



AGENDA

RETIREMENT BOARD MEETING

SECOND MONTHLY MEETING
May 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 March 9, 2016 meeting.

CLOSED SESSION

4. CONFERENCE WITH LABOR NEGOTIATOR
(Government Code Section 54957.6)

Agency designated representative:
Christina Dunn, Admin/HR Manager

Employee Organization: AFSCME Local 2700

5. The Board will continue in closed session under Gov. Code Section 54957 to evaluate the performance of the following public employee:

Title: Chief Executive Officer

6. The Board will continue in closed session pursuant to Govt. Code Section 54956.9(d)(4) to confer with legal counsel regarding whether to initiate litigation (one case).
7. The Board will continue in closed session pursuant to Govt. Code Section 54956.9(d)(2) to confer with legal counsel regarding potential litigation (one case).

OPEN SESSION

8. Consider and take possible action to establish the Disability Specialist classification based on the recommendation received from Koff and Associates, effective June 1, 2016.

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.

9. Consider and take possible action to grant a 3% increase in base pay and a \$500 lump sum payment for all unrepresented staff, except for the CCCERA executive classifications.
 - a. Adopt BOR Resolution 2016-2 granting a 3% increase in base pay effective July 1, 2016 and lump-sum payment in the amount of \$500, to be paid on July 10, 2016 for all unrepresented staff, except for the Chief Executive Officer, Deputy Chief Executive Officer, Compliance Officer, General Counsel, and Chief Investment Officer positions.
 - b. Adopt CCCERA Position Pay Schedules effective July 1, 2016 which reflects a 3% increase in base pay for all CCCERA classifications, except for those classifications listed above.
10. Review of total portfolio performance for period ending March 31, 2016.
11. Consider and take possible action to add or remove investment managers from the watch list.
12. Presentation and recommendation from Verus regarding the establishment of a pool of transition managers.
13. Consider and take possible action to establish a pool of transition managers and execute standing agreements with one or more transition managers.
14. Presentation and recommendation from Verus regarding cash overlay services.
15. Consider and take possible action to contract with a cash overlay manager.
16. Consider and take possible action to authorize the CEO to execute a lease agreement with Caltronics for copier machines effective June 1, 2016.
17. Consider authorizing the attendance of Board and/or staff:
 - a. DLJ Real Estate Capital Partners Annual Meeting, June 15, 2016, New York, NY.
 - b. Modern Investment Theory & Practice for Retirement Systems, SACRS, July 17-20, 2016, Berkeley, CA.
18. Miscellaneous
 - a. Staff Report
 - b. Outside Professionals' Report
 - c. Trustees' comments



Meeting Date
05/25/16
Agenda Item
#3

MINUTES

RETIREMENT BOARD MEETING MINUTES

REGULAR MEETING
March 9, 2016
9:00 a.m.

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

Present: Debora Allen, Candace Andersen, Scott Gordon, Jerry Holcombe, Louie Kroll, John Phillips, William Pigeon, Gabe Rodrigues, Todd Smithey, Jerry Telles and Russell Watts

Absent: Brian Hast

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

Outside Professional Support:	Representing:
Harvey Leiderman	Reed Smith LLP
Susan Hastings	Laughlin, Falbo, Levy & Moresi LLP
Joe Wiley	Wiley Price & Radulovich LLP

1. **Pledge of Allegiance**

Phillips led all in the *Pledge of Allegiance*.

2. **Accept comments from the public**

No member of the public offered comment.

3. **Approval of Minutes**

It was M/S/C to approve the minutes of the January 13, 2016 Board meeting with a revision to delete Russell Watts as being absent and adding "(Deputy Treasurer, present and voting in Russell Watts absence)" after Belinda Zhu's name on Members Present. (Yes: Allen, Andersen, Gordon, Phillips, Pigeon, Rodrigues, Smithey, Telles and Watts)

4. **Routine Items**

It was M/S/C to approve the routine items of the March 9, 2016 meeting. (Yes: Allen, Andersen, Gordon, Phillips, Pigeon, Rodrigues, Smithey, Telles and Watts)

CLOSED SESSION

The Board moved into closed session pursuant to Govt. Code Section 54957, 54957.6 and 54956.9(d)(1).

The Board moved into open session.

5. The disability application for David Reese will be continued for consideration at the April 13, 2016 meeting.
6. There was no reportable action related to Govt. Code Section 54957.6.
7. There was no reportable action related to Govt. Code Section 54957.6.
8. There was no reportable action related to Govt. Code Section 54956.9(d)(4).
9. **Consider and take possible action to determine whether panel management pay is pensionable compensation for four physicians who retired prior to 2013 and provide direction on recovery of pension overpayments**

Dutkiewicz discussed the history of panel management pay noting that the pay earn code was created in 2013 but prior to this the time was reported under the pay earn code for on-call pay. Based on this information CCCERA returned interest on pension contributions attributed to panel management pay as taxable distributions to the active members.

He also reviewed the purpose of panel management pay noting that it was first offered to physicians in 2011 to encourage physicians to expand their primary care clinics to increase patient access and provide additional compensation to the physicians for the expanded and after-hours responsibilities it entailed.

In public comment, Chris Farnitano, Health Services physician, noted he was asked to speak at the meeting on behalf of Dr. Walker and Dr. Goldstein. He described the work that the doctors complete during panel management time. He discussed the types of clinics noting that not all doctors are required to complete panel management time. He stated that at the time that this additional compensation was offered to physicians Health Services expected the compensation to be pensionable.

In public comment, David Hearst, retired physician, he noted that when he retired in 2012 there was not separate information in the MOU regarding panel management pay. He discussed why he felt the pay should be pensionable and that he was reassured by his supervisor and his CCCERA retirement counselor that it would be considered pensionable. He felt he was expected to do the work and it was therefore required of his position.

The Board discussed the applicable MOUs and when they were ratified as well as the resolution adopted by the Board of Supervisors providing for the panel management pay earn code.

In public comment, Krista Farey, retired physician, discussed the type of work the physicians completed while receiving panel management pay noting that it was required work that occurred before and after the panel management pay earn code was created. She noted it was regularly scheduled and should therefore be included as pensionable compensation. She also noted that physicians that did not complete the required five clinics were not compensated for the clinics under the panel management pay earn code.

Priscilla Hinman, retired physician, discussed the purpose for creating panel management pay noting that there was a retention issue at the time and by offering this compensation it created a new infrastructure to assist doctors and nurses to complete the work. Institutional penalties exist for not getting the work done. These penalties can affect funding. She discussed her reasons for retiring in 2012 and noted that she was advised by CCCERA that this compensation would be included in her pension.

Dana Slauson, retired physician, she noted she had worked at John Muir but returned to the County because the County was more aligned with her career and the level of quality care that they wanted to provide their patients. She noted that she went to the CCCERA group counseling sessions four or five times before deciding to retire and during these sessions she was always reassured that this pay would count as pensionable. She asked the Board to keep in mind that there are people that are affected by their decision.

In public comment, David Hearst, retired physician, discussed the classifications that worked panel management time noting that the classification is the same but that the tasks completed by physicians in different departments are very different. He noted weekend rounds are pensionable.

Dutkiewicz reviewed the items for the Board to consider regarding panel management pay noting the Board should determine if the panel management pay earn code should be pensionable and if it is not how the overpayments should be recouped. He noted that there are four retired physicians that this decision affects.

There was a lengthy discussion on the current and previous legal requirements for determining if a pay item is pensionable compensation.

It was **M/S/C** to determine that the on-call compensation paid to four physicians during their final average salary year was for overtime work providing panel management services and therefore should be excluded as pensionable compensation. (Yes: Allen, Andersen, Gordon, Phillips, Rodrigues, Smithey, Telles and Watts. No: Pigeon)

Levy reviewed the options for collecting the overpayment provided to the four retired physicians that received panel management pay in their final year of compensation which increased their pension amount noting that the Board could receive the overpayment amount from the employer or from the retirees.

It was **M/S/C** to direct staff to pursue collection of the overpayments from the County pursuant to the amount indicated in Attachment 14. (Yes: Phillips, Pigeon, Rodrigues, Smithey, Telles and Watts. No: Allen, Andersen, Gordon)

Andersen and Smithey were no longer present for subsequent discussion and voting.

10. Presentation from staff and Adams Street regarding proposed Adams Street Venture Innovation Fund (ASVIF) commitment – Jeffrey Diehl and Kelly Meldrum

Price defined venture capital noting there is a higher failure rate of individual deals but there is also a higher expected portfolio rate of return.

Chu reviewed Adams's Street program both with and without a \$75mm commitment to ASVIF, the risk in investing in ASVIF and the terms of ASVIF and the estimated fee schedule.

Price noted CCCERA received written confirmation that Adams Street waived confidentiality of the presentation materials.

Diehl reviewed the history of the firm noting they currently have over \$27 billion in assets under management.

Meldrum provided an overview of the venture innovation fund noting time diversification is important with venture funds. Adams Street has experience in private markets which contributes to their success noting that relationships are important with private market investing.

Meldrum noted that they have identified 15-20 possible investments for the fund and feel that the targeted returns are consistent with their historical returns. She discussed the portfolio construction noting they have a preference for early stage ventures and the bulk of the exposure will be in the United States.

11. Consider and take possible action to commit to Adams Street Venture Innovation Fund

Price noted a positive opinion from Verus regarding the proposed investment in the Adams Street Venture Innovation Fund is included in the agenda packet.

After a discussion on fees, it was **M/S/C** to make a capital commitment of \$75 million to Adams Street Venture Innovation Fund (ASVIF), subject to satisfactory due diligence, a successful on-site visit, and legal review and authorize the CEO to sign the necessary contracts. (Yes: Allen, Gordon, Holcombe, Phillips, Pigeon, Rodrigues, Telles and Watts)

12. Consider and take possible action to cancel the March 17, 2016 meeting

It was **M/S/C** to cancel the March 17, 2016 meeting. (Yes: Allen, Gordon, Holcombe, Phillips, Pigeon, Rodrigues, Telles and Watts)

13. Miscellaneous

(a) Staff Report –

Strohl reported IT staff transitioned data services from the County on February 25, 2016 and it was a very smooth and successful transition; she thanked and congratulated Son Lu and his entire IT team noting they did a phenomenal job and also thanked the County DOIT department for their part in the transition; she reported there will be training on integrity at the next All Staff Meeting; and there will be an Audit Committee meeting on March 24, 2016 after the Board meeting noting the external auditor will be present to give an overview of the 2015 audit.

Price reported the head of the non-investment grade division of the Angelo Gordon Energy Credit Opportunities Fund has left the firm. Staff will be conducting an on-site visit in conjunction with the upcoming Annual Meeting.

Levy gave a brief update on AB1853 noting the bill was introduced and sponsored by SACRS. The bill would allow '37 Act Systems to become independent.

Dunn reminded the Board Form 700's are due April 1, 2016; CCCERA NeoGov site launched last Friday and the Accounting Manager position is posted on it.

(b) Outside Professionals' Report -

None

Pigeon was no longer present for subsequent discussion and voting.

(c) Trustees' comments –

Watts reported the State Treasurer John Chiang wrote an article in his newsletter about greater transparency needed as related to investment fees. Price commented this is an area of ongoing concern.

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

John Phillips, Chairman

Scott Gordon, Secretary



Meeting Date
05/25/16
Agenda Item
#8

MEMORANDUM

Date: May 25, 2016
To: CCCERA Board of Retirement
From: Gail Strohl, Chief Executive Officer
Subject: Consider and take possible action to establish the Disability Specialist classification based on the recommendation received from Koff and Associates, effective June 1, 2016.

CCCERA recently contracted with Koff and Associates for classification and compensation consulting services. During the classification study, Koff and Associates determined the tasks being completed by the Retirement Counselors performing services related to disability retirements did not appropriately reflect the body of work. Therefore, Koff and Associates has recommended that CCCERA create a Disability Specialist classification.

Koff and Associates completed a compensation study for the proposed Disability Specialist classification and recommends the classification be placed at salary range 25, which provides a top salary step of \$7,016 per month.

Recommendation:

Consider and take possible action to establish the Disability Specialist classification based on the recommendation received from Koff and Associates, effective June 1, 2016.



To: Christina Dunn
From: Katie Kaneko, Project Manager
Subject: Response to Review of Disability Specialist Compensation Data
Date: May 13, 2016

It is our recommendation that this new class be placed at range 25 of CCCERA's salary schedule based on the use of the Retirement Counselor II top monthly and total monthly amounts:

- The current top monthly is 33.9% below the market median of \$7,287/month.
- The current total monthly is 23.1% below the market median of \$10,634, which is a gain of approximately 10.8% once the cost of benefits is taken into consideration.
- The recommended salary level is 23.1% higher than the current base salary, or \$6,699/month, and the class should be placed in range 25 whose maximum monthly pay of \$7,016/month is closest to the recommended salary level.

Please let me know if you have any questions on the the recommended salary, or if you need further information on the issues raised in the review process.

Contra Costa County Employees' Retirement Association
 Top Monthly Salary Data - Disability Specialist
 May 2016

Rank	Comparator Agency	Class Title	Top Monthly Salary	Cost of Labor	Adjusted Top Step Salary	Effective Date	Next Salary Increase	Next Percentage Increase
1	Sacramento County Employees Retirement System	Retirement Disability Specialist	\$7,247	9.8%	\$7,957	6/28/2015	6/26/2016	4% + 1%
2	City/County San Francisco Retirement System	Senior Benefits Analyst	\$7,817		\$7,817	10/15/2015	7/1/2016	2.25%-3.25%
3	San Diego County Employees Retirement Association	Retirement Disability Specialist	\$6,649	9.6%	\$7,287	6/26/2015	6/24/2016	2%
4	Alameda County Employees Retirement Association	Retirement Specialist III	\$6,219		\$6,219	7/5/2015	Unknown	Unknown
5	Orange County Employees Retirement System	Senior Retirement Program Specialist	\$5,415	7.2%	\$5,805	4/14/2014	Unknown	Unknown
6	Contra Costa County Employees' Retirement Association	Retirement Counselor II (Disability Specialist)	\$5,442		\$5,442	7/1/2015		
7	Ventura County Employees Retirement Association	N/C						
	San Mateo County Employees Retirement Association	N/C						
	San Bernardino County Employees Retirement Association	N/C						
	Central Contra Costa Sanitary District	N/C						
	Contra Costa County	N/C						
	Contra Costa Water District	N/C						
	East Bay Municipal Utility District	N/C						
			Average of Comparators		\$7,017			
			% CCCERA Above/Below		-28.9%			
			Median of Comparators		\$7,287			
			% CCCERA Above/Below		-33.9%			
			Number of Matches		5			

NOTE: All calculations exclude CCCERA

N/C - Non Comparator

**Contra Costa County Employees' Retirement Association
Disability Specialist Benefits Detail
May 2016**

Disability Specialist		Agency											
Agency	Class Title	Alameda County Employees Retirement Association	Ventura County Employees Retirement Association	City/County San Francisco Retirement System	Sacramento County Employees Retirement System	Orange County Employees Retirement System	San Bernardino County Employees Retirement Association	San Diego County Employees Retirement Association	San Mateo County Employees Retirement Association	East Bay Municipal Utility District	Contra Costa Water District	Central Contra Costa Sanitary District	Contra Costa County
	Retirement Counselor II (Disability Specialist)												
	Top Monthly Salary	\$6,219		\$7,817	\$7,957	\$5,805		\$7,287					
	Employee Retirement Formula 1	2%@60		2%@60	2%@55	2.7%@55		3%@60					
	PERS	-\$190		-\$274		\$467		\$328					
	Enhanced PERS Formula							\$714					
	12 Month Highest Salary	\$386		\$485	\$493			\$98					
	Social Security							\$452					
	Other												
	Insurance												
	Cafeteria												
	Health	\$2,476		\$1,518	\$1,281	\$1,006		\$1,188					
	Dental	\$124		\$183									
	Vision												
	EAP												
	Life	\$4		\$4	\$5			\$1					
	LTD				\$2								
	STD/SDI												
	Other												
	Leave												
	Vacation	\$359		\$451	\$459	\$603		\$420					
	Holidays	\$359		\$451	\$383	\$268		\$364					
	Administrative												
	Auto Allowance												
	Uniform Allowance												
	Deferred Compensation		\$150										
	Other												
	Longevity												
	Benefit Cost	\$3,517		\$2,817	\$2,744	\$2,345		\$3,565					
	Total Monthly Comp.	\$9,796		\$10,634	\$10,701	\$9,150		\$10,852					

Note: Total Monthly Compensation number may vary slightly from the sum of its components due to cell formulas & rounding.

**Contra Costa County Employees' Retirement Association
Disability Specialist Benefits Detail
May 2016**

1- For agencies that participate in the 37 Act retirement programs the actual retirement formulas may differ. For purposes of comparison we have converted each comparator's 37 Act formula to the CalPERS formula that it most closely mirrors.

**Contra Costa County Employees' Retirement Association
Total Monthly Compensation Data - Disability Specialist
May 2016**

Disability Specialist						
Rank	Comparator Agency	Class Title	Total Monthly Salary	Effective Date	Next Salary Increase	Next Percentage Increase
1	San Diego County Employees Retirement Association	Retirement Disability Specialist	\$10,852	6/26/2015	6/24/2016	2%
2	Sacramento County Employees Retirement System	Retirement Disability Specialist	\$10,701	6/28/2015	6/26/2016	4% + 1%
3	City/County San Francisco Retirement System	Senior Benefits Analyst	\$10,634	10/15/2015	7/1/2016	2.25%-3.25%
4	Alameda County Employees Retirement Association	Retirement Specialist III	\$9,736	7/5/2015	Unknown	Unknown
5	Contra Costa County Employees' Retirement Association	Retirement Counselor II (Disability Specialist)	\$8,637	7/1/2015		
6	Orange County Employees Retirement System	Senior Retirement Program Specialist	\$8,150	4/14/2014	Unknown	Unknown
	Ventura County Employees Retirement Association	N/C				
	San Mateo County Employees Retirement Association	N/C				
	San Bernardino County Employees Retirement Association	N/C				
	Central Contra Costa Sanitary District	N/C				
	Contra Costa County	N/C				
	Contra Costa Water District	N/C				
	East Bay Municipal Utility District	N/C				
			Average of Comparators	\$10,015		
			% CCCERA Above/Below	-16.0%		
			Median of Comparators	\$10,634		
			% CCCERA Above/Below	-23.1%		
			Number of Matches	5		

NOTE: All calculations exclude CCCERA

N/C - Non Comparator



Meeting Date
05/25/16
Agenda Item
#9

MEMORANDUM

Date: May 25, 2016
To: CCCERA Board of Retirement
From: Gail Strohl, Chief Executive Officer
Subject: BOR Resolution 2016-2 granting a 3% increase in base pay effective July 1, 2016 and a lump-sum in the amount of \$500, to be paid on July 10, 2016 for all unrepresented staff, except for the executive classifications

Background

On July 23, 2015, the CCCERA Board of Retirement adopted the Memorandum of Understanding (“MOU”) between Contra Costa County Employees’ Retirement Association and United Clerical, Technical & Specialized Employees (“AFSCME”), Local 2700, for the period of July 1, 2013 through December 31, 2016. This MOU provided employees represented by AFSCME with a 3% increase in base pay, effective July 1, 2016 and a \$500 lump sum payment.

Recommendation

In order to retain parity between CCCERA employees it is recommended to:

- a. Adopt BOR Resolution 2016-2 granting a 3% increase in base pay effective July 1, 2016 and lump-sum payment in the amount of \$500, to be paid on July 10, 2016 for all unrepresented staff, except for the Chief Executive Officer, Deputy Chief Executive Officer, Compliance Officer, General Counsel, and Chief Investment Officer positions.
- b. Adopt CCCERA Position Pay Schedules effective July 1, 2016 which reflects a 3% increase in base pay for all CCCERA classifications, except for those classifications listed above.

BOR Reso. No. 2016-2

**RESOLUTION OF THE BOARD OF RETIREMENT
CONTRA COSTA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION**

**CCCERA RESOLUTION FOR SALARY AND BENEFITS
FOR UNREPRESENTED EMPLOYEES**

**EFFECTIVE FEBRUARY 1, 2016
AMENDED MAY 25, 2016**

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WHEREAS, the Contra Costa County Employees' Retirement Association ("CCCERA") is a public agency established by virtue of, and governed by the County Employees' Retirement Law of 1937, Government Code sections 31450, *et seq.*, ("CERL") and Article XVI, section 17 of the California Constitution.

WHEREAS, CCCERA administers a retirement system for the County of Contra Costa and for other participating employers located within the County, including CCCERA, by and through its Board of Retirement ("Board"), and as the Board delegates to its employees who are appointed by CCCERA pursuant to CERL section 31529.9 ("CCCERA Employees.")

WHEREAS, the Board wishes to provide salary and benefits to the unrepresented employees of CCCERA, effective from January 1, 2015 until further notice;

NOW THEREFORE IT IS HEREBY RESOLVED that effective January 1, 2015 and until further notice employees of CCCERA in the job classifications identified on Attachment A hereto shall receive the following salary and benefits:

1. Paid Holidays:

CCCERA observes the following paid holidays during the term covered by this Resolution:

New Year's Day	Labor Day
Martin Luther King Jr. Day	Veterans' Day
Presidents' Day	Thanksgiving Day
Memorial Day	Day after Thanksgiving
Independence Day	Christmas Day

Any paid holiday observed by CCCERA that falls on a Saturday is observed on the preceding Friday and any paid holiday that falls on a Sunday is observed on the following Monday.

Eligibility for Paid Holidays: Regular full-time employees are entitled to a paid day off in recognition of the holiday without a reduction in monthly base pay for CCCERA-observed holidays listed above.

If a holiday falls on an employee's regularly scheduled day off due to an alternative work schedule, the employee is entitled to take the day off, without a reduction in pay in recognition of the holiday. The employee is entitled to receive 8 hours of flexible compensation hours or pay at the rate of one times the employees' base rate of pay.

Part-time employees [*who are regularly scheduled to work a minimum of 20 hours per week*] are entitled to the listed paid holidays on a pro rata basis. For example, a part time employee whose position hours are 24 per week is entitled to 4.8 hours off work on a holiday ($24/40 \times 8 = 4.8$).

When a paid holiday falls on a part-time employee’s normally scheduled work day and the part-time paid holiday hours are more than the normally scheduled work hours the employee is entitled to receive flexible compensation hours or pay at the rate of one times the employees’ base rate of pay for the difference between the employee’s normally scheduled work hours and the paid part-time holiday hours.

When a paid holiday falls on a part-time employee’s normally scheduled work day and the part-time paid holiday hours are less than the normally scheduled work hours the employee must use non-sick leave accruals for the difference between the employee’s normally scheduled work hours and the part-time paid holiday hours. If the employee does not have any non-sick leave accrual balances, leave without pay will be authorized.

Flexible Compensation: Flexible Compensation may not be accumulated in excess of 288 hours. After 288 hours are accrued by an employee, the employee will receive flexible pay at the rate of 1.0 times the employee’s base rate of pay. Flexible compensation may be taken on those dates and times determined by mutual agreement of the employee and their supervisor.

2. Personal Holidays:

Regular employees subject to this Resolution are entitled to accrue up to two hours of personal holiday credit each month.

Part-time employees [*who are regularly scheduled to work a minimum of 20 hours per week*] accrue personal holiday hours on a pro rata basis.

No employee may accrue more than forty hours of personal holiday credit at any time. Once the employee reaches forty hours of personal holiday, the employee will cease accruing such paid time off until he/she uses sufficient such time to reduce his/her bank below the forty-hour maximum, after at which time the employee may begin to accrue additional hours up to the forty-hour maximum.

On separation from CCCERA service, employees shall be paid for any accrued and unused personal holiday hours at the employee’s then-current rate of pay.

3. Vacation:

Regular full-time employees subject to this Resolution are entitled to accrue paid vacation as follows:

<u>Length of Service*</u>	<u>Monthly Accrual Hours</u>	<u>Maximum Cumulative Hours</u>
Fewer than 11 years	10	240
11 years	10-2/3	256
12 years	11-1/3	272

<u>Length of Service*</u>	<u>Monthly Accrual Hours</u>	<u>Maximum Cumulative Hours</u>
13 years	12	288
14 years	12-2/3	304
15 through 19 years	13-1/3	320
20 through 24 years	16-2/3	400
25 through 29 years	20	480
30 years and up	23-1/3	560

* Includes County service if employed at CCCERA before January 1, 2015.

Part-time employees [*who are regularly scheduled to work a minimum of 20 hours per week*] are entitled to the listed paid vacation on a pro rata basis.

Employees may accrue paid vacation time up to a maximum of twice their annual vacation accrual. That is, for a full-time employee with 8 years of service, the employee may accrue up to a maximum of 240 hours (120 hours maximum annual accrual x 2 = 240 hours). Once the employee reaches this maximum cumulative hours, she/he will cease accruing paid vacation time until he/she uses sufficient vacation to drop below the maximum cumulative hours after which time the employee may begin to accrue additional hours up to the maximum cumulative hours.

On separation from CCCERA service, employees shall be paid for any accrued and unused vacation hours at the employee's then-current rate of pay.

Vacation Buy Back:

- A. With the exception of the Retirement Chief Executive Officer, employees may elect payment of up to one-third (1/3) of their annual vacation accrual, subject to the following conditions:
 - (1) the choice can be made only once every thirteen (13) months and there must be at least twelve (12) full months between each election;
 - (2) payment is based on an hourly rate determined by dividing the employee's current monthly salary by 173.33; and
 - (3) the maximum number of vacation hours that may be paid in any one sale is one-third (1/3) of the annual accrual.

- B. The Retirement Chief Executive Officer may elect payment of up to one-third (1/3) of their annual vacation accrual, subject to the following conditions:
 - (1) the choice can be made only once in each calendar year;
 - (2) payment is based on an hourly rate determined by dividing the employee's

- current monthly salary by 173.33; and
- (3) the maximum number of vacation hours that may be paid in any one sale is one-third (1/3) of the annual accrual.

NOTE: Where a lump-sum payment is made to employees as a retroactive general salary adjustment for a portion of a calendar year that is subsequent to the exercise by an employee of the vacation buy-back provision herein, that employee's vacation buy-back will be adjusted to reflect the percentage difference in base pay rates upon which the lump-sum payment was computed, provided that the period covered by the lump-sum payment includes the effective date of the vacation buy-back. *For example: In May a salary increase is approved with an effective date of January 1st and the employee completed a vacation buy-back in March, a lump sum payment for the difference in base pay of the vacation buy-back would be calculated.*

4. Sick Leave:

Regular full-time employees subject to this Resolution shall earn paid sick leave benefits at the rate of eight (8) hours per month. Regular part-time employees [*who are regularly scheduled to work a minimum of 20 hours per week*] are entitled to sick leave benefits on a pro rata basis.

Unused sick leave hours accumulate from year to year. When an employee is separated, other than through retirement, accumulated sick leave hours shall be cancelled, unless the separation results from layoff, in which case the accumulated hours shall be restored if reemployed in a regular position within the period of layoff eligibility. At retirement, employees are credited, at the rate of one day for each one day earned, with sick leave accumulated as of the day of retirement and that sick leave credit counts as additional retirement service credit.

For more information on sick leave benefits please refer to the CCCERA Personnel Policies.

5. Sick Leave Incentive Plan:

Employees may be eligible for a payoff of a part of unused sick leave accruals at separation. The sick leave incentive plan is an incentive for employees to safeguard sick leave accruals as protection against wage loss due to time lost for injury or illness. Payoff must be approved by the Retirement Chief Executive Officer, and is subject to the following conditions:

- The employee must have resigned in good standing
- Payout is not available if the employee is eligible to retire
- The balance of sick leave at resignation must be at least 70% of accruals earned in the preceding continuous period of employment excluding any sick leave use covered by the Family and Medical Leave Act (FMLA), the California Family

Rights Act (CFRA) or the California Pregnancy Disability Act (PDL).

- Payout is by the following schedule:

<u>Years of Payment Continuous Service</u>	<u>Payment of Unused Sick Leave Payable</u>
3 – 5 years	30%
5 – 7 years	40%
7 plus years	50%

- No payoff will be made pursuant to this section unless CCCERA certifies that an employee requesting as sick leave payoff has terminated membership in, and has withdrawn their contributions from CCCERA.
- It is the intent of the Board of Retirement that payments made pursuant to this section are in lieu of CCCERA retirement benefits resulting from employment with any of the employers in the CCCERA retirement plan.

6. Management Administrative Leave

Management Administrative Leave is authorized time away from the job for any personal activities and needs which are not charged to sick leave or vacation hours. Unrepresented employees who are exempt from the payment of overtime are eligible for this benefit.

Use of Management Administrative Leave may be requested whenever desired by the employee; however; approval of request shall be subject to the same department process as used for vacation requests.

All unused Management Administrative Leave will be cancelled at 11:59 p.m. on December 31st of each year.

- A. On January 1st of each year, all full-time management employees in paid status, except for the Retirement Chief Executive Officer, will be credited with ninety four (94) hours of paid Management Administrative Leave. The Retirement Chief Executive Officer will be credited with seventy (70) hours of paid Management Administrative Leave. All Management Administrative Leave is non-accruable and all balances will be zeroed out on December 31st of each year.
- B. Regular part-time employees [*who are regularly scheduled to work a minimum of 20 hours per week*] are eligible for Management Administrative Leave on a prorated basis, based upon their position hours.
- C. Employees appointed (hired or promoted) to a management position are eligible for Management Administrative Leave on the first day of the month following their appointment date and will receive Management Administrative Leave on a prorated basis for that first year.

7. **Other Unpaid Leaves:**

CCCERA provides leaves of absence to eligible employees in a variety of circumstances. In all cases, CCCERA intends to comply with applicable federal and state laws. For additional information on unpaid leaves please refer to the CCCERA Personnel Policies.

- Pregnancy disability leave may be requested by any employee at any time.
- Workers' compensation leave is provided to any employee as needed.
- Leave as a reasonable accommodation of an employee's disability is provided to any employee as needed.

Request for Leave: As soon as an employee learns of the need for a leave of absence, the employee should submit a request for leave to the Retirement Administration Manager. Request forms are available from Human Resources. Any leave request must state the purpose of the leave being requested. If approved, the leave must be used for that purpose.

A. Medical/Family Illness/Child Care Leave (FMLA/CFRA LEAVE)

Eligible employees may request an unpaid Family Medical Leave Act ("FMLA") of up to 18 workweeks in a rolling 12-month period (measured backwards from the date the leave begins) for any of the following reasons:

- Birth of the employee's child and to care for the child within the first year of birth;
- The care of an adopted or foster child which the first year of placement with the employee;
- Care for the employee's child, spouse or domestic partner, or parent with a serious health condition;
- Serious health condition of the employee;
- A qualifying exigency arising out of an eligible family member's call to military duty; or
- To care for a covered military service member who is the employee's eligible family member/next-of-kin.

For purposes of this Resolution, an eligible employee is one who has completed one year of continuous employment with CCCERA and worked a minimum of 1,250 hours during the preceding 12 months.

Medical certification is required for leaves necessitated by the serious health condition of the employee or of a family member, but an employee or his/her health care provider need not, and should not, disclose the employee's underlying condition. medical history, results

of tests, or any genetic information. A “serious health condition” means an illness, injury, impairment, or physical or mental condition that involves any of the following:

- Time or treatment in connection with inpatient care;
- Period of incapacity of more than three consecutive days that involves treatment by a health care provider; or
- Any period of incapacity or treatment that is permanent or long term.

Employees will continue to be covered by CCCERA health insurance benefits under pre-leave conditions during the entire approved FMLA leave.

FMLA leave is unpaid, except that employees [*may elect* to use any accrued vacation, sick, personal holiday or management administrative leave time.

Intermittent leave or a reduced work schedule may be approved with medical certification for an employee’s Serious Health Condition, for the employee to care for a child, parent, spouse, or domestic partner (under the CFRA only) with a serious health condition.

Medical certification that the employee is released to return to work is required before the employee will be permitted to return.

If an employee needs to extend his or her leave, he/she must request an extension for FMLA/CFRA leave as soon as practicable after he/she has knowledge of the need for additional leave time. Recertification by a treating health care provider may be required every 30 calendar days in connection with an employee’s absence where appropriate.

B. Pregnancy Disability Leave

Pregnancy Disability Leave (PDL) is a leave due to pregnancy, childbirth, or related reasons preventing the employee from performing her job functions. PDL includes leave needed for prenatal care and prenatal complications.

Employees may take up to a maximum of four months of PDL per pregnancy. Medical certification of the need for the leave is required, and the length of PDL will depend on the medical necessity for the leave. Medical certification that the employee is released to return to work is required before the employee will be permitted to return.

Employees will continue to be covered by CCCERA health insurance benefits under pre-leave conditions during the entire approved PDL.

Leave for pregnancy disability is unpaid, except that employees may elect to use any accrued vacation, sick, personal holiday or management administrative leave time.

C. Military Leave

Federal and state mandated-military leaves of absence are granted without pay to members of the United States Uniformed Services, the California National Guard, or the reserves. To be eligible, an employee must submit written verification from the appropriate military authority. Such leaves will be granted in accordance with state and federal law.

When an employee goes on Military Leave for more than 30 days, any applicable group insurance (existing provisions will apply) continues for 90 days following the commencement of unpaid Military Leave. Beyond the 90 days, the employee may elect to continue the same group health care coverage, including dependent coverage, if applicable, for up to 24 months at his/her own expense.

An employee may elect to use accrued personal holidays, vacation, and/or management administrative leave at the beginning of unpaid military service or may retain earned and accrued vacation for use upon return from the leave. The employee must provide this request/election in writing to Retirement Administration Manager prior to the start of the military leave.

At the conclusion of military service, an employee will be reinstated upon giving notice of his/her intent to return to work by either (1) reporting to work or (2) submitting a timely oral or written request to CCCERA for reinstatement within 90 days of days after their release from active duty or any extended period required by law. The Military Leave will expire upon the employee's failure to request reinstatement or return to work in a timely manner after conclusion of service.

8. Health, Dental, and Related Benefits

Regular full-time and part-time employees [*who are regularly scheduled to work a minimum of 20 hours per week*] and their eligible dependents may be entitled to receive medical and dental insurance coverage through CCCERA Plans. Attached hereto as Attachment B, is the monthly premium subsidy for unrepresented employees.

Effective January 1, 2016, CCCERA shall offer an Internal Revenue Code Section 125 Flexible Benefits Plan that offers (i) CalPERS health plan coverages for each eligible employee and the employee's eligible family members and (ii) at least one other nontaxable benefit. CCCERA shall make monthly contributions under the plan for each eligible employee and their dependents (if applicable) up to the relevant amount set forth in Attachment B. Such contributions shall consist of (i) the Minimum Employer Contribution (MEC) established by the Public Employees' Medical and Hospital Care Act, and designated by CCCERA as the MEC, and (ii) the additional amount of such contributions in excess of the MEC.

Any eligible employee who enrolls in health coverage with a higher total premium than CCCERA's contributions with respect to the eligible employee, as stated in Attachment B, will pay the difference via pre-tax payroll deductions under the plan to the extent permitted by Internal Revenue Code Section 125.

Dual Coverage: Each employee, eligible dependent and retiree may be covered by only a single CCCERA health or dental plan.

Please refer any questions about medical/dental benefits to Human Resources.

Health and Dental Coverage Upon Retirement

1. Any CCCERA retiree or their eligible dependent who becomes age 65 on or after January 1, 2009 and who is eligible for Medicare must immediately enroll in Medicare Parts A and B.
2. Employees hired by Contra Costa County or CCCERA on or after January 1, 2009 and their eligible dependents, are eligible for retiree health/dental coverage upon completion of fifteen (15) years of service of which five (5) of those years must be as an active employee of CCCERA with no monthly premium subsidy paid by CCCERA for any health or dental plan after they separate from CCCERA employment. However, any such eligible employee who retires from CCCERA may retain continuous coverage of a CCCERA health and/or dental plan provided that:
 - (i) he or she begins to receive a monthly retirement allowance from CCCERA within 120 days of separation from CCCERA employment and
 - (ii) he or she pays the difference between the Public Employees' Medical and Hospital Care Act (PEMHCA) minimum contribution and the premium cost of the dental plan without any CCCERA premium subsidy.
3. Employees hired by Contra Costa County on January 1, 2007 to December 31, 2008 and their eligible dependents, are eligible for retiree health/dental coverage premium subsidy upon completion of fifteen (15) years of service of which five (5) of those years must be as an active employee of CCCERA. For purposes of retiree health eligibility, one year of service is defined as one thousand (1,000) hours worked within one anniversary year.
4. Employees hired by Contra Costa County on or before December 31, 2006 and their eligible dependents, may remain in their CCCERA health/dental plan, but without CCCERA-paid life insurance coverage, if immediately before their proposed retirement the employees and dependents are either active subscribers to one of the CCCERA contracted health/dental plans or if while on authorized leave of absence without pay, they have retained continuous coverage during the leave period. CCCERA will pay the health/dental plan monthly premium established by the Board of Retirement for eligible retirees and their eligible dependents.
5. All periods of benefit eligible employment will be included in the fifteen (15) years of service calculation for purposes of health and dental coverage upon retirement.
6. Employees, who resign and file for a deferred retirement and their eligible dependents, may continue in their CCCERA group health and/or dental plan under the following conditions and limitations:

- (i) Health and dental coverage during the deferred retirement period is totally at the expense of the employee, without any CCCERA contributions.
- (ii) Life insurance coverage is not included.
- (iii) To continue health and dental coverage, the employee must:
 - a. be qualified for a deferred retirement under the 1937 Retirement Act provisions;
 - b. be an active member of a CCCERA group health and/or dental plan at the time of filing their deferred retirement application and elect to continue plan benefits;
 - c. be eligible for a monthly allowance from the Retirement System and direct receipt of a monthly allowance within one hundred twenty (120) days of application for deferred retirement; and
 - d. file an election to defer retirement and to continue health benefits hereunder with the CCCERA within thirty (30) days before separation from CCCERA service.
- (iv) Deferred retirees who elect continued health benefits hereunder and their eligible dependents may maintain continuous membership in their CCCERA health and/or dental plan group during the period of deferred retirement by paying the full premium for health and dental coverage on or before the 10th of each month, to the CCCERA. When the deferred retirees begin to receive retirement benefits, they will qualify for the same health and/or dental coverage pursuant to section 7 above, as similarly situated retirees who did not defer retirement.
- (v) Deferred retirees may elect retiree health benefits hereunder without electing to maintain participation in their CCCERA health and/or dental plan during their deferred retirement period. When they begin to receive retirement benefits, they will qualify for the same health and/or dental coverage pursuant to section 7 above, as similarly situated retirees who did not defer retirement.
- (vi) Employees who elect deferred retirement will not be eligible in any event for CCCERA health and/or dental plan subvention unless the member draws a monthly retirement allowance within one hundred twenty (120) days after separation from CCCERA employment.
- (vii) Deferred retirees and their eligible family members are required to meet the same eligibility provisions for retiree health/dental coverage as similarly situated retirees who did not defer retirement.

For employees who retire and are eligible to receive a medical premium subsidy that is greater than the PEMHCA minimum contribution, each month during which such retiree medical coverage continues, CCCERA will provide each such retiree with a medical expense reimbursement plan (MERP), also known as a health reimbursement arrangement (HRA), subject to Internal Revenue Code Section 105, with a monthly credit equal to the excess of (i) the relevant medical coverage monthly premium subsidy set forth in Section

17.2 for such eligible retiree and his or her eligible family members over (ii) the then current MEC.

9. Long-Term and Short-Term Disability Insurance

CCCERA will provide Long-Term and Short-Term Disability Insurance.

10. State Disability Insurance

Unrepresented employees do not contribute towards State Disability Insurance.

11. Life Insurance

For employees who are enrolled in the County's program of medical or dental coverage as either the primary or the dependent, term life insurance in the amount of ten thousand dollars (\$10,000) will be provided by CCCERA.

Management employees, with the exception of the Chief Executive Officer will also receive fifty-seven thousand dollars (\$57,000) in addition to the life insurance provided above. The Chief Executive Officer will receive an additional sixty thousand dollars (\$60,000) in addition to the ten thousand dollars (\$10,000) insurance provided above.

In addition to the life insurance benefits provided by CCCERA, employees may subscribe voluntarily and at their own expense for supplemental life insurance. Please refer to Human Resources for additional information.

12. Workers Compensation Insurance

1. For all accepted workers' compensation claims filed with CCCERA employees will receive seventy five percent (75%) of their regular monthly salary during any period of compensable temporary disability not to exceed one (1) year. If workers' compensation benefits become taxable income, CCCERA will restore the former benefit level, one hundred percent (100%) of regular monthly salary.
2. Waiting Period: There is a three (3) calendar day waiting period before workers' compensation benefits commence. If the injured worker loses any time on the date of injury, that day counts as day one (1) of the waiting period. If the injured worker does not lose time on the date of the injury, the waiting period is the first three (3) days following the date of the injury. The time the employee is scheduled to work during this waiting period will be charged to the employee's sick leave and/or vacation accruals. In order to qualify for workers' compensation the employee must be under the care of a physician. Temporary compensation is payable on the first three (3) days of disability when the injury necessitates hospitalization, or when the disability exceeds

fourteen (14) days.

3. Continuing Pay: A regular employee will receive the applicable percentage of regular monthly salary in lieu of workers' compensation during any period of compensable temporary disability not to exceed one year. "Compensable temporary disability absence" for the purpose of this Section, is any absence due to work-connected disability which qualifies for temporary disability compensation under workers' compensation law set forth in Division 4 of the California Labor Code. When any disability becomes medically permanent and stationary, the salary provided by this Section will terminate. No charge will be made against sick leave or vacation for these salary payments. Sick leave and vacation rights do not accrue for those periods during which continuing pay is received. Employees are entitled to a maximum of one (1) year of continuing pay benefits for any one injury or illness.

Continuing pay begins at the same time that temporary workers' compensation benefits commence and continues until either the member is declared medically permanent/stationary, or until one (1) year of continuing pay, whichever comes first, provided the employee remains in an active employed status. Continuing pay is automatically terminated on the date an employee is separated from CCCERA by resignation, retirement, layoff, or the employee is no longer employed by CCCERA. In these instances, employees will be paid workers' compensation benefits as prescribed by workers' compensation laws. All continuing pay must be cleared through CCCERA.

4. Physician Visits: Whenever an employee who has been injured on the job and has returned to work is required by an attending physician to leave work for treatment during working hours, the employee is allowed time off, up to three (3) hours for such treatment, without loss of pay or benefits. Said visits are to be scheduled contiguous to either the beginning or end of the scheduled workday whenever possible. This provision applies only to injuries/illnesses that have been accepted by CCCERA as work related.
5. Labor Code §4850 Exclusion: The foregoing provisions for workers' compensation and continuing pay are inapplicable in the case of employees entitled to benefits under Labor Code Section 4850.

13. Health Care Spending Account

After six (6) months of regular employment, full time and part time (20/40 or greater) employees may elect to participate in a Health Care Spending Account (HCSA) Program designated to qualify for tax savings under Section 125 of the Internal Revenue Code, but such savings are not guaranteed. The HCSA Program allows employees to set aside a predetermined amount of money from their pay, before taxes, for health care expenses not reimbursed by any other health benefit plans. HCSA dollars may be expended on any eligible medical expenses allowed by Internal Revenue Code Section 125. According to IRS regulations, any unused balance is forfeited and may not be recovered by the employee. Please refer to Human Resources for more information on the HCSA Program.

14. **Dependent Care Assistance Program**

Full time and part time (20/40 or greater) employees may elect to participate in a Dependent Care Assistance Program (DCAP) designed to qualify for tax savings under Section 129 of the Internal Revenue Code, but such savings are not guaranteed. The program allows employees to set aside up to five thousand (\$5,000) of annual salary (before taxes) per calendar year to pay for eligible dependent care (child and elder care) expenses. According to IRS regulations, any unused balance is forfeited and may not be recovered by the employee. Please refer to Human Resources for more information on DCAP.

15. **Premium Conversion Plan**

CCCERA offers the Premium Conversion Plan (PCP) designed to qualify for tax savings under Section 125 of the Internal Revenue Code, but tax savings are not guaranteed. The program allows employees to use pre-tax salary to pay health and dental premiums. Please refer to Human Resources for more information on the PCP.

16. **Computer Vision Care (CVC)**

CCCERA will pay 100% of the employee only premium for EyeMed Option 2 vision coverage and up to two hours of CCCERA paid time for exam and to obtain glasses. Employees may obtain spouse and dependent coverage at their own cost.

17. **Retirement:**

CCCERA Membership:

Contributions: Employees are responsible for the payment of one hundred percent of the employees' basic retirement benefit contributions determined annually by the Board. Employees are also responsible for the payment of the employee's contributions to the retirement cost-of-living program as determined annually by the Board. CCCERA is responsible for payment of one hundred percent of the employer's retirement contributions as determined annually by the Board.

- A. Employees who are not classified as new members under PEPRA will be enrolled in Retirement Tier 1 enhanced. For more information on retirement tiers please refer to the CCCERA member handbooks.
- B. Employees who are classified as new members under PEPRA will be enrolled in Retirement IV (3% COLA). For more information on retirement tiers please refer to the CCCERA member handbooks.
- C. CCCERA will implement Section 414(h) (2) of the Internal Revenue Code which allows CCCERA to reduce the gross monthly pay of employees by an amount equal to

the employee’s total contribution to the CCCERA Retirement Plan before Federal and State income taxes are withheld, and forward that amount to the CCCERA Retirement Plan. This program of deferred retirement contribution will be universal and non-voluntary as required by statute.

Deferred Compensation:

- A. CCCERA will contribute eighty-five dollars (\$85) per month to each employee who participates in CCCERA’s Deferred Compensation Plan. To be eligible for this Deferred Compensation Incentive, the employee must contribute to the deferred compensation plan as indicated below:

Employees with Current Monthly Salary of:	Qualifying Base Contribution Amount	Monthly Contribution Required to Maintain Incentive Program Eligibility
\$2,500 and below	\$250	\$50
\$2,501 – 3,334	\$500	\$50
\$3,335 – 4,167	\$750	\$50
\$4,168 – 5,000	\$1,000	\$50
\$5,001 – 5,834	\$1,500	\$100
\$5,835 – 6,667	\$2,000	\$100
\$6,668 and above	\$2,500	\$100

Employees who discontinue contributions or who contribute less than the required amount per month for a period of one (1) month or more will no longer be eligible for the eighty-five dollars (\$85) Deferred Compensation Incentive. To reestablish eligibility, employees must again make a Base Contribution Amounts as set forth above based on current monthly salary. Employees with a break in deferred compensation contributions either because of an approved medical leave or an approved financial hardship withdrawal will not be required to reestablish eligibility. Further, employees who lose eligibility due to displacement by layoff, but maintain contributions at the required level and are later employed in an eligible position, will not be required to reestablish eligibility.

- B. Regular employees hired on and after January 1, 2009 will receive one hundred and fifty dollars (\$150) per month to an employee’s account in the Contra Costa County Deferred Compensation Plan or other tax-qualified savings program designated by CCCERA, for employees who meet all of the following conditions:
1. The employee must be hired by CCCERA on or after January 1, 2009.
 2. The employee is not eligible for a monthly premium subsidy for health and/or dental upon retirement as set forth in Section 8.
 3. The employee must be appointed to a regular position. The position may be either full time or part time (designated at a minimum of 20 hours per week).

4. The employee must have been employed by CCCERA or Contra Costa County for at least 90 calendar days.
5. The employee must contribute a minimum of twenty-five dollars (\$25) per month to the Contra Costa County Deferred Compensation Plan, or other tax-qualified savings program designated by CCCERA.
6. The employee must complete and sign the required enrollment form(s) for his/her deferred compensation account and submit those forms to the Benefits Services Unit of Contra Costa County.
7. The employee may not exceed the annual maximum contribution amount allowable by the United States Internal Revenue Code.
8. Employees are eligible to apply for loans from the Contra Costa County Deferred Compensation Plan loan program. For more information on the loan program refer to Human Resources.

18. General Training

CCCERA periodically provides training to employees on its harassment prevention and equal opportunity/discrimination policies. The purpose of these training sessions is to inform and remind employees of CCCERA's policies on these matters. These training sessions are mandatory.

Employees also receive safety training as part of CCCERA's Injury and Illness Prevention program.

19. Other Job-Related Training

Employees may request to attend training sessions on topics that are directly related to the employee's current job and that are likely to improve the employee's job knowledge and skills. Requests to attend training must be submitted to the employee's department manager. It is within the sole discretion of CCCERA whether or not to grant a training request.

20. Professional Development Reimbursement

To encourage personal and professional growth which is beneficial to both CCCERA and the employee, CCCERA reimburses for certain expenses incurred by employees which are related to an employee's current work assignment.

Expenses that may be eligible for reimbursement include certification programs and courses offered through accredited colleges, universities and technical schools.

Guidelines: Prior to registering for a course, the employee must provide appropriate information to Human Resources to begin the approval process.

If granted, reimbursement may be used to defray actual costs of tuition, registration, testing materials, testing fees and books only and is limited to \$2,000 per year.

Course attendance, study, class assignments and exams must be accomplished outside of the employee's regular working hours.

Reimbursement: Reimbursement will only be provided for course work in which the employee achieves a grade of C or better. Reimbursement will be provided only to employees who are employed by CCCERA at the time CCCERA receives evidence of satisfactory completion of the course or certification exam.

If the employee does not successfully complete the course or certification exam, no reimbursement will be provided.

Exceptions: For classifications which require a certification or technical license, CCCERA will reimburse the entire cost of certification fees and membership dues without reducing the maximum annual Professional Development Reimbursement amount.

21. Salary

Attached hereto as Attachment A, is the salary schedule for all classifications of unrepresented employees.

Effective July 1, 2016 all unrepresented employees of CCCERA with the exception of the executive classifications listed in Attachment A are hereby granted a lump-sum payment in the amount of \$500, to be paid on July 10, 2016. The lump-sum payment will be subject to the employee's required reductions, such as taxes and wage garnishments. The lump-sum payment will be made to permanent full time employees who were employed by CCCERA on June 1, 2016.

22. Overtime

Management employees are not entitled to receive overtime pay, holiday pay, holiday compensatory, or overtime compensatory time.

23. Differential Pay

A. Longevity

Ten Years of Service:

Employees who have completed ten (10) years of service for Contra Costa County and/or CCCERA are eligible to receive a two and one-half percent (2.5%) longevity differential effective on the first day of the month following the month in which the employee qualifies for the ten (10) year service award.

Fifteen Years of Service:

Employees who have completed fifteen (15) years of service for Contra Costa County and/or CCCERA are eligible to receive an additional two and one-half percent (2.5%)

longevity differential effective on the first day of the month following the month in which the employee qualifies for the fifteen (15) year service award.

Twenty Years of Service:

Employees in the Retirement General Counsel classification who have completed twenty (20) years of service for Contra Costa County and/or CCCERA will receive an additional two percent (2%) longevity differential effective on the first day of the month following the month in which the employee qualifies for the twenty (20) year service award.

B. Certificate Differentials

NOTE: No employee may receive more than one certificate differential at one time, regardless of the number of certificates held by that employee.

➤ **Accounting Certificate Differential**

Incumbents of unrepresented professional accounting, auditing or fiscal officer positions who possess one of the following active certifications will receive a differential of five percent (5%) of base monthly salary:

- (1) a Certified Public Accountant (CPA) license issued by the State of California, Department of Consumer Affairs, Board of Accountancy;
- (2) a Certified Internal Auditor (CIA) certification issued by the Institute of Internal Auditors;
- (3) a Certified Management Accountant (CMA) certification issued by the Institute of Management Accountants; or
- (4) a Certified Government Financial Manager (CGFM) certification issued by the Association of Government Accountants.

➤ **Associate of the Society of Actuaries (ASA)**

Employees who possess an active ASA certification will receive a differential of five percent (5%) of base monthly salary. Verification of eligibility for any such differential must be provided to Human Resources.

Resolution of the Board of Retirement
 Contra Costa County Employees' Retirement Association
 CCCERA Resolution for Salary and Benefits for Unrepresented Employees
 (BOR Reso. No. 2016-2)

Attachment A

Effective July 1, 2016

		Salary Range				
Class Title		Step 1	Step 2	Step 3	Step 4	Step 5
Accountant	Exempt (Monthly)	\$5,261	\$5,524	\$5,801	\$6,091	\$6,395
Accounting Manager	Exempt (Monthly)	\$8,999	\$9,449	\$9,921	\$10,417	\$10,938
Accounting Supervisor	Exempt (Monthly)	\$6,715	\$7,051	\$7,403	\$7,773	\$8,162
Administrative/HR Manager	Exempt (Monthly)	\$8,784	\$9,224	\$9,685	\$10,169	\$10,677
Administrative/HR Supervisor	Exempt (Monthly)	\$6,715	\$7,051	\$7,403	\$7,773	\$8,162
Communications Coordinator	Exempt (Monthly)	\$6,243	\$6,555	\$6,883	\$7,227	\$7,588
Compliance Business Analyst	Exempt (Monthly)	\$6,715	\$7,051	\$7,403	\$7,773	\$8,162
Deputy General Counsel	Exempt (Monthly)	\$12,662	\$13,295	\$13,960	\$14,658	\$15,391
Executive Assistant	Non-Exempt (Hourly)	\$31.87	\$33.46	\$35.14	\$36.90	\$38.74
Information System Programmer/Analyst	Exempt (Monthly)	\$6,395	\$6,715	\$7,051	\$7,403	\$7,773
Information Technology Coordinator	Non-Exempt (Hourly)	\$33.46	\$35.14	\$36.90	\$38.74	\$40.68
Information Technology Manager	Exempt (Monthly)	\$10,677	\$11,211	\$11,772	\$12,361	\$12,979
Investment Analyst	Exempt (Monthly)	\$9,224	\$9,685	\$10,169	\$10,677	\$11,211
Member Services Manager	Exempt (Monthly)	\$8,784	\$9,224	\$9,685	\$10,169	\$10,677
Member Services Supervisor	Non-Exempt (Hourly)	\$38.74	\$40.68	\$42.71	\$44.85	\$47.09
Retirement Services Manager	Exempt (Monthly)	\$8,784	\$9,224	\$9,685	\$10,169	\$10,677
Retirement Services Supervisor	Non-Exempt (Hourly)	\$38.74	\$40.68	\$42.71	\$44.85	\$47.09

Executive Class Title	Monthly Salary Range
Chief Executive Officer	\$15,925
Chief Investment Officer	\$17,328 - \$22,527
Compliance Officer	\$8,955 - \$11,642
Deputy Chief Executive Officer	\$13,892 - \$18,059
General Counsel	\$15,316 - \$19,910

Attachment B

Health and Dental Coverage Monthly Premium Subsidy

Effective: January 1, 2016

Health Plans:

➤ CalPERS

Employee Only: \$746.47
Employee + 1: \$1,492.94
Employee + Family: \$1,940.82

➤ Delta Dental

Employee Only: \$46.21
Employee and Spouse: \$103.72
Employee and Children: \$103.41
Family: \$169.38

Effective January 1, 2016, CCCERA shall offer an Internal Revenue Code Section 125 Flexible Benefits Plan that offers (i) CalPERS health plan coverages for each eligible employee and the employee's eligible family members and (ii) at least one other nontaxable benefit. CCCERA shall make monthly contributions under the plan for each eligible employee and their dependents (if applicable) up to the relevant amount set forth above. Such contributions shall consist of (i) the Minimum Employer Contribution (MEC) established by the Public Employees' Medical and Hospital Care Act, and designated by CCCERA as the MEC, and (ii) the additional amount of such contributions in excess of the MEC.

CCCERA Position Pay Schedules - Effective 7/1/16

Class Title	Hourly Pay								Eligible for Differential	
	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step 8	10 year Longevity	2.50%
Retirement Office Specialist	\$20.06	\$21.06	\$22.11	\$23.22	\$24.38	\$25.60	\$26.88	\$28.22	Yes	Yes
Retirement Member Services Technician	\$20.06	\$21.06	\$22.11	\$23.22	\$24.38	\$25.60	\$26.88	\$28.22	Yes	Yes
Retirement Accounting Specialist I	\$21.86	\$23.05	\$24.21	\$25.42	\$26.69	\$27.36	\$28.04		Yes	Yes
Retirement Counselor I	\$21.96	\$23.05	\$24.21	\$25.42	\$26.69	\$27.36	\$28.04		Yes	Yes
Retirement Accounting Technician	\$24.14	\$25.34	\$26.61	\$27.94	\$29.34	\$30.80			Yes	Yes
Retirement Accounting Specialist II	\$25.34	\$26.60	\$27.93	\$29.33	\$30.80	\$32.34			Yes	Yes
Retirement Counselor II	\$25.34	\$26.60	\$27.93	\$29.33	\$30.80	\$32.34			Yes	Yes
Retirement Member Services Data Specialist	\$25.34	\$26.60	\$27.93	\$29.33	\$30.80	\$32.34			Yes	Yes
Retirement Administrative Assistant	\$25.71	\$27.05	\$28.41	\$29.83	\$31.32				Yes	Yes
Retirement Accounting Specialist III	\$29.22	\$30.68	\$32.21	\$33.82	\$35.52	\$37.29			Yes	Yes
Retirement Counselor III	\$29.22	\$30.68	\$32.21	\$33.82	\$35.52	\$37.29			Yes	Yes
Retirement Senior Member Services Data Specialist	\$29.22	\$30.68	\$32.21	\$33.82	\$35.52	\$37.29			Yes	Yes

Positions represented by Local 2700:

Class Title	Hourly Pay								Eligible for Differential*				
	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step 8	10 year Longevity	15 year Longevity	20 year Longevity	CPA, CGFM, CIA, CMA	ASA
Accountant	Exempt (Monthly)	\$5,261	\$5,524	\$5,801	\$6,091	\$6,395			Yes	Yes	No	Yes	Yes
Accounting Manager	Exempt (Monthly)	\$8,989	\$9,449	\$9,921	\$10,417	\$10,938			Yes	Yes	No	Yes	Yes
Accounting Supervisor	Exempt (Monthly)	\$6,715	\$7,051	\$7,403	\$7,773	\$8,162			Yes	Yes	No	Yes	Yes
Administrative/HR Manager	Exempt (Monthly)	\$8,784	\$9,224	\$9,685	\$10,169	\$10,677			Yes	Yes	No	No	Yes
Administrative/HR Supervisor	Exempt (Monthly)	\$6,715	\$7,051	\$7,403	\$7,773	\$8,162			Yes	Yes	No	No	Yes
Communications Coordinator	Exempt (Monthly)	\$6,243	\$6,555	\$6,883	\$7,227	\$7,588			Yes	Yes	No	No	Yes
Compliance Business Analyst	Exempt (Monthly)	\$6,883	\$7,227	\$7,588	\$7,965	\$8,366			Yes	Yes	No	No	Yes
Deputy General Counsel	Non-Exempt (Monthly)	\$12,662	\$13,285	\$13,960	\$14,658	\$15,391			Yes	Yes	No	No	Yes
Executive Assistant	Non-Exempt (Hourly)	\$31.87	\$33.46	\$35.14	\$36.90	\$38.74			Yes	Yes	No	No	Yes
Information System Programmer/Analyst	Exempt (Monthly)	\$6,395	\$6,715	\$7,051	\$7,403	\$7,773			Yes	Yes	No	No	Yes
Information Technology Coordinator	Non-Exempt (Hourly)	\$33.46	\$35.14	\$36.90	\$38.74	\$40.68			Yes	Yes	No	No	Yes
Information Technology Manager	Exempt (Monthly)	\$10,677	\$11,211	\$11,772	\$12,361	\$12,979			Yes	Yes	No	No	Yes
Investment Analyst	Exempt (Monthly)	\$9,224	\$9,685	\$10,169	\$10,677	\$11,211			Yes	Yes	No	No	Yes
Member Services Manager	Exempt (Monthly)	\$8,784	\$9,224	\$9,685	\$10,169	\$10,677			Yes	Yes	No	No	Yes
Member Services Supervisor	Non-Exempt (Hourly)	\$38.74	\$40.68	\$42.71	\$44.85	\$47.09			Yes	Yes	No	No	Yes
Retirement Services Manager	Exempt (Monthly)	\$8,784	\$9,224	\$9,685	\$10,169	\$10,677			Yes	Yes	No	No	Yes
Retirement Services Supervisor	Non-Exempt (Hourly)	\$38.74	\$40.68	\$42.71	\$44.85	\$47.09			Yes	Yes	No	No	Yes

Positions unrepresented:

Class Title	Monthly Salary Range		Eligible for Differential*				
	Min	Max	10 year Longevity	15 year Longevity	20 year Longevity	CPA, CGFM, CIA, CMA	ASA
Chief Executive Officer	\$15,825		Yes	Yes	No	No	Yes
Chief Investment Officer	\$17,328 - \$22,527		Yes	Yes	No	No	Yes
Compliance Officer	\$9,555 - \$11,642		Yes	Yes	No	No	Yes
Deputy Chief Executive Officer	\$13,892 - \$18,059		Yes	Yes	No	No	Yes
General Counsel	\$15,316 - \$19,910		Yes	Yes	Yes	No	Yes

*NOTE: Certificate Differentials cannot be combined with other certificate differentials



**PERSPECTIVES
THAT DRIVE
ENTERPRISE
SUCCESS**



PERIOD ENDING: MARCH 31, 2016

Investment Performance Review for

Contra Costa County Employees' Retirement Association

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PERSPECTIVES
THAT DRIVE
ENTERPRISE
SUCCESS

2ND QUARTER 2016
Investment Landscape

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1st quarter summary

THE ECONOMIC CLIMATE

- Global growth expectations continue to be revised downward. Emerging economies continue to struggle while developed economies continue to grow modestly. U.S. real GDP grew more slowly quarter-over-quarter at 1.4%. *p. 6, 13*
- Global inflation remains low but some signs of positive price movement can be seen, partly due to the effects of lower oil price dissipating and stability in overall commodity markets. Global manufacturing overcapacity will likely act as a headwind to inflation for some time. *p. 13*

MARKET PORTFOLIO IMPACTS

- The U.S. dollar fell slightly in Q1 as expectations dampened regarding the pace of further Fed rate hikes. USD weakness will have benefited U.S. investors whose international assets are unhedged. *p. 39*
- Emerging market equities rebounded, helped by rising commodity prices and emerging currency appreciation. *p. 30, 32*

THE INVESTMENT CLIMATE

- During the first 10 trading days of 2016 the S&P 500 saw its worst start to a year ever. This drawdown was followed by a strong rally and full recovery in major equity markets. *p. 25, 40*
- The benefits of monetary easing seem to be waning. Interest rates in many nations are now in negative territory. The Federal Reserve has taken a more dovish stance, and the market now expects two rate increases in 2016. *p. 5, 18*

ASSET ALLOCATION ISSUES

- We continue to remain underweight risk, and believe that market risks are asymmetrically skewed to the downside. *p. 25, 31*
- With increasing probability of a Brexit, investors should be aware of the potential impacts to continental European risk premia. *p. 15*
- Inflation expectations remain low based on both survey and market pricing data, although investors have historically done a poor job of forecasting inflation. *p. 11*

We remain underweight to risk

Continue to be watchful of global growth and corporate earnings trends

Economic environment

U.S. economics summary

- U.S. real GDP growth expectations have fallen to 0.1% quarter-over-quarter, as of April 13th, according to the Atlanta Fed GDPNow. Lower consumer spending and weaker trade detracted from growth expectations.
- U.S. real GDP growth was 2% during 2015 (Q4 2014 to Q4 2015), slightly down from 2.1% in Q3. Consumption was the predominant driver of growth.
- Headline inflation during the quarter rose to 0.9% from 0.7% in December, and core inflation has shown a strong trend upwards. Both survey based and market based inflation expectations increased.
- The Federal Reserve left the Federal Funds Target Rate unchanged at its March meeting. Janet Yellen explained the Fed will remain accommodative, citing continued risks within global financial markets.
- The unemployment rate increased slightly to 5.0% from 4.9% in February. This rise in unemployment can be partly explained by the increase in the participation rate from 62.9% to 63.0% as new job seekers entered the market.

	Most Recent	12 Months Prior
GDP (<i>annual YoY</i>)	2.0% <i>12/31/15</i>	2.5% <i>12/31/14</i>
Inflation (<i>CPI, Headline</i>)	0.9% <i>3/31/16</i>	(0.1%) <i>3/31/15</i>
Expected Inflation (<i>5yr-5yr forward</i>)	1.8% <i>3/31/16</i>	2.0% <i>3/31/15</i>
Fed Funds Rate	0.25% <i>3/31/16</i>	0.12% <i>3/31/15</i>
10 Year Rate	1.8% <i>3/31/16</i>	1.9% <i>3/31/15</i>
U-3 Unemployment	5.0% <i>3/31/16</i>	5.5% <i>3/31/15</i>
U-6 Unemployment	9.8% <i>3/31/16</i>	10.9% <i>3/31/15</i>

U.S. economics – GDP growth

The U.S. economy grew 1.4% QoQ in the fourth quarter with a majority of that growth coming from the consumer. Household spending has been the strongest driver of expansion contributing nearly 1.7% to growth. A tightening job market has contributed to consumer spending strength. The participation rate moved up and we are beginning to see upward pressure on wages. Inventory investment remains a patch of weakness and has been a drag on U.S. growth over the past two quarters. Additionally, the stronger U.S. dollar has acted

as a headwind for U.S. exports – further detracting from fourth quarter GDP. The economy grew at 2.0% for the year. Looking ahead to growth in GDP, companies will still face headwinds as inventory build has been strong and demand for durable goods is weak. Additionally, multi-national companies continue to face the risk of a stronger dollar which would put downward pressure on profits. As of April 13th, the Atlanta Fed GPDNow indicator is forecasting disappointing growth of 0.1% for Q1 2016.

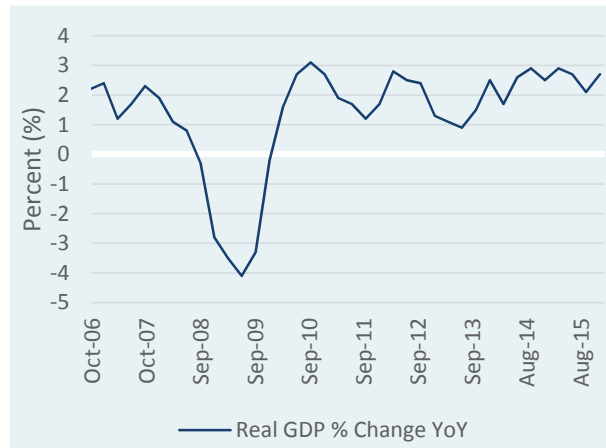
Consumer expenditures were the only notable contributor to growth in Q4

LONG-TERM U.S. GDP GROWTH



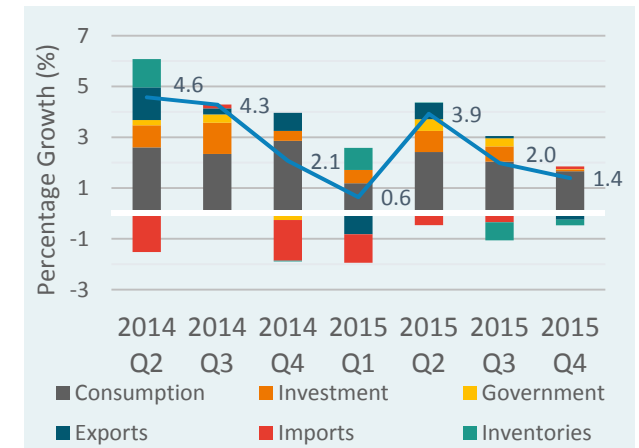
Source: FRED, as of 12/31/15

MEDIUM-TERM U.S. GDP GROWTH



Source: FRED, as of 12/31/15

GDP COMPONENTS



Source: FRED

U.S. economics – unemployment

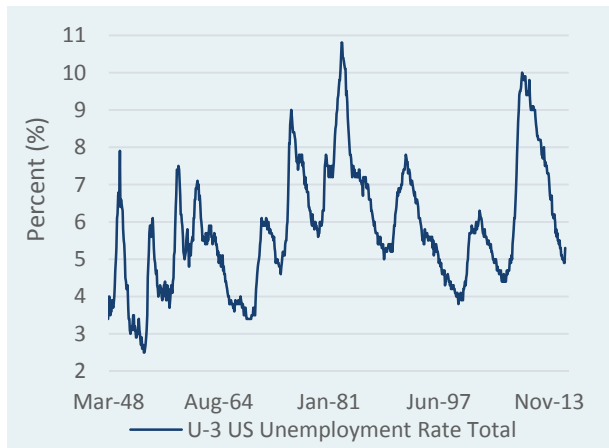
The U.S. labor market was mixed in Q1. The unemployment rate increased slightly to 5.0% from 4.9% in February. However, higher unemployment was influenced by a 0.1% rise in the labor participation rate to 63.0% as new job seekers entered the market. Unemployment duration rose slightly after multiple years of improvement since the financial crisis.

The labor market continued to add jobs, with nonfarm payrolls increasing by 215,000 in March vs an expected

205,000. Average hourly wages have steadily improved since the financial crisis, with the recent print at 2.3% year-over-year.

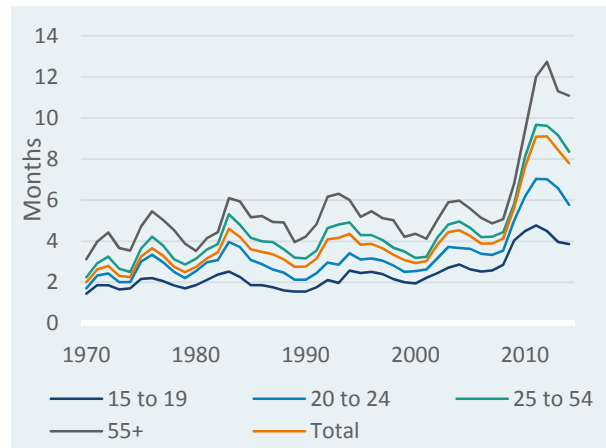
It is interesting to dive deeper into unemployment duration and examine the magnitude of 2008-2009 deterioration by age group rather than an aggregate figure. The drastic increases in unemployment duration for older workers shows the unevenness of the situation across age groups.

UNEMPLOYMENT SINCE 1948



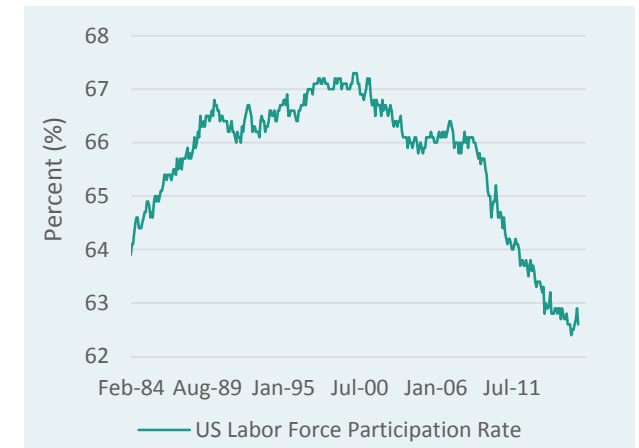
Source: Bloomberg, as of 3/31/16

UNEMPLOYMENT DURATION



Source: OECD, as of 12/31/14

LABOR FORCE PARTICIPATION RATE



Source: FRED, as of 3/31/16

U.S. economics – the consumer

Consumer expenditures predominantly drove real GDP in Q4, as other components of GDP rested near zero growth. We continue to be watchful of these trends as consumer credit expansion and spending is a key tenant of economic growth.

The condition of the U.S. consumer base has improved as the labor market tightens, real wage growth continues at a moderate pace, debt payments remain manageable relative to history, credit growth is

trending up, and current levels of savings leave room for higher consumption levels.

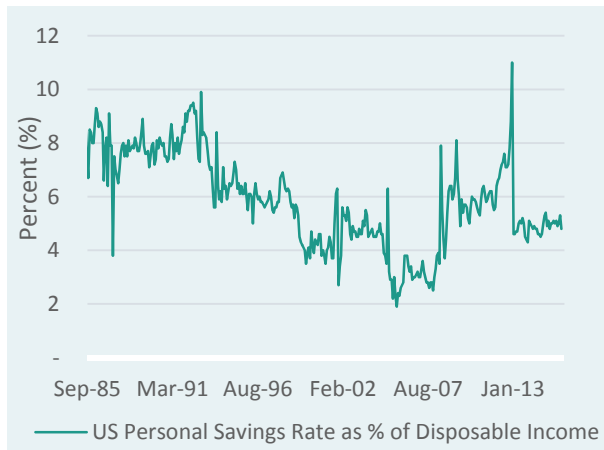
However, the average health of the consumer base may be somewhat deceptive due to unevenness across demographics. Rising student loan burdens are dampening housing demand and spending habits of younger individuals, as the price of education has outstripped broader inflation measures.

CREDIT GROWTH



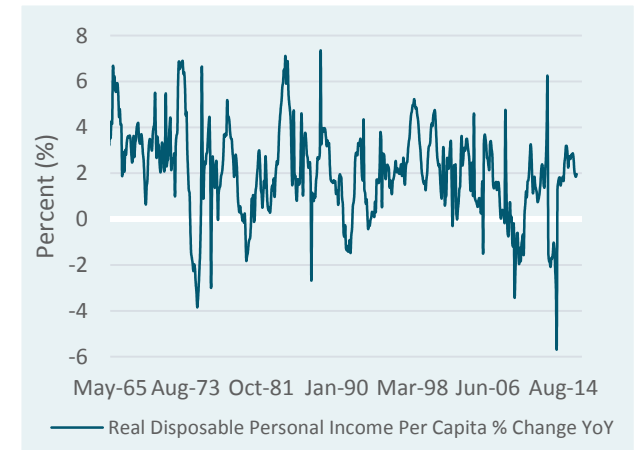
Source: FRED, as of 2/1/16

PERSONAL SAVINGS RATE



Source: FRED, as of 2/1/16

GROWTH OF DISPOSABLE INCOME



Source: FRED, as of 2/1/16

U.S. economics – sentiment

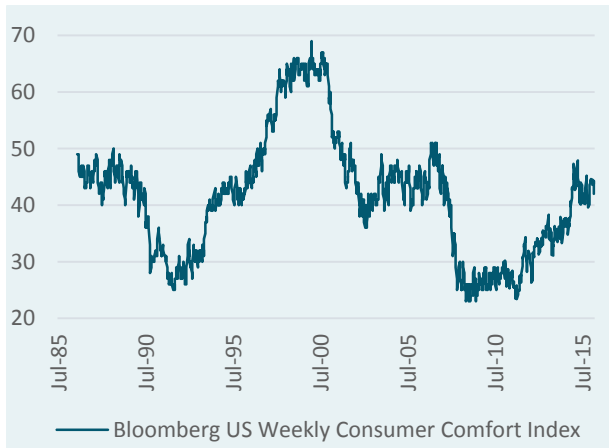
Consumer sentiment has stabilized in a normal range after trending upwards following the financial crisis. The Citi Economic Surprise index remains near the lower end of a normal range as economic data has missed expectations on average.

Sentiment may be an increasingly important indicator in the near future as the consumer remains a core support of economic growth. Given the positive fundamentals surrounding the consumer - ability to

borrow, to increase spending through less savings, and the prospects of higher real wages – positive sentiment may be a deciding factor in economic growth.

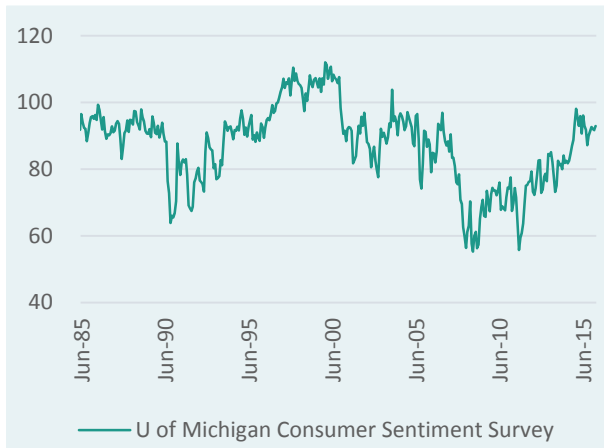
Despite this environment, consumers remain stubbornly timid which may be an indication of deeper economic problems. We believe the cautious state of consumers, given the reliance of the economy on consumption in the current environment, creates downside risks for growth and the markets.

