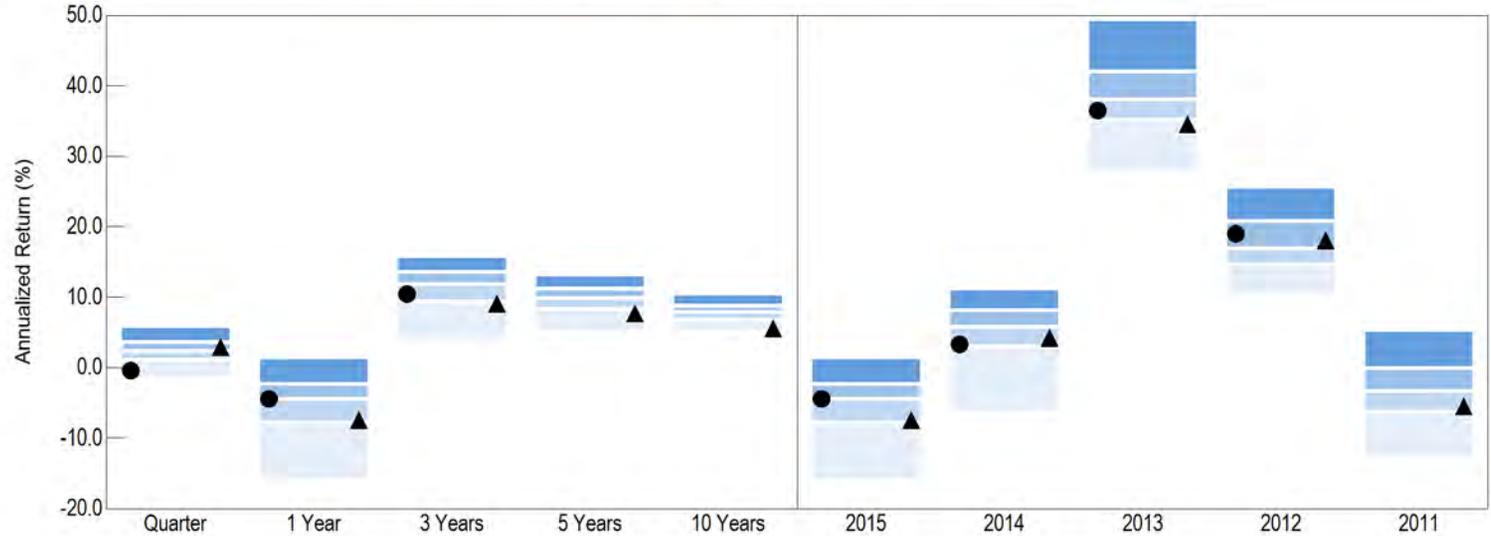
	Avg Wgt	Return	Contribution
FAIR ISAAC	4.41	11.48	0.51
GRANITE CON.	0.77	45.05	0.35
AAR	0.80	39.05	0.31
MUELLER WATER PRODUCTS	1.79	12.52	0.22
KELLY SERVICES 'A'	1.52	14.56	0.22
THOR INDUSTRIES	2.15	9.60	0.21
SANDERSON FARMS	1.39	13.05	0.18
HANOVER INSURANCE GROUP	3.23	5.27	0.17
COHEN & STEERS	1.24	13.73	0.17
EVERCORE PARTNERS 'A'	1.98	8.23	0.16

## Bottom Contributors

	Avg Wgt	Return	Contribution
CHICO'S FAS	1.51	-31.72	-0.48
SOTHEBY'S	1.83	-19.17	-0.35
PROGRESSIVE WASTE (NYS) SLTN.	3.06	-10.39	-0.32
HSN	2.87	-10.86	-0.31
ADVANCED DRAINAGE SYS.	1.83	-16.79	-0.31
ENERGIZER HOLDINGS	2.62	-11.38	-0.30
GUESS	2.46	-10.58	-0.26
COVANTA HOLDING	1.95	-9.82	-0.19
HILL-ROM HOLDINGS	2.61	-7.25	-0.19
PLANTRONICS	2.68	-6.47	-0.17

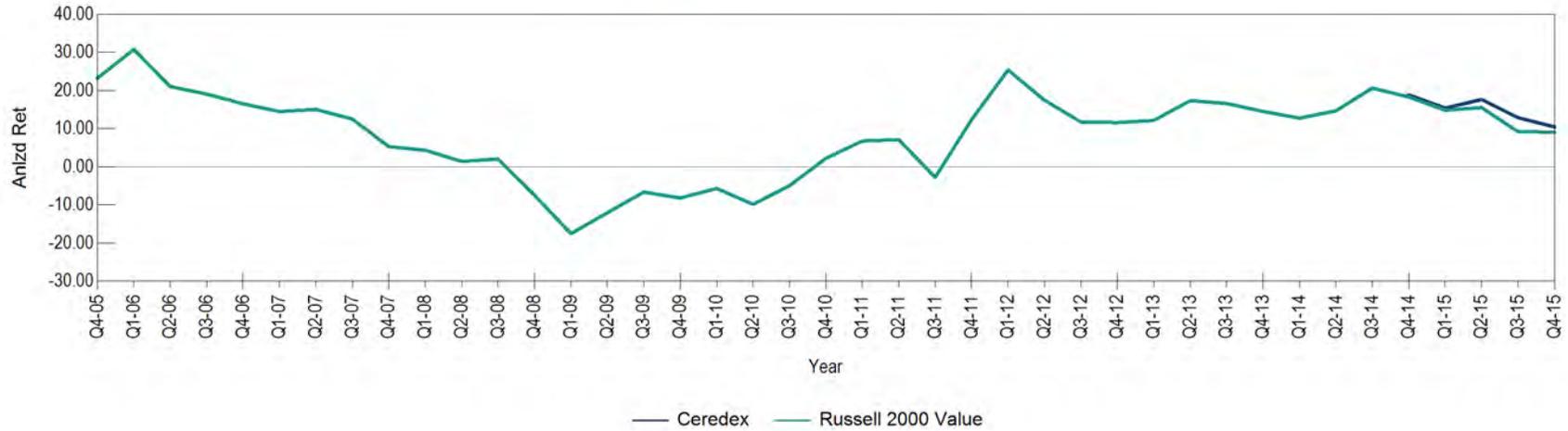
Unclassified sector allocation includes cash allocations.

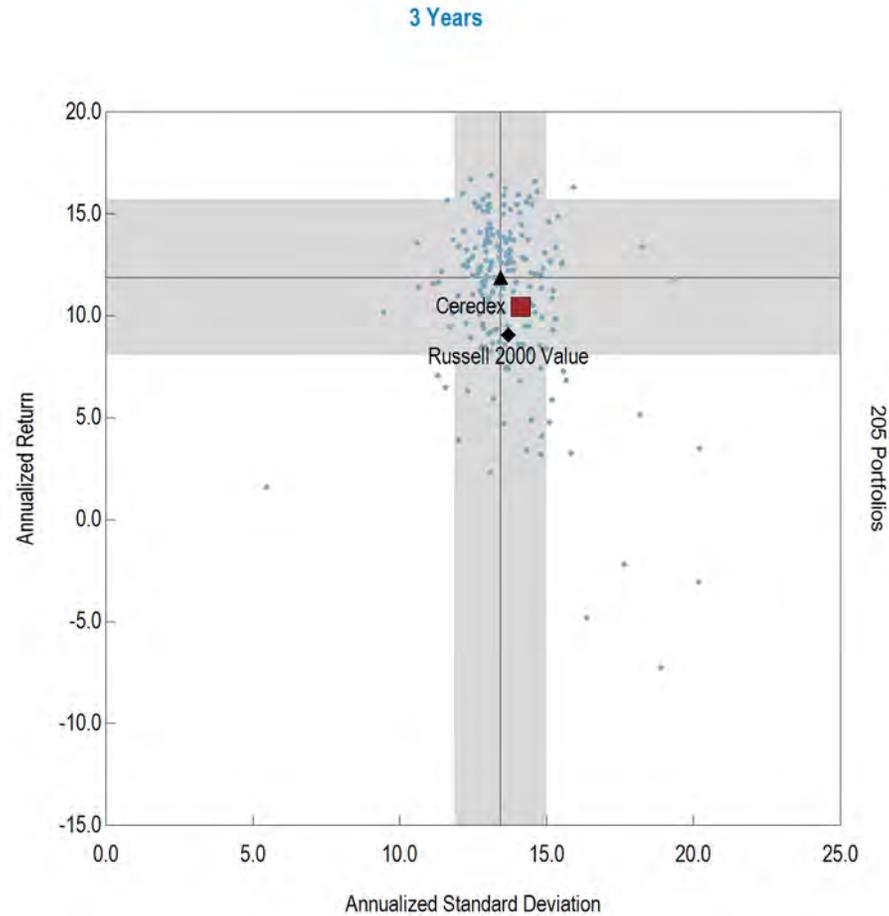
Ceredex vs. eA US Small Cap Value Equity Gross Universe



	Quarter	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011
<b>5th Percentile</b>	5.8	1.5	15.8	13.2	10.5	1.5	11.2	49.4	25.7	5.3
<b>25th Percentile</b>	3.7	-2.2	13.6	11.3	8.8	-2.2	8.2	42.1	20.8	0.0
<b>Median</b>	2.4	-4.3	11.9	9.9	7.9	-4.3	5.8	38.1	16.9	-3.3
<b>75th Percentile</b>	1.2	-7.7	9.5	8.4	6.8	-7.7	3.1	35.2	14.7	-6.2
<b>95th Percentile</b>	-1.5	-15.8	3.9	5.2	5.2	-15.8	-6.3	27.8	10.3	-12.6
<b># of Portfolios</b>	212	212	205	196	152	212	206	199	187	177
<b>● Ceredex</b>	-0.4 (91)	-4.4 (52)	10.4 (67)	-- (--)	-- (--)	-4.4 (52)	3.3 (74)	36.5 (66)	19.0 (38)	-- (--)
<b>▲ Russell 2000 Value</b>	2.9 (40)	-7.5 (74)	9.1 (79)	7.7 (80)	5.6 (92)	-7.5 (74)	4.2 (68)	34.5 (78)	18.1 (43)	-5.5 (69)

Rolling 3 Year Annualized Return (%)





3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Ceredex	10.4%	14.1%	0.7
Russell 2000 Value	9.1%	13.7%	0.7
eA US Small Cap Value Equity Gross Median	11.9%	13.4%	0.9

# International Equity Managers

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# Pyrford Manager Portfolio Overview

Period Ending: December 31, 2015

International equity value portfolio of non-US companies with low valuations at the country and stock level. Primary personnel include Tony Cousins, Daniel McDonagh, and Paul Simons.

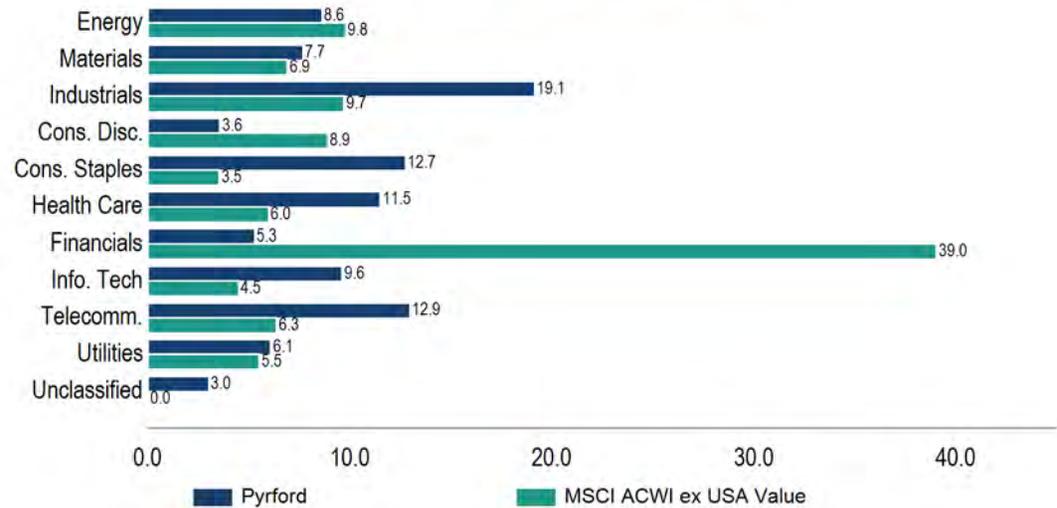
## Characteristics

	MSCI ACWI Portfolio	MSCI ACWI ex USA Value
Number of Holdings	69	1,014
Weighted Avg. Market Cap. (\$B)	53.07	48.30
Median Market Cap. (\$B)	17.02	5.86
Price To Earnings	22.48	14.04
Price To Book	3.57	1.51
Price To Sales	2.16	1.62
Return on Equity (%)	17.81	10.93
Yield (%)	3.68	4.14
Beta		1.00

## Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
<b>Totals</b>		
Developed	88.6%	79.6%
Emerging*	8.4%	20.4%
Cash	3.0%	
<b>Top 10 Largest Countries</b>		
Switzerland	14.8%	4.9%
Australia	11.4%	4.9%
Japan	10.3%	17.3%
Germany	7.9%	6.4%
France	7.7%	8.4%
Hong Kong	7.3%	2.5%
United Kingdom	6.3%	16.4%
Netherlands	6.1%	1.2%
Singapore	5.1%	0.9%
Malaysia*	4.3%	0.7%
<b>Total-Top 10 Largest Countries</b>	<b>81.2%</b>	<b>63.6%</b>

## Sector Allocation (%) vs MSCI ACWI ex USA Value



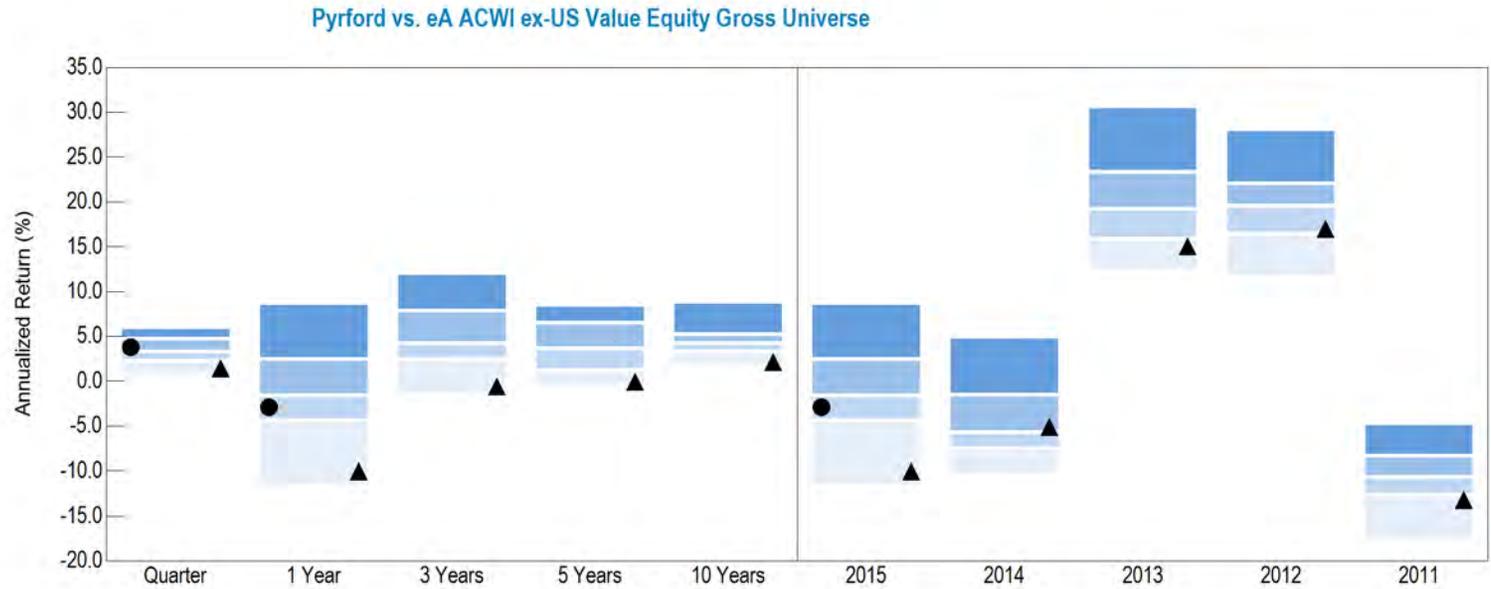
## Top Contributors

	Avg Wgt	Return	Contribution
NIHON KOHDEN	1.16	47.98	0.56
BRAMBLES	1.87	23.07	0.43
SAP	1.44	24.33	0.35
JAPAN TOBACCO	1.26	22.22	0.28
KDDI	1.47	17.74	0.26
MITSUBISHI ELECTRIC	1.38	17.14	0.24
ASM PACIFIC TECH.	1.12	20.47	0.23
COMPUTERSHARE	1.64	13.68	0.22
AXIATA GROUP	1.33	13.15	0.18
TOYOTA TSUSHO	1.35	12.87	0.17

## Bottom Contributors

	Avg Wgt	Return	Contribution
SANOFI	2.26	-9.89	-0.22
VTECH HOLDINGS	1.34	-11.14	-0.15
NOVARTIS 'R'	2.81	-5.23	-0.15
TELENOR	1.77	-8.09	-0.14
CHINA MOBILE	1.81	-4.69	-0.08
AIR LIQUIDE	1.69	-4.52	-0.08
SEMBCORP INDUSTRIES	0.62	-11.65	-0.07
ADVANTECH	0.86	-5.77	-0.05
SUMITOMO RUBBER INDS.	1.43	-3.44	-0.05
PROXIMUS	1.14	-4.16	-0.05

Unclassified sector allocation includes cash allocations.



	Return (Rank)															
5th Percentile	6.0	8.7	12.0	8.5	8.8	8.7	4.9	30.7	28.1	-4.7						
25th Percentile	4.8	2.5	7.9	6.5	5.3	2.5	-1.4	23.4	22.1	-8.2						
Median	3.4	-1.6	4.3	3.7	4.3	-1.6	-5.7	19.3	19.6	-10.7						
75th Percentile	2.3	-4.3	2.5	1.3	3.4	-4.3	-7.4	15.9	16.5	-12.6						
95th Percentile	0.7	-11.6	-1.5	-0.5	1.8	-11.6	-10.4	12.4	11.7	-17.7						
# of Portfolios	45	45	43	37	26	45	37	34	32	26						
● Pyrford	3.8 (41)	-2.9 (59)	-- (--)	-- (--)	-- (--)	-2.9 (59)	-- (--)	-- (--)	-- (--)	-- (--)						
▲ MSCI ACWI ex USA Value	1.4 (94)	-10.1 (93)	-0.6 (94)	-0.1 (89)	2.1 (93)	-10.1 (93)	-5.1 (49)	15.0 (83)	17.0 (74)	-13.2 (81)						

# William Blair Manager Portfolio Overview

Period Ending: December 31, 2015

International equity growth portfolio of non-US companies with high growth rates constructed from the security level. Primary personnel include Simon Fennell and Jeffrey Urbina.

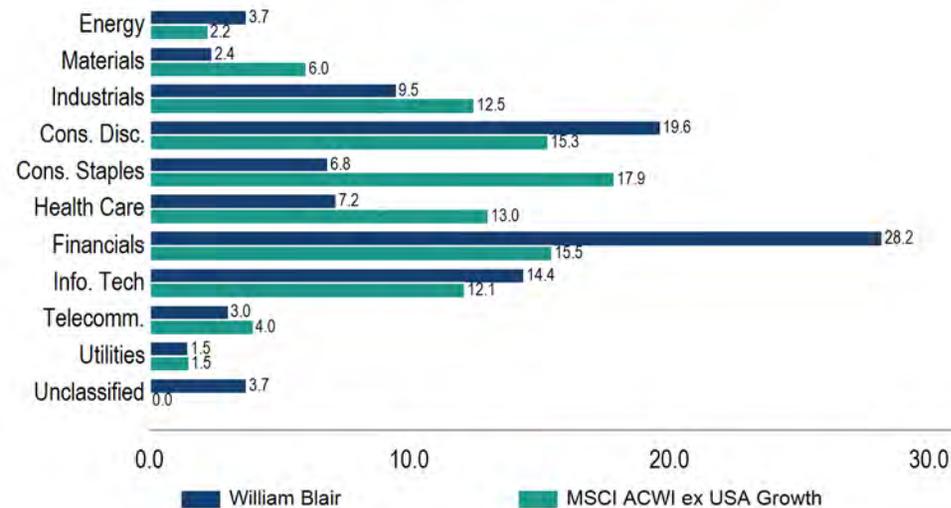
## Characteristics

	MSCI ACWI Portfolio	MSCI ACWI ex USA Growth
Number of Holdings	196	1,058
Weighted Avg. Market Cap. (\$B)	37.25	50.15
Median Market Cap. (\$B)	12.30	6.63
Price To Earnings	22.44	22.84
Price To Book	4.31	4.22
Price To Sales	2.85	3.02
Return on Equity (%)	21.14	19.17
Yield (%)	2.27	2.00
Beta	0.95	1.00

## Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
<b>Totals</b>		
Developed	84.2%	79.9%
Emerging*	12.1%	20.1%
Cash	3.7%	
<b>Top 10 Largest Countries</b>		
Japan	19.1%	17.0%
United Kingdom	15.4%	12.3%
France	8.6%	5.9%
Germany	5.2%	7.0%
Hong Kong	5.0%	2.3%
Canada	4.6%	5.7%
Switzerland	4.0%	9.0%
Cash	3.7%	0.0%
Spain	3.0%	1.7%
China*	2.9%	5.0%
<b>Total-Top 10 Largest Countries</b>	<b>71.6%</b>	<b>66.0%</b>

## Sector Allocation (%) vs MSCI ACWI ex USA Growth



## Top Contributors

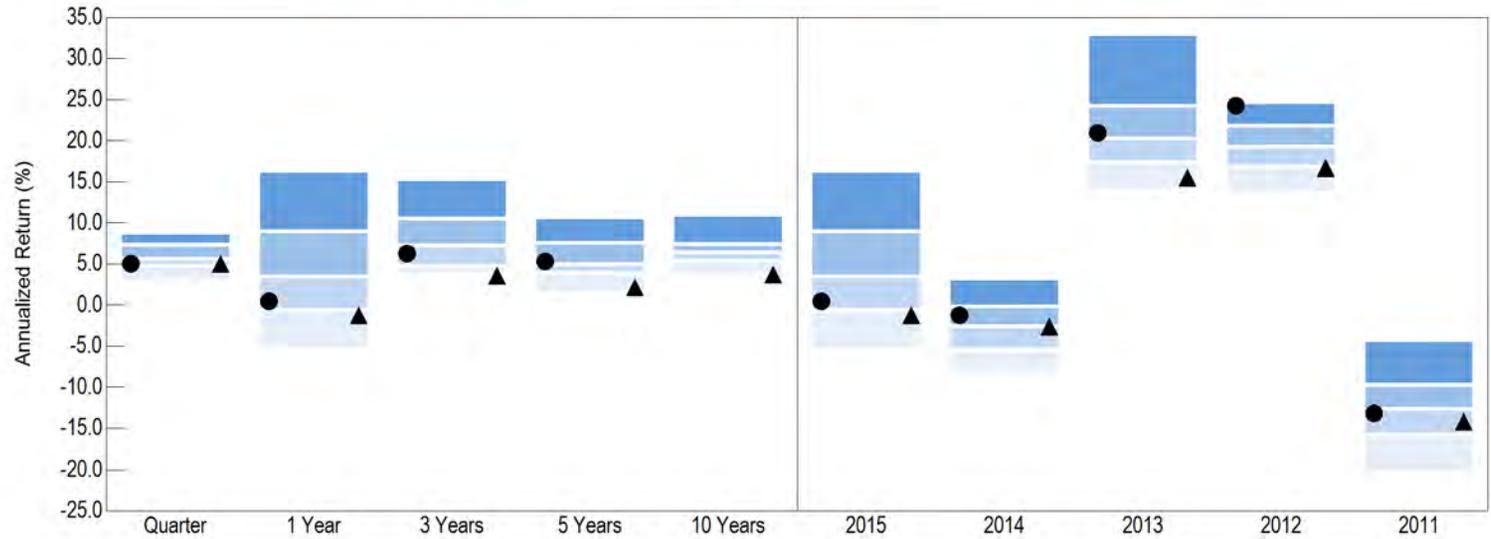
	Avg Wgt	Return	Contribution
FUJI HEAVY INDS.	1.50	16.85	0.25
HOYA	0.93	27.06	0.25
AIA GROUP	1.43	16.35	0.23
AXA	1.42	13.49	0.19
TEVA PHARM.INDS.ADR 1:1	1.13	16.94	0.19
NETEASE ADR 1:25	0.34	51.39	0.17
CONTINENTAL	1.10	15.15	0.17
ORIX	1.42	11.48	0.16
KEYENCE	0.63	25.53	0.16
DAIKIN INDUSTRIES	0.45	32.74	0.15

## Bottom Contributors

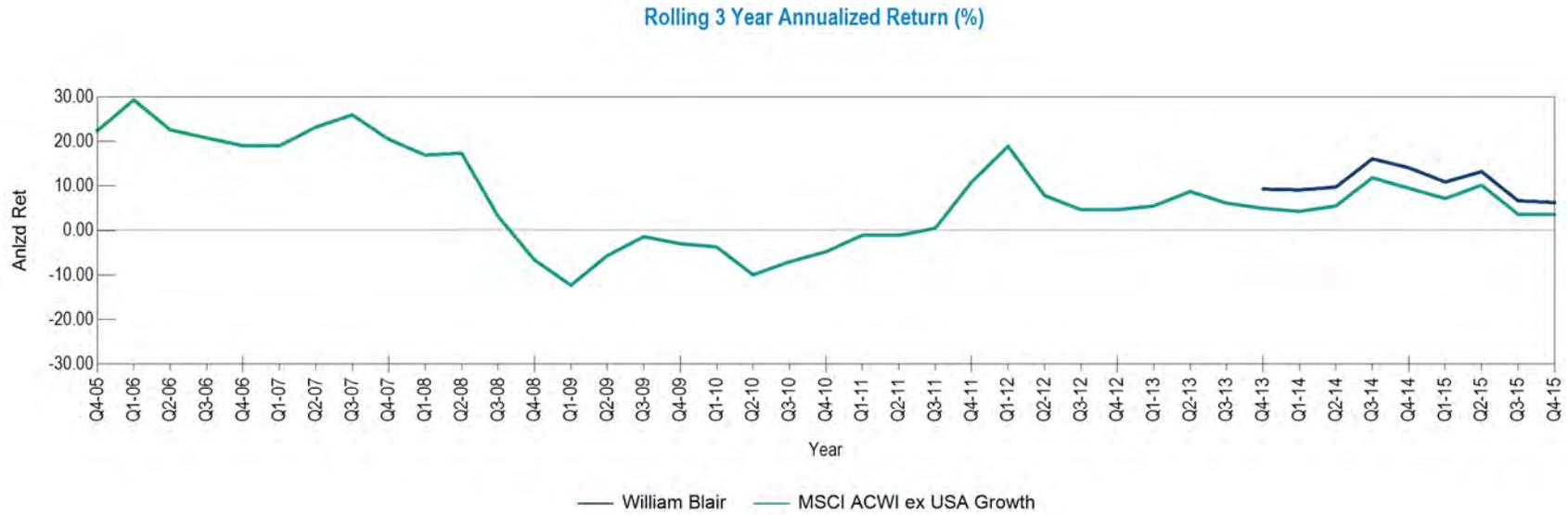
	Avg Wgt	Return	Contribution
MTN GROUP	0.40	-33.38	-0.13
STEINHOFF INTL.	0.71	-15.88	-0.11
FIRSTRAND	0.43	-21.31	-0.09
NOVARTIS 'R'	1.67	-5.23	-0.09
INTESA SANPAOLO	1.65	-4.77	-0.08
ENBRIDGE	0.82	-9.54	-0.08
DOLLARAMA	0.54	-14.40	-0.08
VALEANT PHARMS. (NYS)	0.16	-43.01	-0.07
INTL.	0.16	-43.01	-0.07
BBV.ARGENTARIA	0.44	-12.53	-0.06
NEXT	0.98	-5.40	-0.05

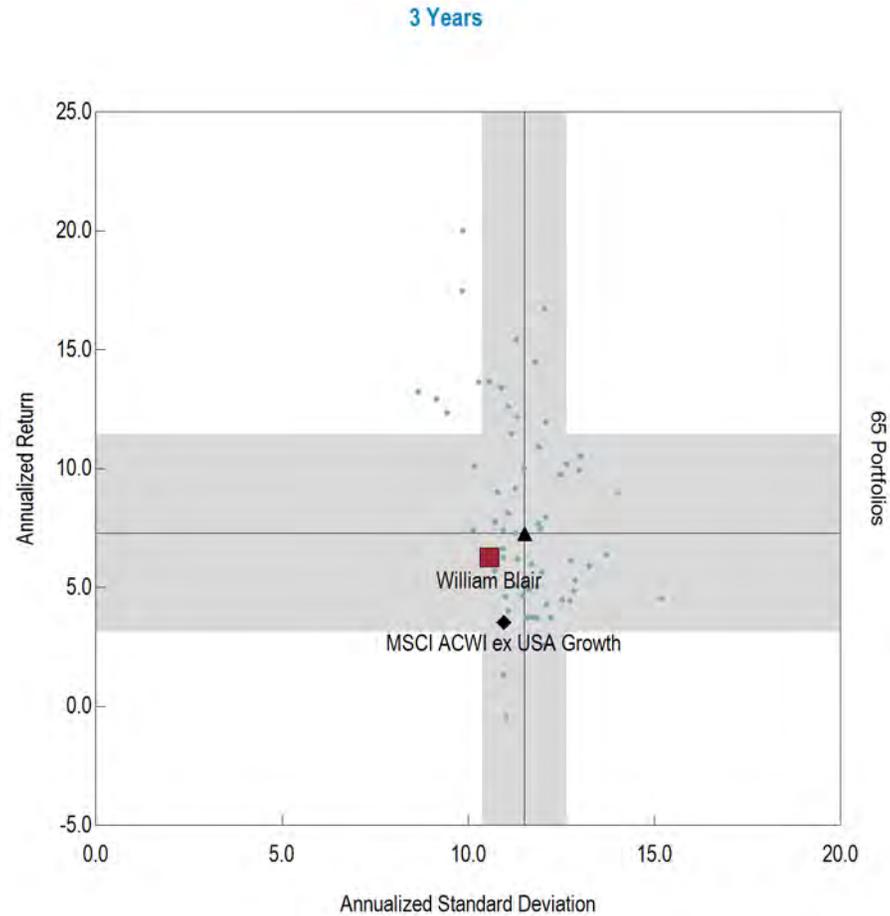
Unclassified sector allocation includes cash allocations.

William Blair vs. eA ACWI ex-US Growth Equity Gross Universe



	Return (Rank)									
	Quarter	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011
5th Percentile	8.8	16.3	15.3	10.6	11.0	16.3	3.2	33.0	24.6	-4.3
25th Percentile	7.4	9.0	10.5	7.6	7.5	9.0	-0.1	24.3	21.9	-9.7
Median	5.7	3.5	7.3	5.0	6.4	3.5	-2.5	20.3	19.3	-12.6
75th Percentile	4.8	-0.5	4.9	4.0	5.4	-0.5	-5.3	17.5	16.9	-15.7
95th Percentile	3.0	-5.4	3.7	1.6	3.6	-5.4	-8.2	14.0	13.7	-20.3
# of Portfolios	70	70	65	62	42	70	50	46	51	51
● William Blair	5.0 (68)	0.5 (69)	6.3 (57)	5.3 (44)	-- (--)	0.5 (69)	-1.2 (37)	20.9 (44)	24.3 (6)	-13.2 (55)
▲ MSCI ACWI ex USA Growth	5.0 (71)	-1.3 (83)	3.5 (96)	2.1 (94)	3.7 (95)	-1.3 (83)	-2.6 (53)	15.5 (87)	16.7 (78)	-14.2 (62)





3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
William Blair	6.3%	10.6%	0.6
MSCI ACWI ex USA Growth	3.5%	11.0%	0.3
eA ACWI ex-US Growth Equity Gross Median	7.3%	11.5%	0.6

## **Global Equity Managers**

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# Artisan Partners Manager Portfolio Overview

Period Ending: December 31, 2015

Global equity portfolio of companies that is benchmark agnostic with accelerating profit cycles and a focus on capital allocation. Primary personnel include James Hamel, Craigh Cepukenas, and Matthew Kamm.

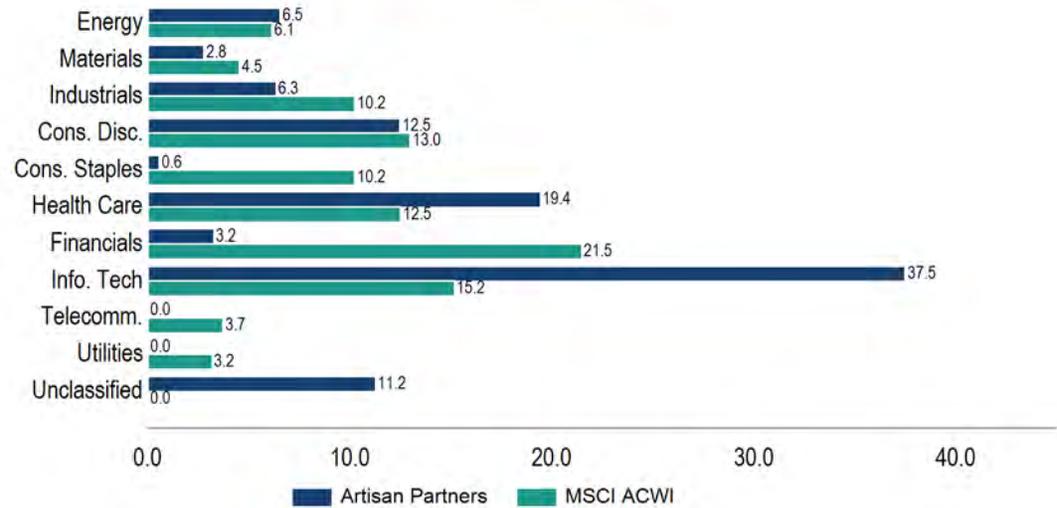
## Characteristics

	Portfolio	MSCI ACWI
Number of Holdings	32	2,491
Weighted Avg. Market Cap. (\$B)	103.15	88.07
Median Market Cap. (\$B)	27.37	7.98
Price To Earnings	28.31	20.93
Price To Book	8.38	3.29
Price To Sales	7.97	2.72
Return on Equity (%)	21.78	16.27
Yield (%)	1.02	2.52
Beta	0.96	1.00

## Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
<b>Totals</b>		
Developed	88.3%	90.3%
Emerging*	2.7%	9.7%
Cash	9.0%	
<b>Top 10 Largest Countries</b>		
United States	78.2%	53.0%
Cash	9.0%	0.0%
Hong Kong	3.8%	1.1%
Ireland	2.8%	0.1%
China*	2.7%	2.8%
Canada	2.3%	2.8%
Italy	1.2%	0.8%
<b>Total-Top 10 Largest Countries</b>	<b>100.0%</b>	<b>60.6%</b>

## Sector Allocation (%) vs MSCI ACWI



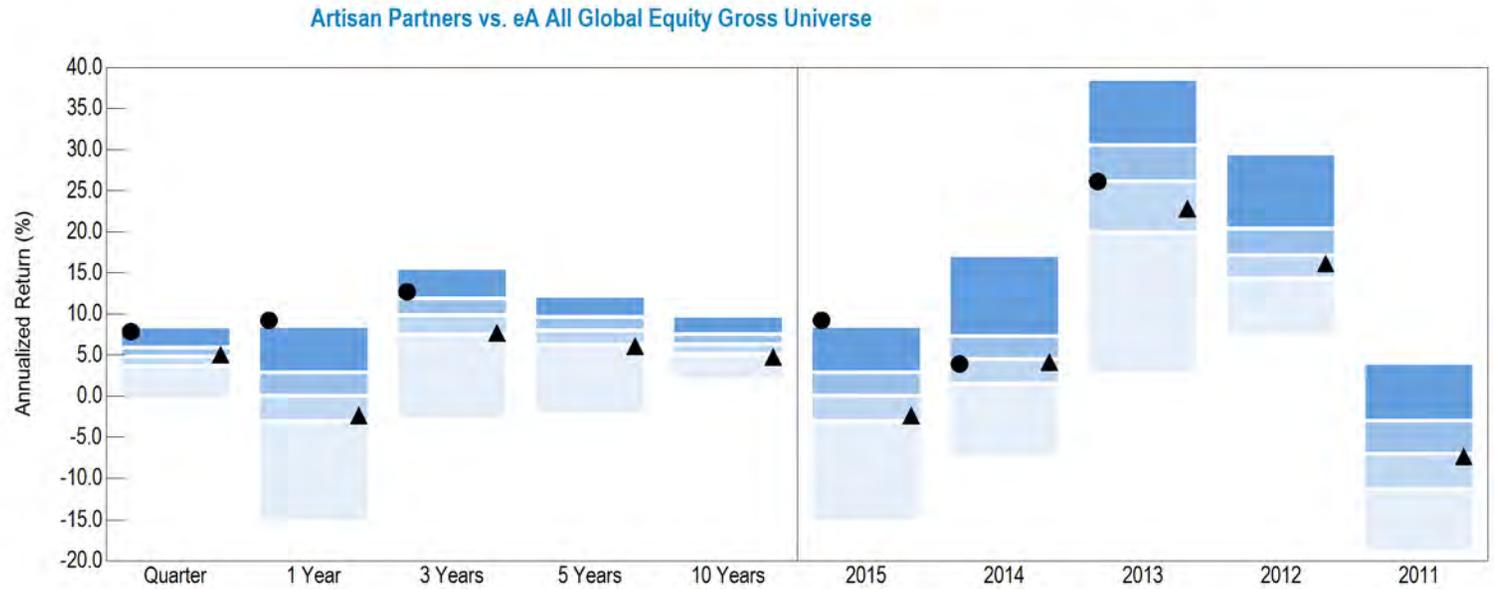
## Top Contributors

	Avg Wgt	Return	Contribution
GENMAB	2.96	45.97	1.36
ALPHABET 'A'	3.68	21.87	0.81
REGENERON PHARMS.	4.35	16.71	0.73
FACEBOOK CLASS A	4.13	16.42	0.68
TENCENT HOLDINGS	3.29	17.94	0.59
ALPHABET 'C'	2.25	24.73	0.56
VISA 'A'	4.66	11.52	0.54
MCGRAW HILL FINANCIAL	2.78	14.36	0.40
HARMONIC DRIVE SYS.	0.67	54.01	0.36
ABBOTT LABORATORIES	2.79	12.32	0.34

## Bottom Contributors

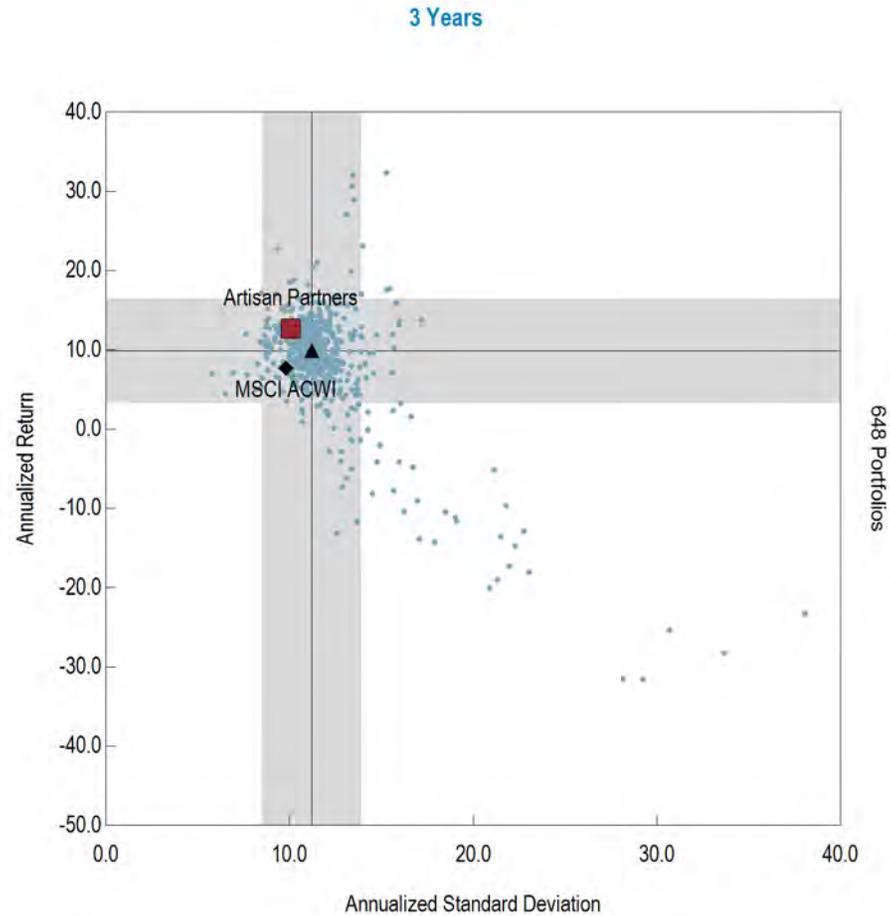
	Avg Wgt	Return	Contribution
CHIPOTLE MEXN.GRILL	2.05	-33.38	-0.69
NINTENDO	1.90	-16.84	-0.32
MONCLER	1.26	-21.41	-0.27
EQT	0.94	-19.48	-0.18
ANADARKO PETROLEUM	0.60	-19.15	-0.11
RAIA DROGASIL ON	1.29	-8.36	-0.11
WEIR GROUP	0.66	-15.92	-0.11
APPLE	2.01	-4.16	-0.08
ELECTROLUX 'B'	0.56	-13.50	-0.08
SHISEIDO	1.74	-2.79	-0.05

Unclassified sector allocation includes cash allocations.