CONSUMER COMFORT INDEX



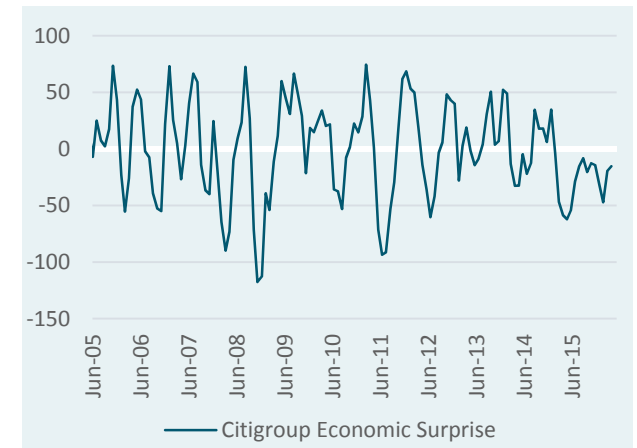
Source: Bloomberg, as of 3/27/16 (see Appendix)

CONSUMER SENTIMENT



Source: University of Michigan, as of 3/31/16 (see Appendix)

ECONOMIC SURPRISE



Source: Bloomberg, as of 3/31/16 (see Appendix)

U.S. economics – housing

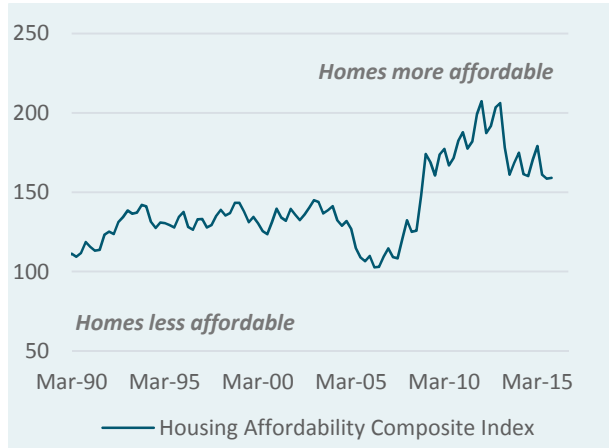
Home prices continued a healthy appreciation of 5.4% year-over-year as of January, according to the S&P/Case-Shiller US National Home Price Index, though values remain below pre-crisis levels. Affordability is materially above average despite a recovery in prices. A low rate of homeownership may indicate pent up demand.

A steady rise in housing prices over previous years has

affected housing affordability, though near-record low borrowing rates have had an overwhelmingly positive effect on affordability, resulting in a net positive. Further tightening of the labor and wages increase should flow through to strength in housing.

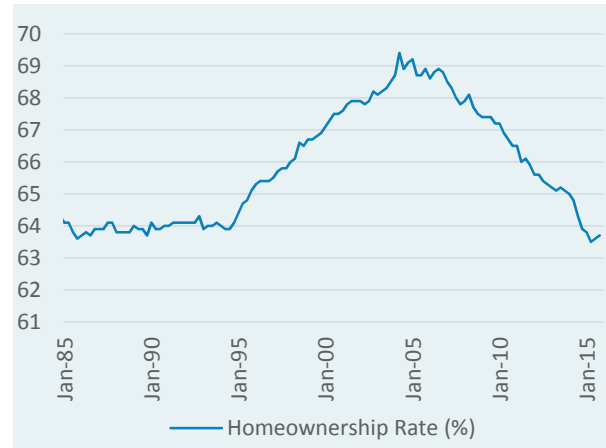
Large student loan burdens have delayed home purchases, and millennials have been starting families at a later age which also affects purchasing habits.

HOME AFFORDABILITY



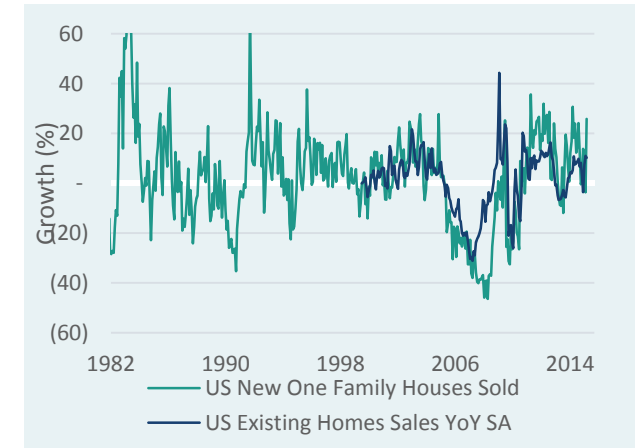
Source: National Association of Realtors, as of 12/31/15

HOMEOWNERSHIP RATE



Source: FRED, as of 1/1/2016

NEW & EXISTING HOME SALES



Source: Bloomberg, as of 2/29/16

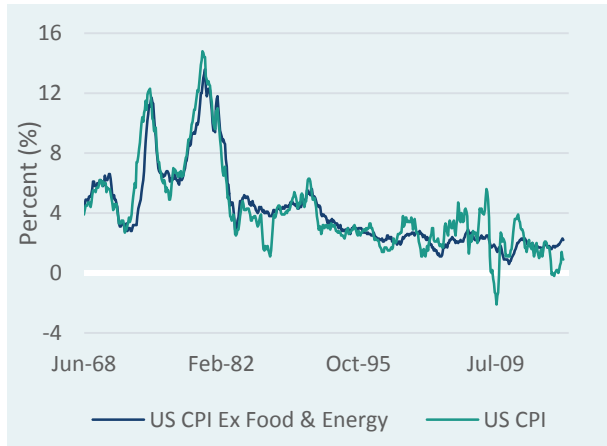
U.S. economics – inflation

Inflation expectations rose materially during Q1, as proxied by the 10yr TIPS Breakeven Rate and the University of Michigan Inflation Expectations Survey.

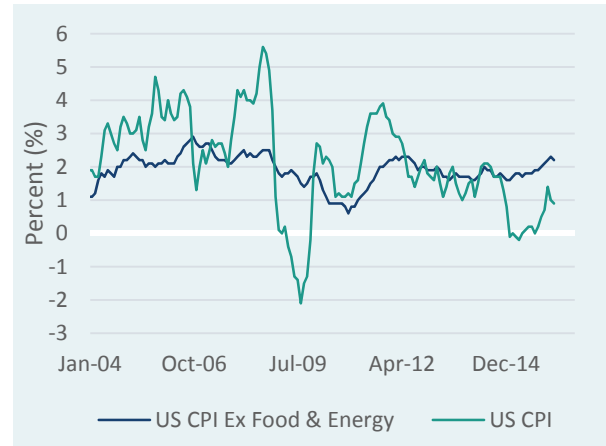
Headline inflation exhibited volatility in Q1 but remains muted. Core inflation (ex-food & energy) has shown a strong uptrend in recent months, buoyed most recently by a rise in housing and medical costs. We remain watchful of domestic inflation; if the dollar depreciates and wages increase, we could see the return of price increases which also may affect the path of Fed policy.

As we have mentioned before, investors' track record at forecasting inflation has been very poor. We can conclude, however, that times of low inflation tend to coincide with depressed prices for those assets which are held to protect against rises in inflation. Investors feeling the dual effect of lower inflation expectations along with losses from their inflation protecting assets can easily become discouraged and divest. However, today's prices may present an inopportune time to sell, and as history suggests we should not place too much weight on the market's expectation of future inflation.

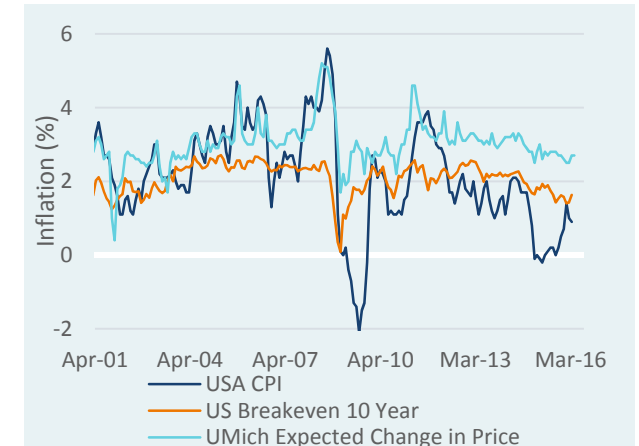
LONG-TERM U.S. CPI (YOY)



MEDIUM-TERM U.S. CPI (YOY)



MARKET EXPECTATIONS OF INFLATION



Source: FRED, as of 3/31/16

Source: FRED, as of 3/31/16

Source: Bloomberg, University of Michigan, as of 3/31/16

International economics summary

- Global growth remains sluggish. The IMF currently forecast growth of 3.2% in 2016, down from 3.4% in January. Upcoming geopolitical tensions surrounding Brexit and the current migrant crisis may have implications on GDP growth this year.
- China remains in the headlines. However, the country continues to be the largest growth engine among both developed and developing economies. China is in the midst of large structural shifts, but it should not be assumed that an economic crisis is inevitable.
- Euro area unemployment has come down about a percent from last year to 10.3%, but youth unemployment remains at extremely high levels, with February coming in at 21.6%, up nearly a percent from last year.
- The ECB further eased existing monetary policy. Among other accommodations, they moved their deposit rate into further negative territory and they included investment grade bonds as a part of eligible investment vehicles.
- Despite adopting negative interest rates in January, Japan has struggled to catalyze strong economic growth and lift inflation.
- After further conversations surrounding the anticipated Brexit, markets are likely to remain volatile until June 23rd, the date of the referendum.

Area	GDP (Real, YoY)	Inflation (CPI)	Unemployment
United States	2.0% 12/31/15	0.9% 3/31/16	5.0% 3/31/16
Western Europe	1.6% 12/31/15	0.0% 3/31/16	8.7% 12/31/15
Japan	0.7% 12/31/15	0.3% 2/29/16	3.3% 2/29/16
BRIC Nations	4.6% 12/31/15	3.9% 12/31/15	5.0% 12/31/15
Brazil	(5.9%) 12/31/15	10.4% 2/29/16	7.4% 12/31/15
Russia	(3.8%) 12/31/15	7.3% 3/31/16	5.7% 12/31/15
India	7.3% 12/31/15	5.2% 2/29/16	8.2% 4/12/16
China	6.8% 12/31/15	2.3% 2/29/16	4.1% 12/31/15

International economics

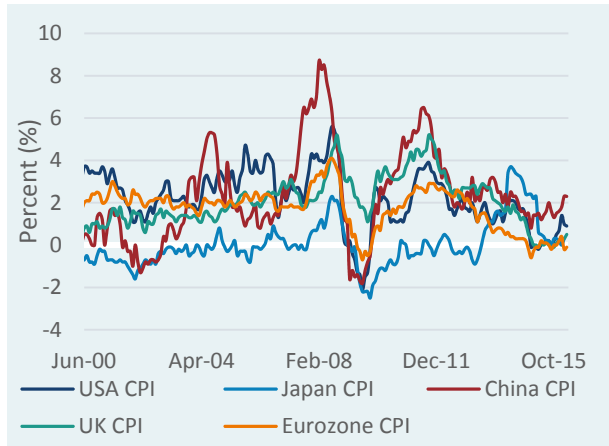
With continued downward revisions to global GDP, many countries are feeling the effects of suppressed inflation, lackluster growth, and waning consumer confidence. As a result, the first quarter saw multiple expansions of monetary policy, notably the ECB further cutting their deposit rate to -0.4% and the BOJ joining NIRP and implementing a deposit rate of -0.1% on excess reserves.

Western Europe continues to face uncertainty surrounding the migrant crisis. Policy around this challenge may affect border control and free movement of people issues which could have effects on trade within the EU. A possible Brexit

may affect the ability of the European Union's central institutions to act in a coordinated manner when needed to address economic issues.

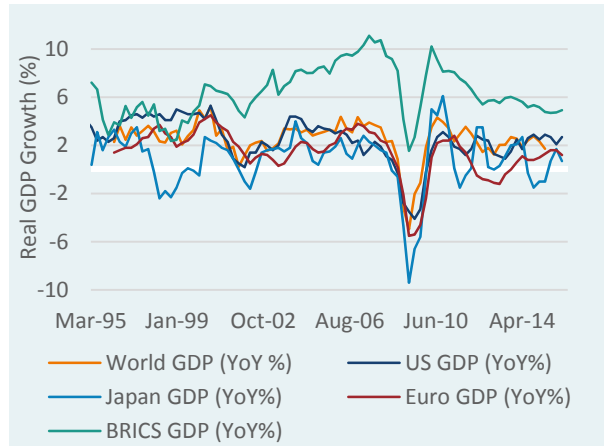
Emerging markets experienced ongoing deflationary forces including the downturn in the global commodity cycle, repatriation of developed market sourced capital, and slowing economic activity in China. As some of these effects flatten or reverse course in the coming months, emerging market countries may see an opportunity for improvement.

INTERNATIONAL INFLATION (CPI)



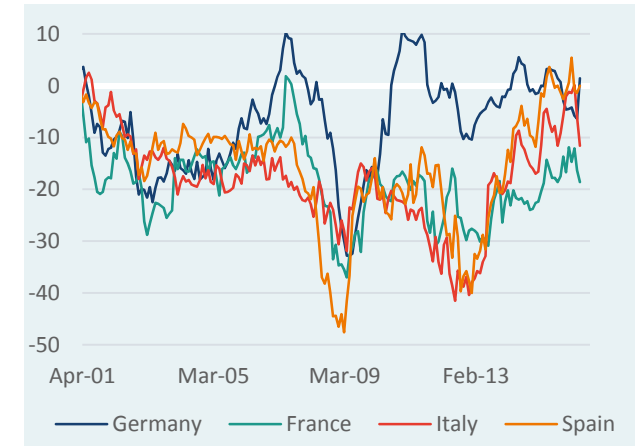
Source: Bloomberg, as of 3/31/16

REAL GDP GROWTH



Source: Bloomberg, as of 12/31/15

CONSUMER CONFIDENCE



Source: Bloomberg, as of 3/31/16

China – the world’s question mark

The Chinese economy continues to grow at a steady, yet slower pace than recent years. Considerable investments into infrastructure over the years produced large gains in industrial capacity which has led to excesses following the growth slowdown. The government is investing to reduce this excess capacity and reposition workers which will be a fragile process given the significant employment shifts required to bring the economy to equilibrium.

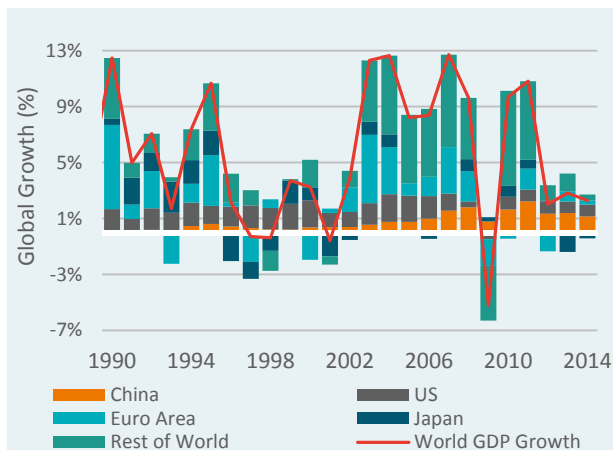
Unemployment in China is very low (4.1% in Q4), economic growth is among the highest in the world (6.8% in Q4), inflation is moderate (2.3% in February), they

remain a net creditor with a healthy current account, and foreign-exchange reserves are large at around \$3.2 Trillion USD. Debt levels in the country are worrying (237% of GDP in Q1), though mostly owned internally which poses less risk to global investors.

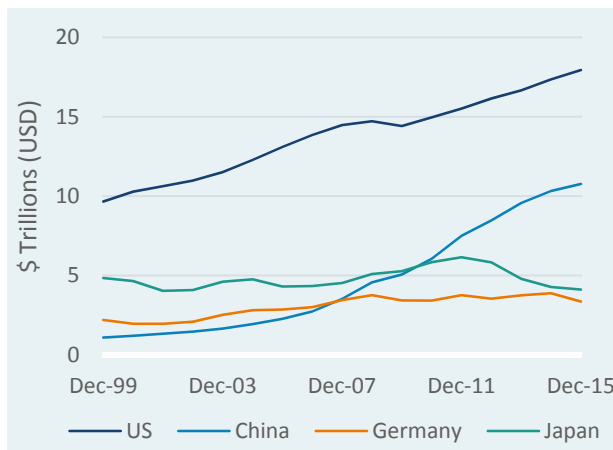
China’s deceleration has had far reaching impacts across the globe and the country continues to own its share of economic problems. However, China remains the world’s largest contributor to growth and potentially a large source of untapped consumer demand.

Valid concerns for the future but many strong economic indicators still persist

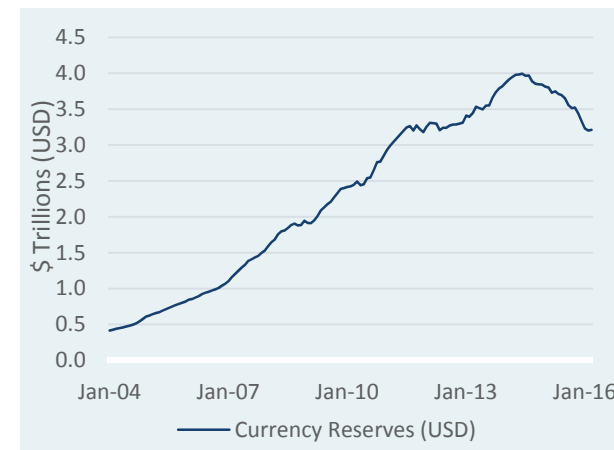
DRIVERS OF GLOBAL GROWTH



TOTAL GDP – 4 LARGEST ECONOMIES



CURRENCY RESERVES



Brexit – it’s complicated

“Brexit” refers to the U.K. voting to leave the European Union. Current polling seems equally balanced regarding the chance of an exit. Market sentiment assumes that Brexit would be a negative result, but the reality is likely more nuanced.

During the early 1990s the U.K. joined the Exchange Rate Mechanism, a currency management agreement regarded as a precursor to the Euro, tying U.K. monetary policy to that of Germany. The strains involved produced “Black Wednesday”, when George Soros and other hedge funds forced the Bank of England to pull out of the

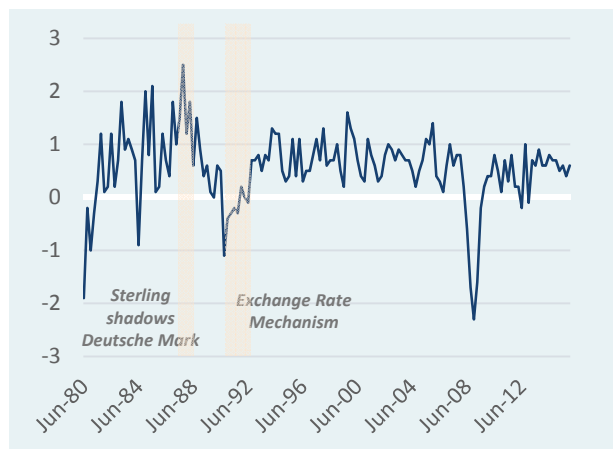
mechanism. Despite predictions of disaster the resulting economic expansion was one of the longest in U.K. history. Similar predictions of doom around the decision of the U.K. not to enter the Euro also proved wrong.

While Brexit could cause volatility, the long term effect for the U.K. (if not for the other EU members) could turn out to be positive as much as negative. Similarly, a vote to stay in could turn market attention to a new raft of regulatory proposals from an EU no longer restrained by the danger of U.K. threats to leave. As always the future is hard to predict.

Brexit would not necessarily be bad

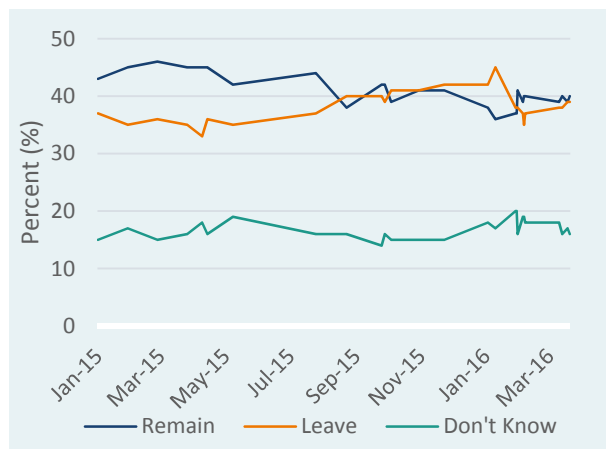
Remaining would not necessarily be good

UK GDP QOQ



Source: UK Office for National Statistics, as of 12/31/2015. Shaded area represents UK membership of ERM

BREXIT POLLS



Source: YouGov, as of 4/18/2016

DIFFERENT ECONOMIES

	UK	Europe
GDP YoY	2.1%	1.6%
Inflation	0.5%	0.0%
Unemployment	5.1%	8.7%
10 Year Interest Rate	1.48%	0.16%

Source: UK Office for National Statistics, Bloomberg

Fixed income rates & credit

Interest rate environment

- With significant volatility in financial markets at the start of 2016, investors fled to U.S. 10 Year Treasuries which rallied from 2.3% at the start of the year to 1.65% a week into February, then retraced some of that move to 1.77%.
- Interest rates decreased broadly across developed markets in Q4, most notably in the U.S. and Germany. Australia and China saw little movement in their 10 year rate.
- Global financial market turmoil has pushed investors into safe haven assets such as U.S. Treasuries which continue to be one of the higher yielding developed market bonds.
- The ECB expanded their existing monetary policy by further cutting rates to -40 bps. The German bund rallied from over 60 bps at the start of the year to under 9 bps in early April.
- Japan implemented a negative interest rate on excess deposits in January, which brought their 10 year yield into negative territory for the first time ever.
- As the U.S. continues to contemplate further rate hikes, most other countries are contemplating easier monetary policy with intention of devaluing currency, increasing investment, and generating economic growth.

Area	Short Term (3M)	10 Year
United States	0.20%	1.77%
Germany	(0.59%)	0.15%
France	(0.42%)	0.49%
Spain	(0.23%)	1.43%
Italy	(0.22%)	1.22%
Greece	2.63%	8.48%
UK	0.45%	1.42%
Japan	(0.09%)	-0.035%
Australia	2.06%	2.49%
China	2.10%	2.84%
Brazil	13.99%	13.97%
Russia*	9.79%	9.09%

Source: Bloomberg, as of 3/31/15

*Shortest term rate for Russia is 1Y

Negative interest rates

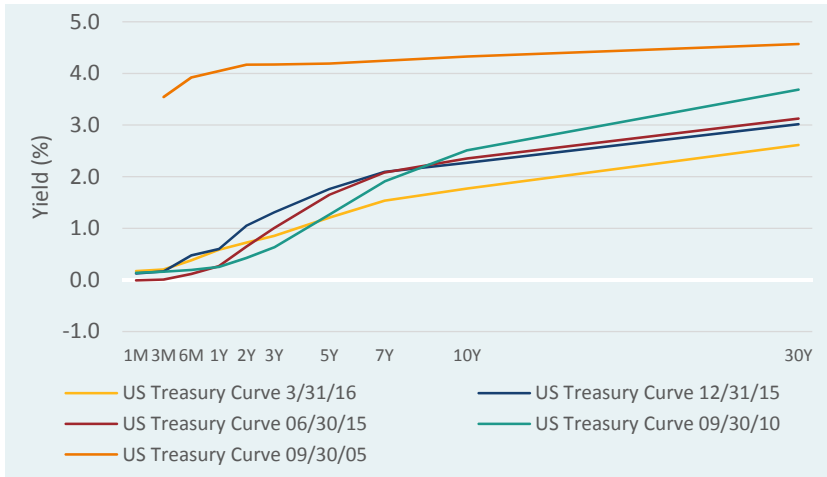
- Facing limitations of already record low policy rates, a few central banks have adopted a novel monetary policy approach phenomenon, NIRP (Negative Interest Rate Policy).
- Negative deposit rates have further suppressed global sovereign yields that were already at historic lows.
- With limited ability to expand balance sheets and no ability to push rates lower, the Eurozone pioneered the implementation of NIRP to achieve target inflation levels and spur economic growth.
- While investors still seem to be prepared to hold bonds at these negative rates, implications include adverse effects on banking profitability and investors being pushed towards taking excessive risk. Additionally, the U.S. has seen a tailwind in the form of dollar strength as other currencies continue to be devalued.
- The consequences of the spread of NIRP remain to be seen and there is little historical data to rely on when assessing likely outcomes.



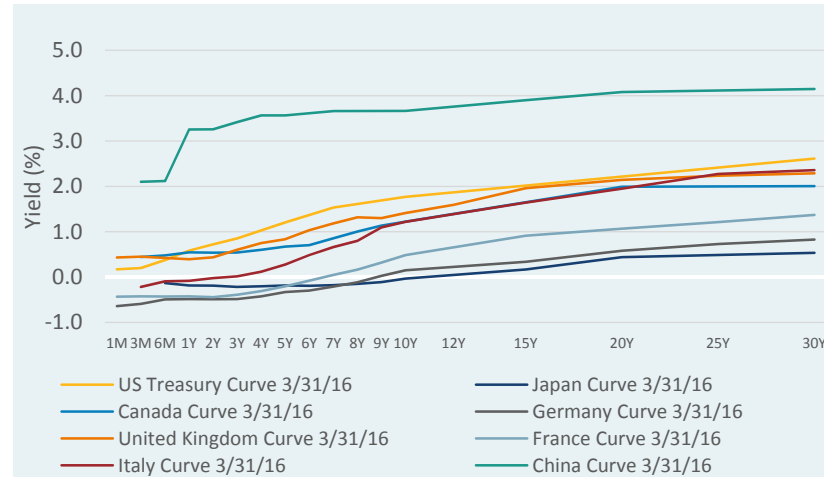
Source: Bloomberg, as of 3/31/16

Yield environment

U.S. YIELD CURVE

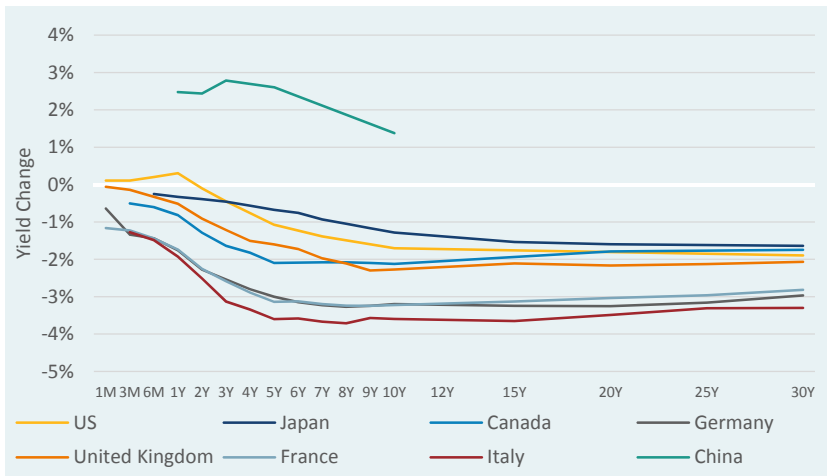


GLOBAL GOVERNMENT YIELD CURVES

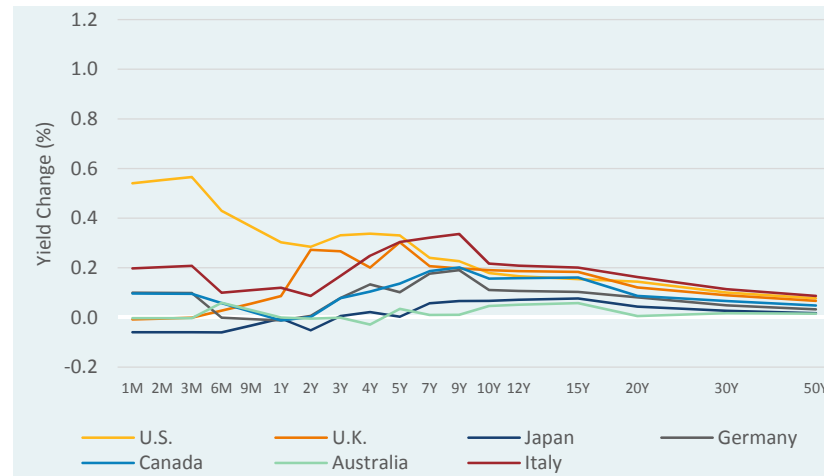


The U.S. yield curve has come down across all major tenors since the end of the fourth quarter

YIELD CURVE CHANGES OVER LAST FIVE YEARS



IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 3/31/16

Credit environment

High yield spreads and high yield energy spreads widened to begin the year, in line with a general market wide risk-off move. However, spreads retraced on the back of the oil rebound and market rally.

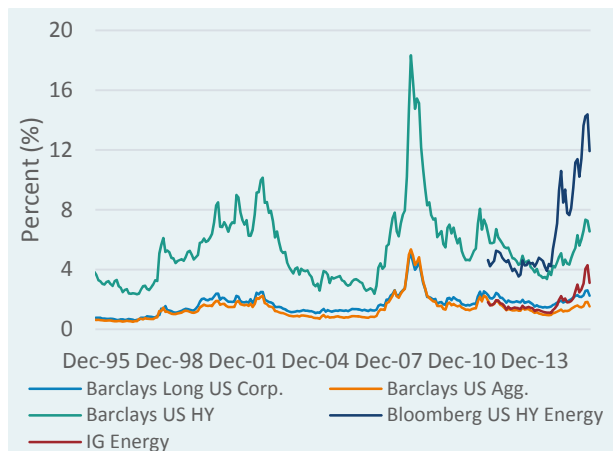
Credit spreads remain above average but in a normal range. A number of sectors, particularly the high yield energy space, are depending on continuing access to the credit markets. Were spreads to stay elevated or move higher, the ongoing viability of these issuance

dependent companies may be increasingly called into question.

The perceived risk of emerging market debt remains high, and country specific. The effect of lower oil prices on commodity exporters is notable, and this has contributed to spreads remaining at higher levels compared to intermediate term history. The recent increase in the oil price has brought spreads closer towards average levels.

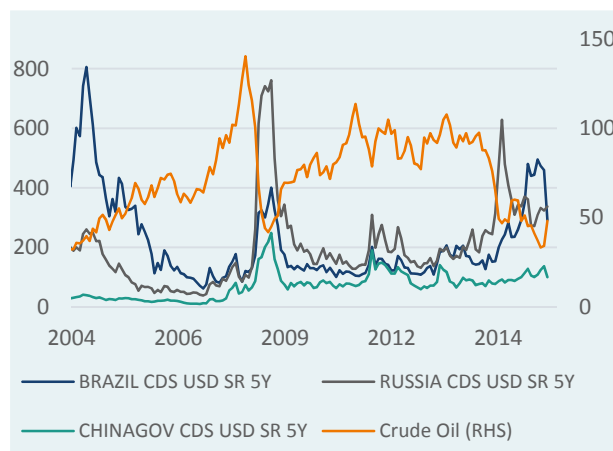
Sensitivity of high yield spreads to oil is much higher in a low oil price environment

CREDIT SPREADS



Source: Barclays Capital Indices, Bloomberg, as of 3/31/16

EMERGING MARKET SPREADS



Source: Bloomberg, as of 3/31/16

SPREADS

Market	Credit Spread (3/31/2016)	Credit Spread (1 Year Ago)
Long US Corporate	2.1%	1.8%
US Aggregate	1.1%	1.0%
US High Yield	7.0%	5.1%
US High Yield Energy	11.9%	9.3%
US Bank Loans	3.9%	3.9%

Source: Barclays, Credit Suisse, Bloomberg, as of 3/31/16

Issuance and default

Issuance has slowed significantly across the higher-risk debt markets. Lending standards are tightening, covenants increasing and high yield defaults are accelerating. These movements suggest that the credit cycle is maturing. We remain cautious regarding overexposure to higher risk credit. We would suggest investors tilt accordingly – bank loans vs. high yield, high grade corporate vs. high yield, and so on.

Defaults are rising in the high yield market, fueled by the energy sector. Hedges put in place by energy-

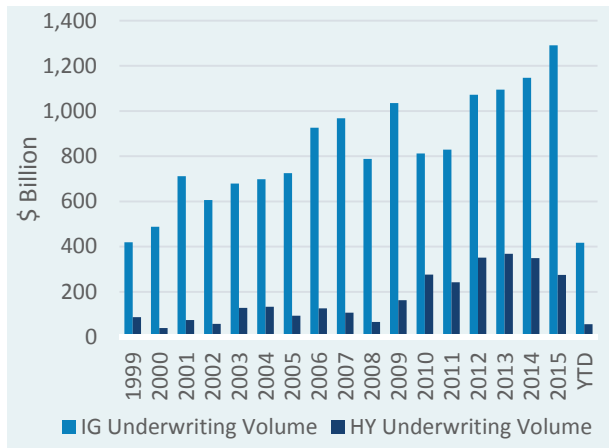
related companies continue to roll off. There exists a surprising level of funding available through distressed credit funds which may make its way to struggling firms and perhaps prolong the pain and prevent the needed restructuring within the industry.

With continued issues in the credit market, investors should take care to understand and control the degree of credit exposure in portfolios, and where possible tilt gently away from high yield rather than increasing exposures.

Credit cycle appears to be maturing

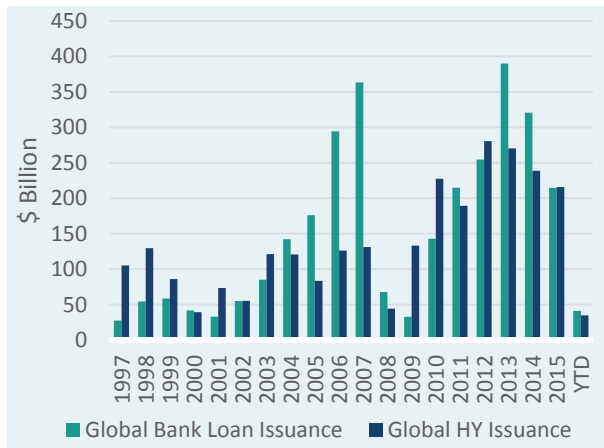
We favor investment grade over higher risk issues

IG & HIGH YIELD ISSUANCE



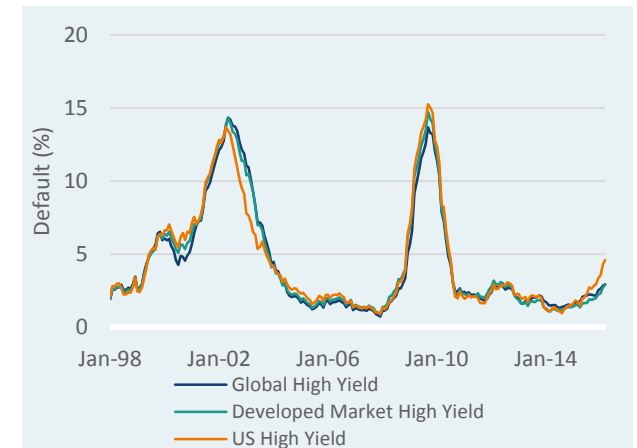
Source: Bloomberg, as of 3/31/16

BANK LOAN & GLOBAL HY ISSUANCE



Source: BofA Merrill Lynch Global Research, as of 3/31/16

HY DEFAULT TRENDS (ROLLING 1 YEAR)



Source: Credit Suisse, BofA, as of 3/31/15

Equity

Equity environment

- We remain underweight to risk assets. Market risks continue to appear asymmetrical to the downside.
- The first quarter earnings growth estimate for the S&P 500 was -9.1% as of April 8th. If an earnings decline is reported it will mark the first time since the four quarters ending Q3 2009 that the index has experienced four consecutive quarters of earnings contraction (see slide 31 for further coverage of domestic and international earnings trends).
- Telecom and utilities sectors showed strong performance in Q1 at 16.6% and 15.6%, respectively. Financials and health care underperformed at -5.1% and -5.5%.
- Size and value factors have failed to produce positive premia over the past 1, 3, 5, 7, and 10 years.
- Emerging market equities fell to start the year but have since rallied along with a bounce in commodity prices. Strong appreciation in emerging market currencies have also buoyed returns for U.S. investors in these markets.
- The U.S. dollar fell in Q1, resulting in gains for domestic investors with unhedged international currency exposure.

	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)	1.2%		1.2%		0.5%	
US Small Cap (Russell 2000)	(1.5%)		(1.5%)		(9.8%)	
US Large Value (Russell 1000 Value)	1.6%		1.6%		(1.5%)	
US Large Growth (Russell 1000 Growth)	0.7%		0.7%		2.5%	
International Large (MSCI EAFE)	(3.0%)	(6.0%)	(3.0%)	(6.0%)	(8.3%)	(11.2%)
Eurozone (Euro Stoxx 50)	(3.3%)	(7.5%)	(3.3%)	(7.5%)	(11.6%)	
UK (FTSE 100)	(2.2%)	(2.4%)	(2.2%)	(2.4%)	(7.6%)	(10.2%)
Japan (NIKKEI 225)	(4.8%)	(12.3%)	(4.8%)	(12.3%)	(5.3%)	(13.4%)
Emerging Markets (MSCI Emerging Markets)	5.7%	2.5%	5.7%	2.5%	(12.0%)	(9.5%)

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 3/31/16

Domestic equity historical return

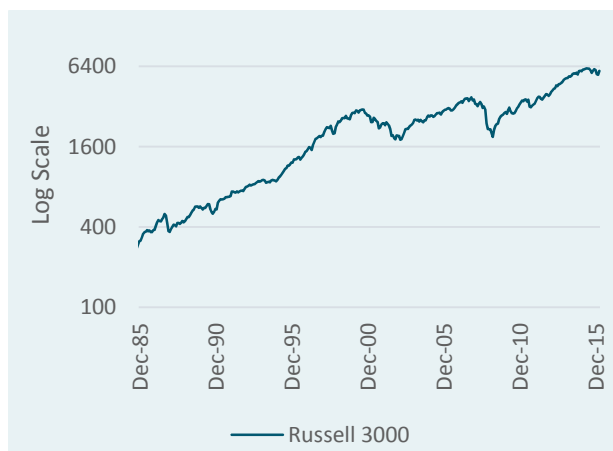
The domestic equity recovery coming out of the financial crisis has been driven fairly equally by strong earnings growth and strong upward movement in valuations. From a fundamental perspective we may need to see an improvement in earnings growth from the current contracting trend in order to realize further equity market upside, barring additional expansion of equity valuations which seems unlikely at current levels.

We remain underweight risk on an intermediate

timeframe. Risks today seem asymmetrical to the downside as corporate earnings turn lower, global growth expectations continue to be revised downward, and credit markets indicate there may be pain ahead.

However, equity exposure remains an integral part of the portfolio and is the primary means for investors to access the long-term productive capacity of the economy. Shorter term disruption notwithstanding, the equity investment experience remains positive over the long term.

LONG-TERM PERFORMANCE



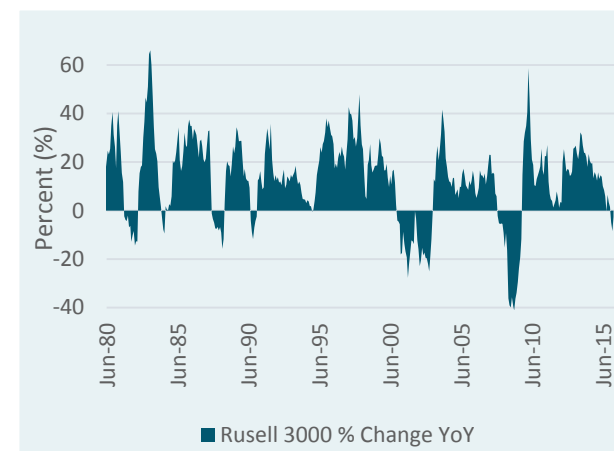
Source: FRED, as of 3/31/16

S&P 500 EPS ESTIMATE & PRICE



Source: Standard & Poor's, as of 3/31/16

DOWNSIDE EVENTS



Source: FRED, as of 3/31/16

Domestic equity recent

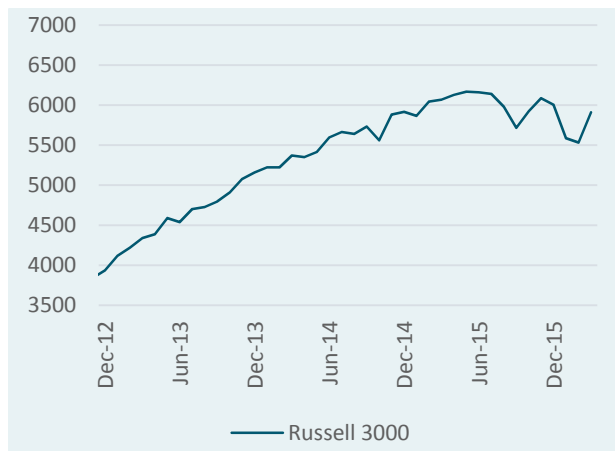
The U.S. equity market has effectively been range-bound since late 2014. The market fell sharply to start the year amid risk-off sentiment and global growth concerns, but retraced losses in March.

The return of risk-on sentiment and a dovish Fed helped stabilize equity markets. The timing of rate hikes continues to add uncertainty; however, market expectations of such a rise have been pushed back once again.

Weak corporate earnings may be a headwind for equity markets in the short-term. For Q1, the April 8th estimate of year over year earnings decline was -9.1%. If a decline does occur, it will mark four consecutive quarters of earnings contraction. With the effect of monetary easing diminishing, investors may find it more difficult to overlook another poor earnings season. Investors should remember, however, that low expectations for earnings growth provide the possibility for positive earnings surprise which might have the effect of changing sentiment.

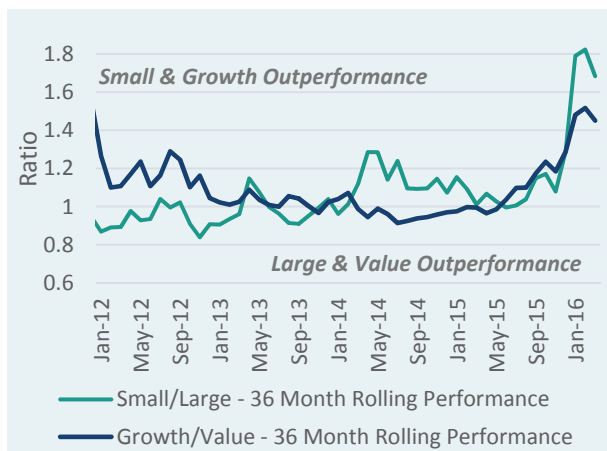
Keep watchful of domestic equities as earnings growth remains negative

SHORT TERM PERFORMANCE (3YR)



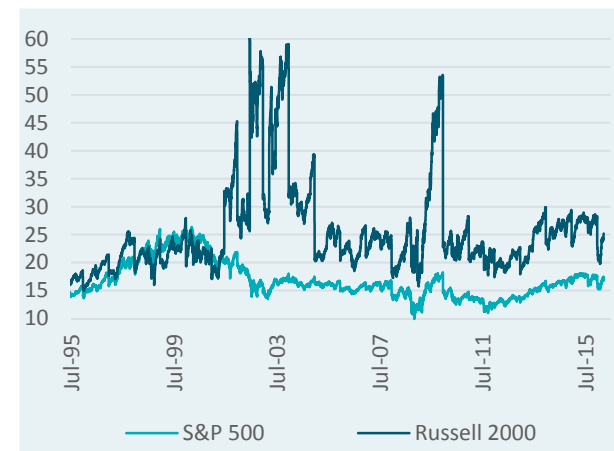
Source: Russell Investments, as of 3/31/16

SMALL/LARGE & GROWTH/VALUE



Source: Russell Investments, as of 3/31/16

FORWARD P/E



Source: Standard & Poor's, Russell Investments, as of 3/31/16

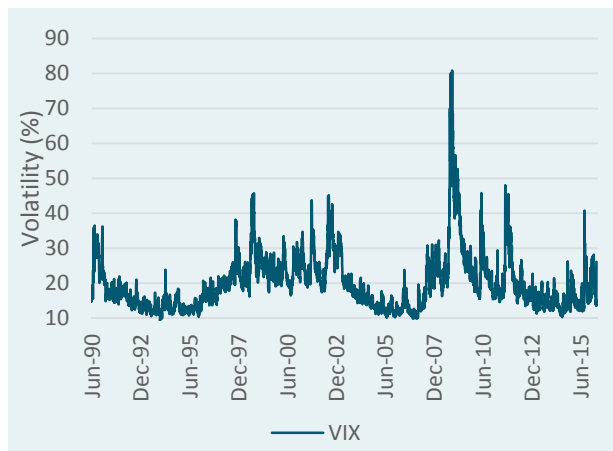
Equity volatility

Despite starting the year with heightened volatility due to a risk-off sentiment, uncertainty in global central bank policy, lowered economic growth expectations, and concerns around financial market stability, equity volatility came down to more normal levels towards the end of the quarter. Most major markets recovered losses from the start of the year and found stable ground as central banks continued a dovish stance, oil found a trading range from upper 30's to lower 40's, and the dollar continued to weaken.

Domestic volatility still remains the lowest compared to other major markets.

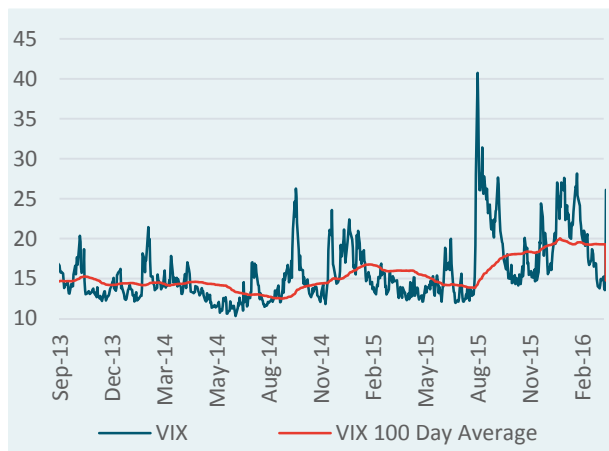
International markets are seeing more volatility as the Brexit referendum approaches, as questions continue regarding economic growth, and as geopolitical tensions persist. Emerging market volatility has come down slightly with the stabilization of oil prices.

LONG-TERM VOLATILITY



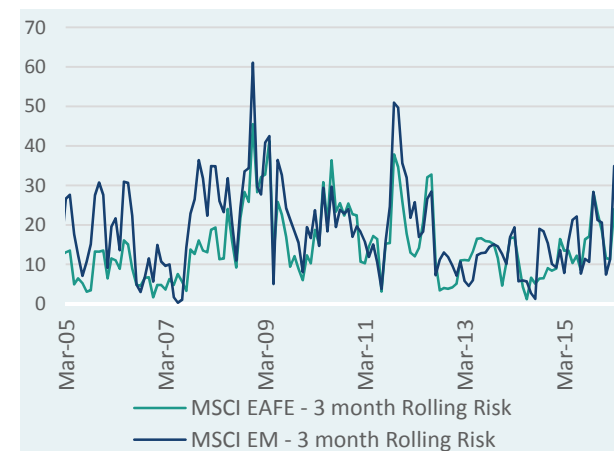
Source: CBOE, as of 3/31/16

INTERMEDIATE-TERM VOLATILITY



Source: CBOE, as of 3/31/16

INTERNATIONAL EQUITY VOLATILITY



Source: MSCI, as of 3/31/16

Domestic equity size and style

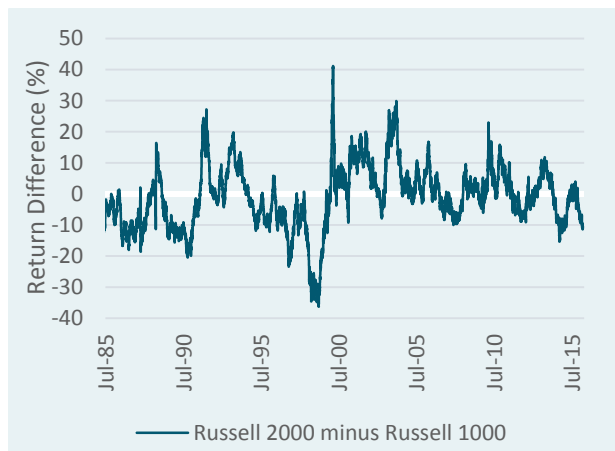
Value stocks outperformed growth stocks during the quarter as the Russell 1000 Value Index and Russell 1000 Growth Index returned 1.6% and 0.7%, respectively. However, the value factor has not provided positive returns to investors over the past 1, 3, 5, 7, and 10 years, leading many to question the efficacy of the value premium, or alternatively to suggest that a reversion to a value market is long overdue.

during the quarter. The Russell 1000 Index and Russell 2000 Index returned 1.2% and 1.5%, respectively. The Russell 1000 Index has outperformed the Russell 2000 Index on an absolute and risk-adjusted basis over the past 1, 3, 5, 7, 10, and 20 years.

This lack of performance from both the size premium and the value premium over the past 10-20 years is certainly worth noting. We will be examining these effects more closely during the coming quarters.

Large cap equities outperformed small cap equities

SMALL CAP VS LARGE CAP (YOY)



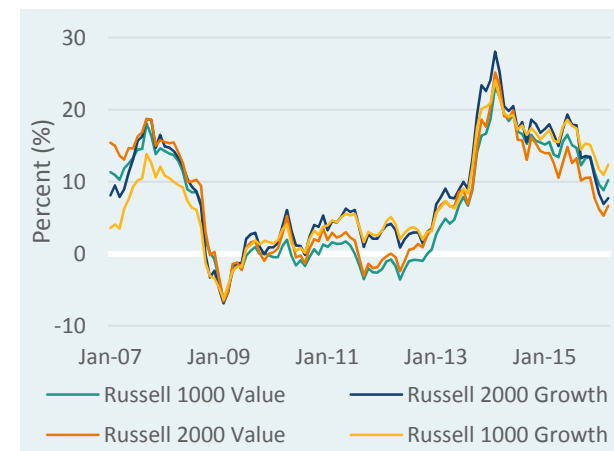
Source: Russell Investments, as of 3/31/16

VALUE VS GROWTH (YOY)



Source: Russell Investments, as of 3/31/16

ROLLING 5 YEAR RETURN



Source: Russell Investments, as of 3/31/16

Domestic equity valuations

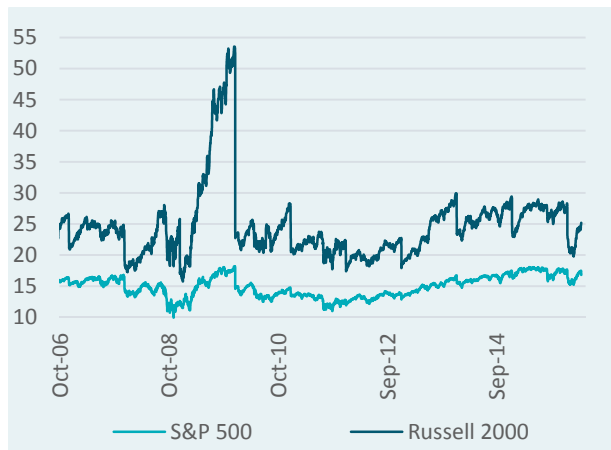
Domestic equity valuations fell to start the year along with the broader equity market decline. Valuations of large cap equities have since returned to prior levels while small cap valuations remain lower.

Attempts to gauge whether equities are over or undervalued on a cross asset class basis is made difficult by the fact that bond yields are extremely low. Investors are willing (or forced) to hold greater allocations to risk assets as most safer assets offer very

low return potential. The natural level of equity valuations could reasonably be expected to be higher in today's environment as investors have fewer alternatives available to meet return targets.

The Shiller P/E ratio remains at a relatively elevated level, although it should be noted that this indicator does not necessarily imply, particularly in the current interest rate environment, that U.S. equities are necessarily due for a significant downturn.

12 MONTH FORWARD P/E



Source: Standard & Poor's, Russell Investments, as of 3/31/16

EQUITY YIELD LESS BOND YIELD



Source: Standard & Poor's, Bloomberg, as of 3/31/16

SHILLER P/E LONG-TERM



Source: Shiller, as of 3/31/16

International equity historical return

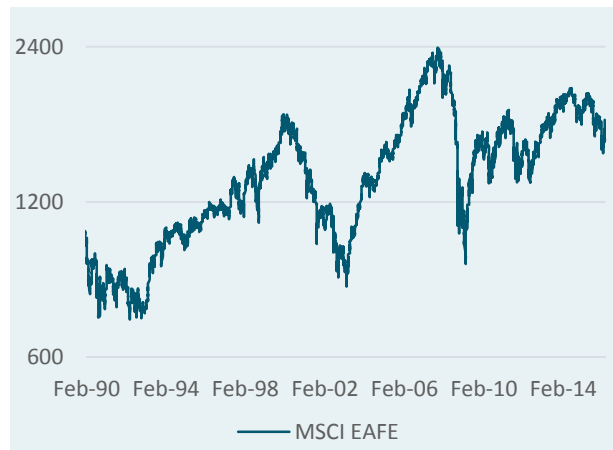
Domestic equities exhibited a significant run over the past 10 years, which led investors with home country bias to outperform. However, international and domestic markets tend to move in cycles. Domestic equities underperformed international equities materially during the early 2000's.

Emerging market equities showed a strong rebound in Q1. Countries have seen deeply depressed valuations following the downturn of the commodity super cycle and weakened currencies. Severe pessimism

surrounding these markets has allowed for potential upside movement if/when expectations are adjusted.

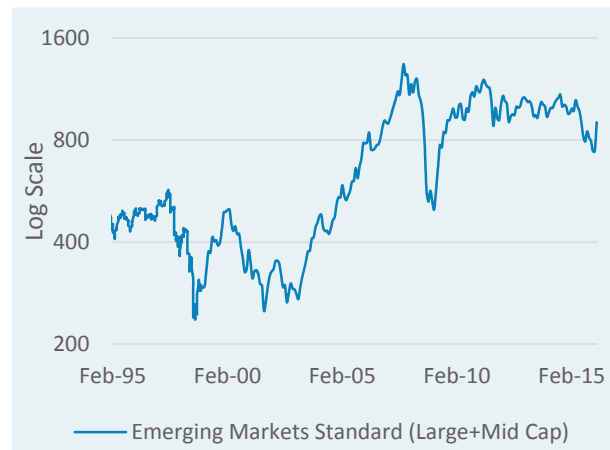
Equities can be thought of in terms of the entire opportunity set – the global equity market. Through gaining exposure to the whole opportunity set, investors should expect to realize greater risk-adjusted returns due to less than perfect correlation across equity markets.

EAFE LONG TERM (USD)



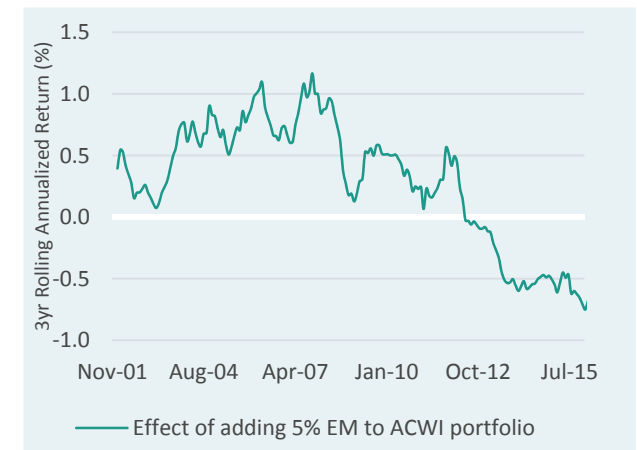
Source: MSCI, as of 3/31/16

EMERGING MARKETS LONG TERM (USD)



Source: MSCI, as of 3/31/16

EM EFFECT ON GLOBAL EQUITY PORTFOLIO



Source: MSCI, as of 3/31/16

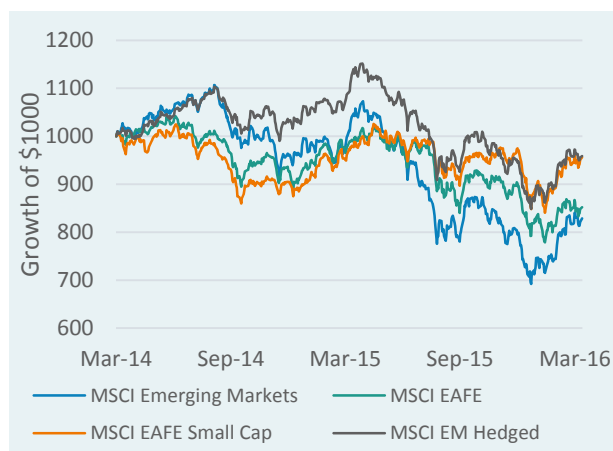
International equity recent

The euro and yen strengthened despite relatively looser monetary policy, contributing to underperformance of developed international markets. Local currency appreciation has the dual effect of hurting the competitiveness of export prices, a negative for the equity markets, while helping returns of foreign investors who hold local equities on an unhedged basis. The net benefit/loss is determined by the nature of trade within each economy and the reaction of equity investors to the currency move.

In Europe, negative interest rates continue to put banks under pressure and financials were one of the worst performing sectors in Q1. Banks compose 14% of the index. Japan equity valuations continued lower after the sell-off, moving from a trailing P/E of 21 at the start of the year to 18.8 at quarter-end.

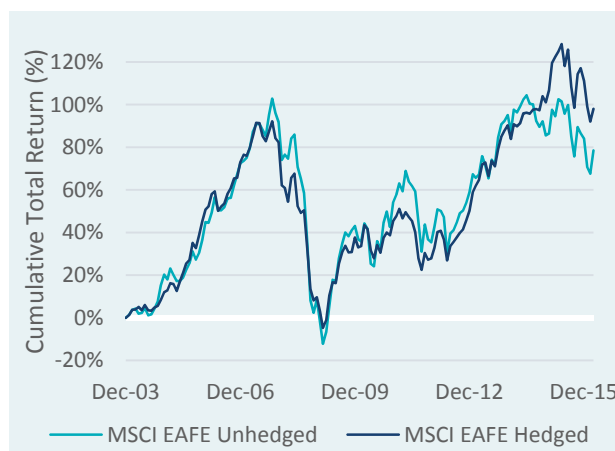
A weaker U.S. dollar and stronger commodity prices fueled a rally in emerging market equities in Q1.

SHORT-TERM PERFORMANCE



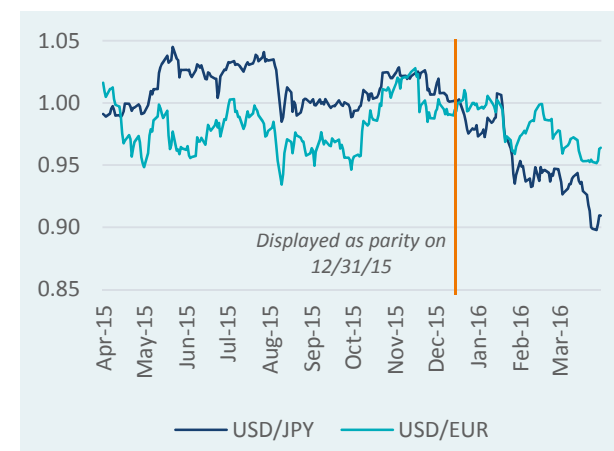
Source: MSCI, as of 3/31/16

CUMULATIVE RETURN



Source: MSCI, as of 3/31/16

USD/EUR, USD/YEN



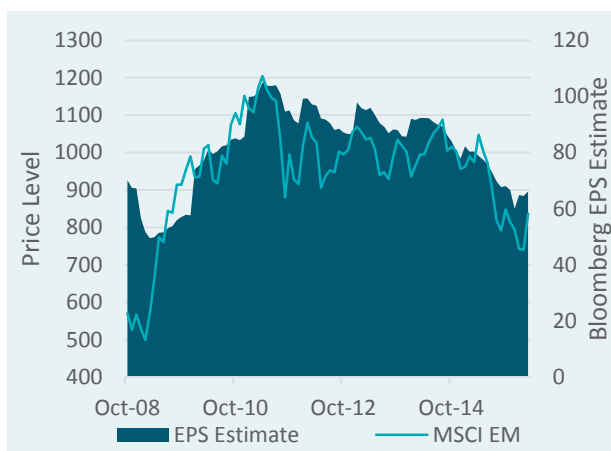
Source: MSCI, as of 3/31/16

International equity valuations

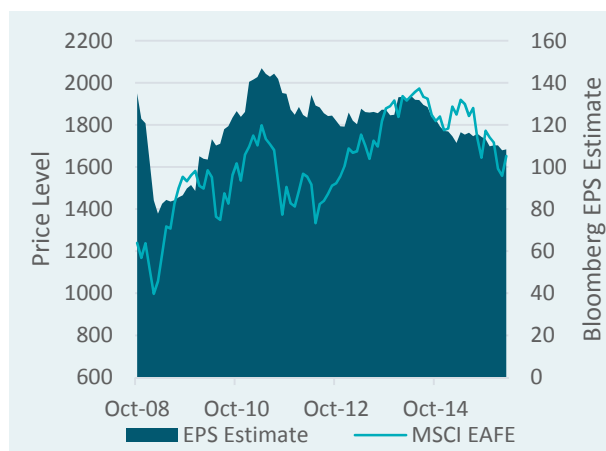
International valuations remain relatively cheap on a traditional P/E basis. However, P/E ratios can be deceiving due to their *point-in-time* nature (price of equities at a certain time divided by equities earnings at a certain time). As the value of equities are determined by the present value of future earnings it is worth noting the directional trend of earnings across each equity marketplace. Trend may add color to current valuation levels.

MSCI EM and MSCI EAFE valuations remain cheaper relative to the U.S. markets, though these indices have exhibited downward trends in earnings-per-share (EPS) estimates. MSCI EAFE has seen a gradual deterioration in earnings estimates while EM has seen a sharp falloff following the downward movement in commodity prices and recession in many countries. The U.S. has exhibited a steady upward trend in earnings until the recent turnover.

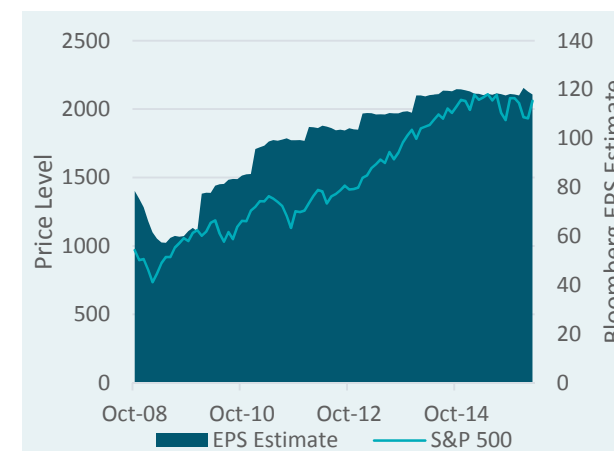
MSCI EM EPS ESTIMATE & PRICE



MSCI EAFE EPS ESTIMATE & PRICE



S&P 500 EPS ESTIMATE & PRICE



Source: MSCI, as of 3/31/16

Source: MSCI, as of 3/31/16

Source: Standard & Poor's, as of 3/31/16

Emerging market equity

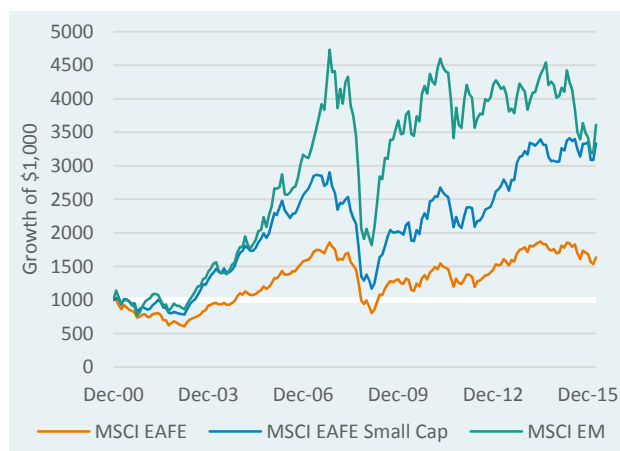
Emerging markets sold off at the start of the year along with broader equity markets, but experienced a full recovery bringing returns positive year-to-date. The rally in the oil market was mirrored by many oil producing emerging market currencies, providing a boost for unhedged U.S. based investors. Brazil was one of the best performing equity markets, supported by further speculation that top government leadership might be replaced.

Equities in this space have faced significant headwinds.

Despite sharp drawdowns in recent years, emerging markets have delivered returns since December 2000 that outpaced international developed by a very large margin.

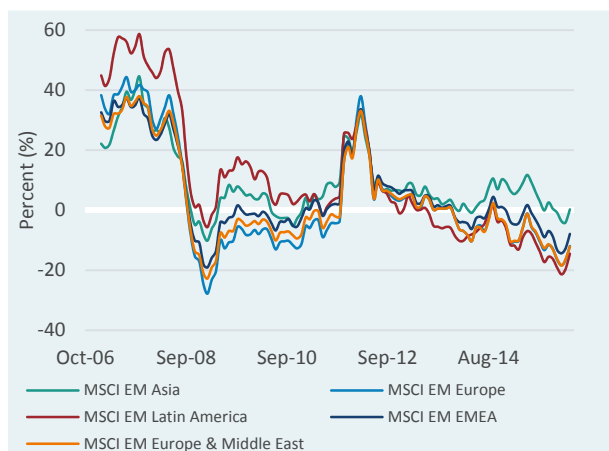
Further accommodative central bank policies and continued low yields in developed markets should help emerging market fund flows as higher yielding investment options remain limited. Furthermore, as borrowing rates tend to follow those of the developed market, an accommodative Fed provides a flow-through stimulus effect to these economies.

LONG TERM PERFORMANCE



Source: MSCI, as of 3/31/16

ROLLING 3 YEAR RETURN



Source: MSCI, as of 3/31/16

FORWARD P/E



Source: MSCI, as of 3/31/16

Other assets

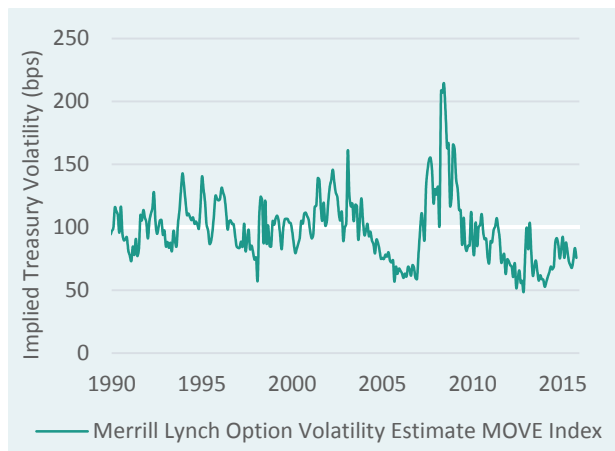
Other asset volatility

With the first Fed rate hike completed, weak commodity prices, and fear of a continued strength in the U.S. dollar versus other major currencies, the start of the first quarter saw increased financial volatility across major asset classes. Since the start of the year, global financial stress has calmed down and foreign exchange volatility has reverted. With dovish comments from the Fed and increased easing from the ECB, BOJ, and PBOC, most financial assets seem to be priced for a stable market environment going forward.

Oil volatility has retreated sharply since the start of the year as talks of potential production output remain a possibility in OPEC countries. Additionally, rig counts in the U.S. dropped, indicating there may be a slight reprieve of supply in the near term.

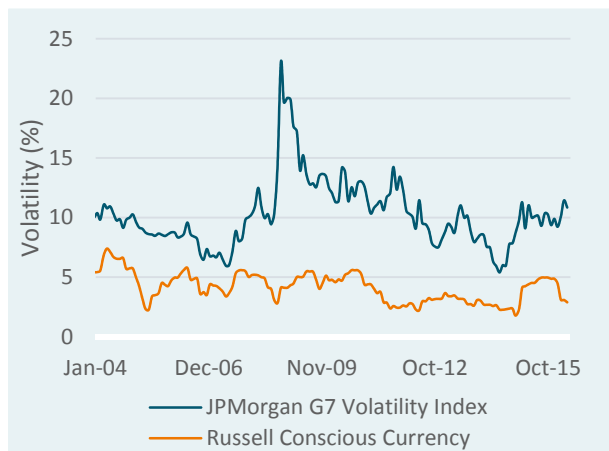
Fixed income implied volatility remains below average despite the anticipation of rate hikes and extended durations in a low yield environment. Even with market attention focused on rate movement, the expected short term risk of fixed income continues to be low.

FIXED INCOME VOLATILITY



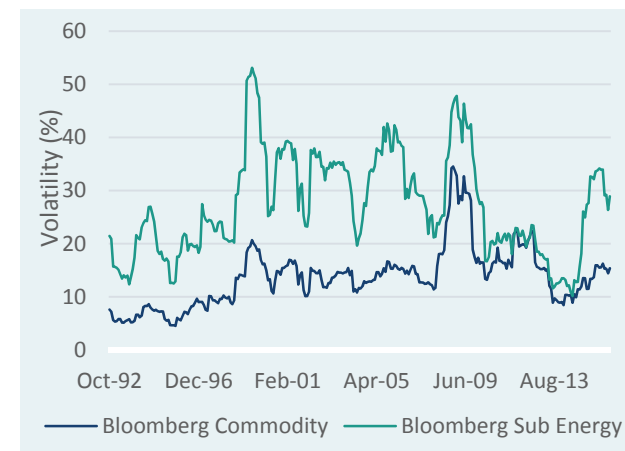
Source: Merrill Lynch, as of 3/31/16 (see Appendix)

FX VOLATILITY



Source: JP Morgan, Russell Investments, as of 3/31/16

COMMODITY VOLATILITY



Source: Bloomberg, as of 3/31/16

Real estate & REITs

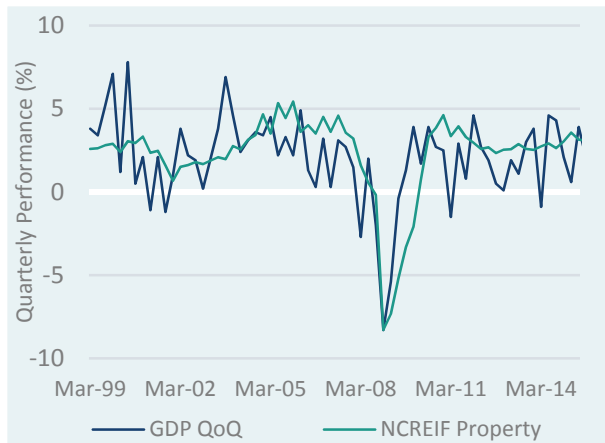
Core real estate has now provided six consecutive years of steady returns between 10-14%. Correlations between GDP growth and real estate have historically been very high. A slow, but steady recovery in the job market, combined with low interest rates has created an environment conducive to positive results in the asset class. Lending standards have remained tighter than previous cycles keeping new supply from overheating the market.

Fundamentals remain strong as vacancy rates continue to decline overall. Industrial property vacancy rates have

shown the steepest declines as e-commerce has increased demand for infill warehouse space. Apartment vacancies ticked up slightly at the end of 2015 as new supply has been heavier in this sector. Net operating income growth remains positive overall, but has slowed in recent quarters with the exception of apartments, which continue to grow over 10%.

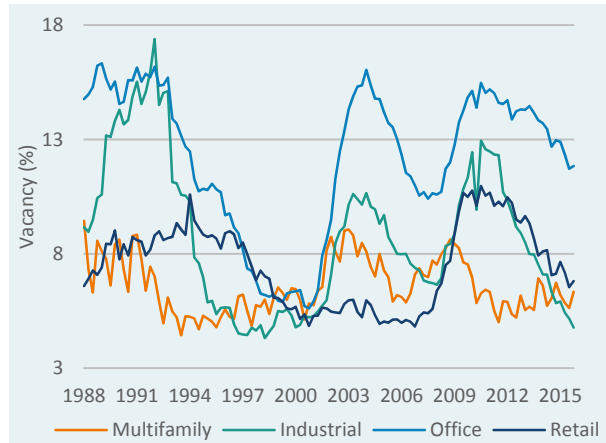
Cap rates have continued to steadily decline along with interest rates, although the spreads to U.S. Treasuries remain attractive.

REAL ESTATE & THE BUSINESS CYCLE



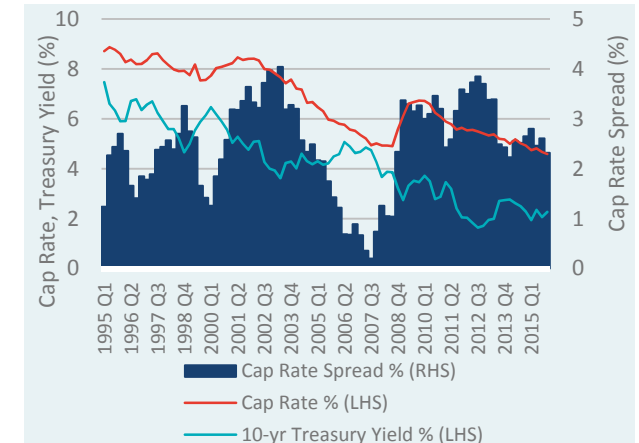
Source: NCREIF, as of 12/31/15

REAL ESTATE VACANCY BY TYPE



Source: NCREIF, as of 12/1/15

CAP RATE SPREADS



Source: NCREIF, as of 12/1/15

Commodities

After months of prolonged negative performance for commodities, Q1 provided a positive reprieve. Along with other risky assets, crude oil saw a rough start to the year, falling below \$30 in February. With stronger market sentiment and indications of production ceilings from major oil producers, the price has recovered to the low \$40's. The WTI forward curve has begun to flatten which could be positive for long investors seeking to reduce their losses on the roll yield.

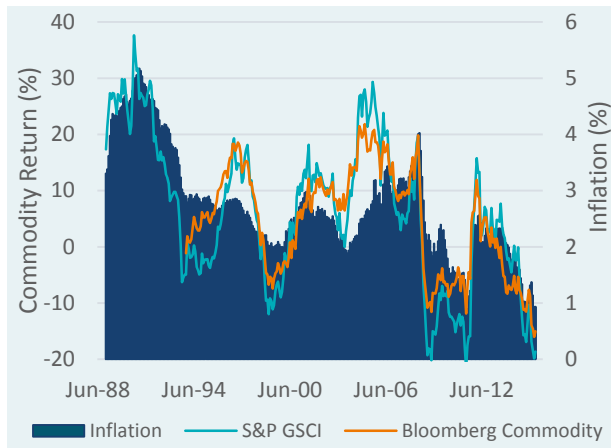
U.S. oil and gas rig counts dropped to the lowest level on record back to 1949, reflecting the dramatic downturn in

activity from the U.S. energy sector. This reduction in supply was a tailwind for crude oil prices.

While oil continues to hover around all time low prices, Americans are approaching peak driving season and could bolster upward price movement.

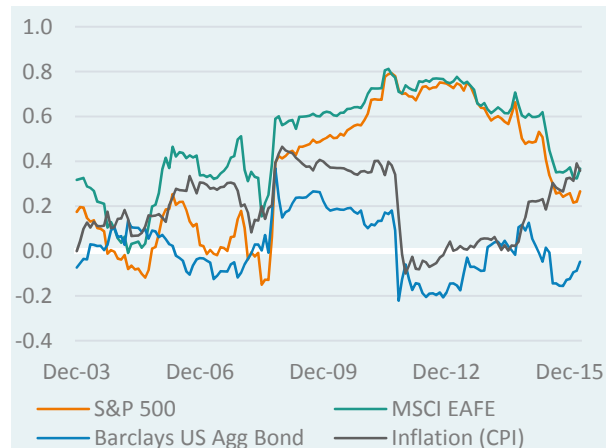
Gold started 2016 just above \$1100 and has since rallied past \$1250. While the initial rally seemed to have been supported by uncertainty around Fed policy and instability across global financial markets, gold has remained range bound over the last month.

3 YR ROLLING RETURNS



Source: Standard & Poor's, Bloomberg, as of 3/31/16

COMMODITY CORRELATION (3YR ROLLING)



Source: MPI, as of 3/31/16 - correlation to Bloomberg Commodity

COMMODITY CUMULATIVE RETURNS



Source: S&P Dow Jones, as of 3/31/16

Private equity buyouts

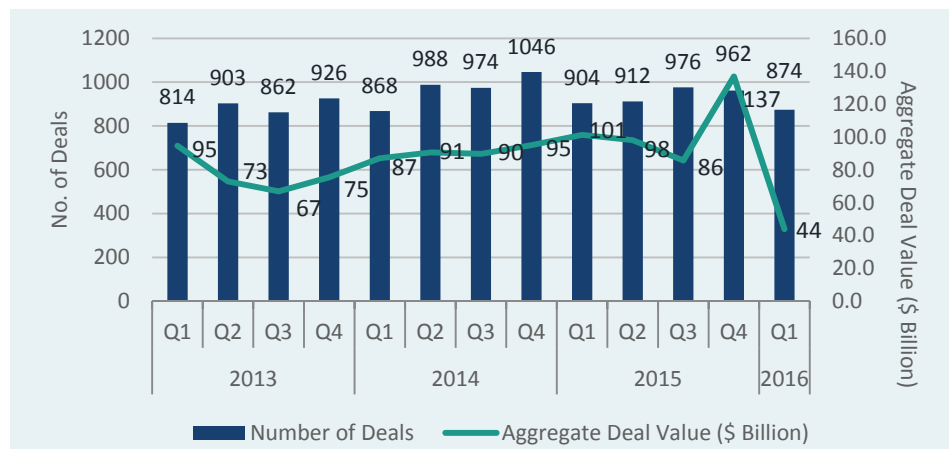
With pricing rich in the buyouts space, harvesting volume is outpacing new capital deployment. This bodes well for LPs given higher levels of distributions than capital calls in a frothy investment environment. While exhibiting a continued downward trend in the number of exits, the aggregate value of Buyout exits continued to outpace new investments.