	Return (Rank)									
5th Percentile	8.4	8.5	15.6	12.2	9.7	8.5	17.1	38.6	29.5	4.0
25th Percentile	6.0	3.0	11.9	9.7	7.6	3.0	7.4	30.6	20.4	-3.0
Median	4.8	0.1	9.9	8.1	6.3	0.1	4.6	26.2	17.2	-7.0
75th Percentile	3.7	-2.9	7.6	6.2	5.2	-2.9	1.5	20.0	14.4	-11.2
95th Percentile	-0.5	-15.1	-2.9	-2.2	1.9	-15.1	-7.4	2.7	7.4	-18.7
# of Portfolios	692	692	648	550	279	692	609	552	475	434
● Artisan Partners	7.8 (8)	9.2 (4)	12.7 (17)	-- (--)	-- (--)	9.2 (4)	3.9 (56)	26.1 (51)	-- (--)	-- (--)
▲ MSCI ACWI	5.0 (46)	-2.4 (73)	7.7 (75)	6.1 (77)	4.8 (81)	-2.4 (73)	4.2 (54)	22.8 (66)	16.1 (61)	-7.3 (53)





3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Artisan Partners	12.7%	10.1%	1.3
MSCI ACWI	7.7%	9.8%	0.8
eA All Global Equity Gross Median	9.9%	11.2%	0.9

# First Eagle Manager Portfolio Overview

Period Ending: December 31, 2015

Global equity portfolio that is benchmark agnostic comprised of companies with low valuations. Primary personnel include Matt McLennan and Kimball Brooker.

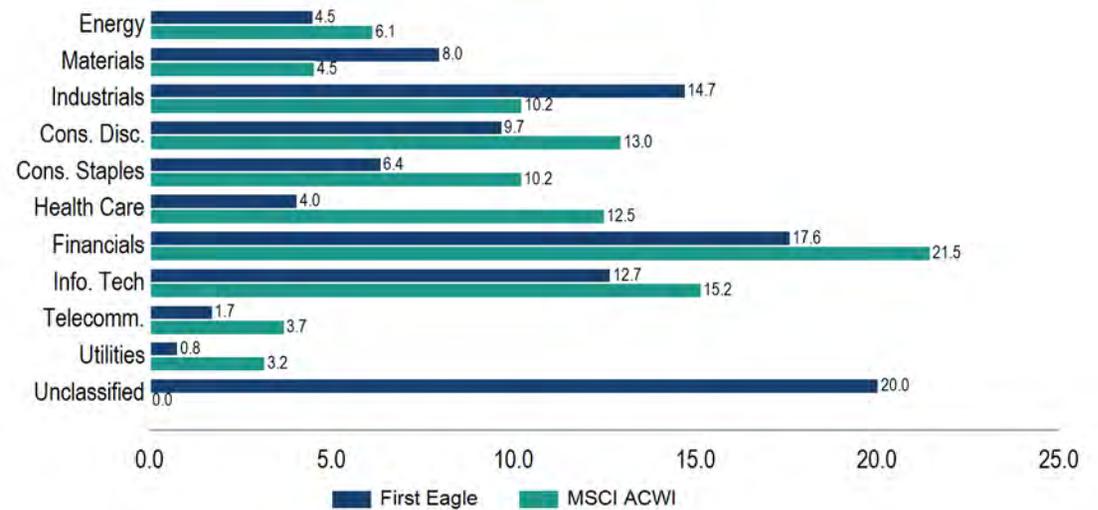
## Characteristics

	Portfolio	MSCI ACWI
Number of Holdings	156	2,491
Weighted Avg. Market Cap. (\$B)	58.87	88.07
Median Market Cap. (\$B)	12.94	7.98
Price To Earnings	20.99	20.93
Price To Book	3.38	3.29
Price To Sales	2.95	2.72
Return on Equity (%)	15.21	16.27
Yield (%)	2.32	2.52
Beta	0.78	1.00

## Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
<b>Totals</b>		
Developed	77.1%	90.3%
Emerging*	3.9%	9.7%
Cash	19.1%	
<b>Top 10 Largest Countries</b>		
United States	42.4%	53.0%
Cash	19.1%	0.0%
Japan	12.9%	8.0%
France	6.2%	3.3%
United Kingdom	3.7%	6.7%
Canada	3.2%	2.8%
Korea*	1.7%	1.5%
Mexico*	1.6%	0.4%
Germany	1.5%	3.1%
Switzerland	1.4%	3.3%
<b>Total-Top 10 Largest Countries</b>	<b>93.7%</b>	<b>82.1%</b>

## Sector Allocation (%) vs MSCI ACWI



## Top Contributors

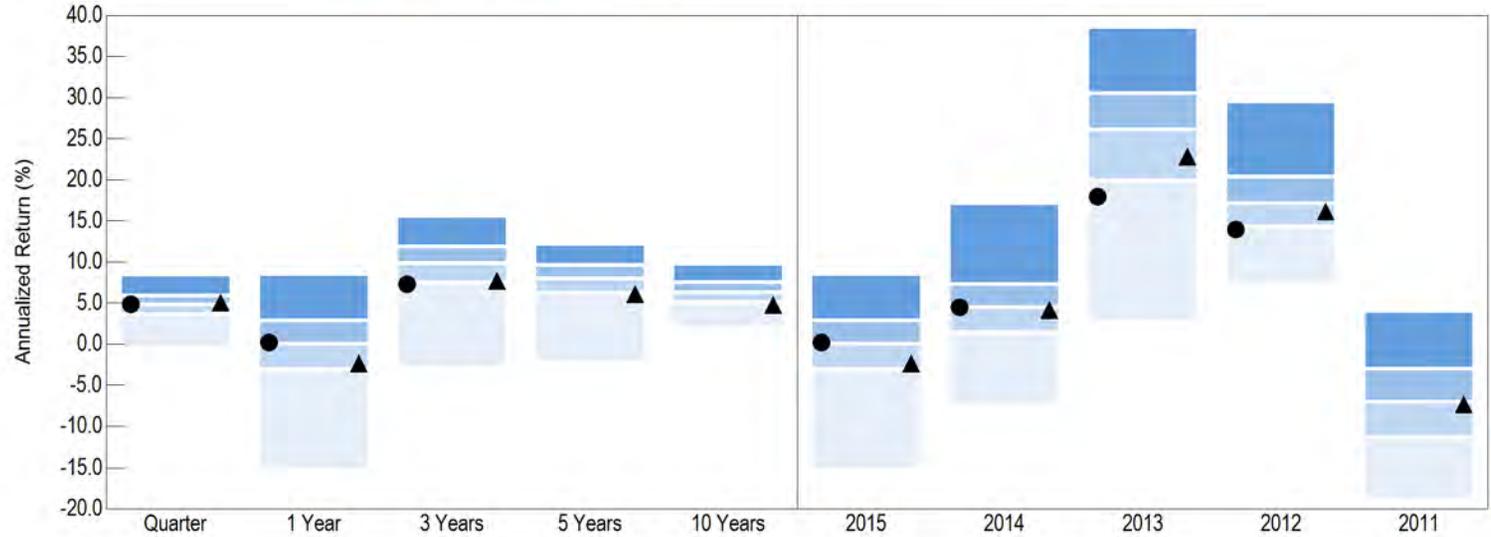
	Avg Wgt	Return	Contribution
MICROSOFT	1.58	26.20	0.41
HOYA	0.70	27.06	0.19
KDDI	1.00	17.74	0.18
KEYENCE	0.65	25.53	0.17
HEIDELBERGCEMENT	0.82	18.94	0.15
OMNICOM GROUP	0.90	15.58	0.14
INTEL	0.91	15.10	0.14
SMC	0.62	21.40	0.13
SECOM	0.91	14.43	0.13
SOMPO JAPAN NPNK.HDG.	0.73	15.55	0.11

## Bottom Contributors

	Avg Wgt	Return	Contribution
NATIONAL OILWELL VARCO	0.74	-9.95	-0.07
POTASH CORPORATION (NYS) OF SASKATCHEWAN	0.40	-15.25	-0.06
SANOFI	0.56	-9.89	-0.06
DEVON ENERGY	0.41	-13.11	-0.05
AMERICAN EXPRESS	0.90	-5.83	-0.05
TERADATA	0.48	-8.77	-0.04
CENOVUS ENERGY (NYS)	0.25	-15.99	-0.04
KT & G	0.53	-5.26	-0.03
FMC TECHNOLOGIES	0.39	-6.42	-0.03
INDUST PENOLES	0.10	-24.54	-0.02

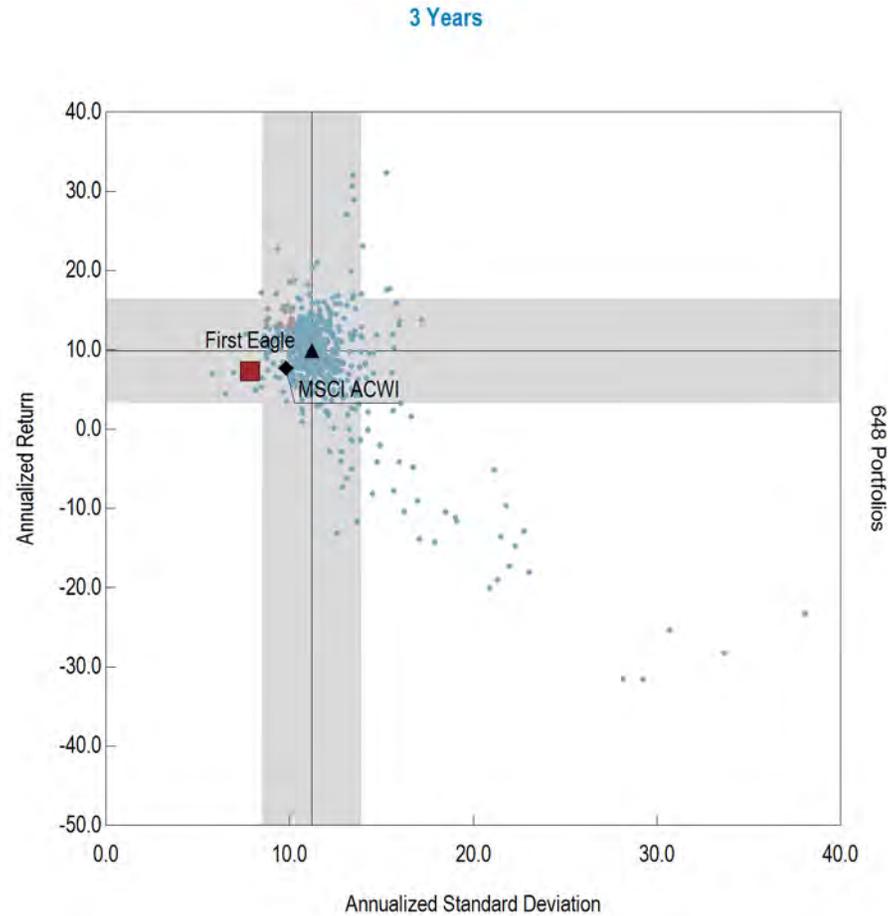
Unclassified sector allocation includes cash allocations.

First Eagle vs. eA All Global Equity Gross Universe



	Return (Rank)														
5th Percentile	8.4	8.5	15.6	12.2	9.7	8.5	17.1	38.6	29.5	4.0					
25th Percentile	6.0	3.0	11.9	9.7	7.6	3.0	7.4	30.6	20.4	-3.0					
Median	4.8	0.1	9.9	8.1	6.3	0.1	4.6	26.2	17.2	-7.0					
75th Percentile	3.7	-2.9	7.6	6.2	5.2	-2.9	1.5	20.0	14.4	-11.2					
95th Percentile	-0.5	-15.1	-2.9	-2.2	1.9	-15.1	-7.4	2.7	7.4	-18.7					
# of Portfolios	692	692	648	550	279	692	609	552	475	434					
● First Eagle	4.8 (50)	0.2 (49)	7.3 (77)	-- (--)	-- (--)	0.2 (49)	4.5 (51)	17.9 (80)	13.9 (78)	-- (--)					
▲ MSCI ACWI	5.0 (46)	-2.4 (73)	7.7 (75)	6.1 (77)	4.8 (81)	-2.4 (73)	4.2 (54)	22.8 (66)	16.1 (61)	-7.3 (53)					





3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
First Eagle	7.3%	7.8%	0.9
MSCI ACWI	7.7%	9.8%	0.8
eA All Global Equity Gross Median	9.9%	11.2%	0.9

# Intech Global Low Vol Manager Portfolio Overview

Period Ending: December 31, 2015

Global equity diversified portfolio focused on maintaining volatility at or below the benchmark. Primary personnel include Adrian Banner, Vassilios Papthanakos, and Joseph Runnels.

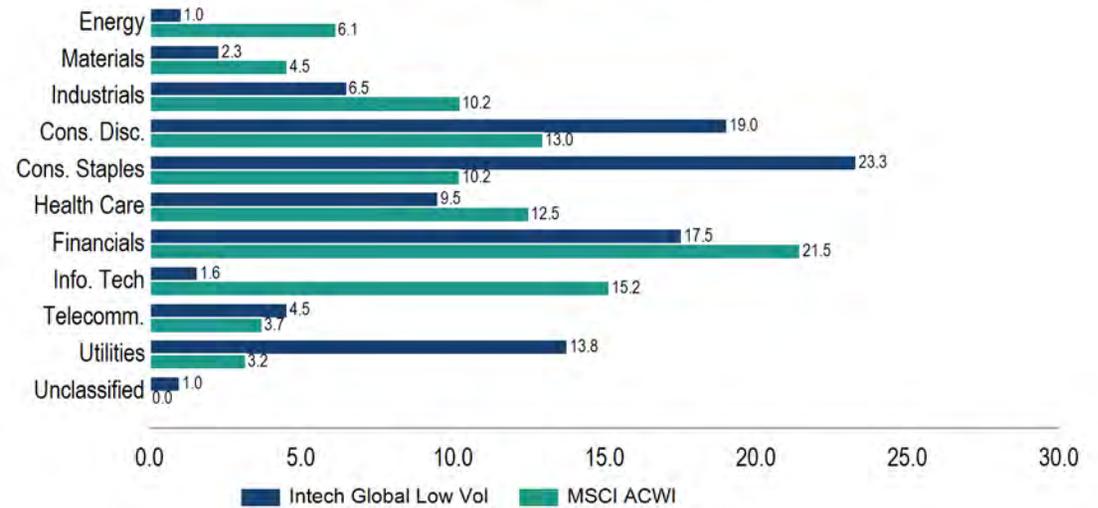
## Characteristics

	Portfolio	MSCI ACWI
Number of Holdings	399	2,491
Weighted Avg. Market Cap. (\$B)	36.47	88.07
Median Market Cap. (\$B)	10.05	7.98
Price To Earnings	25.70	20.93
Price To Book	3.55	3.29
Price To Sales	3.19	2.72
Return on Equity (%)	15.60	16.27
Yield (%)	2.67	2.52
Beta	0.67	1.00

## Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
<b>Totals</b>		
Developed	99.0%	90.3%
Cash	1.0%	
<b>Top 10 Largest Countries</b>		
United States	57.2%	53.0%
Japan	16.2%	8.0%
Hong Kong	8.2%	1.1%
Canada	4.5%	2.8%
Israel	2.8%	0.3%
Switzerland	2.3%	3.3%
Singapore	2.1%	0.4%
Germany	1.3%	3.1%
United Kingdom	1.1%	6.7%
Cash	1.0%	0.0%
<b>Total-Top 10 Largest Countries</b>	<b>96.7%</b>	<b>78.7%</b>

## Sector Allocation (%) vs MSCI ACWI



## Top Contributors

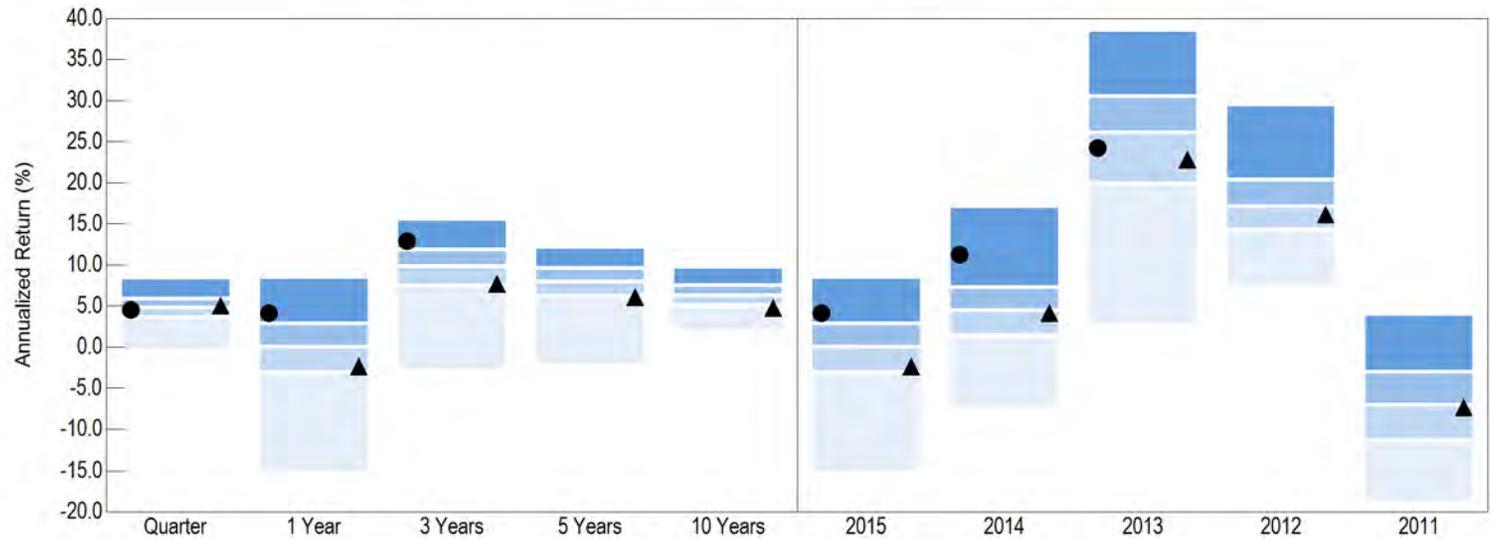
	Avg Wgt	Return	Contribution
KIMBERLY-CLARK	2.52	17.60	0.44
MCDONALDS	1.87	20.84	0.39
PROCTER & GAMBLE	2.67	11.38	0.30
SOUTHERN	5.02	5.97	0.30
CLOROX	1.76	10.47	0.18
KELLOGG	1.70	9.38	0.16
NTT DOCOMO INC	0.62	24.09	0.15
GENERAL MILLS	3.90	3.54	0.14
JOHNSON & JOHNSON	1.08	10.84	0.12
DOLLAR TREE	0.73	15.84	0.12

## Bottom Contributors

	Avg Wgt	Return	Contribution
DOLLARAMA	0.98	-14.40	-0.14
CHIPOTLE MEXN.GRILL	0.29	-33.38	-0.10
INTACT FINANCIAL	0.95	-8.13	-0.08
WAL MART STORES	1.59	-4.67	-0.07
STAPLES	0.40	-18.24	-0.07
BOMBARDIER 'B'	0.31	-22.56	-0.07
URBAN OUTFITTERS	0.30	-22.57	-0.07
ADV.AUTO PARTS	0.32	-20.56	-0.07
CABOT OIL & GAS 'A'	0.34	-19.00	-0.06
RANGE RES.	0.26	-23.25	-0.06

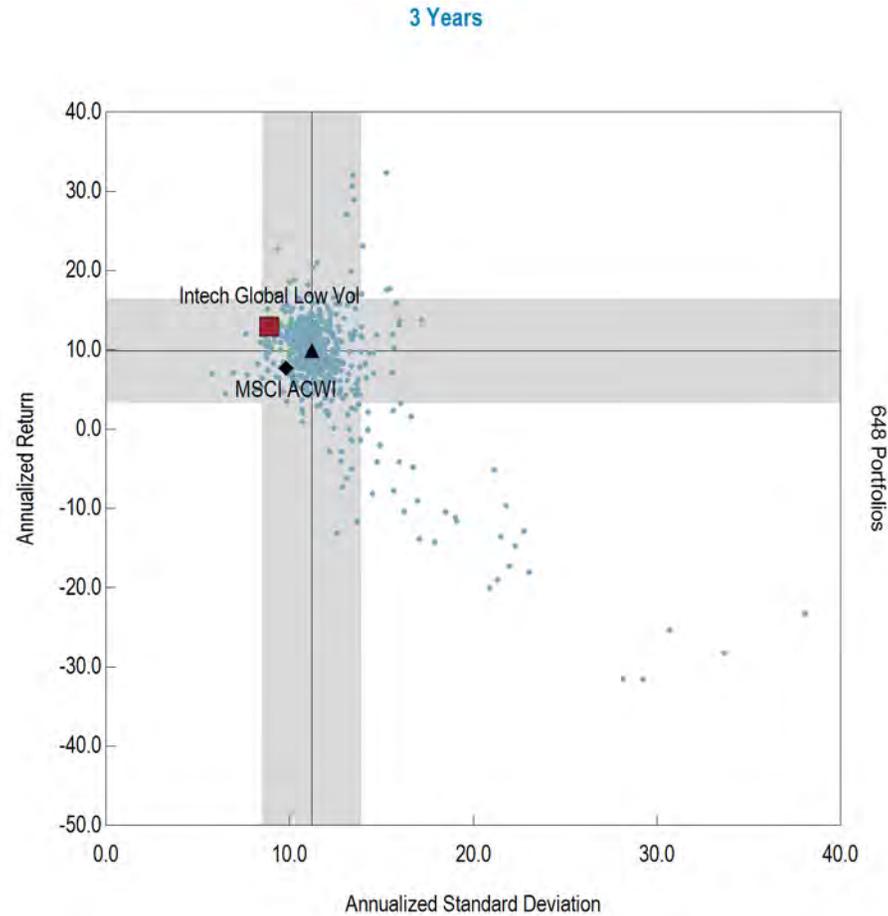
Unclassified sector allocation includes cash allocations.

Intech Global Low Vol vs. eA All Global Equity Gross Universe



	Return (Rank)									
	Quarter	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011
5th Percentile	8.4	8.5	15.6	12.2	9.7	8.5	17.1	38.6	29.5	4.0
25th Percentile	6.0	3.0	11.9	9.7	7.6	3.0	7.4	30.6	20.4	-3.0
Median	4.8	0.1	9.9	8.1	6.3	0.1	4.6	26.2	17.2	-7.0
75th Percentile	3.7	-2.9	7.6	6.2	5.2	-2.9	1.5	20.0	14.4	-11.2
95th Percentile	-0.5	-15.1	-2.9	-2.2	1.9	-15.1	-7.4	2.7	7.4	-18.7
# of Portfolios	692	692	648	550	279	692	609	552	475	434
● Intech Global Low Vol	4.5 (60)	4.1 (18)	12.9 (16)	-- (--)	-- (--)	4.1 (18)	11.2 (14)	24.2 (62)	-- (--)	-- (--)
▲ MSCI ACWI	5.0 (46)	-2.4 (73)	7.7 (75)	6.1 (77)	4.8 (81)	-2.4 (73)	4.2 (54)	22.8 (66)	16.1 (61)	-7.3 (53)





3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Intech Global Low Vol	12.9%	8.9%	1.4
MSCI ACWI	7.7%	9.8%	0.8
eA All Global Equity Gross Median	9.9%	11.2%	0.9

# JP Morgan Global Opportunities Manager Portfolio Overview

Period Ending: December 31, 2015

Global equity diversified portfolio focused on companies with valuations below their intrinsic value. Primary personnel include Jeroen Huysinga, Georgina Perceval-Maxwell, and Gerd Woort-Menker.

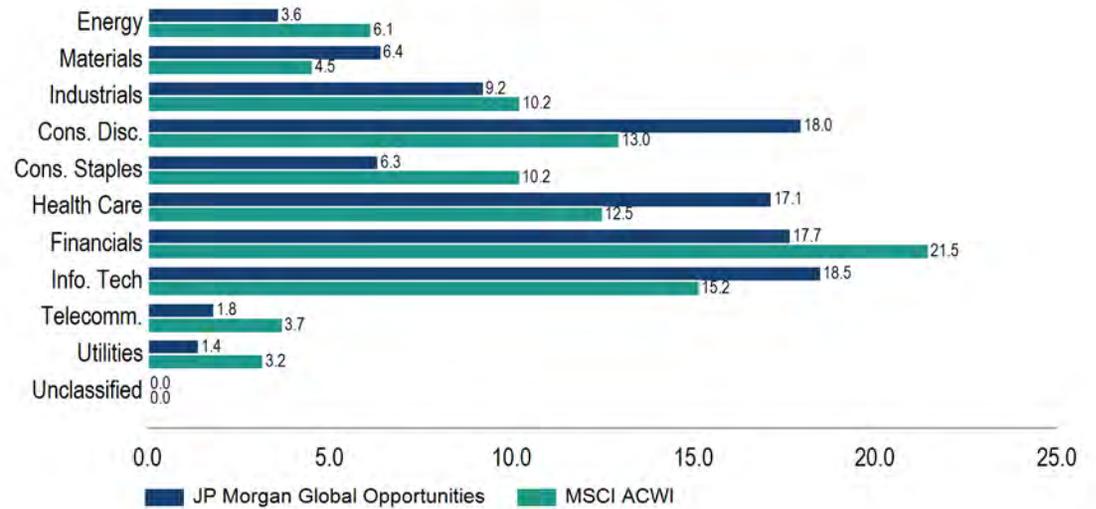
## Characteristics

	Portfolio	MSCI ACWI
Number of Holdings	100	2,491
Weighted Avg. Market Cap. (\$B)	74.69	88.07
Median Market Cap. (\$B)	37.88	7.98
Price To Earnings	23.02	20.93
Price To Book	4.40	3.29
Price To Sales	3.06	2.72
Return on Equity (%)	18.40	16.27
Yield (%)	1.81	2.52
Beta	1.06	1.00

## Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
<b>Totals</b>		
Developed	93.7%	90.3%
Emerging*	6.3%	9.7%
<b>Top 10 Largest Countries</b>		
United States	50.6%	53.0%
Japan	8.6%	8.0%
Germany	6.5%	3.1%
United Kingdom	6.0%	6.7%
Switzerland	5.0%	3.3%
France	3.2%	3.3%
Hong Kong	2.7%	1.1%
Australia	2.2%	2.4%
Finland	1.9%	0.3%
Norway	1.6%	0.2%
<b>Total-Top 10 Largest Countries</b>	<b>88.3%</b>	<b>81.4%</b>

## Sector Allocation (%) vs MSCI ACWI



## Top Contributors

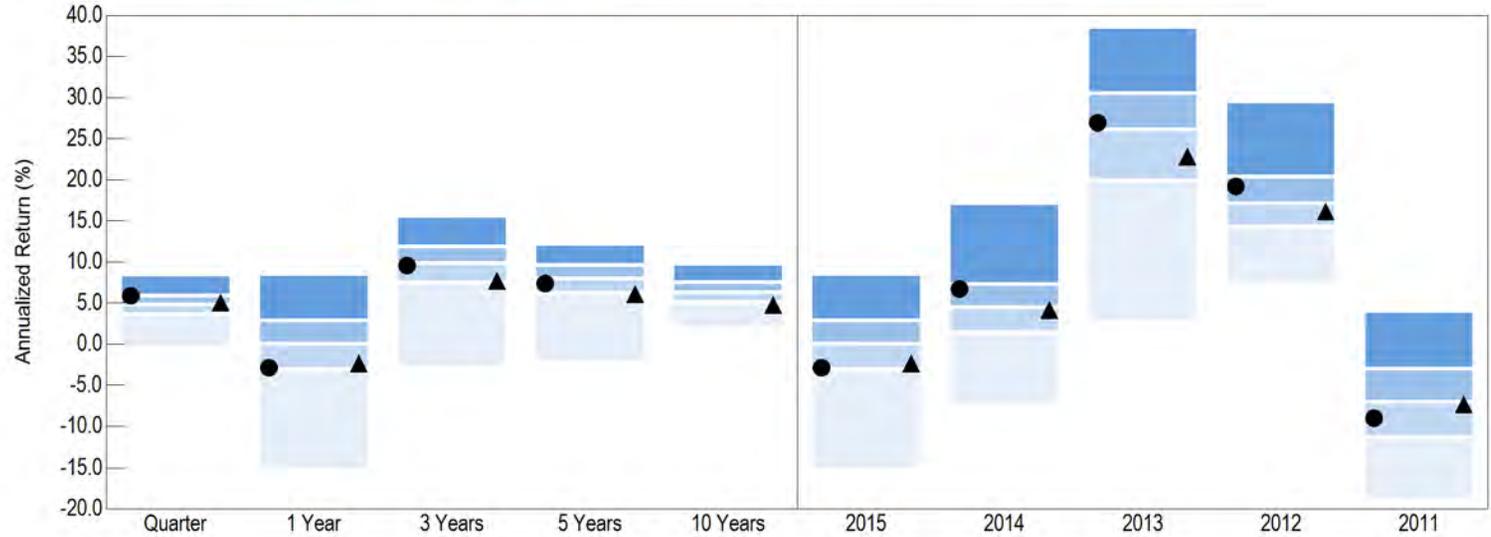
	Avg Wgt	Return	Contribution
ALPHABET 'A'	2.90	21.87	0.63
MICROSOFT	1.62	26.20	0.42
DAIKIN INDUSTRIES	1.11	32.74	0.36
DAIMLER	1.61	16.80	0.27
CHINA OS.LD.& INV.	1.06	19.66	0.21
INFINEON TECHNOLOGIES	0.64	32.03	0.20
JAPAN TOBACCO	0.77	22.22	0.17
LAM RESEARCH	0.77	22.04	0.17
SAP	0.69	24.33	0.17
ALLERGAN	1.09	14.97	0.16

## Bottom Contributors

	Avg Wgt	Return	Contribution
ELECTROLUX 'B'	1.73	-13.50	-0.23
UNION PACIFIC	1.64	-10.97	-0.18
MTN GROUP	0.54	-33.38	-0.18
PJSC MAGNIT GDR (REG S)	0.95	-15.34	-0.15
ANADARKO PETROLEUM	0.76	-19.15	-0.15
ARCELORMITTAL	0.61	-18.59	-0.11
MITSUI FUDOSAN	1.56	-6.76	-0.11
EQT	0.46	-19.48	-0.09
NOVARTIS 'R'	1.56	-5.23	-0.08
UNICREDIT	0.75	-10.28	-0.08

Unclassified sector allocation includes cash allocations.