The first quarter of 2016 saw 874 private equity-backed buyout deals globally, worth a combined \$44 Billion. This represents a sharp decrease from the 962 deals in the

previous quarter, and is 57% lower than the \$101 Billion recorded across 904 deals in Q1 2015.

Private equity buyout-backed exits also contracted in Q1 2016, as 343 exits with a total value of \$62 Billion were announced. The number of exits is 19% lower than the 421 exits seen in Q4 2015, and 15% lower than the 402 exits in Q1 2015.

GLOBAL PRIVATE EQUITY-BACKED BUYOUT DEALS



Source: Preqin, as of 3/31/16

GLOBAL PRIVATE EQUITY-BACKED BUYOUT EXITS



Source: Preqin, as of 3/31/16

Venture capital

Venture Capital fund managers are not finding exit markets as receptive and have adjusted capital deployment to somewhat lower levels, with a focus on existing portfolio companies. With the funding environment generally more stringent for new startups and later stage companies that have yet to gain traction, we see signs that the venture space is going through a modest correction.

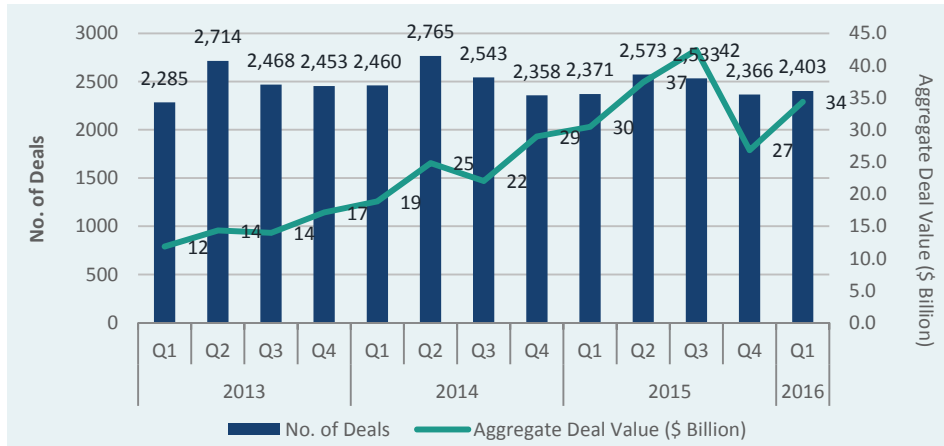
With aggregate exit values generally lagging in 2015, VC investment activity has turned more cautious, with a

focus on selectively funding existing portfolio companies.

Globally the first quarter saw 2,403 deals, worth a combined \$34 Billion. Both the quantity and value of new deals have fallen over the last two quarters.

The venture-backed exit market contracted in Q1, as 265 exits were announced globally worth a total of \$17 Billion. The number of exits was 15% lower than the 304 exits seen in Q4 2015, and 6% lower than the 282 exits in Q1 2015.

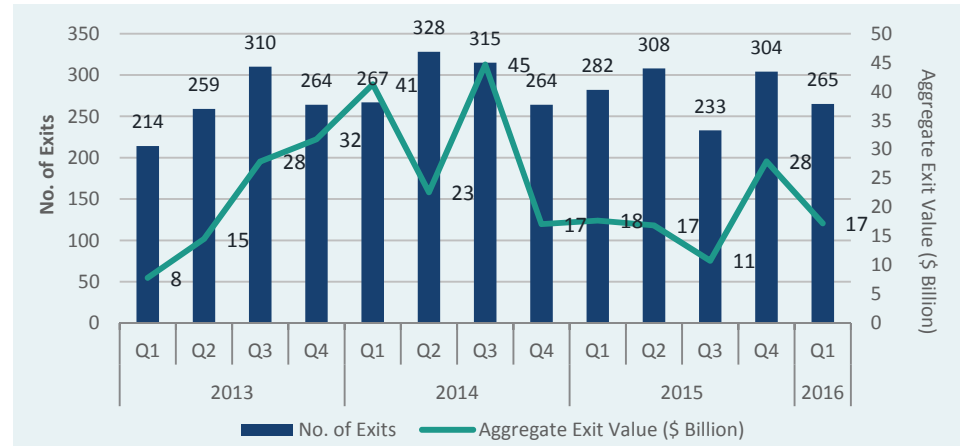
GLOBAL VENTURE CAPITAL INVESTMENTS*



Source: Preqin, as of 3/31/16

* Figures exclude add-ons, mergers, grants, venture debt & secondary stock purchases.

GLOBAL VENTURE CAPITAL EXITS



Source: Preqin, as of 3/31/16

Currency

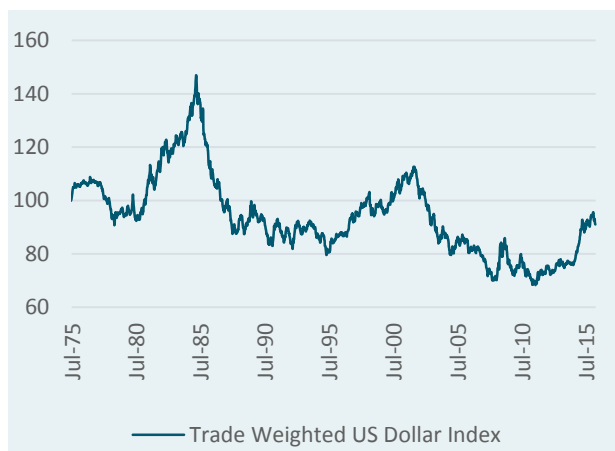
The U.S. dollar depreciated against a broad basket of currencies in Q1, resulting in moderate to significant gains for investors with unhedged international equity exposure. Emerging market currencies rallied particularly hard in March as the U.S. dollar fell following a more accommodative sounding Fed and market risk-on sentiment.

The currency headwind faced by unhedged U.S. investors has reversed, bringing the effects of currency

back to neutral on a 1-year rolling basis.

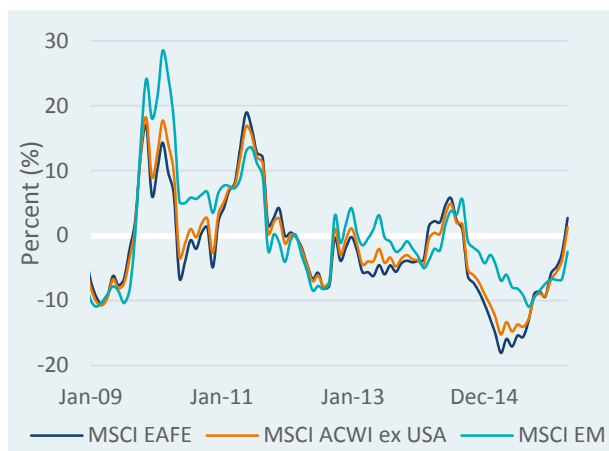
Forecasting the future path of the U.S. dollar is an extremely difficult task. The dollar has appreciated greatly over the last few years, although this quarter some of that progression had been given back. The dollar is influenced by relative interest rates and is therefore influenced by central bank actions. Furthermore, trade and inflows/outflows of U.S. dollars around the globe has great impact on valuations.

LONG-TERM TRADE WEIGHTED USD



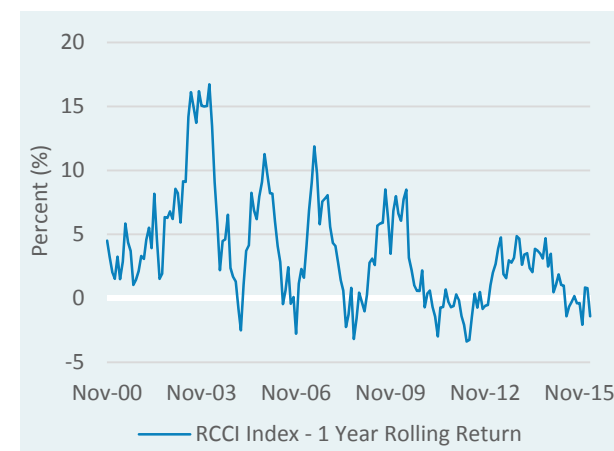
Source: FRED, as of 3/31/16

EFFECT OF CURRENCY (1YR ROLLING)



Source: MSCI, as of 3/31/16

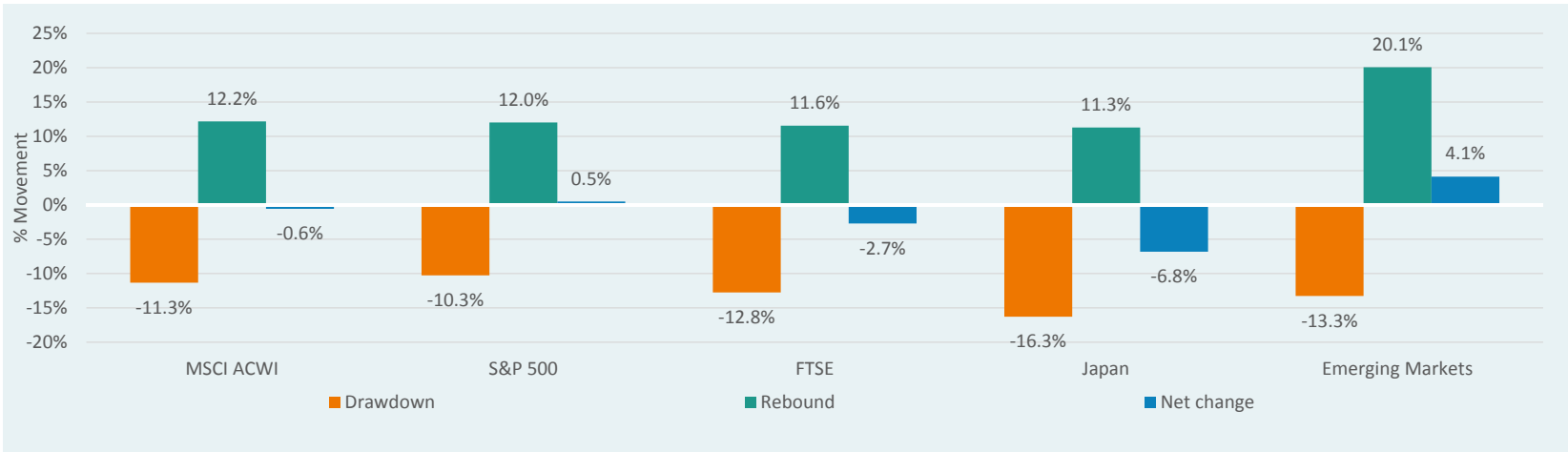
CURRENCY MARKET BEHAVIOR



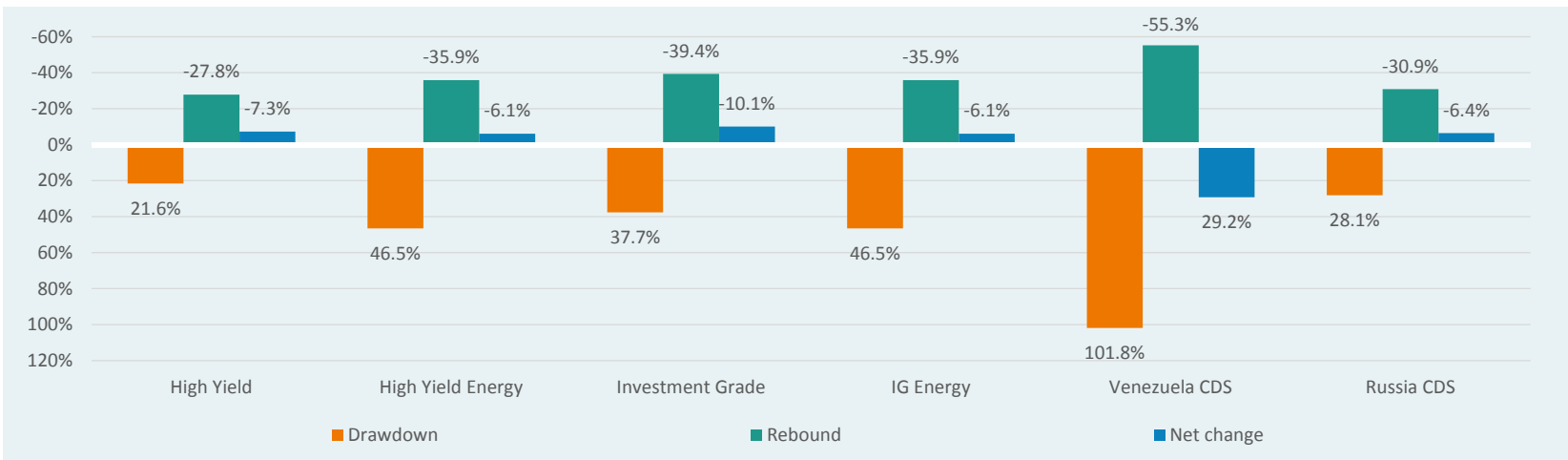
Source: Russell Investments, as of 3/31/16

Peak to trough

EQUITY DRAWDOWN AND RECOVERY



SPREAD EXPANSION AND COMPRESSION



Source: Bloomberg, as of 4/11/2016 Returns are for the period observed during from 1/1/2016 to 4/11/2016. Indices are stated in USD and returns are gross.

Appendix

Periodic table of returns – March 2016

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	YTD	5-Year	10-Year
Emerging Markets Equity	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	5.7	12.4	8.3
US Bonds	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	3.0	11.9	7.6
60/40 Global Portfolio	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	2.6	11.4	7.1
Real Estate	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	2.2	10.2	6.0
Small Cap Value	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	1.7	7.7	5.7
Large Cap Value	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	1.6	7.2	5.3
Large Cap 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	1.2	6.7	4.9
Large 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	0.7	4.0	4.5
Commodities	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	0.4	3.8	4.4
Cash	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	0.1	2.3	3.0
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	-1.5	1.4	1.8
Hedge Funds of Funds	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	-2.5	0.1	1.5
International 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	-3.0	-4.1	1.0
Small Cap Growth	-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	-4.7	-14.1	-6.2

BEST ↑

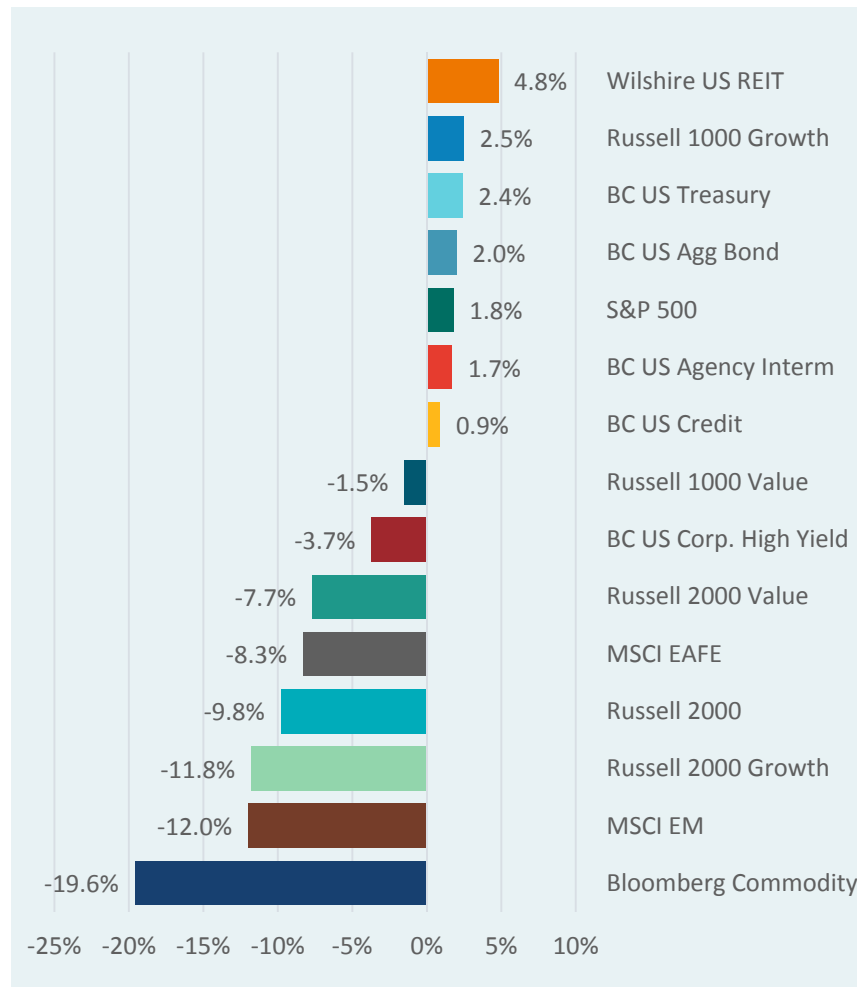
WORST ↓

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

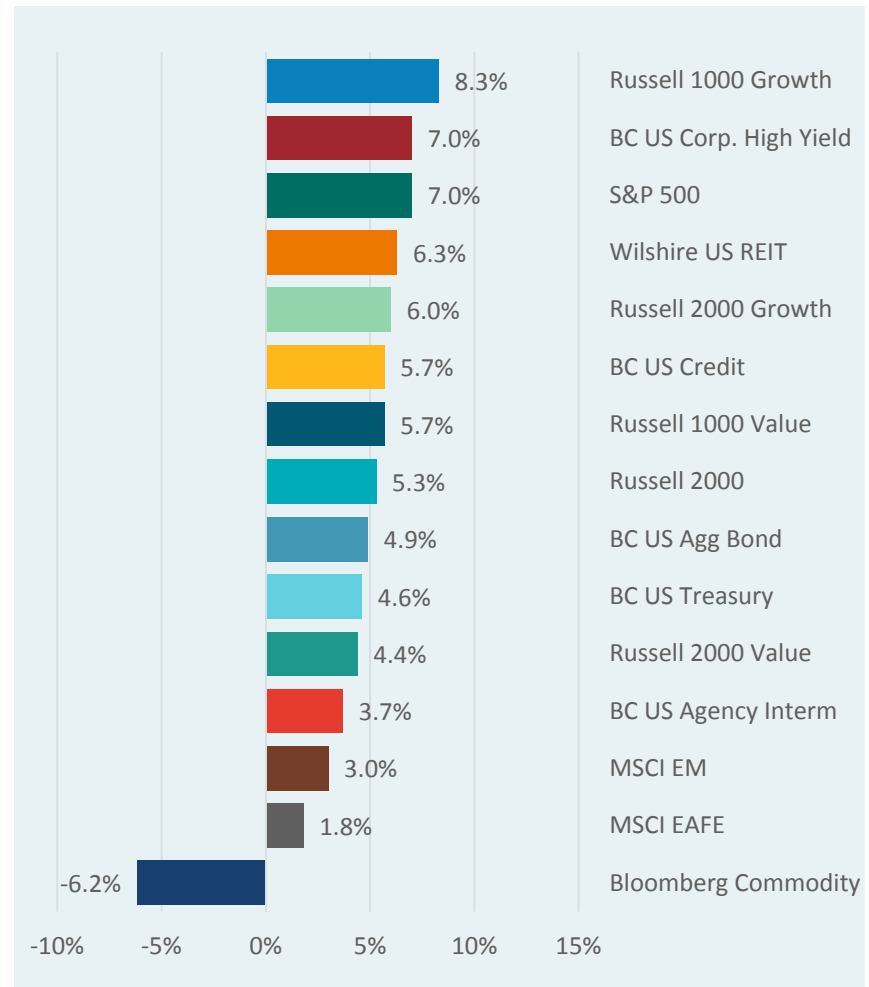
Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Growth, Russell 2000, Russell 2000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, BC Agg, T-Bill 90 Day, Bloomberg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

Major asset class returns

ONE YEAR ENDING MARCH



TEN YEARS ENDING MARCH

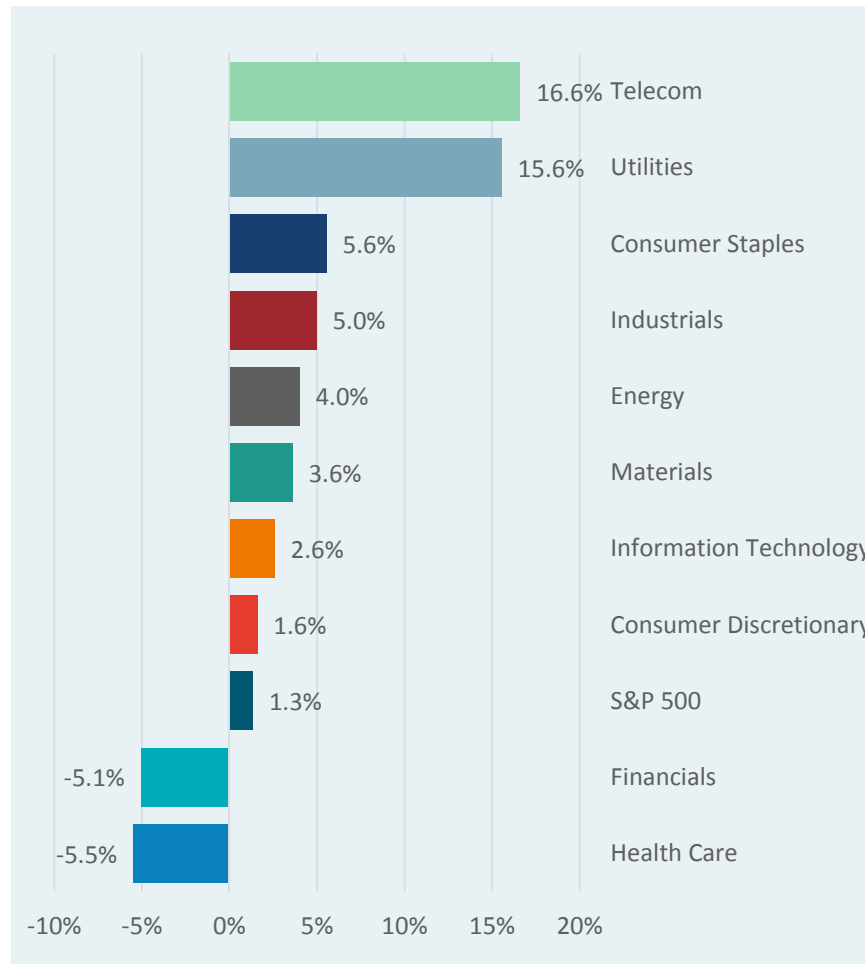


Source: Morningstar, as of 3/31/16

Source: Morningstar, as of 3/31/16

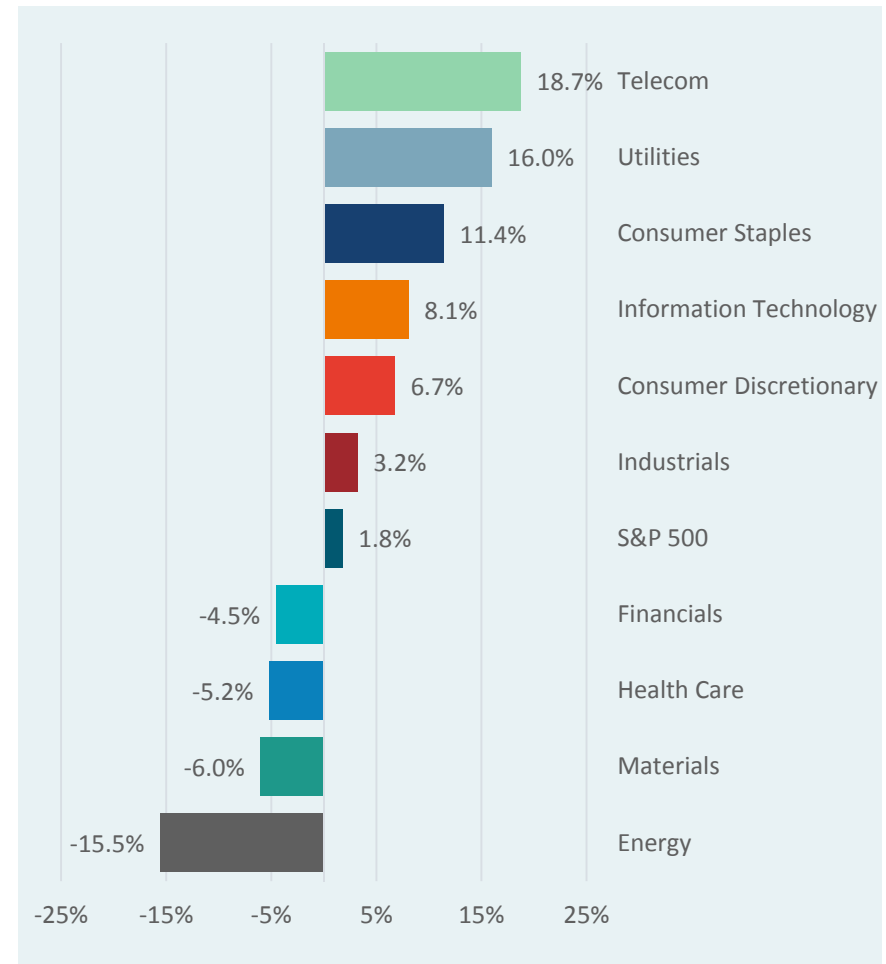
S&P 500 and S&P 500 sector returns

QTD



Source: Morningstar, as of 3/31/16

ONE YEAR ENDING MARCH



Source: Morningstar, as of 3/31/16

Detailed index returns

DOMESTIC EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Core Index							
S&P 500	6.8	1.3	1.3	1.8	11.8	11.6	7.0
S&P 500 Equal Weighted	7.9	3.0	3.0	(1.0)	11.8	11.5	8.2
DJ Industrial Average	7.2	2.2	2.2	2.1	9.3	10.3	7.5
Russell Top 200	6.5	0.7	0.7	2.6	12.0	11.8	6.9
Russell 1000	7.0	1.2	1.2	0.5	11.5	11.4	7.1
Russell 2000	8.0	(1.5)	(1.5)	(9.8)	6.8	7.2	5.3
Russell 3000	7.0	1.0	1.0	(0.3)	11.1	11.0	6.9
Russell Mid Cap	8.2	2.2	2.2	(4.0)	10.4	10.3	7.4
Style Index							
Russell 1000 Growth	6.7	0.7	0.7	2.5	13.6	12.4	8.3
Russell 1000 Value	7.2	1.6	1.6	(1.5)	9.4	10.2	5.7
Russell 2000 Growth	7.7	(4.7)	(4.7)	(11.8)	7.9	7.7	6.0
Russell 2000 Value	8.3	1.7	1.7	(7.7)	5.7	6.7	4.4

INTERNATIONAL EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Broad Index							
MSCI EAFE	6.5	(3.0)	(3.0)	(8.3)	2.2	2.3	1.8
MSCI AC World ex US	8.1	(0.4)	(0.4)	(9.2)	0.3	0.3	1.9
MSCI EM	13.2	5.7	5.7	(12.0)	(4.5)	(4.1)	3.0
MSCI EAFE Small Cap	8.0	(0.6)	(0.6)	3.2	7.3	5.6	3.4
Style Index							
MSCI EAFE Growth	6.4	(2.1)	(2.1)	(3.7)	3.8	3.7	2.9
MSCI EAFE Value	6.6	(4.0)	(4.0)	(12.8)	0.6	0.8	0.6
Regional Index							
MSCI UK	4.8	(2.3)	(2.3)	(8.8)	0.2	2.2	2.0
MSCI Japan	4.7	(6.5)	(6.5)	(7.1)	3.8	4.0	(0.4)
MSCI Euro	7.4	(2.5)	(2.5)	(9.9)	4.0	0.6	0.8
MSCI EM Asia	11.4	1.9	1.9	(12.6)	(0.1)	(0.7)	5.0
MSCI EM Latin American	20.4	19.1	19.1	(9.2)	(14.8)	(11.5)	1.5

FIXED INCOME

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Broad Index							
BC US Treasury US TIPS	1.8	4.5	4.5	1.5	(0.7)	3.0	4.6
BC US Treasury Bills	0.1	0.1	0.1	0.2	0.1	0.1	1.2
BC US Agg Bond	0.9	3.0	3.0	2.0	2.5	3.8	4.9
Duration							
BC US Treasury 1-3 Yr	0.2	0.9	0.9	0.9	0.8	0.9	2.5
BC US Treasury Long	(0.0)	8.2	8.2	2.8	6.1	9.7	8.0
BC US Treasury	0.2	3.2	3.2	2.4	2.1	3.6	4.6
Issuer							
BC US MBS	0.3	2.0	2.0	2.4	2.7	3.2	4.8
BC US Corp. High Yield	4.4	3.4	3.4	(3.7)	1.8	4.9	7.0
BC US Agency Interm	0.2	1.5	1.5	1.7	1.3	1.9	3.7
BC US Credit	2.5	3.9	3.9	0.9	2.9	5.0	5.7

OTHER

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Index							
Bloomberg Commodity	3.8	0.4	0.4	(19.6)	(16.9)	(14.1)	(6.2)
Wilshire US REIT	10.4	5.2	5.2	4.8	11.1	12.1	6.3
Regional Index							
JPM EMBI Global Div	3.3	5.0	5.0	4.2	3.4	6.2	7.2
JPM GBI-EM Global Div	9.1	11.0	11.0	(1.6)	(6.7)	(2.0)	5.0

Source: Morningstar, as of 3/31/16

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)

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)

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)

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.

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Contra Costa County Employees' Retirement Association

Investment Performance Review

Period Ending: March 31, 2016



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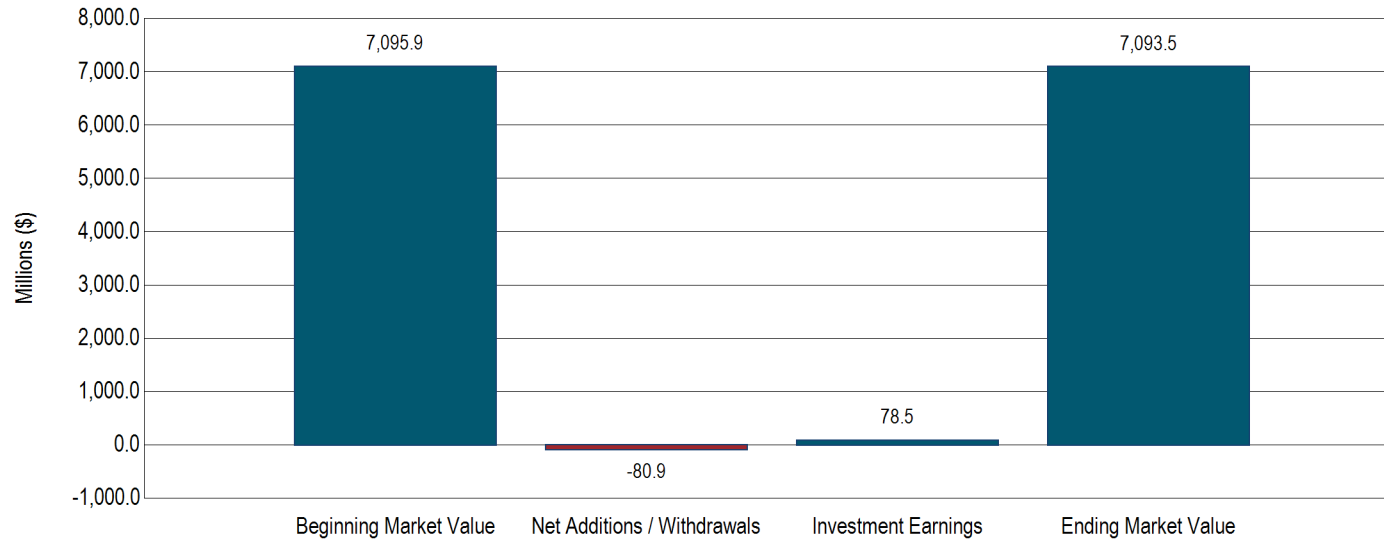
LOS ANGELES 310-297-1777

SAN FRANCISCO 415-362-3484

Portfolio Reconciliation

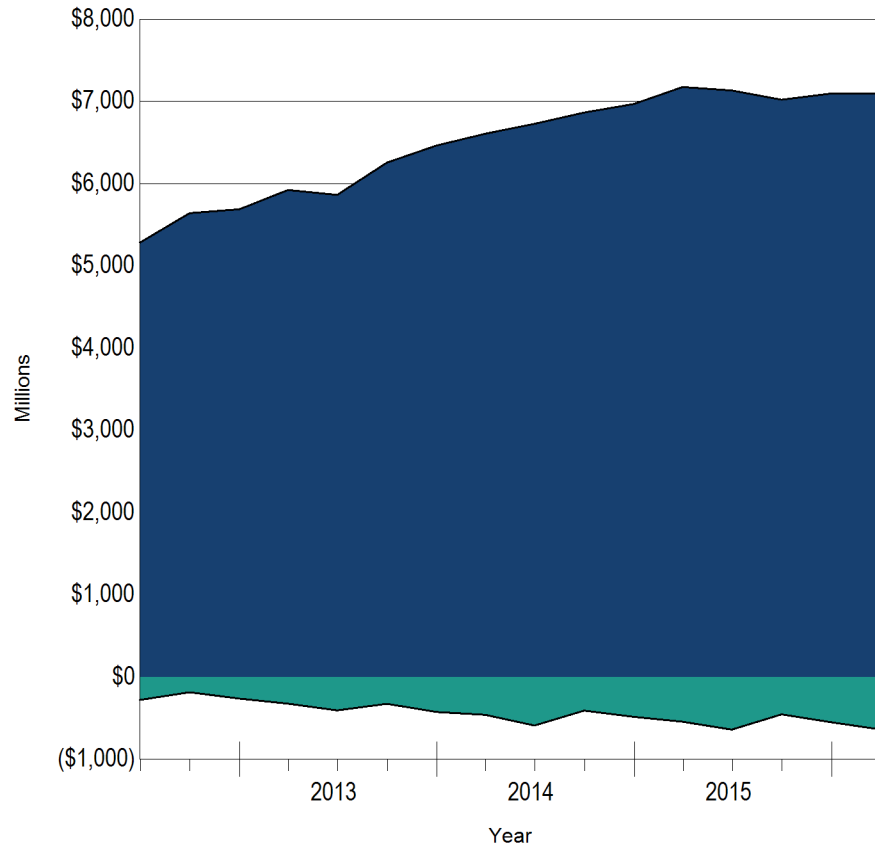
Sources of Portfolio Growth	Last Three Months	Year-To-Date
Beginning Market Value	\$7,095,924,143	\$7,095,924,143
Net Additions/Withdrawals	-\$80,931,073	-\$80,931,073
Investment Earnings	\$78,543,594	\$78,543,594
Ending Market Value	\$7,093,536,664	\$7,093,536,664

**Change in Market Value
Last Three Months**



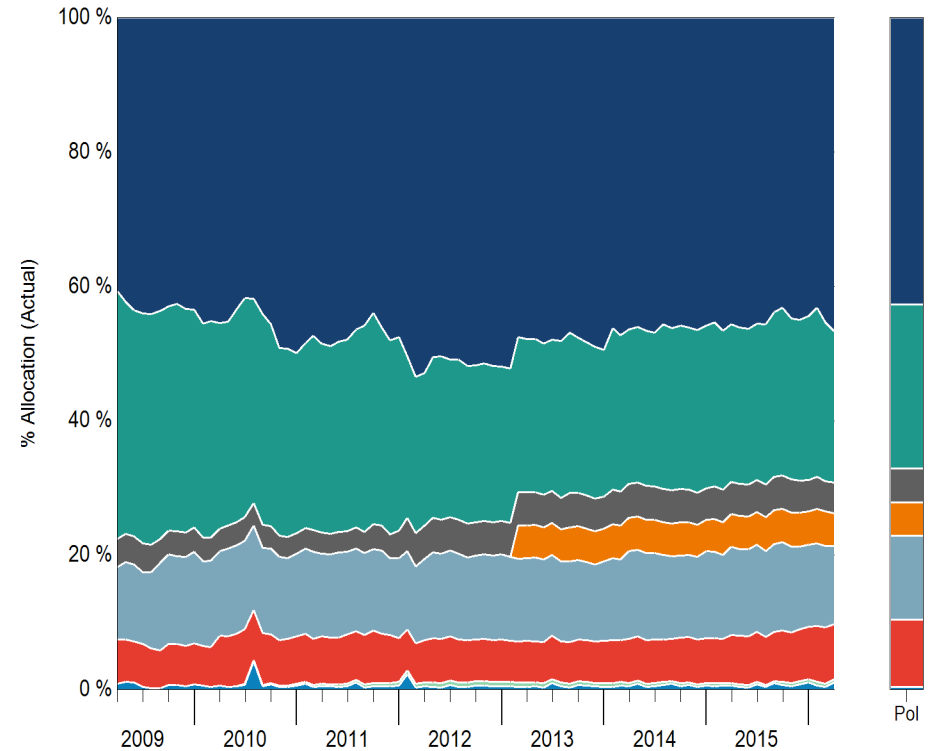
Contributions and withdrawals may include intra-account transfers between managers/funds.

Market Value History
Cumulative Cash Flows



Market Value Net Cash Flow

Asset Allocation History

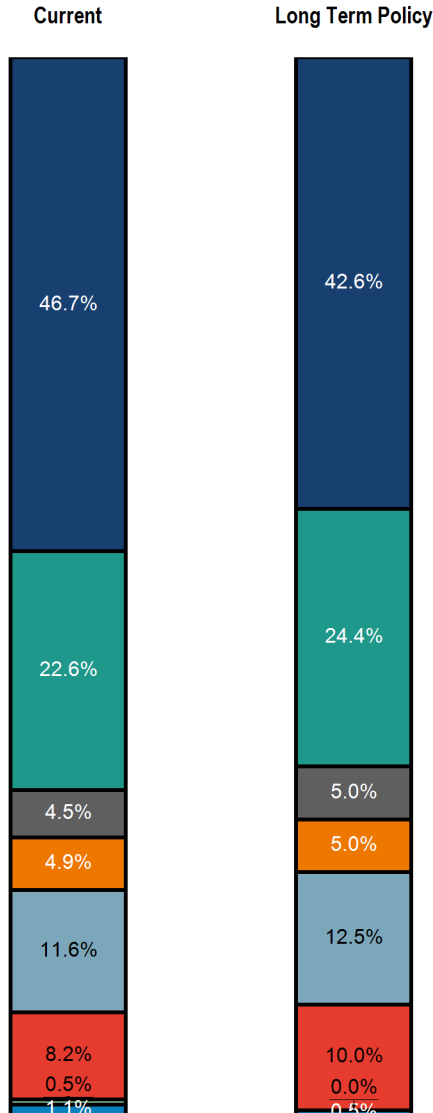


Global Equity Global Fixed Income High Yield Fixed Income Inflation Hedge/Real Assets Real Estate Alternative Investments Opportunistic Cash

Total Fund

Asset Allocation vs. Long Term Target Policy

Period Ending: March 31, 2016



Allocation vs. Long Term Target

	Current Balance	Current Allocation	Long Term Target	Difference	Long Term Target Range	Within IPS Range?
Global Equity	\$3,309,156,809	46.7%	42.6%	\$287,310,190	40.0% - 55.0%	Yes
Global Fixed Income	\$1,599,889,403	22.6%	24.4%	-\$130,933,543	20.0% - 30.0%	Yes
High Yield Fixed Income	\$320,085,905	4.5%	5.0%	-\$34,590,929	2.0% - 9.0%	Yes
Inflation Hedge/Real Assets	\$349,993,795	4.9%	5.0%	-\$4,683,038	0.0% - 10.0%	Yes
Real Estate	\$823,648,890	11.6%	12.5%	-\$63,043,193	10.0% - 16.0%	Yes
Alternative Investments	\$582,760,298	8.2%	10.0%	-\$126,593,368	5.0% - 12.0%	Yes
Opportunistic	\$33,165,026	0.5%	0.0%	\$33,165,026	0.0% - 5.0%	Yes
Cash	\$74,836,538	1.1%	0.5%	\$39,368,854	0.0% - 1.0%	No
Total	\$7,093,536,664	100.0%	100.0%			

Allocation vs. Current Targets

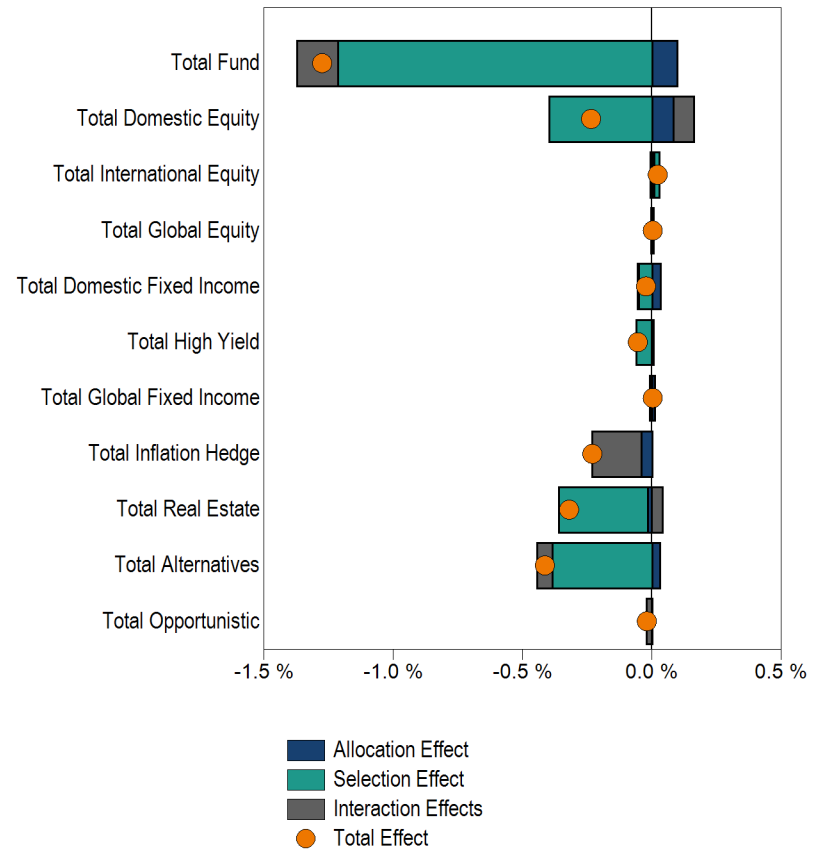
	Current Balance	Current Allocation	Current Target	Difference
Global Equity	\$3,309,156,809	46.7%	46.6%	\$3,568,724
Global Fixed Income	\$1,599,889,403	22.6%	23.6%	-\$74,185,250
High Yield Fixed Income	\$320,085,905	4.5%	5.0%	-\$34,590,929
Inflation Hedge/Real Assets	\$349,993,795	4.9%	5.0%	-\$4,683,038
Real Estate	\$823,648,890	11.6%	12.5%	-\$63,043,193
Alternative Investments	\$582,760,298	8.2%	6.0%	\$157,148,099
Opportunistic	\$33,165,026	0.5%	0.8%	-\$23,583,267
Cash	\$74,836,538	1.1%	0.5%	\$39,368,854
Total	\$7,093,536,664	100.0%	100.0%	

Total Fund Executive Summary (Gross of Fees)

Period Ending: March 31, 2016

	QTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
Total Fund	1.2	1.2	0.0	7.6	8.0	6.3
Policy Index	2.4	2.4	0.5	7.4	8.0	--
CPI + 4%	1.7	1.7	4.9	4.8	5.3	5.8
InvestorForce Public DB > \$1B Gross Rank	43	43	28	5	2	6
Total Domestic Equity	-0.4	-0.4	-2.7	11.2	11.2	7.2
Russell 3000	1.0	1.0	-0.3	11.1	11.0	6.9
eA US All Cap Equity Gross Rank	54	54	42	37	29	51
Total International Equity	0.0	0.0	-5.2	4.3	3.7	1.9
MSCI ACWI ex USA Gross	-0.3	-0.3	-8.8	0.8	0.8	2.4
MSCI EAFE Gross	-2.9	-2.9	-7.9	2.7	2.8	2.3
eA All ACWI ex-US Equity Gross Rank	35	35	52	38	45	94
Total Global Equity	0.3	0.3	-0.7	7.8	6.1	--
MSCI ACWI	0.2	0.2	-4.3	5.5	5.2	--
eA All Global Equity Gross Rank	49	49	31	43	67	--
Total Domestic Fixed Income	2.8	2.8	2.4	4.0	5.6	6.1
Barclays U.S. Universal	3.1	3.1	1.8	2.5	3.9	5.0
Barclays Aggregate	3.0	3.0	2.0	2.5	3.8	4.9
eA US Core Fixed Inc Gross Rank	76	76	29	2	4	9
Total High Yield	2.1	2.1	-4.0	1.6	4.8	7.1
BofA ML High Yield Master II	3.2	3.2	-4.0	1.8	4.7	6.8
eA US High Yield Fixed Inc Gross Rank	71	71	73	76	66	40
Total Global Fixed Income	5.7	5.7	3.9	0.6	1.7	3.7
Barclays Global Aggregate	5.9	5.9	4.6	0.9	1.8	4.3
eA All Global Fixed Inc Gross Rank	24	24	16	72	76	94

Attribution Effects
3 Months Ending March 31, 2016



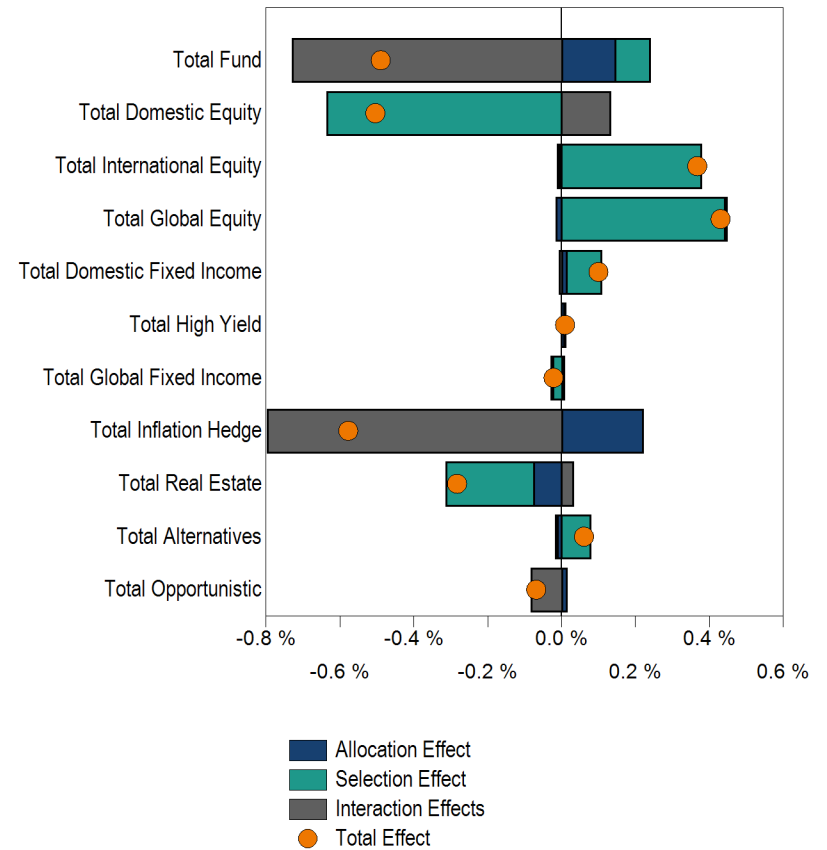
Policy Index (as of 4/1/2012): 27.7% Russell 3000, 10.6% MSCI ACWI ex-US (Gross), 12.3% MSCI ACWI (Net), 19.6% Barclays U.S. Aggregate, 5% Bank of America High Yield Master II, 4% Barclays Global Aggregate, 13.5% Real Estate Benchmark, 6.8% S&P 500 +4% (Lagged), 0.5% 91-Day T-Bills. Real Estate Benchmark: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

Total Fund Executive Summary (Gross of Fees)

Period Ending: March 31, 2016

	QTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
Total Inflation Hedge	-2.0	-2.0	-10.3	-3.1	--	--
CPI + 4%	1.7	1.7	4.9	4.8	--	--
Total Real Estate	1.3	1.3	6.1	13.1	13.2	5.9
Real Estate Benchmark	3.8	3.8	7.9	10.9	12.1	8.0
NCREIF-ODCE	2.2	2.2	13.7	13.6	13.3	6.4
NCREIF Property Index	2.2	2.2	11.8	11.9	11.9	7.6
Total Alternatives	2.6	2.6	7.1	15.4	13.3	12.4
S&P 500 Index +4% (Lagged)	8.1	8.1	5.4	19.7	17.0	11.6
Total Opportunistic	-1.5	-1.5	-13.7	2.2	2.7	--
CPI + 4%	1.7	1.7	4.9	4.8	5.3	--

Attribution Effects
1 Year Ending March 31, 2016

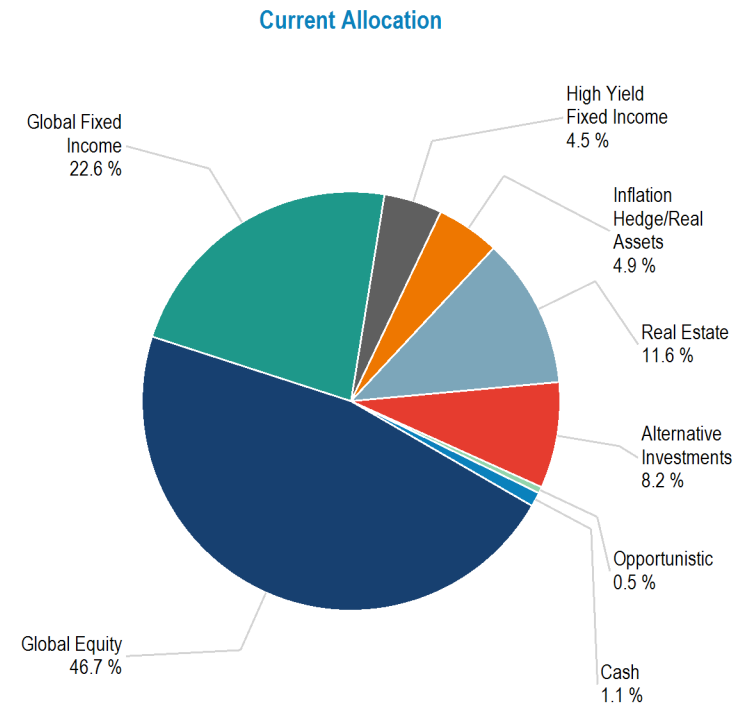


Policy Index (as of 4/1/2012): 27.7% Russell 3000, 10.6% MSCI ACWI ex-US (Gross), 12.3% MSCI ACWI (Net), 19.6% Barclays U.S. Aggregate, 5% Bank of America High Yield Master II, 4% Barclays Global Aggregate, 13.5% Real Estate Benchmark, 6.8% S&P 500 +4% (Lagged), 0.5% 91-Day T-Bills. Real Estate Benchmark: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

Total Fund Executive Summary (Net of Fees)

Period Ending: March 31, 2016

	QTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
Total Fund	1.1	1.1	-0.5	6.9	7.4	5.7
<i>Policy Index</i>	2.4	2.4	0.5	7.4	8.0	--
<i>CPI + 4%</i>	1.7	1.7	4.9	4.8	5.3	5.8
Total Domestic Equity	-0.6	-0.6	-3.1	10.7	10.8	6.8
<i>Russell 3000</i>	1.0	1.0	-0.3	11.1	11.0	6.9
Total International Equity	-0.1	-0.1	-5.6	4.0	3.2	1.4
<i>MSCI ACWI ex USA Gross</i>	-0.3	-0.3	-8.8	0.8	0.8	2.4
<i>MSCI EAFE Gross</i>	-2.9	-2.9	-7.9	2.7	2.8	2.3
Total Global Equity	0.1	0.1	-1.4	7.1	5.4	--
<i>MSCI ACWI</i>	0.2	0.2	-4.3	5.5	5.2	--
Total Domestic Fixed Income	2.7	2.7	2.1	3.6	5.1	5.7
<i>Barclays U.S. Universal</i>	3.1	3.1	1.8	2.5	3.9	5.0
<i>Barclays Aggregate</i>	3.0	3.0	2.0	2.5	3.8	4.9
Total High Yield	2.0	2.0	-4.3	1.2	4.5	7.0
<i>BofA ML High Yield Master II</i>	3.2	3.2	-4.0	1.8	4.7	6.8
Total Global Fixed Income	5.7	5.7	3.7	0.3	1.5	3.5
<i>Barclays Global Aggregate</i>	5.9	5.9	4.6	0.9	1.8	4.3
Total Inflation Hedge	-2.1	-2.1	-11.0	-4.0	--	--
<i>CPI + 4%</i>	1.7	1.7	4.9	4.8	--	--

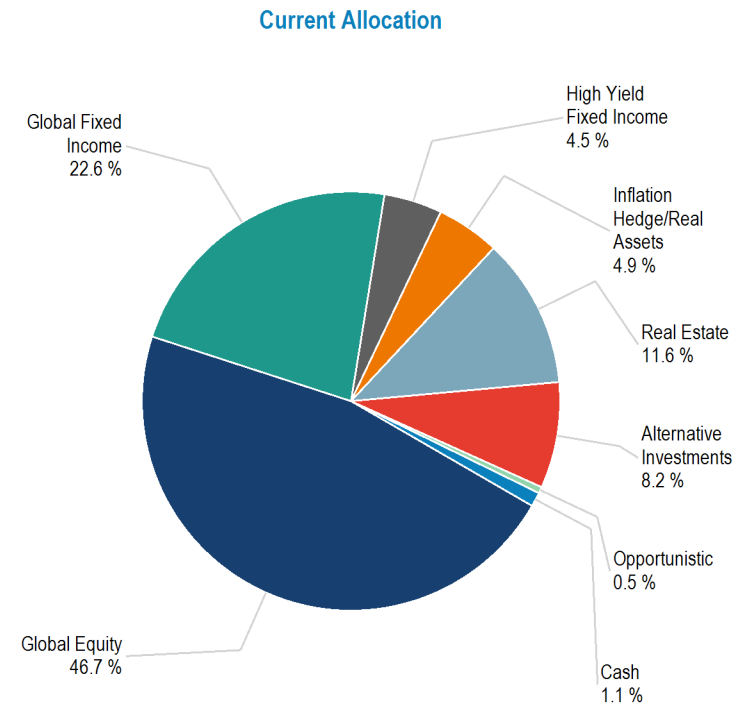


Policy Index (as of 4/1/2012): 27.7% Russell 3000, 10.6% MSCI ACWI ex-US (Gross), 12.3% MSCI ACWI (Net), 19.6% Barclays U.S. Aggregate, 5% Bank of America High Yield Master II, 4% Barclays Global Aggregate, 13.5% Real Estate Benchmark, 6.8% S&P 500 +4% (Lagged), 0.5% 91-Day T-Bills. Real Estate Benchmark: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

Total Fund
Executive Summary (Net of Fees)

Period Ending: March 31, 2016

	QTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
Total Real Estate	1.2	1.2	5.4	11.8	12.0	4.9
Real Estate Benchmark	3.8	3.8	7.9	10.9	12.1	8.0
NCREIF-ODCE	2.2	2.2	13.7	13.6	13.3	6.4
NCREIF Property Index	2.2	2.2	11.8	11.9	11.9	7.6
Total Alternatives	2.6	2.6	6.3	13.5	11.3	9.9
S&P 500 Index +4% (Lagged)	8.1	8.1	5.4	19.7	17.0	11.6
Total Opportunistic	-1.5	-1.5	-13.8	2.2	2.6	--
CPI + 4%	1.7	1.7	4.9	4.8	5.3	--



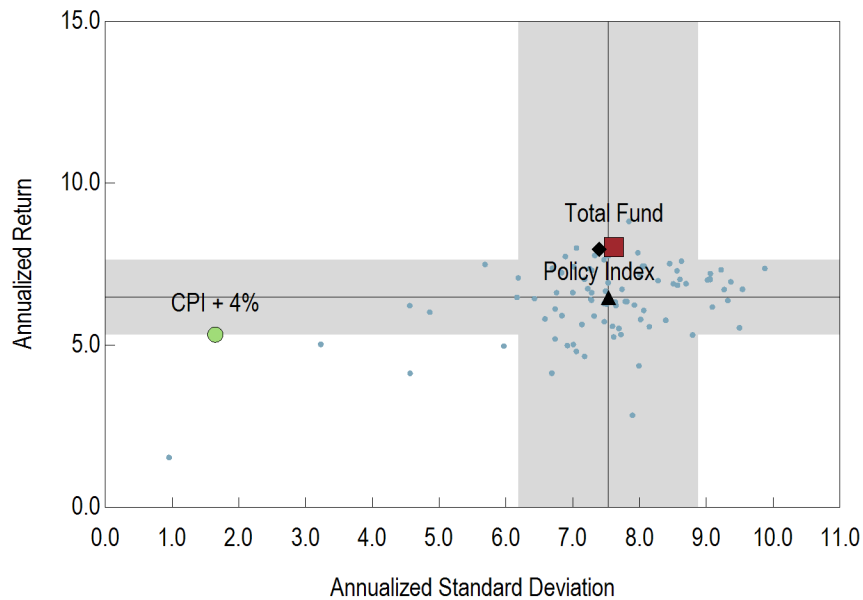
Policy Index (as of 4/1/2012): 27.7% Russell 3000, 10.6% MSCI ACWI ex-US (Gross), 12.3% MSCI ACWI (Net), 19.6% Barclays U.S. Aggregate, 5% Bank of America High Yield Master II, 4% Barclays Global Aggregate, 13.5% Real Estate Benchmark, 6.8% S&P 500 +4% (Lagged), 0.5% 91-Day T-Bills. Real Estate Benchmark: 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: March 31, 2016

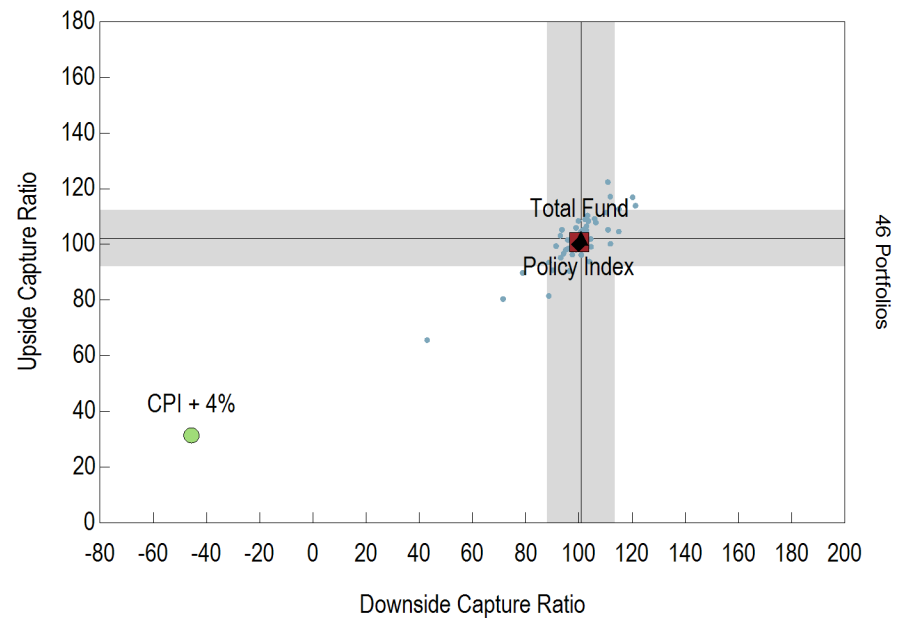
	Anlzd Ret	Ann Excess BM Return	Anlzd Std Dev	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Info Ratio	Up Mkt Cap Ratio	Down Mkt Cap Ratio
Total Fund	8.03%	0.07%	7.62%	-0.08%	1.02	1.17%	0.98	1.05	0.06	100.80%	100.08%

Risk vs. Return



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

Up Markets vs. Down Markets



- 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: March 31, 2016

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2015	2014	2013	2012	2011
Total Fund	7,093,536,664	100.0	1.2	1.2	0.0	7.6	8.0	6.3	2.6	8.4	16.4	14.3	2.7
<i>Policy Index</i>			2.4	2.4	0.5	7.4	8.0	--	0.6	9.0	15.6	14.6	2.8
<i>CPI + 4%</i>			1.7	1.7	4.9	4.8	5.3	5.8	4.8	4.8	5.6	5.8	7.1
<i>InvestorForce Public DB > \$1B Gross Rank</i>			43	43	28	5	2	6	6	6	33	13	9
Total Domestic Equity	1,615,153,672	22.8	-0.4	-0.4	-2.7	11.2	11.2	7.2	1.1	11.4	36.2	18.2	1.1
<i>Russell 3000</i>			1.0	1.0	-0.3	11.1	11.0	6.9	0.5	12.6	33.6	16.4	1.0
<i>eA US All Cap Equity Gross Rank</i>			54	54	42	37	29	51	36	36	41	24	34
<i>Intech Large Cap Core</i>	299,555,680	4.2	1.4	1.4	0.6	13.1	12.4	--	3.8	14.7	32.7	15.3	3.6
<i>S&P 500</i>			1.3	1.3	1.8	11.8	11.6	--	1.4	13.7	32.4	16.0	2.1
<i>eA US Large Cap Core Equity Gross Rank</i>			34	34	39	18	25	--	16	31	54	54	25
<i>PIMCO Stocks+ Absolute Return</i>	246,789,500	3.5	1.0	1.0	-1.4	10.3	11.5	7.1	-1.2	13.6	31.4	20.6	2.3
<i>S&P 500</i>			1.3	1.3	1.8	11.8	11.6	7.0	1.4	13.7	32.4	16.0	2.1
<i>eA US Large Cap Core Equity Gross Rank</i>			41	41	64	79	46	66	73	45	68	4	36
<i>Jackson Square Partners</i>	295,830,816	4.2	-6.1	-6.1	-3.4	11.7	13.0	7.6	6.1	13.9	35.4	16.9	8.9
<i>Russell 1000 Growth</i>			0.7	0.7	2.5	13.6	12.4	8.3	5.7	13.0	33.5	15.3	2.6
<i>eA US Large Cap Growth Equity Gross Rank</i>			97	97	81	67	18	56	37	31	40	37	3
<i>Robeco Boston Partners</i>	318,956,768	4.5	-0.1	-0.1	-4.1	9.9	11.0	7.6	-3.9	12.0	37.4	21.6	0.9
<i>Russell 1000 Value</i>			1.6	1.6	-1.5	9.4	10.2	5.7	-3.8	13.5	32.5	17.5	0.4
<i>eA US Large Cap Value Equity Gross Rank</i>			68	68	70	53	32	27	65	55	24	5	46
<i>Emerald Advisers</i>	215,420,230	3.0	-6.1	-6.1	-11.1	11.4	10.4	7.5	4.1	7.3	50.3	18.5	-0.6
<i>Russell 2000 Growth</i>			-4.7	-4.7	-11.8	7.9	7.7	6.0	-1.4	5.6	43.3	14.6	-2.9
<i>eA US Small Cap Growth Equity Gross Rank</i>			69	69	55	19	24	29	19	21	27	22	42
<i>Ceredex</i>	238,600,679	3.4	8.0	8.0	0.6	9.1	--	--	-4.4	3.3	36.5	19.0	--
<i>Russell 2000 Value</i>			1.7	1.7	-7.7	5.7	--	--	-7.5	4.2	34.5	18.1	--
<i>eA US Small Cap Value Equity Gross Rank</i>			3	3	7	37	--	--	52	74	66	38	--
Total International Equity	798,781,365	11.3	0.0	0.0	-5.2	4.3	3.7	1.9	-1.2	0.3	17.8	18.5	-11.5
<i>MSCI ACWI ex USA Gross</i>			-0.3	-0.3	-8.8	0.8	0.8	2.4	-5.3	-3.4	15.8	17.4	-13.3
<i>MSCI EAFE Gross</i>			-2.9	-2.9	-7.9	2.7	2.8	2.3	-0.4	-4.5	23.3	17.9	-11.7
<i>eA All ACWI ex-US Equity Gross Rank</i>			35	35	52	38	45	94	61	17	69	63	43
<i>Pyrford</i>	400,611,673	5.6	2.6	2.6	-3.5	--	--	--	-2.9	--	--	--	--
<i>MSCI ACWI ex USA Value</i>			-0.4	-0.4	-12.3	--	--	--	-10.1	--	--	--	--
<i>eA ACWI ex-US Value Equity Gross Rank</i>			19	19	47	--	--	--	59	--	--	--	--
<i>William Blair</i>	397,634,341	5.6	-2.9	-2.9	-7.1	3.5	4.6	--	0.5	-1.2	20.9	24.3	-13.2
<i>MSCI ACWI ex USA Growth</i>			-0.3	-0.3	-6.1	1.9	1.6	--	-1.3	-2.6	15.5	16.7	-14.2
<i>eA ACWI ex-US Growth Equity Gross Rank</i>			71	71	80	70	48	--	69	37	44	6	55

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

Total Fund
Performance Summary (Gross of Fees)

Period Ending: March 31, 2016

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2015	2014	2013	2012	2011
International Equity Transition	535,351	0.0											
Total Global Equity	895,221,772	12.6	0.3	0.3	-0.7	7.8	6.1	--	2.2	5.2	23.7	11.1	-5.6
MSCI ACWI			0.2	0.2	-4.3	5.5	5.2	--	-2.4	4.2	22.8	16.1	-7.3
eA All Global Equity Gross Rank			49	49	31	43	67	--	31	44	64	90	40
Artisan Partners	304,254,574	4.3	-0.5	-0.5	3.2	10.2	--	--	9.2	3.9	26.1	--	--
MSCI ACWI			0.2	0.2	-4.3	5.5	--	--	-2.4	4.2	22.8	--	--
eA All Global Equity Gross Rank			58	58	12	12	--	--	4	56	51	--	--
First Eagle	304,825,696	4.3	3.6	3.6	1.3	6.5	7.2	--	0.2	4.5	17.9	13.9	--
MSCI ACWI			0.2	0.2	-4.3	5.5	5.2	--	-2.4	4.2	22.8	16.1	--
eA All Global Equity Gross Rank			23	23	20	65	49	--	49	51	80	78	--
Intech Global Low Vol	23,575,791	0.3	6.0	6.0	6.8	10.4	--	--	4.1	11.2	24.2	--	--
MSCI ACWI			0.2	0.2	-4.3	5.5	--	--	-2.4	4.2	22.8	--	--
eA All Global Equity Gross Rank			10	10	6	11	--	--	18	14	62	--	--
JP Morgan Global Opportunities	262,565,710	3.7	-2.8	-2.8	-7.7	6.4	5.9	--	-2.9	6.7	26.9	19.2	-9.0
MSCI ACWI			0.2	0.2	-4.3	5.5	5.2	--	-2.4	4.2	22.8	16.1	-7.3
eA All Global Equity Gross Rank			86	86	85	66	68	--	75	30	46	32	63
Total Domestic Fixed Income	1,358,764,900	19.2	2.8	2.8	2.4	4.0	5.6	6.1	1.7	7.3	1.3	9.7	7.2
Barclays U.S. Universal			3.1	3.1	1.8	2.5	3.9	5.0	0.4	5.6	-1.3	5.5	7.4
Barclays Aggregate			3.0	3.0	2.0	2.5	3.8	4.9	0.6	6.0	-2.0	4.2	7.8
eA US Core Fixed Inc Gross Rank			76	76	29	2	4	9	8	8	2	5	71
AFL-CIO	231,209,102	3.3	2.9	2.9	2.7	3.0	4.2	5.3	1.6	6.6	-1.9	4.7	8.3
Barclays Aggregate			3.0	3.0	2.0	2.5	3.8	4.9	0.6	6.0	-2.0	4.2	7.8
eA US Core Fixed Inc Gross Rank			70	70	14	24	54	56	15	25	78	80	23
Goldman Sachs Core Plus	323,525,529	4.6	3.1	3.1	1.2	3.0	4.9	--	0.8	6.0	-0.4	7.9	7.6
Barclays Aggregate			3.0	3.0	2.0	2.5	3.8	--	0.6	6.0	-2.0	4.2	7.8
eA US Core Plus Fixed Inc Gross Rank			32	32	55	27	32	--	36	47	49	59	43
GSAM Workout Portfolio	4,078	0.0											
Lord Abbett	324,508,910	4.6	3.1	3.1	1.3	2.8	4.9	--	0.0	6.7	-0.6	8.6	8.2
Barclays Aggregate			3.0	3.0	2.0	2.5	3.8	--	0.6	6.0	-2.0	4.2	7.8
eA US Core Fixed Inc Gross Rank			39	39	92	36	9	--	94	18	18	8	27
PIMCO Fixed Income	347,577,183	4.9	2.8	2.8	1.8	2.3	4.1	6.0	0.5	6.3	-1.6	8.5	5.0
Barclays Aggregate			3.0	3.0	2.0	2.5	3.8	4.9	0.6	6.0	-2.0	4.2	7.8
eA US Core Fixed Inc Gross Rank			72	72	73	88	65	14	75	34	61	8	97

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

Total Fund Performance Summary (Gross of Fees)

Period Ending: March 31, 2016

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2015	2014	2013	2012	2011
Total High Yield	320,085,905	4.5	2.1	2.1	-4.0	1.6	4.8	7.1	-3.5	1.2	8.8	14.1	6.4
<i>BofA ML High Yield Master II</i>			3.2	3.2	-4.0	1.8	4.7	6.8	-4.6	2.5	7.4	15.6	4.4
<i>eA US High Yield Fixed Inc Gross Rank</i>			71	71	73	76	66	40	68	83	28	73	19
Allianz Global Investors	320,085,905	4.5	2.1	2.1	-4.0	1.6	4.8	7.1	-3.5	1.2	8.8	14.1	6.4
<i>BofA ML High Yield Master II</i>			3.2	3.2	-4.0	1.8	4.7	6.8	-4.6	2.5	7.4	15.6	4.4
<i>eA US High Yield Fixed Inc Gross Rank</i>			70	70	73	76	66	40	68	83	28	73	21
Total Global Fixed Income	241,124,503	3.4	5.7	5.7	3.9	0.6	1.7	3.7	-3.0	0.4	-3.5	6.7	5.6
<i>Barclays Global Aggregate</i>			5.9	5.9	4.6	0.9	1.8	4.3	-3.2	0.6	-2.6	4.3	5.6
<i>eA All Global Fixed Inc Gross Rank</i>			24	24	16	72	76	94	59	77	83	68	40
Lazard	241,124,503	3.4	5.7	5.7	3.9	0.6	1.7	--	-3.0	0.4	-3.5	6.7	5.6
<i>Barclays Global Aggregate</i>			5.9	5.9	4.6	0.9	1.8	--	-3.2	0.6	-2.6	4.3	5.6
<i>eA All Global Fixed Inc Gross Rank</i>			24	24	16	72	76	--	59	77	83	68	40
Total Inflation Hedge	350,649,858	4.9	-2.0	-2.0	-10.3	-3.1	--	--	-5.9	-0.6	1.3	--	--
<i>CPI + 4%</i>			1.7	1.7	4.9	4.8	--	--	4.8	4.8	5.6	--	--
PIMCO All Asset Fund	120,307,685	1.7	5.4	5.4	-3.2	-0.3	--	--	-8.0	1.7	--	--	--
<i>CPI + 4%</i>			1.7	1.7	4.9	4.8	--	--	4.8	4.8	--	--	--
Wellington Real Total Return	175,405,143	2.5	-7.0	-7.0	-15.7	-5.3	--	--	-4.9	-2.5	--	--	--
<i>CPI + 4%</i>			1.7	1.7	4.9	4.8	--	--	4.8	4.8	--	--	--
Total Real Estate	823,648,890	11.6	1.3	1.3	6.1	13.1	13.2	5.9	12.6	20.6	10.5	16.7	10.4
<i>Real Estate Benchmark</i>			3.8	3.8	7.9	10.9	12.1	8.0	8.2	18.8	7.1	13.6	13.6
<i>NCREIF-ODCE</i>			2.2	2.2	13.7	13.6	13.3	6.4	15.0	12.5	13.9	10.9	16.0
<i>NCREIF Property Index</i>			2.2	2.2	11.8	11.9	11.9	7.6	13.3	11.8	11.0	10.5	14.3
Adelante	94,985,235	1.3	3.8	3.8	2.7	12.7	12.7	6.0	5.1	33.4	3.6	17.7	9.2
<i>Wilshire REIT</i>			5.2	5.2	4.8	11.1	12.1	6.3	4.2	31.8	1.9	17.6	9.2
INVESCO International REIT	56,735,574	0.8	3.5	3.5	-3.7	1.5	5.4	--	-2.9	2.8	5.4	42.3	-16.5
<i>FTSE EPRA/NAREIT Developed ex-USA</i>			5.2	5.2	-1.7	2.1	5.3	--	-3.2	3.2	6.1	38.6	-15.3
Willows Office Property	0	0.0	-20.6	-20.6	-18.7	5.0	5.6	1.6	4.8	32.8	7.5	6.3	6.1
<i>NCREIF Property Index</i>			2.2	2.2	11.8	11.9	11.9	7.6	13.3	11.8	11.0	10.5	14.3

Individual closed end funds are not shown in performance summary. Willows Office Property liquidated 3/24/2016. Willows Property sold for \$8,180,770 on March 24th. A final income distribution of \$771,325 occurred on April 16th.

Total Fund
Performance Summary (Net of Fees)

Period Ending: March 31, 2016

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2015	2014	2013	2012	2011
Total Fund	7,093,536,664	100.0	1.1	1.1	-0.5	6.9	7.4	5.7	2.0	7.7	15.6	13.6	2.1
<i>Policy Index</i>			2.4	2.4	0.5	7.4	8.0	--	0.6	9.0	15.6	14.6	2.8
<i>CPI + 4%</i>			1.7	1.7	4.9	4.8	5.3	5.8	4.8	4.8	5.6	5.8	7.1
Total Domestic Equity	1,615,153,672	22.8	-0.6	-0.6	-3.1	10.7	10.8	6.8	0.6	11.0	35.7	17.8	0.8
<i>Russell 3000</i>			1.0	1.0	-0.3	11.1	11.0	6.9	0.5	12.6	33.6	16.4	1.0
Intech Large Cap Core	299,555,680	4.2	1.3	1.3	0.1	12.6	11.9	--	3.3	14.2	32.2	14.8	3.3
<i>S&P 500</i>			1.3	1.3	1.8	11.8	11.6	--	1.4	13.7	32.4	16.0	2.1
PIMCO Stocks+ Absolute Return	246,789,500	3.5	0.9	0.9	-1.6	10.0	11.2	6.8	-1.4	13.2	31.0	20.3	2.0
<i>S&P 500</i>			1.3	1.3	1.8	11.8	11.6	7.0	1.4	13.7	32.4	16.0	2.1
Jackson Square Partners	295,830,816	4.2	-6.2	-6.2	-3.8	11.2	12.5	7.2	5.6	13.4	35.0	16.4	8.4
<i>Russell 1000 Growth</i>			0.7	0.7	2.5	13.6	12.4	8.3	5.7	13.0	33.5	15.3	2.6
Robeco Boston Partners	318,956,768	4.5	-0.2	-0.2	-4.4	9.6	10.7	7.2	-4.2	11.6	37.0	21.2	0.6
<i>Russell 1000 Value</i>			1.6	1.6	-1.5	9.4	10.2	5.7	-3.8	13.5	32.5	17.5	0.4
Emerald Advisers	215,420,230	3.0	-6.3	-6.3	-11.6	10.7	9.7	6.9	3.5	6.6	49.4	17.8	-1.2
<i>Russell 2000 Growth</i>			-4.7	-4.7	-11.8	7.9	7.7	6.0	-1.4	5.6	43.3	14.6	-2.9
Ceredex	238,600,679	3.4	7.9	7.9	0.0	8.5	--	--	-5.0	2.7	35.8	18.6	--
<i>Russell 2000 Value</i>			1.7	1.7	-7.7	5.7	--	--	-7.5	4.2	34.5	18.1	--
Total International Equity	798,781,365	11.3	-0.1	-0.1	-5.6	4.0	3.2	1.4	-1.6	0.0	17.4	17.9	-12.0
<i>MSCI ACWI ex USA Gross</i>			-0.3	-0.3	-8.8	0.8	0.8	2.4	-5.3	-3.4	15.8	17.4	-13.3
<i>MSCI EAFE Gross</i>			-2.9	-2.9	-7.9	2.7	2.8	2.3	-0.4	-4.5	23.3	17.9	-11.7
Pyrford	400,611,673	5.6	2.5	2.5	-3.9	--	--	--	-3.3	--	--	--	--
<i>MSCI ACWI ex USA Value</i>			-0.4	-0.4	-12.3	--	--	--	-10.1	--	--	--	--
William Blair	397,634,341	5.6	-3.0	-3.0	-7.5	3.0	4.2	--	0.0	-1.7	20.4	23.7	-13.7
<i>MSCI ACWI ex USA Growth</i>			-0.3	-0.3	-6.1	1.9	1.6	--	-1.3	-2.6	15.5	16.7	-14.2
International Equity Transition	535,351	0.0											
Total Global Equity	895,221,772	12.6	0.1	0.1	-1.4	7.1	5.4	--	1.6	4.5	22.9	10.6	-6.1
<i>MSCI ACWI</i>			0.2	0.2	-4.3	5.5	5.2	--	-2.4	4.2	22.8	16.1	-7.3
Artisan Partners	304,254,574	4.3	-0.7	-0.7	2.4	9.4	--	--	8.4	3.1	25.2	--	--
<i>MSCI ACWI</i>			0.2	0.2	-4.3	5.5	--	--	-2.4	4.2	22.8	--	--
First Eagle	304,825,696	4.3	3.4	3.4	0.5	5.7	6.4	--	-0.6	3.7	17.1	13.1	--
<i>MSCI ACWI</i>			0.2	0.2	-4.3	5.5	5.2	--	-2.4	4.2	22.8	16.1	--
Intech Global Low Vol	23,575,791	0.3	6.0	6.0	6.5	10.0	--	--	3.9	10.8	23.8	--	--
<i>MSCI ACWI</i>			0.2	0.2	-4.3	5.5	--	--	-2.4	4.2	22.8	--	--
JP Morgan Global Opportunities	262,565,710	3.7	-2.9	-2.9	-8.1	5.9	5.5	--	-3.3	6.2	26.4	18.7	-9.4
<i>MSCI ACWI</i>			0.2	0.2	-4.3	5.5	5.2	--	-2.4	4.2	22.8	16.1	-7.3

Individual closed end funds are not shown in performance summary.

Total Fund
Performance Summary (Net of Fees)

Period Ending: March 31, 2016

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2015	2014	2013	2012	2011
Total Domestic Fixed Income	1,358,764,900	19.2	2.7	2.7	2.1	3.6	5.1	5.7	1.4	6.7	0.9	9.2	6.8
<i>Barclays U.S. Universal</i>			3.1	3.1	1.8	2.5	3.9	5.0	0.4	5.6	-1.3	5.5	7.4
<i>Barclays Aggregate</i>			3.0	3.0	2.0	2.5	3.8	4.9	0.6	6.0	-2.0	4.2	7.8
AFL-CIO	231,209,102	3.3	2.8	2.8	2.3	2.5	3.7	4.9	1.1	6.1	-2.4	4.3	7.9
<i>Barclays Aggregate</i>			3.0	3.0	2.0	2.5	3.8	4.9	0.6	6.0	-2.0	4.2	7.8
Goldman Sachs Core Plus	323,525,529	4.6	3.1	3.1	1.0	2.9	4.7	--	0.6	5.8	-0.6	7.7	7.3
<i>Barclays Aggregate</i>			3.0	3.0	2.0	2.5	3.8	--	0.6	6.0	-2.0	4.2	7.8
GSAM Workout Portfolio	4,078	0.0											
Lord Abbett	324,508,910	4.6	3.1	3.1	1.1	2.6	4.7	--	-0.2	6.5	-0.8	8.4	8.0
<i>Barclays Aggregate</i>			3.0	3.0	2.0	2.5	3.8	--	0.6	6.0	-2.0	4.2	7.8
PIMCO Fixed Income	347,577,183	4.9	2.8	2.8	1.6	2.1	3.8	5.7	0.3	6.0	-1.9	8.2	4.7
<i>Barclays Aggregate</i>			3.0	3.0	2.0	2.5	3.8	4.9	0.6	6.0	-2.0	4.2	7.8
Total High Yield	320,085,905	4.5	2.0	2.0	-4.3	1.2	4.5	7.0	-3.9	0.8	8.4	13.7	6.4
<i>BofA ML High Yield Master II</i>			3.2	3.2	-4.0	1.8	4.7	6.8	-4.6	2.5	7.4	15.6	4.4
Allianz Global Investors	320,085,905	4.5	2.0	2.0	-4.3	1.2	4.4	6.7	-3.9	0.8	8.4	13.6	6.0
<i>BofA ML High Yield Master II</i>			3.2	3.2	-4.0	1.8	4.7	6.8	-4.6	2.5	7.4	15.6	4.4
Total Global Fixed Income	241,124,503	3.4	5.7	5.7	3.7	0.3	1.5	3.5	-3.3	0.1	-3.8	6.4	5.3
<i>Barclays Global Aggregate</i>			5.9	5.9	4.6	0.9	1.8	4.3	-3.2	0.6	-2.6	4.3	5.6
Lazard	241,124,503	3.4	5.7	5.7	3.7	0.3	1.5	--	-3.3	0.1	-3.8	6.4	5.3
<i>Barclays Global Aggregate</i>			5.9	5.9	4.6	0.9	1.8	--	-3.2	0.6	-2.6	4.3	5.6
Total Inflation Hedge	350,649,858	4.9	-2.1	-2.1	-11.0	-4.0	--	--	-6.8	-1.5	0.3	--	--
CPI + 4%			1.7	1.7	4.9	4.8	--	--	4.8	4.8	5.6	--	--
PIMCO All Asset Fund	120,307,685	1.7	5.2	5.2	-4.1	-1.2	--	--	-8.8	0.8	--	--	--
CPI + 4%			1.7	1.7	4.9	4.8	--	--	4.8	4.8	--	--	--
Wellington Real Total Return	175,405,143	2.5	-7.1	-7.1	-16.2	-5.8	--	--	-5.4	-3.1	--	--	--
CPI + 4%			1.7	1.7	4.9	4.8	--	--	4.8	4.8	--	--	--
Total Real Estate	823,648,890	11.6	1.2	1.2	5.4	11.8	12.0	4.9	11.5	19.1	8.9	15.7	9.4
<i>Real Estate Benchmark</i>			3.8	3.8	7.9	10.9	12.1	8.0	8.2	18.8	7.1	13.6	13.6
NCREIF-ODCE			2.2	2.2	13.7	13.6	13.3	6.4	15.0	12.5	13.9	10.9	16.0
NCREIF Property Index			2.2	2.2	11.8	11.9	11.9	7.6	13.3	11.8	11.0	10.5	14.3
Adelante	94,985,235	1.3	3.7	3.7	2.3	12.1	12.1	5.5	4.6	32.7	3.0	17.2	8.6
<i>Wilshire REIT</i>			5.2	5.2	4.8	11.1	12.1	6.3	4.2	31.8	1.9	17.6	9.2

Individual closed end funds are not shown in performance summary.

Total Fund
Performance Summary (Net of Fees)

Period Ending: March 31, 2016

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2015	2014	2013	2012	2011
INVESCO International REIT	56,735,574	0.8	3.4	3.4	-4.3	0.8	4.7	--	-3.5	2.2	4.7	41.3	-17.0
<i>FTSE EPRA/NAREIT Developed ex-USA</i>			5.2	5.2	-1.7	2.1	5.3	--	-3.2	3.2	6.1	38.6	-15.3
Willows Office Property	0	0.0	-20.6	-20.6	-18.7	5.0	5.6	1.6	4.8	32.8	7.5	6.3	6.1
<i>NCREIF Property Index</i>			2.2	2.2	11.8	11.9	11.9	7.6	13.3	11.8	11.0	10.5	14.3

Individual closed end funds are not shown in performance summary. Willows Office Property liquidated 3/24/2016. Willows Property sold for \$8,180,770 on March 24th. A final income distribution of \$771,325 occurred on April 16th.

Total Fund
Closed End Funds - Investment Summary

Period Ending: March 31, 2016

Verus Internal Analysis												
Inception Date	Manager Name/Fund Name	Estimated Market Value as of 3/31/16 ³	Total Commitment	% Called	Capital Called	Current Qtr. Capital Called	Current Qtr. Distributions	Total Distributions	Remaining Commitment	Distrib./Paid-In (DPI) ¹	Tot. Value/Paid-In (TVPI) ²	Latest Valuation
Fixed Income												
07/01/2006	Torchlight II	\$48,577,181	\$128,000,000	100%	\$128,000,000	\$0	\$1,994,028	\$154,335,580	\$0	1.21	1.59	03/31/2016
12/12/2008	Torchlight III	\$10,513,084	\$75,000,000	100%	\$75,000,000	\$0	\$0	\$98,512,563	\$0	1.31	1.45	03/31/2016
08/01/2012	Torchlight IV	\$61,858,348	\$60,000,000	100%	\$60,000,000	\$9,000,000	\$507,857	\$34,316,484	\$0	0.57	1.60	03/31/2016
03/12/2015	Torchlight V	\$10,991,485	\$75,000,000	0%	\$11,250,000	\$0	\$0	\$0	\$63,750,000	0.00	0.98	03/31/2016
Total Fixed Income		\$131,940,098										
% of Portfolio (Market Value)		1.9%										
Inflation Hedge												
11/27/2013	Aether Real Assets III	\$9,653,560	\$25,000,000	40%	\$9,957,439	\$1,740,643	\$27,829	\$94,227	\$15,042,561	0.01	0.98	09/30/2015
11/27/2013	Aether Real Assets III Surplus	\$25,328,472	\$50,000,000	50%#	\$25,121,282	\$2,181,806	\$28,120	\$221,923	\$24,878,718	0.01	1.02	09/30/2015
03/16/2016	Aether Real Assets IV	\$500,000	\$50,000,000	1%	\$500,000	\$500,000	\$0	\$0	\$49,500,000	0.00	1.00	-
06/28/2013	Commonfund	\$18,798,935	\$50,000,000	45%	\$22,625,000	\$875,000	\$0	\$0	\$27,375,000	0.00	0.83	12/31/2015
12/08/2015	Wastewater Opportunity Fund	\$656,063	\$25,000,000	5%	\$1,142,512	\$0	\$0	\$0	\$23,857,488	0.00	0.57	12/31/2015
Total Inflation Hedge		\$54,937,030										
% of Portfolio (Market Value)		0.8%										
Opportunistic												
02/18/2010	Oaktree PIF 2009 ³	\$18,455,319	\$40,000,000	87%	\$34,800,000	\$0	\$1,800,000	\$26,518,579	\$5,200,000	0.76	1.29	03/31/2016
09/24/2015	Angelo Gordon Energy Credit Opp.	\$14,053,644	\$75,000,000	20%	\$15,000,000	\$0	\$0	\$0	\$60,000,000	0.00	0.94	12/31/2015
Total Opportunistic		\$32,508,963										
% of Portfolio (Market Value)		0.5%										

¹(DPI) is equal to (capital returned / capital called)

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

³Latest valuation + capital calls - distributions

Total Fund
Closed End Funds - Investment Summary

Period Ending: March 31, 2016

Verus Internal Analysis												
Inception Date	Manager Name/Fund Name	Estimated Market Value as of 3/31/16 ³	Total Commitment	Capital Called	Total % Called	Current Qtr. Capital Called	Current Qtr. Distributions	Total Distributions	Remaining Commitment	Distrib./Paid-In (DPI) ¹	Tot. Value/Paid-In (TVPI) ²	Latest Valuation
Real Estate												
01/23/2012	Angelo Gordon Realty Fund VIII	\$60,952,820	\$80,000,000	\$74,600,000	93%	\$0	\$1,200,000	\$46,152,397	\$5,400,000	0.62	1.44	12/31/2015
12/08/2014	Angelo Gordon Realty Fund IX	\$13,969,665	\$65,000,000	\$14,300,000	22%	\$6,012,500	\$0	\$0	\$50,700,000	-	-	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	\$0	\$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%	\$0	\$0	\$15,422,419	\$24,689,158	0.31	1.12	12/31/2015
06/17/1998	Hearthstone II ⁴	\$1,117	\$25,000,000	\$19,925,048	80%	\$0	\$0	\$19,952,734	\$0	1.00	1.00	03/31/2016
02/01/2005	Invesco Real Estate I	\$6,531,941	\$50,000,000	\$46,241,947	92%	\$0	\$0	\$43,616,113	\$3,758,053	0.94	1.08	03/31/2016
11/26/2007	Invesco Real Estate II	\$14,861,298	\$85,000,000	\$78,202,813	92%	\$0	\$0	\$86,702,813	\$6,797,187	1.11	1.30	03/31/2016
06/30/2013	Invesco Real Estate III	\$19,281,139	\$35,000,000	\$30,685,961	88%	\$210,000	\$1,505,000	\$22,527,850	\$4,314,039	0.73	1.36	03/31/2016
06/30/2014	Invesco Real Estate IV	\$9,450,609	\$35,000,000	\$21,423,457	61%	\$8,123,457	\$7,670,311	\$13,317,018	\$13,576,543	0.62	1.06	03/31/2016
07/16/2013	LaSalle Income & Growth VI	\$83,633,003	\$75,000,000	\$71,428,571	95%	\$0	\$0	\$12,698,316	\$3,571,429	0.18	1.35	03/31/2016
03/30/2007	Long Wharf Fund III	\$12,558,373	\$75,000,000	\$66,940,230	89%	\$0	\$856,468	\$77,039,450	\$8,059,770	1.15	1.34	03/31/2016
07/03/2013	Long Wharf Fund IV	\$24,671,089	\$25,000,000	\$25,000,000	100%	\$0	\$0	\$4,695,206	-\$0	0.19	1.17	03/31/2016
12/31/2011	Oaktree REOF V	\$33,369,582	\$50,000,000	\$50,000,000	100%	\$0	\$4,200,000	\$46,700,000	\$0	0.93	1.60	03/31/2016
09/30/2013	Oaktree REOF VI ⁵	\$89,579,278	\$80,000,000	\$80,000,000	100%	\$0	\$2,400,000	\$19,241,206	\$0	0.24	1.36	03/31/2016
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	\$21,760,525	\$20,000,000	\$15,307,123	77%	\$0	\$0	\$0	\$4,692,877	0.00	1.42	12/31/2015
01/25/2012	Siguler Guff DREOF	\$62,739,352	\$75,000,000	\$68,625,000	92%	\$0	\$3,421,250	\$39,433,488	\$6,375,000	0.57	1.49	12/31/2015
08/31/2013	Siguler Guff DREOF II	\$43,832,754	\$70,000,000	\$43,400,000	62%	\$2,100,000	\$40,000	\$641,123	\$26,600,000	0.01	1.02	12/31/2015
01/27/2016	Siguler Guff DREOF II Co-Inv	\$10,000,362	\$25,000,000	\$10,000,362	40%	\$10,000,362	\$0	\$0	\$14,999,638	0.00	1.00	-
Total Closed End Real Estate		\$671,928,081	\$1,185,000,000	\$941,391,355	79%	\$26,446,319	\$21,293,029	\$557,642,928	\$238,533,693	0.25	0.97	
% of Portfolio (Market Value)		9.5%										

¹(DPI) is equal to (capital returned / capital called)

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

³Latest valuation + capital calls - distributions

⁴No further capital to be called

⁵Actual capital called is \$85,600,000 which includes recallable distributions

⁶Fund paid out it's final distribution during the quarter

Total Fund
Closed End Funds - Investment Summary

Period Ending: March 31, 2016

Verus Internal Analysis											
Inception Date	Manager Name/Fund Name	Estimated Market Value as of 3/31/16 ³	Total Commitment	Total % Called	Current Qtr. Capital Called	Current Qtr. Distributions	Total Distributions	Remaining Commitment	Distrib./Paid-In (DPI) ¹	Tot. Value/Paid-In (TVPI) ²	Latest Valuation
Private Equity & Venture Capital											
03/18/1996	Adams Street Partners	\$120,309,351	\$210,000,000	69%	\$4,827,000	\$3,120,429	\$75,340,445	\$65,512,375	0.52	1.35	12/31/2015
01/16/2009	Adams Street Partners II	\$18,300,727	\$30,000,000	95%	\$0	\$1,094,699	\$27,593,049	\$1,635,000	0.97	1.62	12/31/2015
09/21/2012	Adams Street Partners - Fund 5	\$16,840,108	\$40,000,000	61%	\$2,720,000	\$1,065,207	\$6,713,361	\$15,492,000	0.27	0.96	12/31/2015
01/18/1996	Adams Street Partners - BFP	\$5,589,591	\$59,565,614	97%	\$0	\$1,105,939	\$98,407,249	\$2,048,205	1.71	1.81	12/31/2015
06/14/2004	Bay Area Equity Fund	\$5,554,426	\$10,000,000	100%	\$0	\$0	\$35,310,439	\$0	3.53	4.09	12/31/2015
12/07/2009	Bay Area Equity Fund II	\$10,753,097	\$10,000,000	97%	\$0	\$0	\$1,015,352	\$316,000	0.10	1.22	12/31/2015
11/26/2003	EIF US Power Fund I	\$806,618	\$30,000,000	100%	\$0	\$0	\$64,168,646	\$0	2.14	2.17	12/31/2015
08/16/2005	EIF US Power Fund II	\$43,109,614	\$50,000,000	100%	\$0	\$279,732	\$42,678,921	\$0	0.85	1.72	12/31/2015
05/30/2007	EIF US Power Fund III	\$62,572,492	\$65,000,000	93%	\$0	\$240,741	\$26,015,279	\$4,609,285	0.43	1.47	12/31/2015
11/28/2011	EIF US Power Fund IV	\$50,085,917	\$50,000,000	94%	\$1,459,171	\$0	\$7,918,685	\$3,117,517	0.17	1.24	12/31/2015
05/24/2011	Pathway 6	\$27,592,625	\$40,000,000	67%	\$1,223,421	\$347,093	\$3,223,302	\$13,097,386	0.12	1.15	12/31/2015
02/07/2013	Pathway 7	\$28,251,778	\$70,000,000	43%	\$3,775,853	\$100,943	\$1,457,533	\$39,625,776	0.05	0.98	12/31/2015
11/23/2015	Pathway 8	\$3,877,944	\$70,000,000	43%	\$468,947	\$0	\$796,887	\$39,625,776	0.03	0.15	12/31/2015
11/09/1998	Pathway	\$44,632,726	\$125,000,000	97%	\$108,900	\$1,744,313	\$131,836,216	\$3,775,666	1.09	1.46	12/31/2015
12/26/2008	Pathway 2008	\$22,913,576	\$30,000,000	81%	\$280,676	\$747,151	\$8,554,299	\$5,827,367	0.35	1.30	12/31/2015
01/31/2008	Carpenter Bancfund	\$27,657,891	\$30,000,000	97%	\$0	\$0	\$17,137,847	\$979,074	0.59	1.54	03/31/2016
02/15/2004	Nogales	\$278,994	\$15,000,000	99%	\$0	\$0	\$12,079,772	\$194,897	0.82	0.83	12/31/2015
11/30/2007	Paladin III	\$23,832,387	\$25,000,000	91%	\$1,190,579	\$0	\$14,486,323	\$2,191,313	0.64	1.68	12/31/2015
06/11/2014	Ocean Avenue Fund II	\$14,518,677	\$30,000,000	50%	\$0	\$0	\$589,938	\$15,000,000	0.04	1.01	12/31/2015
06/03/2014	Siguler Guff CCCERA Opportunities	\$55,281,759	\$200,000,000	27%	\$9,575,000	\$0	\$4,589,491	\$145,507,500	0.08	1.10	12/31/2015
Total Private Equity and Venture Capital		\$582,760,298	\$1,189,565,614	70%	\$25,629,547	\$9,846,246	\$579,913,033	\$358,555,137	0.70	1.40	
% of Portfolio (Market Value)		8.2%									

¹(DPI) is equal to (capital returned / capital called)

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

³Latest valuation + capital calls - distributions

Total Fund
Closed End Funds - IRR Summary

Period Ending: March 31, 2016

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%	03/31/2016
Torchlight III	12/12/2008	18.2%	18.3%	13.7%	13.8%	03/31/2016
Torchlight IV	08/01/2012	11.7%	12.7%	9.2%	10.6%	03/31/2016
Torchlight V	03/12/2015	7.6%	9.5%	-8.2%	-3.3%	03/31/2016
Inflation Hedge	Inception	Fund Level (G)	CCCERA (G)	Fund Level (N)	CCCERA (N)	IRR Date
Aether Real Assets III ⁴	11/27/2013	4.9%	4.9%	-5.0%	-5.0%	09/30/2015
Aether Real Assets III Surplus ⁴	11/27/2013	6.5%	6.5%	1.9%	1.9%	09/30/2015
CommonFund ⁴	06/28/2013	-	-	-	-14.4%	12/31/2015
Wastewater Opportunity Fund ¹	12/08/2015	-	-	-	-	-
Opportunistic	Inception	Fund Level (G)	CCCERA (G)	Fund Level (N)	CCCERA (N)	IRR Date
Oaktree PIF	02/18/2010	6.9%	-	6.8%	-	03/31/2016
Angelo Gordon Energy Cred Opp. ¹	09/24/2015	-	-	-	-	-
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 ¹	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 ¹	07/01/2014	-	-	-	-	-
Hearthstone II	06/17/1998	-	30.1%	-	30.1%	12/31/2015
Invesco Fund I	02/01/2005	2.6%	2.6%	1.6%	1.6%	03/31/2016
Invesco Fund II	11/26/2007	8.5%	7.6%	7.0%	6.8%	03/31/2016
Invesco Fund III	06/30/2013	22.5%	23.9%	21.1%	17.6%	03/31/2016
Invesco Fund IV	06/30/2014	32.1%	33.8%	29.5%	24.0%	03/31/2016
LaSalle Income & Growth	07/16/2013	20.1%	20.1%	16.2%	16.3%	03/31/2016
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	18.2%	-	13.3%	-	03/31/2016
Oaktree REOF VI	09/30/2013	20.7%	-	14.0%	-	03/31/2016
Oaktree REOF VII ¹	04/01/2015	-	-	-	-	-
Paulson ¹	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
Siguler Guff DREOF II Co-Inv ¹	01/27/2016	-	-	-	-	-

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

²Fund level data includes CCCERA and all other fund investors.

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

⁴Manager 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: March 31, 2016

Private Equity & Venture Capital	Inception	Fund Level (G)	CCCERA (G)	Fund Level (N)	CCCERA (N)	IRR Date
Adams Street Partners	03/18/1996	-	12.2%	-	9.1%	12/31/2015
Adams Street Partners II	01/16/2009	-	21.0%	-	16.9%	12/31/2015
Adams Street Partners - Fund 5	09/21/2012	-	0.6%	-	-3.7%	12/31/2015
Adams Street Partners - BPF	01/18/1996	-	14.3%	-	11.7%	12/31/2016
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%	12/31/2015
Energy Investor Fund II	08/16/2005	8.7%	8.1%	5.9%	5.4%	12/31/2015
Energy Investor Fund III	05/30/2007	8.7%	8.7%	6.0%	6.0%	12/31/2015
Energy Investor Fund IV	11/28/2011	21.7%	22.4%	13.9%	13.6%	12/31/2015
Pathway 6	05/24/2011	14.3%	14.3%	9.2%	9.2%	12/31/2015
<i>Benchmark⁴</i>		8.1%	-	-	-	12/31/2015
Pathway 7 ¹	02/07/2013	-	-	-	-	-
Pathway Private Equity Fund	11/09/1998	10.2%	10.2%	8.3%	8.3%	12/31/2015
<i>Benchmark⁵</i>		8.1%	-	-	-	12/31/2015
Pathway Private Equity Fund 2008	12/26/2008	12.9%	12.9%	9.3%	9.3%	12/31/2015
<i>Benchmark⁶</i>		9.1%	-	-	-	12/31/2015
Carpenter Bancfund	01/31/2008	9.6%	9.5%	8.2%	8.0%	12/31/2015
Nogales	02/15/2004		-4.5%	-8.6%	-8.8%	03/31/2015
Paladin III	11/30/2007	17.6%	-	6.5%	6.7%	09/30/2015
Ocean Avenue	06/11/2014	-	-	0.6%	-	12/31/2015
Siguler Guff CCCERA Opportunities	06/03/2014	-	31.6%	-	24.0%	09/30/2015

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

²Fund level data includes CCCERA and all other fund investors.

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

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

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

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

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

Period Ending: March 31, 2016

	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	12.62%	0.79%	8.25%	2.17%	0.88	3.72%	0.81	1.52	0.21	97.98%	58.84%
PIMCO Stocks+ Absolute Return	10.04%	-1.78%	10.11%	-3.93%	1.18	2.35%	0.97	0.99	-0.76	97.90%	158.51%
Jackson Square Partners	11.21%	-2.40%	11.80%	-6.51%	1.30	4.98%	0.87	0.95	-0.48	87.97%	136.22%
Robeco Boston Partners	9.56%	0.18%	9.62%	-0.01%	1.02	2.77%	0.92	0.99	0.06	99.37%	93.29%
Emerald Advisers	10.69%	2.78%	16.42%	2.61%	1.02	6.79%	0.83	0.65	0.41	113.51%	90.70%
Ceredex	8.50%	2.78%	13.31%	2.87%	0.98	5.32%	0.84	0.63	0.52	113.06%	84.26%
William Blair	3.03%	1.11%	10.59%	1.20%	0.95	2.68%	0.94	0.28	0.42	105.57%	92.18%
Artisan Partners	9.37%	3.84%	10.02%	3.91%	0.99	3.78%	0.86	0.93	1.01	128.52%	71.28%
First Eagle	5.68%	0.14%	7.50%	1.53%	0.75	3.47%	0.88	0.75	0.04	94.83%	87.20%
Intech Global Low Vol	10.04%	4.50%	6.45%	7.26%	0.50	6.43%	0.53	1.55	0.70	122.38%	45.80%
JP Morgan Global Opportunities	5.89%	0.35%	10.72%	-0.20%	1.10	3.00%	0.93	0.54	0.12	97.41%	87.65%
AFL-CIO	2.53%	0.03%	3.15%	0.11%	0.97	0.53%	0.97	0.79	0.06	96.90%	90.68%
Goldman Sachs Core Plus	2.87%	0.37%	3.20%	0.68%	0.88	1.58%	0.77	0.88	0.23	92.90%	60.76%
Lord Abbett	2.63%	0.13%	3.34%	0.16%	0.99	1.07%	0.90	0.77	0.12	95.79%	82.17%
PIMCO Fixed Income	2.07%	-0.43%	3.43%	-0.54%	1.05	0.74%	0.96	0.59	-0.58	93.17%	109.78%
Allianz Global Investors	1.17%	-0.58%	5.09%	-0.43%	0.91	1.07%	0.97	0.22	-0.55	84.79%	94.55%
Lazard	0.32%	-0.55%	5.32%	-0.52%	0.97	1.14%	0.96	0.05	-0.48	85.02%	97.09%
PIMCO All Asset Fund	-1.16%	-5.95%	7.85%	-12.69%	2.41	7.22%	0.24	-0.15	-0.82	-3.57%	771.76%

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

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

Period Ending: March 31, 2016

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	11.93%	0.35%	12.74%	0.73%	0.97	3.28%	0.93	0.93	0.11	99.35%	93.10%
PIMCO Stocks+ Absolute Return	11.22%	-0.36%	13.96%	-1.36%	1.09	2.17%	0.98	0.80	-0.17	104.37%	113.89%
Jackson Square Partners	12.50%	0.12%	14.17%	-0.60%	1.06	4.26%	0.91	0.88	0.03	99.71%	97.54%
Robeco Boston Partners	10.70%	0.46%	15.12%	-0.32%	1.08	3.01%	0.97	0.70	0.15	107.75%	105.86%
Emerald Advisers	9.69%	1.99%	21.51%	1.20%	1.10	6.61%	0.91	0.45	0.30	121.68%	104.14%
William Blair	4.17%	2.56%	14.72%	2.59%	0.99	2.43%	0.97	0.28	1.06	116.05%	91.87%
First Eagle	6.45%	1.22%	9.20%	2.96%	0.67	4.97%	0.94	0.69	0.25	84.82%	69.19%
JP Morgan Global Opportunities	5.48%	0.26%	15.03%	-0.31%	1.11	2.85%	0.97	0.36	0.09	106.12%	103.46%
AFL-CIO	3.73%	-0.04%	2.91%	0.15%	0.95	0.55%	0.97	1.26	-0.08	96.87%	91.10%
Goldman Sachs Core Plus	4.66%	0.88%	2.96%	1.37%	0.87	1.41%	0.79	1.56	0.63	109.52%	54.33%
Lord Abbett	4.72%	0.94%	2.99%	1.39%	0.88	1.42%	0.79	1.56	0.66	114.21%	68.13%
PIMCO Fixed Income	3.77%	-0.01%	2.98%	0.87%	0.77	2.00%	0.60	1.25	0.00	98.07%	92.46%
Allianz Global Investors	4.39%	-0.32%	6.14%	0.04%	0.92	1.12%	0.97	0.71	-0.29	89.93%	90.28%
Lazard	1.46%	-0.35%	4.71%	-0.31%	0.98	1.18%	0.94	0.30	-0.29	90.42%	98.03%
Adelante	12.13%	0.01%	14.22%	0.76%	0.94	1.93%	0.99	0.85	0.01	92.04%	87.79%
INVESCO International REIT	4.68%	-0.67%	15.24%	-0.84%	1.03	1.92%	0.99	0.30	-0.35	97.52%	103.71%

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

Total Fund Investment Fund Fee Analysis

Period Ending: March 31, 2016

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	\$299,555,680	\$1,293,445	0.43%
PIMCO Stocks+ Absolute Return	Global Equity	0.15% of Assets	\$246,789,500	\$370,184	0.15%
Jackson Square Partners	Global Equity	0.50% of First \$100.0 Mil, 0.40% of Next \$150.0 Mil, 0.35% Thereafter	\$295,830,816	\$1,260,408	0.43%
Robeco Boston Partners	Global Equity	0.50% of First \$25.0 Mil, 0.30% Thereafter	\$318,956,768	\$1,006,870	0.32%
Emerald Advisers	Global Equity	0.75% of First \$10.0 Mil, 0.60% Thereafter	\$215,420,230	\$1,307,521	0.61%
Ceredex	Global Equity	0.85% of First \$10.0 Mil, 0.68% of Next \$40.0 Mil, 0.51% Thereafter	\$238,600,679	\$1,318,863	0.55%
Pyrford	Global Equity	0.70% of First \$50.0 Mil, 0.50% of Next \$50.0 Mil, 0.35% Thereafter	\$400,611,673	\$1,652,141	0.41%
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	\$397,634,341	\$1,607,903	0.40%
Artisan Partners	Global Equity	0.75% of Assets	\$304,254,574	\$2,281,909	0.75%
First Eagle	Global Equity	0.75% of Assets	\$304,825,696	\$2,286,193	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	\$23,575,791	\$57,761	0.25%
JP Morgan Global Opportunities	Global Equity	0.50% of First \$100.0 Mil, 0.40% Thereafter	\$262,565,710	\$1,150,263	0.44%
AFL-CIO	Global Fixed Income	0.43% of Assets	\$231,209,102	\$994,199	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: March 31, 2016

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	\$323,525,529	\$566,170	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	\$324,508,910	\$611,763	0.19%
PIMCO Fixed Income	Global Fixed Income	0.25% of First \$600.0 Mil, 0.15% Thereafter	\$347,577,183	\$868,943	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	\$320,085,905	\$1,220,301	0.38%
Lazard	Global Fixed Income	0.40% of First \$25.0 Mil, 0.30% of Next \$25.0 Mil, 0.25% Thereafter	\$241,124,503	\$652,811	0.27%
PIMCO All Asset Fund	Inflation Hedge/Real Assets	0.87% of Assets	\$120,307,685	\$1,046,677	0.87%
Wellington Real Total Return	Inflation Hedge/Real Assets	0.55% of Assets	\$175,405,143	\$964,728	0.55%

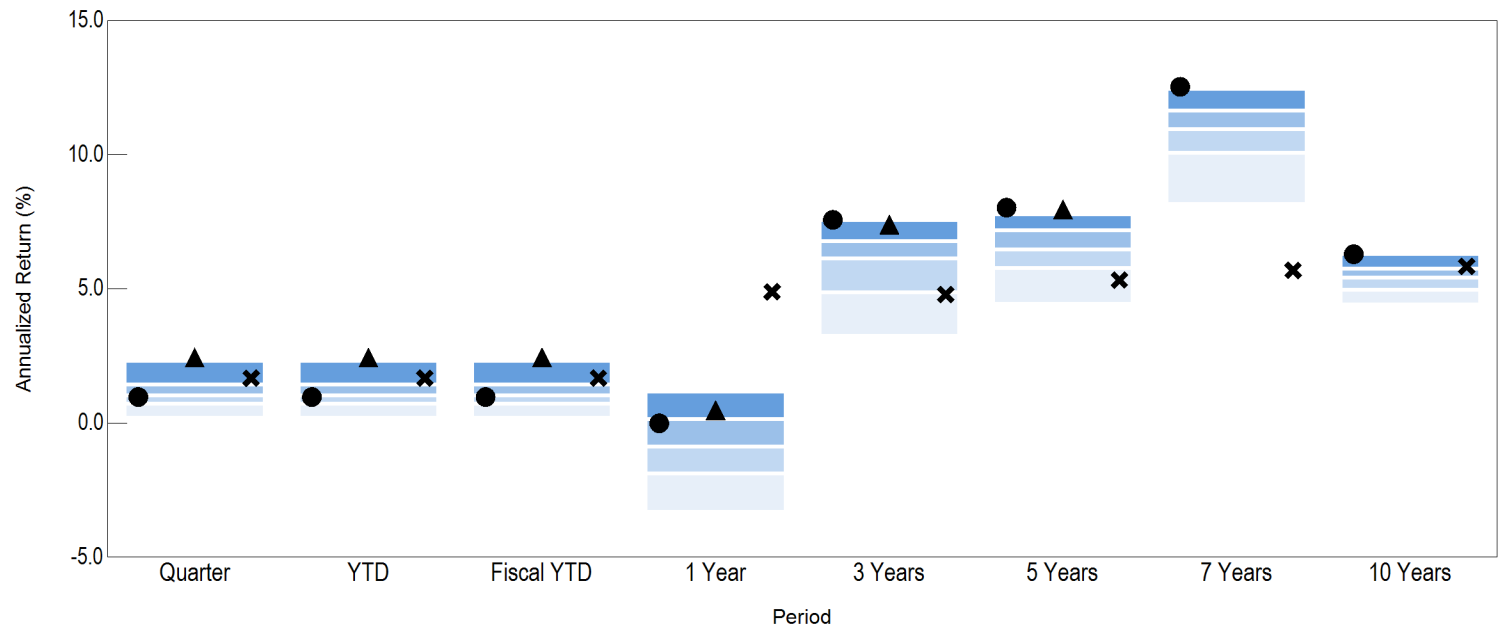
Mutual fund fees shown are sourced from Morningstar and are as of the most current prospectus.

Total Fund

Peer Universe Comparison: Cumulative Performance (Gross of Fees)

Period Ending: March 31, 2016

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



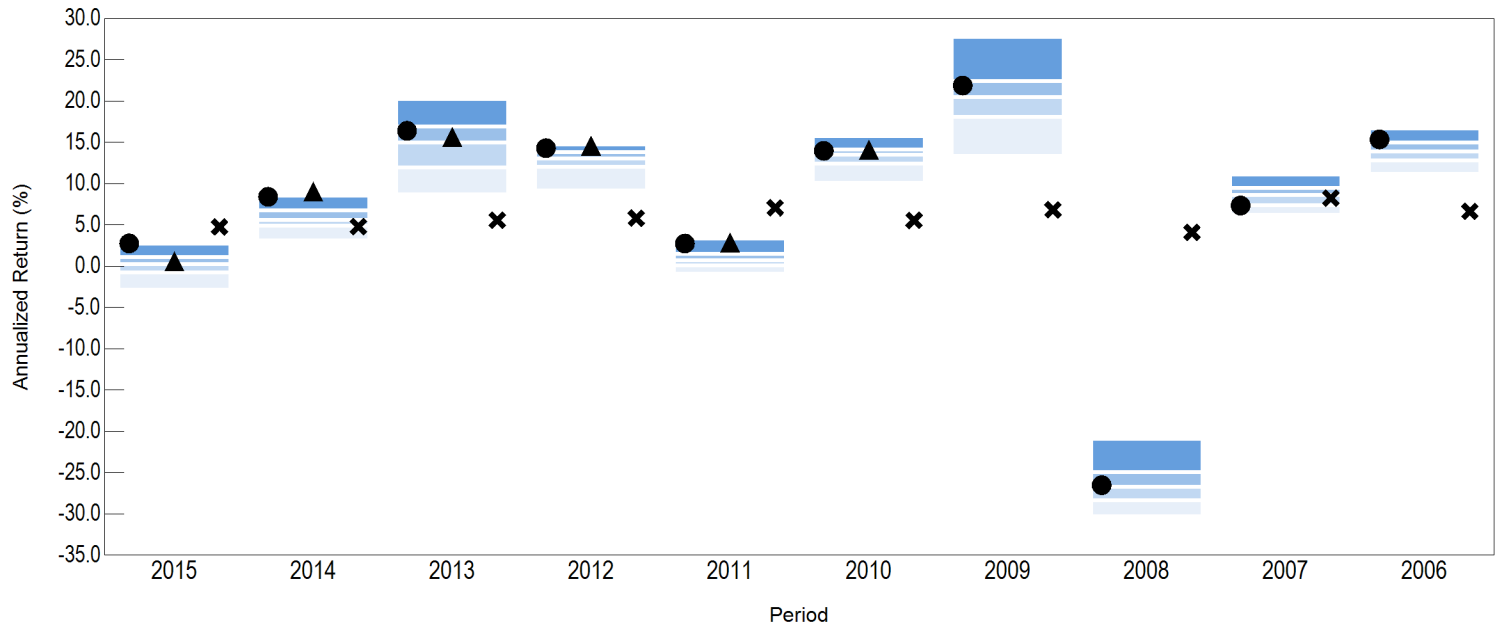
	Quarter		YTD		Fiscal YTD		1 Year		3 Years		5 Years		7 Years		10 Years	
5th Percentile	2.3	2.3	2.3	1.2	7.6	7.8	12.4	6.3	2.3	2.3	2.3	1.2	7.6	7.8	12.4	6.3
25th Percentile	1.5	1.5	1.5	0.2	6.8	7.2	11.7	5.8	1.5	1.5	1.5	0.2	6.8	7.2	11.7	5.8
Median	1.0	1.0	1.0	-0.9	6.2	6.5	11.0	5.4	1.0	1.0	1.0	-0.9	6.2	6.5	11.0	5.4
75th Percentile	0.7	0.7	0.7	-1.9	4.9	5.8	10.1	5.0	0.7	0.7	0.7	-1.9	4.9	5.8	10.1	5.0
95th Percentile	0.2	0.2	0.2	-3.3	3.3	4.5	8.2	4.4	0.2	0.2	0.2	-3.3	3.3	4.5	8.2	4.4
# of Portfolios	102	102	102	101	90	87	76	73	102	102	102	101	90	87	76	73
● Total Fund	1.0 (58)	1.0 (58)	1.0 (58)	0.0 (29)	7.6 (5)	8.0 (2)	12.5 (3)	6.3 (6)	1.0 (58)	1.0 (58)	1.0 (58)	0.0 (29)	7.6 (5)	8.0 (2)	12.5 (3)	6.3 (6)
▲ Policy Index	2.4 (4)	2.4 (4)	2.4 (4)	0.5 (16)	7.4 (9)	8.0 (2)	-- (--)	-- (--)	2.4 (4)	2.4 (4)	2.4 (4)	0.5 (16)	7.4 (9)	8.0 (2)	-- (--)	-- (--)
✕ CPI + 4%	1.7 (18)	1.7 (18)	1.7 (18)	4.9 (1)	4.8 (77)	5.3 (84)	5.7 (99)	5.8 (22)	1.7 (18)	1.7 (18)	1.7 (18)	4.9 (1)	4.8 (77)	5.3 (84)	5.7 (99)	5.8 (22)

Total Fund

Peer Universe Comparison: Consecutive Periods (Gross of Fees)

Period Ending: March 31, 2016

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



	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
5th Percentile	2.7	8.5	20.2	14.7	3.3	15.7	27.7	-21.0	11.0	16.6
25th Percentile	1.1	6.8	17.0	13.9	1.6	14.2	22.5	-24.9	9.5	15.0
Median	0.3	5.7	15.0	13.0	0.8	13.5	20.5	-26.7	8.6	13.9
75th Percentile	-0.7	4.9	12.0	12.1	0.1	12.5	18.1	-28.3	7.4	12.9
95th Percentile	-2.8	3.1	8.7	9.2	-0.9	10.2	13.4	-30.2	6.2	11.2
# of Portfolios	98	79	67	74	68	66	66	65	64	64
● Total Fund	2.8 (4)	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)
▲ Policy Index	0.6 (40)	9.0 (2)	15.6 (43)	14.6 (8)	2.8 (9)	14.1 (27)	-- (--)	-- (--)	-- (--)	-- (--)
✕ CPI + 4%	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

Intech Large Cap Core Manager Portfolio Overview

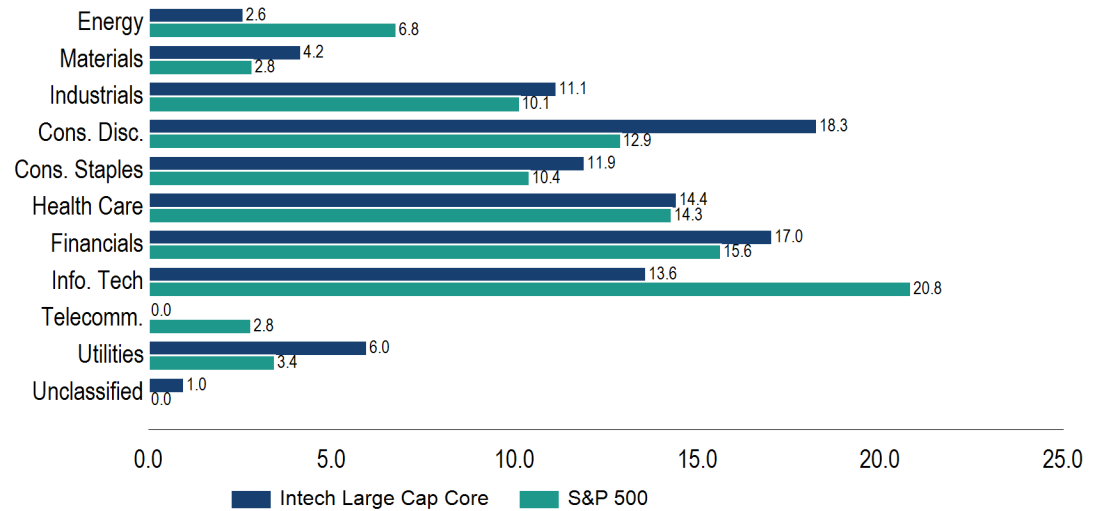
Period Ending: March 31, 2016

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

Characteristics

	Portfolio	S&P 500
Number of Holdings	252	504
Weighted Avg. Market Cap. (\$B)	38.74	128.86
Median Market Cap. (\$B)	19.63	18.28
Price To Earnings	27.33	22.73
Price To Book	5.08	4.24
Price To Sales	3.41	2.98
Return on Equity (%)	20.19	17.79
Yield (%)	1.61	2.16
Beta	0.88	1.00

Sector Allocation (%) vs S&P 500



Largest Holdings

	End Weight	Return
CONSTELLATION BRANDS 'A'	1.43	6.31
FISERV	1.38	12.16
NORTHROP GRUMMAN	1.36	5.25
LOCKHEED MARTIN	1.34	2.78
KROGER	1.30	-8.30
O REILLY AUTOMOTIVE	1.22	7.99
AVAGO TECHNOLOGIES	1.03	6.79
MARSH & MCLENNAN	1.03	10.29
ANTHEM	1.03	0.17
CVS HEALTH	1.02	6.58

Top Contributors

	Avg Wgt	Return	Contribution
FISERV	1.33	12.16	0.16
MARSH & MCLENNAN	0.98	10.29	0.10
CMS ENERGY	0.54	18.55	0.10
SEMPRA EN.	0.85	11.49	0.10
CONSTELLATION BRANDS 'A'	1.45	6.31	0.09
CVS HEALTH	1.39	6.58	0.09
O REILLY AUTOMOTIVE	1.12	7.99	0.09
TYSON FOODS 'A'	0.35	25.28	0.09
EDWARDS LIFESCIENCES	0.75	11.69	0.09
ALLSTATE	0.96	9.06	0.09

Bottom Contributors

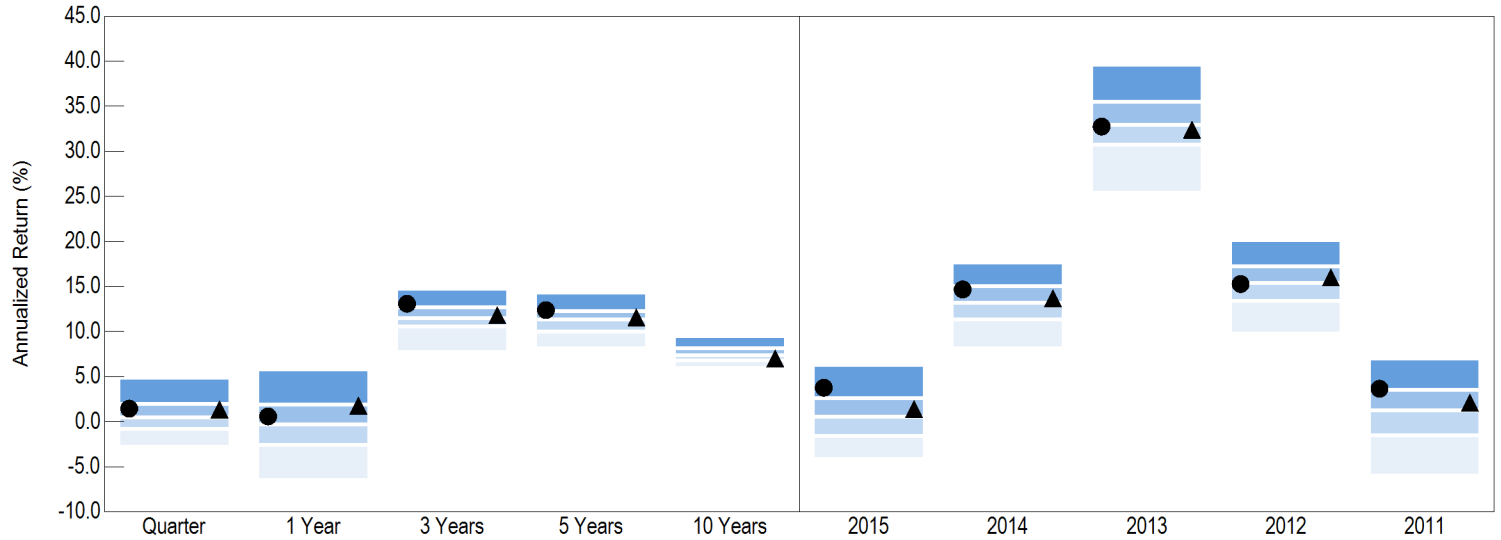
	Avg Wgt	Return	Contribution
AMERISOURCEBERGEN	1.14	-16.22	-0.18
MCKESSON	0.85	-20.13	-0.17
REGENERON PHARMS.	0.45	-33.60	-0.15
KROGER	1.43	-8.30	-0.12
ALLERGAN	0.78	-14.23	-0.11
DELPHI AUTOMOTIVE	0.81	-12.08	-0.10
TESORO	0.54	-17.85	-0.10
ROYAL CARIBBEAN CRUISES	0.43	-18.40	-0.08
MARATHON PETROLEUM	0.25	-27.56	-0.07
CARDINAL HEALTH	0.87	-7.77	-0.07

Unclassified sector allocation includes cash allocations.

Intech Large Cap Core
 Manager Performance Comparisons (Gross of Fees)

Period Ending: March 31, 2016

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

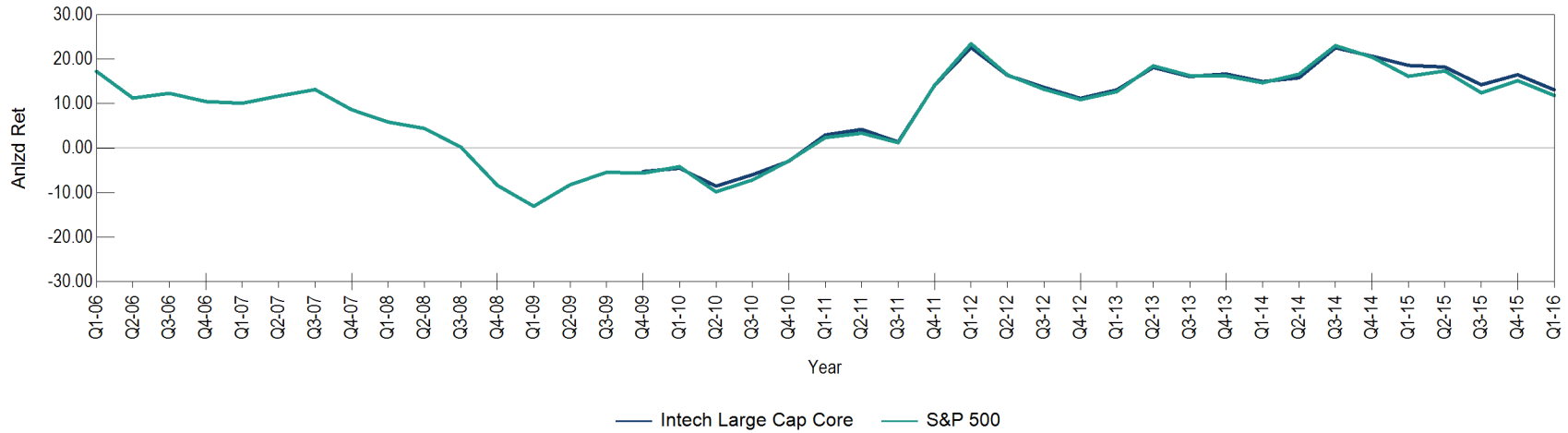


	Return (Rank)									
	Quarter	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011
5th Percentile	4.8	5.7	14.7	14.3	9.5	6.3	17.7	39.6	20.1	7.0
25th Percentile	2.0	1.9	12.7	12.3	8.1	2.7	15.1	35.5	17.2	3.6
Median	0.5	-0.3	11.5	11.3	7.4	0.6	13.3	32.9	15.4	1.3
75th Percentile	-0.7	-2.5	10.6	10.0	6.8	-1.6	11.4	30.8	13.4	-1.5
95th Percentile	-2.7	-6.5	7.8	8.2	6.0	-4.1	8.2	25.4	9.8	-5.9
# of Portfolios	248	248	244	231	189	267	267	261	254	259
● Intech Large Cap Core	1.4 (34)	0.6 (39)	13.1 (18)	12.4 (25)	-- (--)	3.8 (16)	14.7 (31)	32.7 (54)	15.3 (54)	3.6 (25)
▲ S&P 500	1.3 (36)	1.8 (26)	11.8 (45)	11.6 (46)	7.0 (67)	1.4 (42)	13.7 (42)	32.4 (58)	16.0 (41)	2.1 (40)

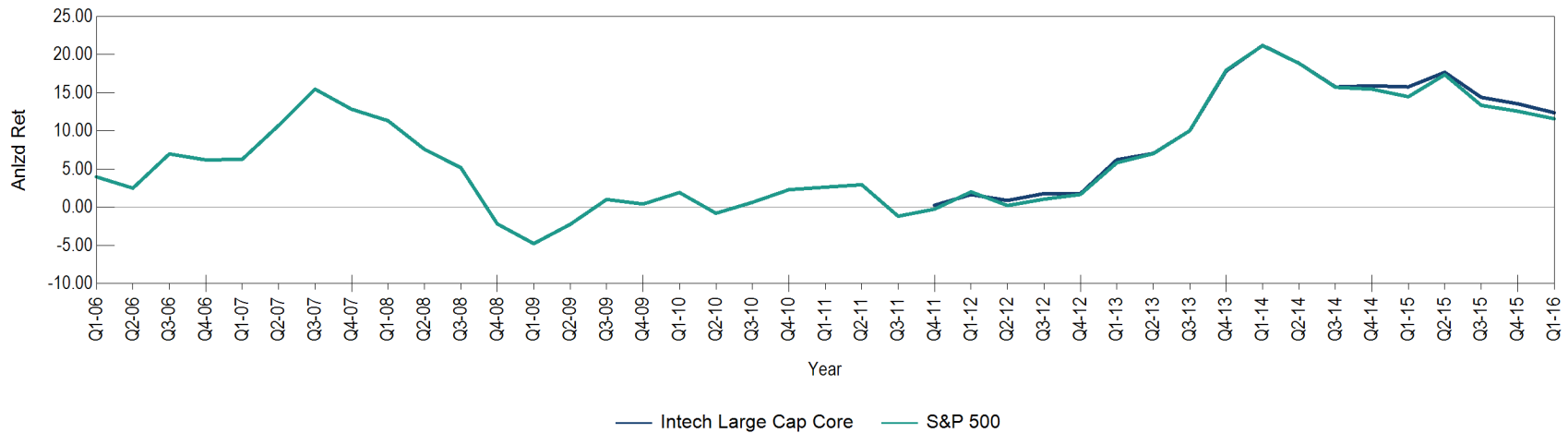
Intech Large Cap Core
 Manager Performance - Rolling 3 & 5 Year (Gross of Fees)

Period Ending: March 31, 2016

Rolling 3 Year Annualized Return (%)

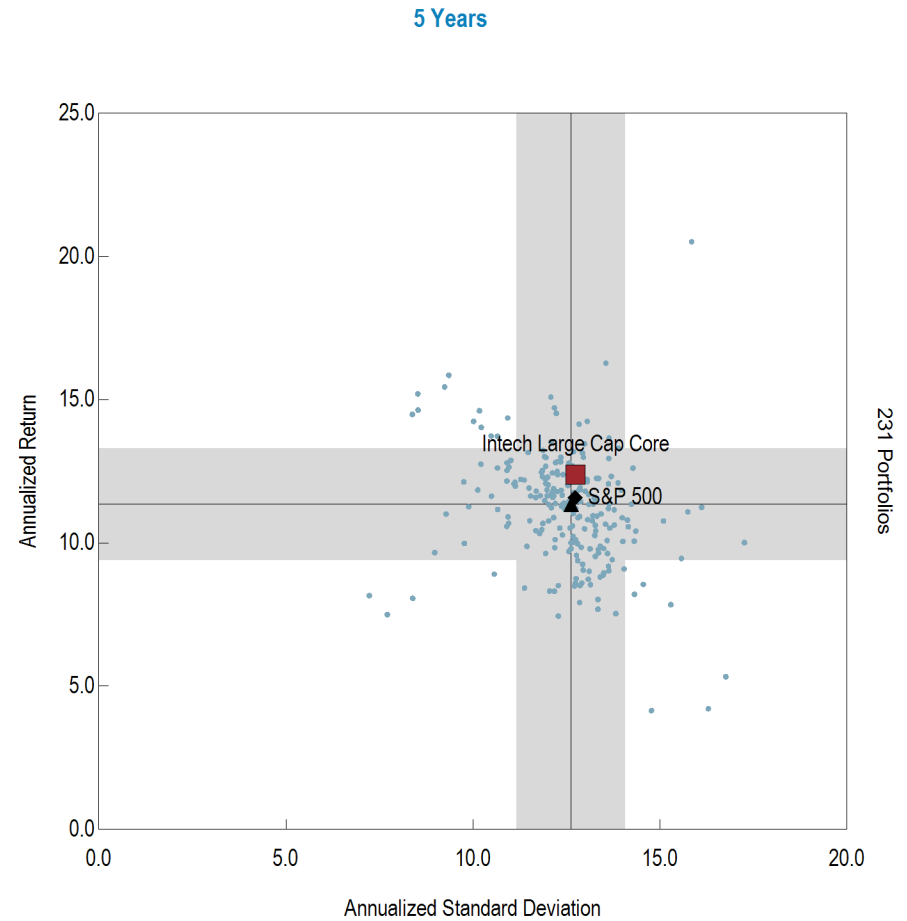
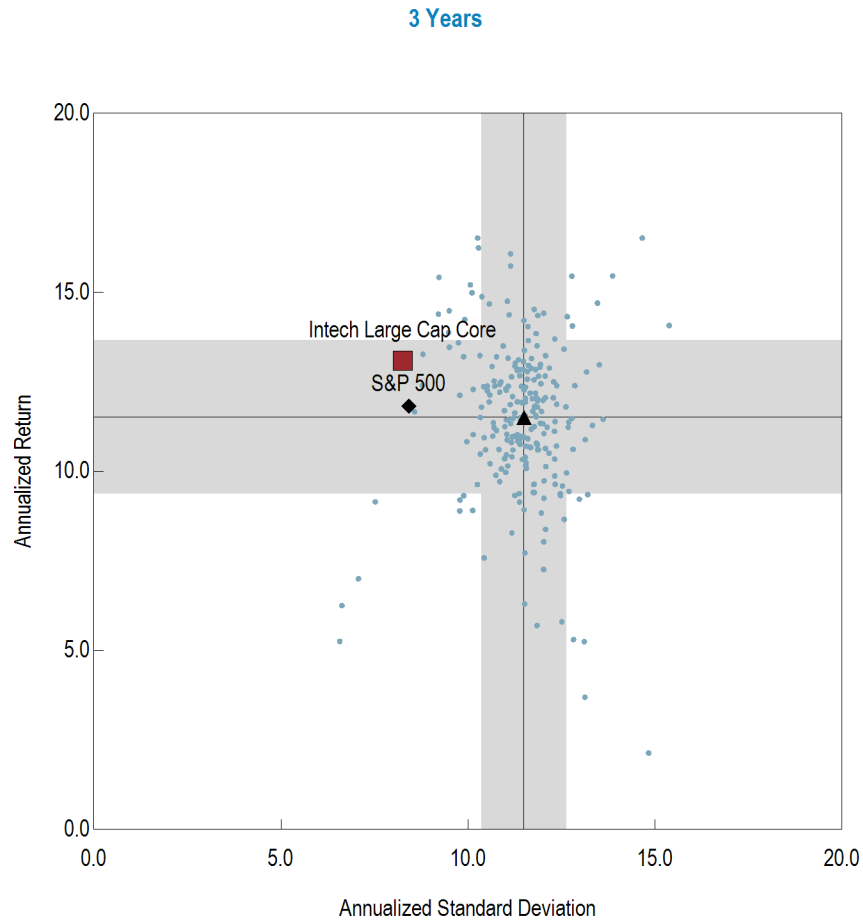


Rolling 5 Year Annualized Return (%)



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

Period Ending: March 31, 2016



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Intech Large Cap Core	13.1%	8.3%	1.6
S&P 500	11.8%	8.4%	1.4
eA US Large Cap Core Equity Gross Median	11.5%	11.5%	1.0

5 Years

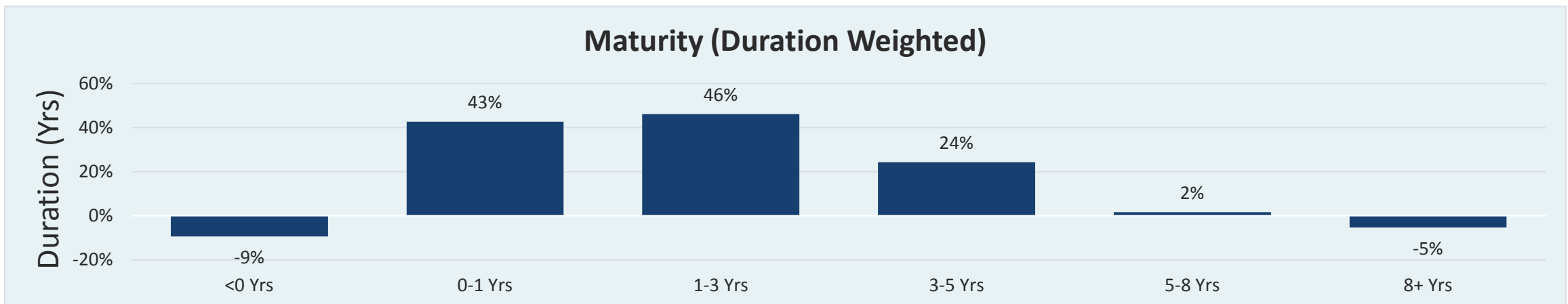
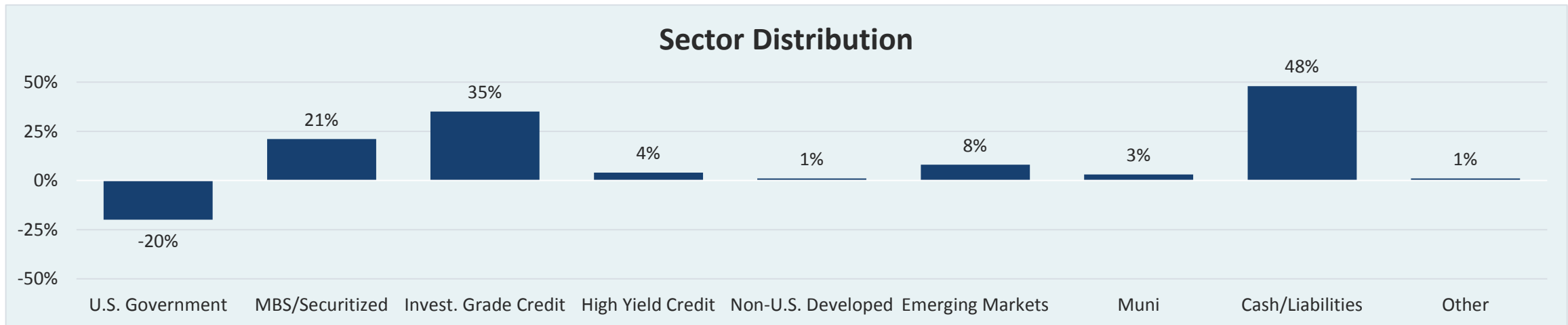
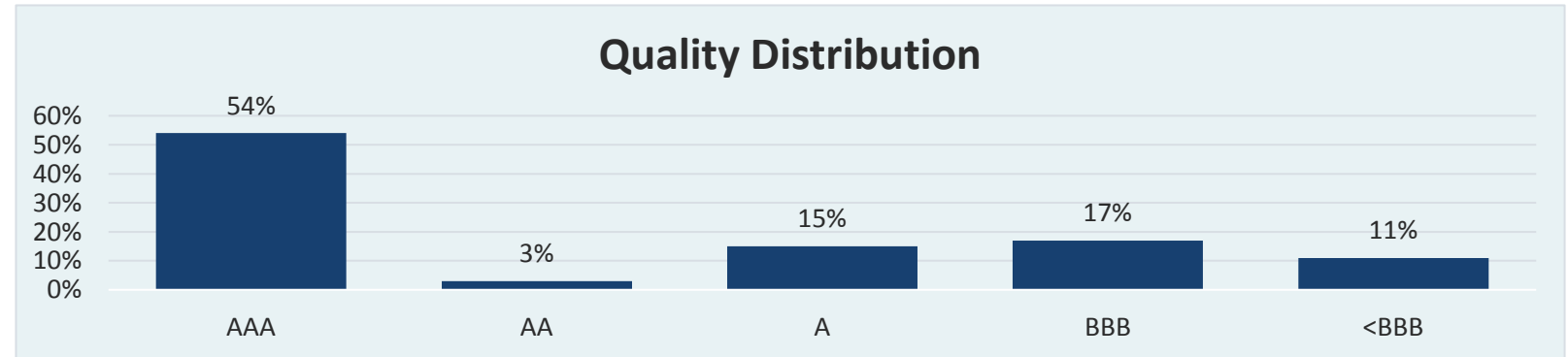
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Intech Large Cap Core	12.4%	12.7%	1.0
S&P 500	11.6%	12.7%	0.9
eA US Large Cap Core Equity Gross Median	11.3%	12.6%	0.9

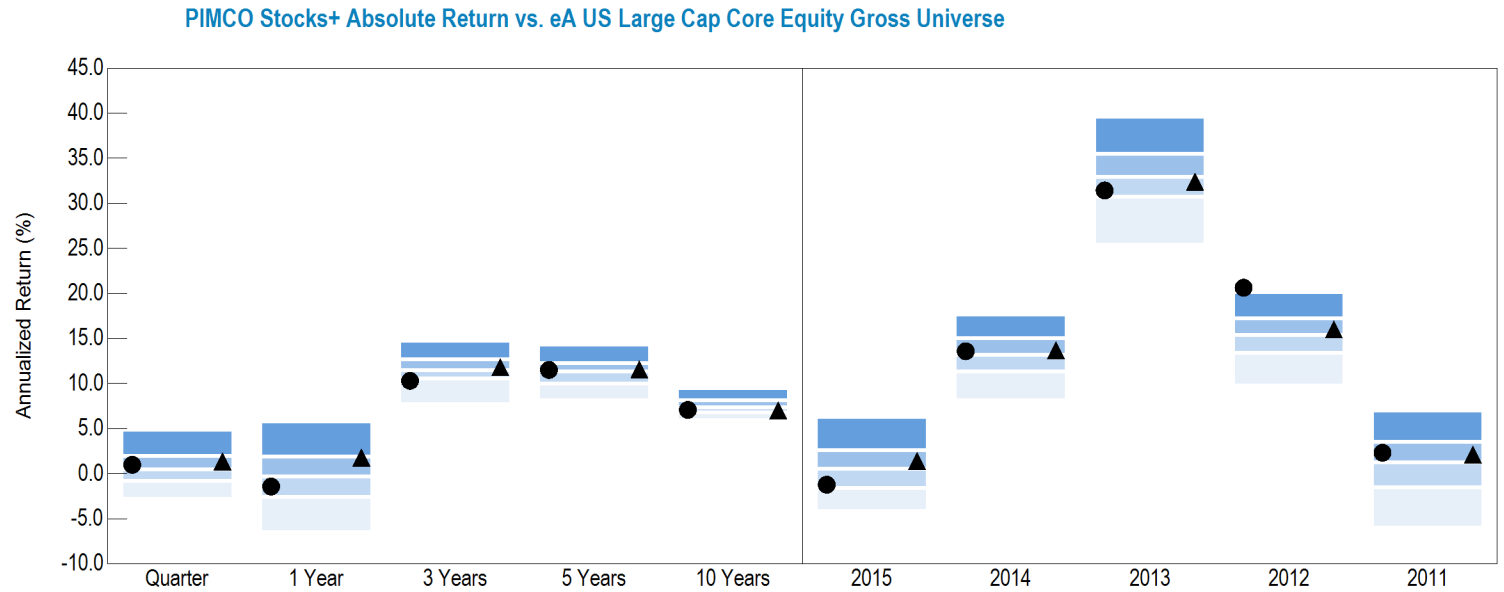
PIMCO Stocks+ Absolute Return Manager Portfolio Overview

Period Ending: March 31, 2016

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.

	PIMCO Stocks+
Effective Duration	0.28
Futures Adjusted Duration	0.22
Yield to Maturity	2.68
Average Quality	AA-



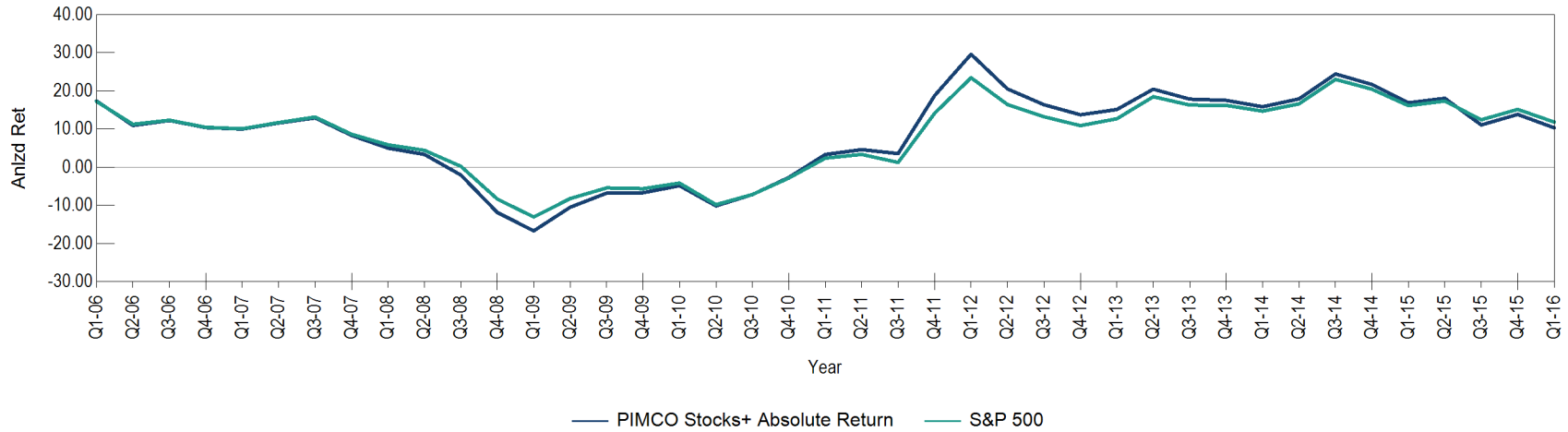


	Return (Rank)									
	Quarter	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011
5th Percentile	4.8	5.7	14.7	14.3	9.5	6.3	17.7	39.6	20.1	7.0
25th Percentile	2.0	1.9	12.7	12.3	8.1	2.7	15.1	35.5	17.2	3.6
Median	0.5	-0.3	11.5	11.3	7.4	0.6	13.3	32.9	15.4	1.3
75th Percentile	-0.7	-2.5	10.6	10.0	6.8	-1.6	11.4	30.8	13.4	-1.5
95th Percentile	-2.7	-6.5	7.8	8.2	6.0	-4.1	8.2	25.4	9.8	-5.9
# of Portfolios	248	248	244	231	189	267	267	261	254	259
● PIMCO Stocks+ Absolute Return	1.0 (41)	-1.4 (64)	10.3 (79)	11.5 (46)	7.1 (66)	-1.2 (73)	13.6 (45)	31.4 (68)	20.6 (4)	2.3 (36)
▲ S&P 500	1.3 (36)	1.8 (26)	11.8 (45)	11.6 (46)	7.0 (67)	1.4 (42)	13.7 (42)	32.4 (58)	16.0 (41)	2.1 (40)

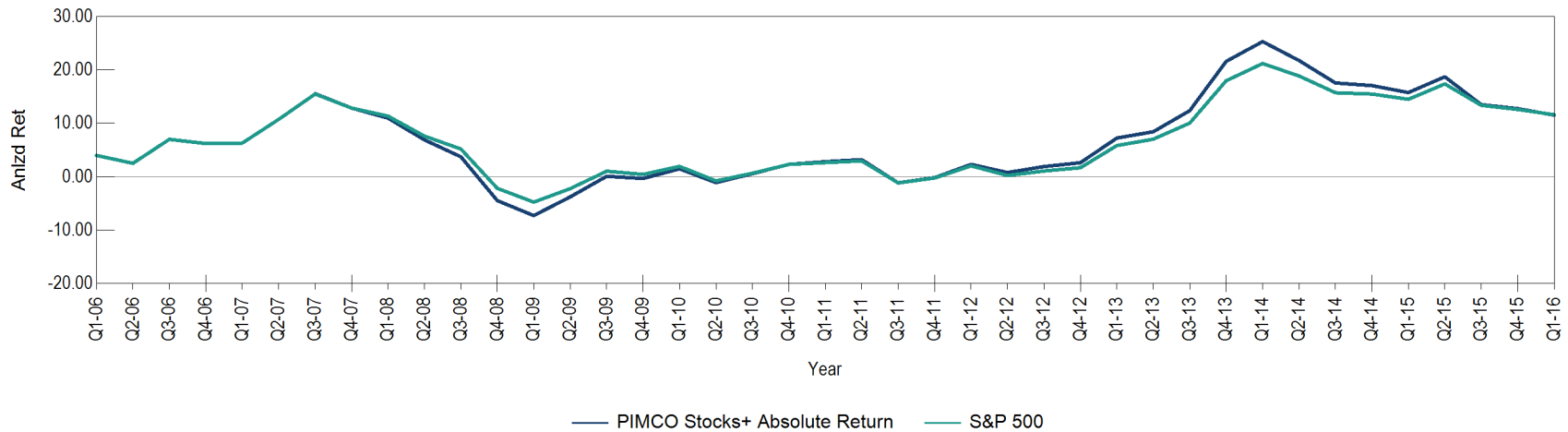
PIMCO Stocks+ Absolute Return
 Manager Performance - Rolling 3 & 5 Year (Gross of Fees)

Period Ending: March 31, 2016

Rolling 3 Year Annualized Return (%)



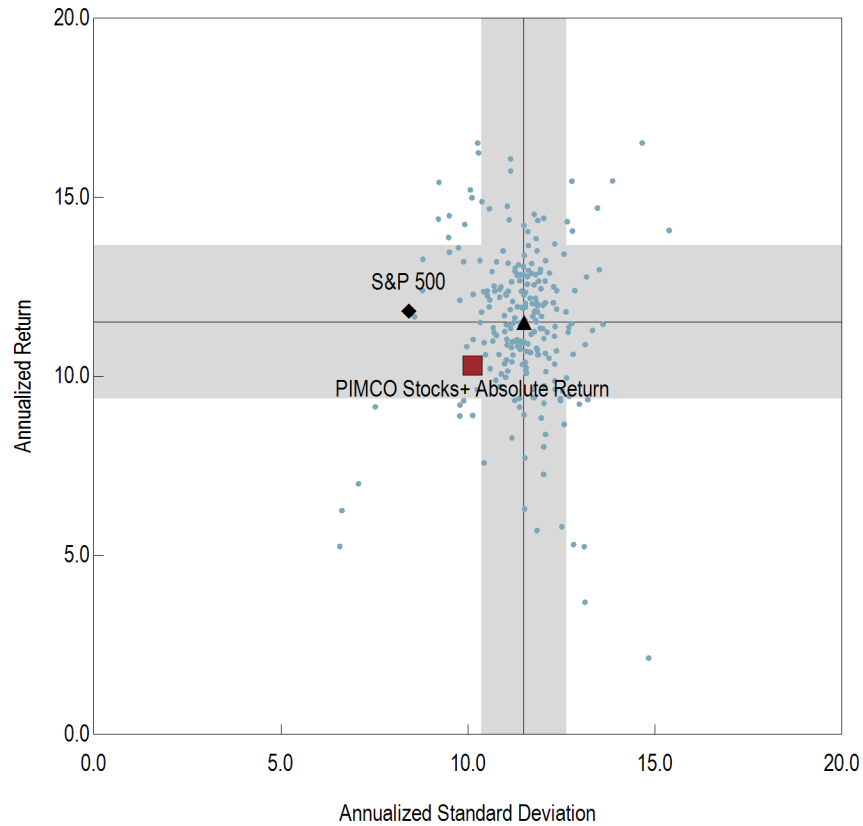
Rolling 5 Year Annualized Return (%)



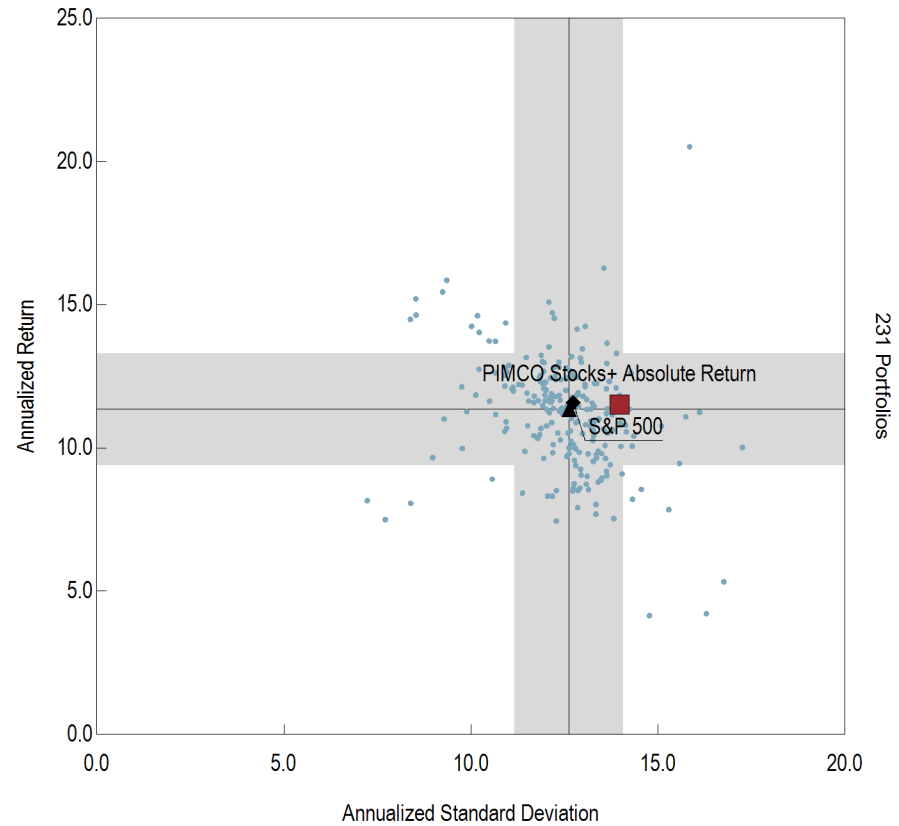
PIMCO Stocks+ Absolute Return
Risk vs. Return 3 & 5 Year (Gross of Fees)

Period Ending: March 31, 2016

3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
PIMCO Stocks+ Absolute Return	10.3%	10.1%	1.0
S&P 500	11.8%	8.4%	1.4
eA US Large Cap Core Equity Gross Median	11.5%	11.5%	1.0

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
PIMCO Stocks+ Absolute Return	11.5%	14.0%	0.8
S&P 500	11.6%	12.7%	0.9
eA US Large Cap Core Equity Gross Median	11.3%	12.6%	0.9

Jackson Square Partners Manager Portfolio Overview

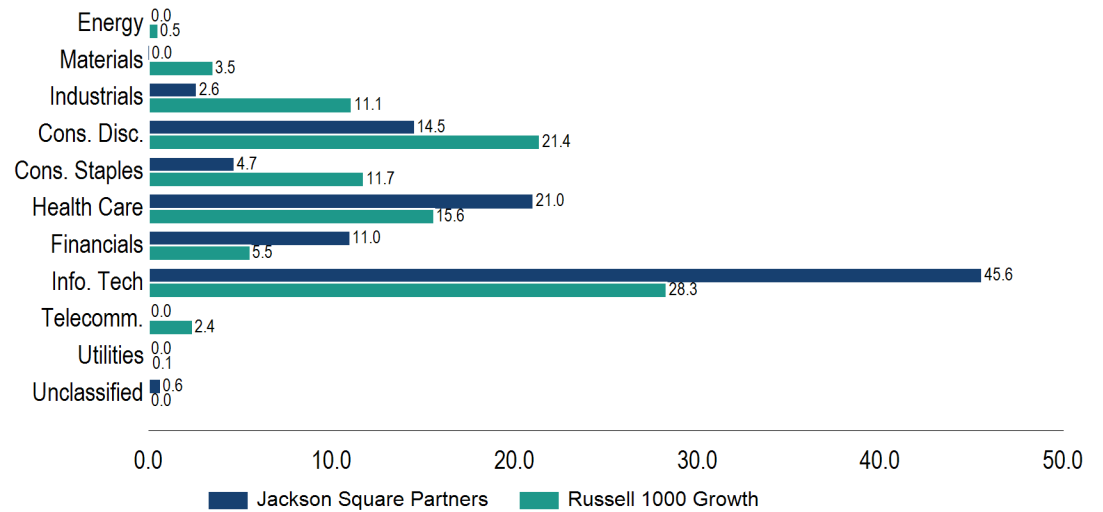
Period Ending: March 31, 2016

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 Prislín.