JP Morgan Global Opportunities vs. eA All Global Equity Gross Universe

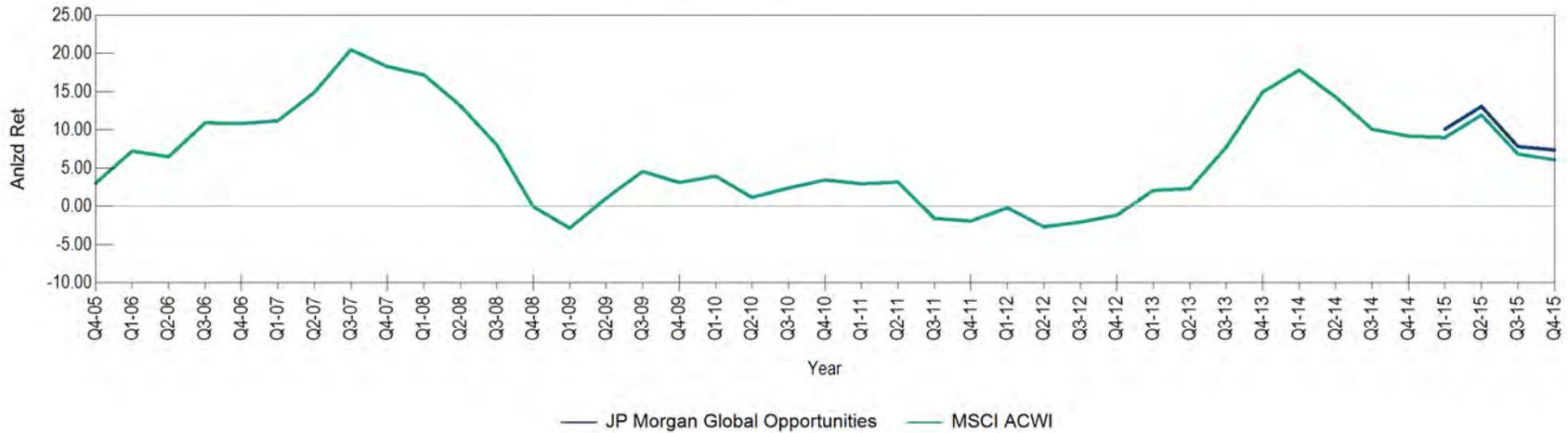


	Return (Rank)									
	Quarter	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011
5th Percentile	8.4	8.5	15.6	12.2	9.7	8.5	17.1	38.6	29.5	4.0
25th Percentile	6.0	3.0	11.9	9.7	7.6	3.0	7.4	30.6	20.4	-3.0
Median	4.8	0.1	9.9	8.1	6.3	0.1	4.6	26.2	17.2	-7.0
75th Percentile	3.7	-2.9	7.6	6.2	5.2	-2.9	1.5	20.0	14.4	-11.2
95th Percentile	-0.5	-15.1	-2.9	-2.2	1.9	-15.1	-7.4	2.7	7.4	-18.7
# of Portfolios	692	692	648	550	279	692	609	552	475	434
● JP Morgan Global Opportunities	5.9 (27)	-2.9 (75)	9.6 (54)	7.4 (62)	-- (--)	-2.9 (75)	6.7 (30)	26.9 (46)	19.2 (32)	-9.0 (63)
▲ MSCI ACWI	5.0 (46)	-2.4 (73)	7.7 (75)	6.1 (77)	4.8 (81)	-2.4 (73)	4.2 (54)	22.8 (66)	16.1 (61)	-7.3 (53)

Rolling 3 Year Annualized Return (%)

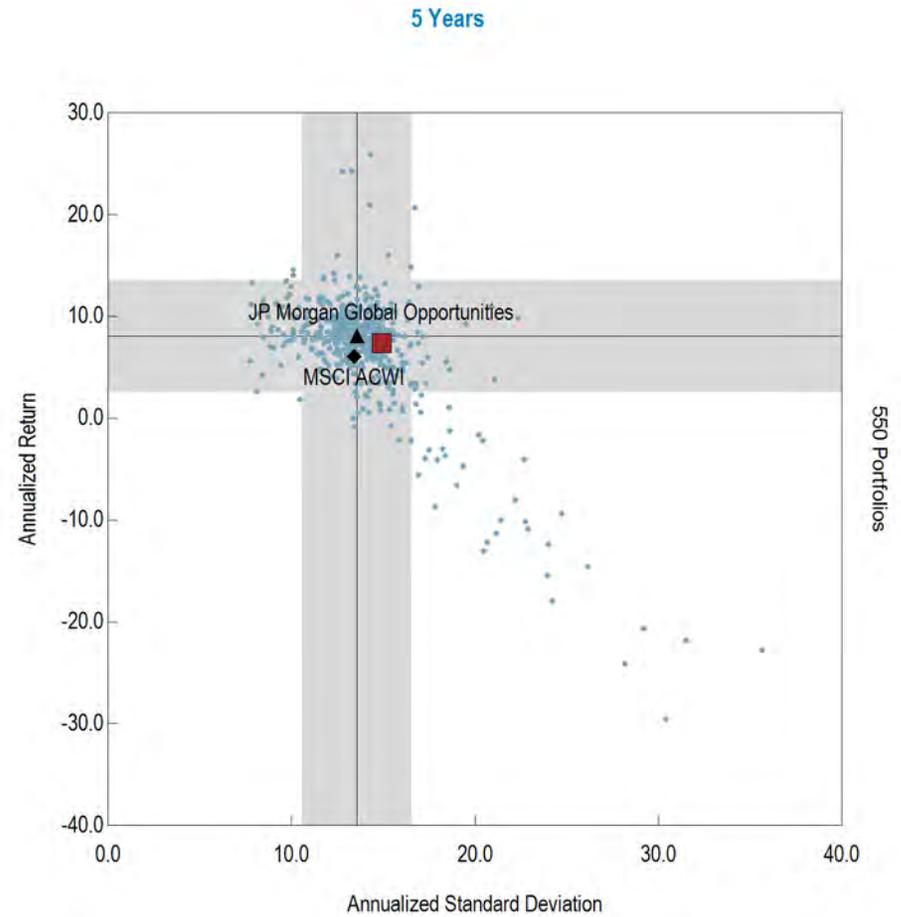
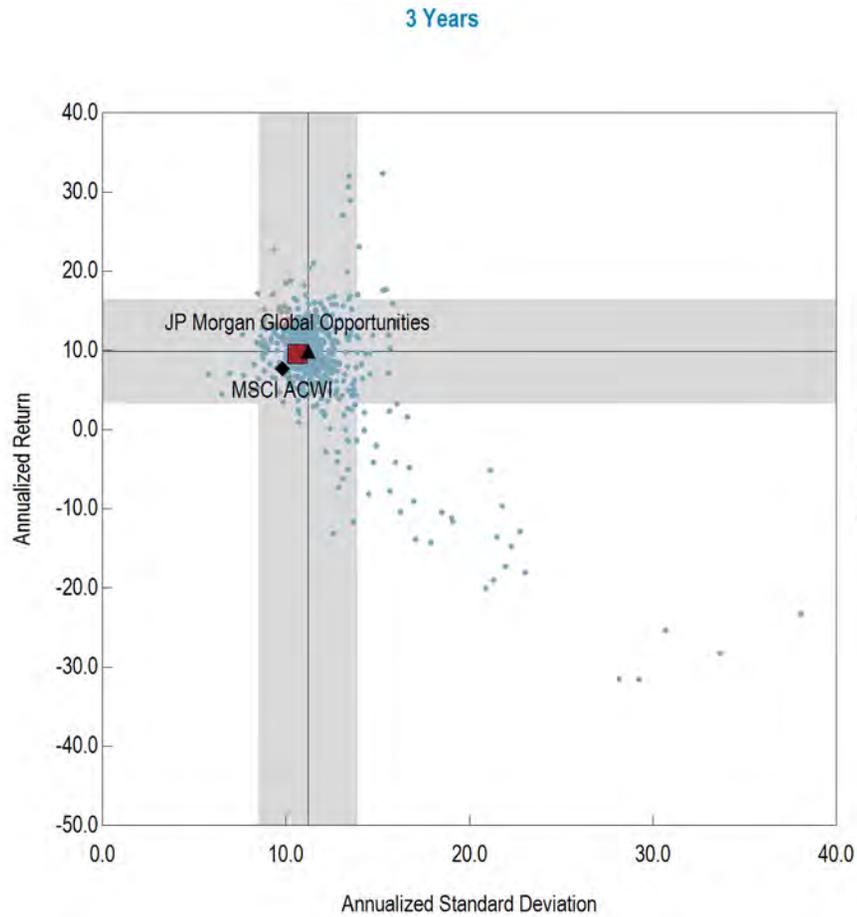


Rolling 5 Year Annualized Return (%)



JP Morgan Global Opportunities  
 Risk vs. Return 3 & 5 Year (Gross of Fees)

Period Ending: December 31, 2015



**3 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
JP Morgan Global Opportunities	9.6%	10.6%	0.9
MSCI ACWI	7.7%	9.8%	0.8
eA All Global Equity Gross Median	9.9%	11.2%	0.9

**5 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
JP Morgan Global Opportunities	7.4%	14.9%	0.5
MSCI ACWI	6.1%	13.4%	0.5
eA All Global Equity Gross Median	8.1%	13.6%	0.6

## **Domestic Fixed Income Managers**

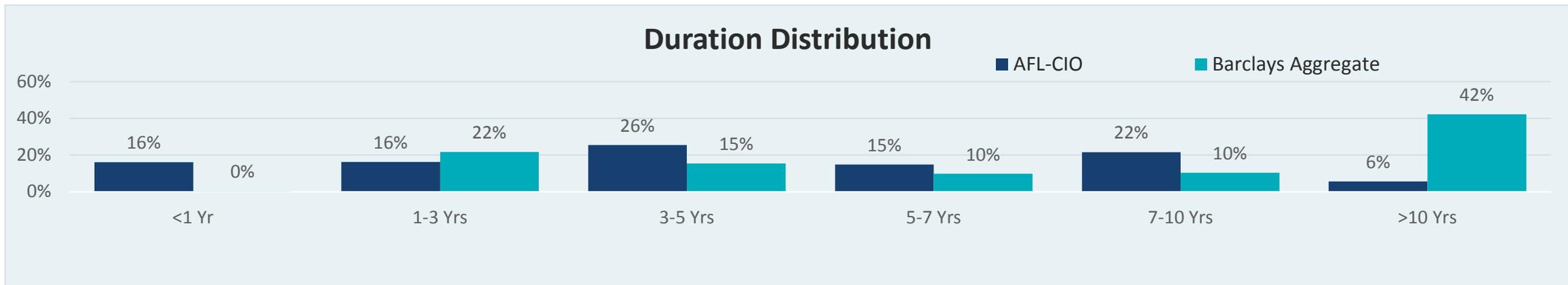
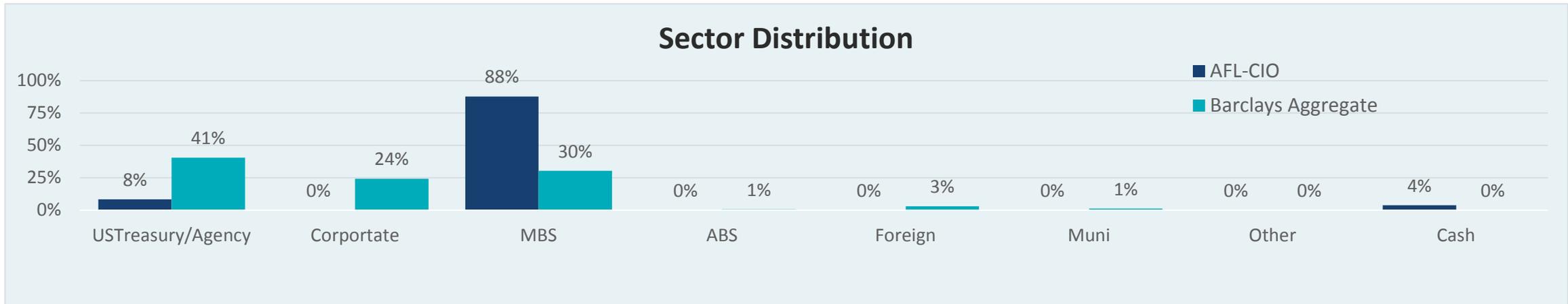
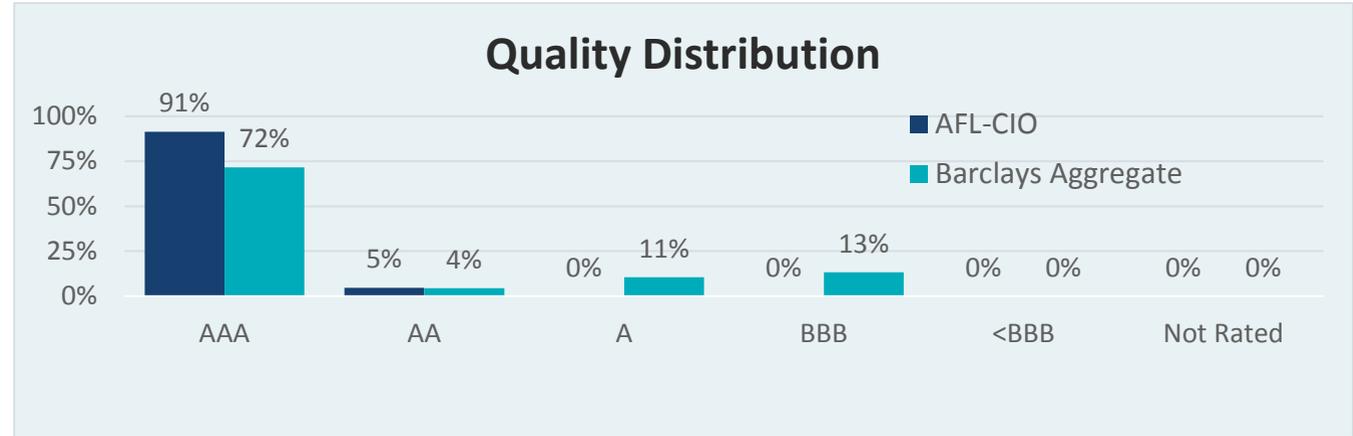
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# AFL-CIO Manager Portfolio Overview

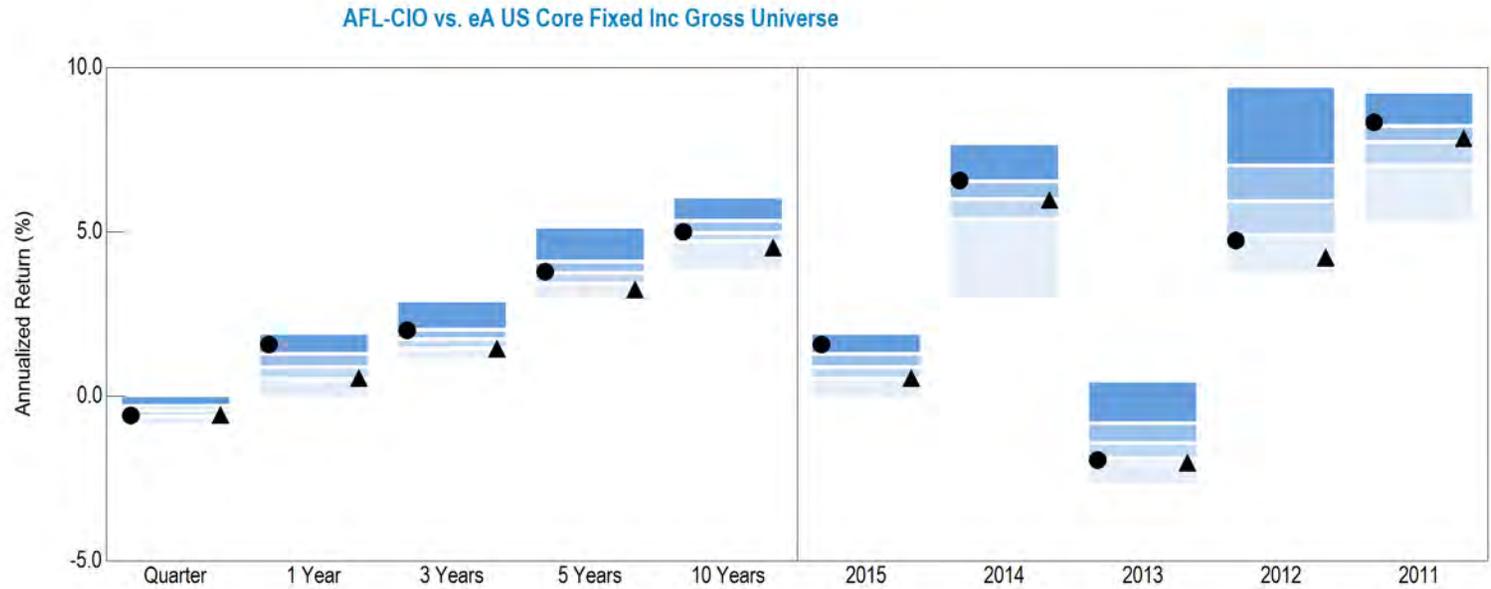
Period Ending: December 31, 2015

Domestic core fixed income portfolio with an exclusive focus on mortgage-related securities. Primary personnel include Stephen Coyle and Chang Su.

	AFL-CIO	Barclays Aggregate
Effective Duration	5.05	5.68
Yield to Maturity	2.79	3.31
Average Quality	AAA	AA
Average Coupon	3.25%	3.97%

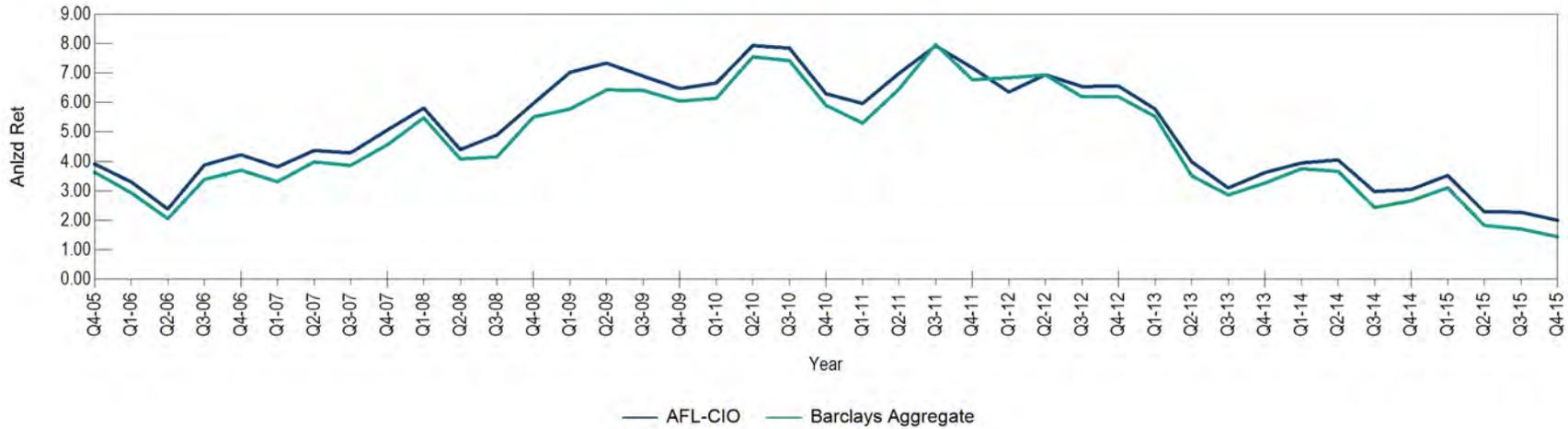


Duration and Quality distributions exclude cash.

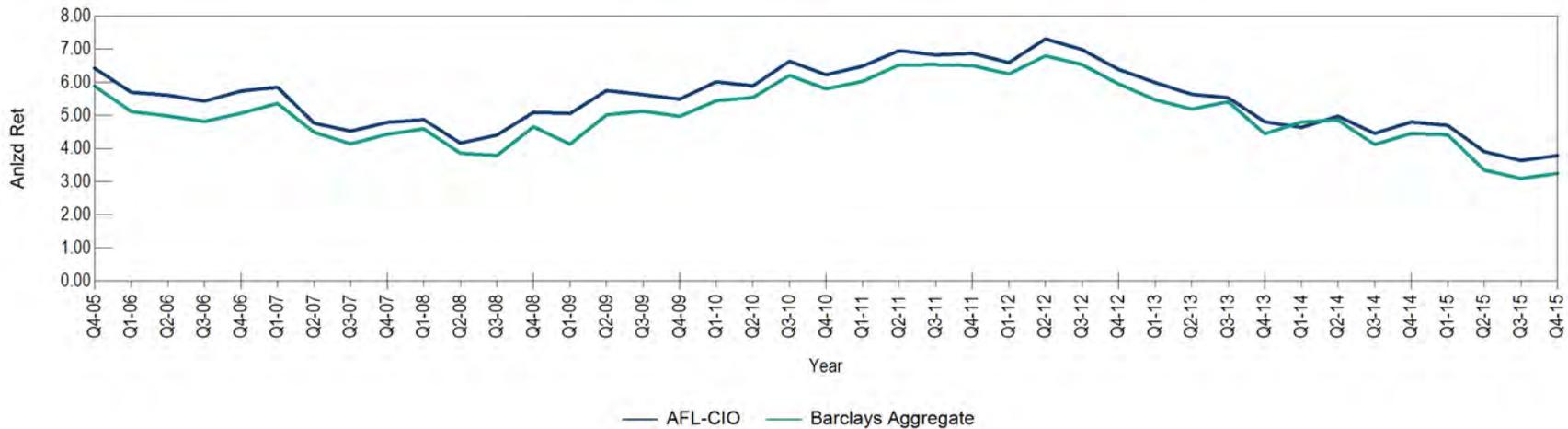


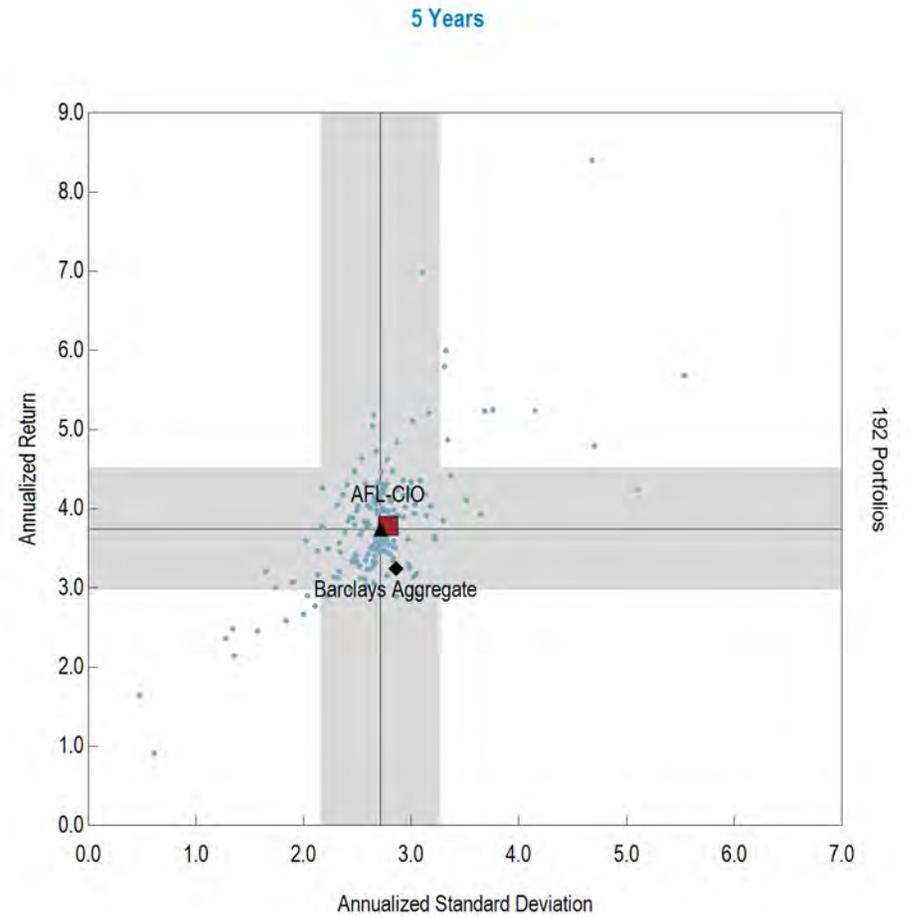
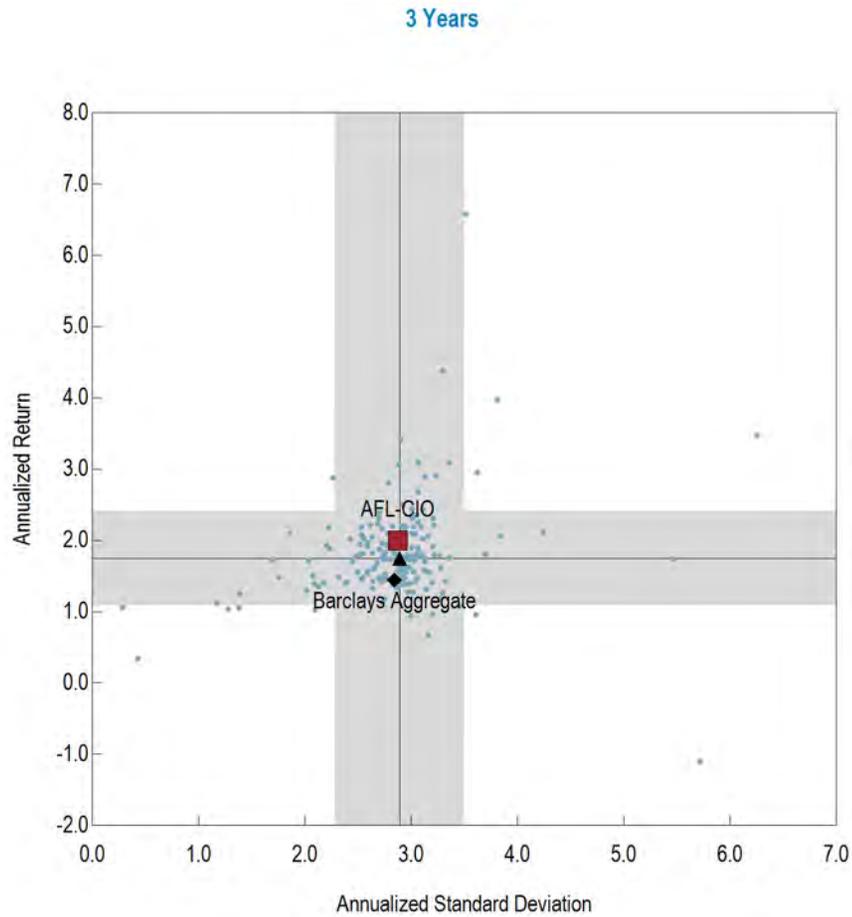
	Return (Rank)										
	Quarter	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011	
5th Percentile	0.0	1.9	2.9	5.1	6.1	1.9	7.7	0.5	9.4	9.2	
25th Percentile	-0.3	1.3	2.0	4.1	5.3	1.3	6.5	-0.8	7.0	8.2	
Median	-0.4	0.9	1.7	3.7	5.0	0.9	6.0	-1.4	5.9	7.7	
75th Percentile	-0.6	0.5	1.5	3.4	4.7	0.5	5.4	-1.9	4.9	7.0	
95th Percentile	-0.9	-0.1	1.1	2.9	3.8	-0.1	2.9	-2.7	3.7	5.3	
# of Portfolios	196	196	195	192	173	196	213	209	228	213	
● AFL-CIO	-0.6 (74)	1.6 (15)	2.0 (29)	3.8 (48)	5.0 (49)	1.6 (15)	6.6 (25)	-1.9 (78)	4.7 (80)	8.3 (23)	
▲ Barclays Aggregate	-0.6 (72)	0.6 (75)	1.4 (79)	3.2 (84)	4.5 (87)	0.6 (75)	6.0 (52)	-2.0 (82)	4.2 (90)	7.8 (46)	

Rolling 3 Year Annualized Return (%)



Rolling 5 Year Annualized Return (%)





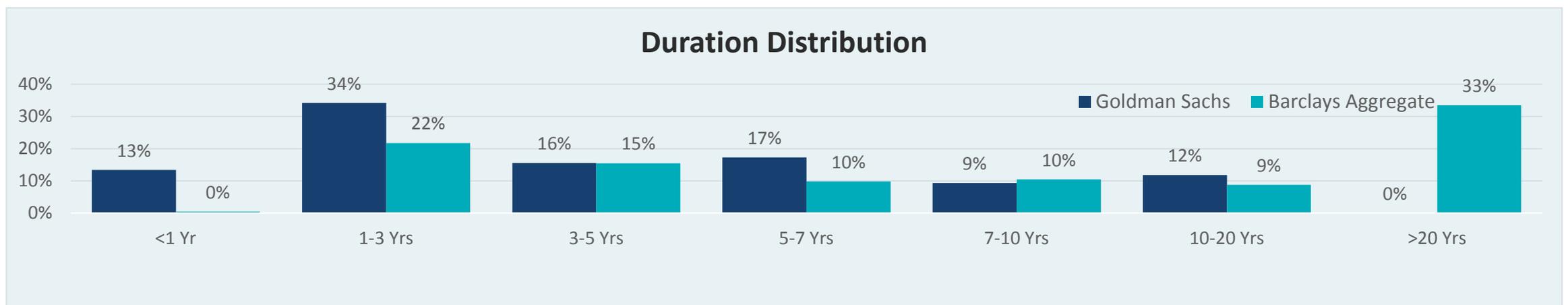
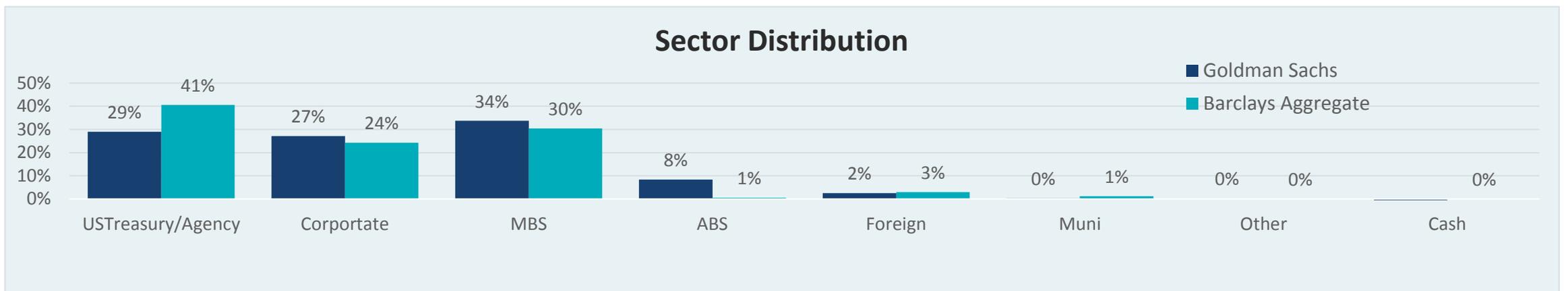
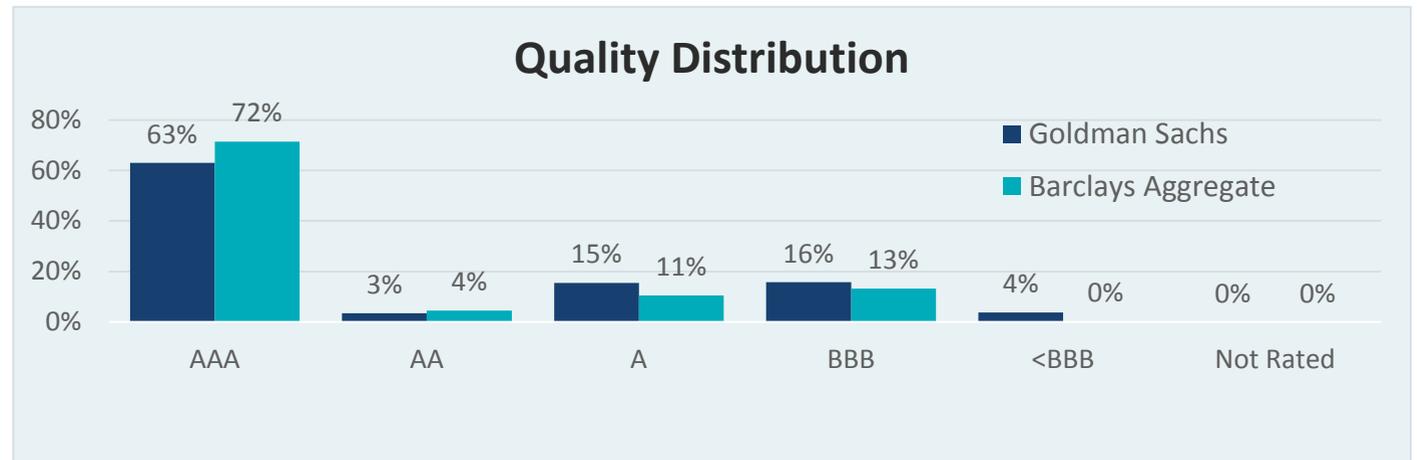
	3 Years			5 Years			
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	
AFL-CIO	2.0%	2.9%	0.7	AFL-CIO	3.8%	2.8%	1.3
Barclays Aggregate	1.4%	2.8%	0.5	Barclays Aggregate	3.2%	2.9%	1.1
eA US Core Fixed Inc Gross Median	1.7%	2.9%	0.6	eA US Core Fixed Inc Gross Median	3.7%	2.7%	1.4

# Goldman Sachs Core Plus Manager Portfolio Overview

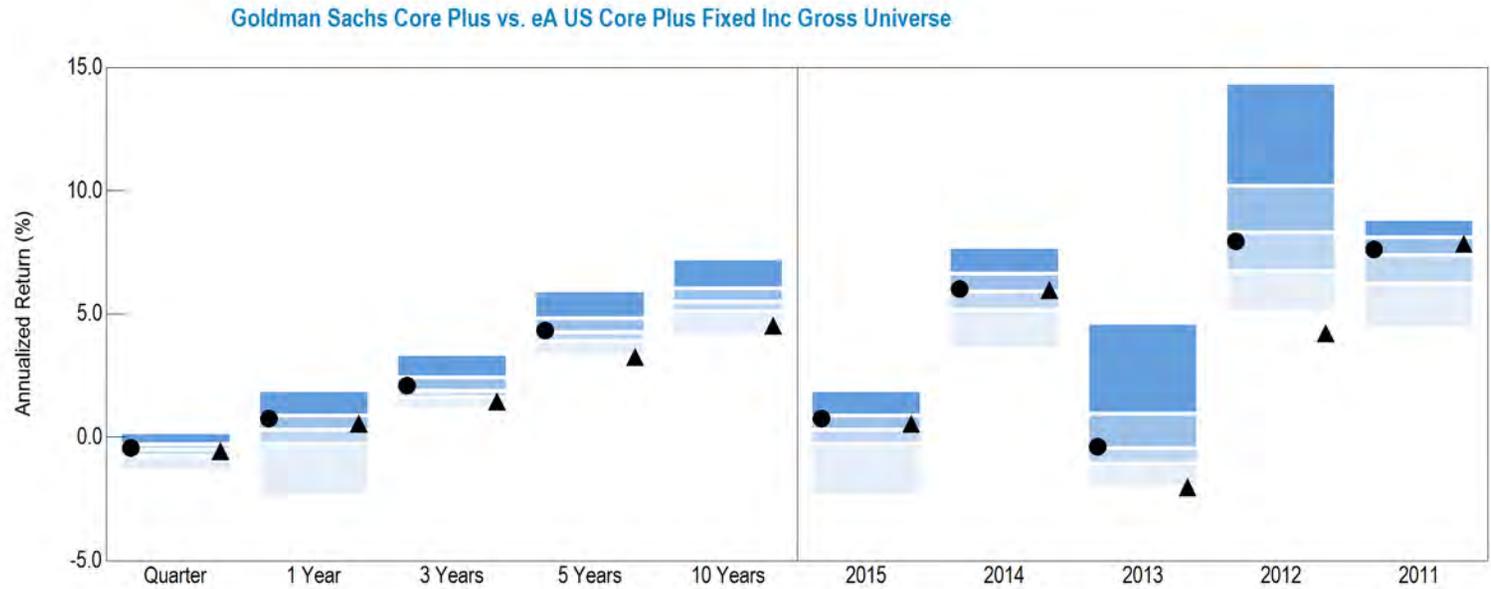
Period Ending: December 31, 2015

Domestic core plus fixed income portfolio with a focus on security selection seeking enhanced returns. Primary personnel include Jonathan Beinner.

	Goldman Sachs	Barclays Aggregate
Option Adjusted Duration	5.67	5.39
Yield to Maturity	3.14	3.31
Average Quality	AA	AA
Average Coupon	3.38%	3.97%



Duration and Quality distributions exclude cash.

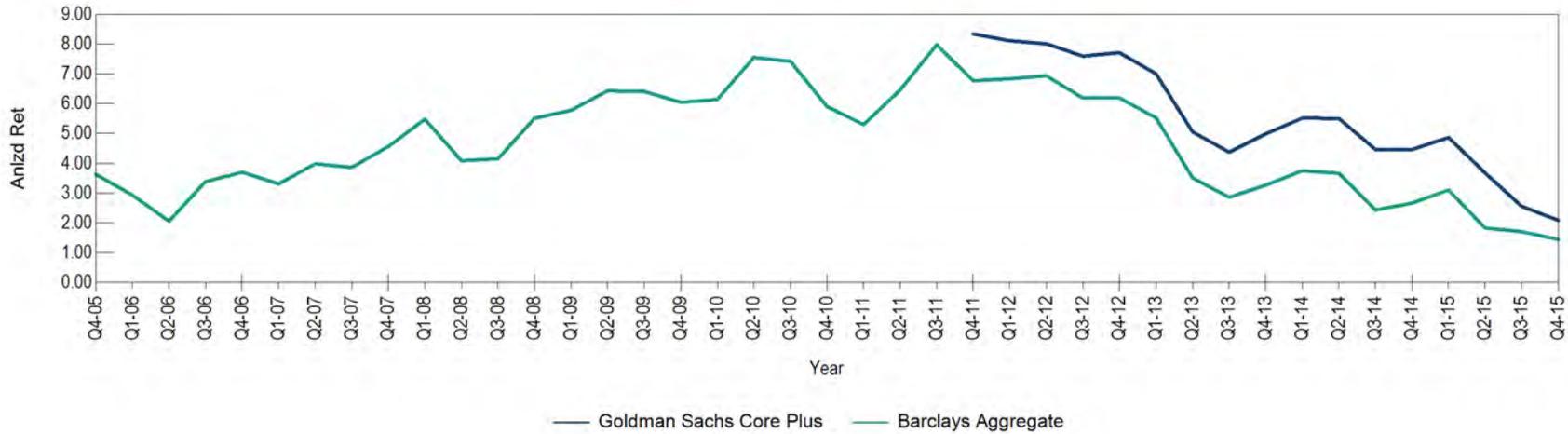


	Return (Rank)									
	Quarter	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011
5th Percentile	0.2	1.9	3.4	6.0	7.2	1.9	7.7	4.6	14.4	8.8
25th Percentile	-0.3	0.9	2.4	4.8	6.0	0.9	6.7	1.0	10.2	8.1
Median	-0.5	0.3	1.9	4.3	5.5	0.3	5.9	-0.4	8.3	7.4
75th Percentile	-0.7	-0.2	1.6	3.9	5.1	-0.2	5.2	-1.0	6.7	6.3
95th Percentile	-1.4	-2.4	1.2	3.3	4.1	-2.4	3.6	-2.0	5.1	4.4
# of Portfolios	115	115	114	111	88	115	118	116	124	118
● Goldman Sachs Core Plus	-0.4 (45)	0.8 (36)	2.1 (35)	4.3 (47)	-- (--)	0.8 (36)	6.0 (47)	-0.4 (49)	7.9 (59)	7.6 (43)
▲ Barclays Aggregate	-0.6 (60)	0.6 (42)	1.4 (85)	3.2 (97)	4.5 (95)	0.6 (42)	6.0 (50)	-2.0 (96)	4.2 (97)	7.8 (37)

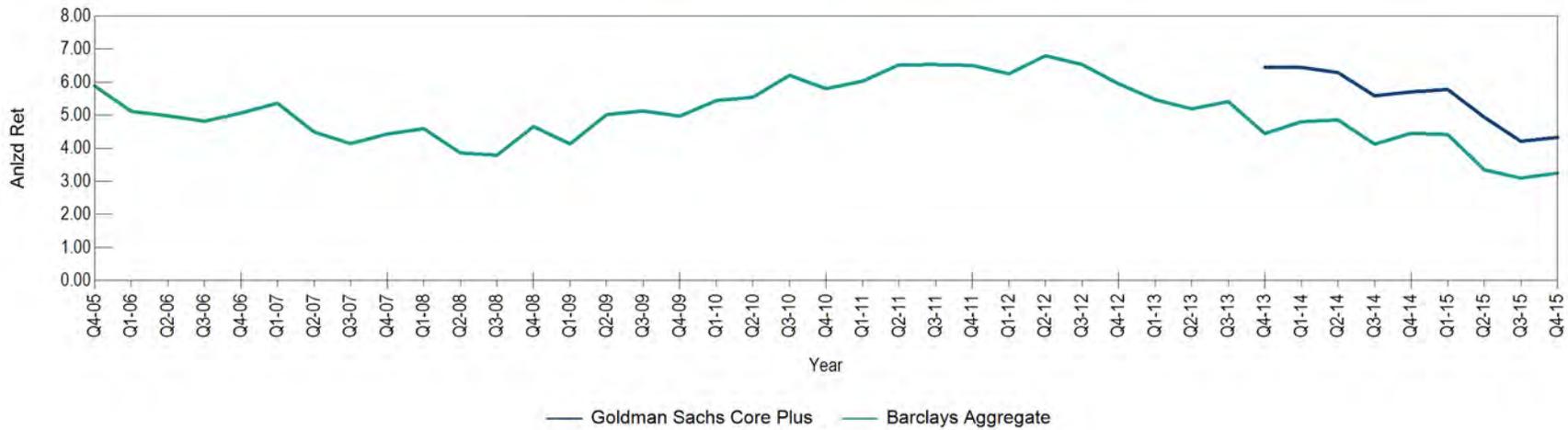
Goldman Sachs Core Plus  
 Manager Performance - Rolling 3 & 5 Year (Gross of Fees)

Period Ending: December 31, 2015

Rolling 3 Year Annualized Return (%)