Characteristics

	Portfolio	Russell 1000 Growth
Number of Holdings	31	635
Weighted Avg. Market Cap. (\$B)	96.17	125.80
Median Market Cap. (\$B)	28.59	8.50
Price To Earnings	34.41	25.33
Price To Book	6.24	6.65
Price To Sales	6.73	3.66
Return on Equity (%)	19.51	24.23
Yield (%)	1.04	1.61
Beta	1.30	1.00

Sector Allocation (%) vs Russell 1000 Growth



Largest Holdings

	End Weight	Return
VISA 'A'	5.74	-1.19
QUALCOMM	5.59	3.28
ALLERGAN	5.24	-14.23
CELGENE	4.98	-16.42
MICROSOFT	4.84	0.25
WALGREENS BOOTS ALLIANCE	4.68	-0.61
CROWN CASTLE INTL.	4.63	1.10
PAYPAL HOLDINGS	4.58	6.63
LIBERTY INTACT.QVC GROUP 'A'	4.39	-7.58
MASTERCARD	4.33	-2.74

Top Contributors

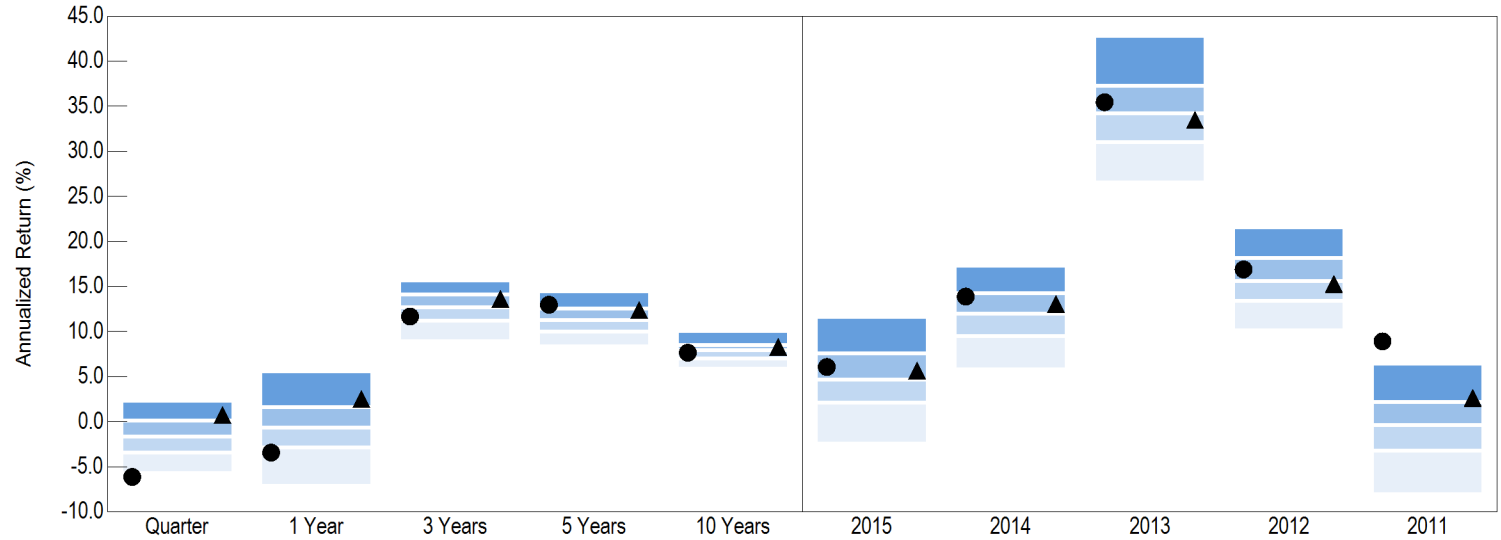
	Avg Wgt	Return	Contribution
EQUINIX	4.21	10.00	0.42
FACEBOOK CLASS A	3.14	9.02	0.28
PAYPAL HOLDINGS	3.81	6.63	0.25
NIELSEN	1.61	13.63	0.22
QUALCOMM	5.14	3.28	0.17
INTUIT	1.99	8.12	0.16
DISCOVERY COMMS.'C'	1.24	7.06	0.09
DISCOVERY COMMS.'A'	0.70	7.31	0.05
CROWN CASTLE INTL.	4.50	1.10	0.05
BAIDU 'A' ADR 10:1	2.17	0.97	0.02

Bottom Contributors

	Avg Wgt	Return	Contribution
VALEANT PHARMS. (NYS) INTL.	3.01	-74.13	-2.23
CELGENE	5.29	-16.42	-0.87
ALLERGAN	5.59	-14.23	-0.79
TRIPADVISOR 'A'	2.64	-21.99	-0.58
BIOGEN	3.43	-15.03	-0.52
EBAY	3.14	-13.17	-0.41
LIBERTY INTACT.QVC GROUP 'A'	4.45	-7.58	-0.34
INTERCONTINENTAL EX.	3.39	-7.91	-0.27
NOVO NORDISK 'B' ADR 1:1	3.33	-5.06	-0.17
L BRANDS	3.04	-5.45	-0.17

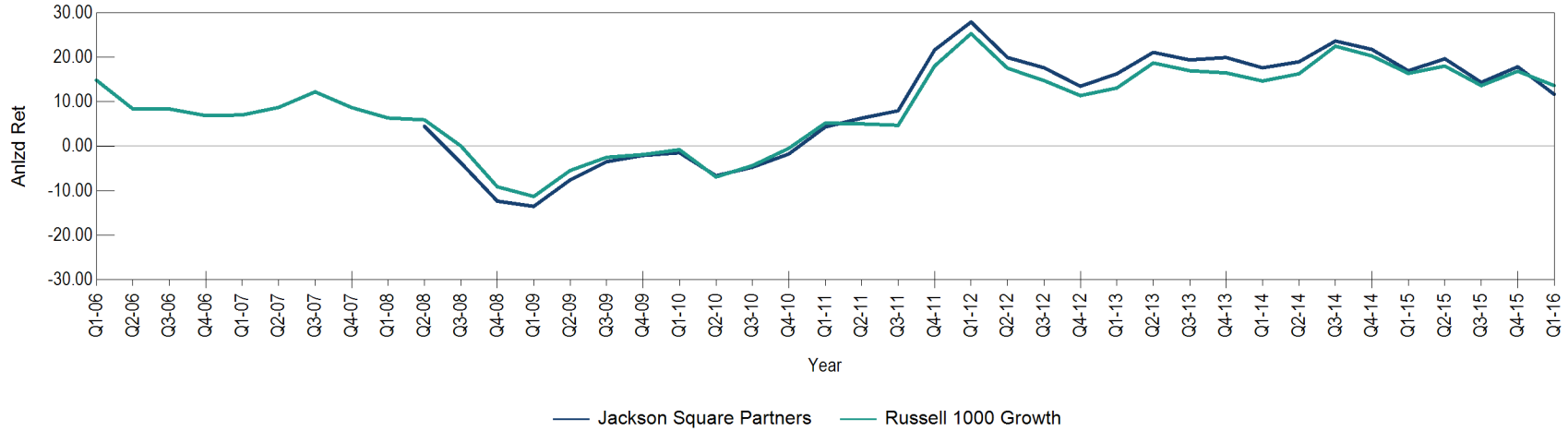
Unclassified sector allocation includes cash allocations.

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

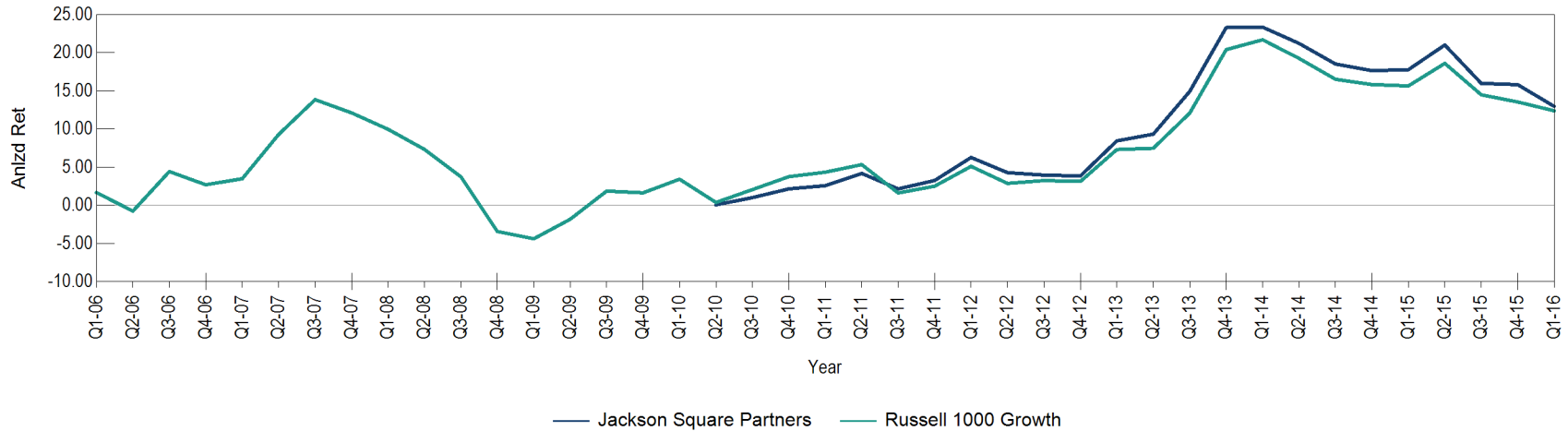


	Return (Rank)									
	Quarter	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011
5th Percentile	2.3	5.5	15.7	14.4	10.0	11.6	17.3	42.8	21.6	6.4
25th Percentile	0.2	1.6	14.1	12.6	8.6	7.6	14.3	37.3	18.2	2.2
Median	-1.6	-0.6	12.7	11.3	8.0	4.7	12.0	34.3	15.7	-0.3
75th Percentile	-3.4	-2.8	11.2	10.0	7.1	2.1	9.5	31.0	13.4	-3.2
95th Percentile	-5.6	-7.1	8.9	8.4	5.9	-2.4	5.8	26.6	10.2	-8.0
# of Portfolios	267	267	261	247	210	270	291	274	274	294
● Jackson Square Partners	-6.1 (97)	-3.4 (81)	11.7 (67)	13.0 (18)	7.6 (56)	6.1 (37)	13.9 (31)	35.4 (40)	16.9 (37)	8.9 (3)
▲ Russell 1000 Growth	0.7 (19)	2.5 (17)	13.6 (34)	12.4 (30)	8.3 (40)	5.7 (42)	13.0 (38)	33.5 (56)	15.3 (55)	2.6 (22)

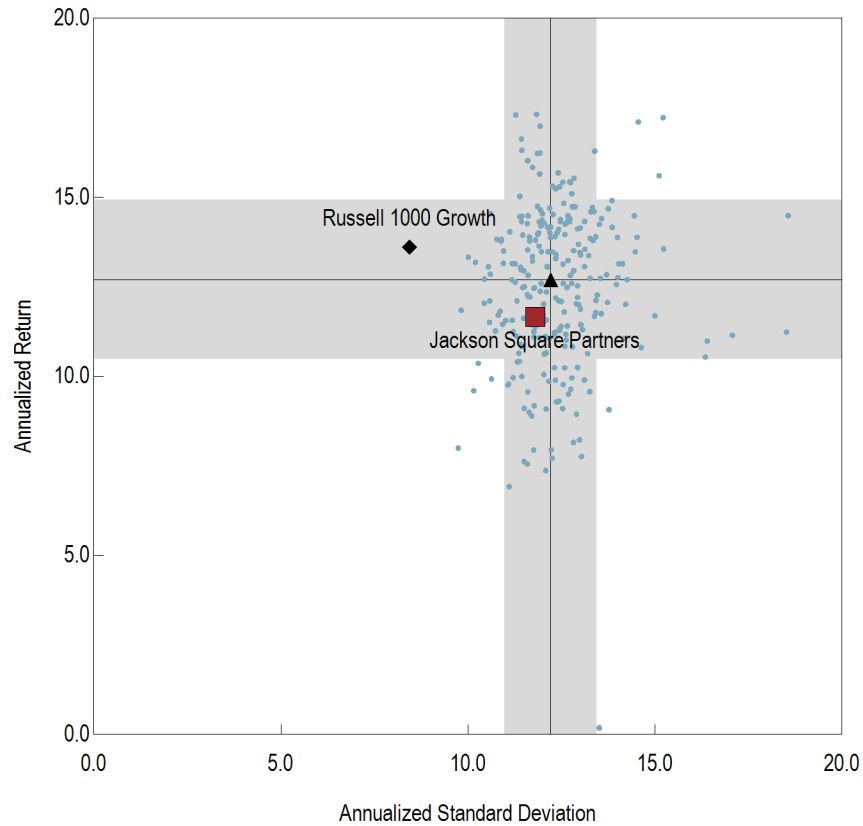
Rolling 3 Year Annualized Return (%)



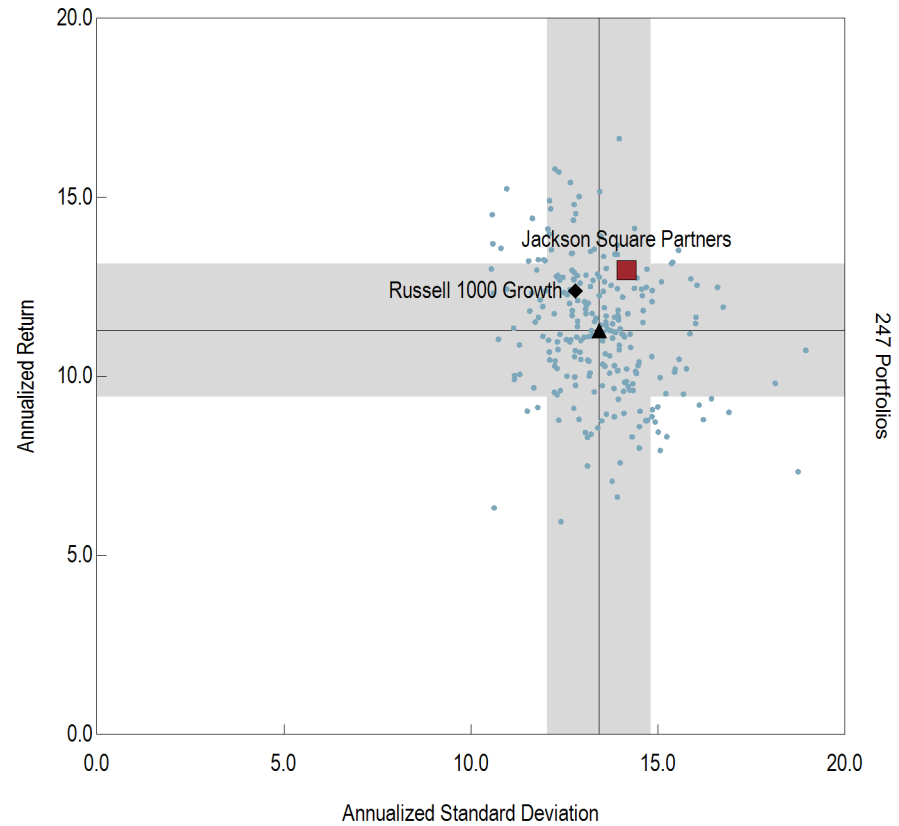
Rolling 5 Year Annualized Return (%)



3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Jackson Square Partners	11.7%	11.8%	1.0
Russell 1000 Growth	13.6%	8.4%	1.6
eA US Large Cap Growth Equity Gross Median	12.7%	12.2%	1.0

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Jackson Square Partners	13.0%	14.2%	0.9
Russell 1000 Growth	12.4%	12.8%	1.0
eA US Large Cap Growth Equity Gross Median	11.3%	13.4%	0.8

Robeco Boston Partners Manager Portfolio Overview

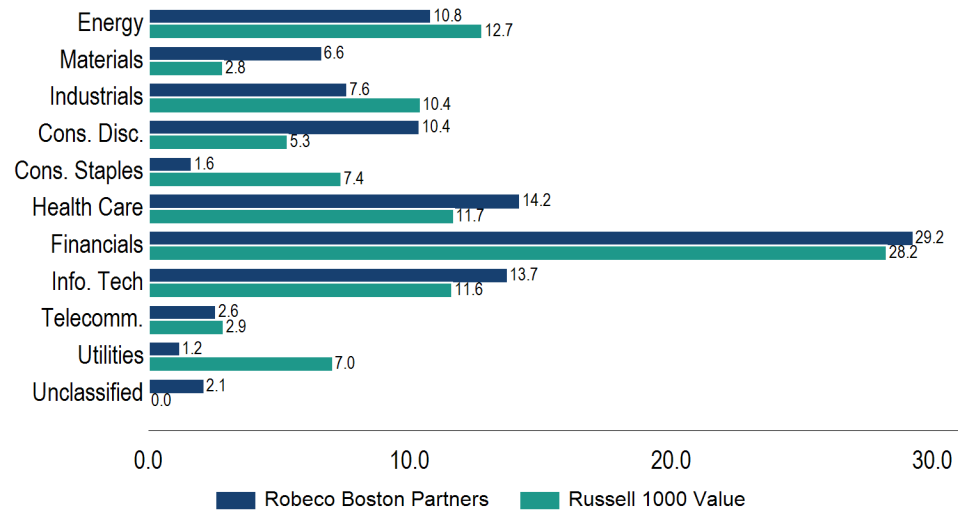
Period Ending: March 31, 2016

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	91	684
Weighted Avg. Market Cap. (\$B)	100.92	105.28
Median Market Cap. (\$B)	29.65	6.91
Price To Earnings	14.57	20.00
Price To Book	2.96	2.26
Price To Sales	2.18	2.54
Return on Equity (%)	15.87	11.46
Yield (%)	2.00	2.59
Beta	1.02	1.00

Sector Allocation (%) vs Russell 1000 Value



Largest Holdings

	End Weight	Return
BERKSHIRE HATHAWAY 'B'	4.90	7.45
JP MORGAN CHASE & CO.	4.07	-9.69
JOHNSON & JOHNSON	3.91	6.09
WELLS FARGO & CO	3.00	-10.34
MICROSOFT	2.94	0.25
CAPITAL ONE FINL.	2.83	-3.34
VERIZON COMMUNICATIONS	2.56	18.46
OCCIDENTAL PTL.	2.37	2.40
CITIGROUP	2.35	-19.22
PHILLIPS 66	2.31	6.67

Top Contributors

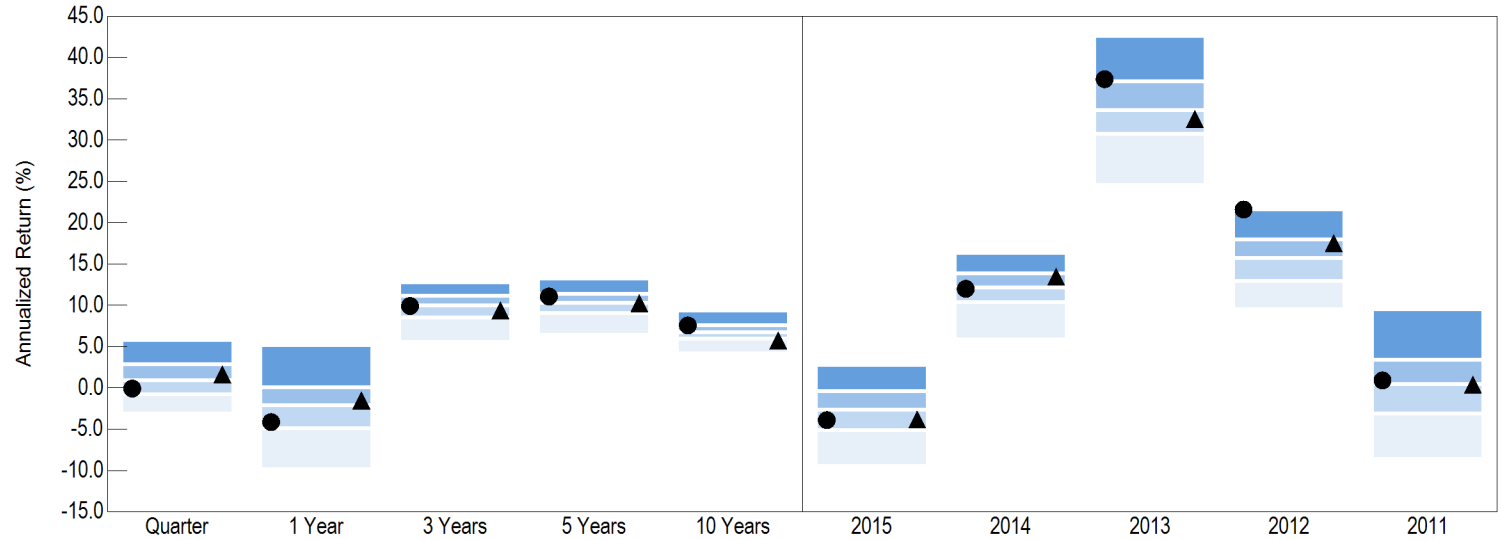
	Avg Wgt	Return	Contribution
BARRICK GOLD (NYS)	0.65	84.28	0.55
CANADIAN NATURAL RES.	1.44	25.64	0.37
VERIZON COMMUNICATIONS	2.00	18.46	0.37
CBS 'B'	1.83	17.23	0.32
TYSON FOODS 'A'	1.02	25.28	0.26
AES	1.02	24.73	0.25
BERKSHIRE HATHAWAY 'B'	3.27	7.45	0.24
HEWLETT PACKARD ENTER.	1.14	17.05	0.19
LIBERTY BROADBAND SR.C	1.63	11.74	0.19

Bottom Contributors

	Avg Wgt	Return	Contribution
CITIGROUP	1.90	-19.22	-0.37
JP MORGAN CHASE & CO.	3.03	-9.69	-0.29
WELLS FARGO & CO	2.56	-10.34	-0.27
EXPRESS SCRIPTS HOLDING	1.14	-21.42	-0.24
MCKESSON	1.15	-20.13	-0.23
WESTROCK	1.52	-13.42	-0.20
FIFTH THIRD BANCORP	1.20	-16.32	-0.20
EBAY	1.26	-13.17	-0.17
PFIZER	2.05	-7.25	-0.15
ACTIVISION BLIZZARD	1.16	-11.87	-0.14

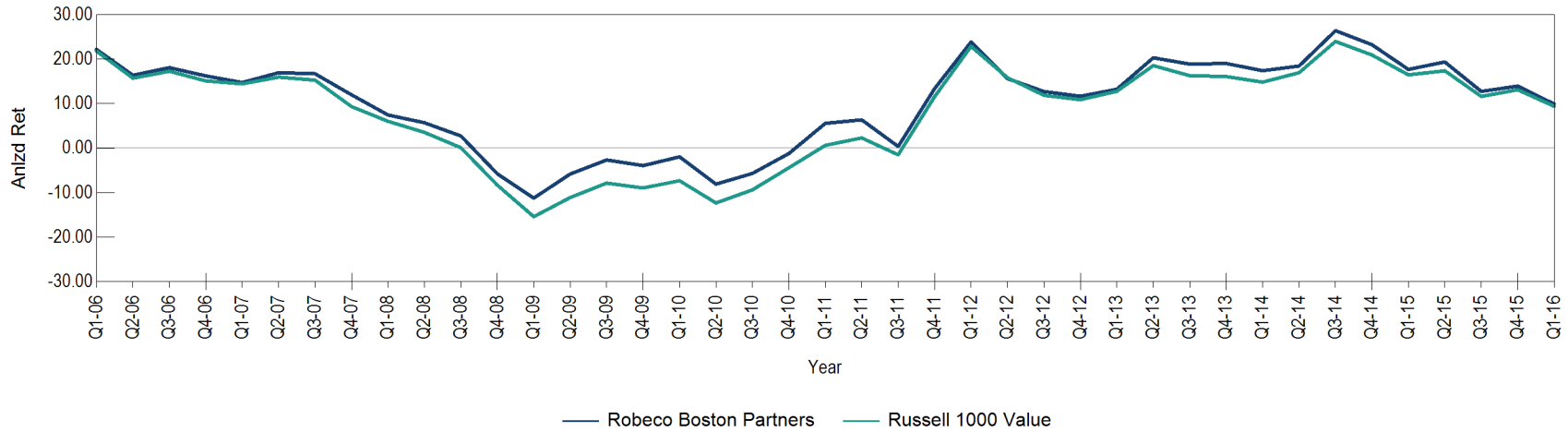
Unclassified sector allocation includes cash allocations.

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

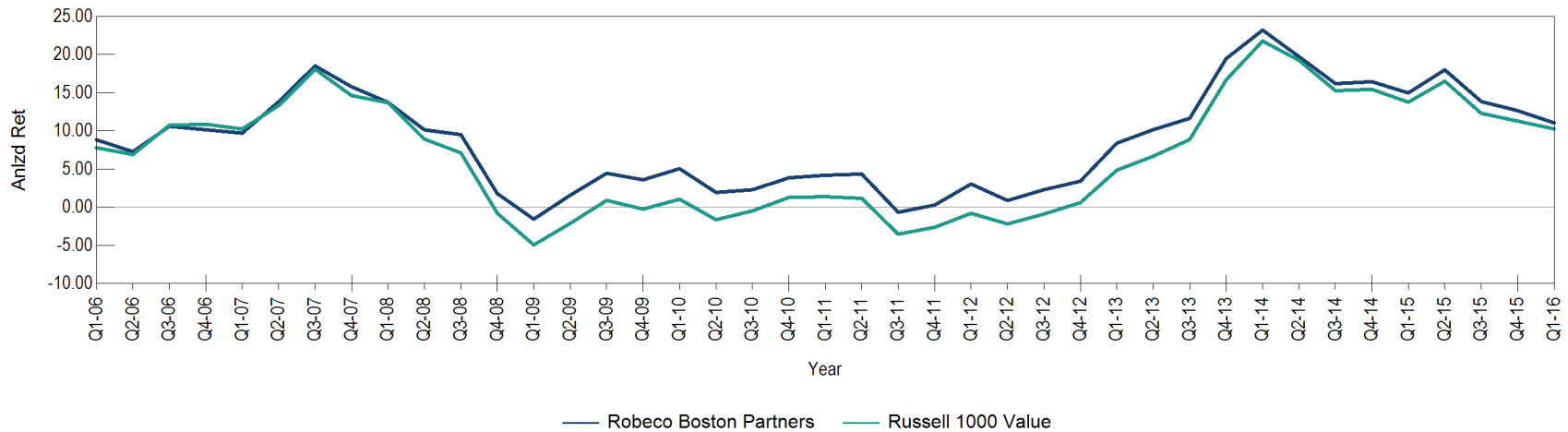


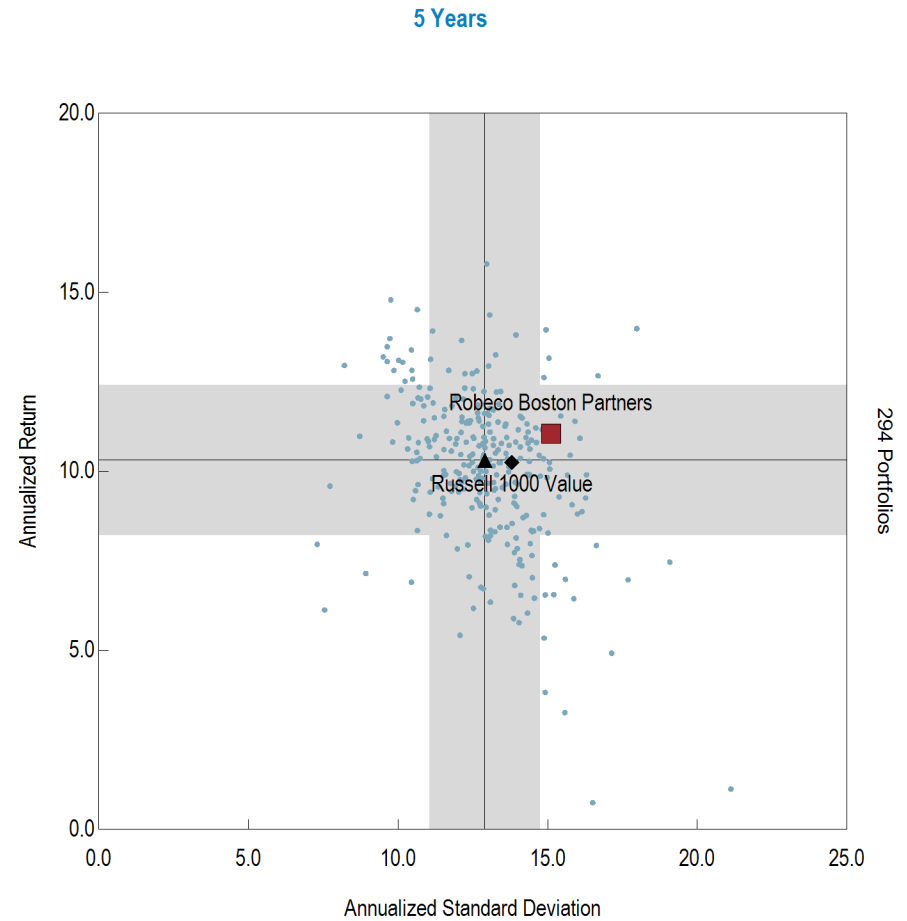
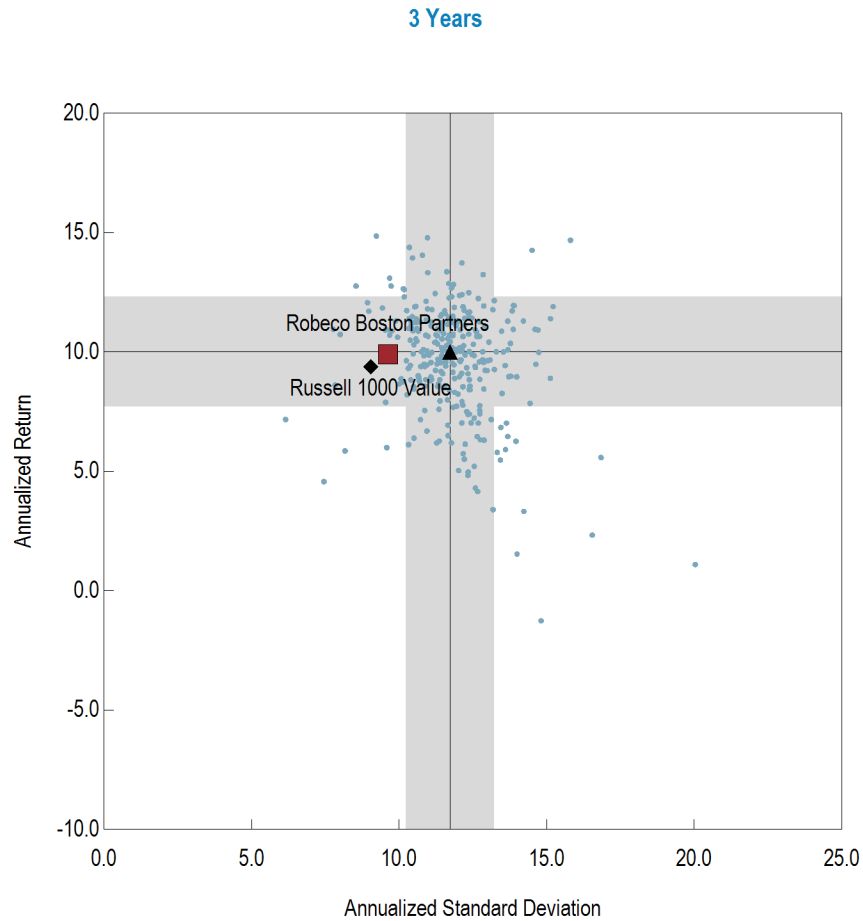
	Return (Rank)										
	Quarter	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011	
5th Percentile	5.8	5.1	12.7	13.2	9.3	2.8	16.3	42.5	21.5	9.5	
25th Percentile	2.9	0.1	11.2	11.4	7.6	-0.4	13.9	37.2	18.0	3.4	
Median	0.9	-2.0	10.0	10.3	6.7	-2.6	12.2	33.6	15.7	0.5	
75th Percentile	-0.7	-4.9	8.6	9.1	6.0	-5.1	10.4	30.8	13.0	-3.1	
95th Percentile	-3.1	-9.8	5.6	6.5	4.2	-9.4	5.9	24.6	9.6	-8.6	
# of Portfolios	317	317	309	294	245	312	307	310	303	310	
● Robeco Boston Partners	-0.1 (68)	-4.1 (70)	9.9 (53)	11.0 (32)	7.6 (27)	-3.9 (65)	12.0 (55)	37.4 (24)	21.6 (5)	0.9 (46)	
▲ Russell 1000 Value	1.6 (41)	-1.5 (43)	9.4 (64)	10.2 (52)	5.7 (80)	-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	9.9%	9.6%	1.0
Russell 1000 Value	9.4%	9.0%	1.0
eA US Large Cap Value Equity Gross Median	10.0%	11.7%	0.8

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Robeco Boston Partners	11.0%	15.1%	0.7
Russell 1000 Value	10.2%	13.8%	0.7
eA US Large Cap Value Equity Gross Median	10.3%	12.9%	0.8

Emerald Advisers Manager Portfolio Overview

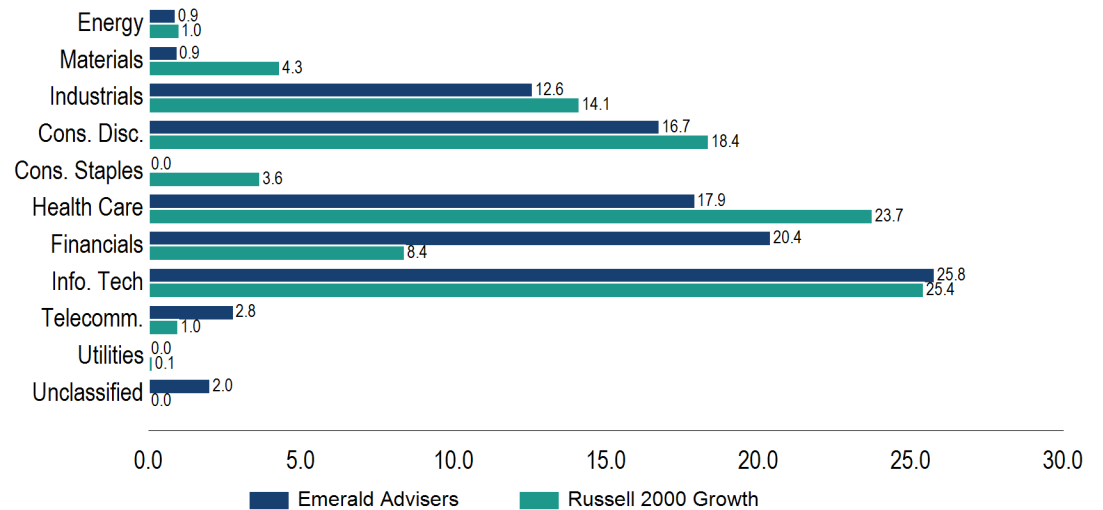
Period Ending: March 31, 2016

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	114	1,181
Weighted Avg. Market Cap. (\$B)	1.90	2.02
Median Market Cap. (\$B)	1.17	0.69
Price To Earnings	26.54	27.42
Price To Book	4.14	4.21
Price To Sales	3.77	3.18
Return on Equity (%)	15.66	16.59
Yield (%)	0.48	0.58
Beta	1.02	1.00

Sector Allocation (%) vs Russell 2000 Growth



Largest Holdings

	End Weight	Return
MICROSTRATEGY	2.17	0.24
BANK OF THE OZARKS	2.09	-14.86
WELLCARE HEALTH PLANS	1.87	18.59
LENDINGTREE	1.83	9.52
TREX	1.82	26.00
EPAM SYSTEMS	1.80	-5.02
VEEVA SYSTEMS CL.A	1.77	-13.21
APOGEE ENTERPRISES	1.63	1.19
OPUS BANK	1.60	-7.60
MICROSEMI	1.51	17.55

Top Contributors

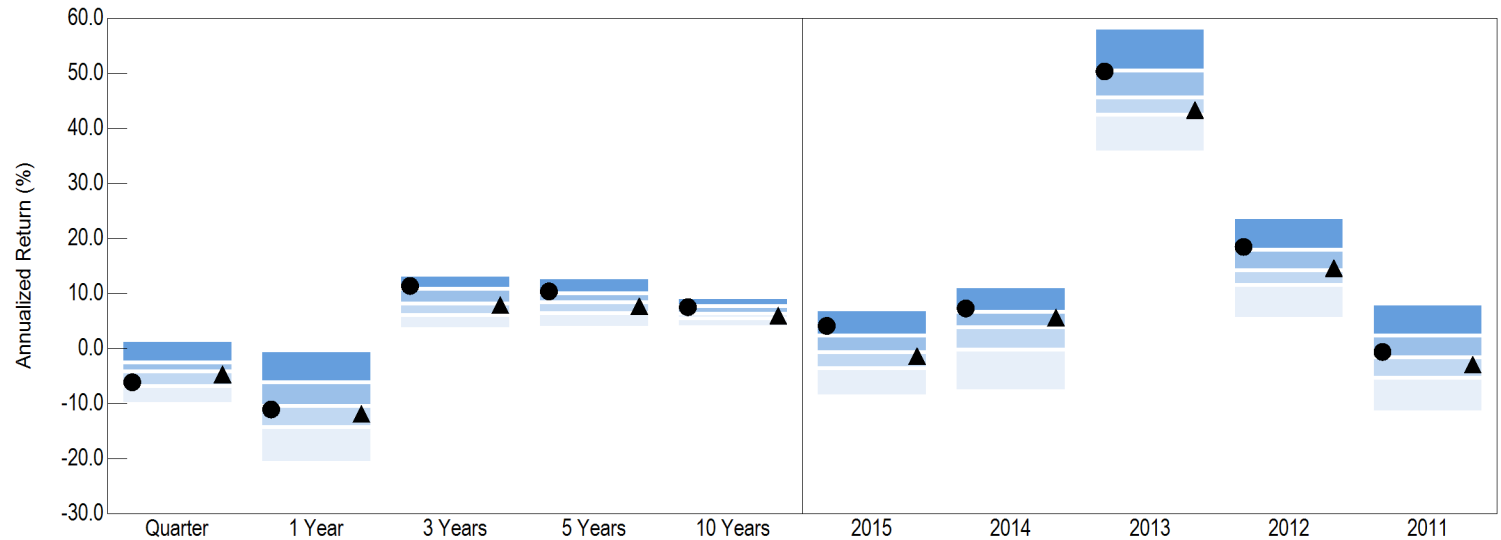
	Avg Wgt	Return	Contribution
BURLINGTON STORES	1.42	31.10	0.44
TREX	1.67	26.00	0.44
SUPER MICRO COMPUTER	0.97	39.05	0.38
FIVE BELOW	1.29	28.78	0.37
WELLCARE HEALTH PLANS	1.96	18.59	0.37
ALARMCOM HOLDINGS	0.81	42.09	0.34
SPIRIT AIRLINES	1.23	20.40	0.25
MICROSEMI	1.22	17.55	0.21
GIGAMON	1.20	16.75	0.20
CANTEL MED.	1.18	14.96	0.18

Bottom Contributors

	Avg Wgt	Return	Contribution
RELYPSA	0.74	-52.19	-0.39
PORTOLA PHARMACEUTICALS	0.60	-60.35	-0.36
VONAGE HOLDINGS	1.71	-20.38	-0.35
FIRST NBC BANK HOLDING	0.78	-44.93	-0.35
ADAMAS PHARMACEUTICALS	0.70	-48.94	-0.35
BANK OF THE OZARKS	2.15	-14.86	-0.32
NEUROCRINE BIOSCIENCES	1.03	-30.09	-0.31
IMPERVA	1.47	-20.23	-0.30
KFORCE	1.31	-22.03	-0.29

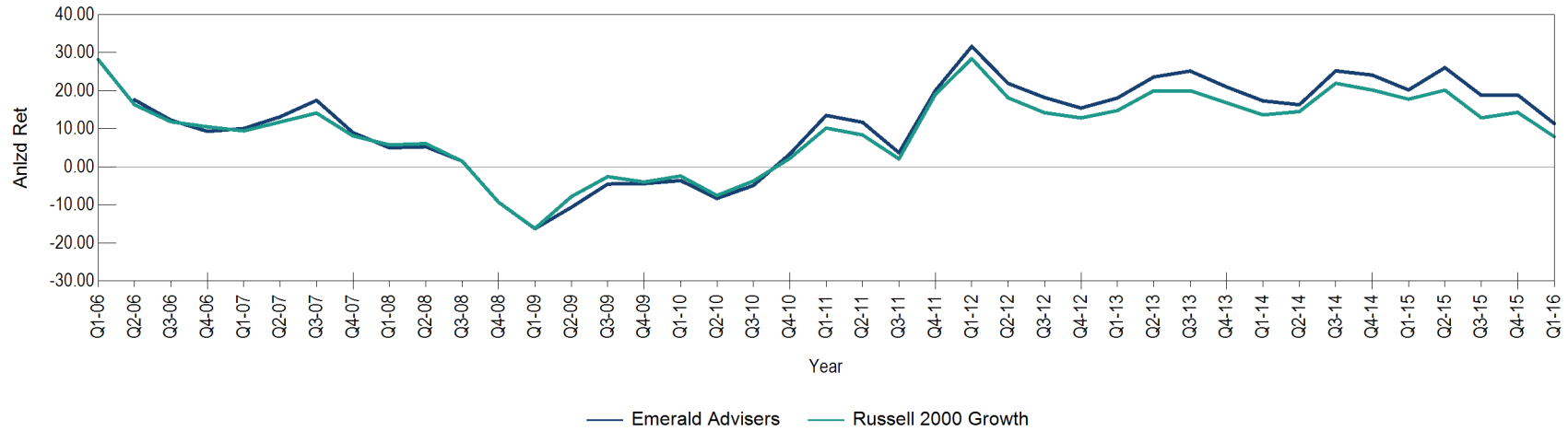
Unclassified sector allocation includes cash allocations.

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

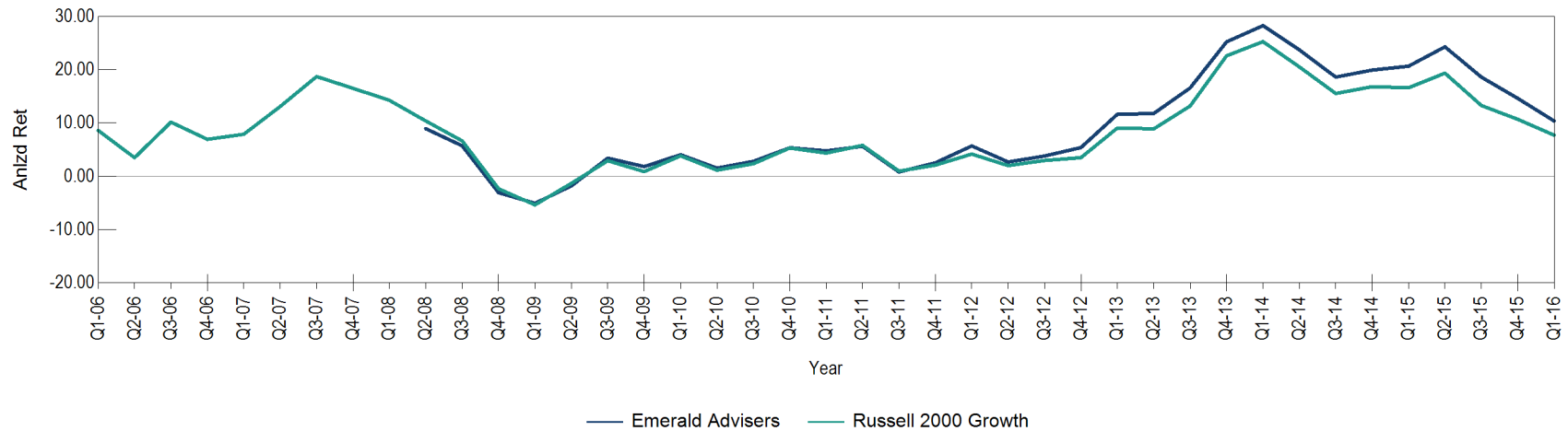


	Return (Rank)									
	Quarter	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011
5th Percentile	1.5	-0.3	13.4	12.9	9.3	7.1	11.3	58.2	23.8	8.1
25th Percentile	-2.4	-6.0	10.9	10.1	7.8	2.5	6.7	50.6	18.0	2.4
Median	-4.1	-10.3	8.2	8.4	6.4	-0.6	3.9	45.6	14.3	-1.5
75th Percentile	-6.7	-14.2	6.2	6.6	5.5	-3.5	-0.1	42.6	11.6	-5.2
95th Percentile	-10.0	-20.7	3.6	3.8	3.9	-8.7	-7.6	35.6	5.4	-11.5
# of Portfolios	153	153	149	144	119	154	161	160	162	166
● Emerald Advisers	-6.1 (69)	-11.1 (55)	11.4 (19)	10.4 (24)	7.5 (29)	4.1 (19)	7.3 (21)	50.3 (27)	18.5 (22)	-0.6 (42)
▲ Russell 2000 Growth	-4.7 (55)	-11.8 (60)	7.9 (55)	7.7 (62)	6.0 (60)	-1.4 (59)	5.6 (32)	43.3 (70)	14.6 (48)	-2.9 (60)

Rolling 3 Year Annualized Return (%)



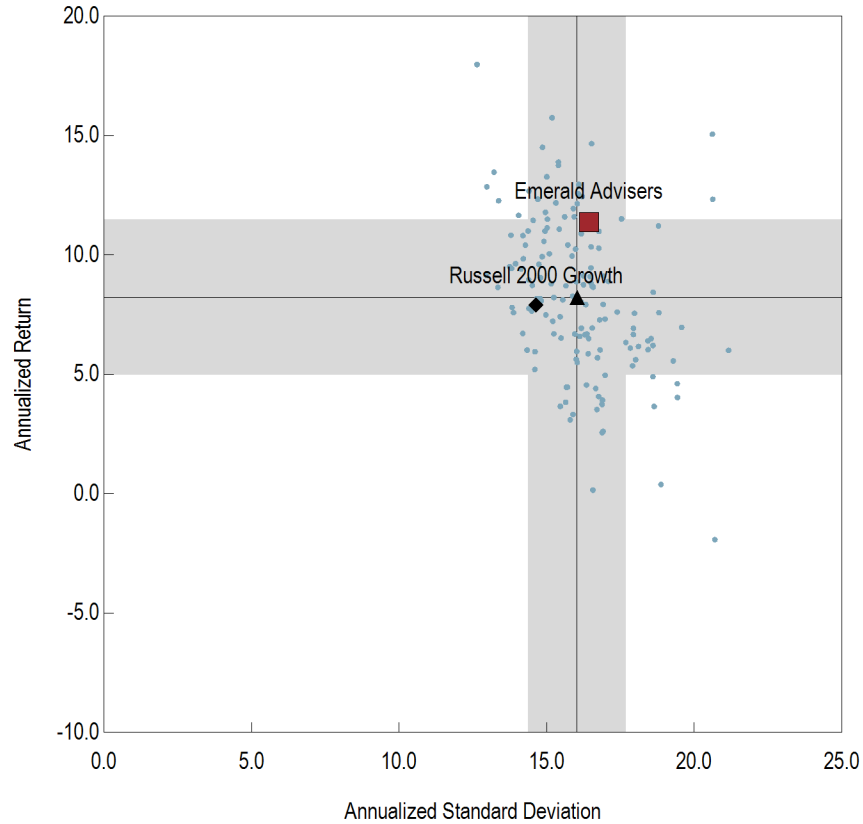
Rolling 5 Year Annualized Return (%)



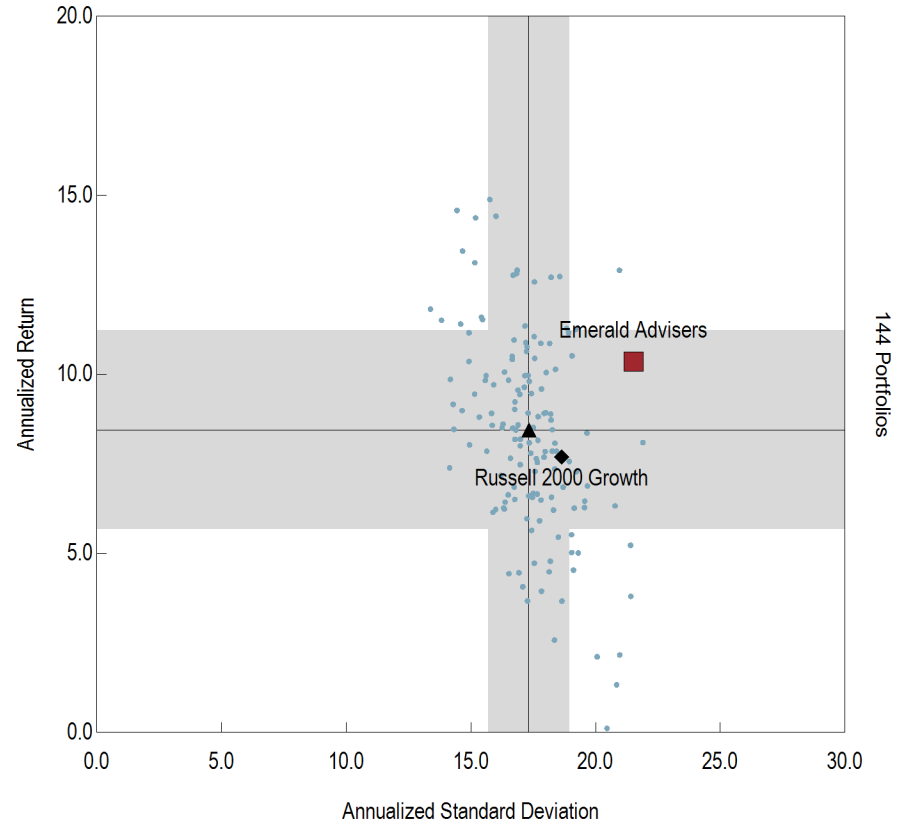
Emerald Advisers
 Risk vs. Return 3 & 5 Year (Gross of Fees)

Period Ending: March 31, 2016

3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Emerald Advisers	11.4%	16.4%	0.7
Russell 2000 Growth	7.9%	14.6%	0.5
eA US Small Cap Growth Equity Gross Median	8.2%	16.0%	0.5

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Emerald Advisers	10.4%	21.5%	0.5
Russell 2000 Growth	7.7%	18.6%	0.4
eA US Small Cap Growth Equity Gross Median	8.4%	17.3%	0.5

Ceredex Manager Portfolio Overview

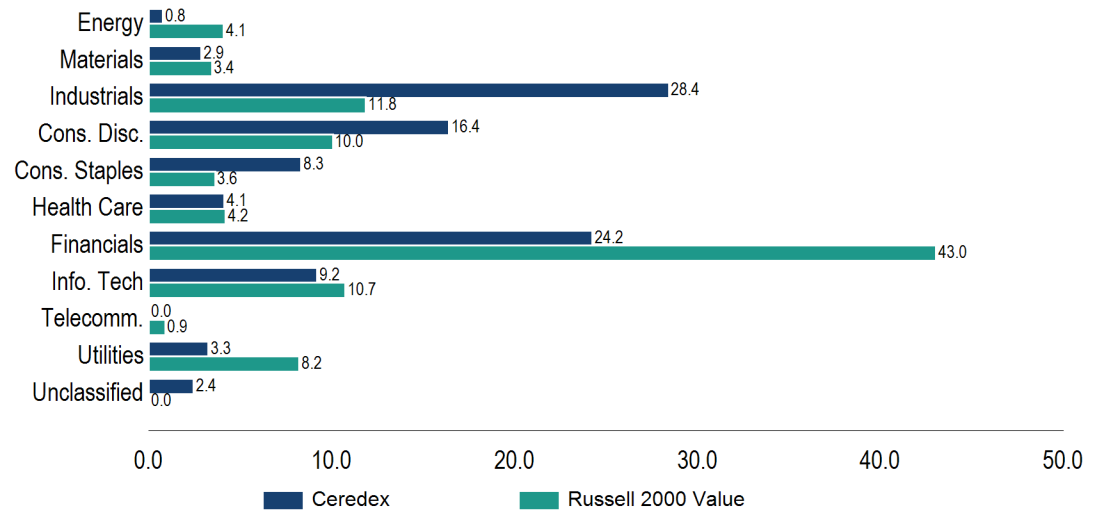
Period Ending: March 31, 2016

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	1,325
Weighted Avg. Market Cap. (\$B)	2.13	1.74
Median Market Cap. (\$B)	1.60	0.58
Price To Earnings	27.69	20.37
Price To Book	2.95	1.64
Price To Sales	1.84	2.50
Return on Equity (%)	12.03	7.13
Yield (%)	2.41	2.01
Beta	0.98	1.00

Sector Allocation (%) vs Russell 2000 Value



Largest Holdings

	End Weight	Return
FAIR ISAAC	4.94	12.67
PROGRESSIVE WASTE (NYS) SLTN.	3.51	32.31
ENERGIZER HOLDINGS	3.42	19.73
HANOVER INSURANCE GROUP	3.40	11.52
AMC ENTERTAINMENT HDG. CL.A	2.88	17.53
HILL-ROM HOLDINGS	2.82	5.04
HSN	2.67	3.90
MEDICAL PROPS.TRUST	2.65	14.83
B & G FOODS	2.43	0.60
HERMAN MILLER	2.35	8.25

Top Contributors

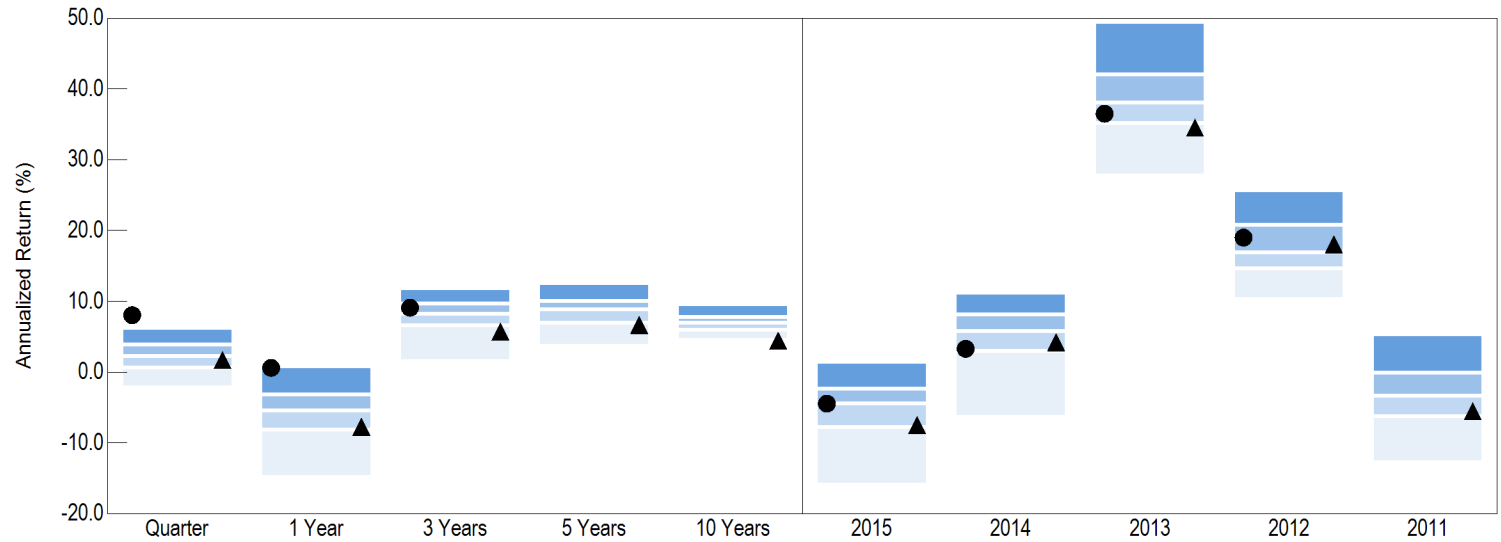
	Avg Wgt	Return	Contribution
PROGRESSIVE WASTE (NYS) SLTN.	2.63	32.31	0.85
FAIR ISAAC	4.75	12.67	0.60
ENERGIZER HOLDINGS	3.02	19.73	0.60
HECLA MINING	1.21	47.22	0.57
AMC ENTERTAINMENT HDG. CL.A	2.60	17.53	0.46
HANOVER INSURANCE GROUP	3.40	11.52	0.39
COHEN & STEERS	1.36	28.67	0.39
MEDICAL PROPS.TRUST	2.51	14.83	0.37
PROGRESSIVE WASTE SLTN.	1.02	33.58	0.34

Bottom Contributors

	Avg Wgt	Return	Contribution
PLANTRONICS	2.40	-17.02	-0.41
BRISTOW GROUP	0.93	-26.60	-0.25
SONIC AUTOMOTIVE 'A'	1.09	-18.60	-0.20
ADVANCED DRAINAGE SYS.	1.45	-11.13	-0.16
PRIMERICA	2.17	-5.34	-0.12
AAR	0.85	-11.17	-0.09
EVERCORE PARTNERS 'A'	2.02	-3.63	-0.07
KFORCE	0.26	-22.03	-0.06
DAKTRONICS	0.69	-8.18	-0.06
HORACE MANN EDUCATORS	1.35	-3.70	-0.05

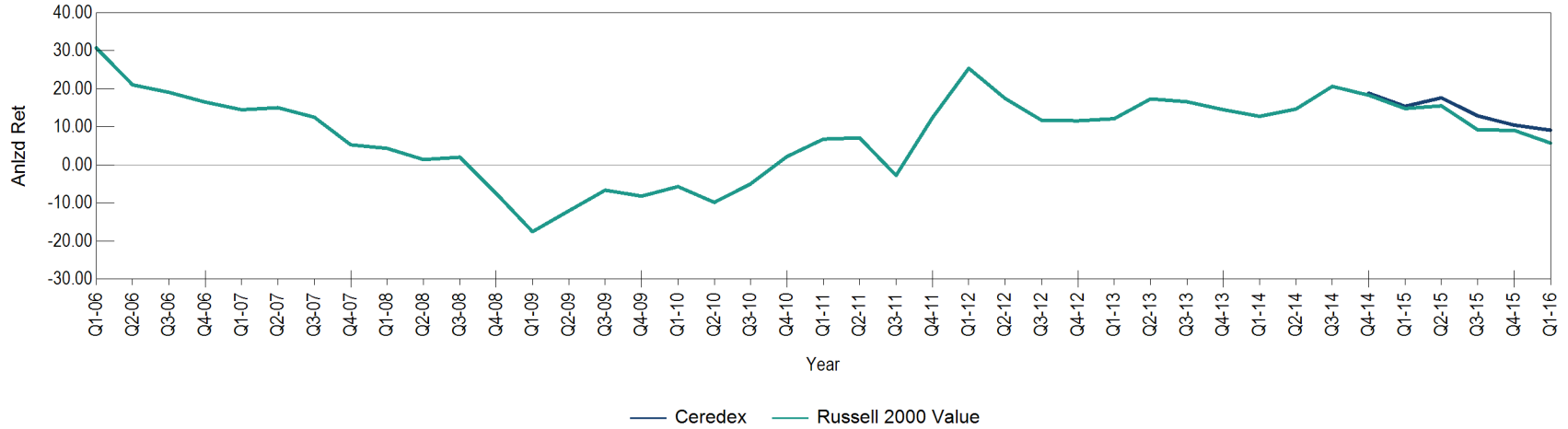
Unclassified sector allocation includes cash allocations.

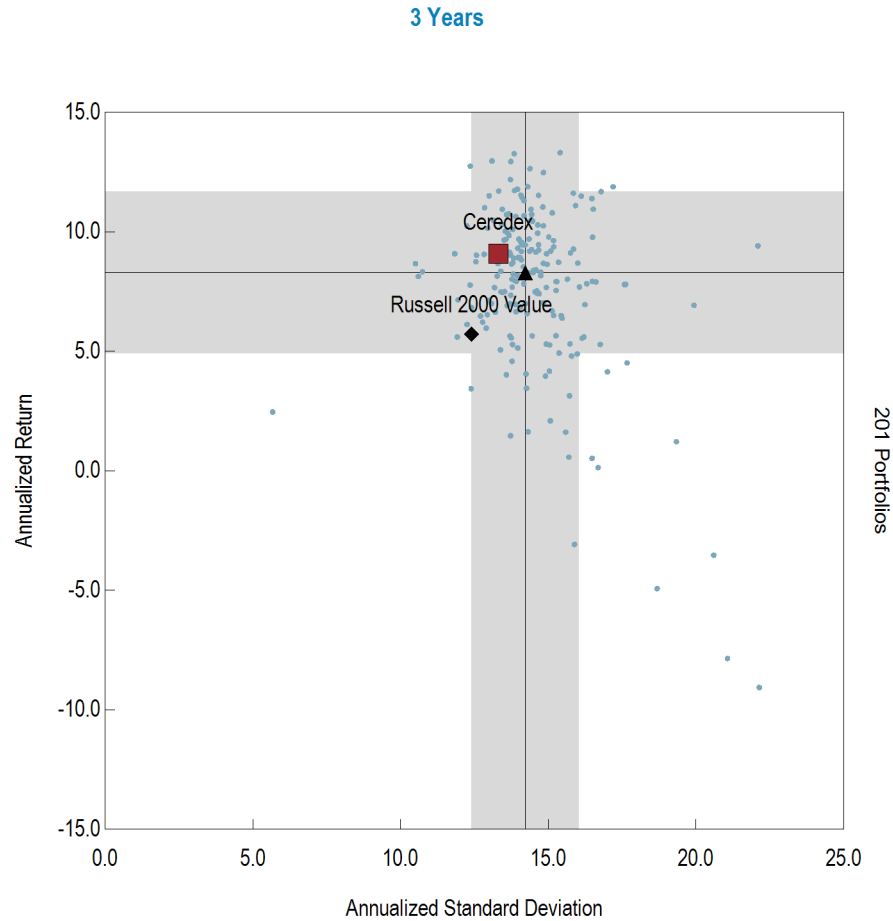
Ceredex vs. eA US Small Cap Value Equity Gross Universe



	Return (Rank)													
	Quarter	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011				
5th Percentile	6.2	0.8	11.8	12.5	9.5	1.5	11.2	49.4	25.7	5.3				
25th Percentile	4.0	-3.1	9.7	10.1	7.8	-2.2	8.2	42.1	20.8	0.0				
Median	2.4	-5.3	8.3	8.9	7.0	-4.3	5.8	38.1	16.9	-3.3				
75th Percentile	0.7	-8.1	6.6	7.0	6.0	-7.7	3.1	35.2	14.7	-6.2				
95th Percentile	-2.1	-14.7	1.6	3.7	4.6	-15.8	-6.3	27.8	10.3	-12.6				
# of Portfolios	205	205	201	194	148	212	206	199	187	177				
● Ceredex	8.0 (3)	0.6 (7)	9.1 (37)	-- (--)	-- (--)	-4.4 (52)	3.3 (74)	36.5 (66)	19.0 (38)	-- (--)				
▲ Russell 2000 Value	1.7 (62)	-7.7 (73)	5.7 (80)	6.7 (80)	4.4 (96)	-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	9.1%	13.3%	0.7
Russell 2000 Value	5.7%	12.4%	0.5
eA US Small Cap Value Equity Gross Median	8.3%	14.2%	0.6

International Equity Managers

Pyrford Manager Portfolio Overview

Period Ending: March 31, 2016

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.

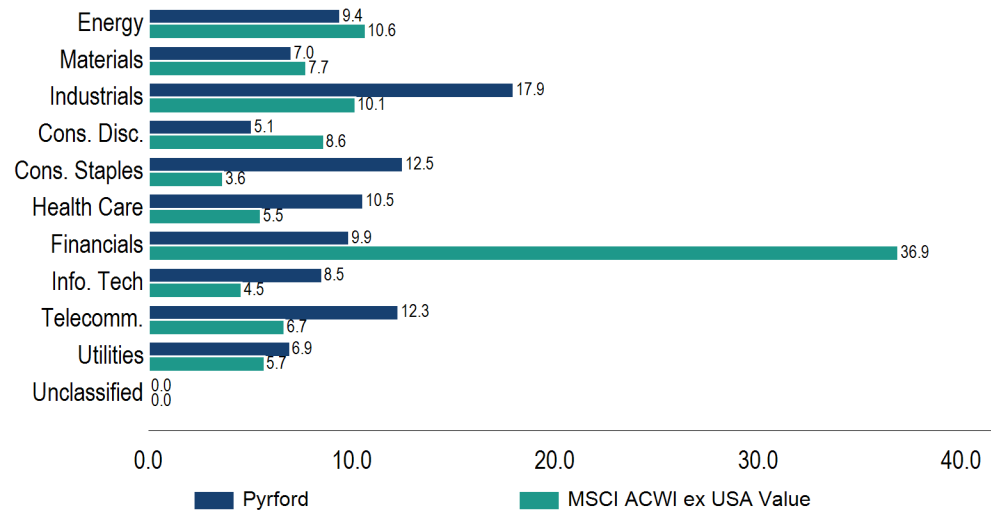
Characteristics

	MSCI ACWI Portfolio	MSCI ACWI ex USA Value
Number of Holdings	75	1,007
Weighted Avg. Market Cap. (\$B)	49.88	45.24
Median Market Cap. (\$B)	19.15	6.23
Price To Earnings	21.68	12.79
Price To Book	3.41	1.41
Price To Sales	2.20	1.58
Return on Equity (%)	16.82	10.48
Yield (%)	3.79	4.22
Beta		1.00

Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
Totals		
Developed	91.9%	77.8%
Emerging*	8.1%	22.2%
Top 10 Largest Countries		
United Kingdom	14.3%	15.9%
Switzerland	13.0%	4.5%
Australia	10.1%	4.8%
Japan	8.9%	15.8%
Germany	7.5%	6.2%
France	7.1%	8.4%
Hong Kong	6.8%	2.7%
Netherlands	5.8%	1.1%
Singapore	4.9%	1.0%
Taiwan*	4.1%	2.6%
Total-Top 10 Largest Countries	82.5%	63.0%

Sector Allocation (%) vs MSCI ACWI ex USA Value



Top Contributors

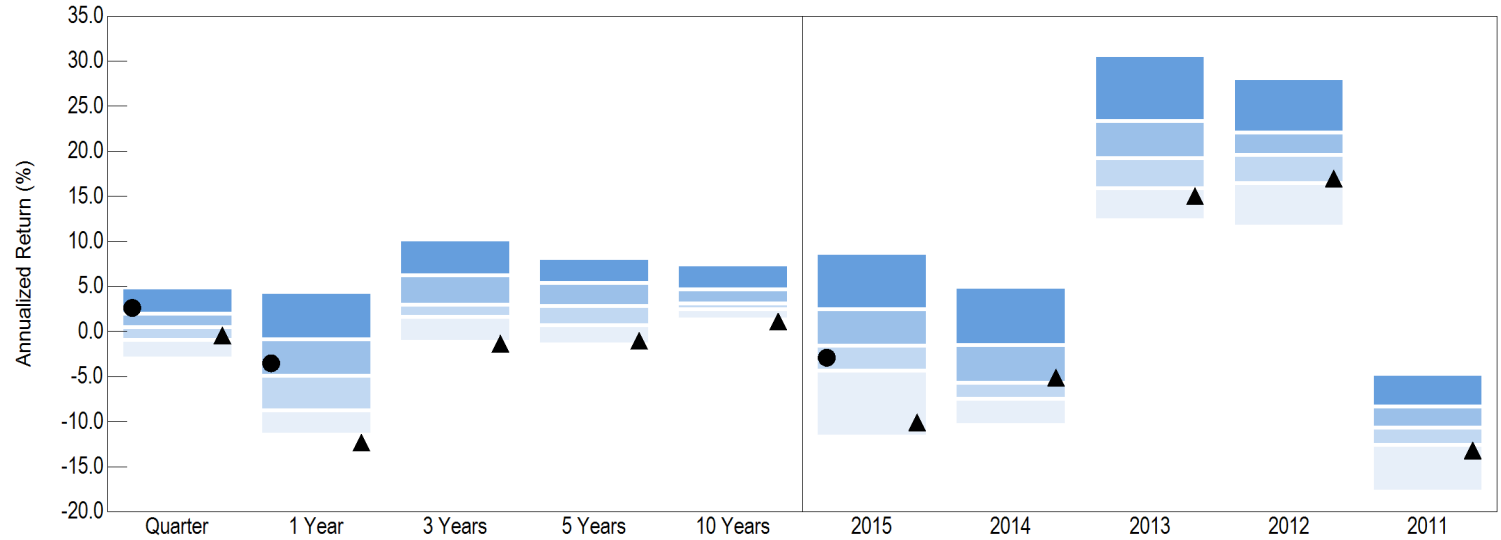
	Avg Wgt	Return	Contribution
NEWCREST MINING	1.05	38.25	0.40
BRAMBLES	2.41	12.05	0.29
MALAYAN BANKING	1.47	18.17	0.27
SUMITOMO RUBBER INDS.	1.42	17.72	0.25
VOPAK	1.55	15.73	0.24
COLRUYT	1.75	13.20	0.23
GEA GROUP	1.11	20.30	0.23
VTECH HOLDINGS	1.49	14.53	0.22
CHUNGHWA TELECOM	1.54	12.77	0.20
JAPAN TOBACCO	1.59	12.27	0.20

Bottom Contributors

	Avg Wgt	Return	Contribution
NOVARTIS 'R'	2.79	-12.89	-0.36
ROCHE HOLDING	3.59	-7.60	-0.27
TEVA PHARMACEUTICAL	1.16	-17.01	-0.20
COMPUTERSHARE	1.75	-9.46	-0.17
ZURICH INSURANCE GROUP	1.45	-9.66	-0.14
FUCHS PETROLUB PREF.	2.02	-5.93	-0.12
SANOFI	2.14	-5.43	-0.12
MERIDA INDUSTRY	0.36	-17.83	-0.06
QBE INSURANCE GROUP	1.10	-5.81	-0.06
ASSA ABLOY 'B'	0.92	-6.40	-0.06

Unclassified sector allocation includes cash allocations.

Pyrford vs. eA ACWI ex-US Value Equity Gross Universe



	Return (Rank)															
5th Percentile	4.9	4.3	10.2	8.2	7.4	8.7	4.9	30.7	28.1	-4.7						
25th Percentile	2.0	-0.8	6.3	5.4	4.7	2.5	-1.4	23.4	22.1	-8.2						
Median	0.5	-4.8	3.0	2.9	3.2	-1.6	-5.7	19.3	19.6	-10.7						
75th Percentile	-0.9	-8.7	1.7	0.7	2.5	-4.3	-7.4	15.9	16.5	-12.6						
95th Percentile	-3.0	-11.4	-1.1	-1.4	1.4	-11.6	-10.4	12.4	11.7	-17.7						
# of Portfolios	45	45	42	36	26	45	37	34	32	26						
● Pyrford	2.6 (19)	-3.5 (47)	-- (--)	-- (--)	-- (--)	-2.9 (59)	-- (--)	-- (--)	-- (--)	-- (--)						
▲ MSCI ACWI ex USA Value	-0.4 (66)	-12.3 (96)	-1.3 (96)	-1.0 (90)	1.1 (97)	-10.1 (93)	-5.1 (49)	15.0 (83)	17.0 (74)	-13.2 (81)						

William Blair Manager Portfolio Overview

Period Ending: March 31, 2016

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.