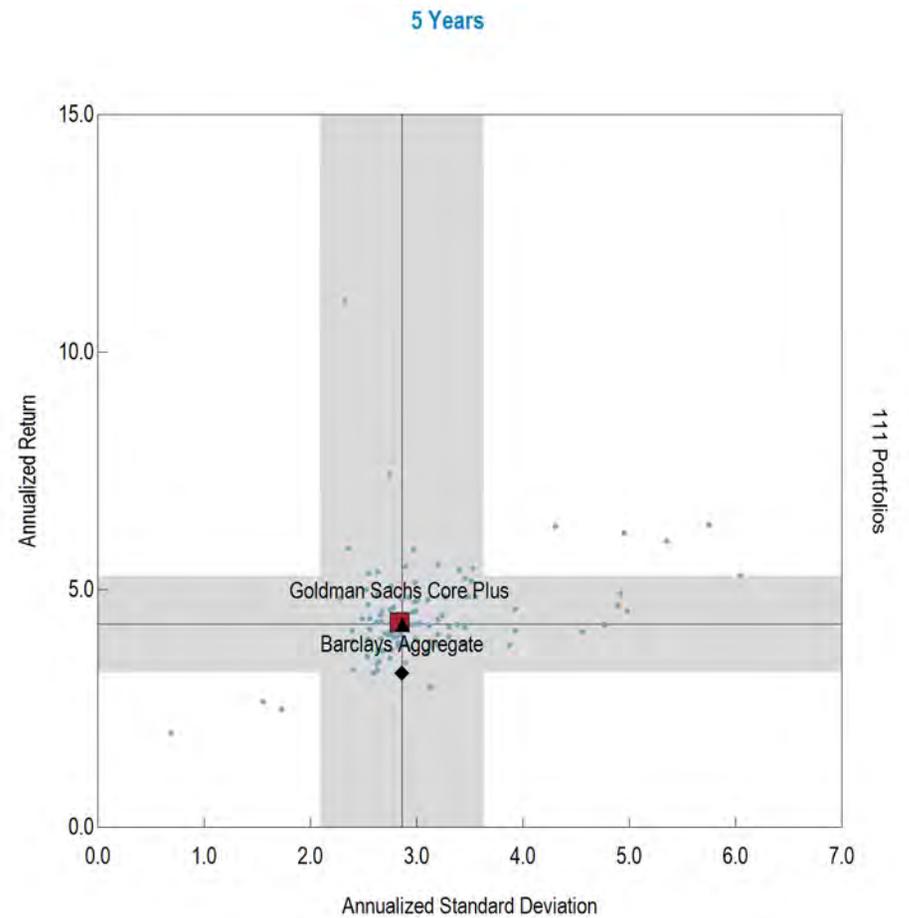
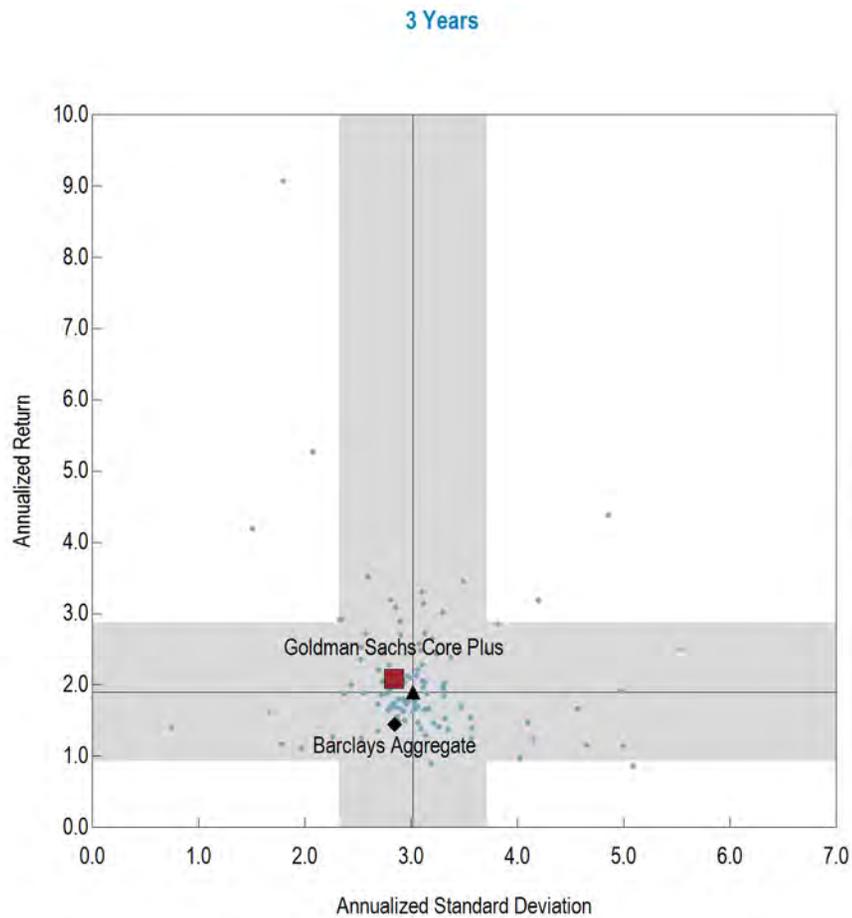


Rolling 5 Year Annualized Return (%)



Goldman Sachs Core Plus  
Risk vs. Return 3 & 5 Year (Gross of Fees)

Period Ending: December 31, 2015



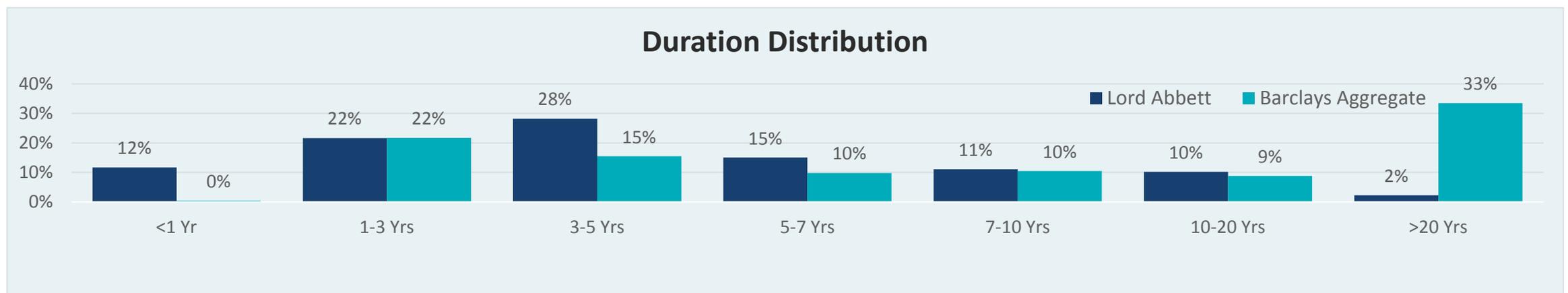
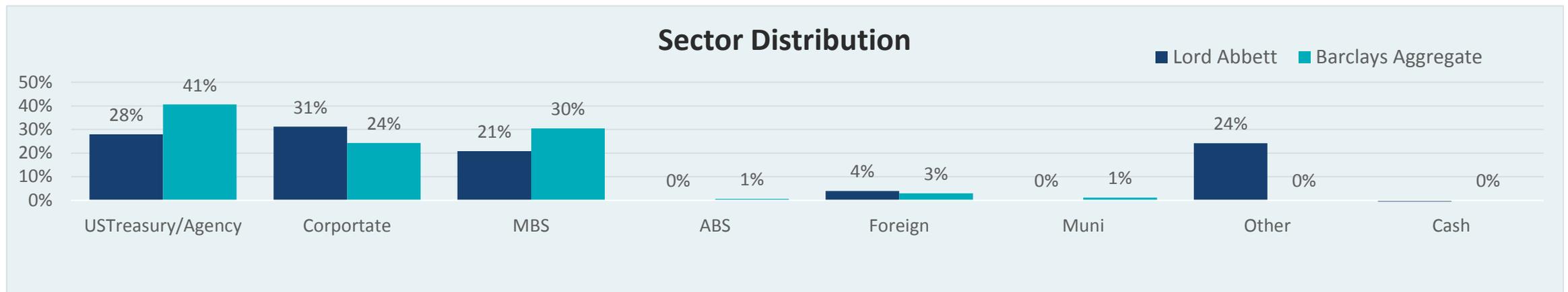
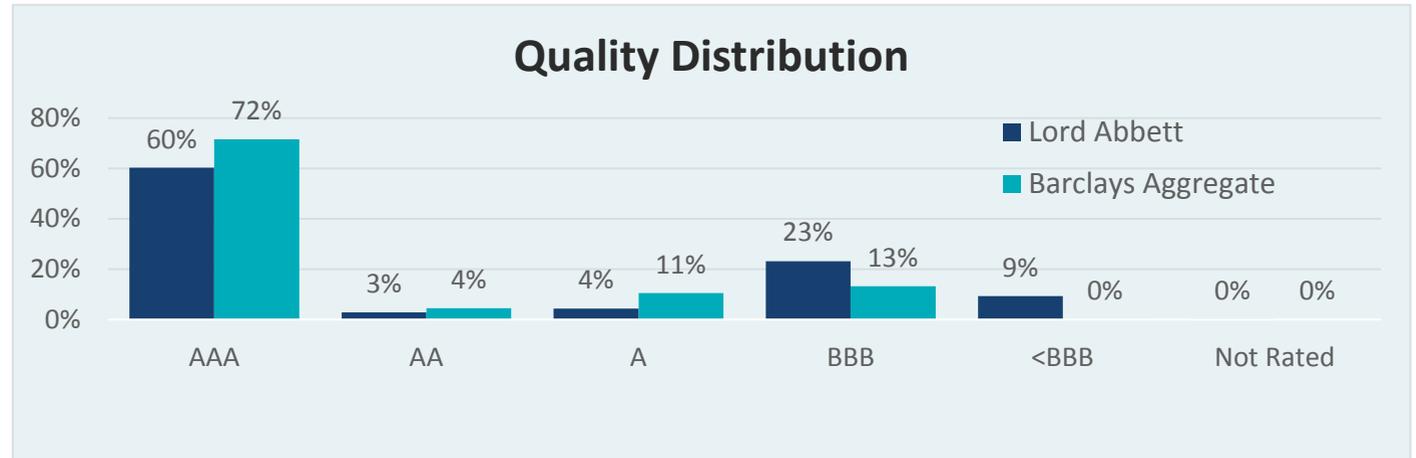
	<b>3 Years</b>			<b>5 Years</b>			
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	
Goldman Sachs Core Plus	2.1%	2.8%	0.7	Goldman Sachs Core Plus	4.3%	2.8%	1.5
Barclays Aggregate	1.4%	2.8%	0.5	Barclays Aggregate	3.2%	2.9%	1.1
eA US Core Plus Fixed Inc Gross Median	1.9%	3.0%	0.6	eA US Core Plus Fixed Inc Gross Median	4.3%	2.9%	1.5

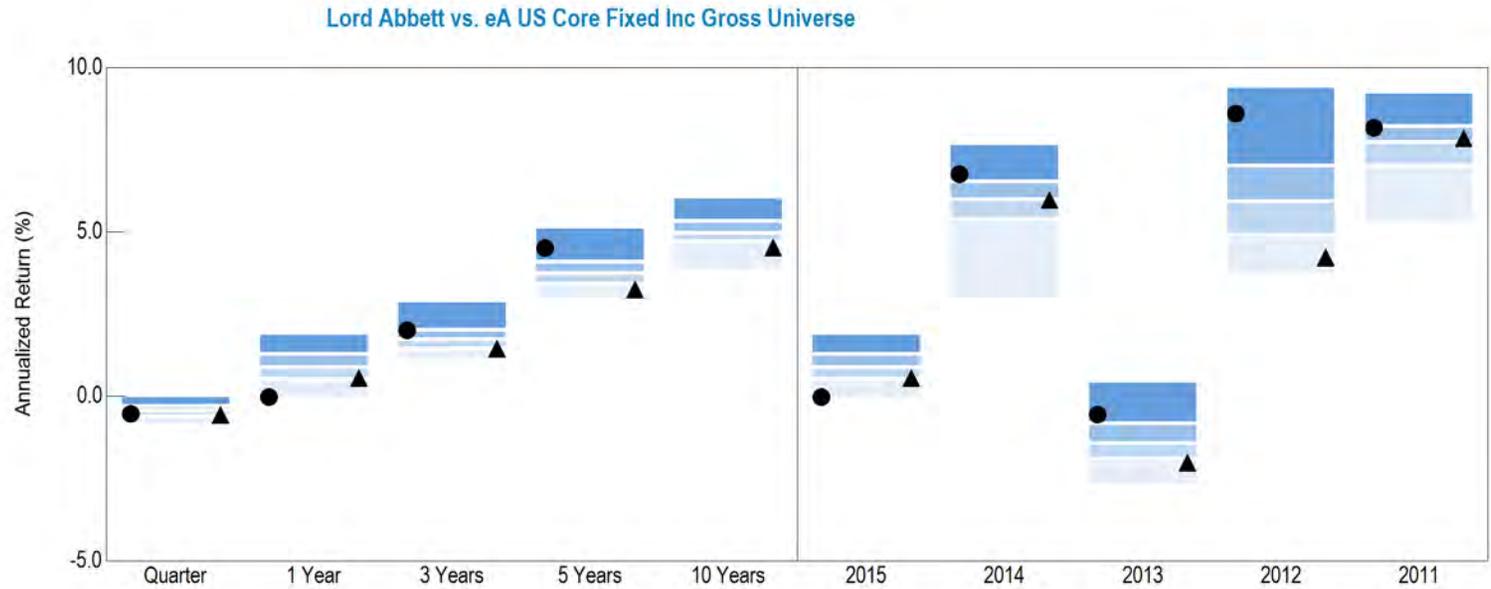
# Lord Abbett Manager Portfolio Overview

Period Ending: December 31, 2015

Domestic core plus fixed income portfolio that is duration-neutral with a focus on sector selection seeking enhanced returns. Primary personnel include Robert Lee and Robert Gerber.

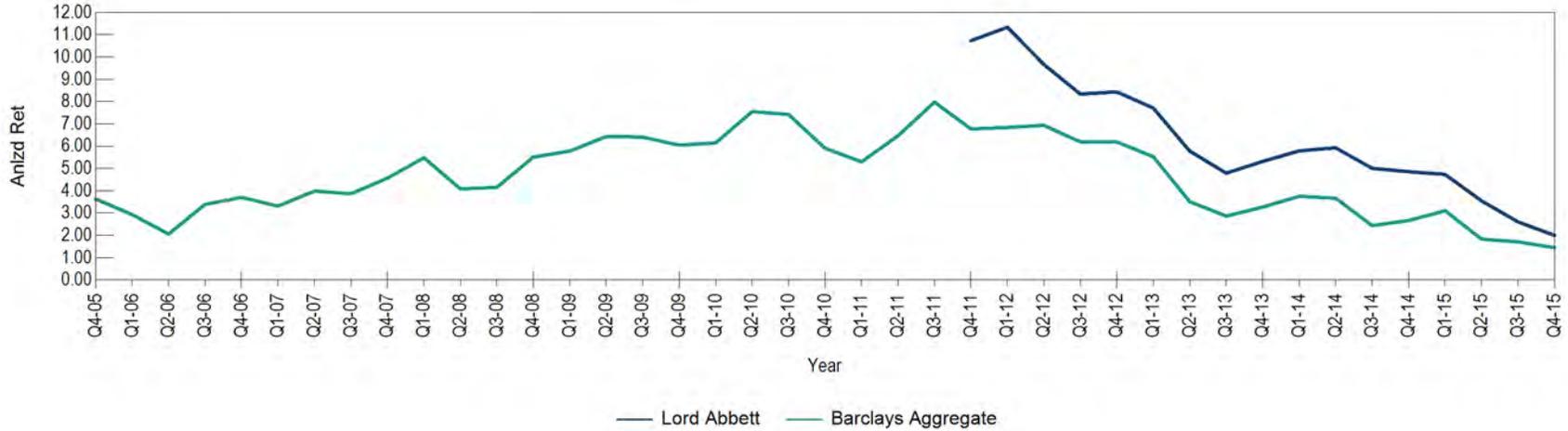
	Lord Abbett	Barclays Aggregate
Effective Duration	5.30	5.68
Yield to Maturity	3.80	3.31
Average Quality	AA	AA
Average Coupon	3.90%	3.97%



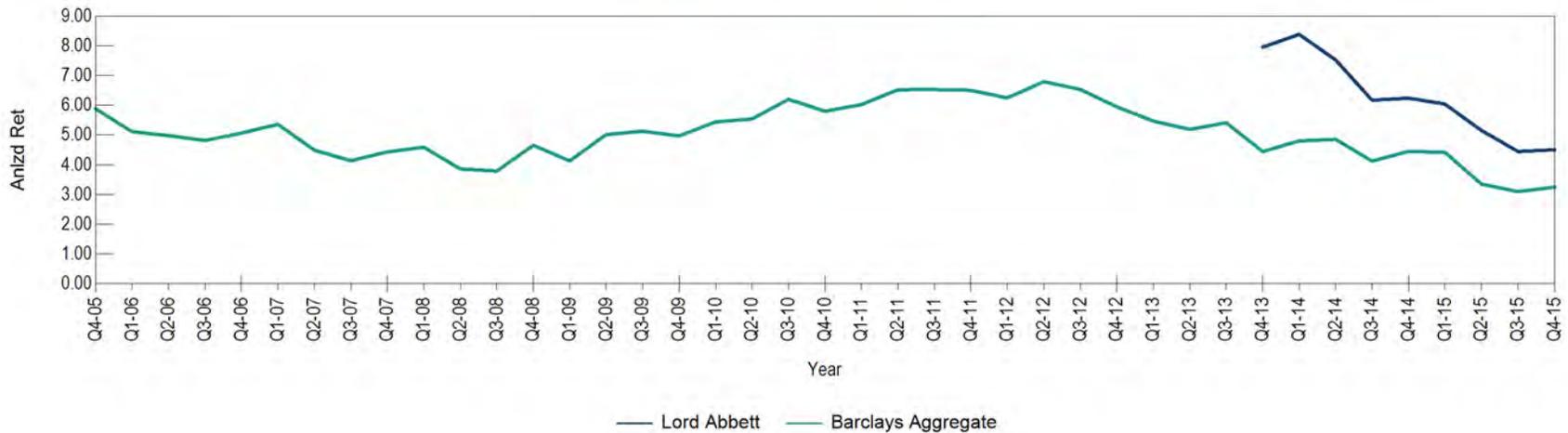


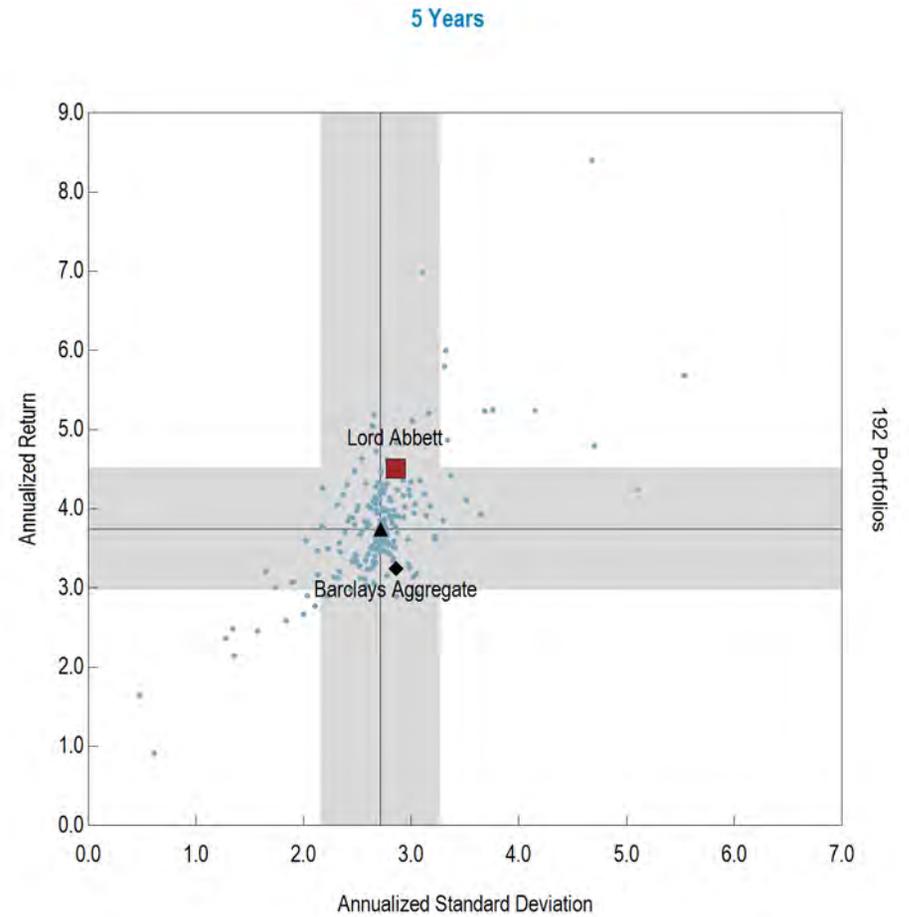
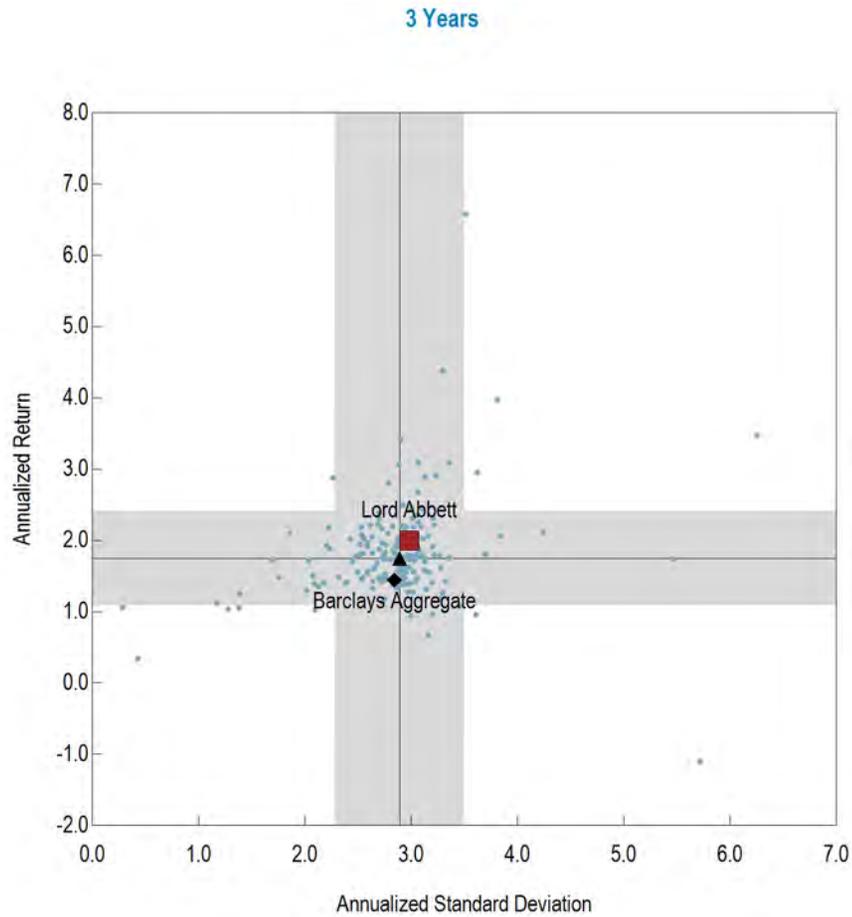
	Return (Rank)									
	Quarter	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011
5th Percentile	0.0	1.9	2.9	5.1	6.1	1.9	7.7	0.5	9.4	9.2
25th Percentile	-0.3	1.3	2.0	4.1	5.3	1.3	6.5	-0.8	7.0	8.2
Median	-0.4	0.9	1.7	3.7	5.0	0.9	6.0	-1.4	5.9	7.7
75th Percentile	-0.6	0.5	1.5	3.4	4.7	0.5	5.4	-1.9	4.9	7.0
95th Percentile	-0.9	-0.1	1.1	2.9	3.8	-0.1	2.9	-2.7	3.7	5.3
# of Portfolios	196	196	195	192	173	196	213	209	228	213
● Lord Abbett	-0.5 (71)	0.0 (94)	2.0 (29)	4.5 (10)	-- (--)	0.0 (94)	6.7 (18)	-0.6 (18)	8.6 (8)	8.2 (27)
▲ Barclays Aggregate	-0.6 (72)	0.6 (75)	1.4 (79)	3.2 (84)	4.5 (87)	0.6 (75)	6.0 (52)	-2.0 (82)	4.2 (90)	7.8 (46)

Rolling 3 Year Annualized Return (%)



Rolling 5 Year Annualized Return (%)





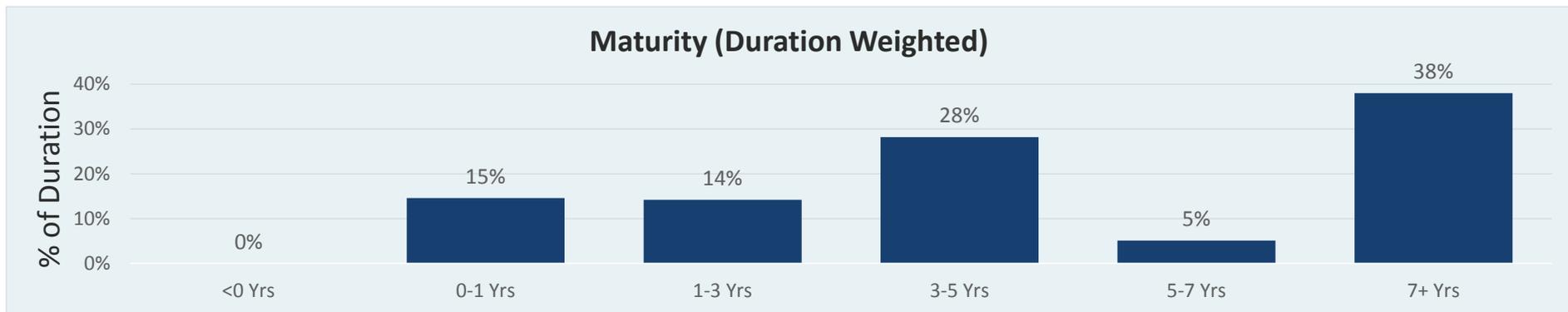
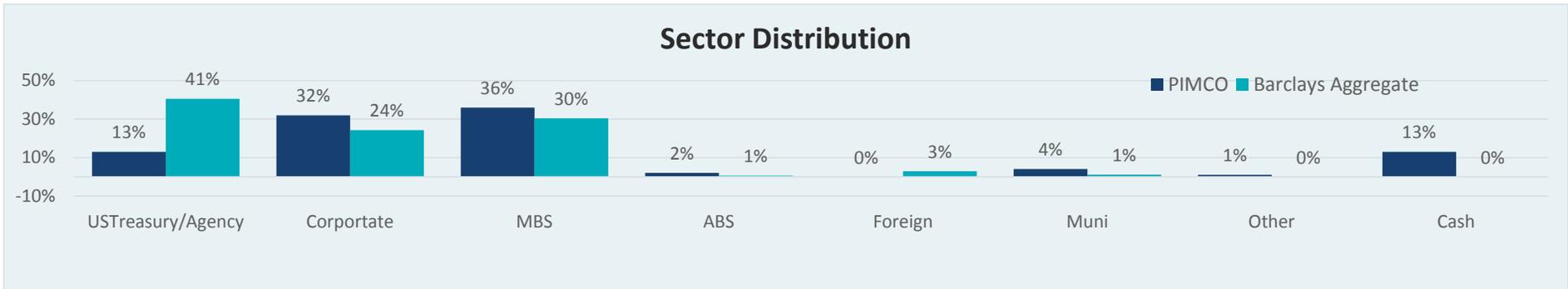
	<b>3 Years</b>			<b>5 Years</b>		
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Lord Abbett	2.0%	3.0%	0.7	4.5%	2.9%	1.6
Barclays Aggregate	1.4%	2.8%	0.5	3.2%	2.9%	1.1
eA US Core Fixed Inc Gross Median	1.7%	2.9%	0.6	3.7%	2.7%	1.4

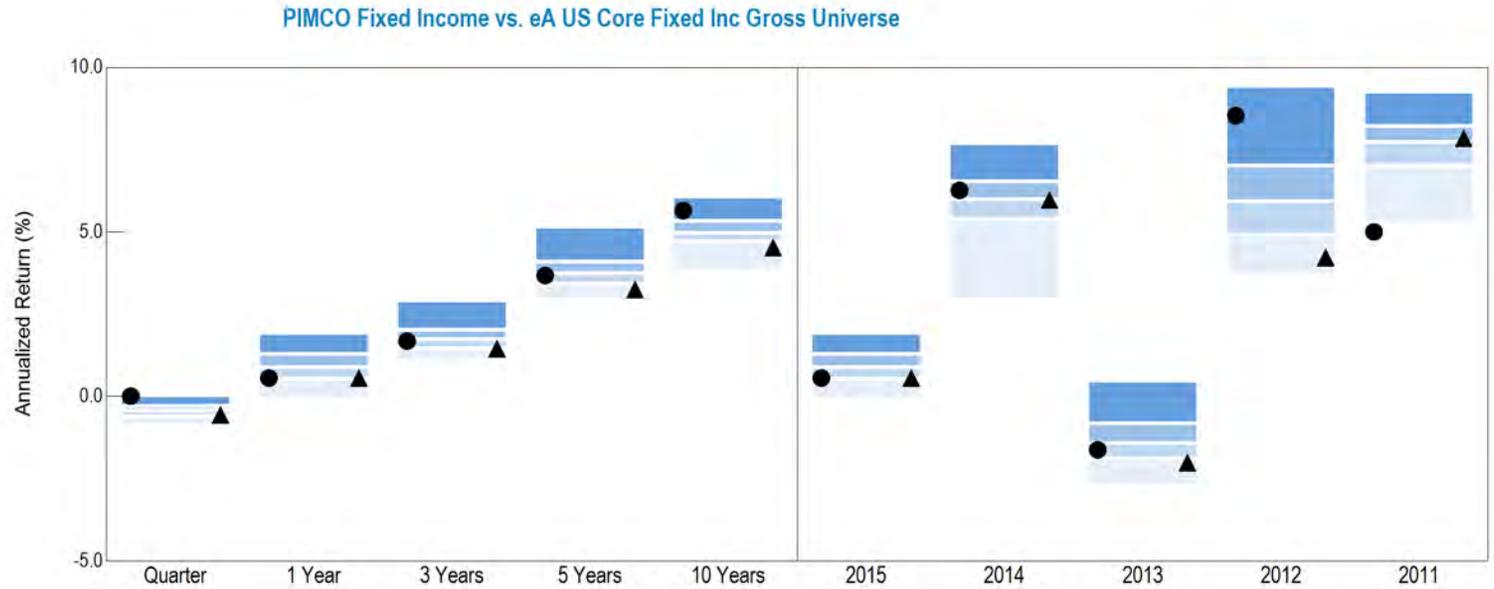
PIMCO Fixed Income  
 Manager Portfolio Overview

Period Ending: December 31, 2015

Domestic core plus fixed income portfolio seeking enhanced returns through sector and security selection, yield curve structure, and duration decision.

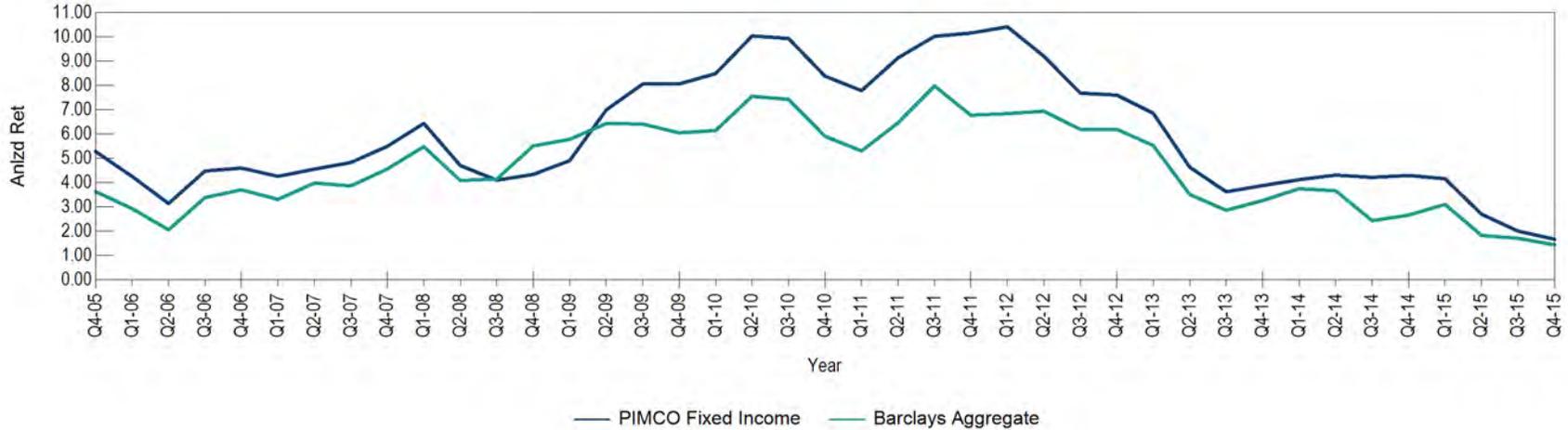
	PIMCO	Barclays Aggregate
Effective Duration	5.16	5.68
Yield to Maturity	3.02	3.31
Average Quality	AA	AA
Average Coupon	3.54%	3.97%



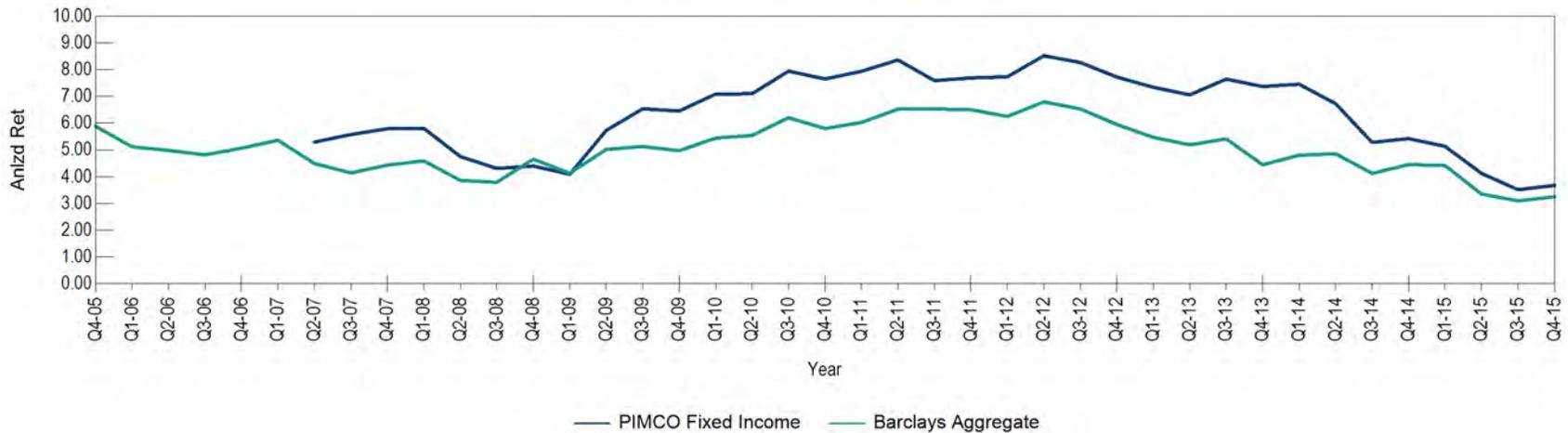


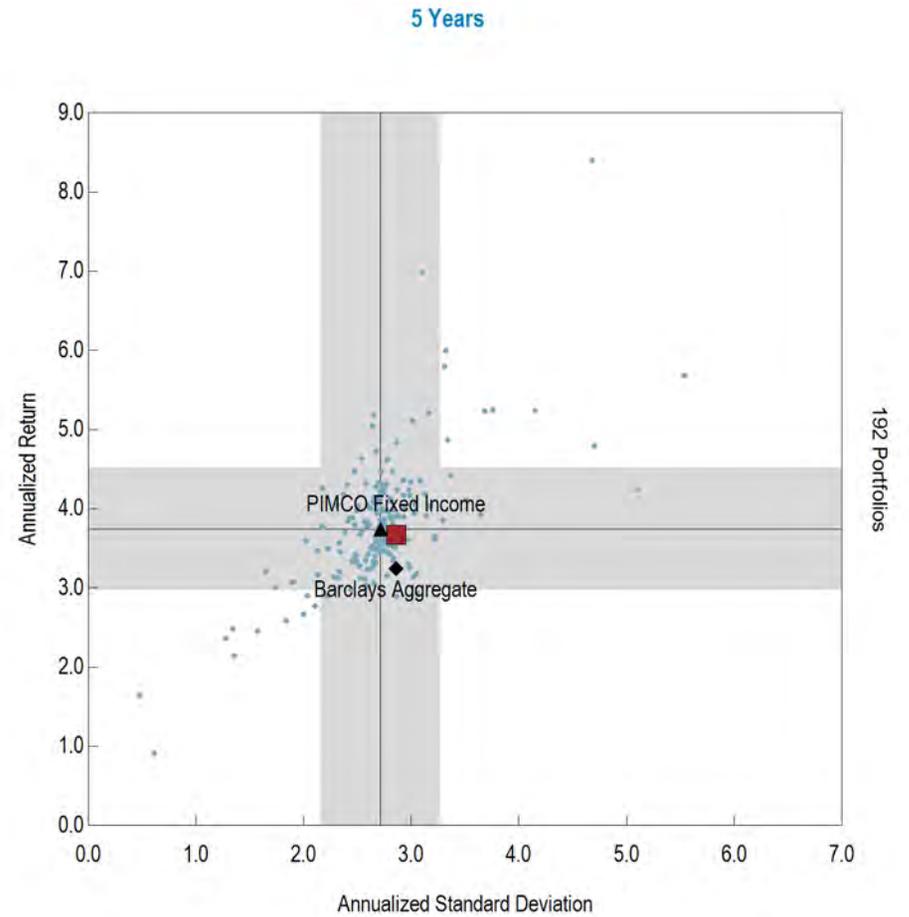
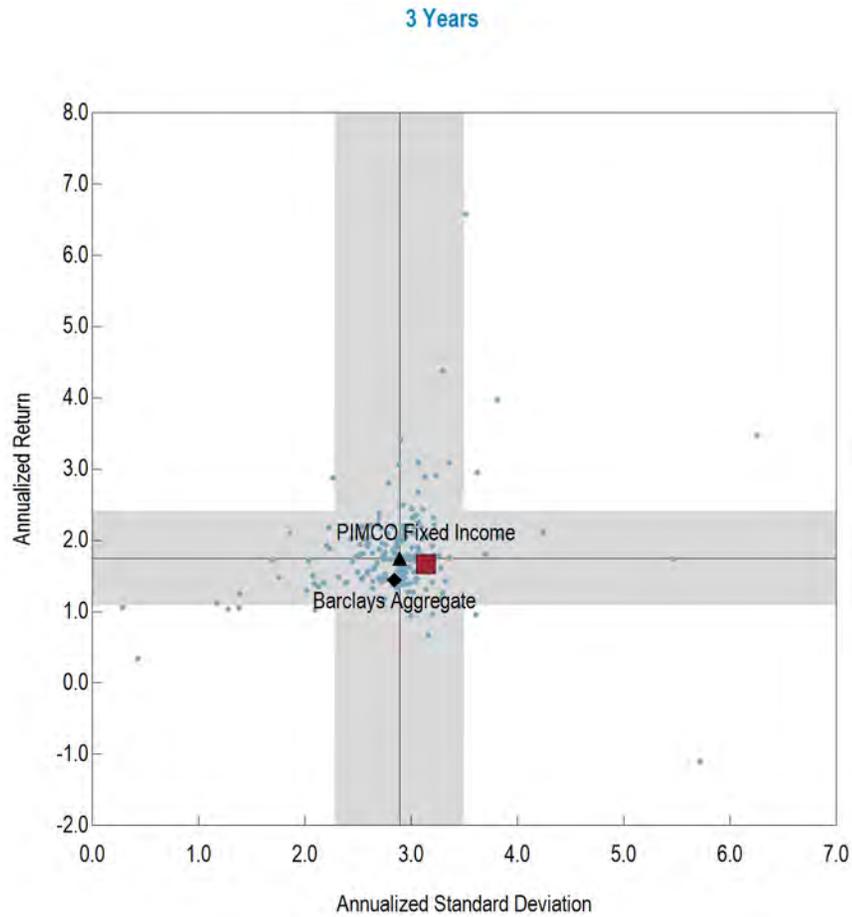
	Return (Rank)									
	Quarter	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011
5th Percentile	0.0	1.9	2.9	5.1	6.1	1.9	7.7	0.5	9.4	9.2
25th Percentile	-0.3	1.3	2.0	4.1	5.3	1.3	6.5	-0.8	7.0	8.2
Median	-0.4	0.9	1.7	3.7	5.0	0.9	6.0	-1.4	5.9	7.7
75th Percentile	-0.6	0.5	1.5	3.4	4.7	0.5	5.4	-1.9	4.9	7.0
95th Percentile	-0.9	-0.1	1.1	2.9	3.8	-0.1	2.9	-2.7	3.7	5.3
# of Portfolios	196	196	195	192	173	196	213	209	228	213
● PIMCO Fixed Income	0.0 (6)	0.5 (75)	1.7 (61)	3.7 (56)	5.6 (12)	0.5 (75)	6.3 (34)	-1.6 (61)	8.5 (8)	5.0 (97)
▲ Barclays Aggregate	-0.6 (72)	0.6 (75)	1.4 (79)	3.2 (84)	4.5 (87)	0.6 (75)	6.0 (52)	-2.0 (82)	4.2 (90)	7.8 (46)

Rolling 3 Year Annualized Return (%)



Rolling 5 Year Annualized Return (%)





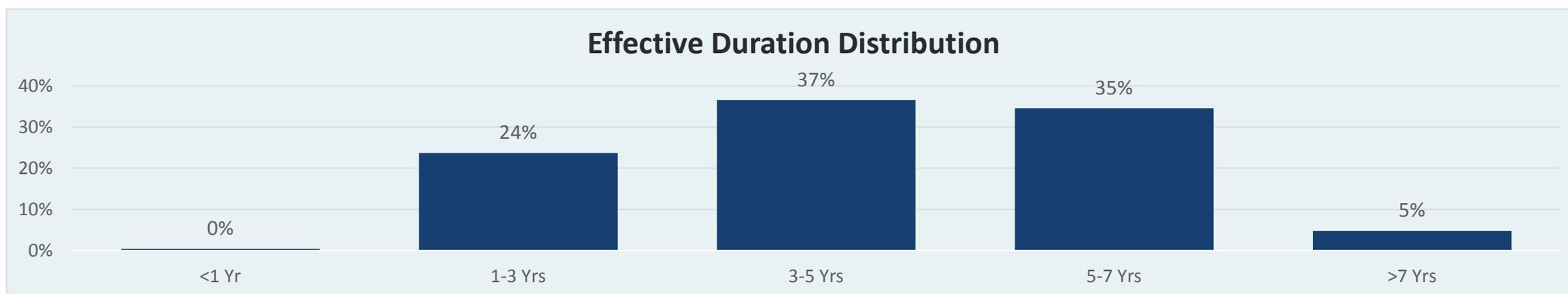
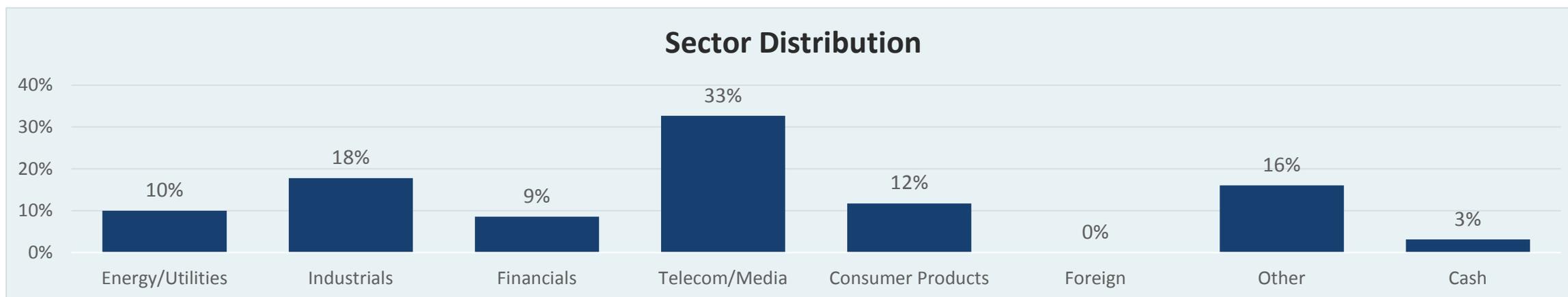
	<b>3 Years</b>			<b>5 Years</b>			
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	
PIMCO Fixed Income	1.7%	3.1%	0.5	PIMCO Fixed Income	3.7%	2.9%	1.3
Barclays Aggregate	1.4%	2.8%	0.5	Barclays Aggregate	3.2%	2.9%	1.1
eA US Core Fixed Inc Gross Median	1.7%	2.9%	0.6	eA US Core Fixed Inc Gross Median	3.7%	2.7%	1.4

## High Yield Managers

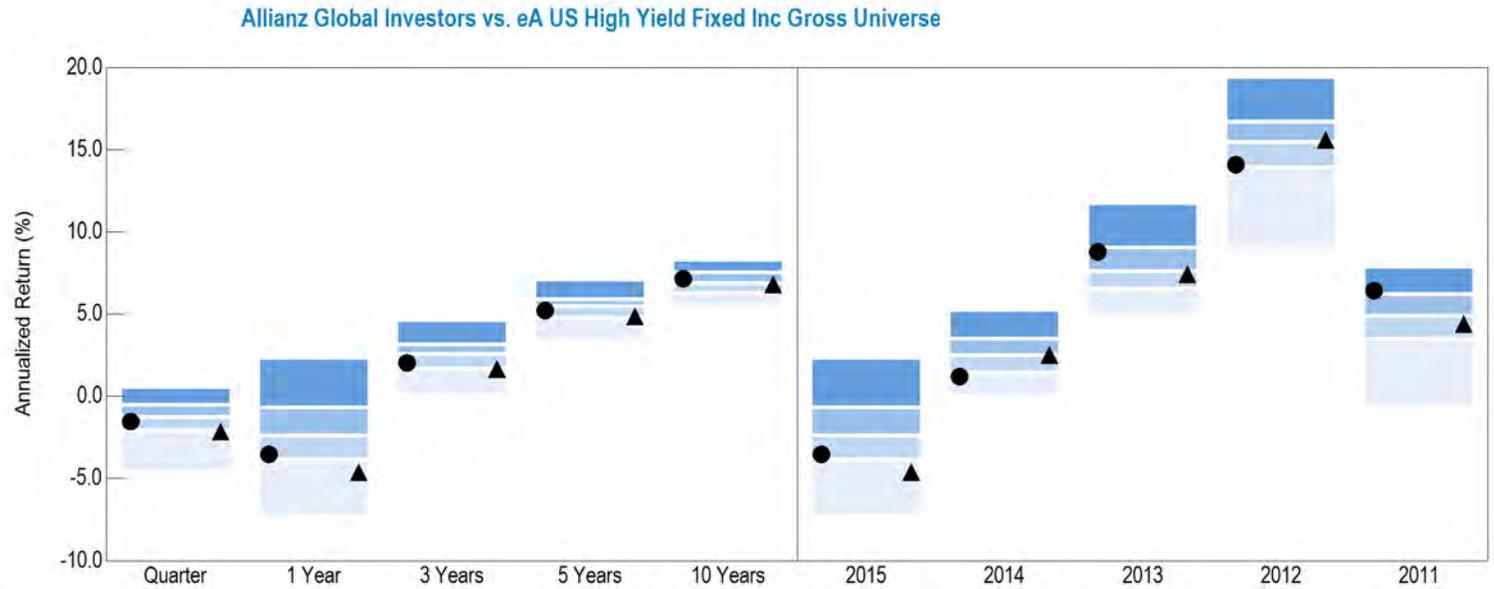
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Domestic high yield fixed income portfolio with a focus on security selection. Primary personnel include Douglas Forsyth, Justin Kass, William Stickney, and Michael Yee.

	Allianz	BofA ML HY Master II
Effective Duration	4.5	4.4
Yield to Maturity	9.7	8.9
Average Quality	B1	B1
Average Coupon	7.1%	6.7%

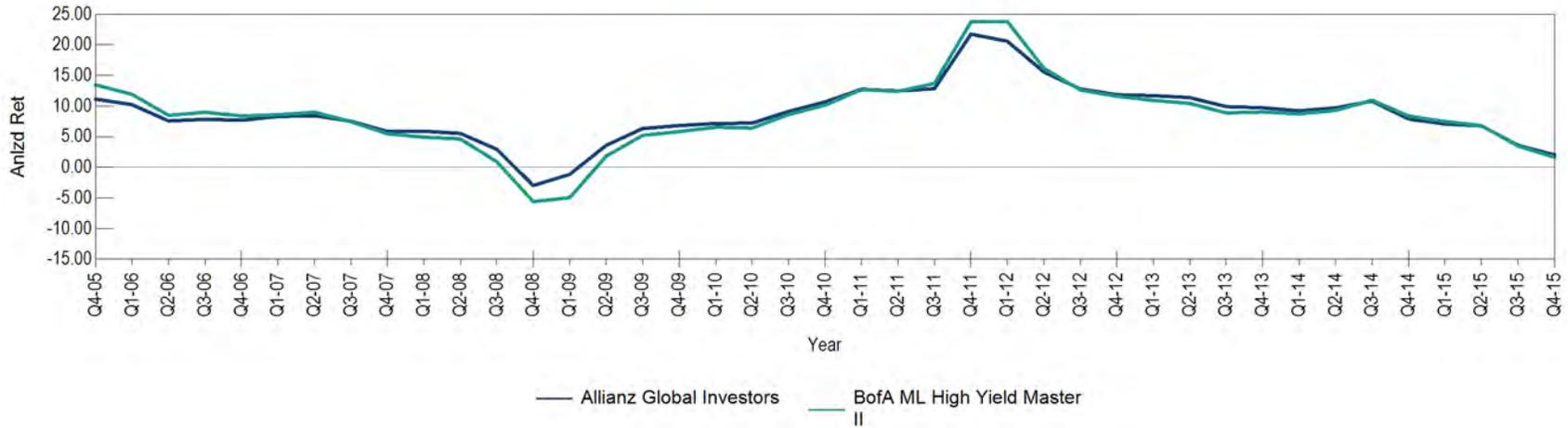


Quality distribution excludes cash.

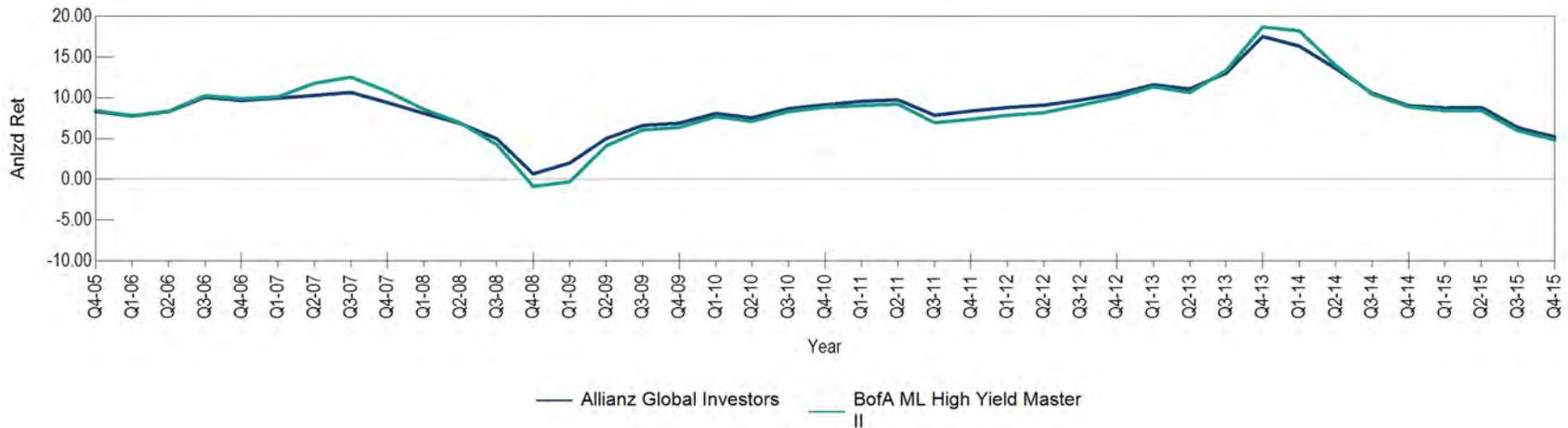


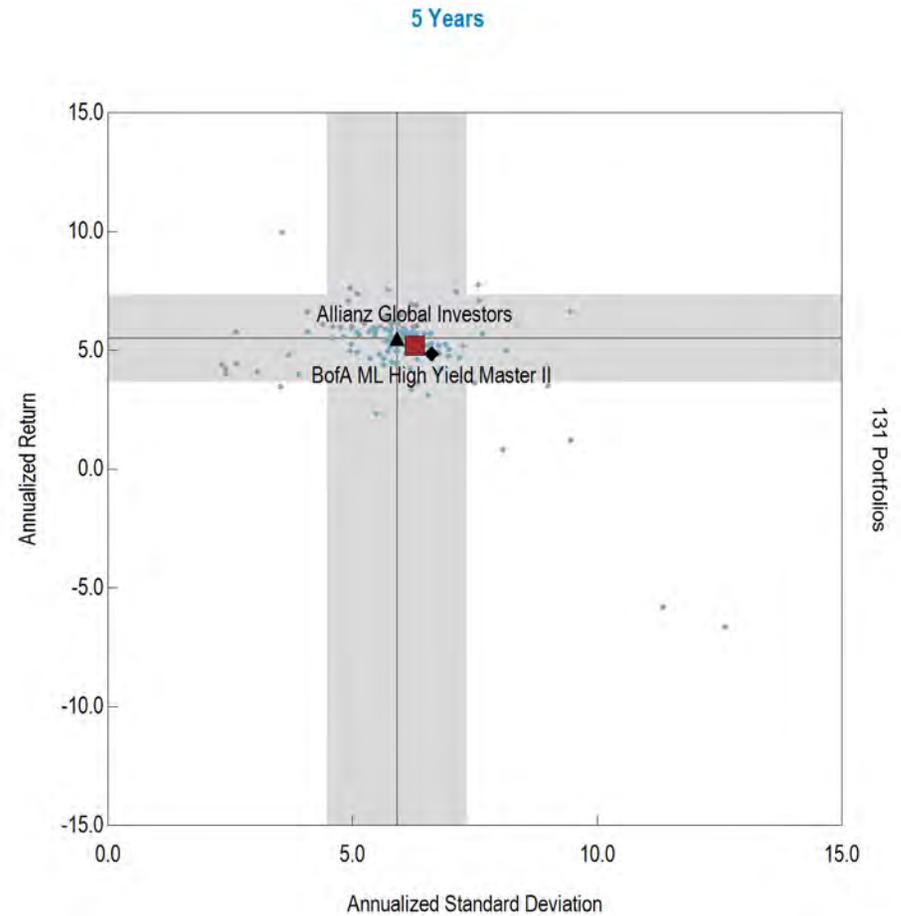
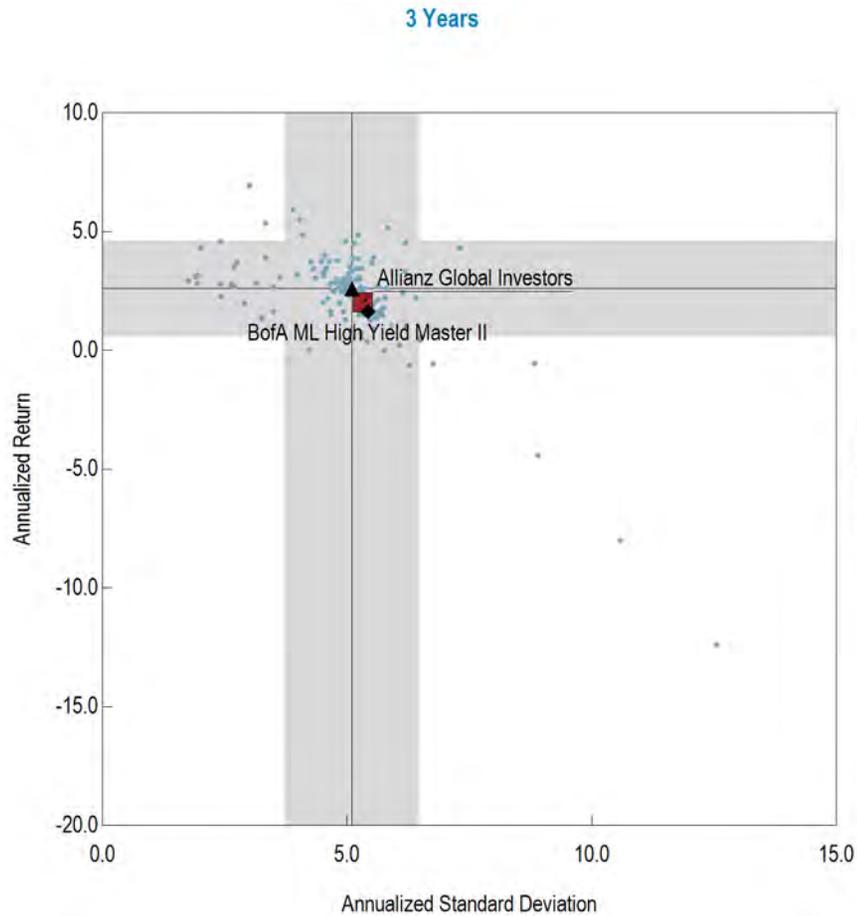
	Return (Rank)									
	Quarter	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011
5th Percentile	0.6	2.3	4.6	7.1	8.3	2.3	5.2	11.7	19.4	7.9
25th Percentile	-0.5	-0.7	3.2	5.9	7.5	-0.7	3.5	9.1	16.7	6.2
Median	-1.2	-2.4	2.6	5.5	6.9	-2.4	2.5	7.6	15.5	4.9
75th Percentile	-2.1	-3.8	1.7	4.8	6.3	-3.8	1.5	6.6	14.0	3.5
95th Percentile	-4.6	-7.2	0.1	3.4	5.5	-7.2	0.0	5.0	8.9	-0.7
# of Portfolios	155	155	148	131	104	155	141	130	129	117
● Allianz Global Investors	-1.6 (61)	-3.5 (68)	2.0 (68)	5.2 (59)	7.1 (39)	-3.5 (68)	1.2 (83)	8.8 (28)	14.1 (73)	6.4 (21)
▲ BofA ML High Yield Master II	-2.2 (77)	-4.6 (83)	1.6 (78)	4.8 (75)	6.8 (57)	-4.6 (83)	2.5 (50)	7.4 (55)	15.6 (47)	4.4 (60)

Rolling 3 Year Annualized Return (%)



Rolling 5 Year Annualized Return (%)





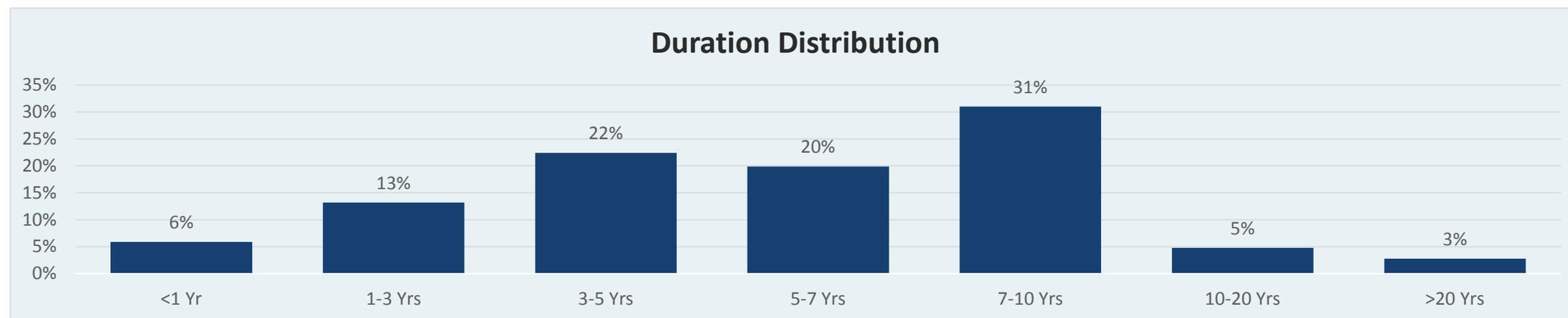
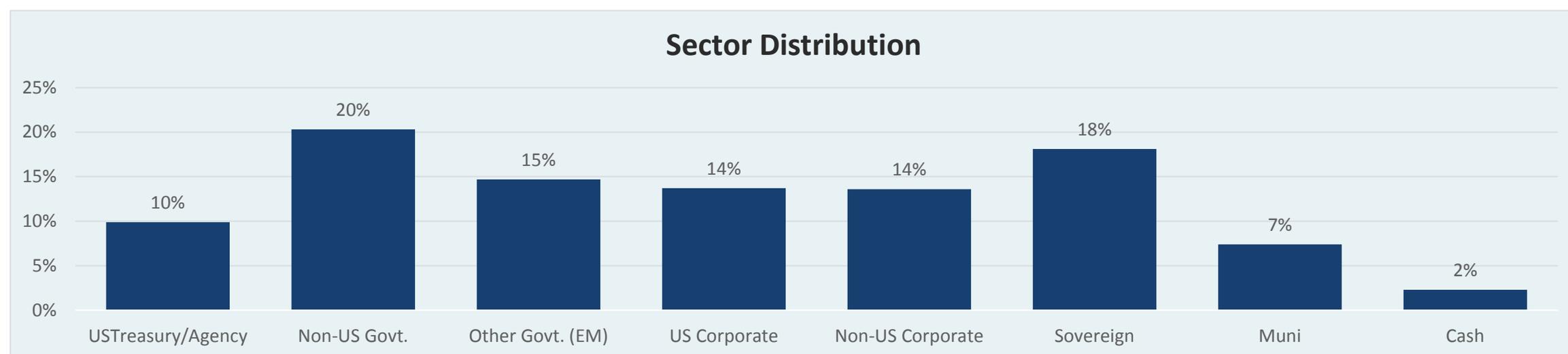
	<b>3 Years</b>			<b>5 Years</b>			
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	
Allianz Global Investors	2.0%	5.3%	0.4	Allianz Global Investors	5.2%	6.3%	0.8
BofA ML High Yield Master II	1.6%	5.4%	0.3	BofA ML High Yield Master II	4.8%	6.6%	0.7
eA US High Yield Fixed Inc Gross Median	2.6%	5.1%	0.5	eA US High Yield Fixed Inc Gross Median	5.5%	5.9%	0.9

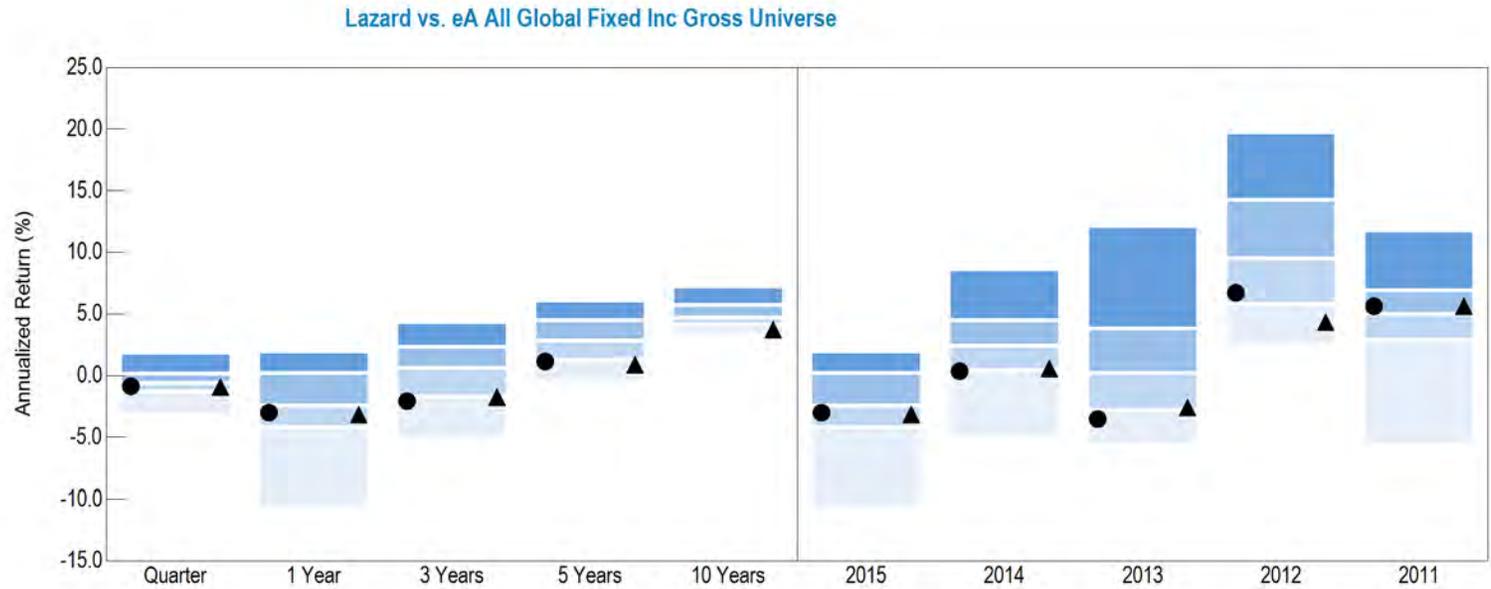
## **Global Fixed Income Managers**

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Global core fixed income portfolio with a focus on country selection and currency management. Primary personnel include Yvette Klevan, Benjamin Dietrich, and Jared Daniels.

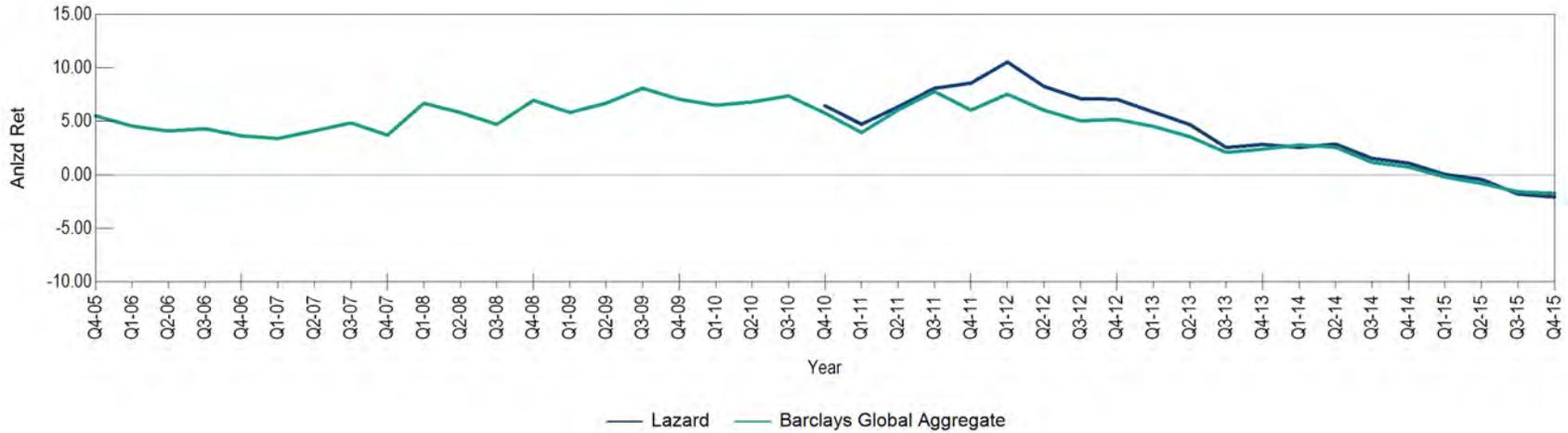
	Lazard
Effective Duration	5.25
Average Maturity	6.3
Average Quality	A



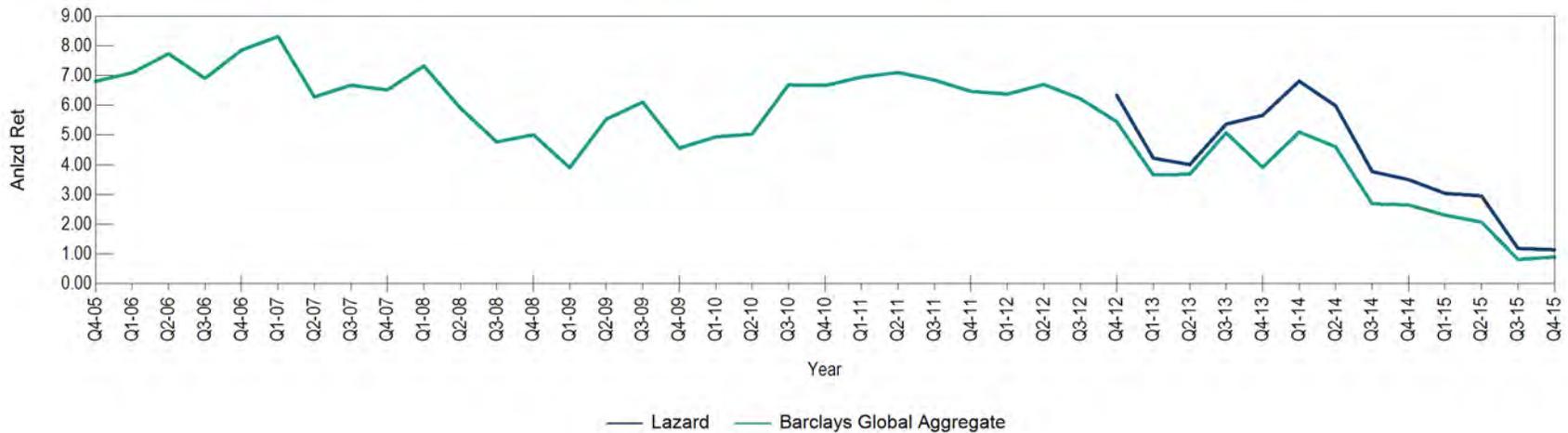


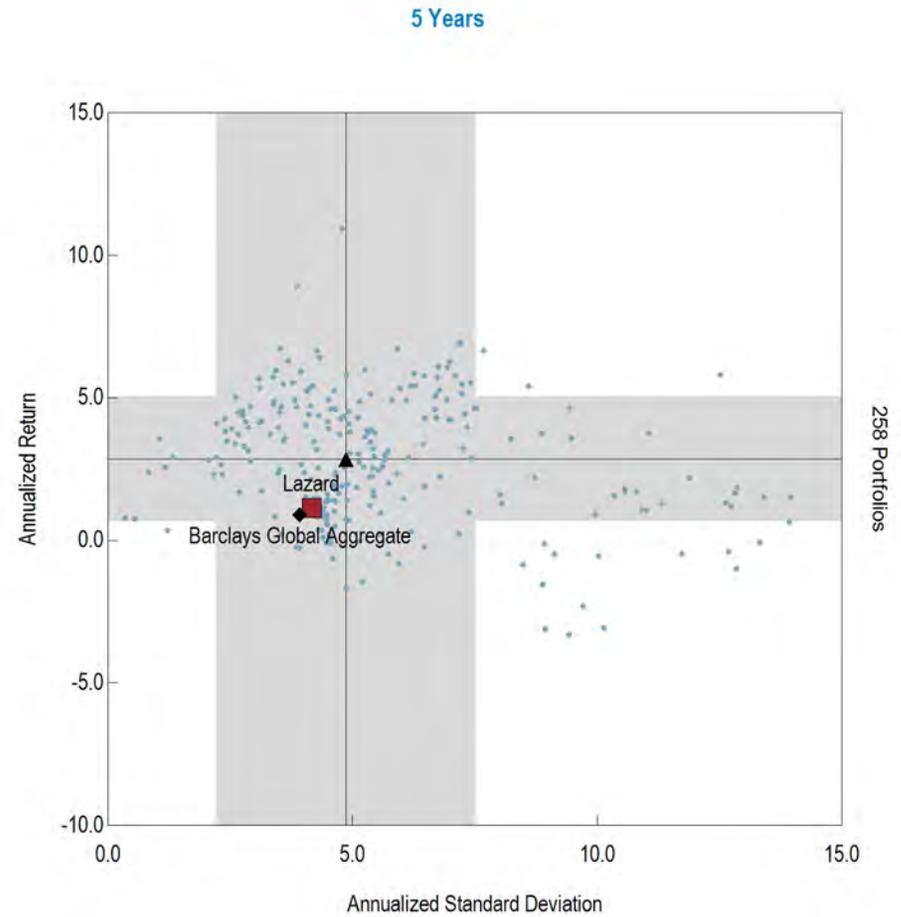
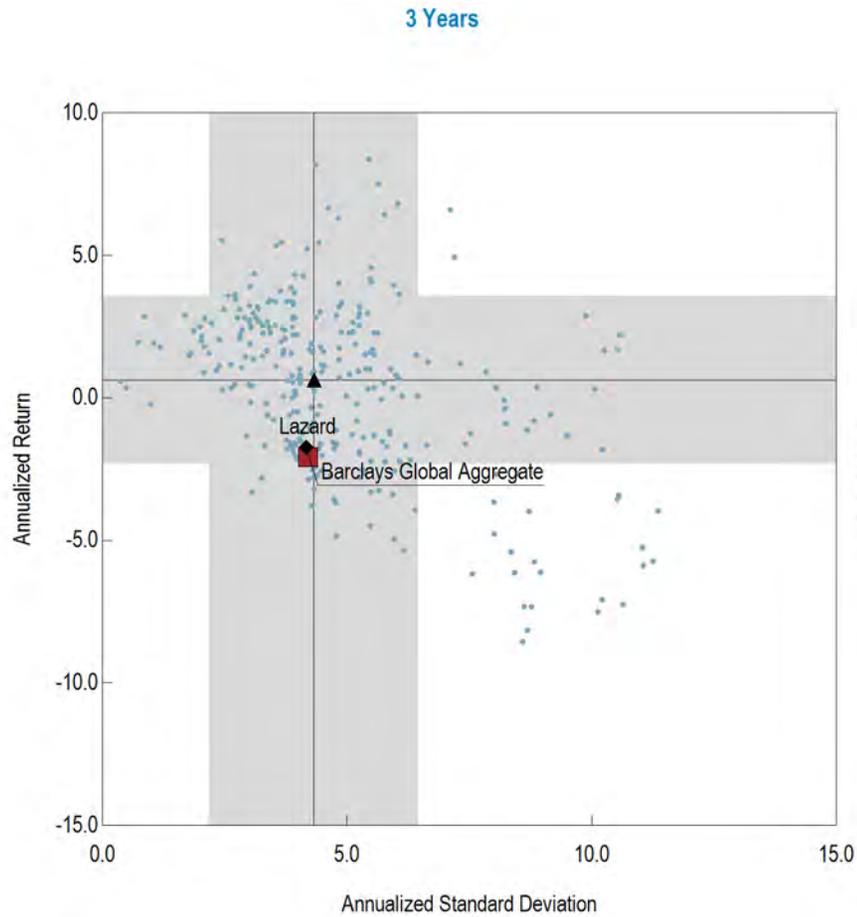
	Return (Rank)									
	Quarter	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011
5th Percentile	1.8	1.9	4.3	6.1	7.2	1.9	8.6	12.1	19.7	11.7
25th Percentile	0.2	0.3	2.4	4.5	5.8	0.3	4.5	3.9	14.3	6.9
Median	-0.6	-2.4	0.6	2.9	4.7	-2.4	2.5	0.2	9.5	5.0
75th Percentile	-1.3	-4.2	-1.7	1.3	4.2	-4.2	0.5	-2.8	5.9	2.9
95th Percentile	-3.1	-10.6	-5.2	-0.5	3.3	-10.6	-4.9	-5.6	2.5	-5.5
# of Portfolios	335	332	308	258	139	332	263	225	197	171
● Lazard	-0.9 (60)	-3.0 (59)	-2.1 (81)	1.1 (79)	-- (--)	-3.0 (59)	0.4 (77)	-3.5 (83)	6.7 (68)	5.6 (40)
▲ Barclays Global Aggregate	-0.9 (63)	-3.2 (61)	-1.7 (77)	0.9 (83)	3.7 (88)	-3.2 (61)	0.6 (74)	-2.6 (74)	4.3 (87)	5.6 (39)

Rolling 3 Year Annualized Return (%)



Rolling 5 Year Annualized Return (%)





	<b>3 Years</b>			<b>5 Years</b>			
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio		Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Lazard	-2.1%	4.2%	-0.5	Lazard	1.1%	4.2%	0.3
Barclays Global Aggregate	-1.7%	4.2%	-0.4	Barclays Global Aggregate	0.9%	3.9%	0.2
eA All Global Fixed Inc Gross Median	0.6%	4.3%	0.2	eA All Global Fixed Inc Gross Median	2.9%	4.9%	0.6