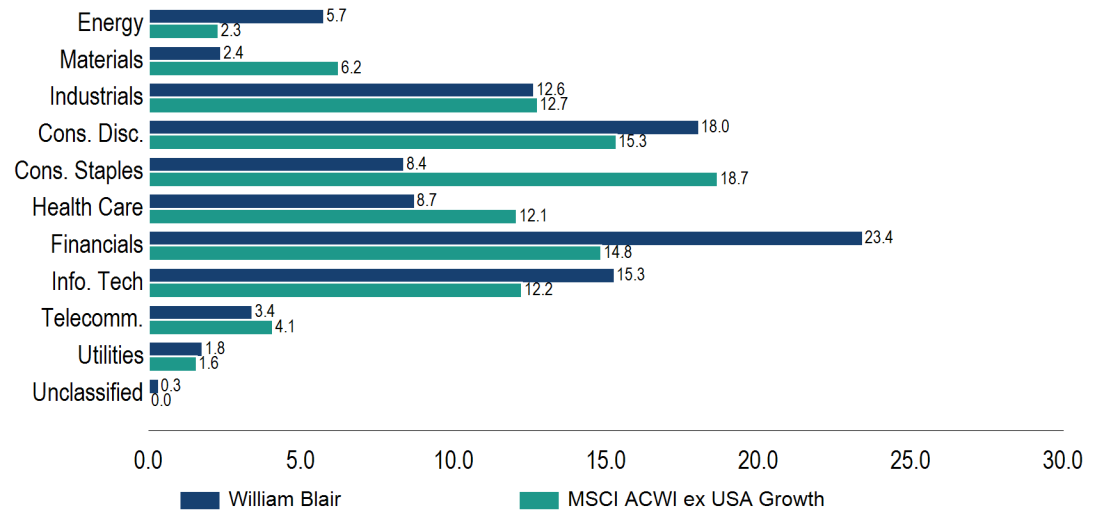
Characteristics

	MSCI ACWI Portfolio	MSCI ACWI ex USA Growth
Number of Holdings	200	1,059
Weighted Avg. Market Cap. (\$B)	36.57	48.12
Median Market Cap. (\$B)	11.68	6.68
Price To Earnings	21.42	21.91
Price To Book	4.57	3.74
Price To Sales	3.16	3.14
Return on Equity (%)	21.25	18.63
Yield (%)	2.43	2.24
Beta	0.96	1.00

Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
Totals		
Developed	87.5%	79.0%
Emerging*	12.5%	21.0%
Top 10 Largest Countries		
United Kingdom	17.6%	11.9%
Japan	14.7%	16.4%
France	11.6%	6.1%
Germany	5.9%	7.0%
Canada	5.8%	6.2%
United States	4.5%	0.0%
Switzerland	4.2%	8.4%
Hong Kong	3.2%	2.3%
Denmark	2.9%	2.5%
Netherlands	2.5%	3.3%
Total-Top 10 Largest Countries	72.8%	64.0%

Sector Allocation (%) vs MSCI ACWI ex USA Growth



Top Contributors

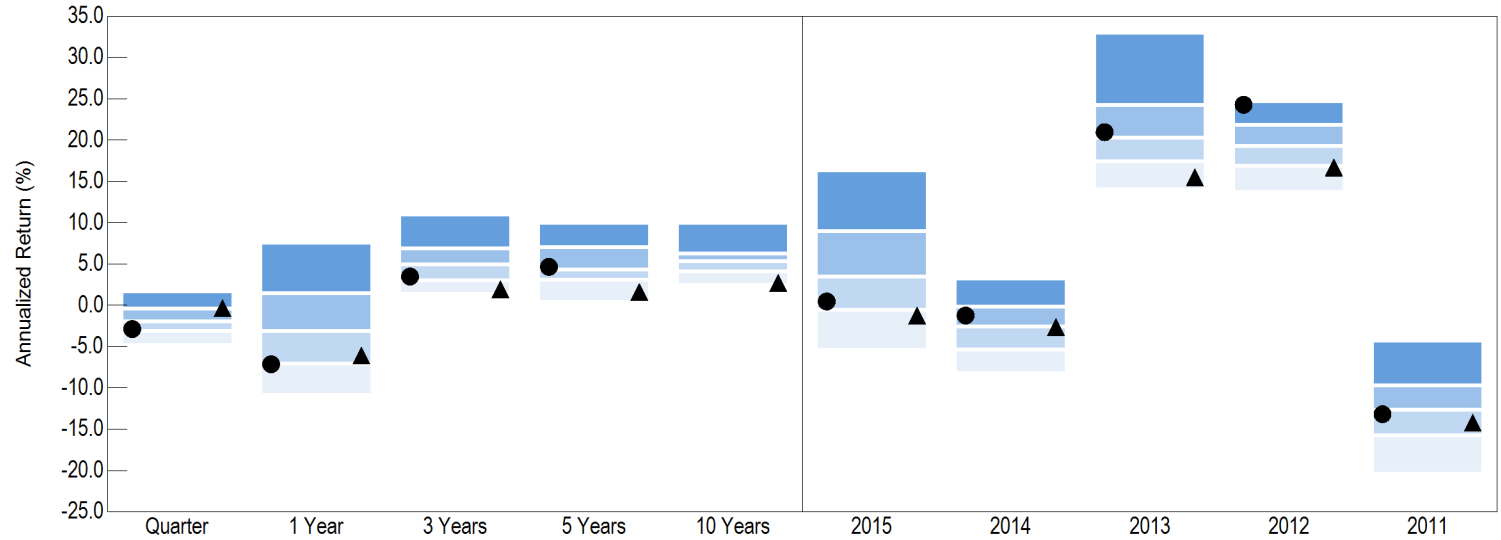
	Avg Wgt	Return	Contribution
TAIWAN			
SEMICON.SPN.ADR 1:5	1.34	15.16	0.20
STEINHOFF INTL.	0.56	29.97	0.17
ENBRIDGE	0.70	19.50	0.14
AMBEV SPONSORED ADR 1:1	0.70	16.97	0.12
WOLTERS KLUWER	0.61	18.84	0.11
PARTNERS GROUP HOLDING	0.83	11.84	0.10
BB SEGURIDADE ON	0.24	41.15	0.10
UNILEVER (UK)	1.52	5.87	0.09
BROOKFIELD ASSET MAN.'A' (NYS)	0.81	10.80	0.09
KONE 'B'	0.50	17.40	0.09

Bottom Contributors

	Avg Wgt	Return	Contribution
TEVA PHARM.INDS.ADR 1:1	1.55	-18.00	-0.28
INTESA SANPAOLO	1.49	-17.32	-0.26
SUMITOMO MITSUI FINL.GP.	1.24	-19.00	-0.24
FUJI HEAVY INDS.	1.66	-13.89	-0.23
MURATA MANUFACTURING	1.29	-16.69	-0.22
AXA	1.53	-13.98	-0.21
PRUDENTIAL	1.40	-14.76	-0.21
NEXT	0.70	-27.12	-0.19
MITSUBISHI UFJ FINL.GP.	0.72	-25.03	-0.18
ITV	1.16	-14.96	-0.17

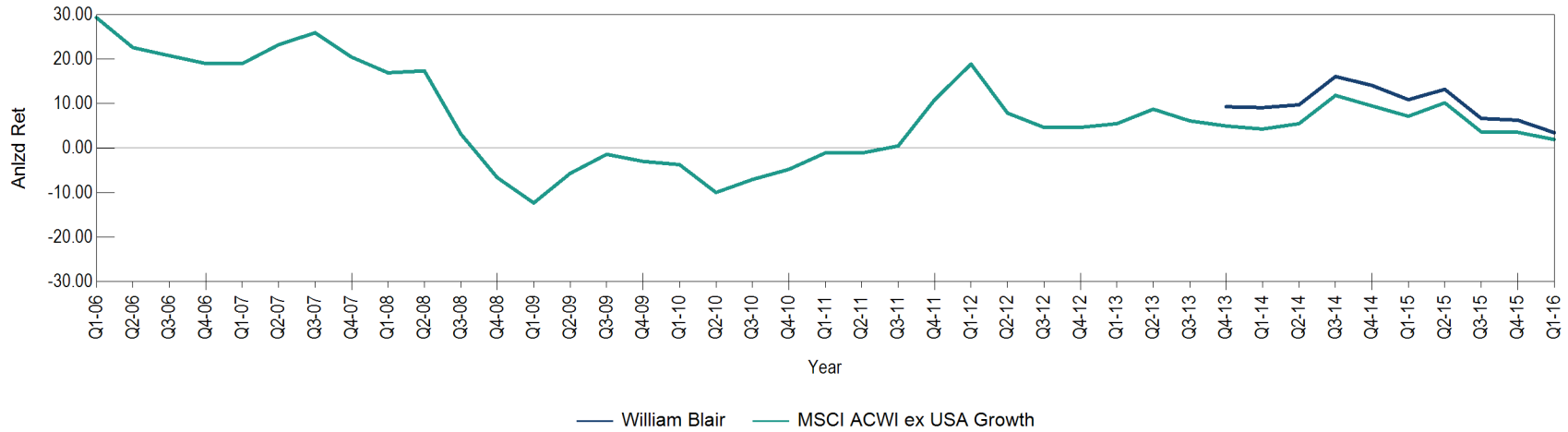
Unclassified sector allocation includes cash allocations.

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

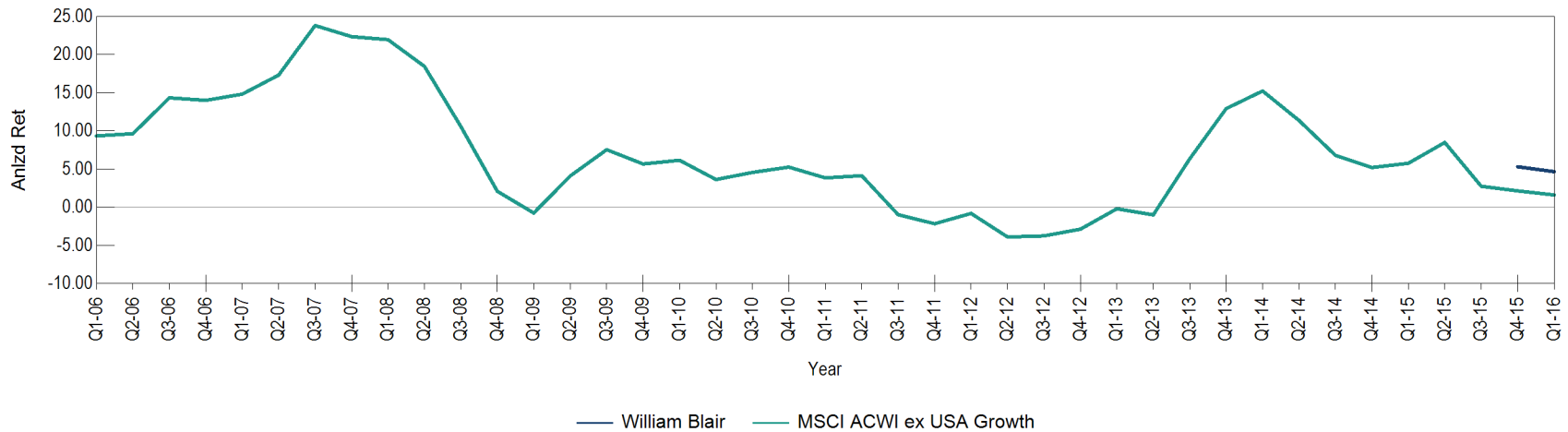


	Return (Rank)									
	Quarter	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011
5th Percentile	1.7	7.6	11.0	9.9	10.0	16.3	3.2	33.0	24.6	-4.3
25th Percentile	-0.3	1.5	7.0	7.1	6.3	9.0	-0.1	24.3	21.9	-9.7
Median	-1.9	-3.1	5.0	4.4	5.4	3.5	-2.5	20.3	19.3	-12.6
75th Percentile	-3.1	-7.0	3.0	3.1	4.1	-0.5	-5.3	17.5	16.9	-15.7
95th Percentile	-4.8	-10.8	1.4	0.4	2.5	-5.4	-8.2	14.0	13.7	-20.3
# of Portfolios	68	68	64	60	44	70	50	46	51	51
● William Blair	-2.9 (71)	-7.1 (80)	3.5 (70)	4.6 (48)	-- (--)	0.5 (69)	-1.2 (37)	20.9 (44)	24.3 (6)	-13.2 (55)
▲ MSCI ACWI ex USA Growth	-0.3 (25)	-6.1 (70)	1.9 (91)	1.6 (91)	2.7 (90)	-1.3 (83)	-2.6 (53)	15.5 (87)	16.7 (78)	-14.2 (62)

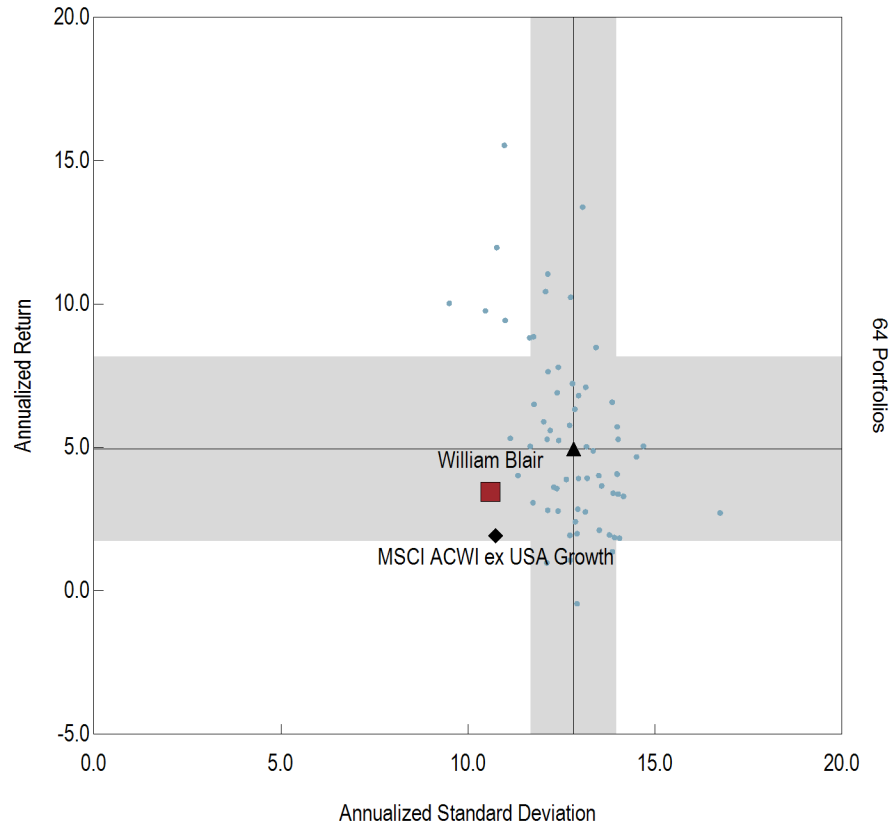
Rolling 3 Year Annualized Return (%)



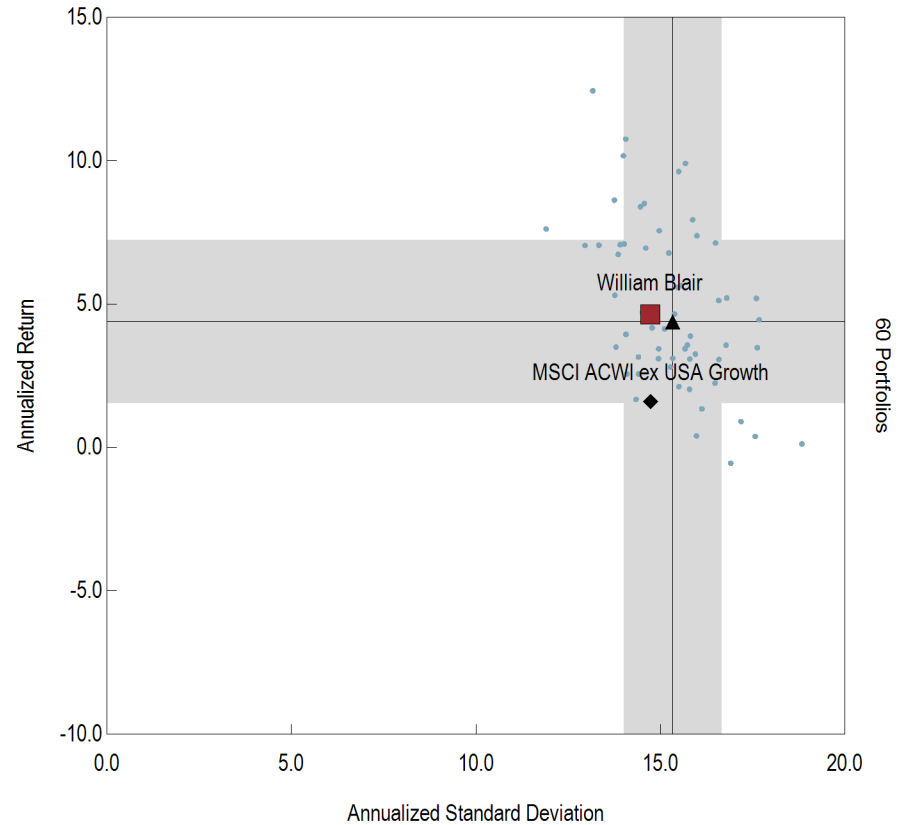
Rolling 5 Year Annualized Return (%)



3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
William Blair	3.5%	10.6%	0.3
MSCI ACWI ex USA Growth	1.9%	10.7%	0.2
eA ACWI ex-US Growth Equity Gross Median	5.0%	12.8%	0.4

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
William Blair	4.6%	14.7%	0.3
MSCI ACWI ex USA Growth	1.6%	14.7%	0.1
eA ACWI ex-US Growth Equity Gross Median	4.4%	15.3%	0.3

Global Equity Managers

Artisan Partners Manager Portfolio Overview

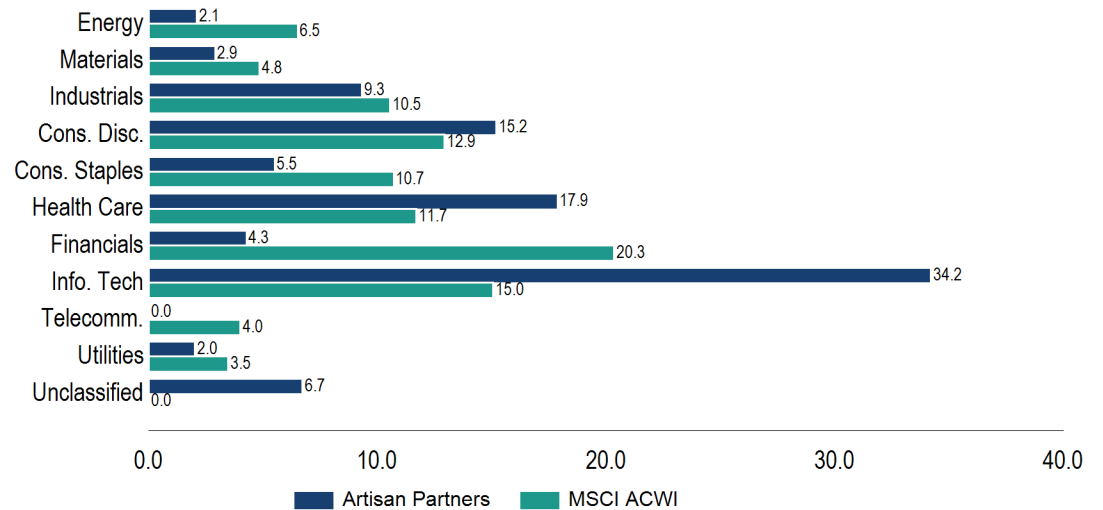
Period Ending: March 31, 2016

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	52	2,482
Weighted Avg. Market Cap. (\$B)	67.14	87.27
Median Market Cap. (\$B)	8.91	8.29
Price To Earnings	35.87	20.22
Price To Book	6.65	3.16
Price To Sales	7.15	2.70
Return on Equity (%)	22.78	15.77
Yield (%)	1.08	2.63
Beta	0.99	1.00

Sector Allocation (%) vs MSCI ACWI



Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
Totals		
Developed	88.8%	89.9%
Emerging*	11.2%	10.1%
Top 10 Largest Countries		
United States	60.8%	53.1%
Sweden	5.7%	1.0%
Hong Kong	5.7%	1.2%
United Kingdom	4.8%	6.5%
Japan	3.3%	7.5%
Mexico*	2.9%	0.5%
China*	2.9%	2.4%
Denmark	2.6%	0.7%
Australia	2.1%	2.4%
Taiwan*	2.1%	1.3%
Total-Top 10 Largest Countries	92.9%	76.5%

Top Contributors

	Avg Wgt	Return	Contribution
MARKIT	2.87	17.17	0.49
FACEBOOK CLASS A	4.93	9.02	0.45
ENERPLUS (NYS)	2.32	16.87	0.39
EQT	1.31	29.09	0.38
IHS 'A'	6.33	4.84	0.31
JAMES HARDIE INDS.ADR 1:1	2.76	7.58	0.21
APPLE	3.82	4.10	0.16
APPLIED MATS.	0.66	14.06	0.09
MCGRAW HILL FINANCIAL	3.24	0.82	0.03
ADOBE SYSTEMS	2.27	-0.15	0.00

Bottom Contributors

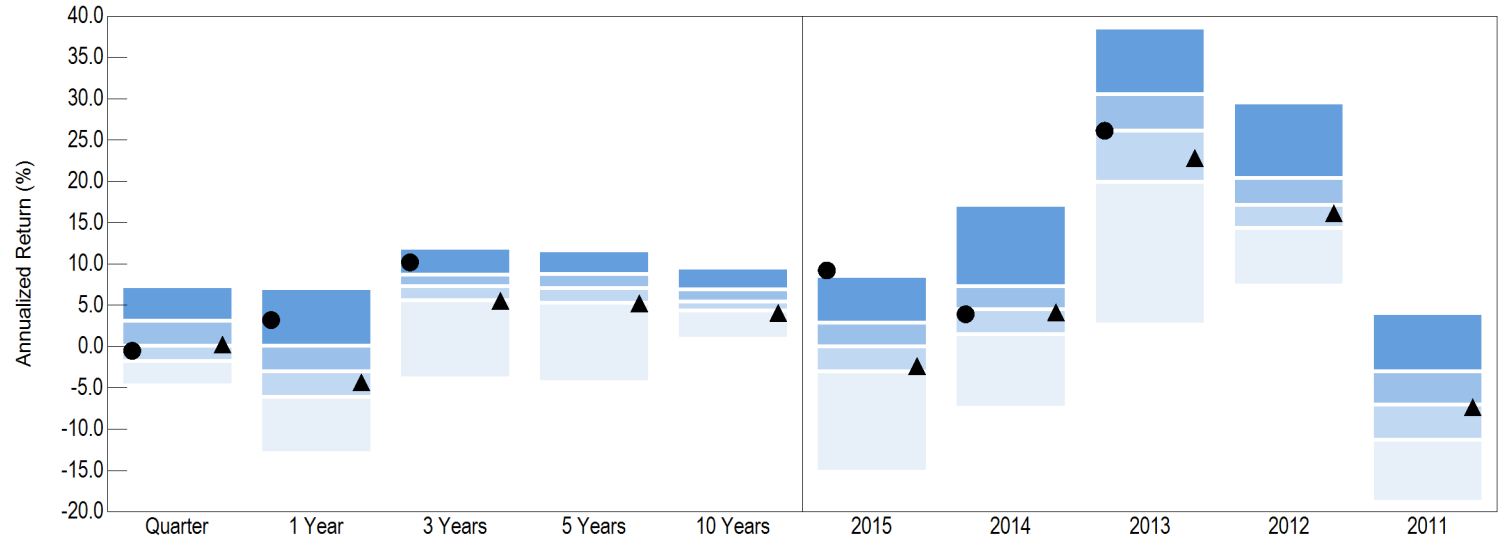
	Avg Wgt	Return	Contribution
REGENERON PHARMS. 'A'	6.08	-33.60	-2.04
GENESIS HEALTHCARE	3.56	-33.14	-1.18
ARDMORE SHIPPING	2.06	-32.42	-0.67
ILLUMINA	3.98	-15.54	-0.62
ABBOTT LABORATORIES	4.13	-6.26	-0.26
BIOGEN	1.64	-15.03	-0.25
WALT DISNEY	3.61	-5.49	-0.20
ELECTRONIC ARTS	3.55	-3.80	-0.13
WORKDAY CLASS A	2.53	-3.56	-0.09
ALPHABET 'A'	4.46	-1.94	-0.09

Unclassified sector allocation includes cash allocations.

Artisan Partners
 Manager Performance Comparisons (Gross of Fees)

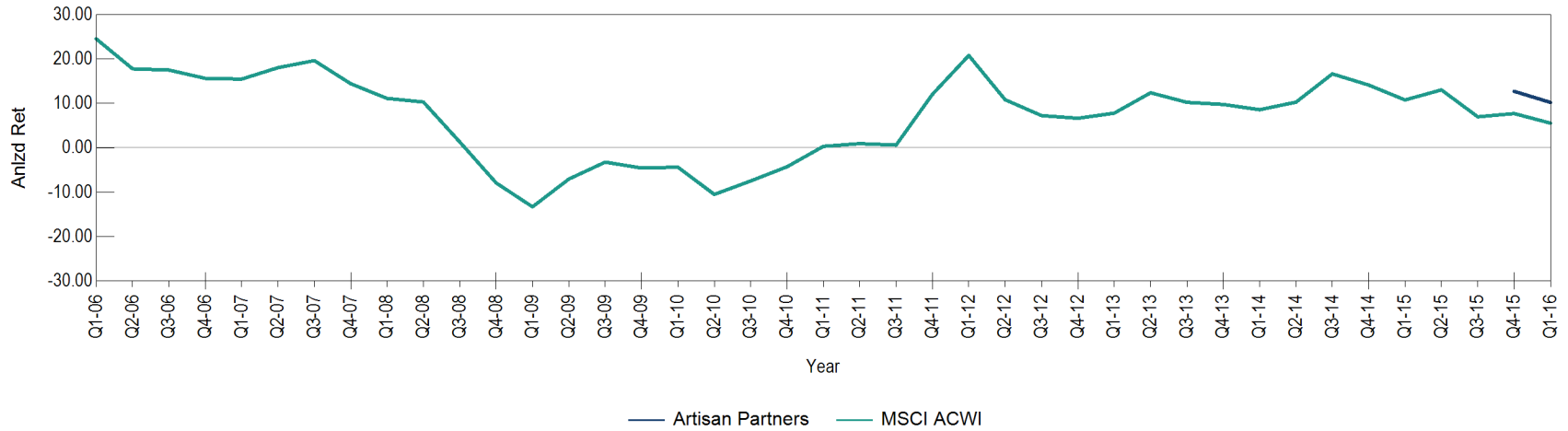
Period Ending: March 31, 2016

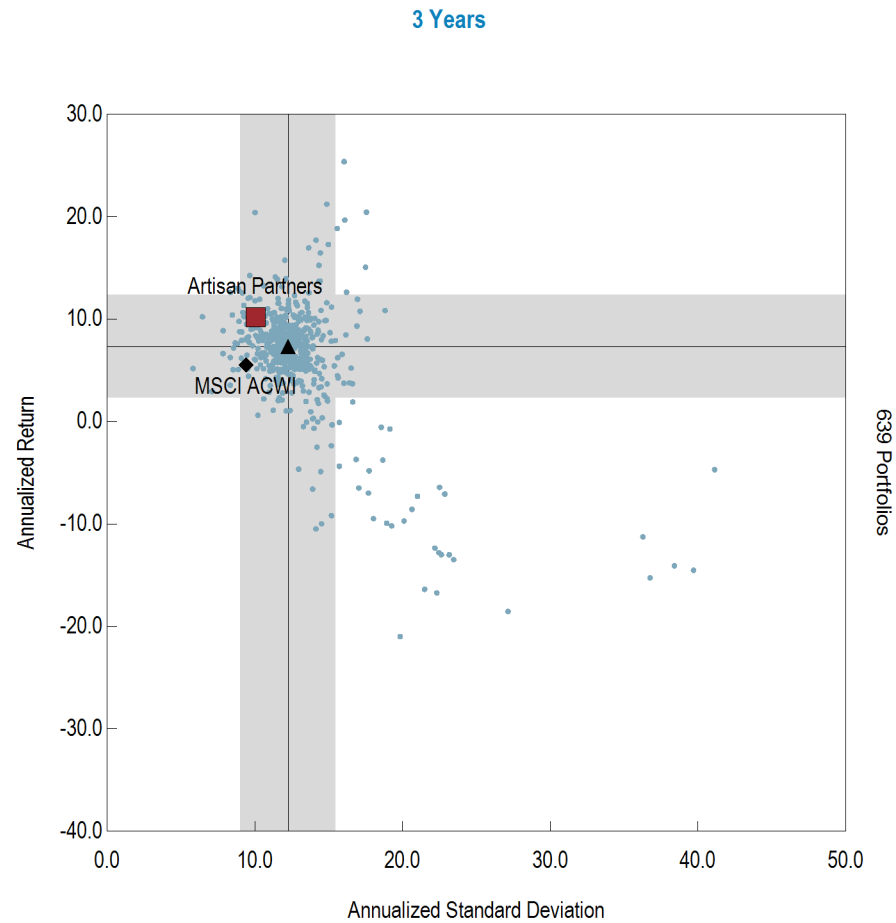
Artisan Partners vs. eA All Global Equity Gross Universe



	Return (Rank)									
	Quarter	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011
5th Percentile	7.3	7.0	12.0	11.6	9.5	8.5	17.1	38.6	29.5	4.0
25th Percentile	3.2	0.1	8.8	8.8	6.9	3.0	7.4	30.6	20.4	-3.0
Median	0.2	-2.9	7.3	7.1	5.5	0.1	4.6	26.2	17.2	-7.0
75th Percentile	-1.7	-6.0	5.6	5.3	4.4	-2.9	1.5	20.0	14.4	-11.2
95th Percentile	-4.6	-12.9	-3.8	-4.2	1.0	-15.1	-7.4	2.7	7.4	-18.7
# of Portfolios	675	674	639	542	284	692	609	552	475	434
● Artisan Partners	-0.5 (58)	3.2 (12)	10.2 (12)	-- (--)	-- (--)	9.2 (4)	3.9 (56)	26.1 (51)	-- (--)	-- (--)
▲ MSCI ACWI	0.2 (50)	-4.3 (64)	5.5 (77)	5.2 (77)	4.1 (80)	-2.4 (73)	4.2 (54)	22.8 (66)	16.1 (61)	-7.3 (53)

Rolling 3 Year Annualized Return (%)





3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Artisan Partners	10.2%	10.0%	1.0
MSCI ACWI	5.5%	9.4%	0.6
eA All Global Equity Gross Median	7.3%	12.2%	0.6

First Eagle Manager Portfolio Overview

Period Ending: March 31, 2016

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

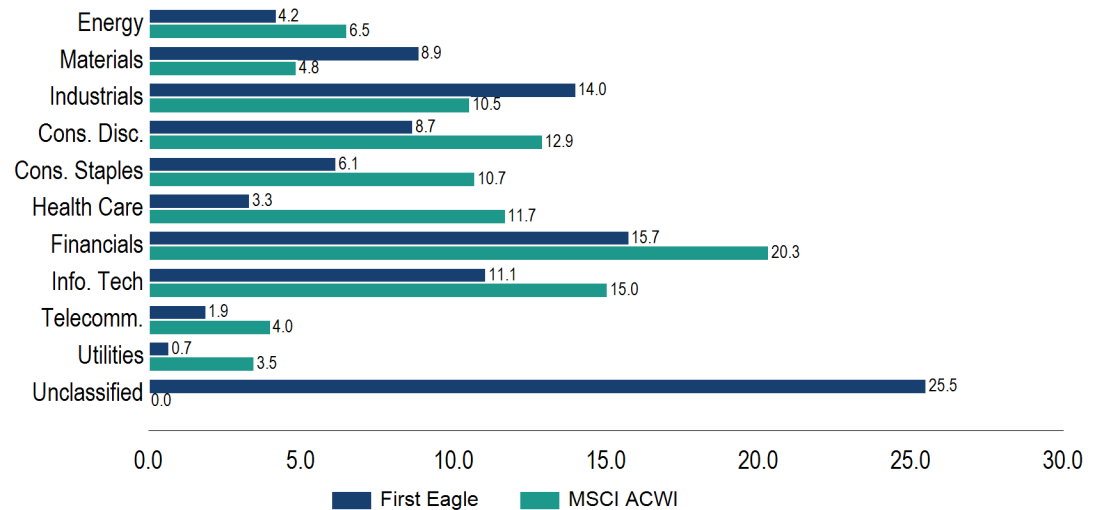
Characteristics

	Portfolio	MSCI ACWI
Number of Holdings	177	2,482
Weighted Avg. Market Cap. (\$B)	53.20	87.27
Median Market Cap. (\$B)	14.10	8.29
Price To Earnings	20.14	20.22
Price To Book	3.22	3.16
Price To Sales	2.78	2.70
Return on Equity (%)	14.51	15.77
Yield (%)	2.27	2.63
Beta	0.75	1.00

Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
Totals		
Developed	77.9%	89.9%
Emerging*	4.0%	10.1%
Cash	18.1%	
Top 10 Largest Countries		
United States	44.5%	53.1%
Cash	18.1%	0.0%
Japan	11.8%	7.5%
France	5.8%	3.4%
Canada	3.8%	3.1%
United Kingdom	3.5%	6.5%
Korea*	1.7%	1.6%
Mexico*	1.6%	0.5%
Germany	1.5%	3.1%
Singapore	1.3%	0.5%
Total-Top 10 Largest Countries	93.6%	79.2%

Sector Allocation (%) vs MSCI ACWI



Top Contributors

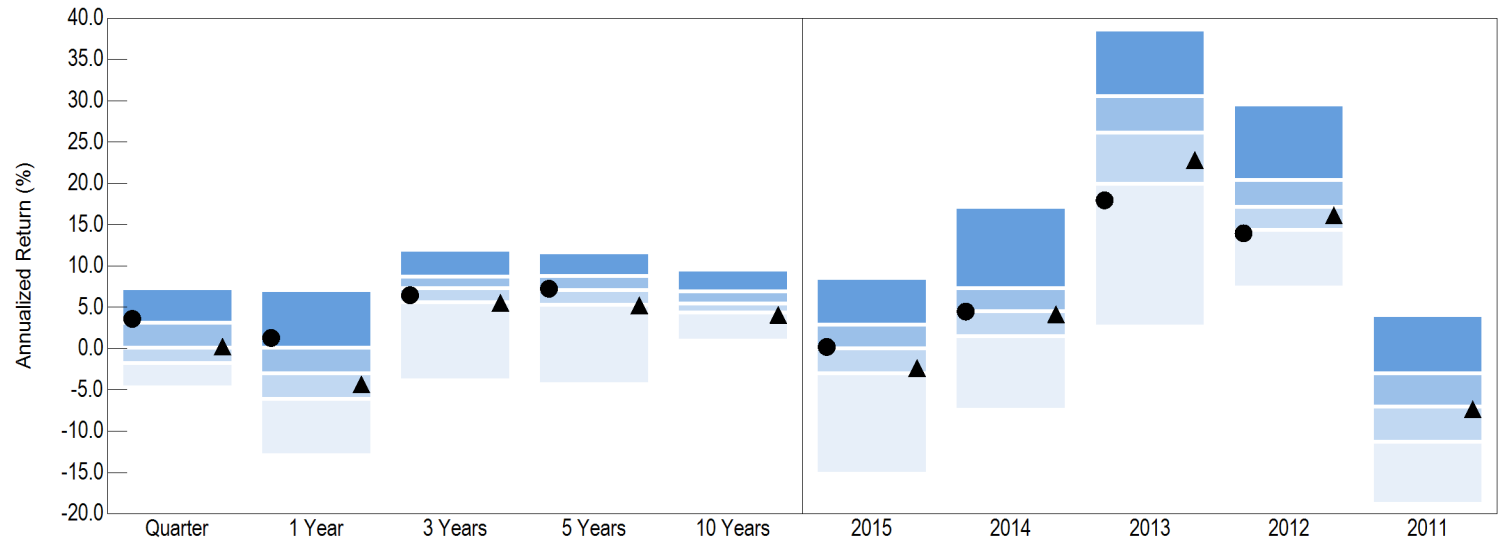
	Avg Wgt	Return	Contribution
BARRICK GOLD (NYS)	0.52	84.28	0.43
NEWCREST MINING	0.89	38.25	0.34
ORACLE	2.22	12.46	0.28
GOLDCORP (NYS)	0.56	41.02	0.23
COMCAST 'A'	1.98	8.73	0.17
3M	1.48	11.42	0.17
OMNICOM GROUP	1.53	10.71	0.16
JARDINE MATHESON HDG.	0.74	19.47	0.14
SECOM	1.47	9.55	0.14
FRESNILLO	0.45	31.19	0.14

Bottom Contributors

	Avg Wgt	Return	Contribution
AMERICAN EXPRESS	1.39	-11.32	-0.16
SOMPO JAPAN NPNK.HDG.	1.10	-13.88	-0.15
BANK OF NEW YORK MELLON	1.36	-10.23	-0.14
FANUC	1.15	-11.22	-0.13
BERKELEY GROUP HDG.(THE)	0.80	-14.91	-0.12
SMC	0.94	-11.61	-0.11
BB&T	0.85	-11.25	-0.10
AMERICAN INTL.GP.	0.65	-12.24	-0.08
MITSUBISHI ESTATE	0.66	-11.05	-0.07
HOYA	0.90	-8.01	-0.07

Unclassified sector allocation includes cash allocations and Gold allocations (10.6% as of 3/31/2016).

First Eagle vs. eA All Global Equity Gross Universe

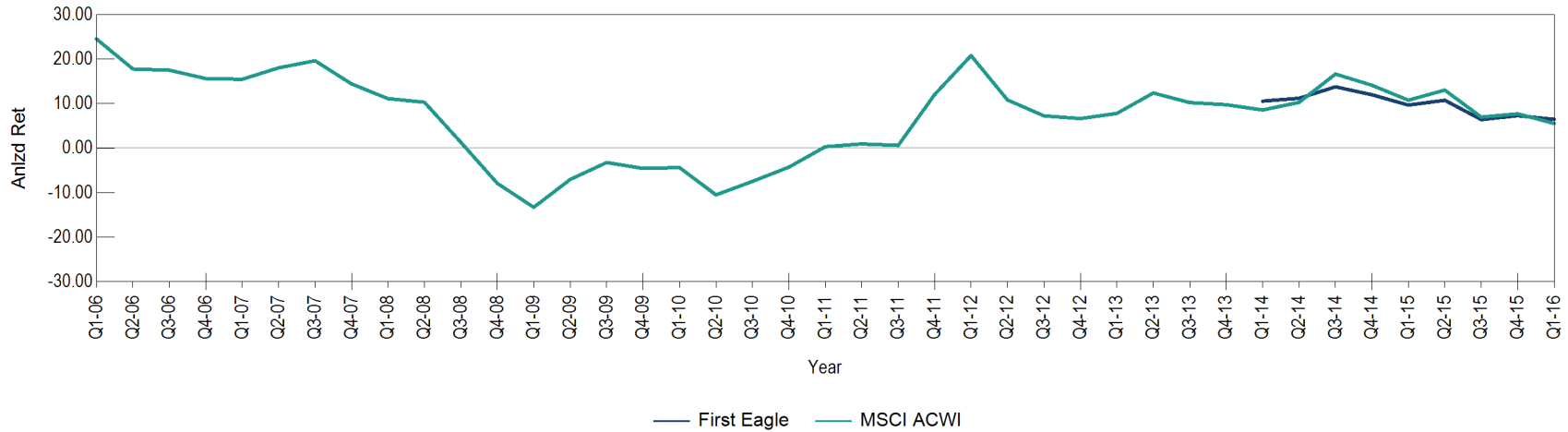


	Quarter	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011
5th Percentile	7.3	7.0	12.0	11.6	9.5	8.5	17.1	38.6	29.5	4.0
25th Percentile	3.2	0.1	8.8	8.8	6.9	3.0	7.4	30.6	20.4	-3.0
Median	0.2	-2.9	7.3	7.1	5.5	0.1	4.6	26.2	17.2	-7.0
75th Percentile	-1.7	-6.0	5.6	5.3	4.4	-2.9	1.5	20.0	14.4	-11.2
95th Percentile	-4.6	-12.9	-3.8	-4.2	1.0	-15.1	-7.4	2.7	7.4	-18.7
# of Portfolios	675	674	639	542	284	692	609	552	475	434
● First Eagle	3.6 (23)	1.3 (20)	6.5 (65)	7.2 (49)	-- (--)	0.2 (49)	4.5 (51)	17.9 (80)	13.9 (78)	-- (--)
▲ MSCI ACWI	0.2 (50)	-4.3 (64)	5.5 (77)	5.2 (77)	4.1 (80)	-2.4 (73)	4.2 (54)	22.8 (66)	16.1 (61)	-7.3 (53)

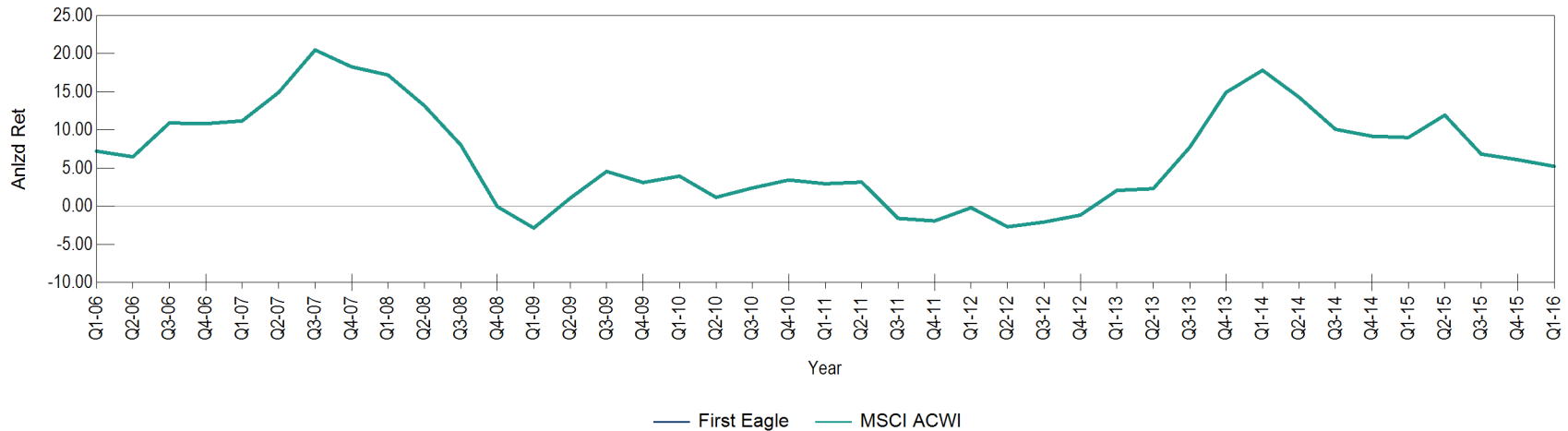
First Eagle
 Manager Performance - Rolling 3 & 5 Year (Gross of Fees)

Period Ending: March 31, 2016

Rolling 3 Year Annualized Return (%)



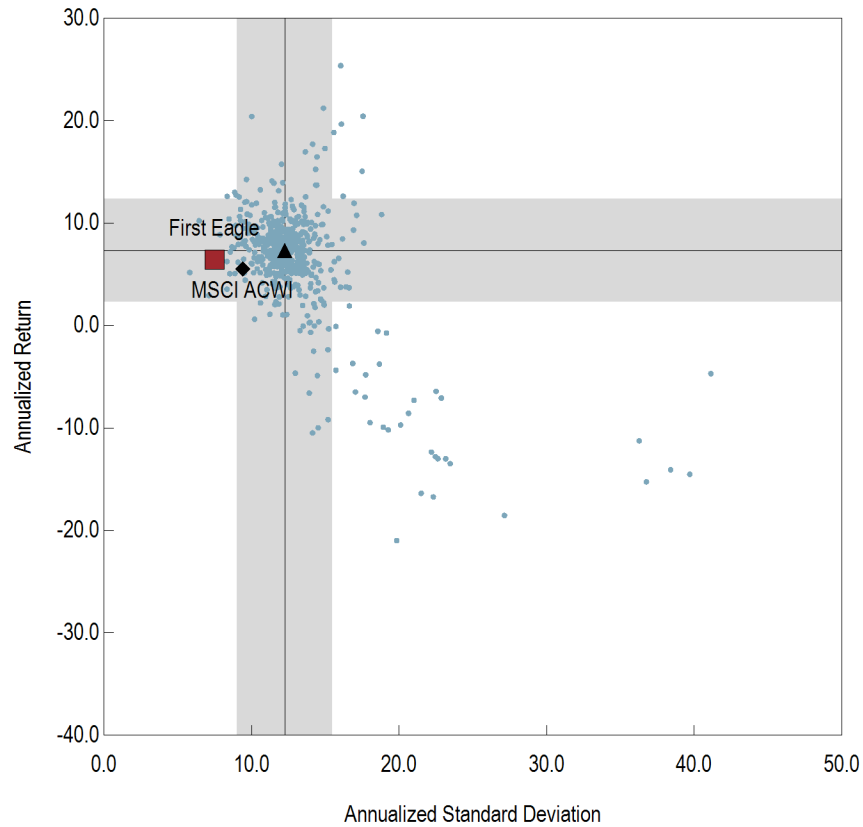
Rolling 5 Year Annualized Return (%)



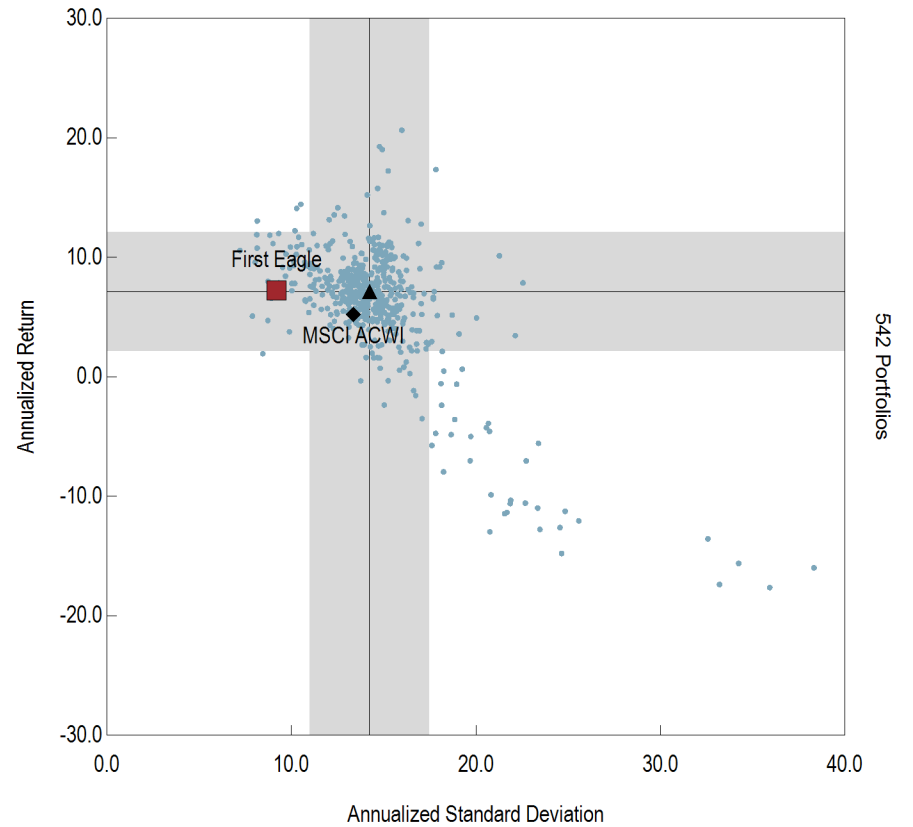
First Eagle
Risk vs. Return 3 & 5 Year (Gross of Fees)

Period Ending: March 31, 2016

3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
First Eagle	6.5%	7.5%	0.9
MSCI ACWI	5.5%	9.4%	0.6
eA All Global Equity Gross Median	7.3%	12.2%	0.6

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
First Eagle	7.2%	9.2%	0.8
MSCI ACWI	5.2%	13.4%	0.4
eA All Global Equity Gross Median	7.1%	14.2%	0.5

Intech Global Low Vol Manager Portfolio Overview

Period Ending: March 31, 2016

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

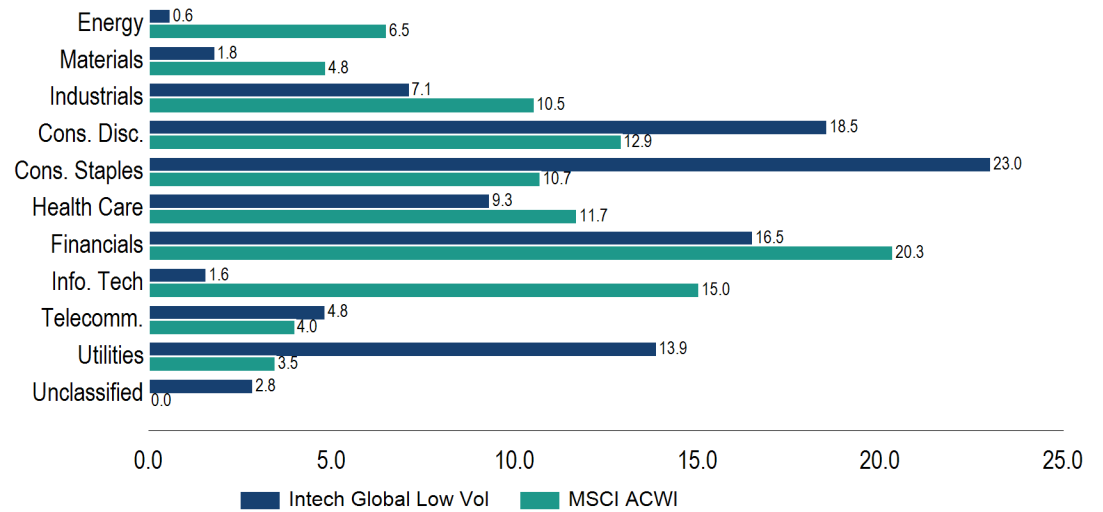
Characteristics

	Portfolio	MSCI ACWI
Number of Holdings	389	2,482
Weighted Avg. Market Cap. (\$B)	38.43	87.27
Median Market Cap. (\$B)	10.78	8.29
Price To Earnings	24.91	20.22
Price To Book	4.13	3.16
Price To Sales	3.08	2.70
Return on Equity (%)	15.64	15.77
Yield (%)	2.63	2.63
Beta	0.50	1.00

Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
Totals		
Developed	97.2%	89.9%
Cash	2.8%	
Top 10 Largest Countries		
United States	56.7%	53.1%
Japan	16.0%	7.5%
Hong Kong	7.6%	1.2%
Canada	4.1%	3.1%
Cash	2.8%	0.0%
Israel	2.5%	0.2%
Switzerland	2.5%	3.1%
Singapore	1.7%	0.5%
Germany	1.0%	3.1%
New Zealand	1.0%	0.1%
Total-Top 10 Largest Countries	96.0%	71.8%

Sector Allocation (%) vs MSCI ACWI



Top Contributors

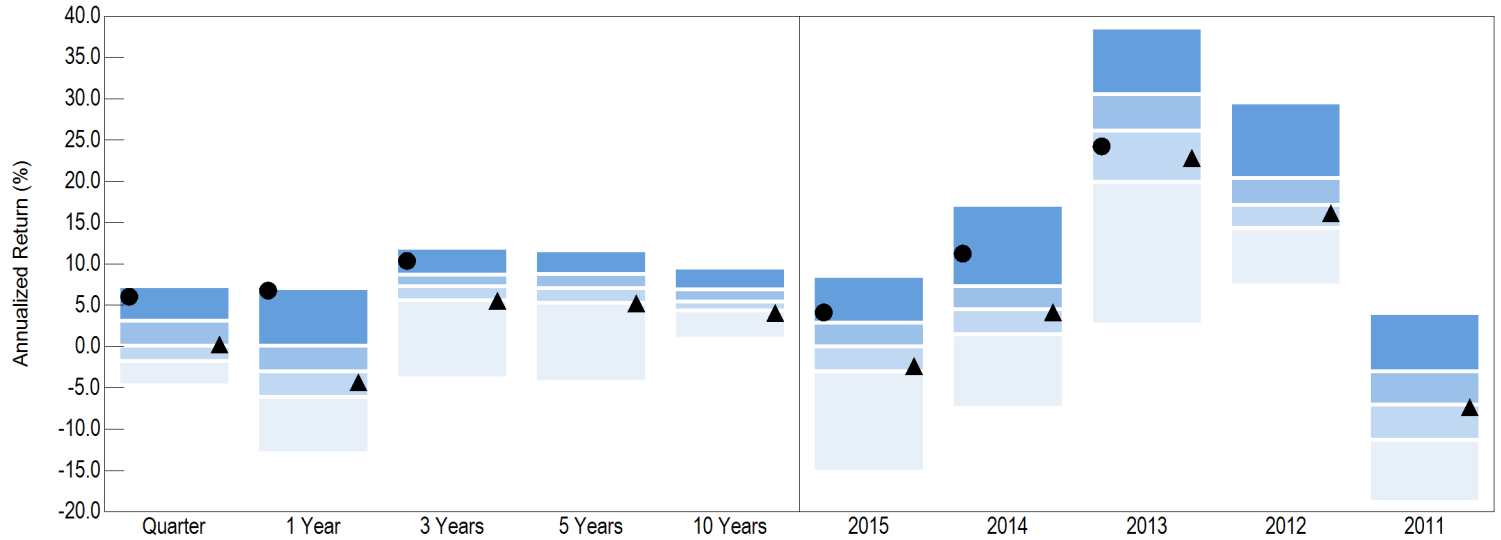
	Avg Wgt	Return	Contribution
SOUTHERN	5.26	11.81	0.62
GENERAL MILLS	3.60	10.75	0.39
CONSOLIDATED EDISON	1.21	20.35	0.25
WAL MART STORES	1.83	12.56	0.23
ORIENTAL LAND	1.14	16.52	0.19
AUTOZONE	2.40	7.38	0.18
DOLLAR GENERAL	0.90	19.46	0.18
FRANCO-NEVADA	0.47	35.79	0.17
KIMBERLY-CLARK	2.57	6.40	0.16
DOLLARAMA	0.71	22.92	0.16

Bottom Contributors

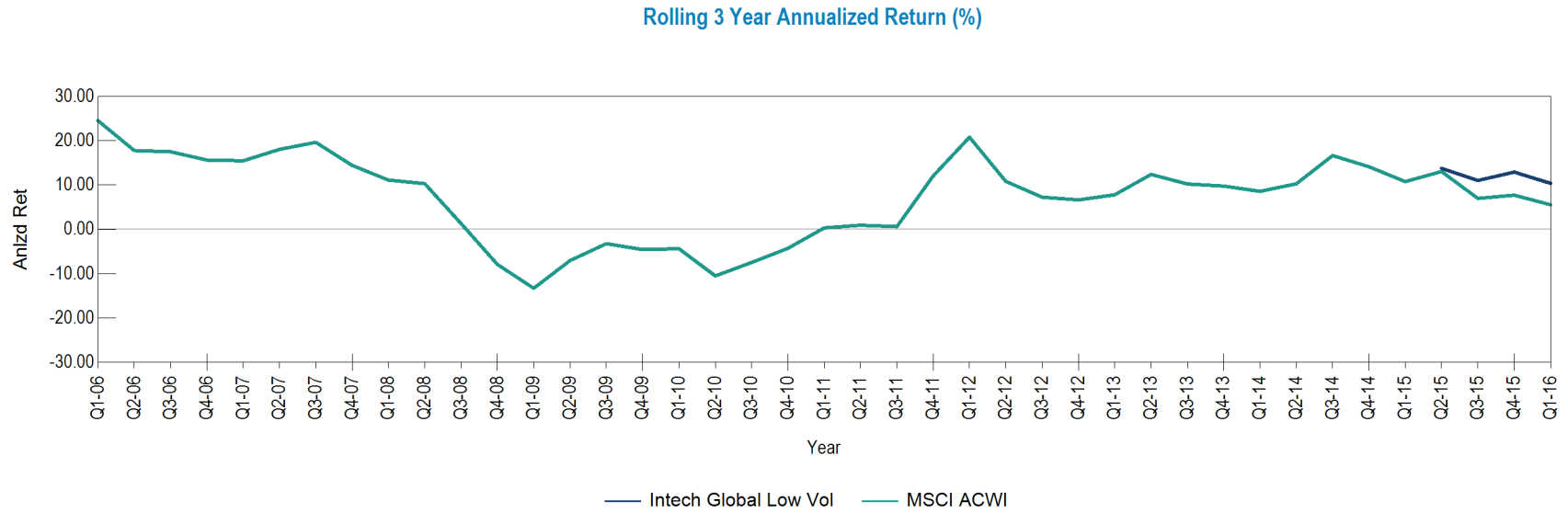
	Avg Wgt	Return	Contribution
NEXT	0.37	-27.12	-0.10
LINKEDIN CLASS A	0.16	-49.20	-0.08
TAIHEIYO CEMENT	0.36	-20.79	-0.07
EXPRESS SCRIPTS HOLDING	0.31	-21.42	-0.07
WEST JAPAN RAILWAY	0.56	-10.53	-0.06
EISAI	0.60	-9.11	-0.05
INTERCONTINENTAL EX.	0.53	-7.91	-0.04
TEVA PHARMACEUTICAL	0.24	-17.01	-0.04
CIGNA	0.63	-6.19	-0.04
KABEL DEUTSCHLAND HLDG.	0.35	-10.13	-0.03

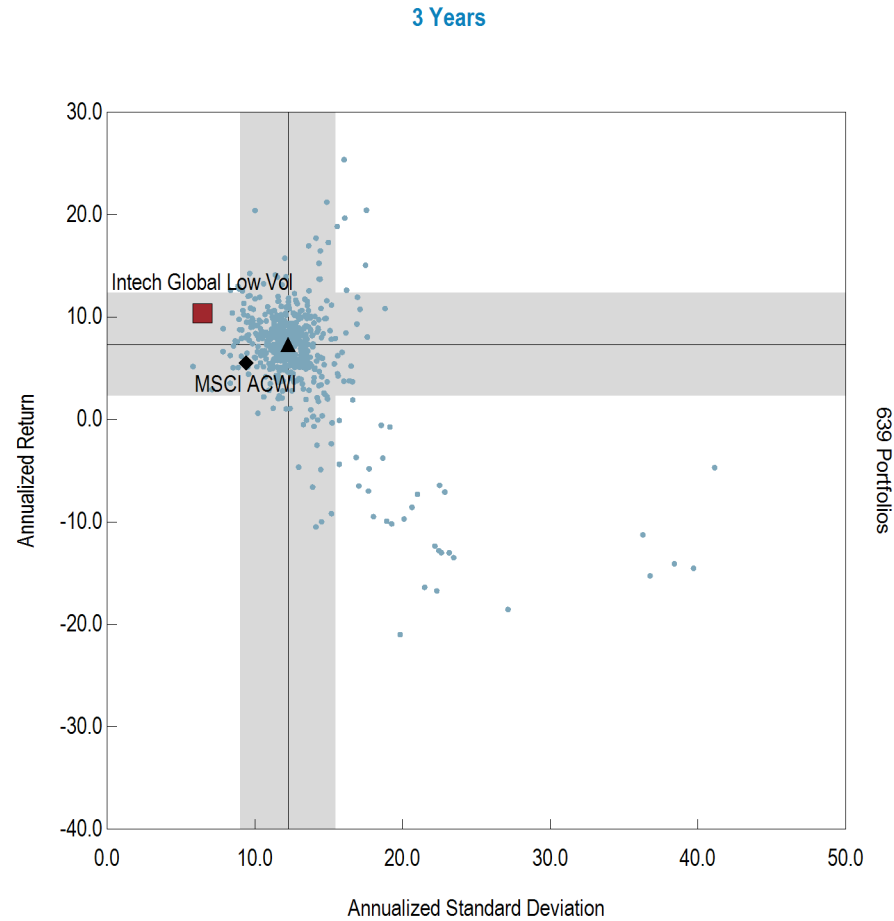
Unclassified sector allocation includes cash allocations.

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	7.3	7.0	12.0	11.6	9.5	8.5	17.1	38.6	29.5	4.0
25th Percentile	3.2	0.1	8.8	8.8	6.9	3.0	7.4	30.6	20.4	-3.0
Median	0.2	-2.9	7.3	7.1	5.5	0.1	4.6	26.2	17.2	-7.0
75th Percentile	-1.7	-6.0	5.6	5.3	4.4	-2.9	1.5	20.0	14.4	-11.2
95th Percentile	-4.6	-12.9	-3.8	-4.2	1.0	-15.1	-7.4	2.7	7.4	-18.7
# of Portfolios	675	674	639	542	284	692	609	552	475	434
● Intech Global Low Vol	6.0 (10)	6.8 (6)	10.4 (11)	-- (--)	-- (--)	4.1 (18)	11.2 (14)	24.2 (62)	-- (--)	-- (--)
▲ MSCI ACWI	0.2 (50)	-4.3 (64)	5.5 (77)	5.2 (77)	4.1 (80)	-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	10.4%	6.4%	1.6
MSCI ACWI	5.5%	9.4%	0.6
eA All Global Equity Gross Median	7.3%	12.2%	0.6

JP Morgan Global Opportunities Manager Portfolio Overview

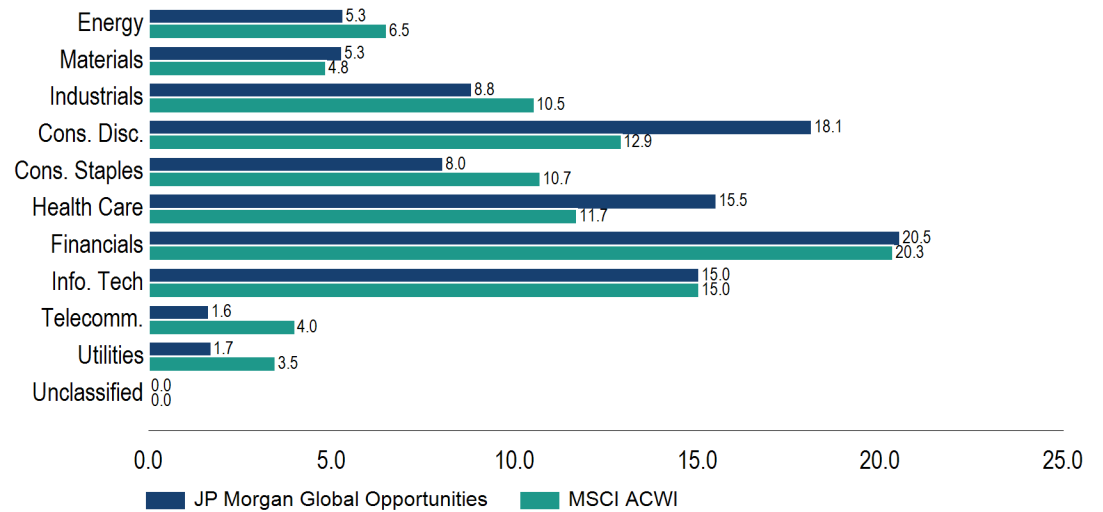
Period Ending: March 31, 2016

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	105	2,482
Weighted Avg. Market Cap. (\$B)	70.93	87.27
Median Market Cap. (\$B)	38.11	8.29
Price To Earnings	22.39	20.22
Price To Book	3.63	3.16
Price To Sales	2.88	2.70
Return on Equity (%)	17.37	15.77
Yield (%)	2.12	2.63
Beta	1.10	1.00

Sector Allocation (%) vs MSCI ACWI



Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
Totals		
Developed	95.1%	89.9%
Emerging*	4.9%	10.1%
Top 10 Largest Countries		
United States	49.2%	53.1%
United Kingdom	12.3%	6.5%
Japan	7.7%	7.5%
Germany	5.8%	3.1%
Netherlands	3.6%	1.0%
Switzerland	2.9%	3.1%
Hong Kong	2.5%	1.2%
France	2.4%	3.4%
Finland	2.0%	0.3%
Italy	1.8%	0.7%
Total-Top 10 Largest Countries	90.2%	80.0%

Top Contributors

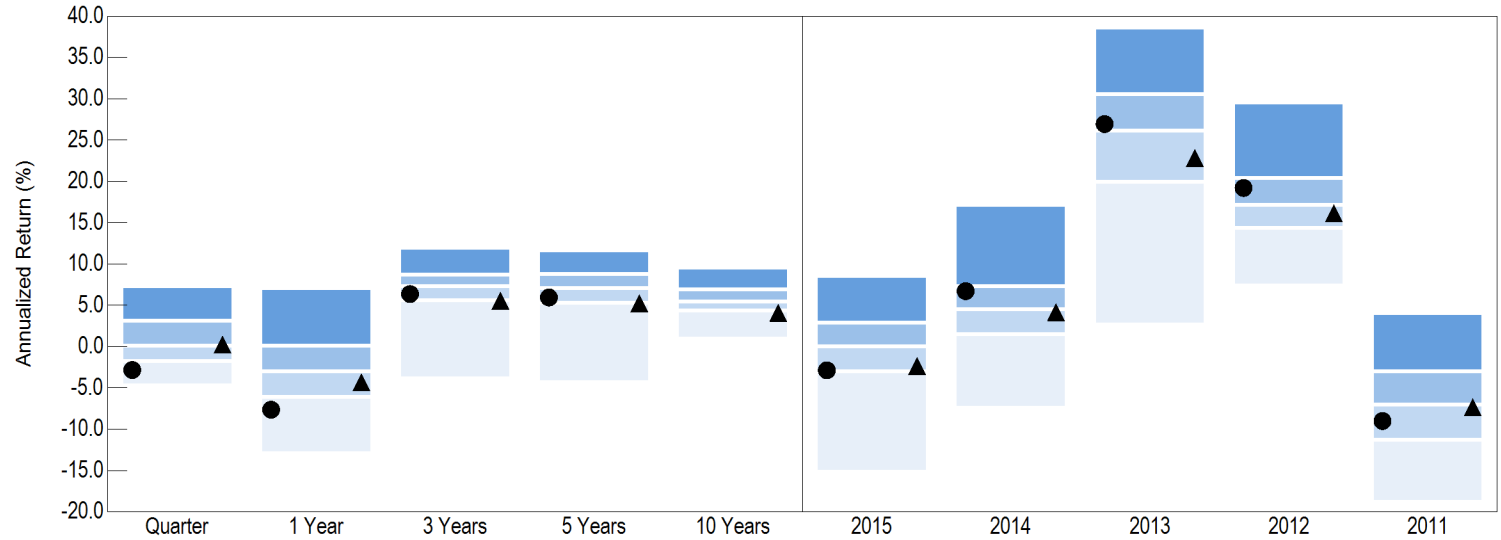
	Avg Wgt	Return	Contribution
ARCELORMITTAL	0.69	37.99	0.26
ITAU UNIBANCO BANCO HLDG.ADR 1:1	0.57	35.80	0.20
FIRST QUANTUM MRLS.	0.43	41.81	0.18
NORSK HYDRO	1.61	10.05	0.16
UNITEDHEALTH GROUP	1.48	10.02	0.15
CHARTER COMMS.CL.A	1.26	10.56	0.13
CNOOC	0.89	13.41	0.12
NEXTERA ENERGY	0.79	14.76	0.12
EQT	0.39	29.09	0.11
TJX	1.04	10.83	0.11

Bottom Contributors

	Avg Wgt	Return	Contribution
MORGAN STANLEY	2.09	-20.91	-0.44
CITIGROUP	1.69	-19.22	-0.33
VERTEX PHARMS.	0.88	-36.83	-0.32
MITSUBISHI UFJ FINL.GP.	1.26	-25.03	-0.31
DISH NETWORK 'A'	1.32	-19.10	-0.25
UNICREDIT	0.61	-35.24	-0.21
ALEXION PHARMS.	0.77	-27.01	-0.21
ALLERGAN	1.40	-14.23	-0.20
NOVARTIS 'R'	1.53	-12.89	-0.20
MCKESSON	0.93	-20.13	-0.19

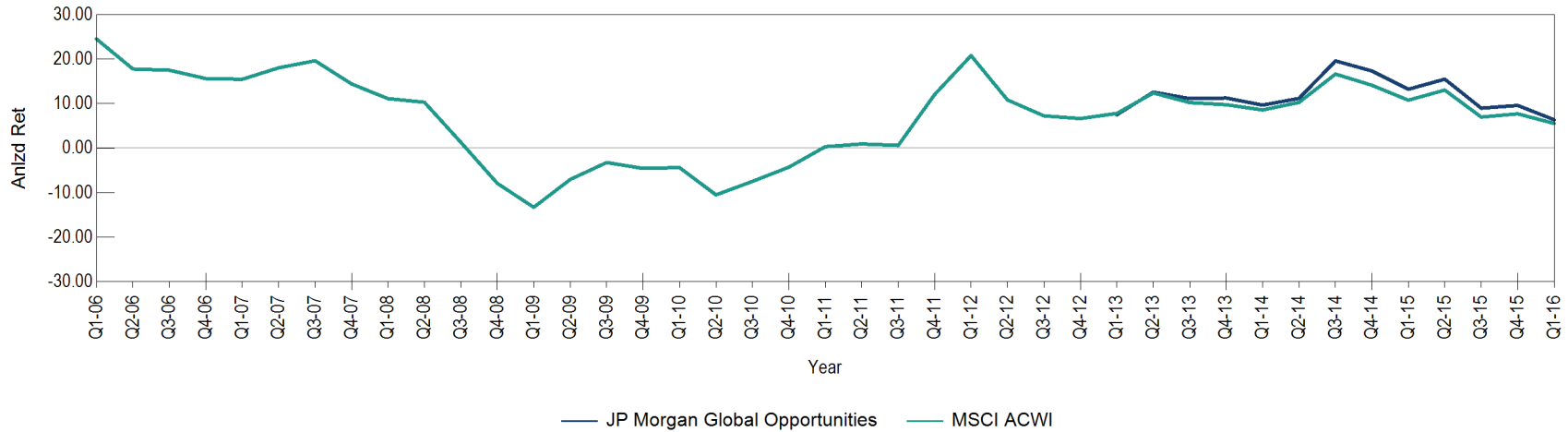
Unclassified sector allocation includes cash allocations.