## **Inflation Hedge Managers**

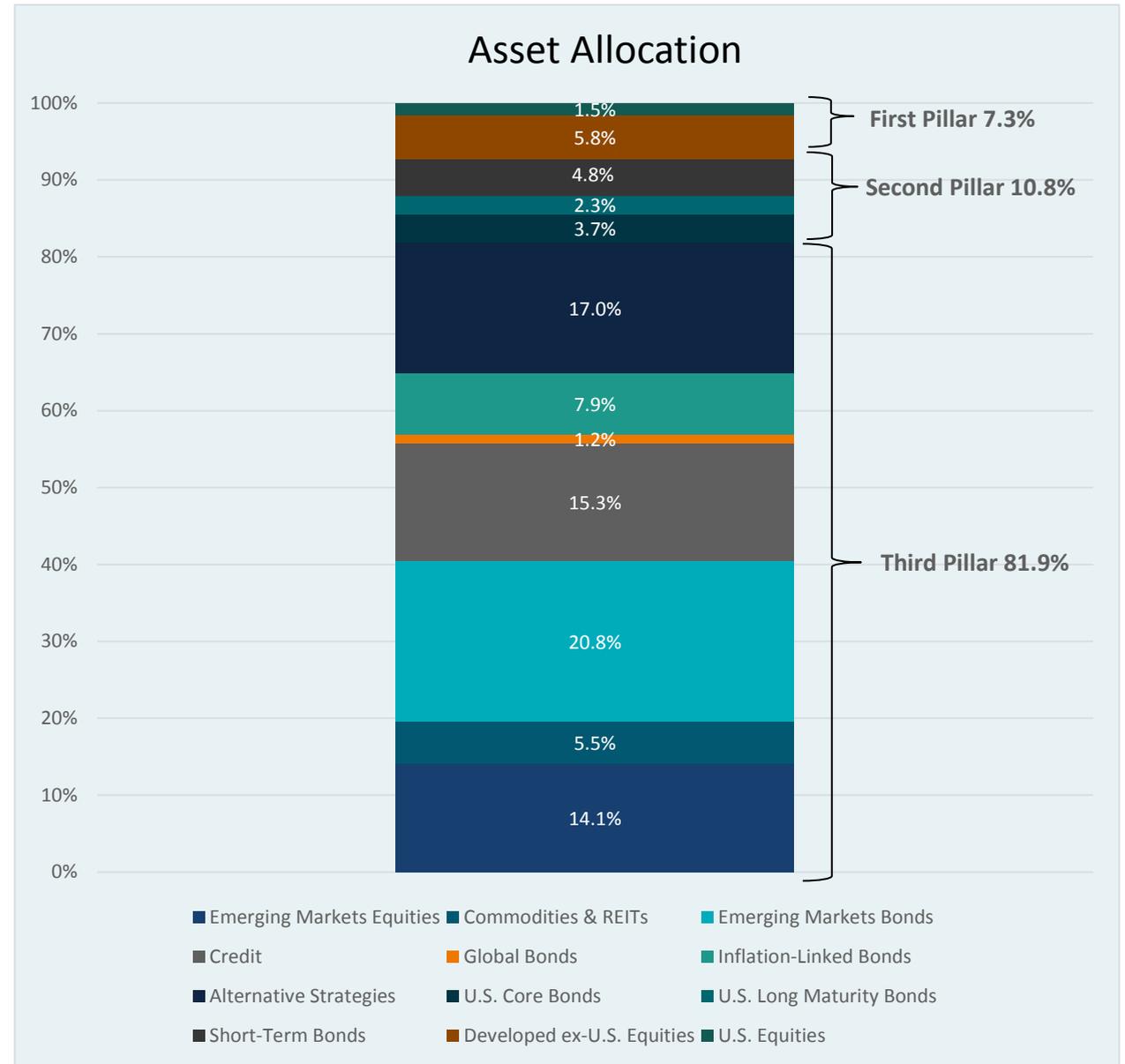
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# PIMCO All Asset Manager Portfolio Overview

Period Ending: December 31, 2015

Tactical multi-asset class real return strategy with a primary focus on inflation protection and a secondary focus on enhanced returns

	PIMCO All Asset
Effective Duration	2.61
Sharpe Ratio (10 year)	0.27
Volatility (10 Year)	9.3%
Equity Beta (10 Year)	0.46

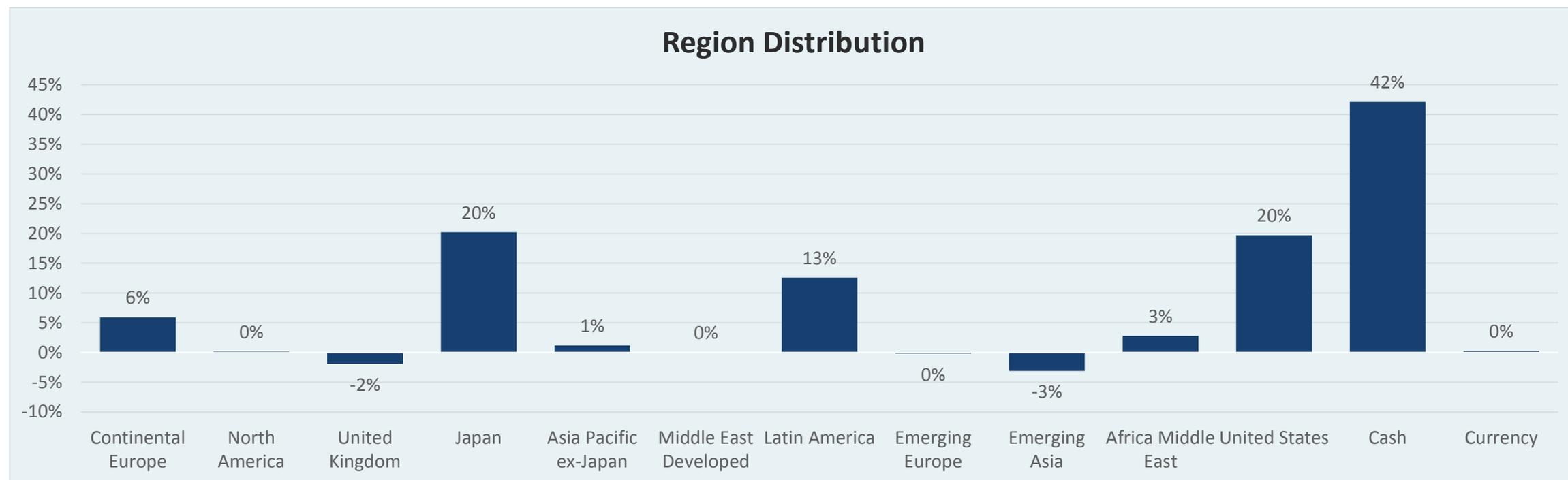
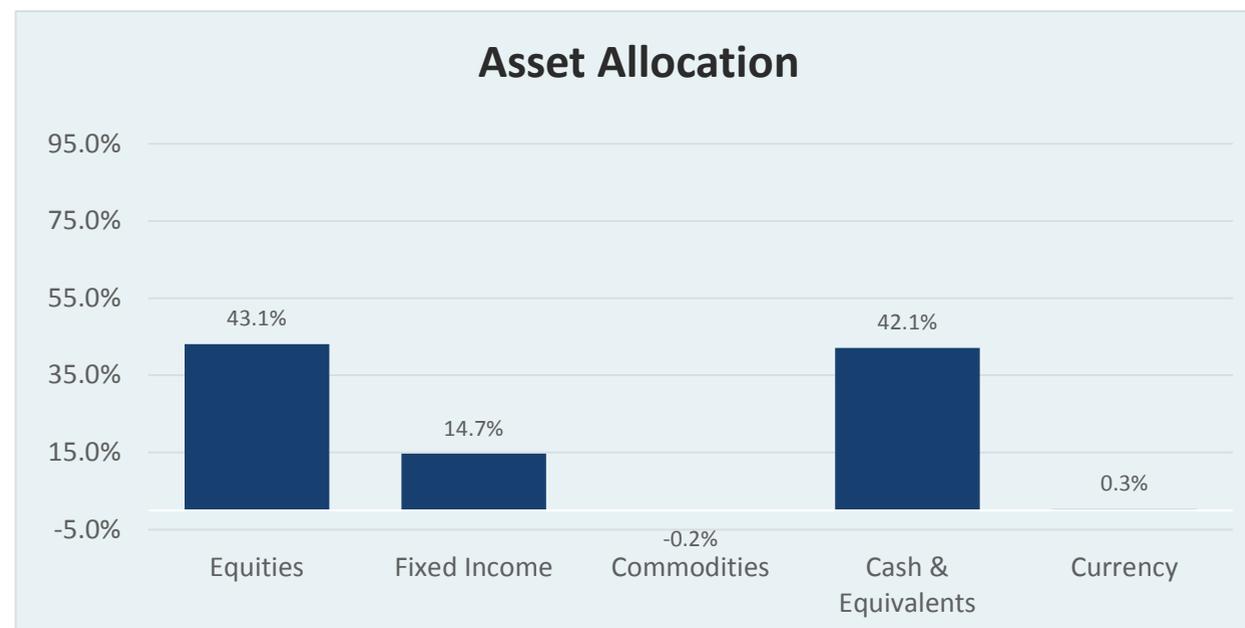


# Wellington Total Return Manager Portfolio Overview

Period Ending: December 31, 2015

Tactical multi-asset class real return strategy with a focus on managing risk of active strategies used to gain exposure to attractive assets of markets.

	Wellington Total Return
Number of Equity Holdings	512
Number of Commodity Holdings	91
Effective Duration (Years)	6.00
Average Quality	Aa2



## Real Estate Managers

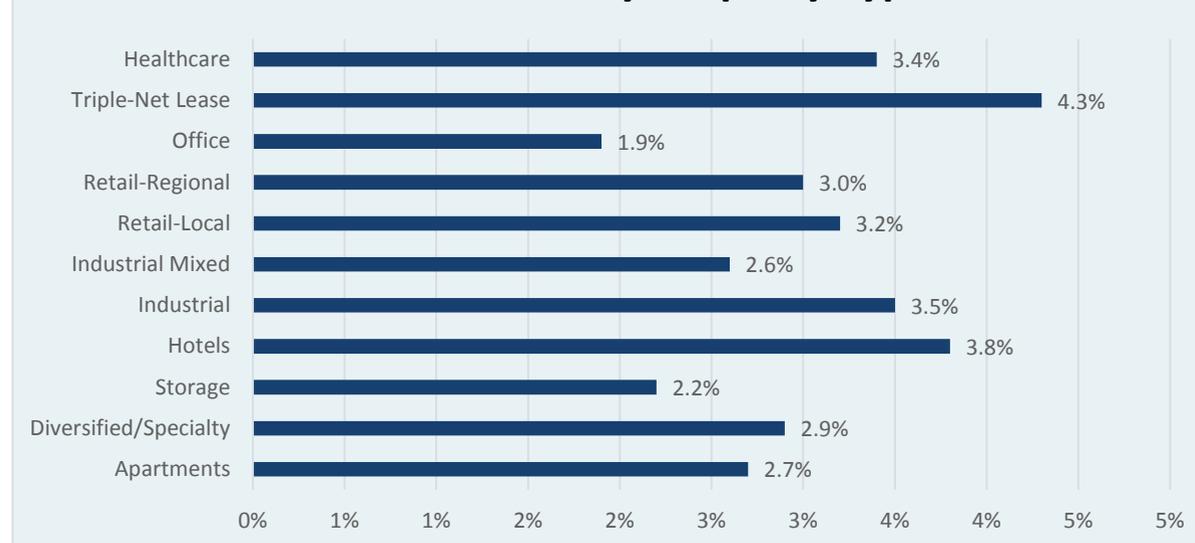
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Diversified portfolio of U.S. REITs with a focus on the underlying real estate assets

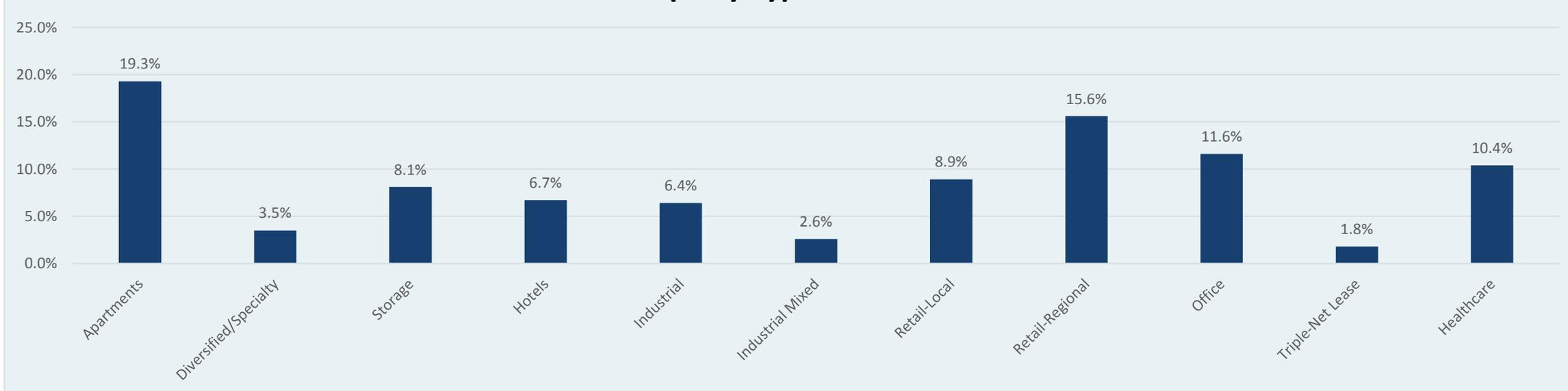
**Top Five Holdings**

Company	Property Type	Allocation
Simon Property Group	Retail-Regional	11.5%
Equity Residential	Apartment	6.9%
Welltower Inc.	Healthcare	5.9%
Avalon Bay Communities Inc.	Apartment	4.8%
Public Storage	Storage	4.9%

**Dividend Yield by Property Type**



**Property Type Allocation**



# Invesco Global ex-US Real Estate Manager Portfolio Overview

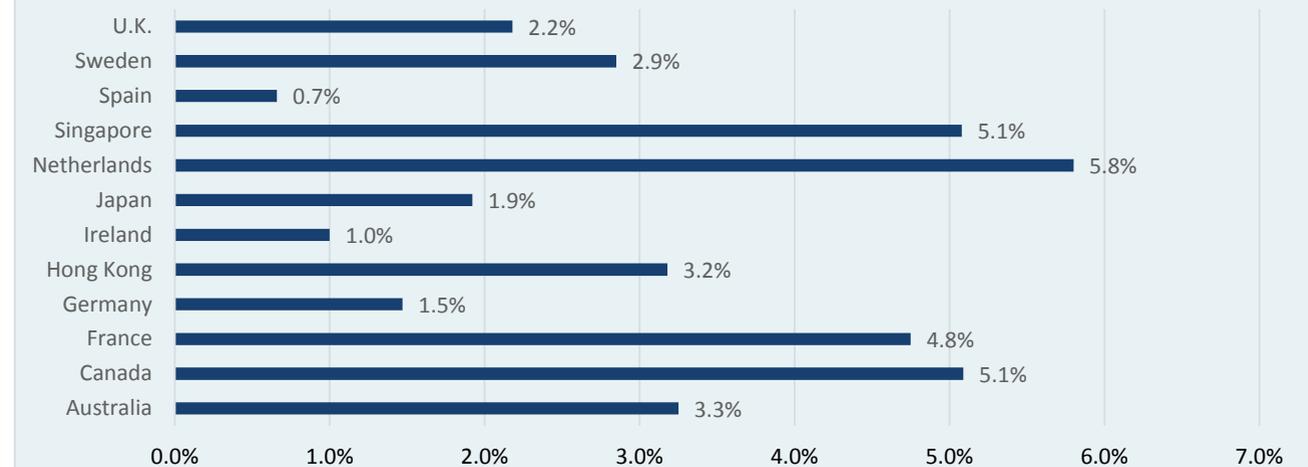
Period Ending: December 31, 2015

Diversified portfolio of non-US REITs with a focus on cash flow and dividends

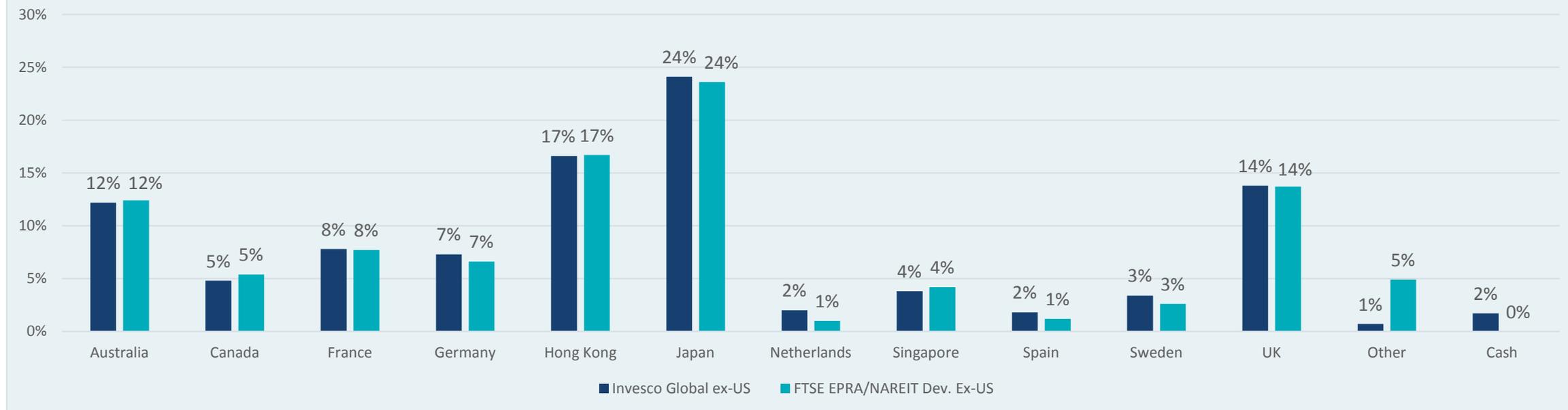
## Top Five Holdings

Holding	Country	Allocation
Mitsubishi Estate	Japan	6.4%
Land Securities PLC	U.K.	6.0%
Mitsui Fudosan Co.	Japan	5.8%
Sun Hung Kai Property	Hong Kong	4.6%
Unibail-Rodamco SE	France	4.6%

## Dividend Yield by Country



## Country Allocation vs. Benchmark



# Total Fund Explanatory Notes

Period Ending: December 31, 2015

## Performance Return Calculations

Returns calculated in the performance summary tables are time-weighted rates of return (TWRR). TWRR are calculated from changes in monthly market values, adjusted for weighted cash flows between months. Returns are linked geometrically and annualized for periods longer than one year.

## Data Source

Verus is an independent third party consulting firm and calculates returns from best source book of record data. Returns calculated by Verus may deviate from those shown by the manager in part, but not limited to, differences in prices and market values reported by the custodian and manager, as well as significant cash flows into or out of an account. It is the responsibility of the manager and custodian to provide insight into the pricing methodologies and any difference in valuation.

## Illiquid Alternatives

Closed end funds including but not limited to Real Estate, Hedge Funds, Private Equity, and Private Credit may lag performance and market value data due to delayed reporting. Verus will show market values for closed end funds as of the most recent reported performance adjusted for capital calls and distributions. Closed end fund managers report performance using an internal rate of return (IRR), which differs from the TWRR calculation done by Verus. It is inappropriate to compare IRR and TWRR to each other. IRR figures reported in the illiquid alternative pages are provided by the respective managers, and Verus has not made any attempts to verify these returns. Until a partnership is liquidated (typically over 10-12 years), the IRR is only an interim estimated return. The actual IRR performance of any LP is not known until the final liquidation.

## Manager Line Up

Manager	Inception Date	Data Source	Manager	Inception Date	Data Source
Intech Large Cap Core	11/10/2006	State Street	LaSalle Income & Growth VI	07/16/2013	LaSalle
PIMCO Stocks+ AR	08/31/2002	State Street	Long Wharf Fund II	03/10/2004	Long Wharf
Jackson Square Partners	05/01/2005	State Street	Long Wharf Fund III	03/30/2007	Long Wharf
Robeco Boston Partners	06/01/1995	State Street	Long Wharf Fund IV	07/03/2013	Long Wharf
Emerald Advisors	04/07/2003	State Street	Hearthstone II	06/17/1998	Hearthstone
Ceredex	11/06/2011	State Street	Invesco Real Estate I	02/01/2005	Invesco
Pyrford	04/25/2014	State Street	Invesco Real Estate II	11/26/2007	Invesco
William Blair	10/29/2010	William Blair	Invesco Real Estate III	06/30/2013	Invesco
Artisan Partners	10/01/2012	SEI Trust	Invesco Real Estate IV	06/30/2014	Invesco
First Eagle	01/18/2011	State Street	Oaktree REOF V	12/31/2011	Oaktree
Intech Global Low Vol	05/06/2012	State Street	Oaktree REOF VI	09/30/2013	Oaktree
JP Morgan Global Opportunities	01/31/2010	JP Morgan	Oaktree REOF VII	04/01/2015	Oaktree
AFL-CIO	06/30/1991	AFL-CIO	Siguler Guff DREOF	01/25/2012	Siguler Guff
Goldman Sachs Core Plus	11/01/2008	State Street	Siguler Guff DREOF II	08/31/2013	Siguler Guff
Lord Abbett	10/22/2008	State Street	Paulson Real Estate Fund II	11/10/2013	State Street
PIMCO Total Return	05/31/2002	State Street	Adams Street Partners	03/18/1996	Adams Street
Torchlight II	09/30/2006	Torchlight	Adams Street Partners II	01/16/2009	Adams Street
Torchlight III	12/31/2008	Torchlight	Adams Street Partners - BFP	01/18/1996	Adams Street
Torchlight IV	07/01/2012	Torchlight	Adams Street Partners - Fund 5	09/21/2012	Adams Street
Torchlight V	07/01/2012	Torchlight	Bay Area Equity Fund	06/14/2004	DBL Investors
Allianz Global Investors	04/25/2000	State Street	Bay Area Equity Fund II	12/07/2009	DBL Investors
Lazard	12/31/2007	State Street	Carpenter Bancfund	01/31/2008	Carpenter Bancfund
PIMCO All Asset Fund	02/26/2013	State Street	EIF US Power Fund I	11/26/2003	Ares Management
Wellington Real Total Return	02/26/2013	State Street	EIF US Power Fund II	08/16/2005	Ares Management
Aether Real Assets III	11/27/2013	Aether	EIF US Power Fund III	05/30/2007	Ares Management
Commonfund	06/28/2013	Commonfund	EIF US Power Fund IV	11/28/2011	Ares Management
Adelante	09/30/2001	State Street	Nogales	02/15/2004	Nogales
Invesco International REIT	06/30/2008	Invesco	Paladin III	11/30/2007	Paladin
Angelo Gordon Realty Fund VIII	01/23/2012	Angelo Gordon	Ocean Avenue Fund II	06/11/2014	Ocean Avenue
Angelo Gordon Realty Fund IX	12/08/2014	Angelo Gordon	Pathway	11/09/1998	Pathway
DLJ RECP II	09/24/1999	DLJ	Pathway 2008	12/26/2008	Pathway
DLJ RECP III	06/23/2005	DLJ	Pathway 6	05/24/2011	Pathway
DLJ RECP IV	02/11/2008	DLJ	Pathway 7	02/07/2013	Pathway
DLJ RECP V	07/01/2014	DLJ	Siguler Guff CCCERA Opps	06/03/2014	Siguler Guff
Willows Office	-	Transwestern	Cash	-	State Street

**Policy & Custom Index Composition**

Policy Index (4/1/2012-Current) 27.7% Russell 3000, 10.6% MSCI ACWI ex-US (Gross), 12.3% MSCI ACWI (Net), 19.6% Barclays U.S. Aggregate, 5% Bank of America High Yield Master II, 4% Barclays Global Aggregate, 13.5% Real Estate Benchmark, 6.8% S&P 500 +4% (Lagged), 0.5% 91-Day T-Bills.

Real Estate Benchmark 40% Wilshire REIT, 50% NCREIF Property Index, 10% FTSE/EPRA NAREIT Developed ex-USA.

**Other Disclosures**

All data prior to 12/31/2014 was provided by previous consultant.

# Glossary

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**Allocation Effect:** An attribution effect that describes the amount attributable to the managers' asset allocation decisions, relative to the benchmark.

**Alpha:** The excess return of a portfolio after adjusting for market risk. This excess return is attributable to the selection skill of the portfolio manager. Alpha is calculated as: Portfolio Return - [Risk-free Rate + Portfolio Beta x (Market Return - Risk-free Rate)].

**Benchmark R-squared:** Measures how well the Benchmark return series fits the manager's return series. The higher the Benchmark R-squared, the more appropriate the benchmark is for the manager.

**Beta:** A measure of systematic, or market risk; the part of risk in a portfolio or security that is attributable to general market movements. Beta is calculated by dividing the covariance of a security by the variance of the market.

**Book-to-Market:** The ratio of book value per share to market price per share. Growth managers typically have low book-to-market ratios while value managers typically have high book-to-market ratios.

**Capture Ratio:** A statistical measure of an investment manager's overall performance in up or down markets. The capture ratio is used to evaluate how well an investment manager performed relative to an index during periods when that index has risen (up market) or fallen (down market). The capture ratio is calculated by dividing the manager's returns by the returns of the index during the up/down market, and multiplying that factor by 100.

**Correlation:** A measure of the relative movement of returns of one security or asset class relative to another over time. A correlation of 1 means the returns of two securities move in lock step, a correlation of -1 means the returns of two securities move in the exact opposite direction over time. Correlation is used as a measure to help maximize the benefits of diversification when constructing an investment portfolio.

**Excess Return:** A measure of the difference in appreciation or depreciation in the price of an investment compared to its benchmark, over a given time period. This is usually expressed as a percentage and may be annualized over a number of years or represent a single period.

**Information Ratio:** A measure of a manager's ability to earn excess return without incurring additional risk. Information ratio is calculated as: excess return divided by tracking error.

**Interaction Effect:** An attribution effect that describes the portion of active management that is contributable to the cross interaction between the allocation and selection effect. This can also be explained as an effect that cannot be easily traced to a source.

**Portfolio Turnover:** The percentage of a portfolio that is sold and replaced (turned over) during a given time period. Low portfolio turnover is indicative of a buy and hold strategy while high portfolio turnover implies a more active form of management.

**Price-to-Earnings Ratio (P/E):** Also called the earnings multiplier, it is calculated by dividing the price of a company's stock into earnings per share. Growth managers typically hold stocks with high price-to-earnings ratios whereas value managers hold stocks with low price-to-earnings ratios.

**R-Squared:** Also called the coefficient of determination, it measures the amount of variation in one variable explained by variations in another, i.e., the goodness of fit to a benchmark. In the case of investments, the term is used to explain the amount of variation in a security or portfolio explained by movements in the market or the portfolio's benchmark.

**Selection Effect:** An attribution effect that describes the amount attributable to the managers' stock selection decisions, relative to the benchmark.

**Sharpe Ratio:** A measure of portfolio efficiency. The Sharpe Ratio indicates excess portfolio return for each unit of risk associated with achieving the excess return. The higher the Sharpe Ratio, the more efficient the portfolio. Sharpe ratio is calculated as: Portfolio Excess Return / Portfolio Standard Deviation.

**Sortino Ratio:** Measures the risk-adjusted return of an investment, portfolio, or strategy. It is a modification of the Sharpe Ratio, but penalizes only those returns falling below a specified benchmark. The Sortino Ratio uses downside deviation in the denominator rather than standard deviation, like the Sharpe Ratio.

**Standard Deviation:** A measure of volatility, or risk, inherent in a security or portfolio. The standard deviation of a series is a measure of the extent to which observations in the series differ from the arithmetic mean of the series. For example, if a security has an average annual rate of return of 10% and a standard deviation of 5%, then two-thirds of the time, one would expect to receive an annual rate of return between 5% and 15%.

**Style Analysis:** A return based analysis designed to identify combinations of passive investments to closely replicate the performance of funds

**Style Map:** A specialized form or scatter plot chart typically used to show where a Manager lies in relation to a set of style indices on a two-dimensional plane. This is simply a way of viewing the asset loadings in a different context. The coordinates are calculated by rescaling the asset loadings to range from -1 to 1 on each axis and are dependent on the Style Indices comprising the Map.

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## CCCERA Risk Dashboard

12/31/2015

### 1 Portfolio risk



Portfolio: 7.6%

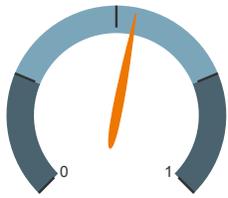


Policy: 7.2%

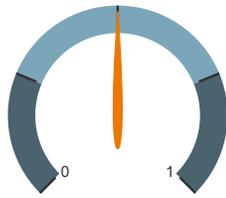


Average Pension: 7.4%

### 2 Portfolio equity beta



Portfolio: 0.54



Policy: 0.5



Average Pension: 0.53

### 3 Portfolio interest rate risk – Duration



Portfolio: 1.6



Policy: 1.3



Average Pension: 1.9

### 4 Portfolio credit risk – Spread duration



Portfolio: 0.2



Policy: 0.7

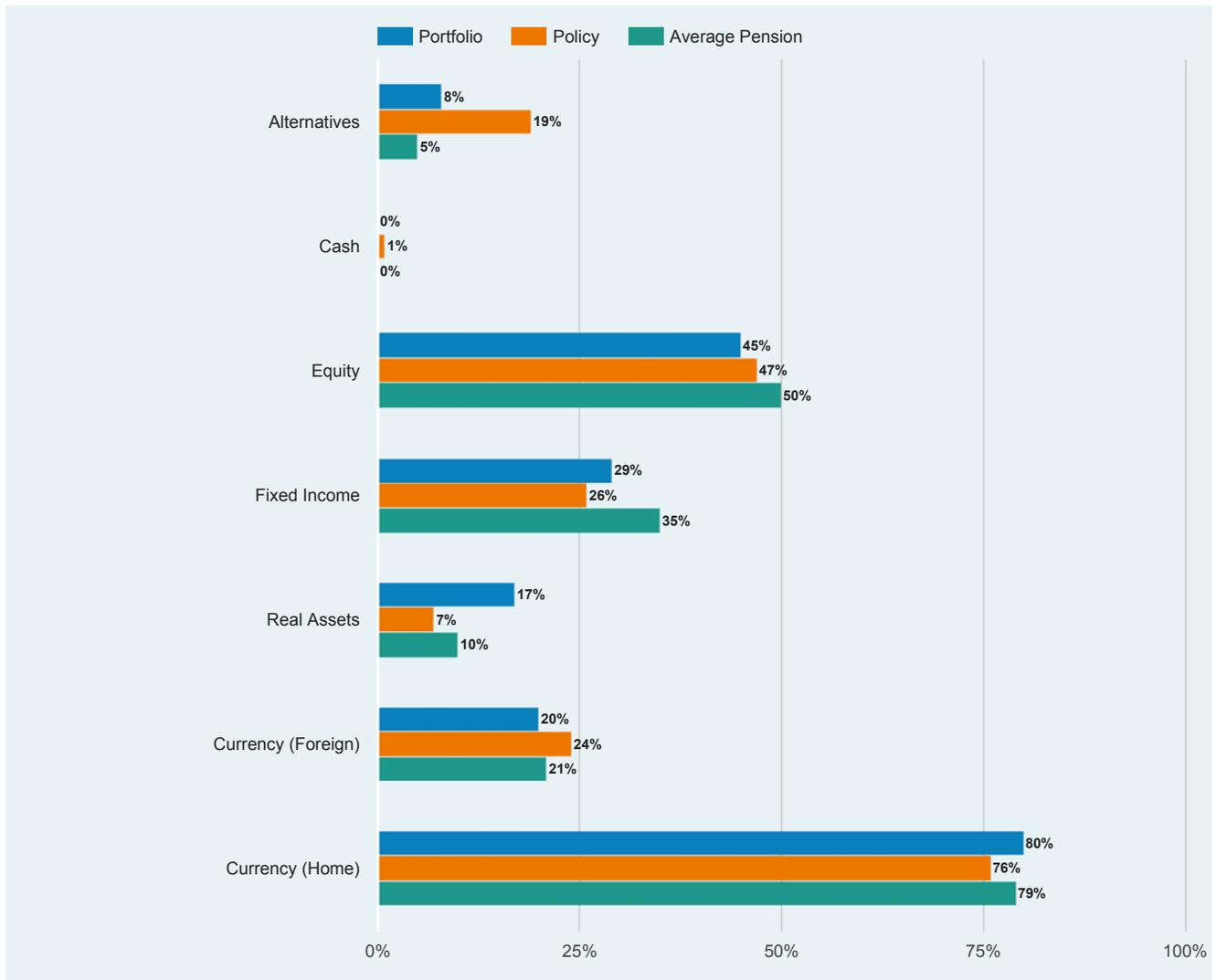


Average Pension: 0

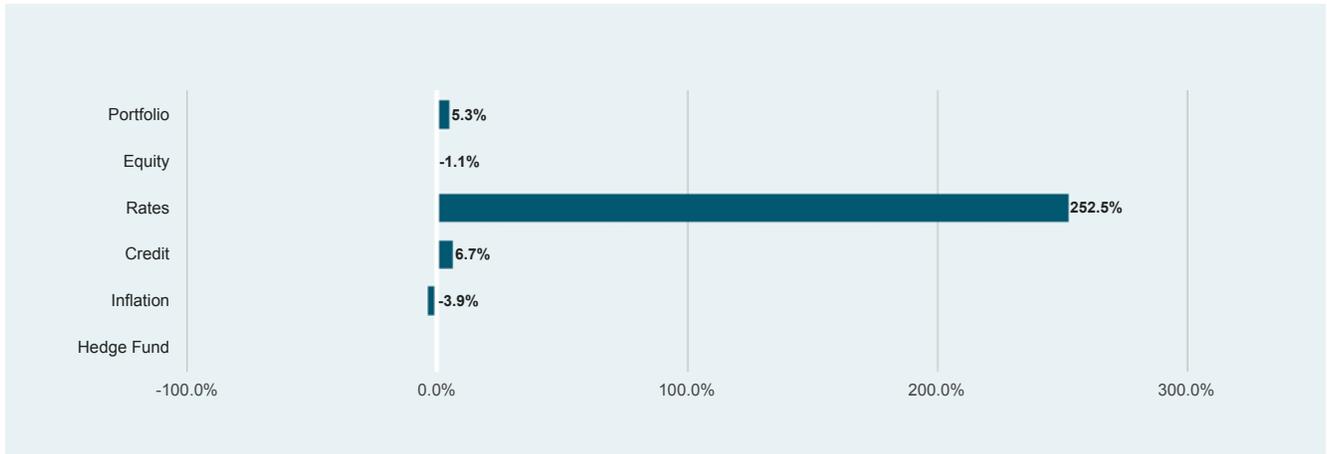
## 5 Exposure allocation by asset class

		Portfolio	Policy	Average Pension
Alternatives	Risk Diversifying Strategies	7.8%	2.0%	5.0%
	Opportunistic	0.3%		
	Private Credit	0.0%	17.0%	
<b>Alternatives Total</b>		<b>8.1%</b>	<b>19.0%</b>	<b>5.0%</b>
Cash	Cash	0.3%	1.0%	
<b>Cash Total</b>		<b>0.3%</b>	<b>1.0%</b>	
Equity	Large Cap US Equity	22.0%	6.0%	
	Global Equity	12.4%		45.0%
	International Large	10.6%	10.0%	
	Emerging Markets	0.0%	14.0%	
	Private Equity	0.0%	17.0%	5.0%
<b>Equity Total</b>		<b>45.0%</b>	<b>47.0%</b>	<b>50.0%</b>
Fixed Income	US Bonds	20.5%		35.0%
	High Yield Fixed	4.8%		
	Global Bonds	4.1%		
	Short-term Gov/Credit	0.0%	24.0%	
	US Treasury	0.0%	2.0%	
<b>Fixed Income Total</b>		<b>29.4%</b>	<b>26.0%</b>	<b>35.0%</b>
Real Assets	Real Estate	12.3%	7.0%	5.0%
	Real Assets	4.9%		
	Commodities	0.0%		5.0%
<b>Real Assets Total</b>		<b>17.2%</b>	<b>7.0%</b>	<b>10.0%</b>
<b>Total Portfolio</b>		<b>100%</b>	<b>100%</b>	<b>100%</b>

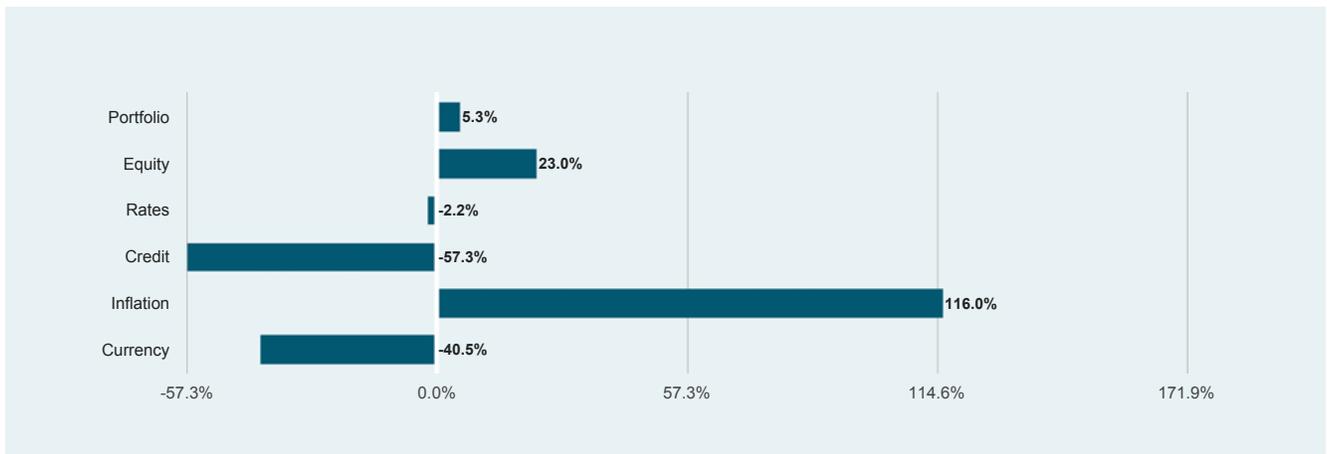
## 6 Exposure allocation



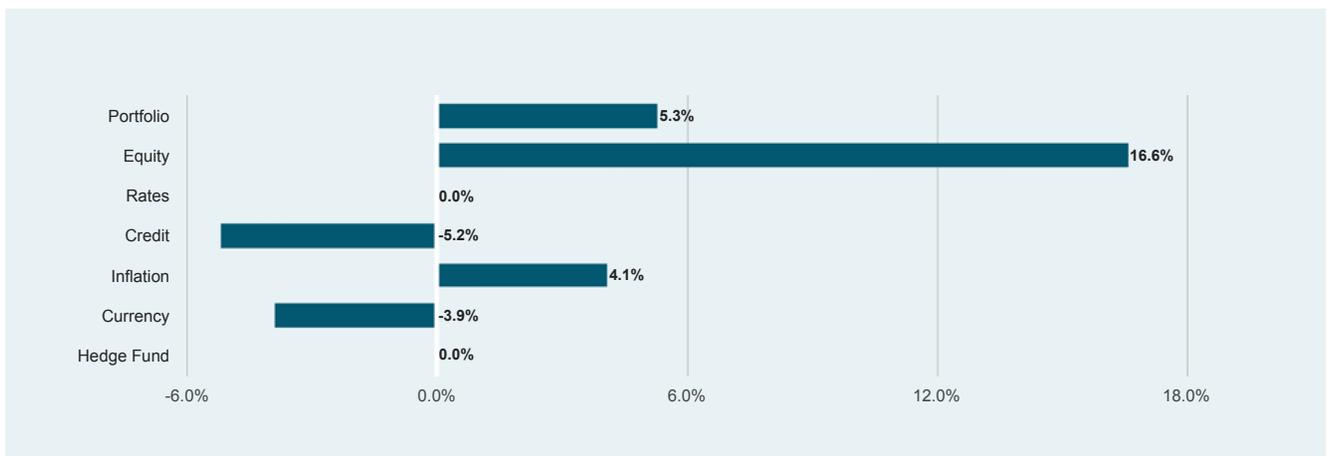
### 7 Relative risk vs target by bucket



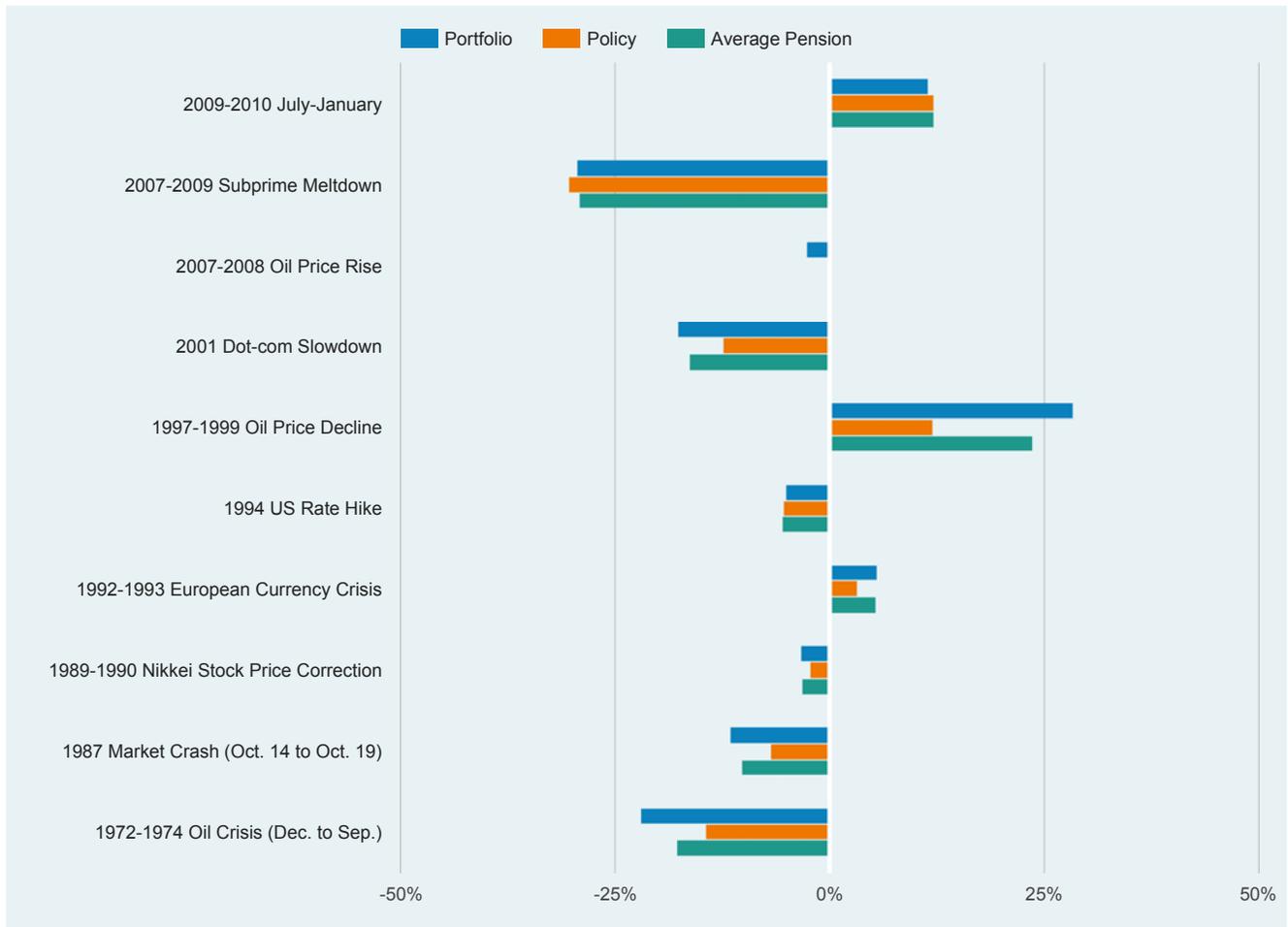
### 8 Relative risk vs target by risk factor



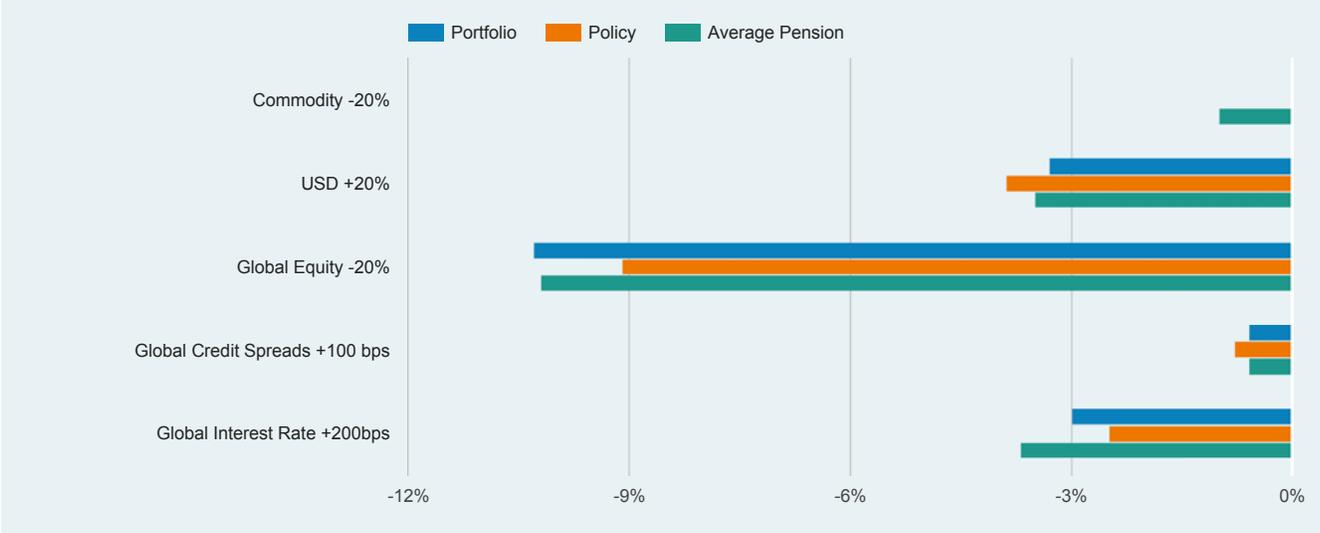
### 9 Risk factor weight relative to target



## 10 Tail risk – Scenario analysis



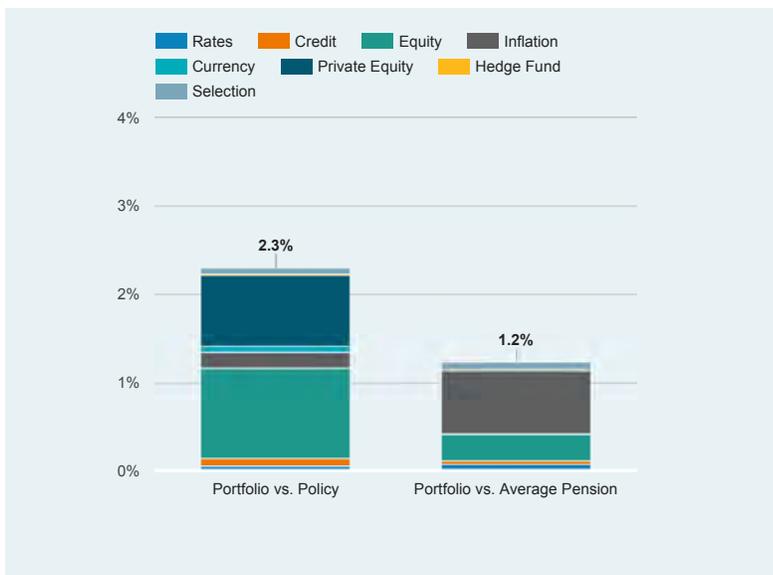
11 Tail risk – Stress tests



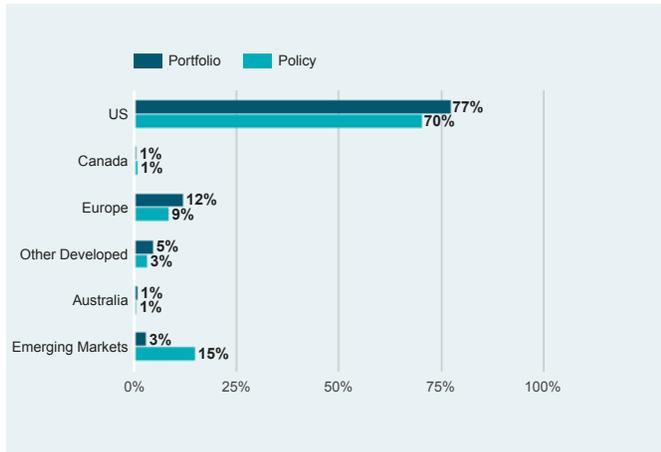
## 12 Risk contribution by risk factor



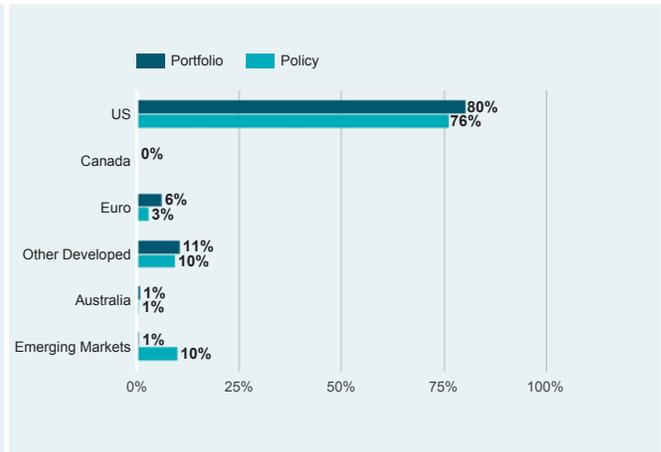
## 13 Active risk contribution by risk factor



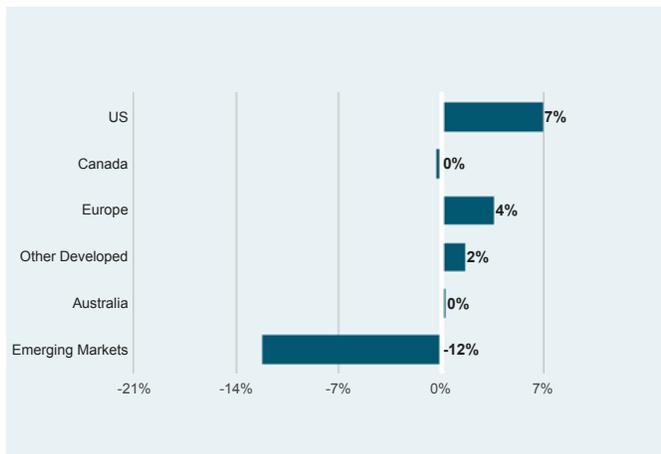
### 14 Geographic allocation



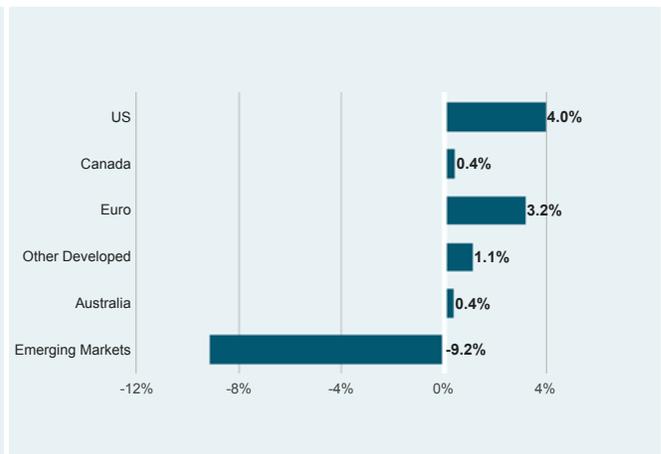
### 15 Currency allocation



### 16 Net geographic exposure



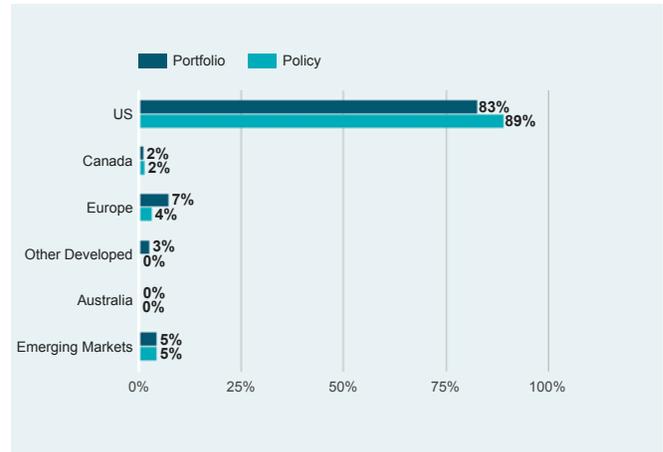
### 17 Net currency exposure



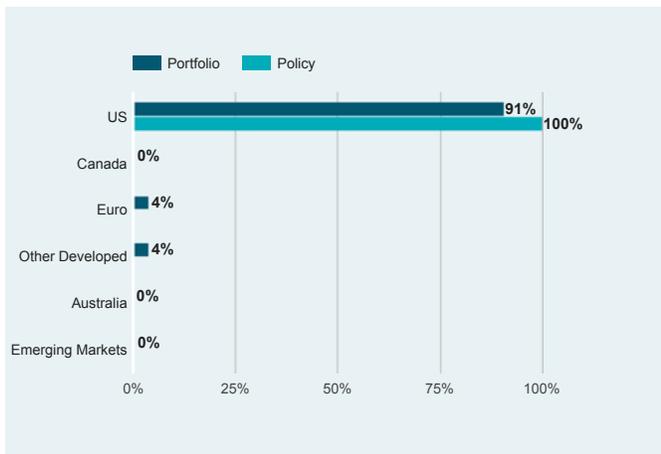
### 18 Interest rate bucket

	Portfolio	Policy	Difference
Duration	5.6	2.2	3.3
Yield to Maturity	2.9%	1.6%	1.3%
Wt. Avg. Rating	Aa1 / Aa2	Aa1 / Aa2	

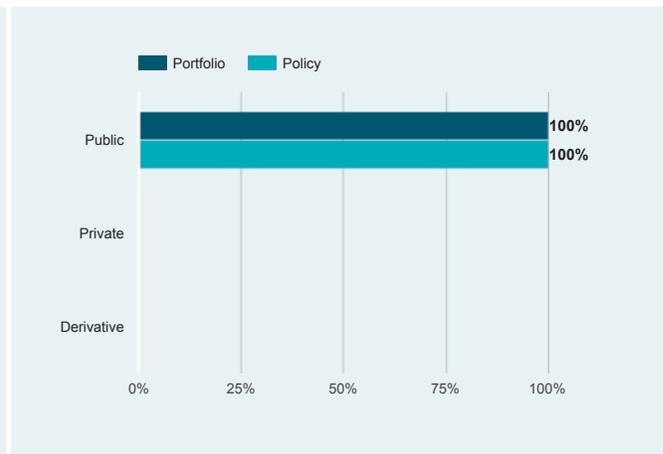
### 19 Rates bucket – Country allocation



### 20 Rates bucket – Currency allocation



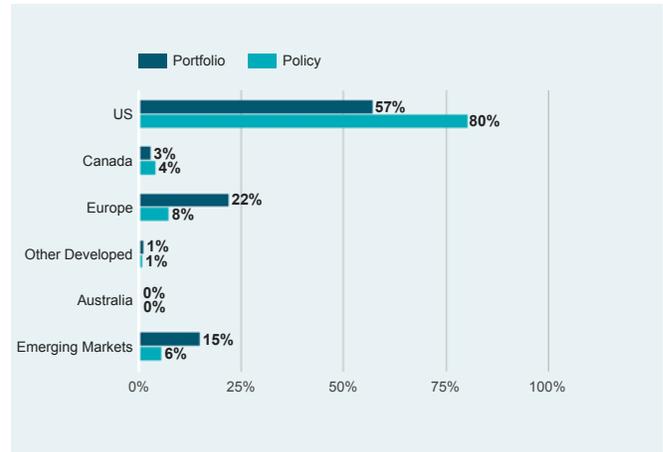
### 21 Rates bucket – Security type



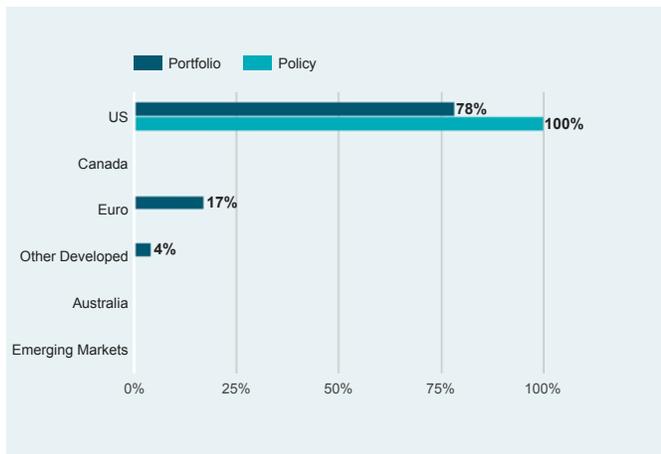
## 22 Credit bucket

	Portfolio	Policy	Difference
Duration	4.0	4.1	-0.1
Coupon Yield	7.2%	7.6%	-0.4%
Yield to Maturity	8.3%	8.3%	0.0%
Wt. Avg. Rating	Ba3 / B1	B1	

## 23 Credit bucket – Country allocation



## 24 Credit bucket – Currency allocation



## 25 Credit bucket – Security type



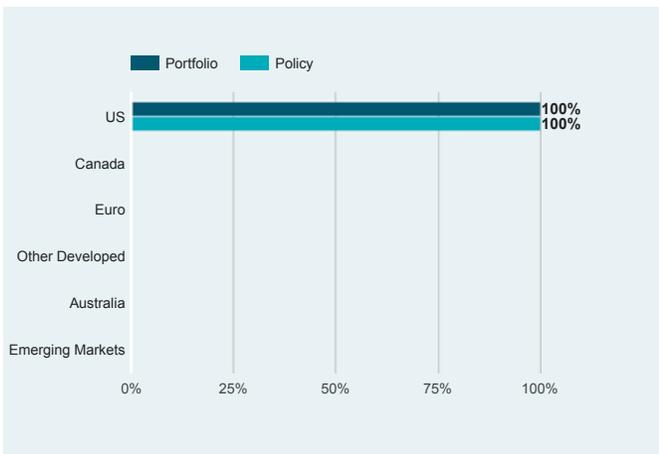
### 26 Inflation bucket

	Portfolio	Policy	Difference
Real Estate Allocation	12.3%	7.0%	5.3%
Other Real Assets	4.9%		4.9%

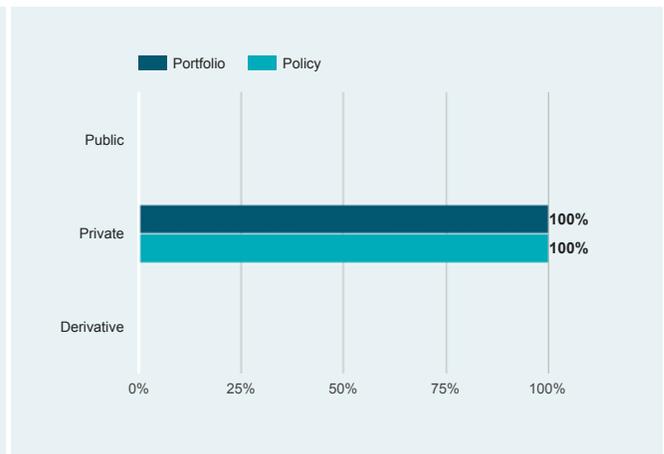
### 27 Inflation bucket – Country allocation



### 28 Inflation bucket – Currency allocation



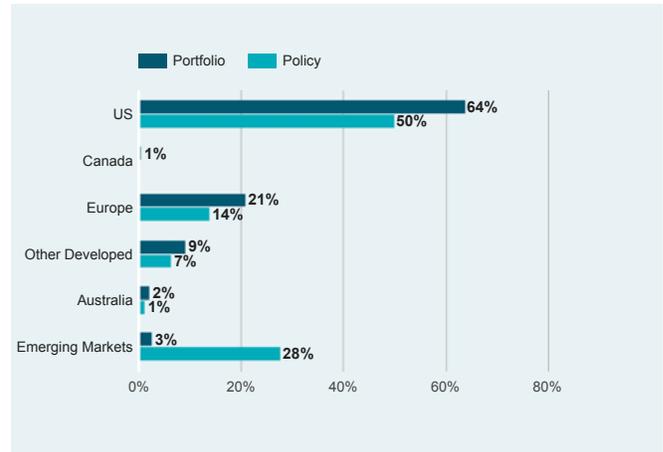
### 29 Inflation bucket – Security type



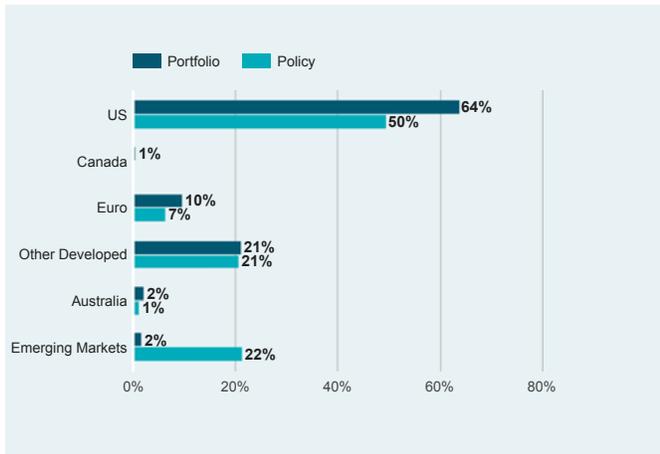
### 30 Equity bucket

	Portfolio	Policy	Difference
Beta	1.0	0.9	0.1
Dividend Yield	2.5%	2.8%	-0.3%
PE Ratio	17.2	20.3	-3.1

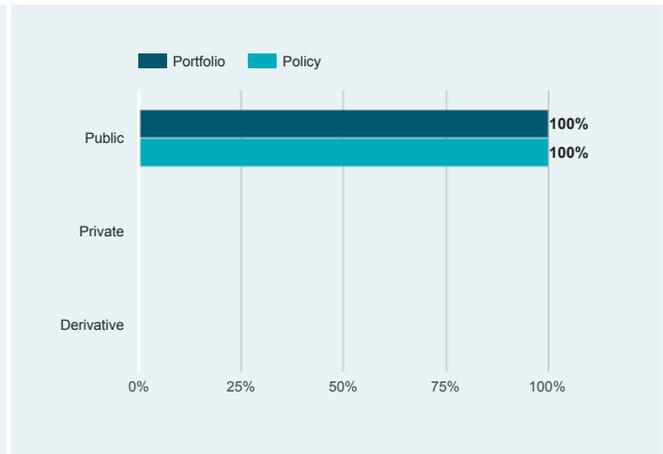
### 31 Equity bucket – Country allocation



### 32 Equity bucket – Currency allocation



### 33 Equity bucket – Security type



## Chart Definitions

1	<b>Portfolio risk</b> Compares total risk (volatility) of portfolio relative to multiple reference benchmarks and liabilities.
2	<b>Portfolio equity beta</b> Equity beta is a measure describing the sensitivity of portfolio returns with returns of the equity market as represented by MSCI ACWI (USD).
3	<b>Portfolio interest rate risk – Duration</b> For investments, bonds, with fixed cash flows, interest rate duration is the estimated price change given a 1% change in interest rates, calculated by the weighted average of the instruments cash flows (including both interest and maturity payments).
4	<b>Portfolio credit risk – Spread duration</b> For investments, bonds, with fixed cash flows, spread duration estimates the change in price given a 1% change in spreads. Spread duration is a more isolated measure than interest rate duration, by focusing solely on the spread component rather than both interest rates and spread.
5	<b>Exposure allocation by asset class</b> Actual vs budgeted exposure to various asset classes and sub-asset classes as allocation in investment policy and another reference benchmark. Assignment to sub-asset classes is at the custodial account level according to manager mandate.
6	<b>Exposure allocation</b> This bar chart provides a visual representation of the major asset classes and currency exposure listed in Exposure allocation by asset class table.
7	<b>Relative risk vs target by bucket</b> Compares the total risk (volatility) of the portfolio vs. the reference benchmark at a total and sub-asset class account grouping level. The accounts are grouped in terms of mandates where all equity mandates or credit mandates are in their respective groups. For example, equity bucket relative risk compares the total risk of the equity grouped accounts vs the benchmark equity group bucket. Formula: (portfolio risk group bucket/ benchmark risk group bucket) – 1
8	<b>Relative risk vs target by risk factor</b> Disregarding any specific asset class mandates and having a look through on the portfolio decomposing risk in respective risk factor contributions, this measure looks at the relative risk contributions specific factors of the portfolio vs. the reference benchmark. Formula: (factor risk contribution within portfolio / factor risk contribution within reference benchmark) – 1
9	<b>Risk factor weight relative to target</b> Relative risk of individual asset classes or factors as displayed in charts 7 and 8 is instructive, but the picture is incomplete. Chart 9 shows contribution by factor to total relative risk of the portfolio vs the reference benchmark, reflecting the significance of each factor within the portfolio as it is currently constructed. For example, if the credit benchmark is based on domestic, investment grade securities and the portfolio has exposures to high yield and non-domestic corporate bonds, relative risk in charts 7 and/or 8 may be high in absolute terms; but if the portfolio has a small allocation to credit, contribution to total portfolio relative risk will be small. The factor risks displayed in this chart are additive to the total relative risk at the top line. Formula: (factor risk contribution within portfolio – reference benchmark factor risk contribution) / total reference benchmark risk
10	<b>Tail risk – Scenario analysis</b> Tail risk is a form of risk that arises when the possibility that an investment will have losses greater than what the normal distribution would suggest. This graphic shows the expected performance under various historical scenarios, which are defined in the appendix at the end of this report. For each historical scenario, the current market value is recalculated to determine return under identical market conditions, assuming an instantaneous shock.
11	<b>Tail risk – Stress tests</b> Expected performance when specific individual asset class or currency risk factors are subjected to stress tests with instantaneous shocks. Directly affected asset classes are revalued at the factor levels.
12	<b>Risk contribution by risk factor</b> Contribution of various risk factors to the overall total risk (volatility) of the portfolio and the reference benchmarks. The contributions by each risk factor sum up to one. This measure takes into account the exposure, volatility and correlation of each asset class within the portfolio.
13	<b>Active risk contribution by risk factor</b> Active risk in terms of annual tracking error: Tracking Error (TE) measures how closely a portfolio follows the reference benchmark. It is the standard deviation of the difference between the portfolio and reference benchmark returns.
14	<b>Geographic allocation</b> The exposures by country, including derivatives with the exception of currency, calculated utilizing the notional exposure as a percentage of market value. Any portfolio that has explicit leverage due to the use of derivatives, the total could be higher or lower than 100% due to the use of notional in the numerator and net market value in the denominator.
15	<b>Currency allocation</b> Exposure by currency, including both the underlying securities and the purchasing currency of any derivatives
16	<b>Net geographic exposure</b> Difference between portfolio and policy allocation among major geographic areas
17	<b>Net currency exposure</b> Difference between portfolio and policy allocation among major currencies
18	<b>Interest rate bucket</b> Yield to Maturity is the interest rate of return earned by an investor who buys a fixed interest security today at the market price and holds it until maturity. Weighted Average Ratings indicates the average credit quality.

19	<b>Rates bucket – Country allocation</b> Country exposures specific to interest rate allocations, calculated using the notional exposure as a percentage of market value, including derivatives but excluding currency derivatives. Any portfolio that has explicit leverage due to the use of derivatives, the total could be higher or lower than 100% due to the use of notional in the numerator and net market value in the denominator.
20	<b>Rates bucket – Currency allocation</b> Currency exposures specific to interest rate allocations, including both the underlying securities and the purchasing currency of any derivatives
21	<b>Rates bucket – Security type</b> Allocation of interest rate instruments among different security types Includes derivative overlays
22	<b>Credit bucket</b> Country exposures specific to credit risk allocations, calculated using the notional exposure as a percentage of market value, including derivatives but excluding currency derivatives.
23	<b>Credit bucket – Country allocation</b> Country exposures specific to credit risk allocations, calculated using the notional exposure as a percentage of market value, including derivatives but excluding currency derivatives. Any portfolio that has explicit leverage due to the use of derivatives, the total could be higher or lower than 100% due to the use of notional in the numerator and net market value in the denominator.
24	<b>Credit bucket – Currency allocation</b> Currency exposures specific to credit risk allocations, including both the underlying securities and the purchasing currency of any derivatives
25	<b>Credit bucket – Security type</b> Allocation of credit instruments among different security types.
26	<b>Inflation bucket</b> Composition of inflation hedging instruments in portfolio and reference benchmark, including the notional duration of real rates instruments.
27	<b>Inflation bucket – Country allocation</b> Country exposures specific to inflation hedging instruments, calculated using the notional exposure as a percentage of market value, including derivatives but excluding currency derivatives. Any portfolio that has explicit leverage due to the use of derivatives, the total could be higher or lower than 100% due to the use of notional in the numerator and net market value in the denominator.
28	<b>Inflation bucket – Currency allocation</b> Currency exposures specific to inflation hedging instruments, including both the underlying securities and currency derivatives.
29	<b>Inflation bucket – Security type</b> Allocation of inflation instruments among different security types
30	<b>Equity bucket</b> P/E ratio is a valuation ratio of current share price compared to per share earnings. Beta measures returns sensitivity to global equities (MSCI ACWI USD).
31	<b>Equity bucket – Country allocation</b> Country exposures specific to equity risk, calculated using the notional exposure as a percentage of market value, including derivatives but excluding currency derivatives. Any portfolio that has explicit leverage due to the use of derivatives, the total could be higher or lower than 100% due to the use of notional in the numerator and net market value in the denominator.
32	<b>Equity bucket – Currency allocation</b> Currency exposures specific to equity risk, including both the underlying securities and currency derivatives.
33	<b>Equity bucket – Security type</b> Allocation of equity assets among different security types

#### Tail Risk Scenario Definitions

1	<b>2009-2010 July-January</b> (7/1/2009 – 12/31/2009) As global economic woes persisted, many countries were saddled with widening budget deficits, rising borrowing costs, slowing growth, higher unemployment, and higher inflation, which made monetary stimulus difficult. Dubai World sought to delay its huge debt repayments, shocking the global market, while the financial distress in Greece and Ireland began to emerge in late 2009.
2	<b>2007-2009 Subprime Meltdown</b> (1/10/2007 – 2/27/2009) The burst of the housing bubble in mid-2007 marked the beginning of the years-long subprime mortgage crisis, rooted from the easy credit, low interest rates, and loose regulatory environment in the early 2000s, which made low quality (subprime) mortgaging extremely easy. The contagious meltdown quickly led to plunging asset prices in the financial markets, rising bankruptcies, delinquencies, and foreclosures, and central bank monetary rescues and fiscal interventions by governments around the globe.
3	<b>2007-2008 Oil Price Rise</b> (1/18/2007 – 6/27/2008) Oil prices spiked from around \$60/bbl in 2007 to a record high of \$145/bbl on 3 July 2008.
4	<b>2001 Dot-com Slowdown</b> (3/10/2001 – 10/9/2002) Upon the burst of the tech bubble in 2000, more and more internet companies went out of business as the stock market plummeted further.
5	<b>1997-1999 Oil Price Decline</b> (1/8/1997 – 2/16/1999) The combined effect of OPEC overproduction and lower oil demand due to the Asia economic crisis sent oil prices into a downward spiral.

- 
- 6 **1994 US Rate Hike**  
(1/31/1994 – 12/13/1994) In combating inflation, the U.S. Federal Reserve raised its interest rate from 3.25% in February to 5.5% in November 1994.
- 
- 7 **1992-1993 European Currency Crisis**  
(9/1/1992 – 8/13/1993) Upon Germany's reunification, the German mark appreciated rapidly, which destabilized exchange rates between European countries under the European Monetary System. It led to a series of European currency devaluations, interest rate increases, and the widening range of exchange rates in 1992.
- 
- 8 **1989-1990 Nikkei Stock Price Correction**  
(12/29/1989 – 3/30/1990) After hitting the Nikkei stock index's all-time high on December 29, 1989, the Japan financial market crashed and plunged to a low in March 1990.
- 
- 9 **1987 Market Crash (Oct. 14 to Oct. 19)**  
(10/14/1987 – 10/19/1987) The U.S. stock market began to topple on October 14, 1987 after reaching a record high. It was triggered by reports of a larger trade deficit and the elimination of the tax benefits of financing mergers. The aggravating selling pressure in October 19, from confused and fearful investors, and the failing portfolio insurers' models led to a substantial global market sell-off.
- 
- 10 **1972-1974 Oil Crisis (Dec. to Sep.)**  
(12/1/1972 – 9/30/1974) Many developed countries suffered in this energy crisis as OPEC members placed an oil embargo on the U.S. and Israel's allies during the Yom Kippur War in October 1973, which sent global oil prices soaring.

#### **DISCLAIMERS AND NOTICES**

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## ***MEMORANDUM***

**Date:** February 17, 2016

**To:** CCCERA Board of Retirement

**From:** Timothy Price, Chief Investment Officer

**Subject:** Quarterly Watch List Update

---

### ***Function of Watch List***

The Watch List, previously incorporated into the Quarterly Investment Report, grew out of the CCCERA policy for placing managers “Under Review” for various reasons. As an interim step, the Watch List will be maintained by CCCERA staff, until a new Investment Policy Statement is prepared (expected early 2016). The section of the Investment Policy Statement that authorizes the Watch List is Section VIII. C. The specific issues that might trigger the Board to place a manager on the Watch List generally fall under the headings of poor performance, portfolio drift, personnel changes, organizational changes, regulatory sanctions and poor communication.

At least each quarter, and whenever the Board deems appropriate, the Board will evaluate all Investment Managers under review, and for each such manager take one of three actions:

- a. Decide the manager is no longer under review,
- b. Terminate the manager, or
- c. Keep the manager under review.

### ***Current Watch List Status***

<b>Firm</b>	<b>Reason</b>	<b>Date Placed on Watch</b>	<b>Recommendation</b>
Nogales	Performance	5/28/08	No change

**Notes**

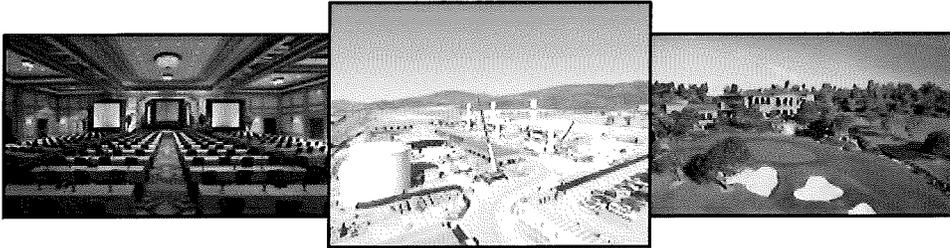
As noted in our prior Watch List memos, Nogales is a private equity fund and the Board has previously asked that the manager remain on Watch until the fund is completely wound down. We expect the fund to be completely wound down in 2016.

***Proposed Additions to the Watch List***

Staff has not identified any managers that we believe should to be added to the Watch List at this time.

**From:** ares EIF events <areseifevents@aresmgmt.com>  
**Sent:** Friday, February 12, 2016 9:23 AM  
**To:** ares EIF events  
**Subject:** SAVE THE DATE - ARES EIF 27th ANNUAL MEETING AND ENERGY INDUSTRY CONFERENCE

## SAVE THE DATE



### ARES EIF 27<sup>TH</sup> ANNUAL MEETING AND ENERGY INDUSTRY CONFERENCE

**FAIRMONT GRAND DEL MAR**  
SAN DIEGO, CALIFORNIA  
MAY 9-11, 2016

**Tentative Agenda:**

<b>Monday, May 9th</b>	3:00 PM	Investor Advisory Board Meetings
	4:00 PM	Calypso, Channelview and Oregon Co-Investor Meetings
	5:00 PM	Linden Co-Investor Meeting
	7:00 PM	Reception and Dinner
<b>Tuesday, May 10th</b>	8:00 AM	United States Power Fund Series I-V Presentations to Investors
	1:00 PM	Pio Pico Energy Center Site Tour
	7:00 PM	Reception and Dinner
<b>Wednesday, May 11th</b>	8:00 AM	Energy Industry Conference
	1:00 PM	Afternoon Activities
	7:00 PM	Reception and Dinner

Formal invitation to follow in March. If you have any questions, please contact [areseifevents@aresmgmt.com](mailto:areseifevents@aresmgmt.com) or Ashley Eisele at 781-292-7010.

We hope you will be able to join us this spring in San Diego!

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ADVOCACY

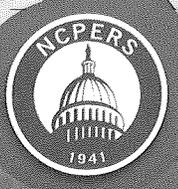
RESEARCH

EDUCATION

*Celebrating 75 Years*

**NCPERS**

NATIONAL CONFERENCE ON PUBLIC EMPLOYEE RETIREMENT SYSTEMS



# 2016 Annual Conference & Exhibition

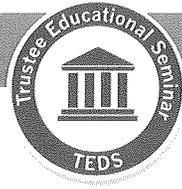
San Diego, CA  
May 14-19

FUND MEMBER REGISTRATION FORM

Follow Us on Twitter  #NCPERS16

# PRE-CONFERENCE PROGRAM

## TRUSTEE EDUCATIONAL SEMINAR (TEDS)



### ABOUT

The Trustee Educational Seminar (TEDS) is intended for new and novice trustees who are seeking a better understanding of their roles and responsibilities as trustees of their pension funds. It also serves as a refresher for experienced trustees interested in staying up-to-date.

This two-day program provides an introduction to fiduciary responsibilities, creating a solid foundation of knowledge for those who have limited experience in pension plan trusteeship. Program content is designed to address the critical elements of trust fund management, including important topics such as investing, legal requirements, and trustee ethics.

**Attendance at TEDS provides trustees with eight (8) hours of continuing education (CE) credit.**

**Cost: \$400 (early-bird rate through April 22)  
\$600 (after April 22 or on-site)**

### WHO SHOULD ATTEND?

- **New trustees** – get started with a solid foundation of knowledge so you'll be prepared to fulfill your obligations to your retirees.
- **Experienced trustees** – get updated on the most recent trends and developments in the public pension fund industry to ensure your continued success.
- **Administrators and pension staff** – be better prepared to do your job as a key implementer of policies and critical fund initiatives.