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

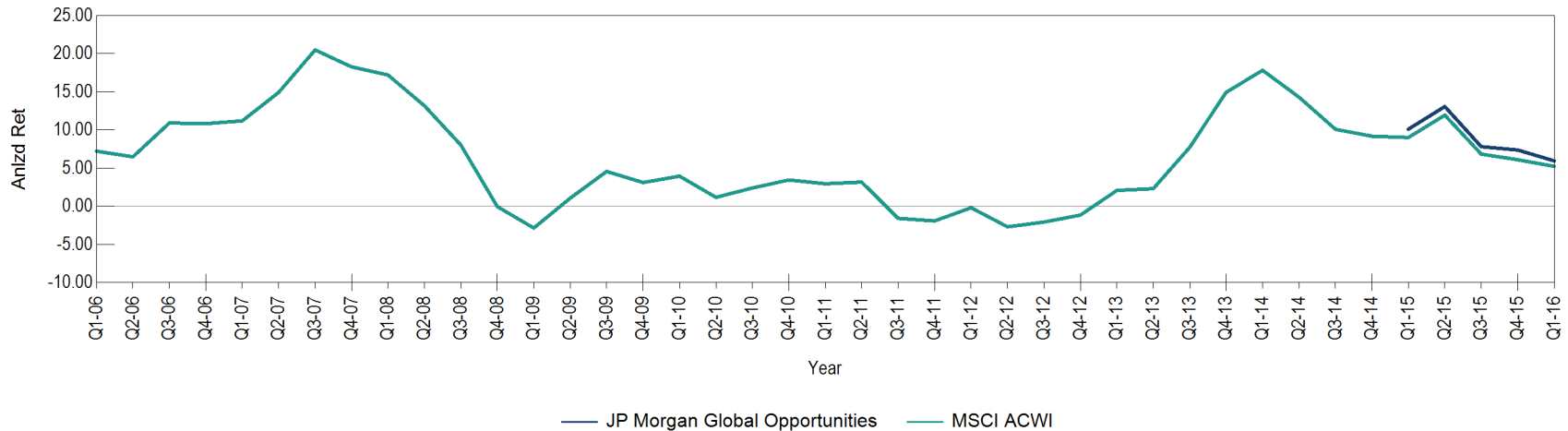


	Return (Rank)									
	Quarter	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011
5th Percentile	7.3	7.0	12.0	11.6	9.5	8.5	17.1	38.6	29.5	4.0
25th Percentile	3.2	0.1	8.8	8.8	6.9	3.0	7.4	30.6	20.4	-3.0
Median	0.2	-2.9	7.3	7.1	5.5	0.1	4.6	26.2	17.2	-7.0
75th Percentile	-1.7	-6.0	5.6	5.3	4.4	-2.9	1.5	20.0	14.4	-11.2
95th Percentile	-4.6	-12.9	-3.8	-4.2	1.0	-15.1	-7.4	2.7	7.4	-18.7
# of Portfolios	675	674	639	542	284	692	609	552	475	434
● JP Morgan Global Opportunities	-2.8 (86)	-7.7 (85)	6.4 (66)	5.9 (68)	-- (--)	-2.9 (75)	6.7 (30)	26.9 (46)	19.2 (32)	-9.0 (63)
▲ MSCI ACWI	0.2 (50)	-4.3 (64)	5.5 (77)	5.2 (77)	4.1 (80)	-2.4 (73)	4.2 (54)	22.8 (66)	16.1 (61)	-7.3 (53)

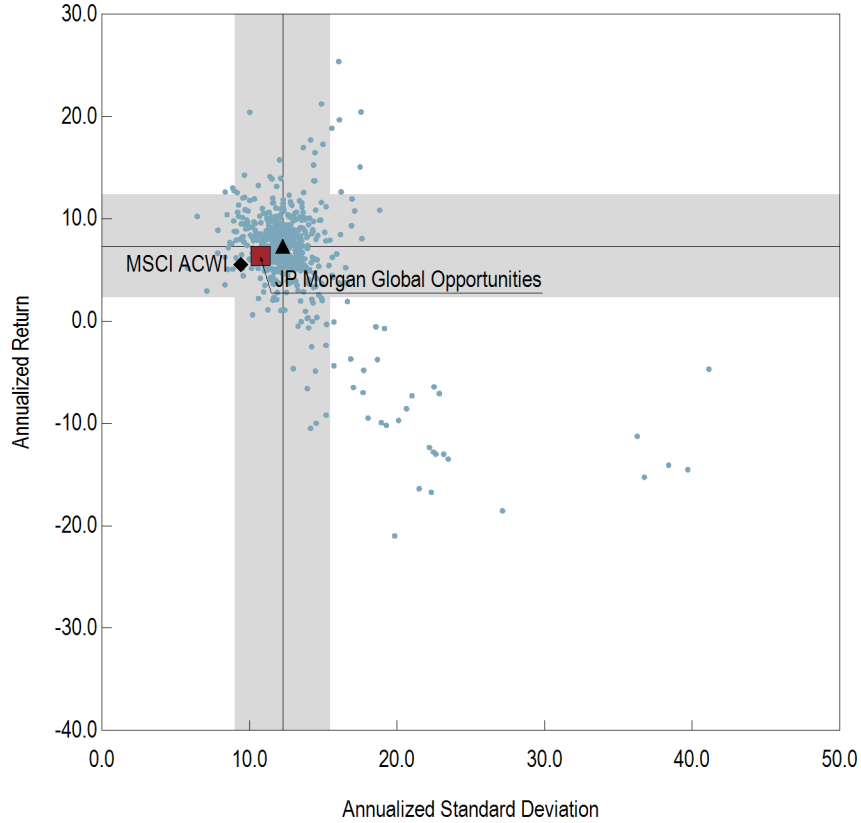
Rolling 3 Year Annualized Return (%)



Rolling 5 Year Annualized Return (%)

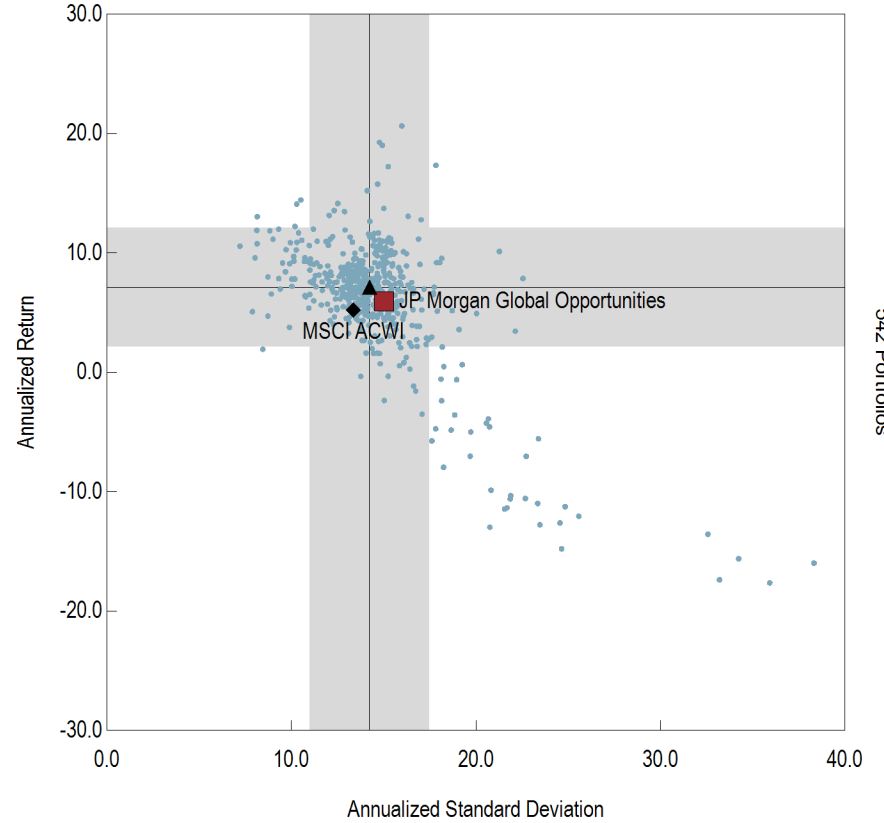


3 Years



639 Portfolios

5 Years



542 Portfolios

3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
JP Morgan Global Opportunities	6.4%	10.7%	0.6
MSCI ACWI	5.5%	9.4%	0.6
eA All Global Equity Gross Median	7.3%	12.2%	0.6

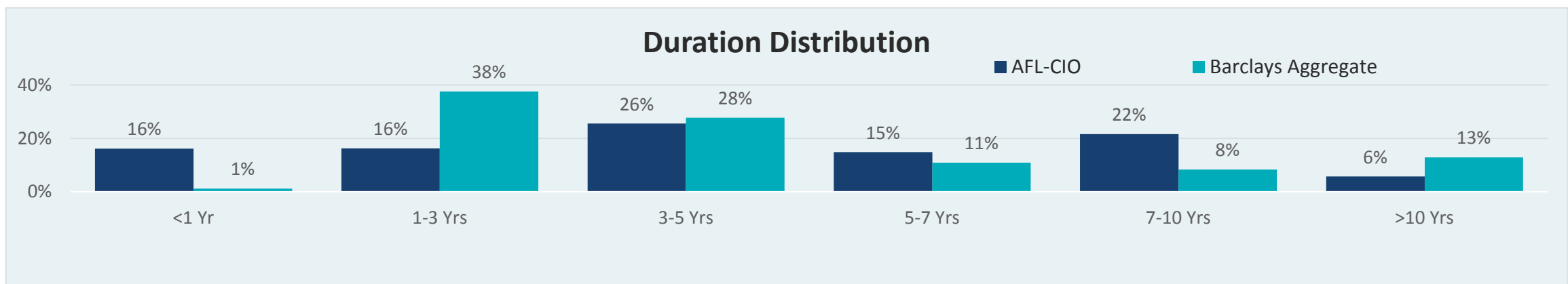
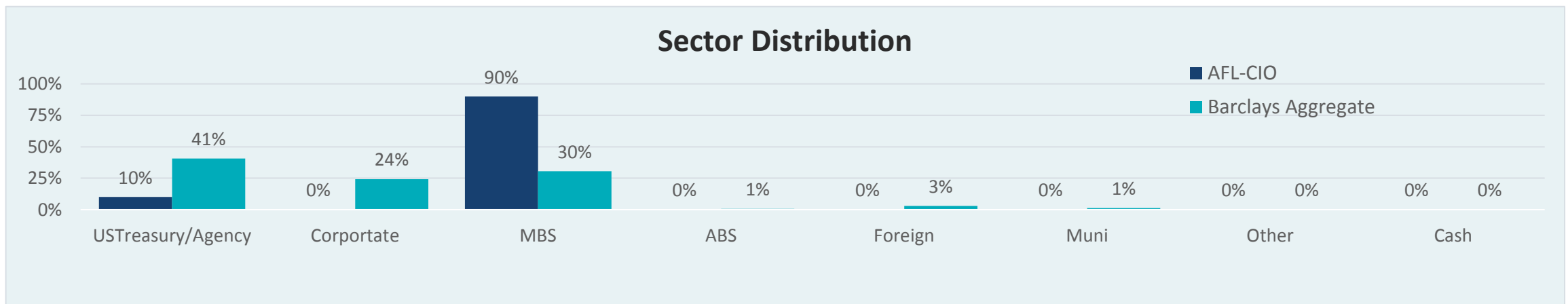
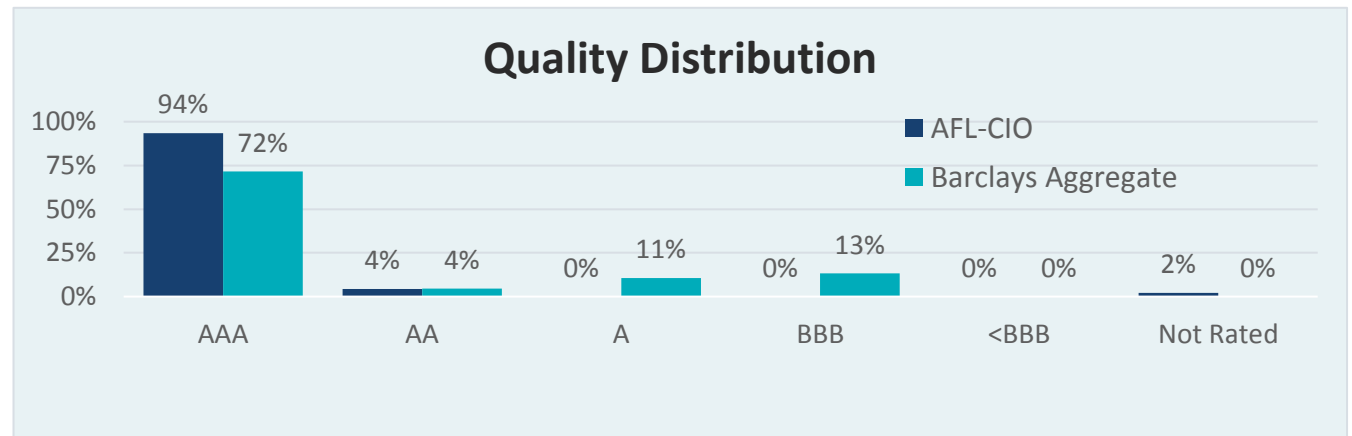
5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
JP Morgan Global Opportunities	5.9%	15.0%	0.4
MSCI ACWI	5.2%	13.4%	0.4
eA All Global Equity Gross Median	7.1%	14.2%	0.5

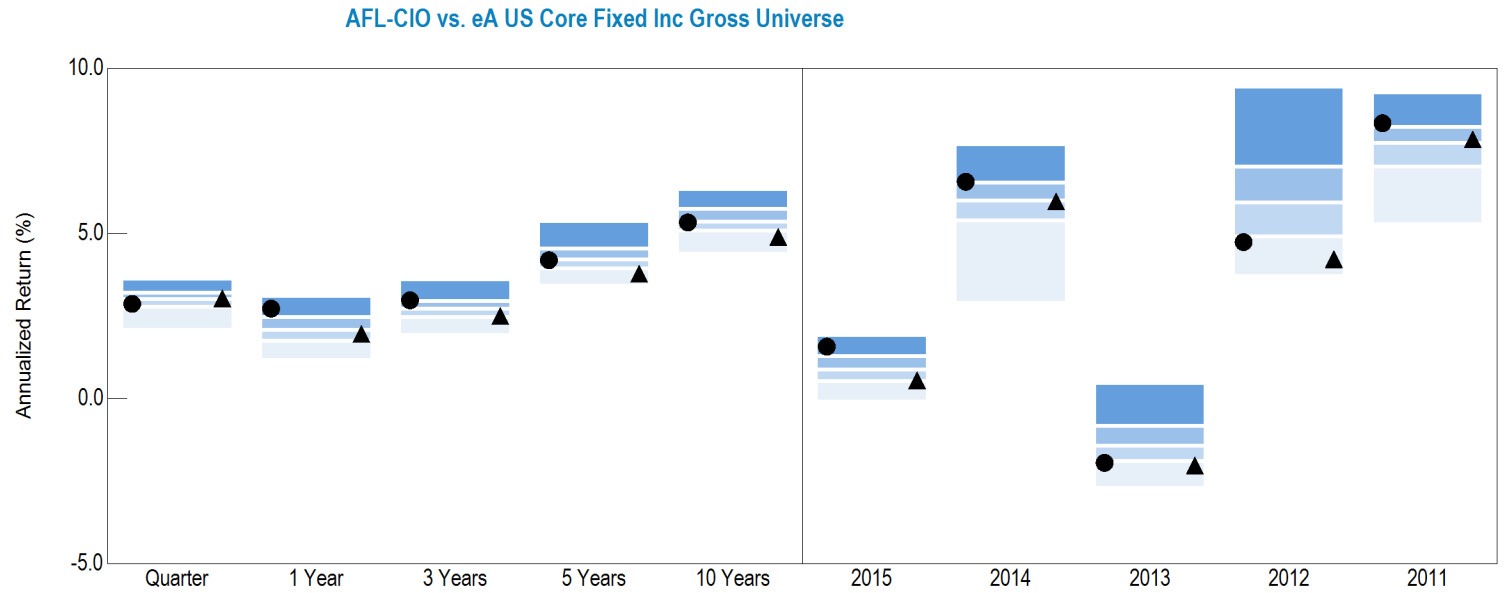
Domestic Fixed Income Managers

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	4.94	5.47
Yield to Maturity	3.20	2.07
Average Quality	AAA	AA+
Average Coupon	3.26%	3.24%

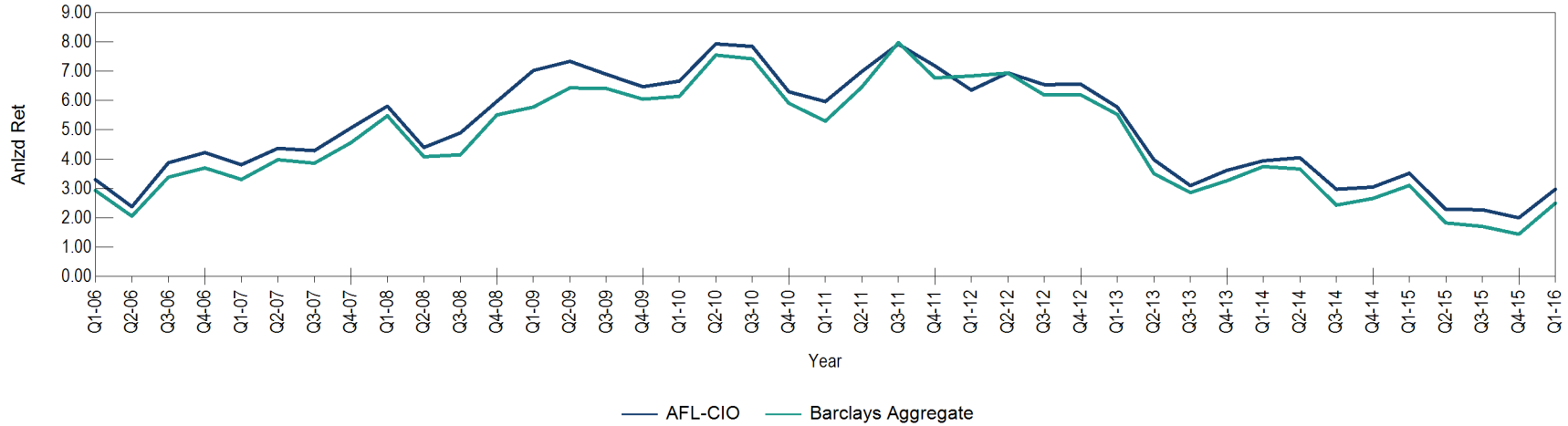


Duration and Quality distributions exclude cash.

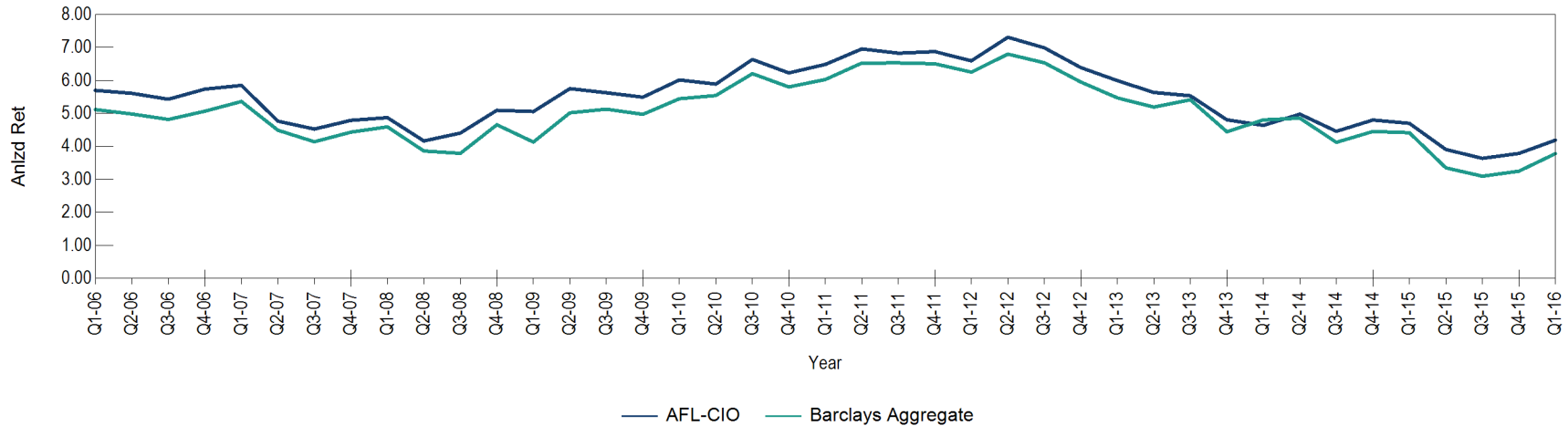


	Return (Rank)										
	Quarter	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011	
5th Percentile	3.6	3.1	3.6	5.4	6.3	1.9	7.7	0.5	9.4	9.2	
25th Percentile	3.2	2.5	3.0	4.6	5.7	1.3	6.5	-0.8	7.0	8.2	
Median	3.0	2.1	2.7	4.2	5.4	0.9	6.0	-1.4	5.9	7.7	
75th Percentile	2.8	1.8	2.5	3.9	5.1	0.5	5.4	-1.9	4.9	7.0	
95th Percentile	2.1	1.2	1.9	3.4	4.4	-0.1	2.9	-2.7	3.7	5.3	
# of Portfolios	186	186	185	183	164	196	213	209	228	213	
● AFL-CIO	2.9 (70)	2.7 (14)	3.0 (24)	4.2 (54)	5.3 (56)	1.6 (15)	6.6 (25)	-1.9 (78)	4.7 (80)	8.3 (23)	
▲ Barclays Aggregate	3.0 (49)	2.0 (61)	2.5 (74)	3.8 (85)	4.9 (88)	0.6 (75)	6.0 (52)	-2.0 (82)	4.2 (90)	7.8 (46)	

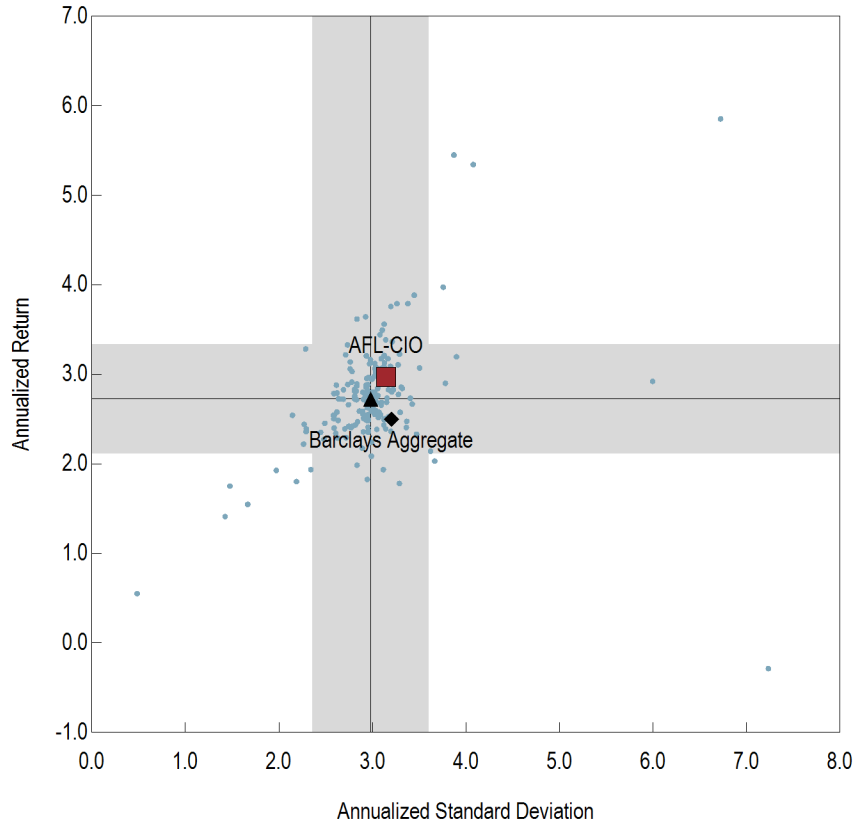
Rolling 3 Year Annualized Return (%)



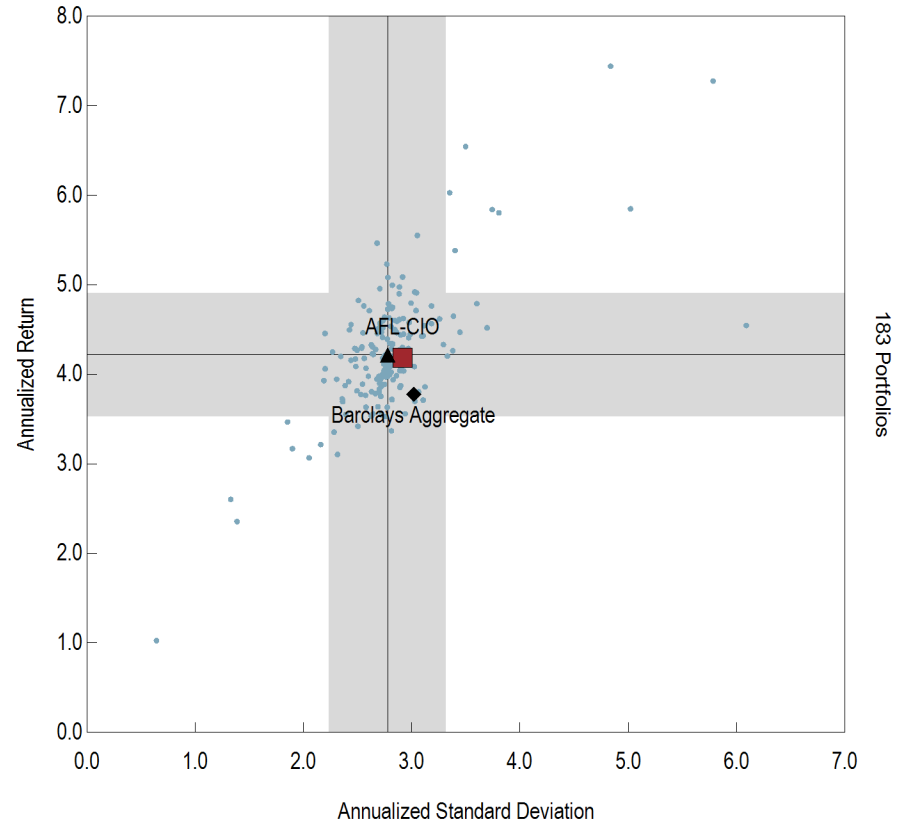
Rolling 5 Year Annualized Return (%)



3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
AFL-CIO	3.0%	3.1%	0.9
Barclays Aggregate	2.5%	3.2%	0.8
eA US Core Fixed Inc Gross Median	2.7%	3.0%	0.9

5 Years

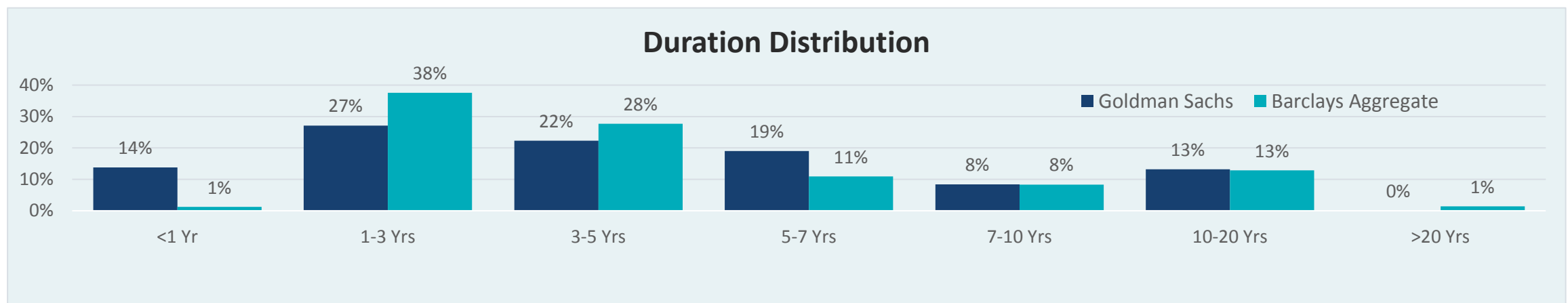
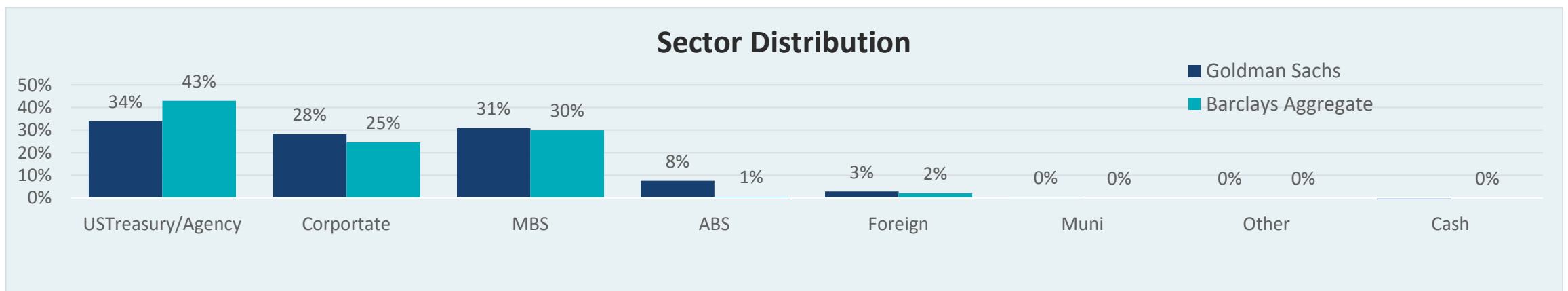
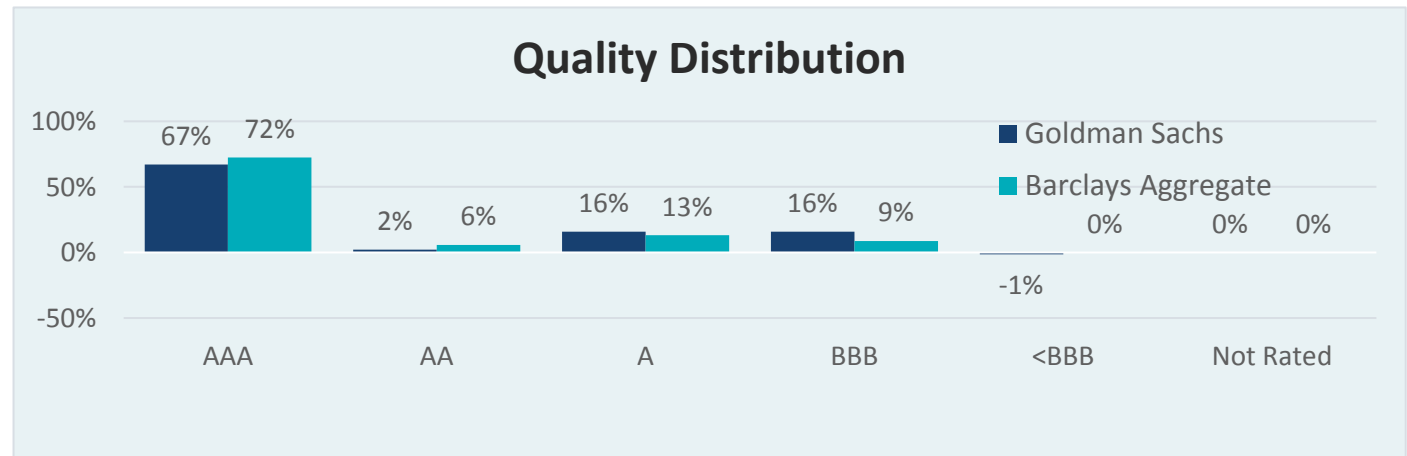
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
AFL-CIO	4.2%	2.9%	1.4
Barclays Aggregate	3.8%	3.0%	1.2
eA US Core Fixed Inc Gross Median	4.2%	2.8%	1.5

Goldman Sachs Core Plus Manager Portfolio Overview

Period Ending: March 31, 2016

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

	Goldman Sachs	Barclays Aggregate
Option Adjusted Duration	5.08	5.29
Yield to Maturity	2.72	2.07
Average Quality	AA	AA+
Average Coupon	3.41%	3.24%

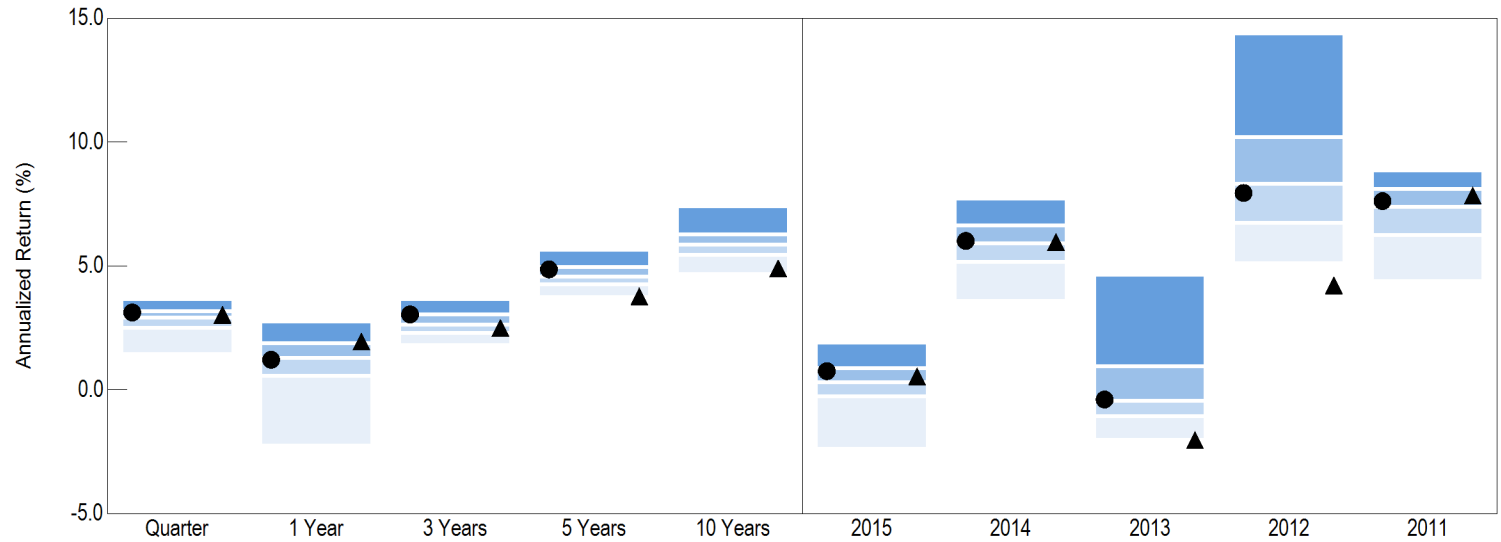


Duration and Quality distributions exclude cash.

Goldman Sachs Core Plus
 Manager Performance Comparisons (Gross of Fees)

Period Ending: March 31, 2016

Goldman Sachs Core Plus vs. eA US Core Plus Fixed Inc Gross Universe

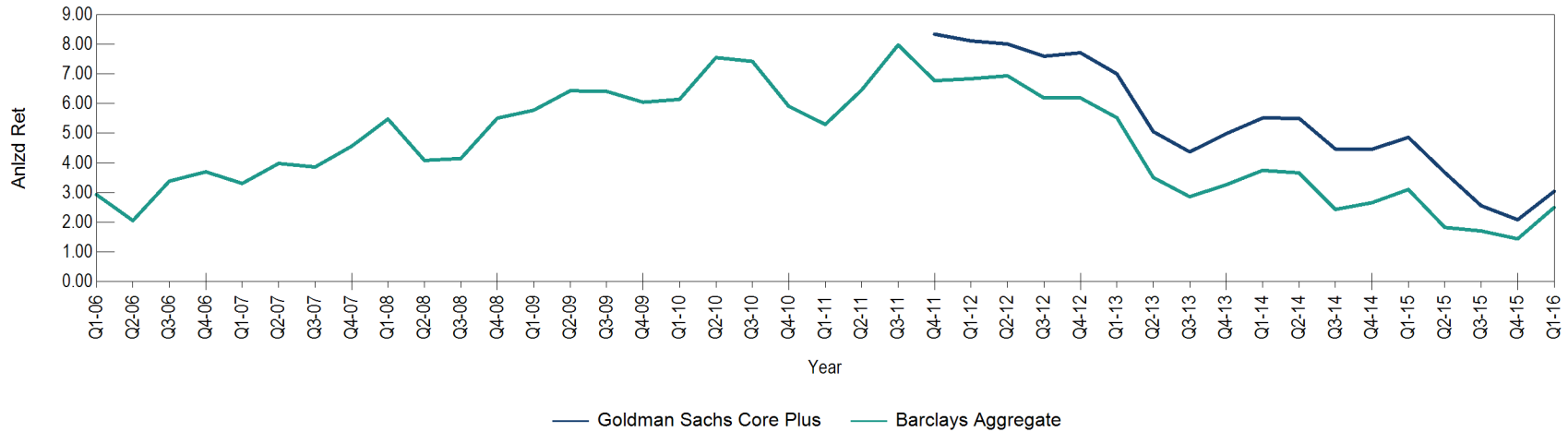


	Return (Rank)										
5th Percentile	3.7	2.7	3.7	5.6	7.4	1.9	7.7	4.6	14.4	8.8	
25th Percentile	3.2	1.9	3.1	5.0	6.3	0.9	6.7	1.0	10.2	8.1	
Median	2.9	1.3	2.7	4.6	5.9	0.3	5.9	-0.4	8.3	7.4	
75th Percentile	2.5	0.6	2.3	4.3	5.5	-0.2	5.2	-1.0	6.7	6.3	
95th Percentile	1.5	-2.2	1.8	3.8	4.7	-2.4	3.6	-2.0	5.1	4.4	
# of Portfolios	114	114	114	111	89	115	118	116	124	118	
● Goldman Sachs Core Plus	3.1 (32)	1.2 (55)	3.0 (27)	4.9 (32)	-- (--)	0.8 (36)	6.0 (47)	-0.4 (49)	7.9 (59)	7.6 (43)	
▲ Barclays Aggregate	3.0 (39)	2.0 (21)	2.5 (65)	3.8 (95)	4.9 (93)	0.6 (42)	6.0 (50)	-2.0 (96)	4.2 (97)	7.8 (37)	

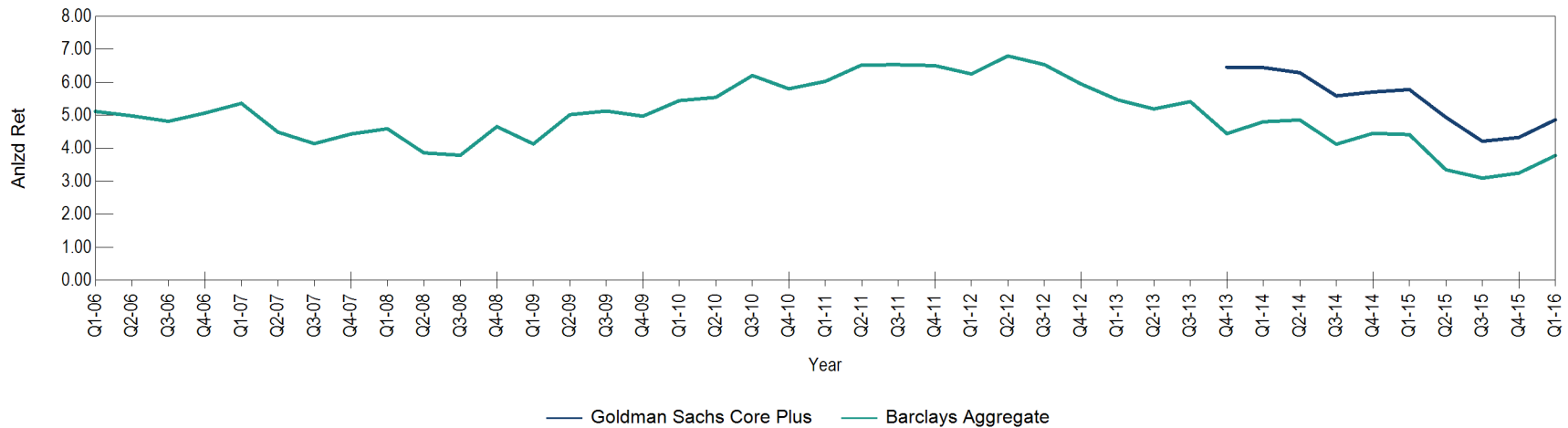
Goldman Sachs Core Plus
 Manager Performance - Rolling 3 & 5 Year (Gross of Fees)

Period Ending: March 31, 2016

Rolling 3 Year Annualized Return (%)

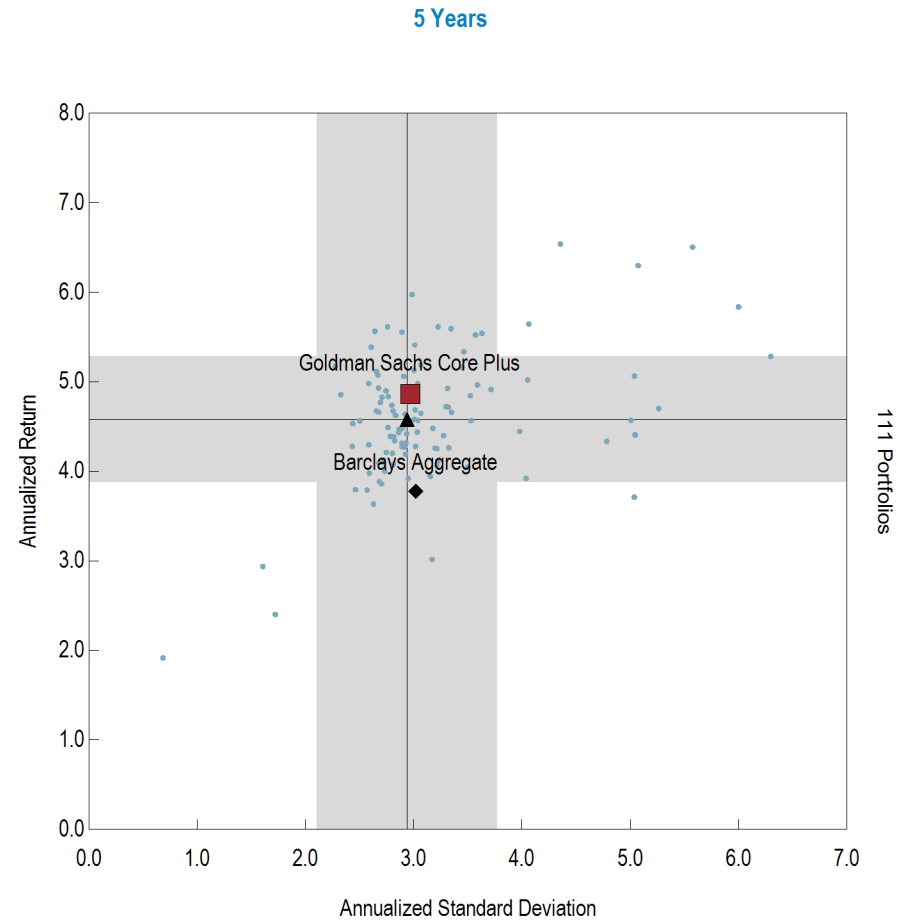
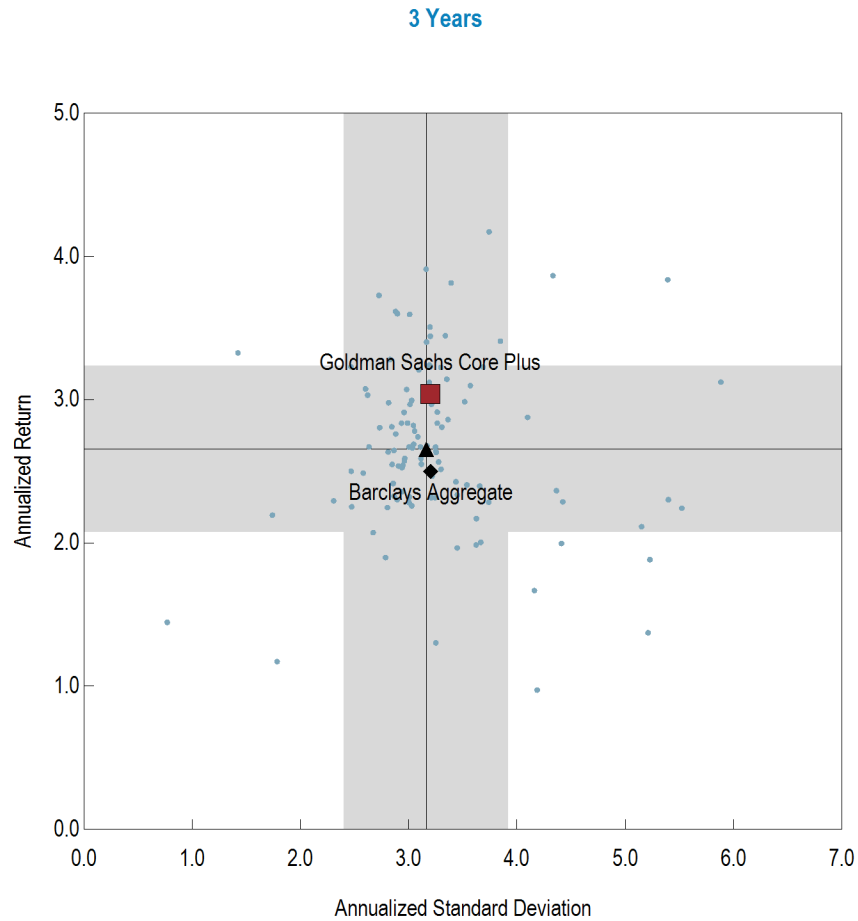


Rolling 5 Year Annualized Return (%)



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

Period Ending: March 31, 2016



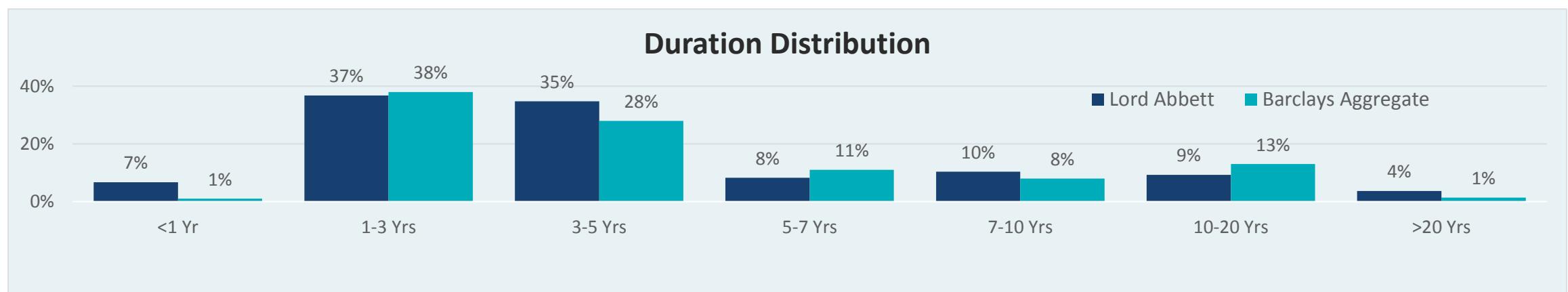
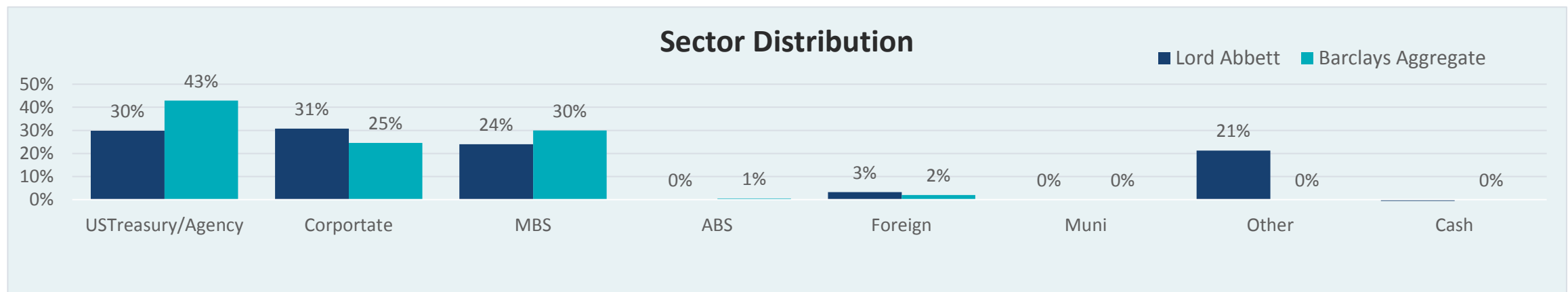
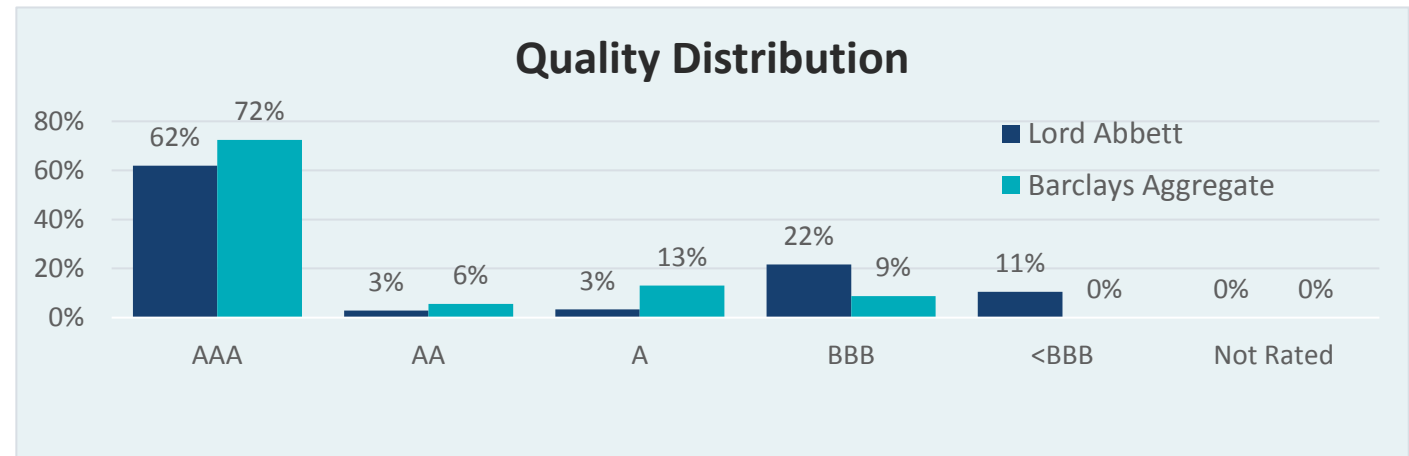
	3 Years			5 Years			
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	
Goldman Sachs Core Plus	3.0%	3.2%	0.9	Goldman Sachs Core Plus	4.9%	3.0%	1.6
Barclays Aggregate	2.5%	3.2%	0.8	Barclays Aggregate	3.8%	3.0%	1.2
eA US Core Plus Fixed Inc Gross Median	2.7%	3.2%	0.9	eA US Core Plus Fixed Inc Gross Median	4.6%	2.9%	1.5

Lord Abbett Manager Portfolio Overview

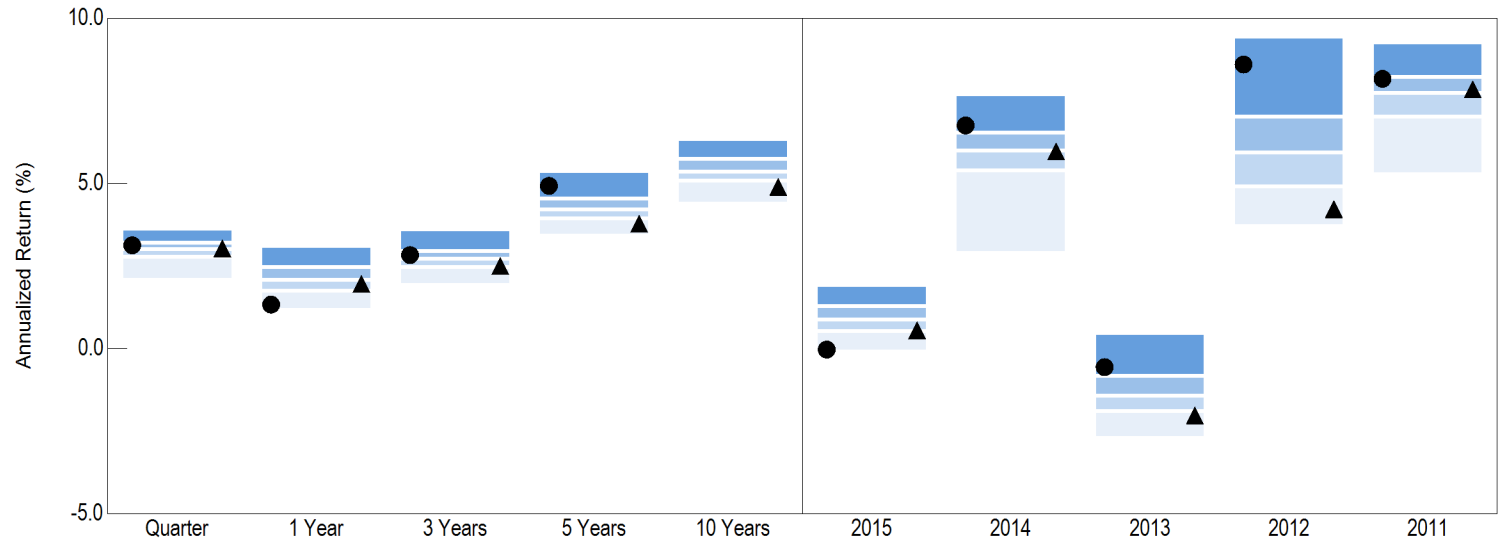
Period Ending: March 31, 2016

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	5.40	5.47
Yield to Maturity	3.80	2.07
Average Quality	AA	AA+
Average Coupon	3.90%	3.24%



Lord Abbett vs. eA US Core Fixed Inc Gross Universe

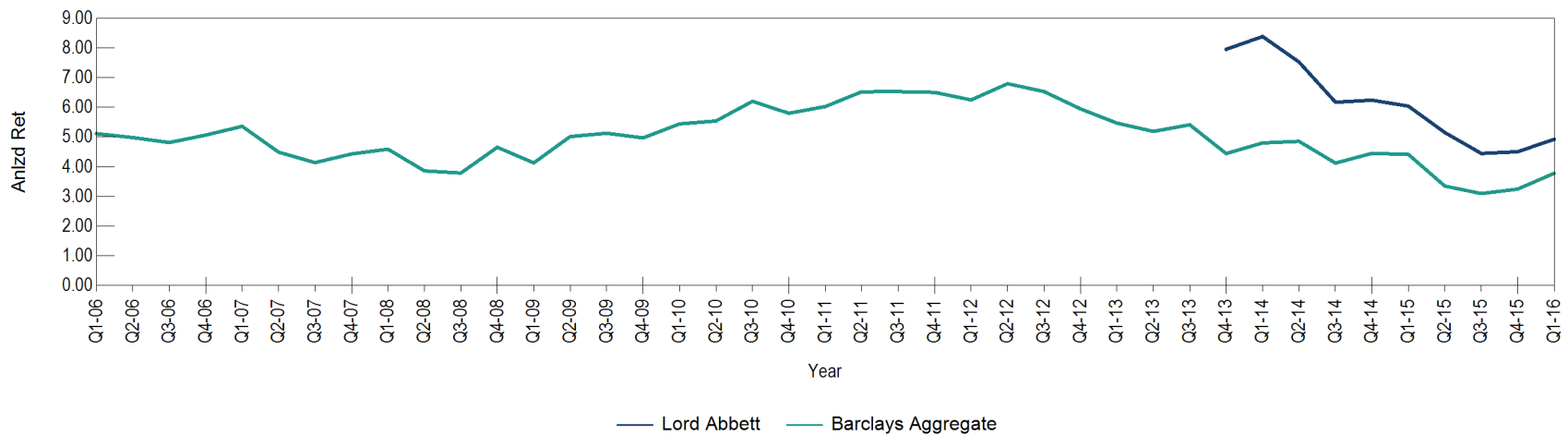


	Return (Rank)												
	Quarter	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011			
5th Percentile	3.6	3.1	3.6	5.4	6.3	1.9	7.7	0.5	9.4	9.2			
25th Percentile	3.2	2.5	3.0	4.6	5.7	1.3	6.5	-0.8	7.0	8.2			
Median	3.0	2.1	2.7	4.2	5.4	0.9	6.0	-1.4	5.9	7.7			
75th Percentile	2.8	1.8	2.5	3.9	5.1	0.5	5.4	-1.9	4.9	7.0			
95th Percentile	2.1	1.2	1.9	3.4	4.4	-0.1	2.9	-2.7	3.7	5.3			
# of Portfolios	186	186	185	183	164	196	213	209	228	213			
● Lord Abbett	3.1 (39)	1.3 (92)	2.8 (36)	4.9 (9)	-- (--)	0.0 (94)	6.7 (18)	-0.6 (18)	8.6 (8)	8.2 (27)			
▲ Barclays Aggregate	3.0 (49)	2.0 (61)	2.5 (74)	3.8 (85)	4.9 (88)	0.6 (75)	6.0 (52)	-2.0 (82)	4.2 (90)	7.8 (46)			

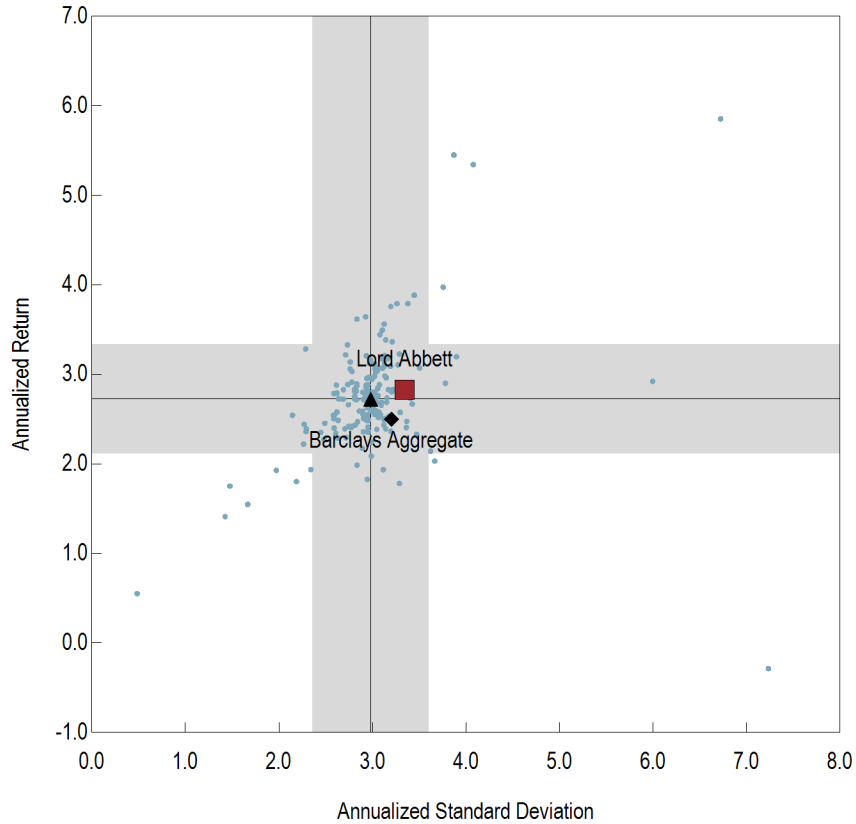
Rolling 3 Year Annualized Return (%)



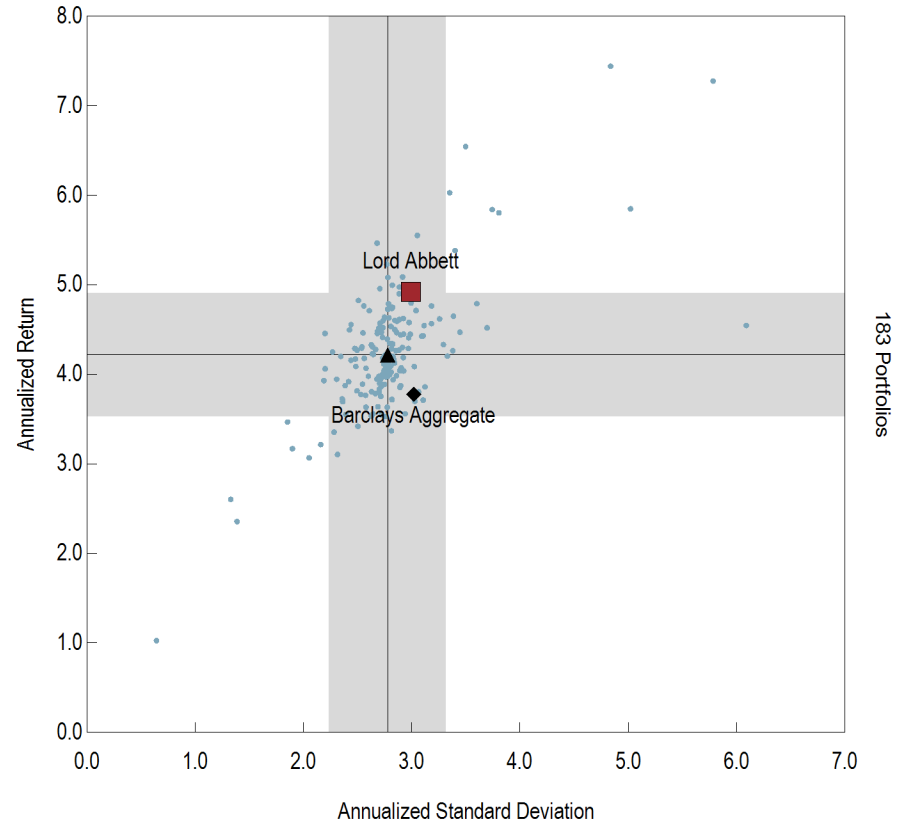
Rolling 5 Year Annualized Return (%)



3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Lord Abbett	2.8%	3.3%	0.8
Barclays Aggregate	2.5%	3.2%	0.8
eA US Core Fixed Inc Gross Median	2.7%	3.0%	0.9

5 Years

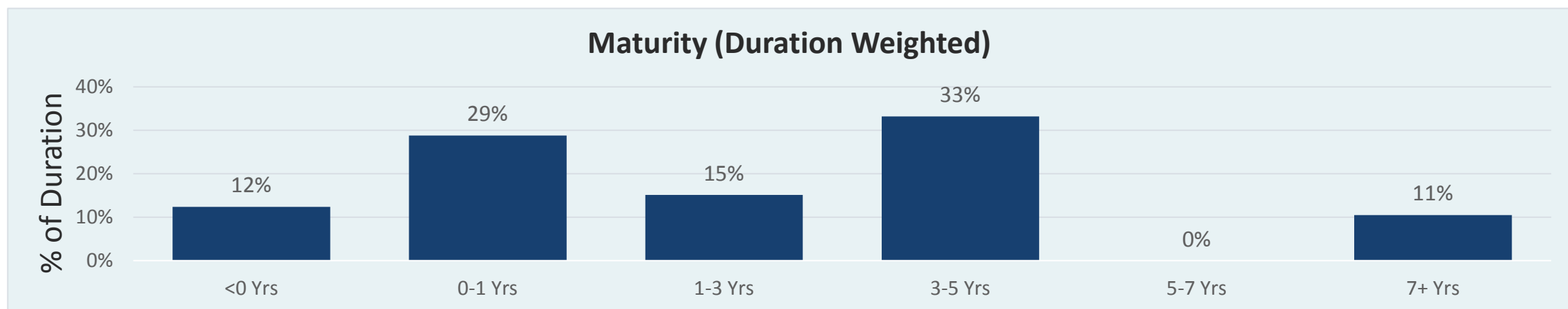
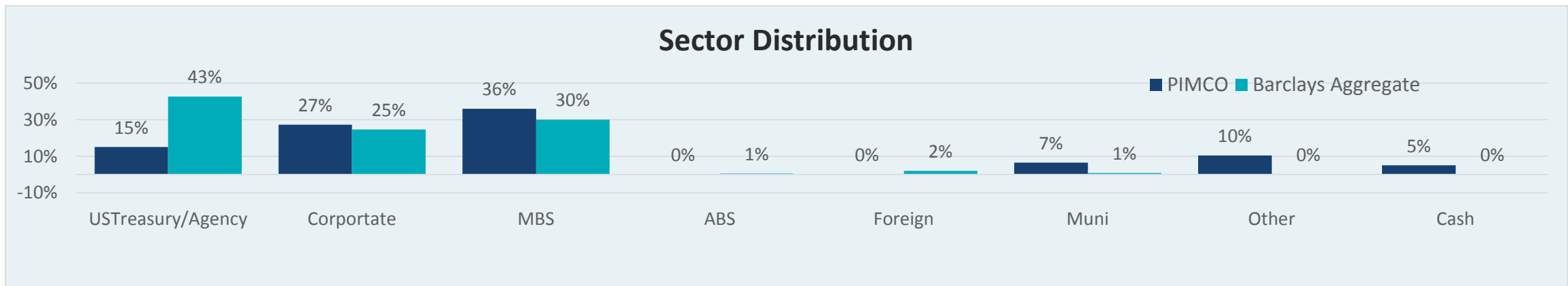
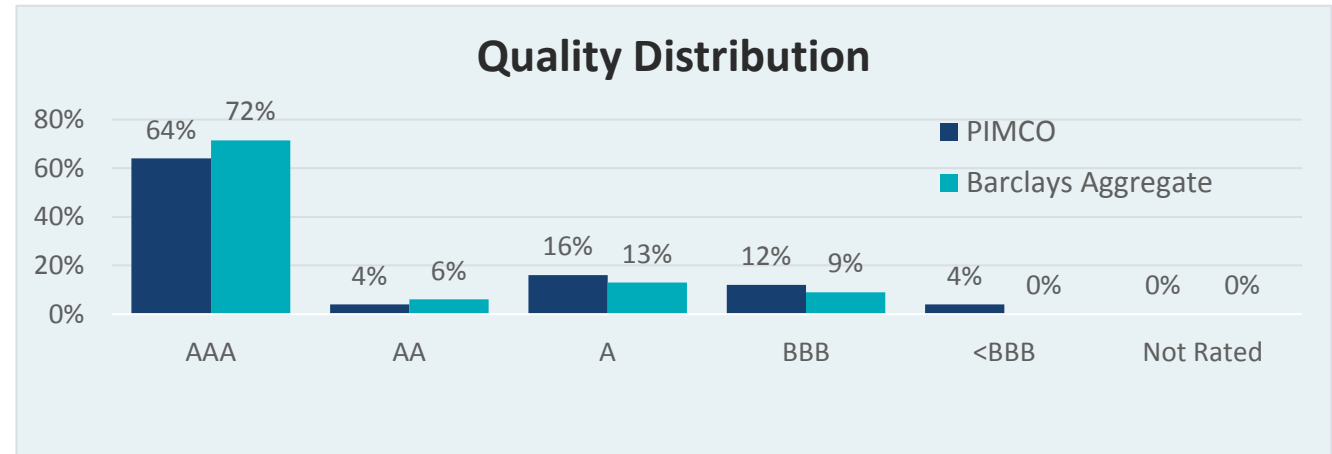
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Lord Abbett	4.9%	3.0%	1.6
Barclays Aggregate	3.8%	3.0%	1.2
eA US Core Fixed Inc Gross Median	4.2%	2.8%	1.5

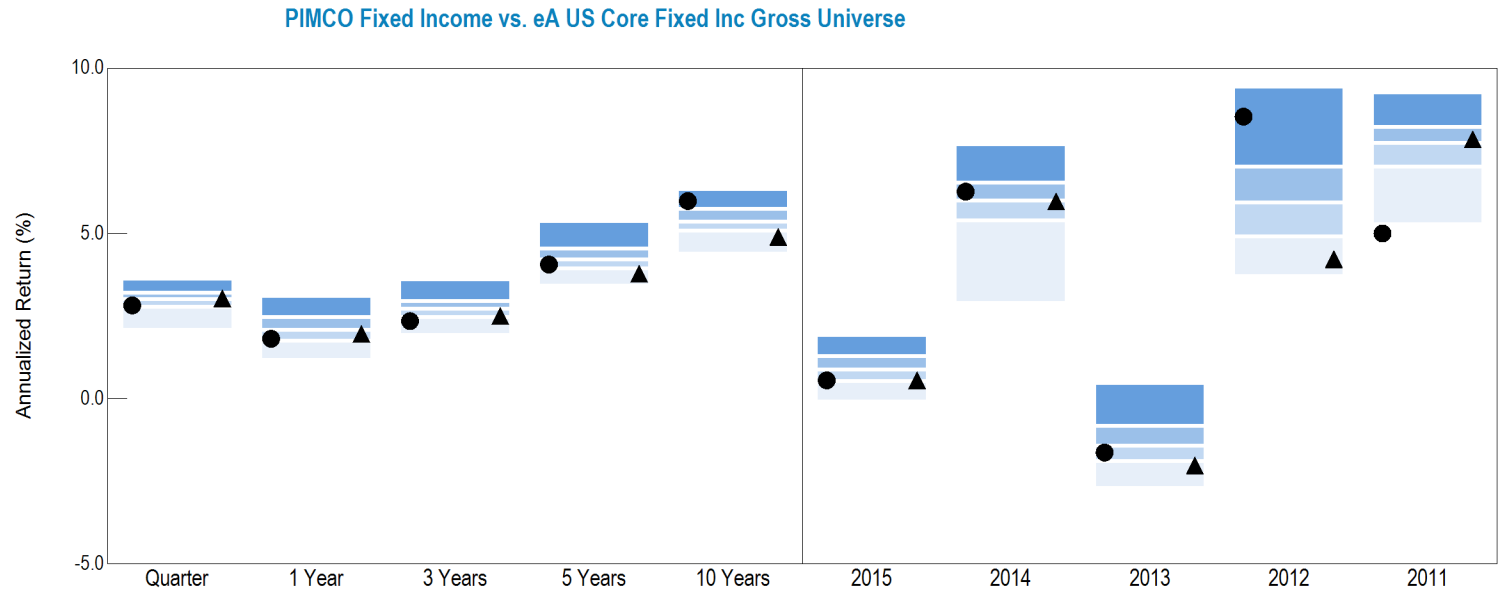
PIMCO Fixed Income Manager Portfolio Overview

Period Ending: March 31, 2016

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

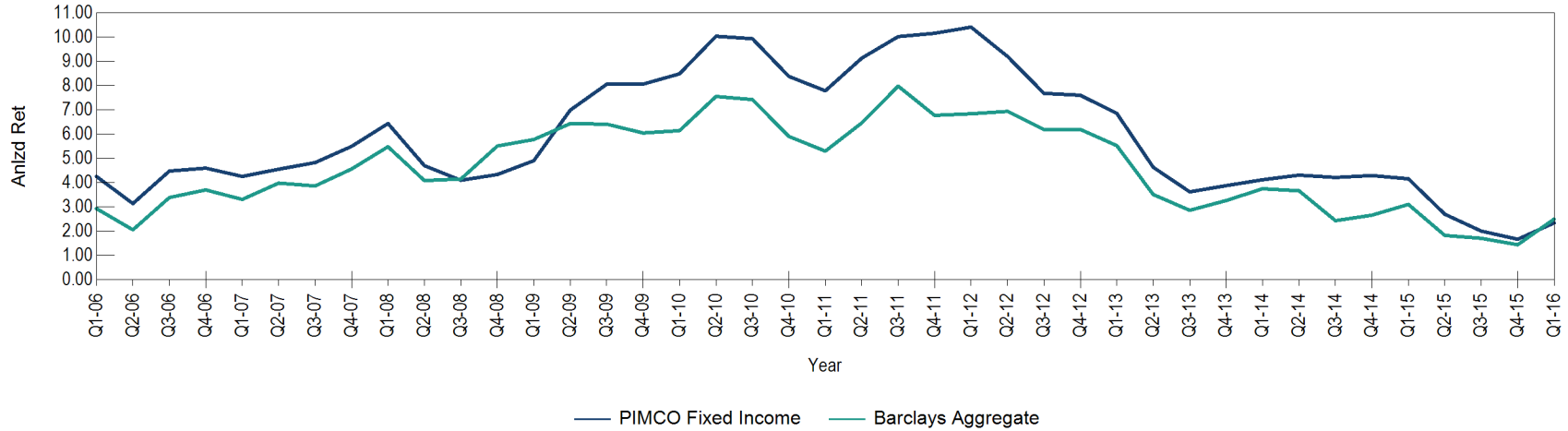
	PIMCO	Barclays Aggregate
Effective Duration	4.99	5.47
Yield to Maturity	2.69	2.07
Average Quality	AA	AA+
Average Coupon	3.65%	3.24%



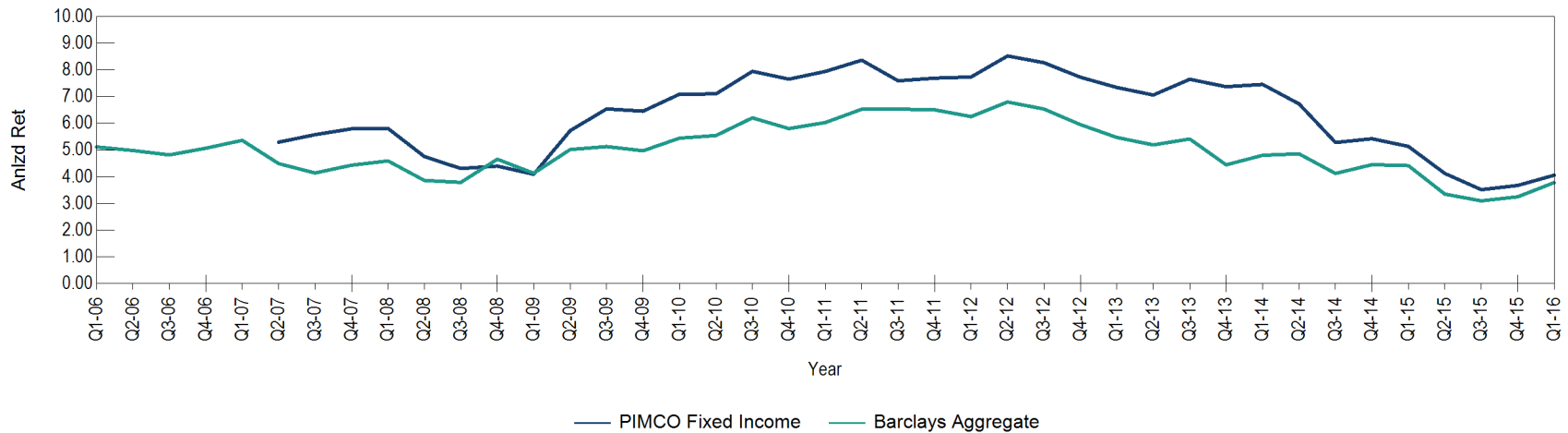


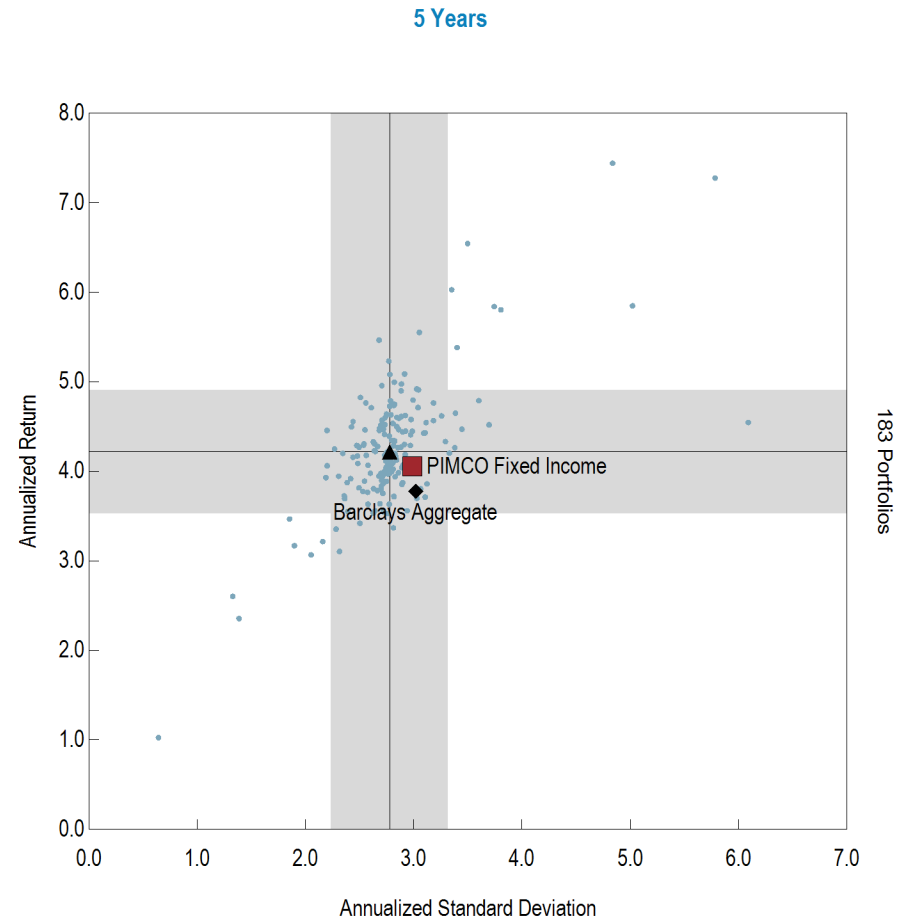
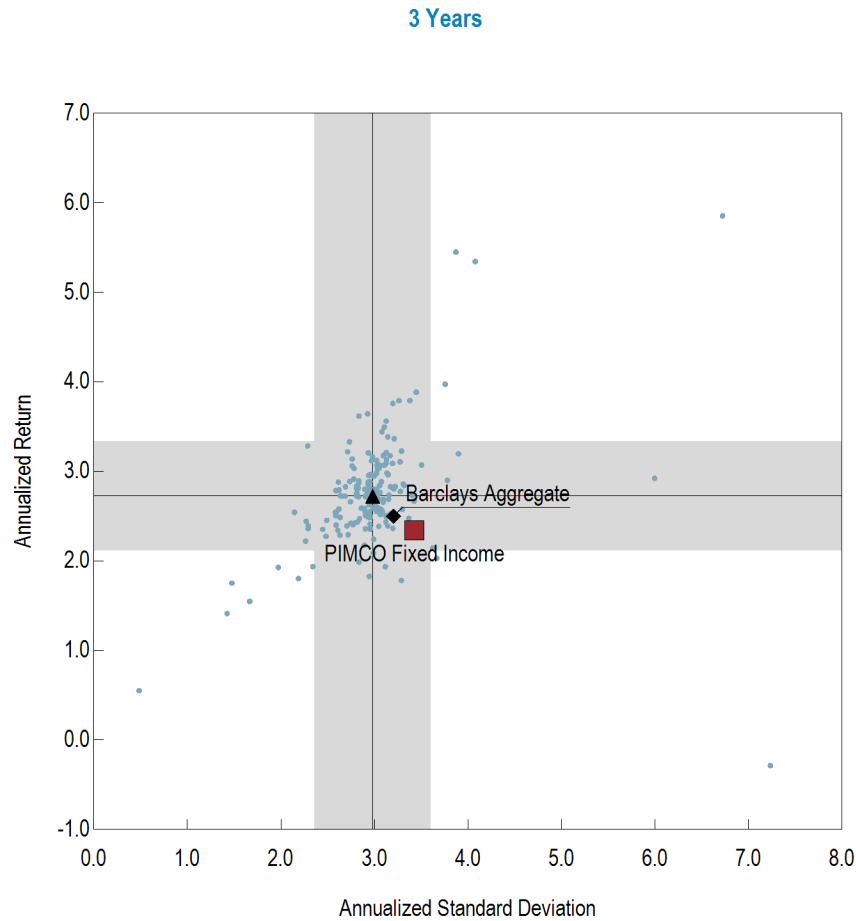
	Return (Rank)										
	Quarter	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011	
5th Percentile	3.6	3.1	3.6	5.4	6.3	1.9	7.7	0.5	9.4	9.2	
25th Percentile	3.2	2.5	3.0	4.6	5.7	1.3	6.5	-0.8	7.0	8.2	
Median	3.0	2.1	2.7	4.2	5.4	0.9	6.0	-1.4	5.9	7.7	
75th Percentile	2.8	1.8	2.5	3.9	5.1	0.5	5.4	-1.9	4.9	7.0	
95th Percentile	2.1	1.2	1.9	3.4	4.4	-0.1	2.9	-2.7	3.7	5.3	
# of Portfolios	186	186	185	183	164	196	213	209	228	213	
● PIMCO Fixed Income	2.8 (72)	1.8 (73)	2.3 (88)	4.1 (65)	6.0 (14)	0.5 (75)	6.3 (34)	-1.6 (61)	8.5 (8)	5.0 (97)	
▲ Barclays Aggregate	3.0 (49)	2.0 (61)	2.5 (74)	3.8 (85)	4.9 (88)	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

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
PIMCO Fixed Income	2.3%	3.4%	0.7
Barclays Aggregate	2.5%	3.2%	0.8
eA US Core Fixed Inc Gross Median	2.7%	3.0%	0.9

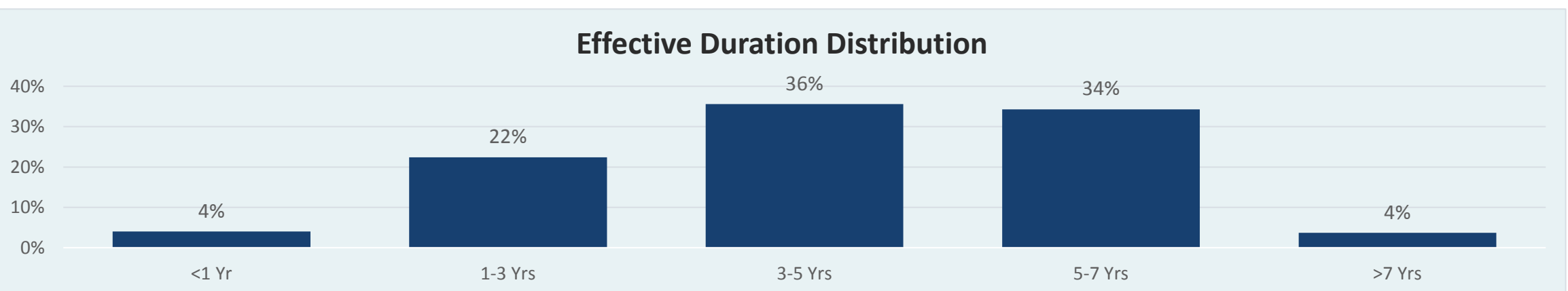
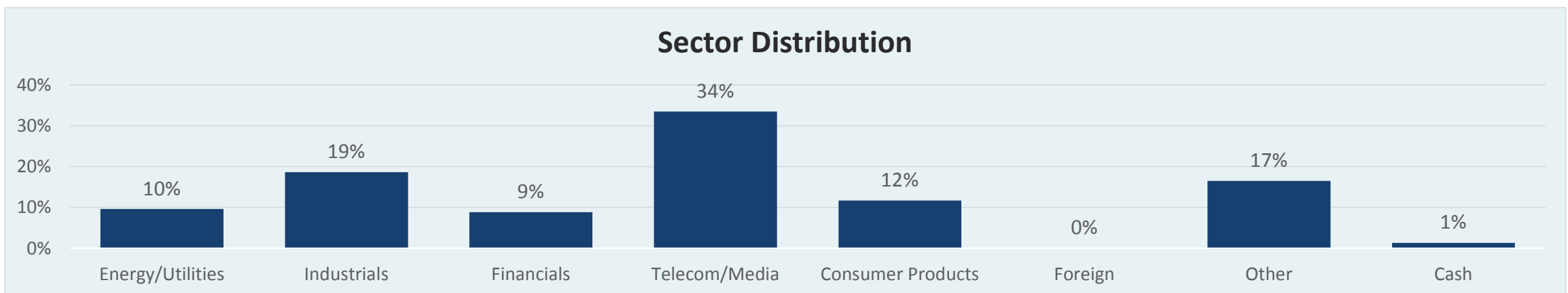
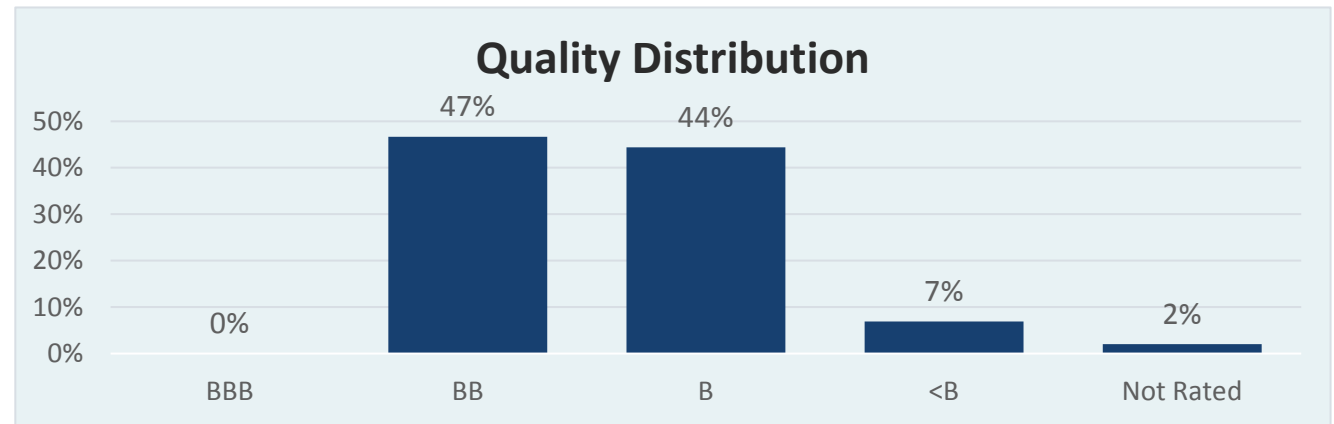
5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
PIMCO Fixed Income	4.1%	3.0%	1.3
Barclays Aggregate	3.8%	3.0%	1.2
eA US Core Fixed Inc Gross Median	4.2%	2.8%	1.5

High Yield Managers

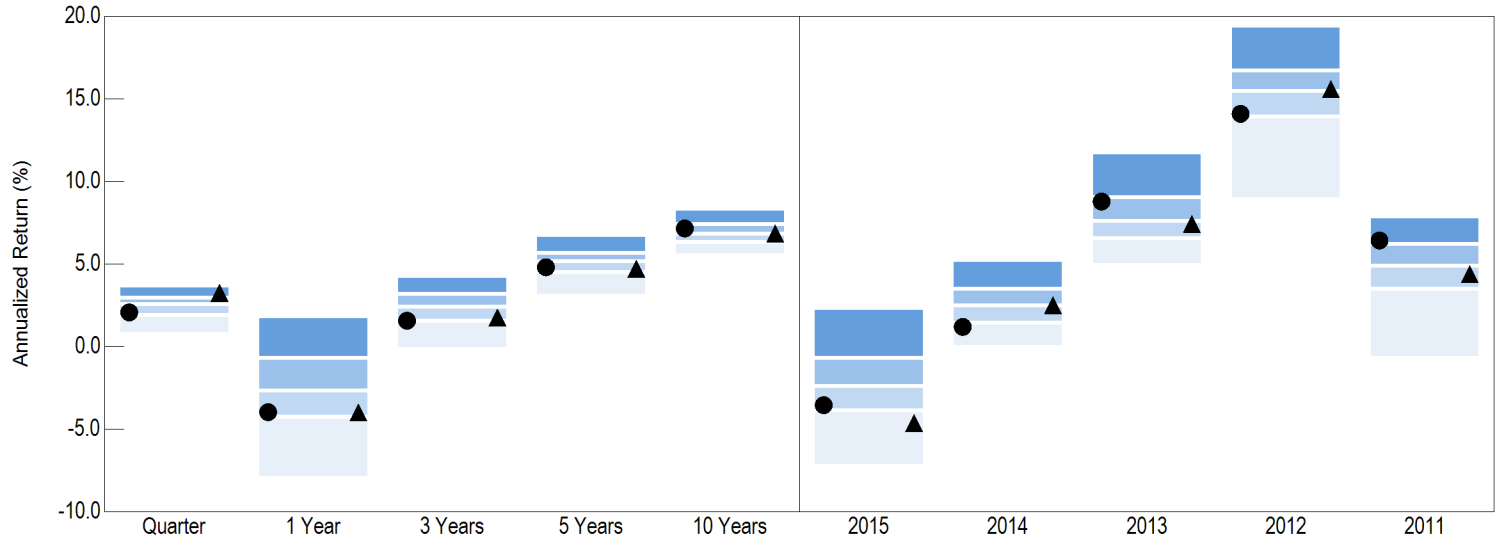
Domestic high yield fixed income portfolio with a focus on security selection. Primary personnel include Douglas Forsyth, Justin Kass, William Stickney, and Michael Yee.