### SATURDAY, MAY 14

7:00 am – 8:00 am Breakfast

7:00 am – 1:00 pm Registration

8:00 am – 1:00 pm GENERAL SESSION I

- The Pension Promise: History, Evolution & Mechanics of a Pension
- Investments 101
- Emerging Managers

5:00 pm – 6:00 pm President's Reception

### SUNDAY, MAY 15

7:00 am – 8:00 am Breakfast

7:00 am – 1:00 pm Registration

8:00 am – 1:00 pm GENERAL SESSION II

- Corporate Governance
- Best Practices Panel
- Due Diligence
- Pension Reforms: How To Do It Right

1:00 pm

Presentation of Certificates

# PRE-CONFERENCE PROGRAM

**NEW**

## NCPERS ACCREDITED FIDUCIARY (NAF) PROGRAM

*STRONG BOARDS, SOLID GOVERNANCE, STABLE RETURNS*

An accredited program specifically tailored for public pension trustees – providing information, best practices, and strategies for governing public funds in an ever-changing environment. This program will include material from leading experts, dynamic classroom participation, and interactive simulations.

- Module 1** Governance and the Board's Role
- Module 2** Investment, Finance, and Accounting
- Module 3** Legal, Risk Management, and Communication
- Module 4** Human Capital

### WHO SHOULD TAKE THIS?

Elected or appointed public pension trustees interested in the next level of professional development.

### WHAT WILL YOU RECEIVE?

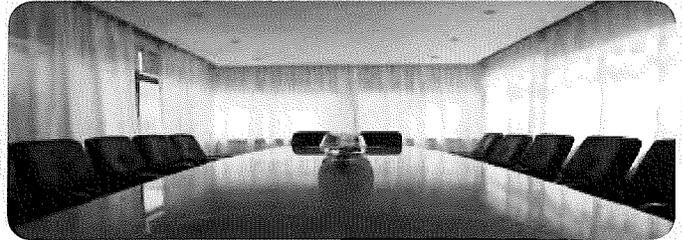
- Participants will earn six (6) hours of continuing education (CE) credit for each two (2) modules completed.
- Participants who complete all four (4) modules will have an opportunity to complete an exam and if successful, receive a certificate and plaque showcasing their newly earned **NCPERS Accredited Fiduciary (NAF)** designation.

### MODULES 1 AND 2

**Date:** May 14 – 15 | **Time:** 8:00 am to 2:00 pm

**Cost:** \$550 (early-bird rate through April 22)  
\$750 (after April 22 or on-site)

\* Lunch included. Limited to 50 attendees.



### MAY 14

**Module 1 – Governance and the Board's Role**

#### Learning Objectives

- Understanding the roles, responsibilities, and accountabilities of your public pension board as well as the differing governance models and principles that exist
- How to become a “high-functioning board”

#### Answers the Questions

- How active should your board be?
- How does your board culture impact your effectiveness to govern?
- What is your board's role in setting strategy and direction?
- How do you attract and retain top talent to your board?

### MAY 15

**Module 2 – Investment, Finance, and Accounting**

#### Learning Objectives

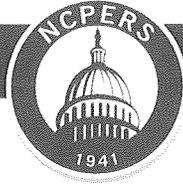
- Understanding what you as a director need to know and how you access the required information to make informed financial decisions
- Proper administration of your fund's investments, ensuring compliance with investment policies, performance management, and adequate reporting

#### Answers the Questions

- What is the role of external advisors and how do you leverage them?
- What is the board's role in ensuring compliance with financial/investment policies?
- What are the roles and responsibilities of the audit/investment committee?

For updates or to register online visit [www.NCPERS.org](http://www.NCPERS.org). Fax registration forms to 202-624-1439.  
Question? Call 1-877-202-5706 or e-mail [registration@ncpers.org](mailto:registration@ncpers.org).

# ANNUAL CONFERENCE & EXHIBITION



**N**CPERS' focus on trustee education makes the NCPERS Annual Conference the premier public pension education conference in the United States — and the best place to connect with pension trustees, administrators, staff members, union officials, and investment professionals. The Annual Conference provides an unparalleled opportunity to keep up-to-date on pension trends, best practices, and the latest news and information pertinent to your fiduciary obligations. Hear from noted expert speakers in the pension industry — and network with colleagues from across the United States and Canada.

**Earn up to 16.5 hours of CE attending the Annual Conference.**

**COST: \$800 (EARLY-BIRD RATE THROUGH APRIL 22)  
\$1,000 (AFTER APRIL 22 OR ON-SITE)**

## SUNDAY, MAY 15

2:00 pm – 6:00 pm Registration  
4:00 pm – 6:00 pm Exhibition  
4:00 pm – 6:00 pm CorPERS Lounge  
4:00 pm – 6:00 pm Welcome Reception

## MONDAY, MAY 16

6:30 am – 7:45 am Breakfast  
6:30 am – 2:00 pm Registration  
8:00 am – 10:30 am First General Session  
8:00 am – 1:30 pm Exhibition  
8:00 am – 1:30 pm CorPERS Lounge  
10:30 am – 11:00 am Exhibit Break  
11:00 am – 12:00 pm Four (4) Concurrent Breakout Sessions  
12:15 pm – 1:15 pm Four (4) Concurrent Breakout Sessions  
1:30 pm – 2:30 pm Lunch & Lecture Series  
*(not open to guests)*  
2:45 pm – 3:45 pm National Committee Election

## TUESDAY, MAY 17

6:30 am – 7:45 am Breakfast  
7:00 am – 2:00 pm Registration  
8:00 am – 10:30 am Second General Session  
8:00 am – 1:30 pm Exhibition  
8:00 am – 1:30 pm CorPERS Lounge  
10:30 am – 11:00 am Exhibit Break

## TUESDAY, MAY 17 (cont.)

11:00 am – 12:00 pm Four (4) Concurrent Breakout Sessions  
12:15 pm – 1:15 pm Four (4) Concurrent Breakout Sessions  
12:15 pm – 1:15 pm Administrator's Open Forum  
1:30 pm – 2:30 pm Lunch & Lecture Series  
*(not open to guests)*  
2:45 pm – 3:30 pm National Committee Executive Board Elections

## WEDNESDAY, MAY 18

6:30 am – 7:45 am Breakfast  
7:30 am – 12:00 pm Registration  
8:00 am – 10:30 am Third General Session  
10:30 am – 11:00 am Refreshment Break  
11:00 am – 12:00 pm Three (3) Concurrent Breakout Sessions  
12:15 pm – 1:15 pm Three (3) Concurrent Breakout Sessions  
1:30 pm – 2:30 pm Lunch & Lecture Series  
*(not open to guests)*  
6:00 pm – 7:00 pm Closing Reception  
7:00 pm – 9:00 pm Closing Dinner & Entertainment

## THURSDAY, MAY 19

9:00 am – 10:00 am Annual Business Meeting

# CONFERENCE HIGHLIGHTS

## EDUCATION

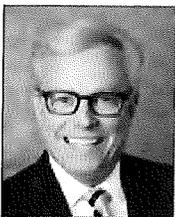
The NCPERS Annual Conference provides a multitude of educational offerings for its members at all levels of experience. These opportunities will help you develop the knowledge, skills, and ideas you need to better serve your fund or union, move forward in your professional development, and engage effectively with colleagues across the country and Canada.

NCPERS is recognized as a learning provider and is an accredited sponsor of continuing education in several states. By attending the Annual Conference, trustees can earn up to 16.5 hours of continuing education.

### Educational sessions will include these:

- Economic Update
- Corporate Governance
- Shareholder Activism
- Trustee Ethics
- Pension Law Update
- Emerging Markets
- Pension Actuarial Science
- State Pension Battle Update
- Reform & Regulations
- Portfolio Risk and Performance
- Investment Strategies
- Healthcare Reform
- GASB Update
- Social Media

## FEATURED SESSION



### **GASB Update: What NCPERS Members Need to Know**

*David A. Vaudt, Chairman, Governmental Accounting Standards Board (GASB)*

In this session, GASB Chair David A. Vaudt will present his views on Board activities designed to improve accounting and financial reporting for U.S. state and

local governments, and highlight the key issues and impacts NCPERS members should know about. Specifically, Mr. Vaudt will discuss issues relating to these topics:

- The other postemployment benefits (OPEB) standards finalized in 2015
- Pensions
- Fair value

The GASB chair will also address member questions on these and other issues.

## SOCIAL MEDIA TRACK



Have a Facebook account? Twitter? Whether you're already fully immersed in the waters of social media or are still standing on the shore wondering what to make of it all, learning how to interact on various social media platforms and getting the most of your online investments is crucial to survive and thrive in this age

of digital communication. This year NCPERS has enlisted James Spellos of Meetings U to help you demystify the use of social media and give you the fundamental information you need to be part of the social revolution.

### Sessions include the following:

- Social Media 101
- Social Media 201
- It's App-tastic

## ADMINISTRATOR'S OPEN FORUM

**Tuesday, May 17, 12:15 pm – 1:15 pm**

*Hosted by David Clark, Arkansas Local Police & Fire Retirement System*

Recognizing the need for small-plan administrators to meet and discuss issues with peers who have similar challenges, NCPERS will host an educational session devoted to the needs of municipal and county public plan administrators and staff. This session will be moderated by a city pension administrator and will allow attendees to ask questions, discuss issues related to their funds, and learn how others are addressing mutual concerns.

## HOTEL INFORMATION

Hilton San Diego Bayfront  
1 Park Boulevard | San Diego, CA 92101  
Phone: 619-564-3333

### RESERVATION DEADLINE APRIL 22

Book your hotel room at the Hilton and receive the discounted conference rate. **The group rate is available until Friday, April 22**, or until the group block is sold out, whichever comes first. After April 22, rates will be based on the hotel's prevailing room rates.

**NCPERS GROUP RATE**  
**\$265 single/double occupancy**



CALL 1-800-HILTONS OR 1-800-445-8667  
BOOK ONLINE [WWW.NCPERS.ORG](http://WWW.NCPERS.ORG)

# GENERAL INFORMATION

## MEMBERSHIP REQUIRED

NCPERS Annual Conference & Exhibition is a members-only conference. Your organization must be a current member of NCPERS in order for your registration to be processed.

To verify your organization's membership status, please e-mail your inquiry to [membership@ncpers.org](mailto:membership@ncpers.org).

## WHO ATTENDS?

Professionals from all venues of the pension industry, including trustees, administrators and staff, state and local officials, investment and financial consultants, individuals who provide products and services to pension plans, union officers, and regulators from across the United States and Canada.

## CONTINUING EDUCATION (CE) CREDITS

NCPERS is recognized as a learning provider in the public pension industry and is an accredited sponsor of continuing education in several states.

Attending TEDS = up to 8 hours of CE  
Attending NAF = up to 6 hours of CE  
Attending Annual Conference = up to 16.5 hours of CE

## REGISTRATION FEES

There are no per-day registration rates for TEDS or the Annual Conference. If you register on-site, the full conference rate will apply, regardless of the day you register on.

Registration fees include (unless otherwise noted) the following:

- Meeting materials, including the conference bag, lanyard, and pen
- Breakfast
- Refreshment breaks
- Receptions
- Lunch & Lecture Series (*Not applicable to guests*)
- Closing dinner and show

Registration fees do not include hotel accommodations, airfare, or transportation to and from the hotel.

## GUEST REGISTRATION

A guest refers to a spouse or personal friend, not a business associate, staff member, or colleague. All guests must be registered to attend NCPERS events. No admittance will be given to guests without a registration name badge.

The guest fee includes access to breakfast (valued at \$30 per day), receptions (valued at \$60 per event), exhibit hall refreshment breaks (valued at \$20 per event), and closing dinner with show (valued at \$100 per person). **Guests cannot attend the Lunch & Lecture Series as this is an educational event for trustees.**

## REGISTRATION DEADLINE

Register by Friday, April 22, to receive the early-bird conference rates and be included on the preliminary attendee list. You may still register for the conference after this date, but higher registration fees will apply.

## REGISTRATION CHANGES

All registration changes must be received in writing. Please e-mail all registration changes to [registration@ncpers.org](mailto:registration@ncpers.org) or fax to 202-624-1439.

## REGISTRATION METHODS



Submit your registration online at [www.NCPERS.org](http://www.NCPERS.org). You will need your individual username and password to login.



Fax the registration form with credit card number to 202-624-1439.



Mail the registration form with check or credit card number to:

NCPERS  
444 North Capitol Street, NW  
Suite 630  
Washington, DC 20001

# FUND MEMBER REGISTRATION FORM

ATTENDEE REGISTRATION	Early-Bird Registration Fees (through April 22)	Registration Fees (after April 22 or on-site)
<input type="checkbox"/> Trustee Educational Seminar (TEDS)*	\$400/person	\$600/person
<input type="checkbox"/> NCPERS Accredited Fiduciary (NAF) Program*	\$550/person	\$750/person
<input type="checkbox"/> Annual Conference & Exhibition	\$800/person	\$1,000/person

\* The NCPERS pre-conference programs will run concurrently. Attendees should register for only one of the programs.

(Please Print Clearly)

Organization Name: \_\_\_\_\_

First Name: \_\_\_\_\_ Last Name: \_\_\_\_\_

Title: \_\_\_\_\_

Preferred Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Daytime Phone: \_\_\_\_\_ E-mail Address: \_\_\_\_\_

Please provide your e-mail address for conference updates and registration confirmation.

GUEST REGISTRATION	Early-Bird Registration Fees (through April 22)	Registration Fees (after April 22 or on-site)
<input type="checkbox"/> TEDS/Accreditation Guest Registration	\$50/person	\$75/person
<input type="checkbox"/> Annual Conference Guest Registration	\$150/person	\$200/person
<input type="checkbox"/> Children 12 and Under	\$25/person	\$50/person

A guest refers to a spouse or personal friend, not a business associate, staff member, or colleague. All guests must be registered to attend NCPERS events. **See general information page for more details.**

First Name: \_\_\_\_\_ Last Name: \_\_\_\_\_

First Name: \_\_\_\_\_ Last Name: \_\_\_\_\_

## REGISTRATION/ORDER SUMMARY

TEDS Registration \$ \_\_\_\_\_  
 NCPERS Accredited Fiduciary  
 (NAF) Program \$ \_\_\_\_\_  
 Annual Conference Registration \$ \_\_\_\_\_  
 Guest Registration \$ \_\_\_\_\_  
**GRAND TOTAL (U.S. funds) \$ \_\_\_\_\_**

## PAYMENT METHODS (All payments must be in U.S. funds)

### Check

Send registration form(s) and check,  
 made payable to NCPERS, to:  
 444 North Capitol Street, NW  
 Suite 630  
 Washington, DC 20001

### Credit Card

American Express   Visa   MasterCard 

Credit Card #: \_\_\_\_\_

Expiration Date: \_\_\_\_\_ CC Verification Code: \_\_\_\_\_

Name (as it appears on the card): \_\_\_\_\_

CC Billing Address: \_\_\_\_\_

Authorized Amount to Charge: \$ \_\_\_\_\_

*By submitting this form, I certify I have read and understand the terms of this registration. If paying by credit card, I authorize NCPERS to charge my card for the total amount indicated.*

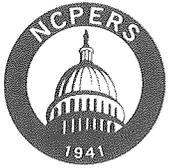
Signature: \_\_\_\_\_

## CANCELLATION POLICY

All registration cancellations must be received in writing before April 22 to receive a refund and will be subject to a processing fee: \$50 for TEDS/Accreditation Program, \$100 for Annual Conference, and \$50 for guest registrations. **No refunds will be given for cancellations after April 22 or for no-shows.** Please e-mail your cancellation request to [registration@ncpers.org](mailto:registration@ncpers.org) or fax it to 202-624-1439.

For updates or to register online visit [www.NCPERS.org](http://www.NCPERS.org). Fax registration forms to 202-624-1439.

Question? Call 1-877-202-5706 or e-mail [registration@ncpers.org](mailto:registration@ncpers.org).



National Conference on Public Employee Retirement Systems  
*The Voice for Public Pensions*

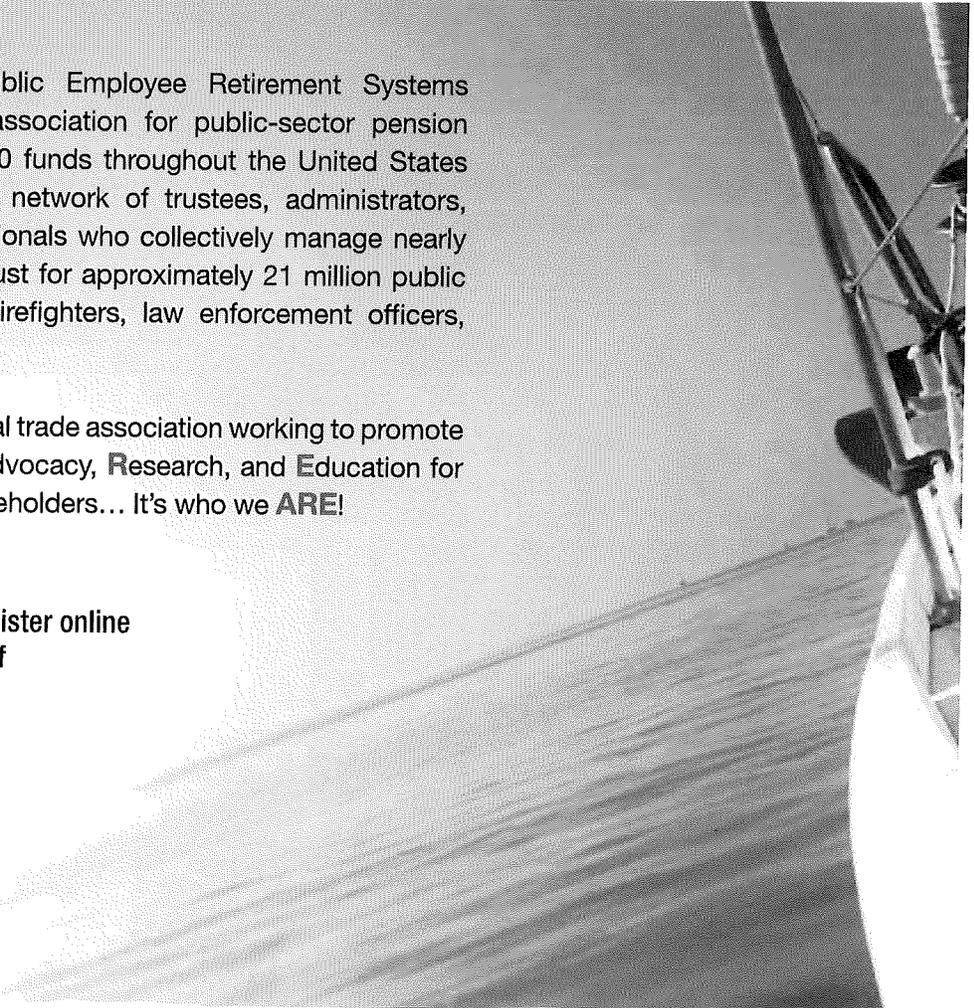
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Suite 630  
Washington, DC 20001  
Phone: 1-877-202-5706  
Fax: 202-624-1439  
info@NCPERS.org  
www.NCPERS.org

The National Conference on Public Employee Retirement Systems (NCPERS) is the largest trade association for public-sector pension funds, representing more than 500 funds throughout the United States and Canada. It is a unique nonprofit network of trustees, administrators, public officials, and investment professionals who collectively manage nearly \$3.7 trillion in pension assets held in trust for approximately 21 million public employees and retirees — including firefighters, law enforcement officers, teachers, and other public servants.

Founded in 1941, NCPERS is the principal trade association working to promote and protect pensions by focusing on **A**dvocacy, **R**esearch, and **E**ducation for the benefit of public sector pension stakeholders... It's who we **ARE!**



For program updates and to register online  
go to [www.NCPERS.org/annconf](http://www.NCPERS.org/annconf)



Amy Brown's

# PRJ

THE PUBLIC RETIREMENT JOURNAL  
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28<sup>th</sup> Annual Southern California

## **PUBLIC RETIREMENT SEMINAR** **March 24<sup>th</sup>, 2016**

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(916) 341-0848

## KEYNOTE SPEAKER

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# Betty T. Yee

CALIFORNIA STATE  
CONTROLLER

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State Controller Betty T. Yee was elected in November 2014, following two terms of service on the Board of Equalization. As Controller, she continues to serve the Board as its fifth voting member.

Ms. Yee was first elected to the Board of Equalization in 2006 where she represented 21 counties in northern and central California. She was elected to her second four-year term in 2010.

Now serving as the State's Chief Financial Officer, Ms. Yee also chairs the Franchise Tax Board and serves as a member of the California Public Employees' Retirement System (CalPERS) and the California State Teachers' Retirement System (CalSTRS) Boards. These two boards have a combined portfolio of nearly \$500 billion.

Ms. Yee has over 30 years of experience in public service, specializing in state and local finance and tax policy. Ms. Yee previously served as Chief Deputy Director for Budget with the California Department of Finance where she led the development of the Governor's Budget, negotiations with the Legislature and key budget stakeholders, and fiscal analyses of legislation on behalf of the Administration. Prior to this, she served in senior staff positions for several fiscal and policy committees in both houses of the California State Legislature.

Ms. Yee currently serves on the board of directors for the Equality California Institute. She is a cofounder of the Asian Pacific Youth Leadership Project, which exposes California high school youth to the public service, public policy, and political arenas.

A native of San Francisco, Ms. Yee received her bachelor's degree in Sociology from the University of California, Berkeley, and her master's degree in Public Administration from Golden Gate University, San Francisco.

**SEMINAR DATE**  
MARCH 24, 2016  
9am - 4pm  
Registration: 8am



**Register Today!**

[PUBLICRETIREMENTJOURNAL.ORG](http://PUBLICRETIREMENTJOURNAL.ORG)

**Cancellation Policy**

Full refund if notified by 5pm  
on March 10, 2016

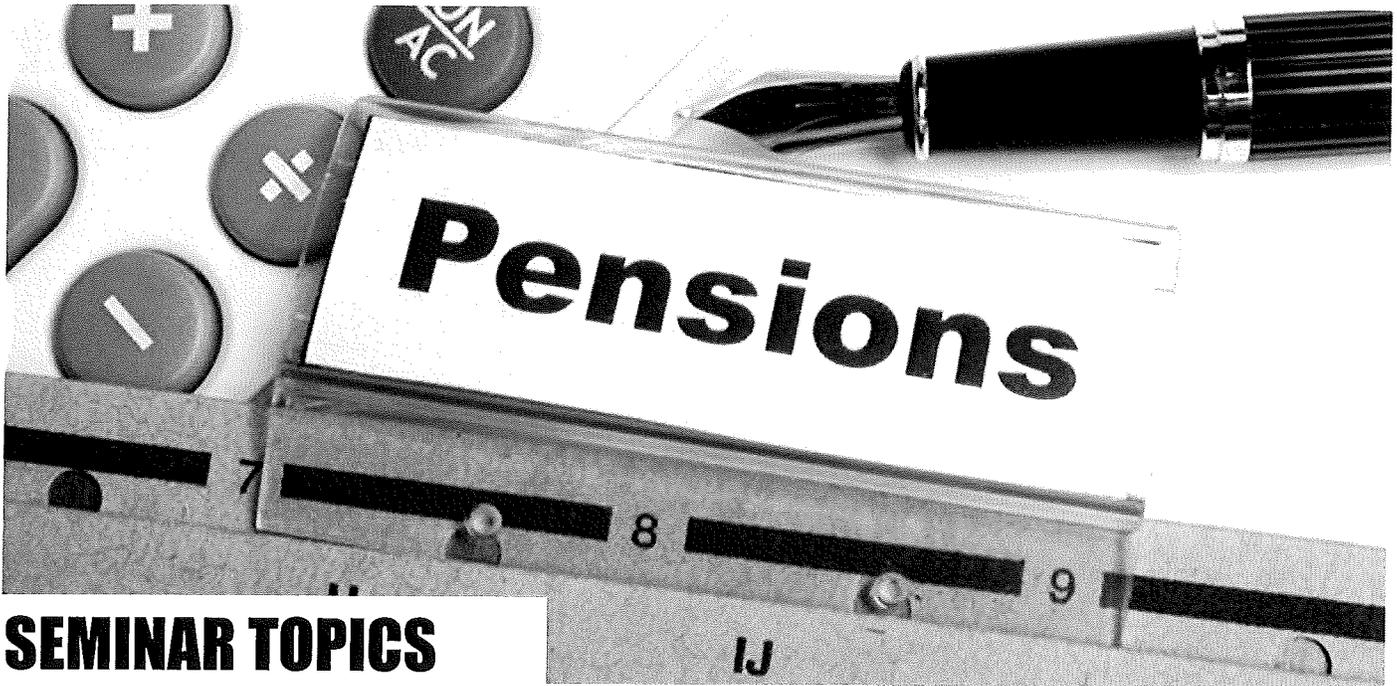
## LOCATION

The Centre at Sycamore Plaza  
5000 Clark Avenue  
Lakewood, CA 90712

**REGISTRATION : \$200**

Includes breakfast,  
lunch & seminar  
materials





## SEMINAR TOPICS

### Defined Benefits Are Under Attack

We will hear from experts about the history behind the failed attempts to end defined benefit plans and cut pensions for existing workers and the likelihood of a 2016 initiative.

### CalPERS - Rate Increases on the Horizon

We'll explore why CalPERS actuaries believe the pension fund needs to be taking less risk, and we'll take look at why, when and how contribution rate will increase over the next five to ten years, and beyond.

### Legislators at Work

The pension gurus of the Legislature will be on hand to discuss the current legislative session - the current political climate, issues of importance, and an overview of the bills that have become law in January 2016.

### Actuarial Realities of Pension Benefits

Despite politics and legislation, there's still the reality of funding promised benefits. We'll hear from a top pension actuary about the impacts of increased rates and issues on the horizon.

### Labor's Perspective on Retirement - Is a Statewide Initiative Expected for 2016?

We'll hear from labor representatives about their take on current events. How is the PEPR going to affect bargaining? What will happen on the statewide ballot in 2016?

### Management and Labor

We will have attorneys from both sides discussing the implications of the recent ruling on Chapter 9 bankruptcies, concessions at the bargaining table, increases in rates and how that will play into decisions made at the state and local level.

### Local Agency Bankruptcies - A U.S. Bankruptcy Court Ruling

Bankruptcy has become a bigger issue for local governments that anyone would like. Speakers will talk about those who have gone down this path and what it means for employees' pension benefits and the employers' pension liabilities.

### Retiree Health Care

Are these vested benefits? In the wake of the Affordable Care Act implementation and the rising costs of health care coverage, are your retiree benefits volatile?

### Local Ordinances to Scale Back Pensions

We will discuss the legal challenges facing local agencies whose elected bodies vote to either scale back existing benefits, implement new tiers, or terminate their contracts with their retirement systems.

Stay informed about future seminars and public retirement news.



THE PUBLIC RETIREMENT JOURNAL  
1121 L Street, Ste. 408  
Sacramento, CA 95814

916-341-0848 (Office)  
916-341-0849 (Fax)



Amy Brown's

**PRJ**

THE PUBLIC RETIREMENT JOURNAL  
The Inside Stories on Retirement in California

**DELIVER TO:**

Contra Costa County E.R.A.  
c/o Gail Strohl  
1355 Willow Way, Suite 221  
Concord, CA 94520



28<sup>th</sup> Annual Southern California  
**PUBLIC RETIREMENT SEMINAR**  
March 24<sup>th</sup>, 2016  
**REGISTER TODAY!**

Organization Name: \_\_\_\_\_

Attendee Name(s): \_\_\_\_\_

\_\_\_\_\_

Address: \_\_\_\_\_

City, State, Zip Code: \_\_\_\_\_

Email Address: \_\_\_\_\_

Phone Number: \_\_\_\_\_

Payment Method (Circle):      Check                      Credit Card

Card Number: \_\_\_\_\_

Exp Date and 3 Digit VCode: \_\_\_\_\_

Dietary Restrictions: \_\_\_\_\_



## SAVE THE DATE

Siguler Guff & Company's  
2016 Annual Conference

**Wednesday, May 4 – Thursday, May 5**

New York Athletic Club  
180 Central Park South  
New York, NY 10019

### **May 4**

Advisory Board Meetings (for advisory board members only)  
Dinner with Keynote Speaker

### **May 5**

Morning Sessions: BRIC/Global Emerging Markets Opportunities Funds  
Small Buyout Opportunities Funds  
Small Business Credit Opportunities Fund

Afternoon Sessions: Distressed Opportunities Funds  
Secondary Opportunities Fund  
Distressed Real Estate Opportunities Funds

Invitation to follow  
Please direct questions to [conference@sigulerguff.com](mailto:conference@sigulerguff.com)



## 2016 SIGULER GUFF ANNUAL CONFERENCE

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### Conference Agenda May 4 – 5, 2016

**New York Athletic Club  
180 Central Park South  
New York, NY 10019**

#### Wednesday, May 4

Advisory board meetings will be held in the Manhattan Room on the 12th floor  
Cocktail reception and dinner will be held on the 9th floor

1:30pm – 2:30pm	BRIC/Global Emerging Markets Opportunities Funds Advisory Board Meeting Advisory board members only
2:30pm – 3:30pm	Small Buyout Opportunities Funds Advisory Board Meeting Advisory board members only
3:30pm – 3:45pm	Break
3:45pm – 4:45pm	Distressed Opportunities Funds Advisory Board Meeting Advisory board members only
4:45pm – 5:45pm	Distressed Real Estate Opportunities Funds Advisory Board Meeting Advisory board members only
6:00pm – 7:00pm	Cocktail Reception
7:00pm – 9:30pm	<b>Dinner with Keynote Speaker</b>

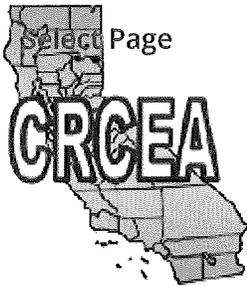
#### Thursday, May 5

All conference events will be held on the 9th floor

8:00am – 8:45am	Buffet Breakfast
8:45am – 9:00am	<b>Introductory Remarks and Firm Update</b> Drew Guff, Managing Director and Founding Partner Siguler Guff & Company
9:00am – 10:15am	<b>BRIC/Global Emerging Markets Opportunities Funds: Review and Outlook</b> Ralph Jaeger, Managing Director Siguler Guff & Company  Cesar Collier, Managing Director, Brazil Vladimir Andrienko, Managing Director, Russia Praneet Singh, Managing Director, India Ally Zhang, Managing Director, China Siguler Guff & Company  <b>BRIC/EM GUEST SPEAKER</b>

10:15am – 10:30am	Break
10:30am – 11:15am	<b>Small Buyout Opportunities Funds: Review and Outlook</b> Kevin Kester, Managing Director Siguler Guff & Company
11:15am – 11:30am	Break
11:30am – 12:00pm	<b>Small Business Credit Opportunities Fund: Review and Outlook</b> Sean Greene, Managing Director Mark Denomme, Managing Director Siguler Guff & Company
12:00pm – 12:30pm	Buffet Lunch
12:30pm – 1:15pm	<b>Keynote Lunch Speaker</b>
1:15pm – 1:30pm	<b>Private Equity Market: Review and Outlook</b> George Siguler, Managing Director and Founding Partner Siguler Guff & Company
1:30pm – 1:45pm	Break
1:45pm – 3:00pm	<b>Distressed Opportunities Funds: Review and Outlook</b> James Gereghy, Managing Director Siguler Guff & Company
	<b>DOF GUEST SPEAKER</b>
3:00pm – 3:15pm	Break
3:15pm – 3:45pm	<b>Secondary Opportunities Fund: Review and Outlook</b> Anthony Cusano, Managing Director Siguler Guff & Company
3:45pm – 4:30pm	<b>Distressed Real Estate Opportunities Funds: Review and Outlook</b> James Corl, Managing Director Anthony Corriggio, Managing Director Siguler Guff & Company
4:30pm	Closing

✉ info@crcea.org

 Search

# California Retired County Employees Association



**Join us in Bakersfield on April 11-13, 2016 for our Spring Conference, hosted by Kern County.**

The conference will be held at the Bakersfield Marriott at the Convention Center.

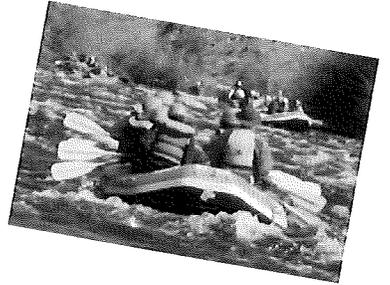
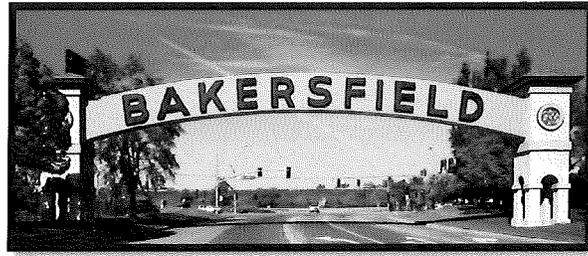
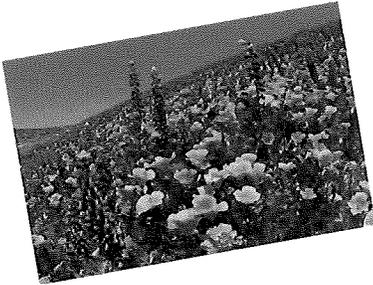
Association Fee: \$75

Attendee Fee: \$45

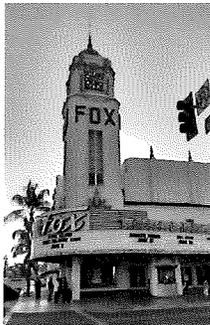
For hotel reservations, please call the hotel directly at (661) 323-1900 and request the CRCEA Conference rate, which is \$110 per night, plus taxes. A breakfast buffet is available for \$10.75 per person/per day in the Nine's Coffee Shop. For any questions or issues, please contact Ginger Mello at (661) 834-6729.

To download the conference flyer, [click here](#).

# 2016 CRCEA SPRING CONFERENCE



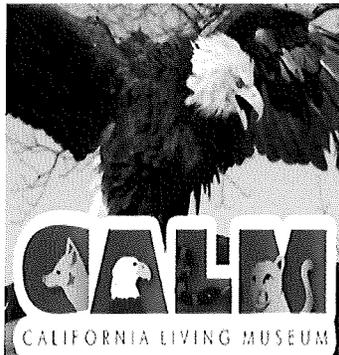
## Places to see...



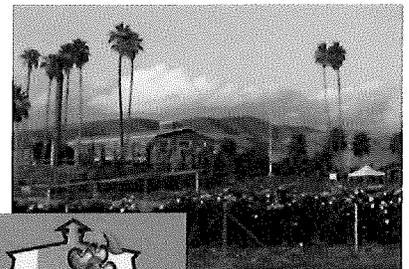
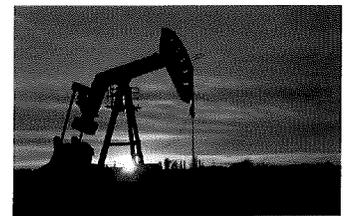
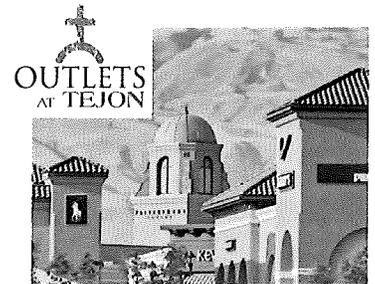
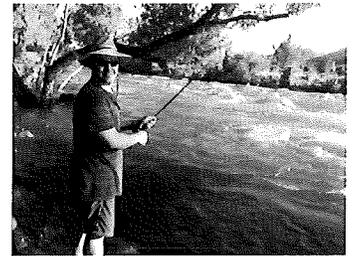
**2016 CRCEA  
Spring Conference  
April 11 - 13, 2016**

**Hosted By  
RETIRED EMPLOYEES  
OF KERN COUNTY**

*The Bakersfield Marriott  
at the  
Convention Center  
801 Truxtun Avenue  
Bakersfield, CA 93301  
661 • 323-1900*



## Things to do...





PLEASE SUBMIT ONE FORM  
FOR EACH ATTENDEE

**2016 CRCEA SPRING CONFERENCE REGISTRATION FORM**

**April 11 - 13, 2016**

The Bakersfield Marriott at the Convention Center  
801 Truxtun Avenue, Bakesfield CA 93301  
Reservations: 661-323-1900

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

PHONE \_\_\_\_\_ E-MAIL \_\_\_\_\_

AFFILIATE OR ASSOCIATION NAME \_\_\_\_\_

EMERGENCY CONTACT (Name/ Phone number) \_\_\_\_\_

SPRING CONFERENCE REGISTRATION DEADLINE: **MARCH 31, 2016**  
RESERVATION DEADLINE FOR MARRIOTT HOTEL: **MARCH 11, 2016**

For hotel reservations, please call hotel directly at 661-323-1900 and request CRCEA Conference rate, which is \$110 per night, plus taxes. Breakfast buffet is available for \$10.75 per person per day in the Nine's Coffee Shop. For any questions or issues, please contact Ginger Mello at 661-834-6729.

**Tell us which Designation you wish on your name badge. Please check appropriate box below:**

Delegate	<input type="checkbox"/>	Alternate Delegate	<input type="checkbox"/>
Retired Board Member	<input type="checkbox"/>	Retired Board Member Alternate	<input type="checkbox"/>
Member	<input type="checkbox"/>	Guest	<input type="checkbox"/>
Affiliate (Pay only banquet fee)	<input type="checkbox"/>	CRCEA Officer (Indicate Title) _____	<input type="checkbox"/>

**ASSOCIATION FEE \$75.00** (enter only on form submitted by Delegate) \$ \_\_\_\_\_

**ATTENDEE FEE \$45.00** \$ \_\_\_\_\_

(To be paid by every attendee -including spouse/guest - except Affiliate and Host Conference Volunteers)

**BANQUET TUESDAY EVENING -\$45 PER PERSON**

Mushroom Chicken	Quantity		@ \$45.00 each	Total Paid	\$ _____
Salmon fillet topped with berry buerre blanc	Quantity		@ \$45.00 each	Total Paid	\$ _____
Mushroom stuffed ravioli (Vegetarian)	Quantity		@ \$45.00 each	Total Paid	\$ _____
<b>TOTAL AMOUNT ENCLOSED</b> (Association fee, banquet, attendee fee)				\$ _____	
<b>MAIL CHECK (payable to REOKC) along with this form to:</b>				<b>REOKC</b> <b>P O Box 21316</b> <b>Bakersfield, CA 93390</b> <b>ATTN: CRCEA Conference</b>	