	Allianz	BofA ML HY Master II
Effective Duration	4.2	4.3
Yield to Maturity	8.6	8.6
Average Quality	B1	B1
Average Coupon	7.1%	6.7%



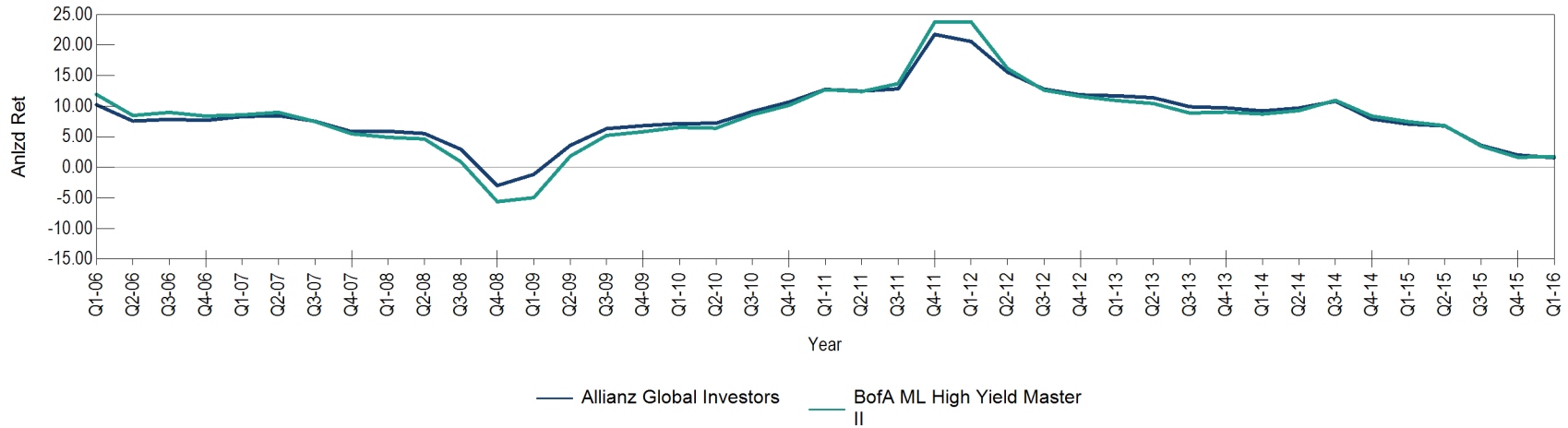
Quality distribution excludes cash.

Allianz Global Investors vs. eA US High Yield Fixed Inc Gross Universe

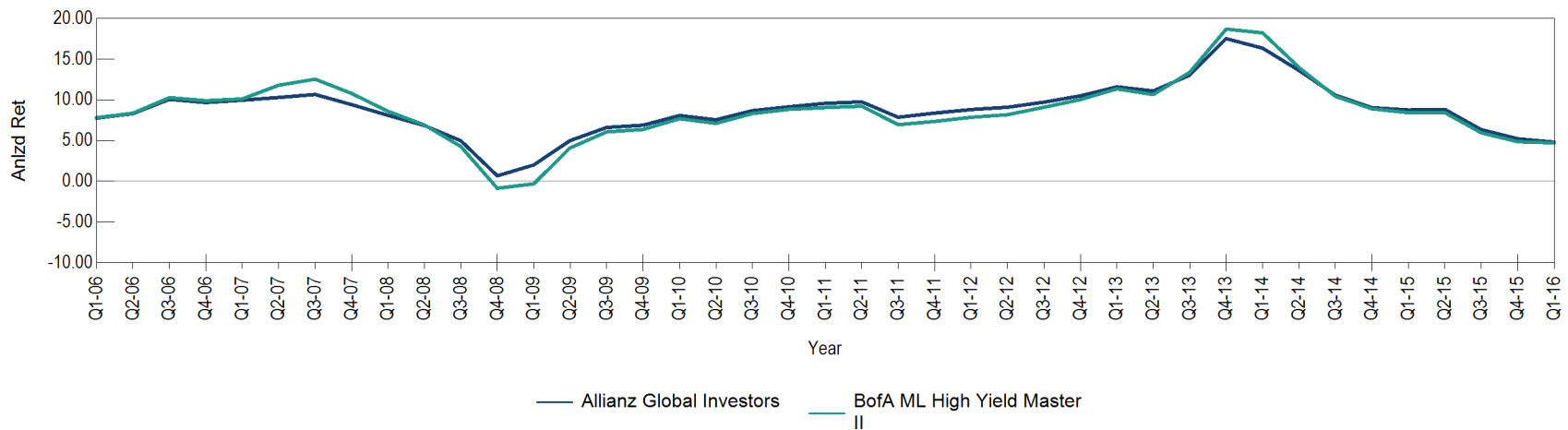


	Quarter	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011
5th Percentile	3.7	1.8	4.2	6.7	8.3	2.3	5.2	11.7	19.4	7.9
25th Percentile	3.0	-0.7	3.2	5.7	7.4	-0.7	3.5	9.1	16.7	6.2
Median	2.6	-2.6	2.4	5.2	6.9	-2.4	2.5	7.6	15.5	4.9
75th Percentile	1.9	-4.2	1.6	4.5	6.3	-3.8	1.5	6.6	14.0	3.5
95th Percentile	0.8	-8.0	-0.1	3.1	5.5	-7.2	0.0	5.0	8.9	-0.7
# of Portfolios	147	147	143	126	102	155	141	130	129	117
● Allianz Global Investors	2.1 (70)	-4.0 (73)	1.6 (76)	4.8 (66)	7.1 (40)	-3.5 (68)	1.2 (83)	8.8 (28)	14.1 (73)	6.4 (21)
▲ BofA ML High Yield Master II	3.2 (15)	-4.0 (73)	1.8 (68)	4.7 (69)	6.8 (52)	-4.6 (83)	2.5 (50)	7.4 (55)	15.6 (47)	4.4 (60)

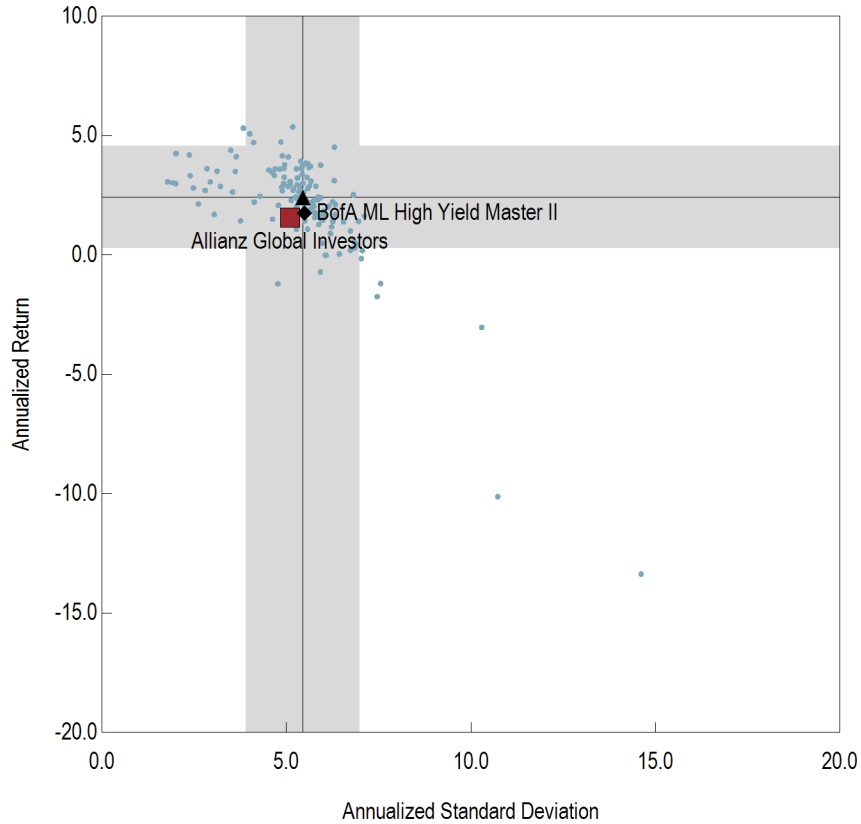
Rolling 3 Year Annualized Return (%)



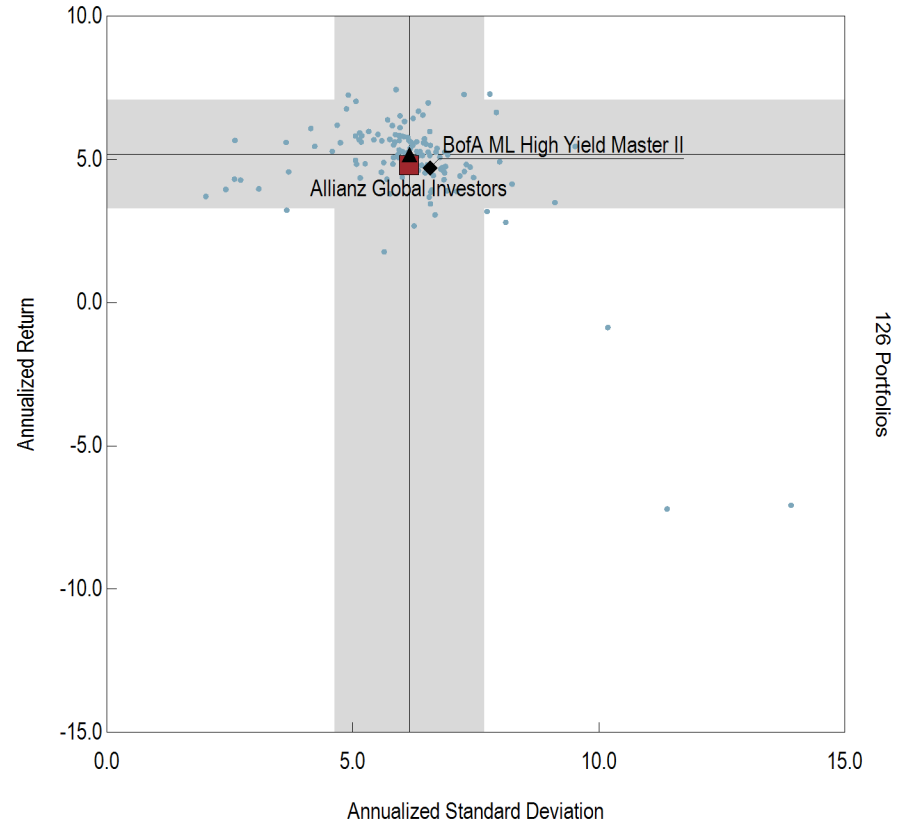
Rolling 5 Year Annualized Return (%)



3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Allianz Global Investors	1.6%	5.1%	0.3
BofA ML High Yield Master II	1.8%	5.5%	0.3
eA US High Yield Fixed Inc Gross Median	2.4%	5.4%	0.5

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Allianz Global Investors	4.8%	6.1%	0.8
BofA ML High Yield Master II	4.7%	6.6%	0.7
eA US High Yield Fixed Inc Gross Median	5.2%	6.2%	0.9

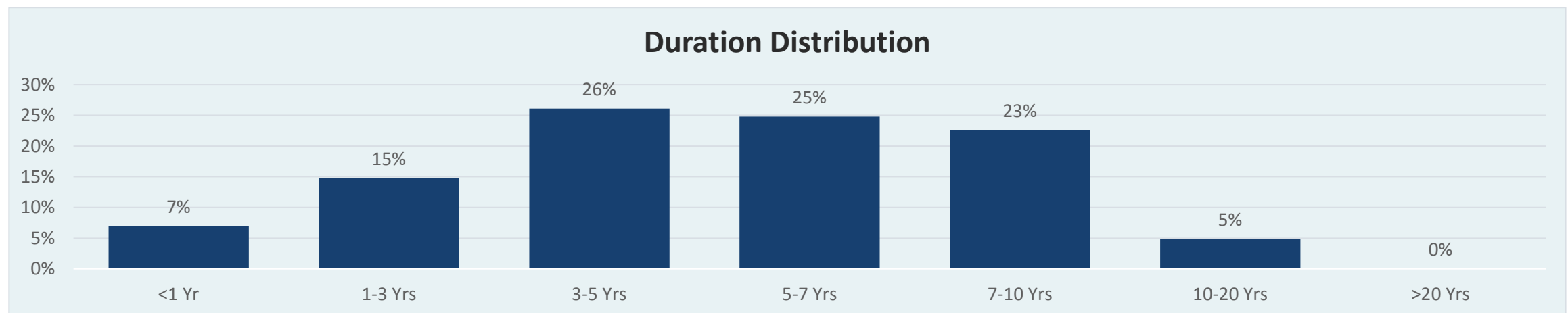
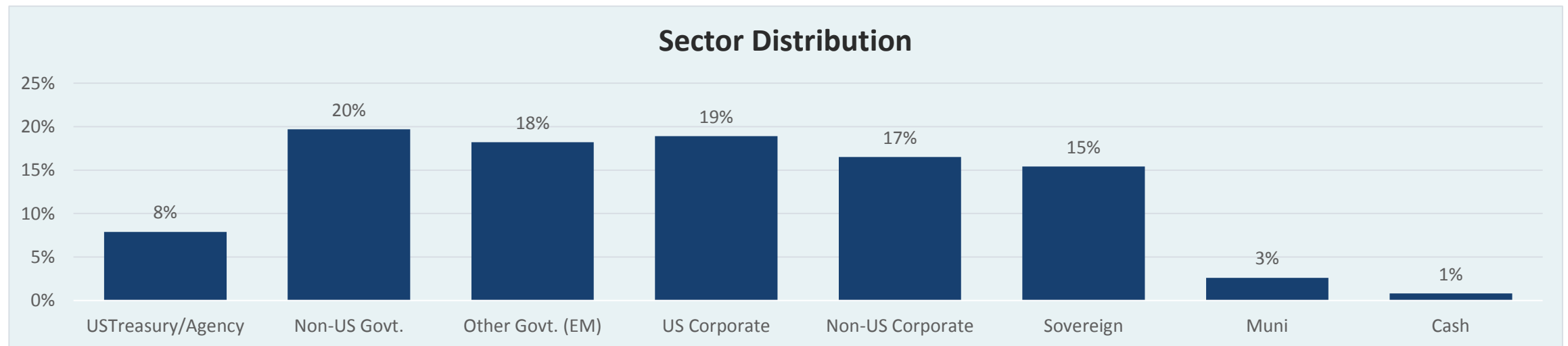
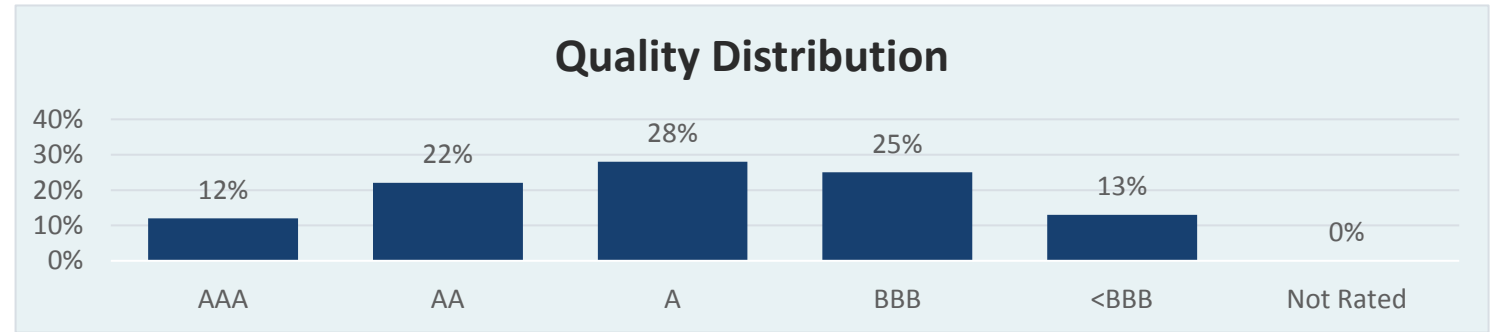
Global Fixed Income Managers

Lazard Manager Portfolio Overview

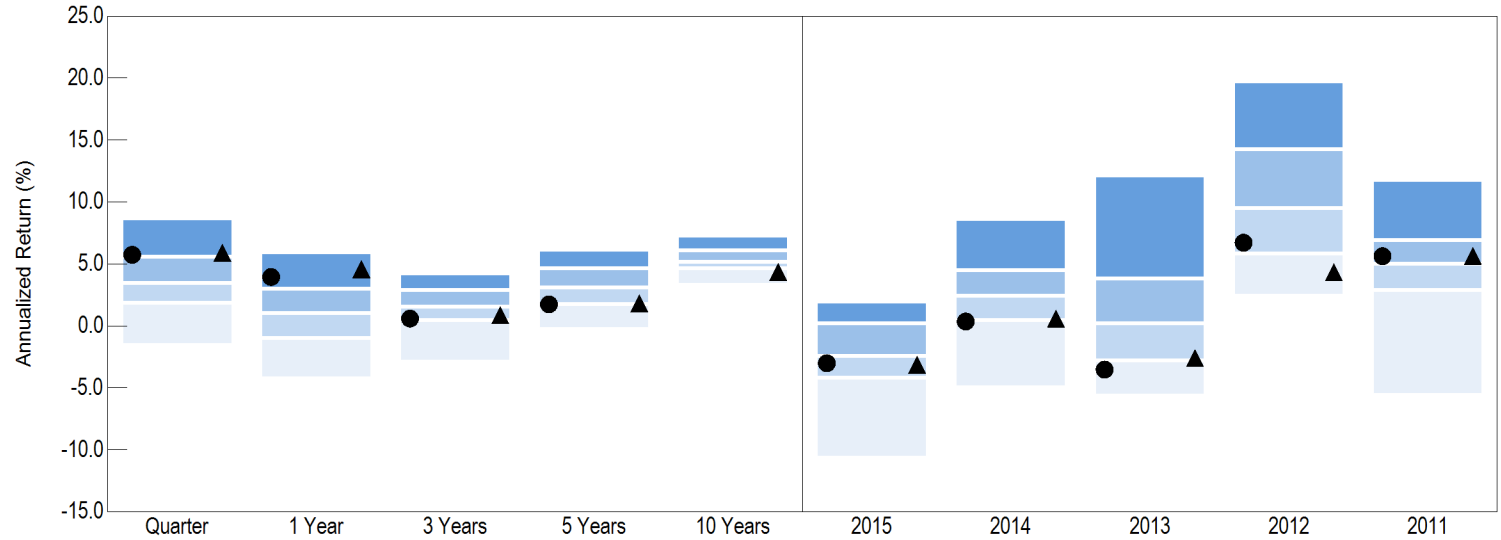
Period Ending: March 31, 2016

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	5.20
Average Maturity	6.8
Average Quality	BBB+

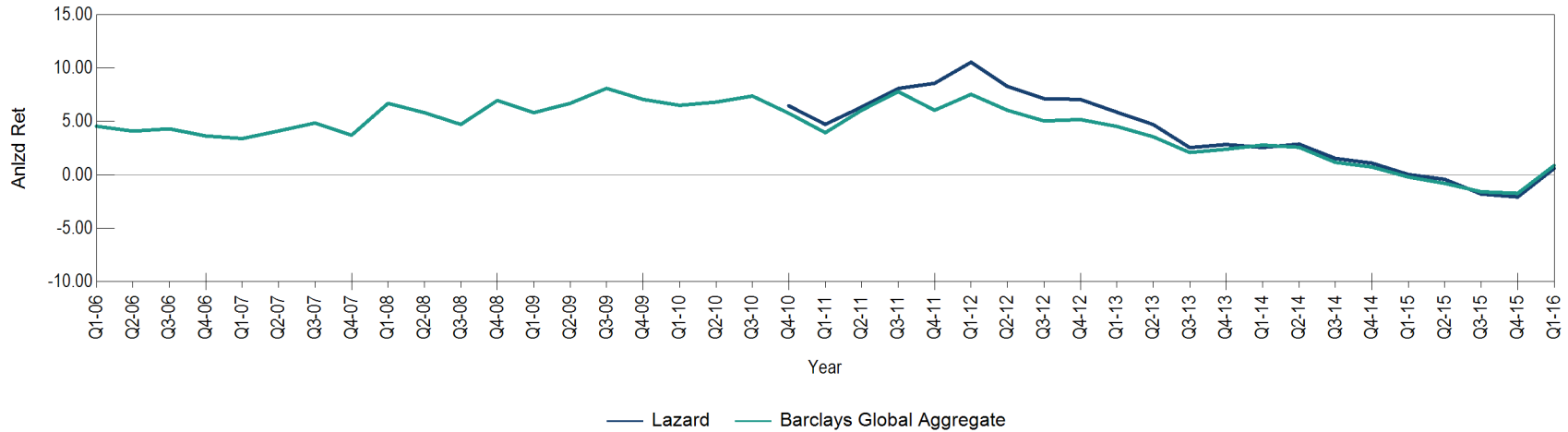


Lazard vs. eA All Global Fixed Inc Gross Universe

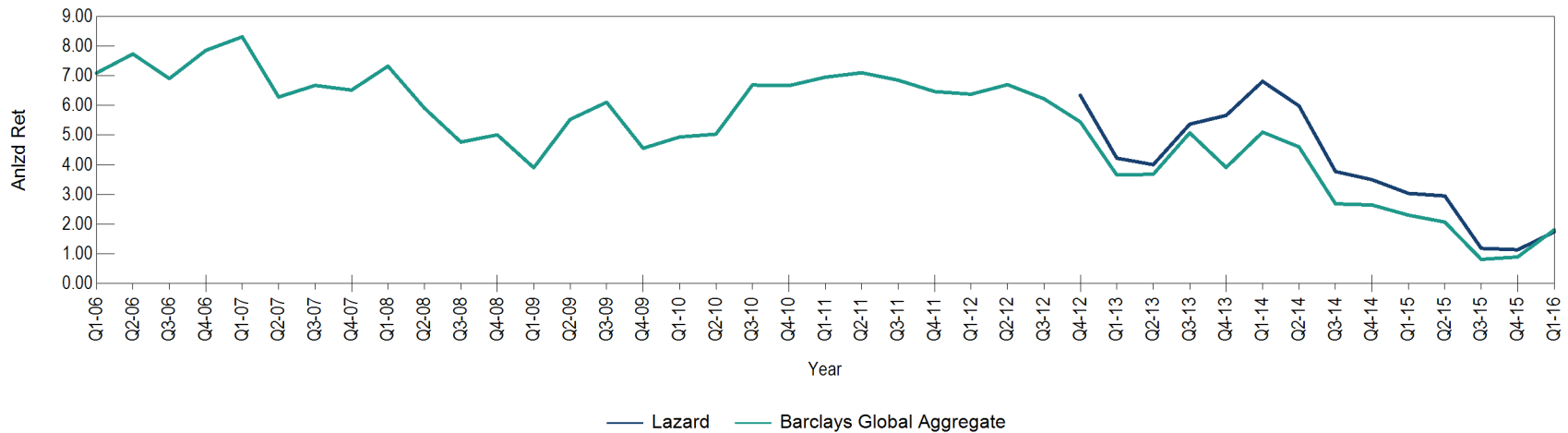


	Return (Rank)										
	Quarter	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011	
5th Percentile	8.6	5.9	4.2	6.1	7.2	1.9	8.6	12.1	19.7	11.7	
25th Percentile	5.6	3.0	2.9	4.7	6.1	0.3	4.5	3.9	14.3	6.9	
Median	3.5	1.1	1.6	3.1	5.2	-2.4	2.5	0.2	9.5	5.0	
75th Percentile	1.9	-0.9	0.5	1.8	4.7	-4.2	0.5	-2.8	5.9	2.9	
95th Percentile	-1.5	-4.2	-2.8	-0.2	3.3	-10.6	-4.9	-5.6	2.5	-5.5	
# of Portfolios	355	354	324	269	145	332	263	225	197	171	
● Lazard	5.7 (24)	3.9 (16)	0.6 (72)	1.7 (76)	-- (--)	-3.0 (59)	0.4 (77)	-3.5 (83)	6.7 (68)	5.6 (40)	
▲ Barclays Global Aggregate	5.9 (22)	4.6 (12)	0.9 (67)	1.8 (75)	4.3 (84)	-3.2 (61)	0.6 (74)	-2.6 (74)	4.3 (87)	5.6 (39)	

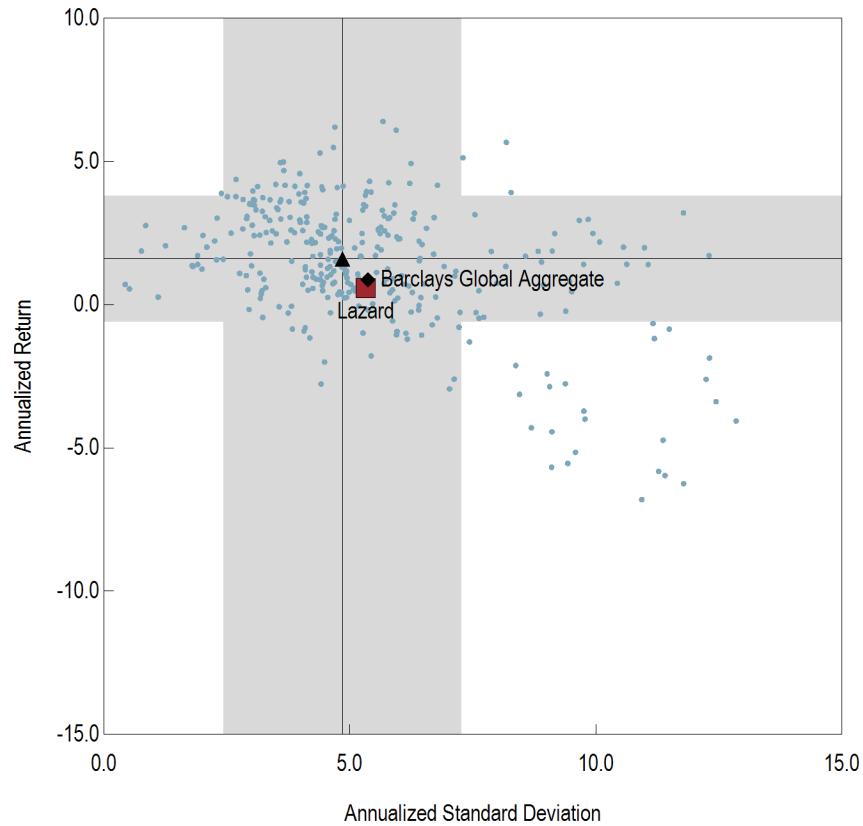
Rolling 3 Year Annualized Return (%)



Rolling 5 Year Annualized Return (%)

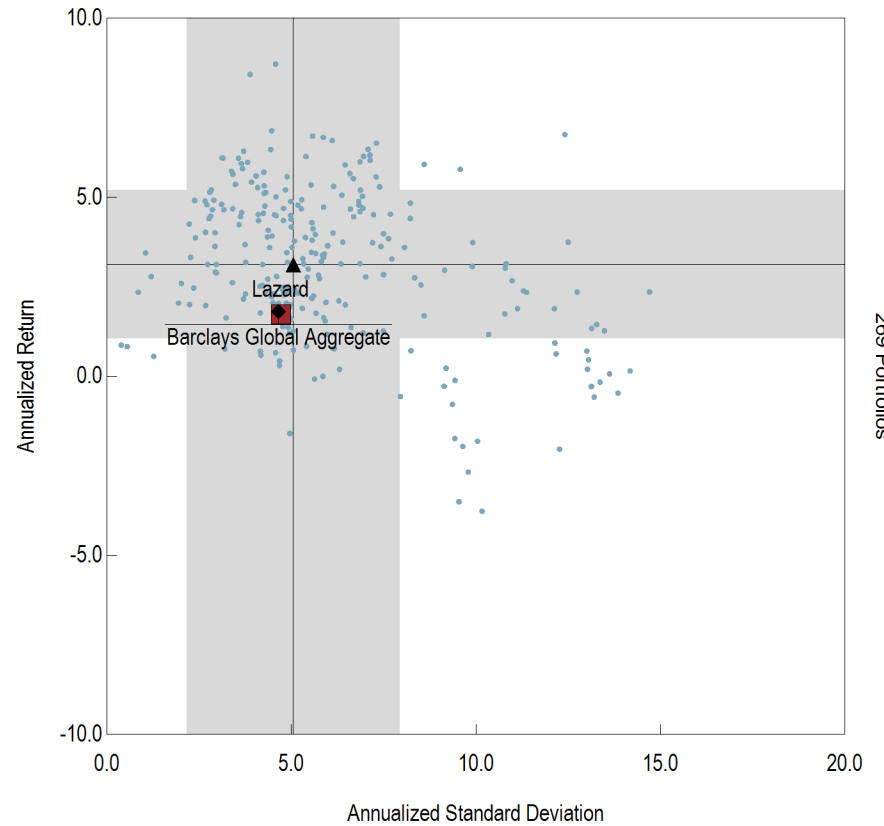


3 Years



324 Portfolios

5 Years



269 Portfolios

3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Lazard	0.6%	5.3%	0.1
Barclays Global Aggregate	0.9%	5.4%	0.2
eA All Global Fixed Inc Gross Median	1.6%	4.8%	0.3

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Lazard	1.7%	4.7%	0.4
Barclays Global Aggregate	1.8%	4.6%	0.4
eA All Global Fixed Inc Gross Median	3.1%	5.1%	0.6

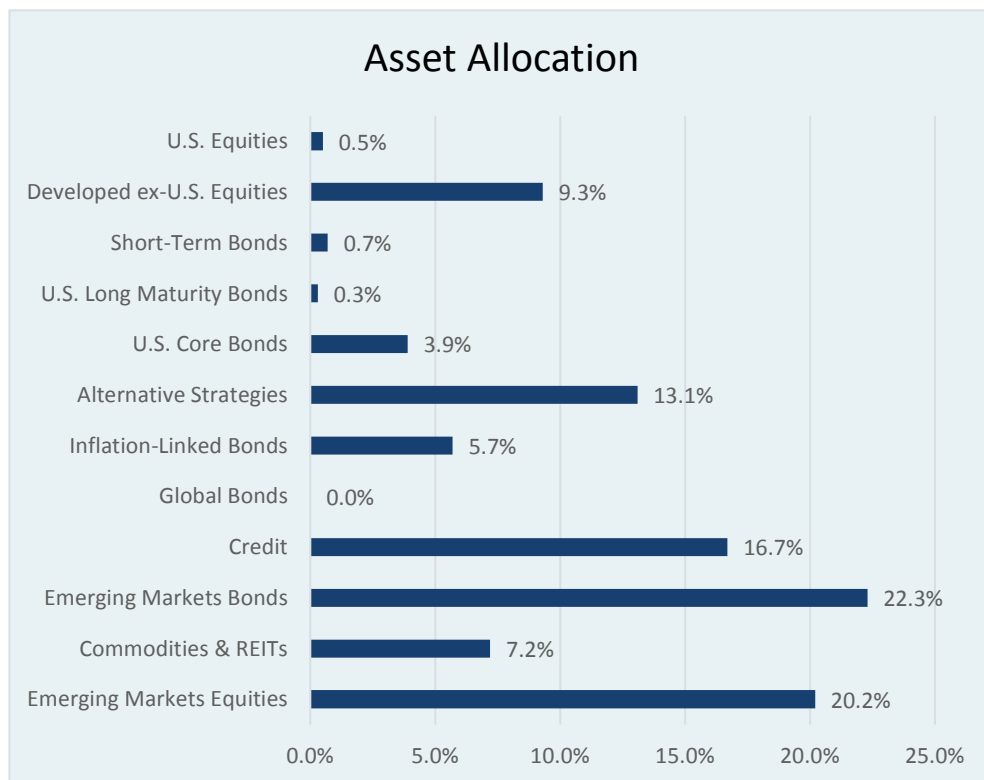
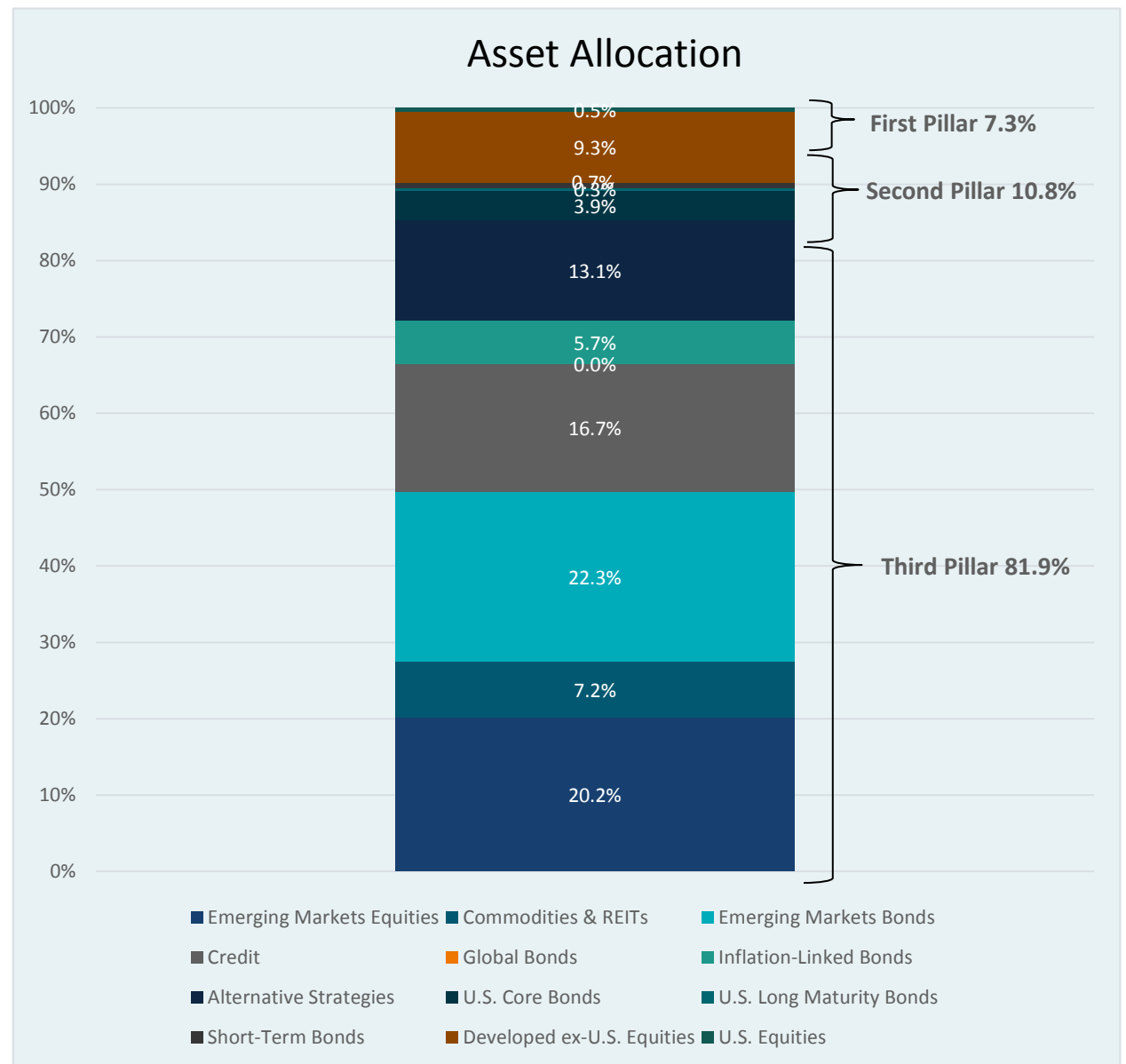
Inflation Hedge Managers

PIMCO All Asset Manager Portfolio Overview

Period Ending: March 31, 2016

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	2.57
Sharpe Ratio (10 year)	0.43
Volatility (10 Year)	9.6%
Equity Beta (10 Year)	0.83

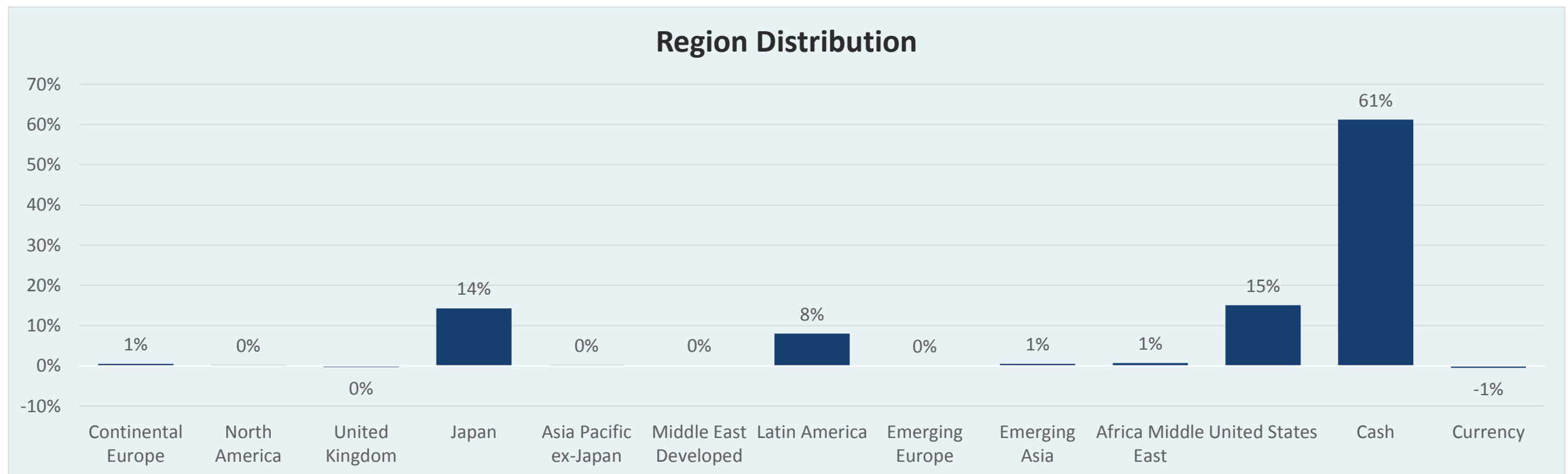
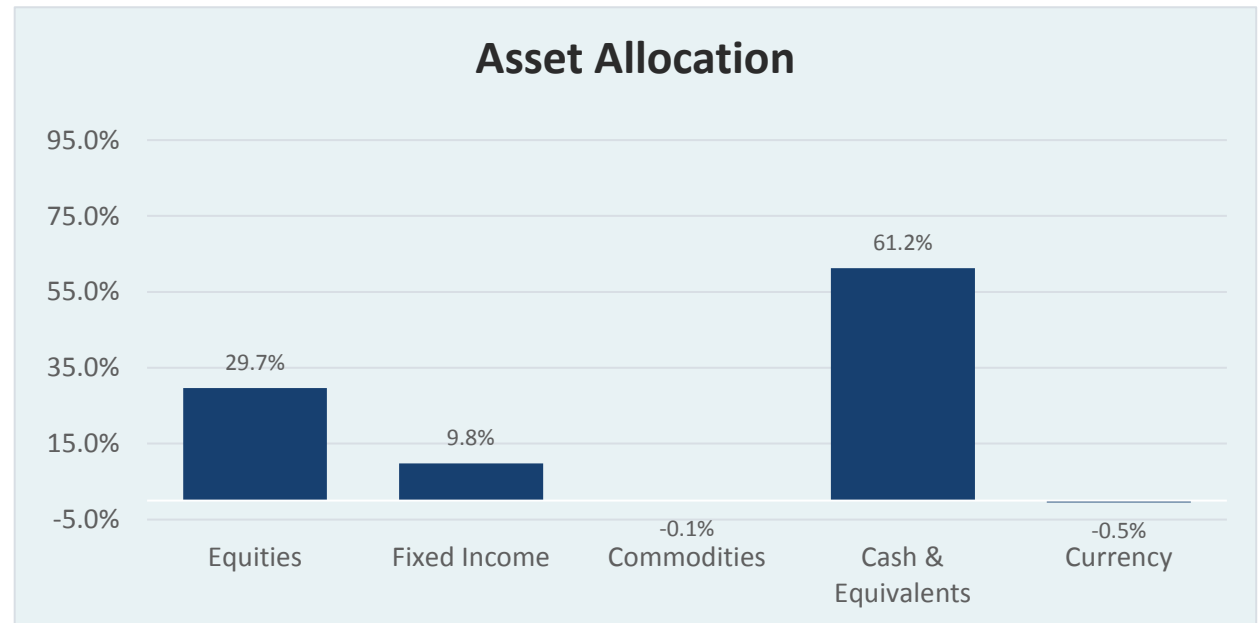


Wellington Total Return Manager Portfolio Overview

Period Ending: March 31, 2016

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	444
Number of Commodity Holdings	87
Effective Duration (Years)	3.80
Average Quality	USTz



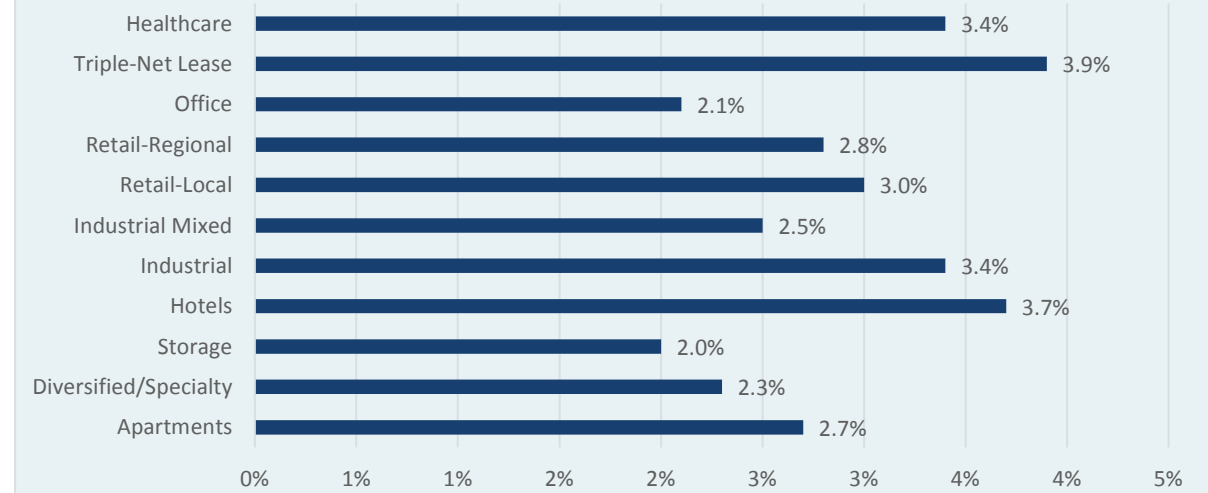
Real Estate Managers

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

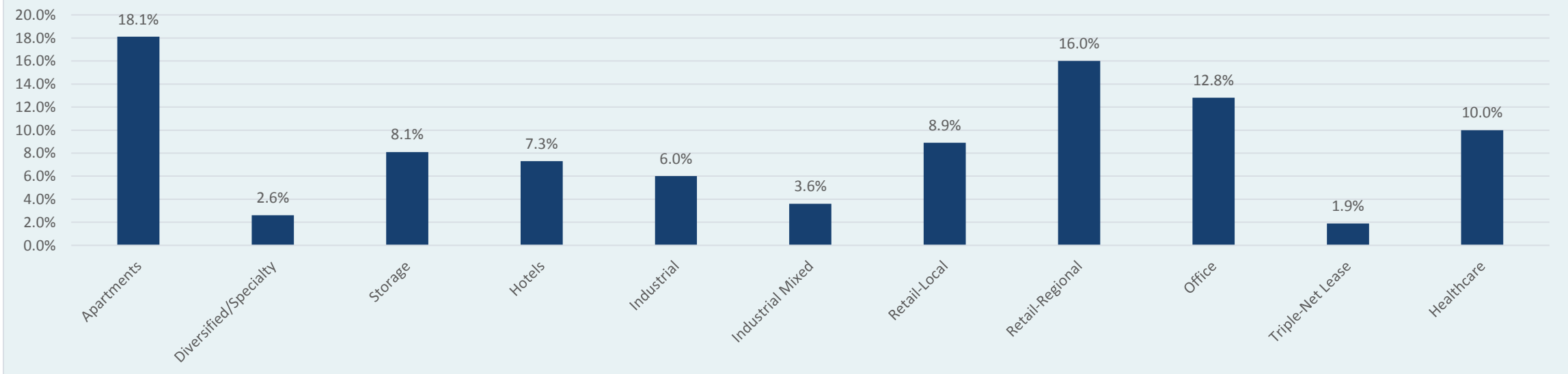
Top Five Holdings

Company	Property Type	Allocation
Simon Property Group	Retail-Regional	12.0%
Welltower Inc.	Healthcare	5.9%
Equity Residential	Apartment	5.6%
Essex Property Trust	Apartment	5.0%
Extra Space Storage, Inc.	Storage	4.3%

Dividend Yield by Property Type



Property Type Allocation



Invesco Global ex-US Real Estate Manager Portfolio Overview

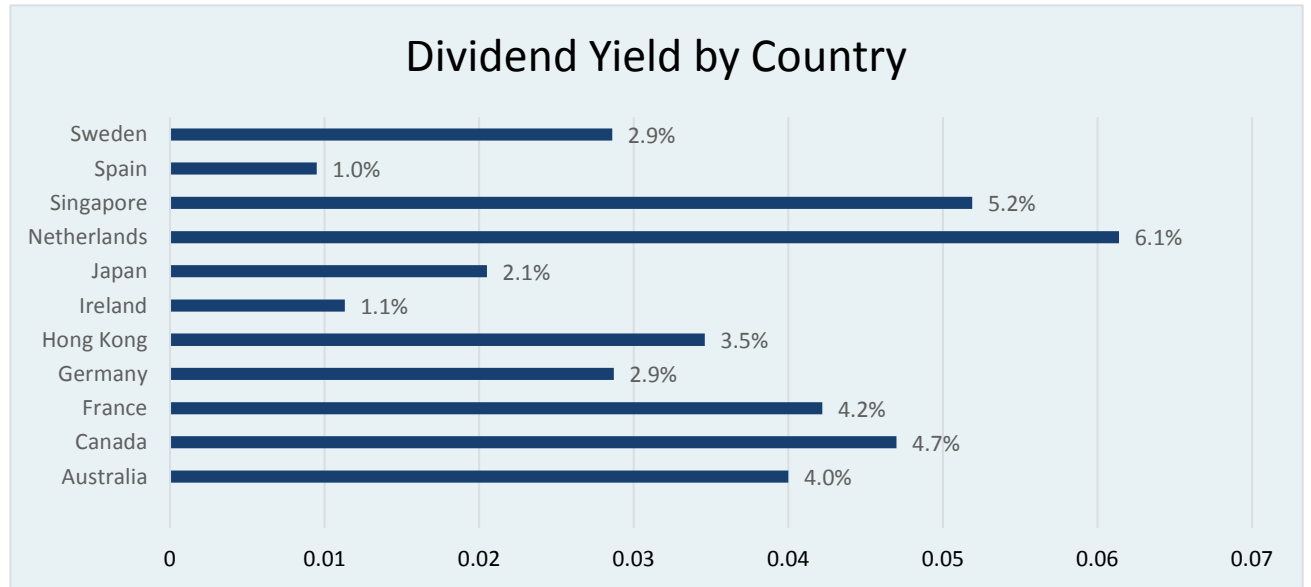
Period Ending: March 31, 2016

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

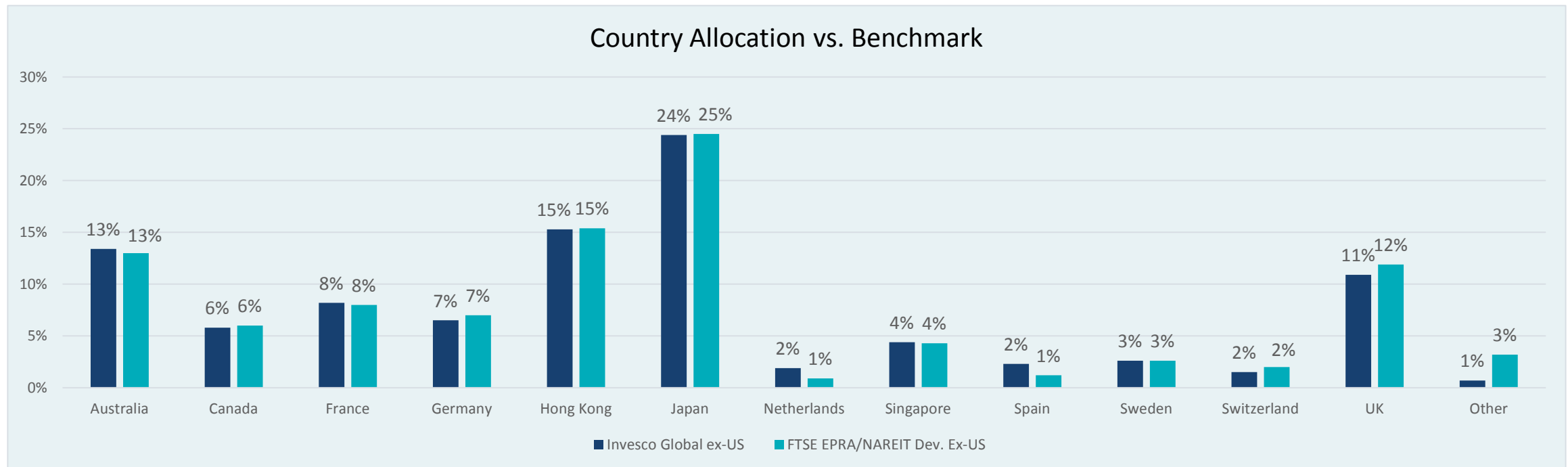
Top Five Holdings

Holding	Country	Allocation
Mitsui Fudosan Co.	Japan	6.4%
Sun Hung Kai Property	Hong Kong	5.1%
Land Securities PLC	United Kingdom	4.3%
Vonovia SE	Germany	3.8%
Vicinity Centers REIT	Australia	3.7%

Dividend Yield by Country



Country Allocation vs. Benchmark



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 III	03/30/2007	Long Wharf
Jackson Square Partners	05/01/2005	State Street	Long Wharf Fund IV	07/03/2013	Long Wharf
Robeco Boston Partners	06/01/1995	State Street	Hearthstone II	06/17/1998	Hearthstone
Emerald Advisors	04/07/2003	State Street	Invesco Real Estate I	02/01/2005	Invesco
Ceredex	11/06/2011	State Street	Invesco Real Estate II	11/26/2007	Invesco
Pyrford	04/25/2014	State Street	Invesco Real Estate III	06/30/2013	Invesco
William Blair	10/29/2010	William Blair	Invesco Real Estate IV	06/30/2014	Invesco
Artisan Partners	10/01/2012	SEI Trust	Oaktree REOF V	12/31/2011	Oaktree
First Eagle	01/18/2011	State Street	Oaktree REOF VI	09/30/2013	Oaktree
Intech Global Low Vol	05/06/2012	State Street	Oaktree REOF VII	04/01/2015	Oaktree
JP Morgan Global Opportunities	01/31/2010	JP Morgan	Siguler Guff DREOF	01/25/2012	Siguler Guff
AFL-CIO	06/30/1991	AFL-CIO	Siguler Guff DREOF II	08/31/2013	Siguler Guff
Goldman Sachs Core Plus	11/01/2008	State Street	Siguler Guff DREOF II Co-Inv	01/27/2016	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
Angelo Gordon Energy Credit Opp	09/24/2015	Angelo Gordon	Pathway 2008	12/26/2008	Pathway
DLJ RECP II	09/24/1999	DLJ	Pathway 6	05/24/2011	Pathway
DLJ RECP III	06/23/2005	DLJ	Pathway 7	02/07/2013	Pathway
DLJ RECP IV	02/11/2008	DLJ	Siguler Guff CCCERA Opps	06/03/2014	Siguler Guff
DLJ RECP V	07/01/2014	DLJ	Cash	-	State Street
Wastewater Opp. Fund	12/08/2015	Wastewater	Aether Real Assets IV	03/16/2016	Aether

Policy & Custom Index Composition

Policy Index (4/1/2012-Current) America High Yield Master II, 4% Barclays Global Aggregate, 13.5% Real Estate Benchmark, 6.8% S&P 500 +4% (Lagged),
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

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: $\text{Portfolio Return} - [\text{Risk-free Rate} + \text{Portfolio Beta} \times (\text{Market Return} - \text{Risk-free Rate})]$.

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: $\text{excess return} / \text{tracking error}$.

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: $\text{Portfolio Excess Return} / \text{Portfolio Standard Deviation}$.

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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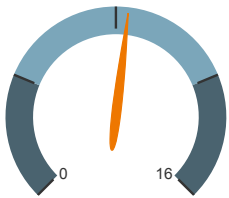
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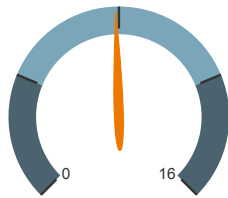
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CCCERA Risk Dashboard

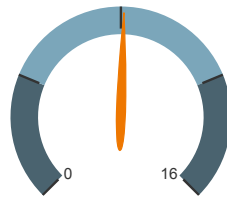
03/31/2016



Portfolio: 8.4%



Policy: 7.9%



Average Pension: 8.1%

2 Portfolio equity beta



Portfolio: 0.55



Policy: 0.50



Average Pension: 0.53

3 Portfolio interest rate risk – Duration



Portfolio: 1.4



Policy: 1.3



Average Pension: 1.7

4 Portfolio credit risk – Spread duration



Portfolio: 0.2



Policy: 0.7

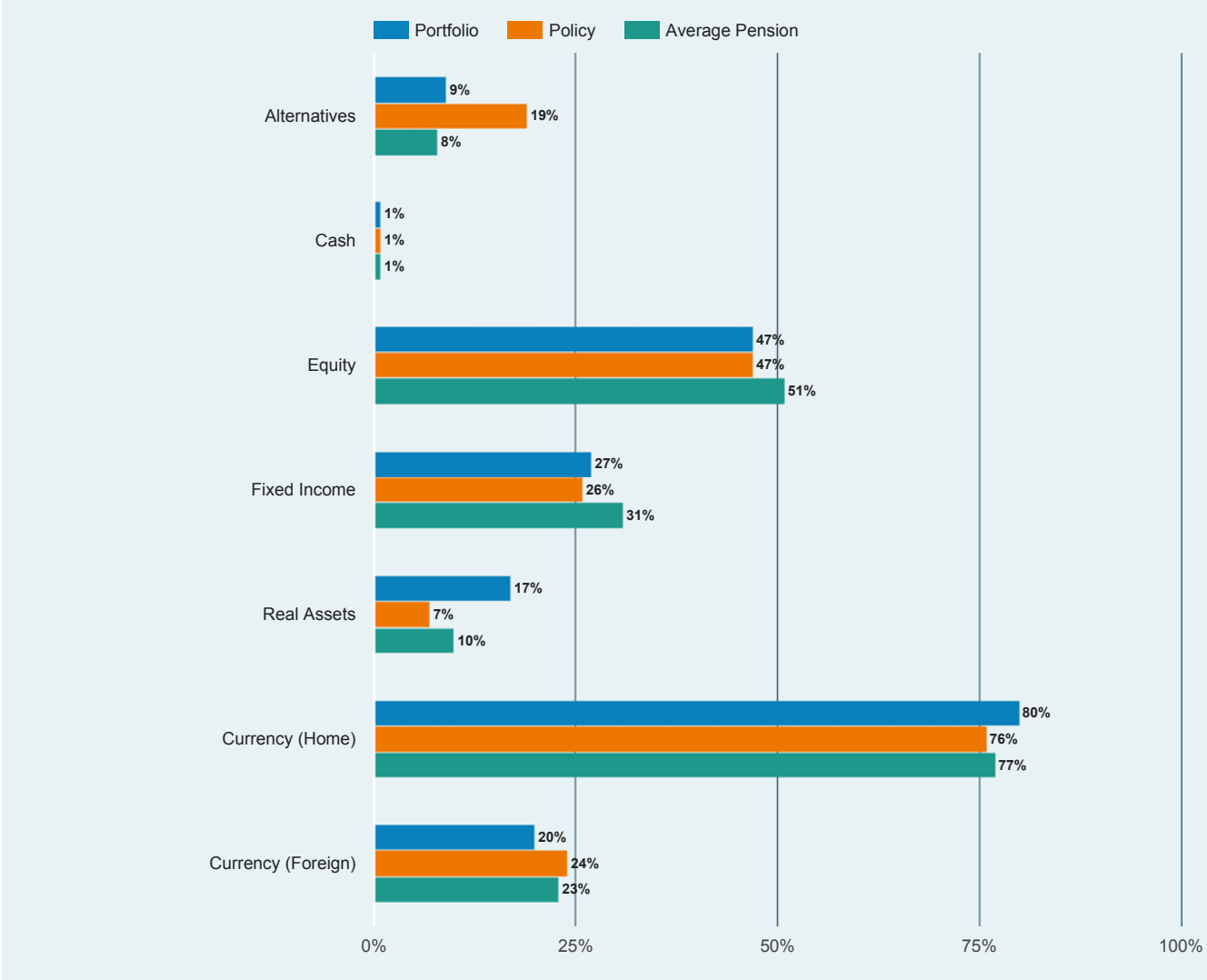


Average Pension: 0.1

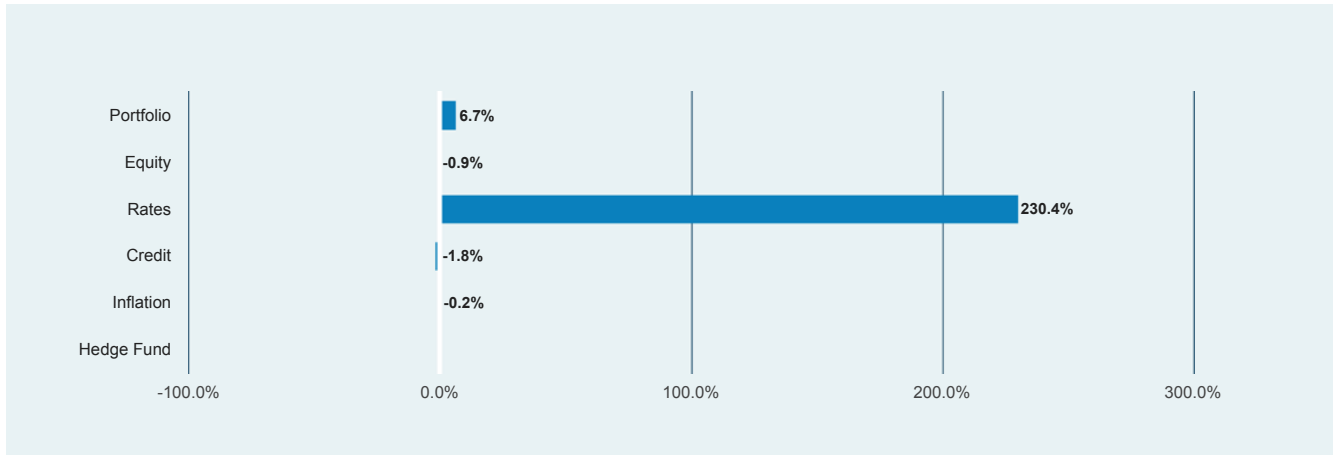
5 Exposure allocation by asset class

		Portfolio	Policy	Average Pension
Alternatives	Private Credit	0.0%	17.0%	
	Opportunistic	0.5%		
	Risk Diversifying Strategies	8.2%	2.0%	8.1%
Alternatives Total		8.7%	19.0%	8.1%
Cash	Cash	1.2%	1.0%	1.1%
Cash Total		1.2%	1.0%	1.1%
Equity	Emerging Markets	0.0%	14.0%	3.4%
	Private Equity	0.0%	17.0%	6.0%
	International Large	11.2%	10.0%	
	Global Equity	12.6%		15.1%
	Large Cap US Equity	22.7%	6.0%	26.1%
Equity Total		46.5%	47.0%	50.6%
Fixed Income	Short-term Gov/Credit	0.0%	24.0%	2.4%
	US Treasury	0.0%	2.0%	
	Global Bonds	3.4%		5.8%
	High Yield Fixed	4.5%		
	US Bonds	19.1%		22.5%
Fixed Income Total		27.0%	26.0%	30.7%
Real Assets	Commodities	0.0%		1.1%
	Real Assets	4.9%		1.1%
	Real Estate	11.7%	7.0%	7.4%
Real Assets Total		16.6%	7.0%	9.5%
Total Portfolio		100%	100%	100%

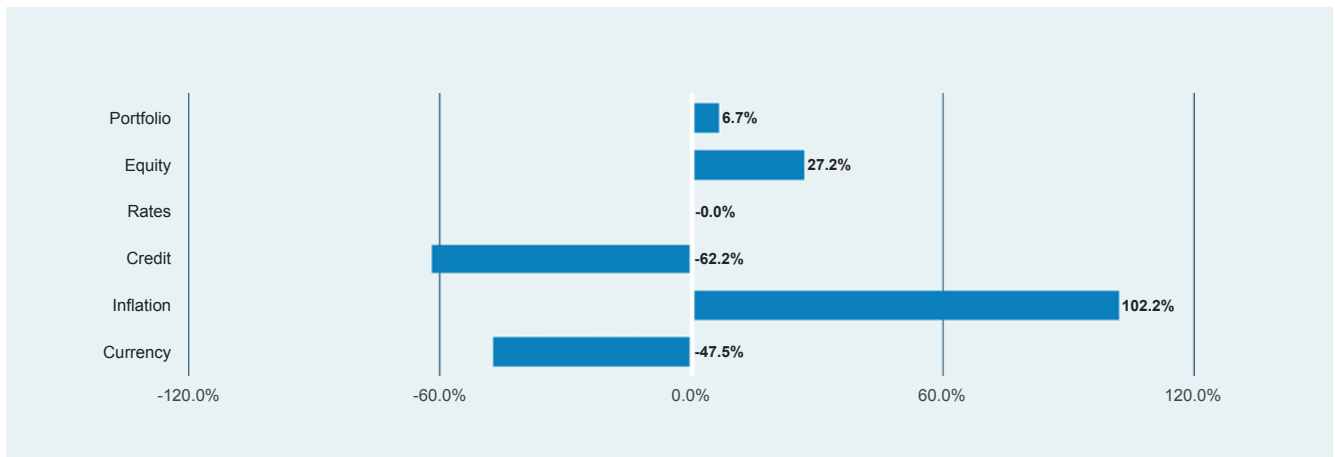
6 Exposure allocation



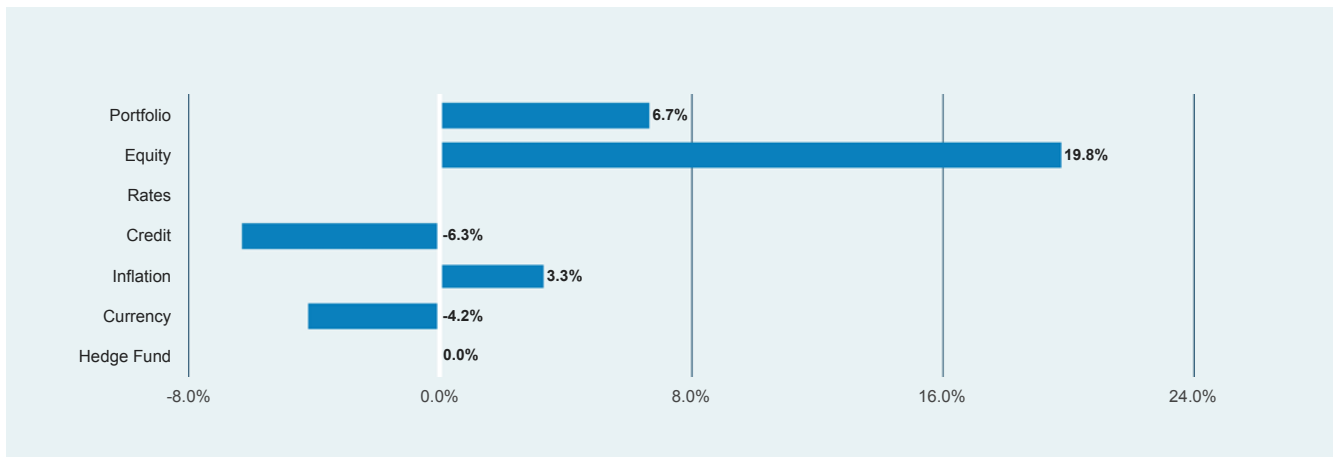
7 Relative risk vs target by bucket



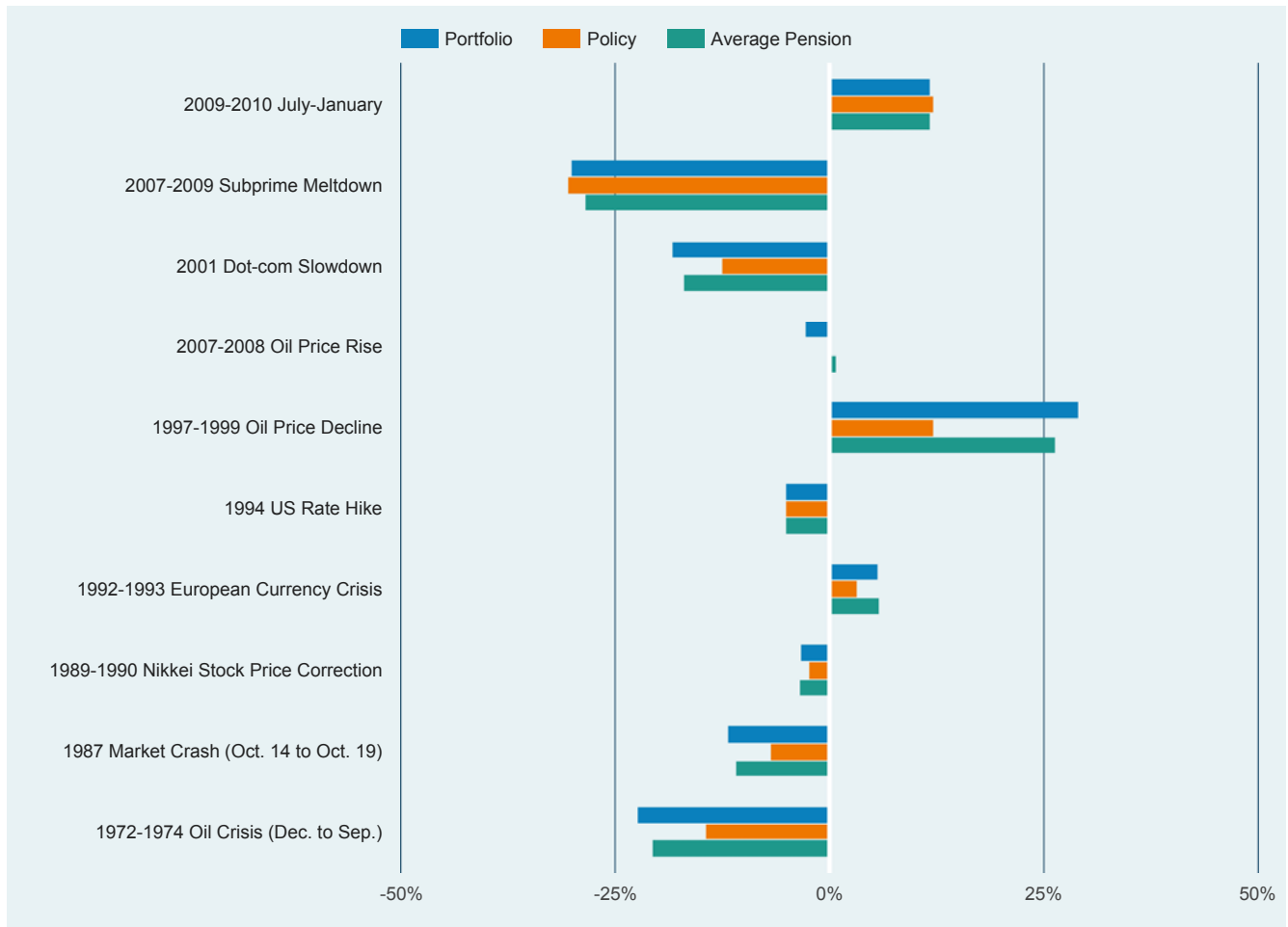
8 Relative risk vs target by risk factor



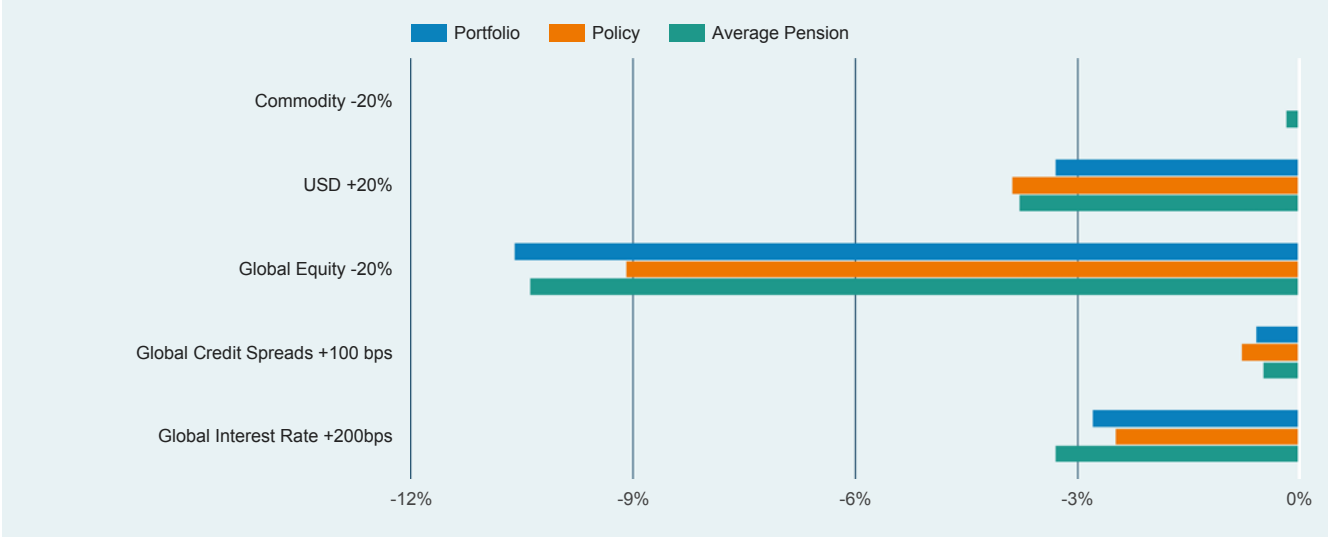
9 Risk factor weight relative to target



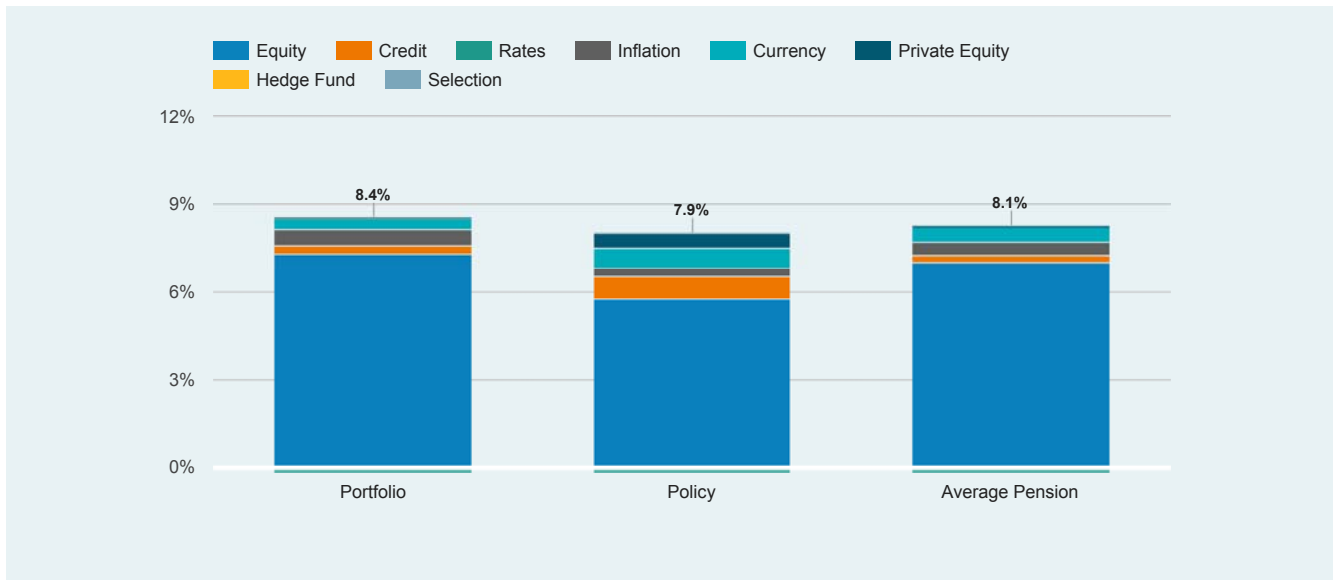
10 Tail risk – Scenario analysis



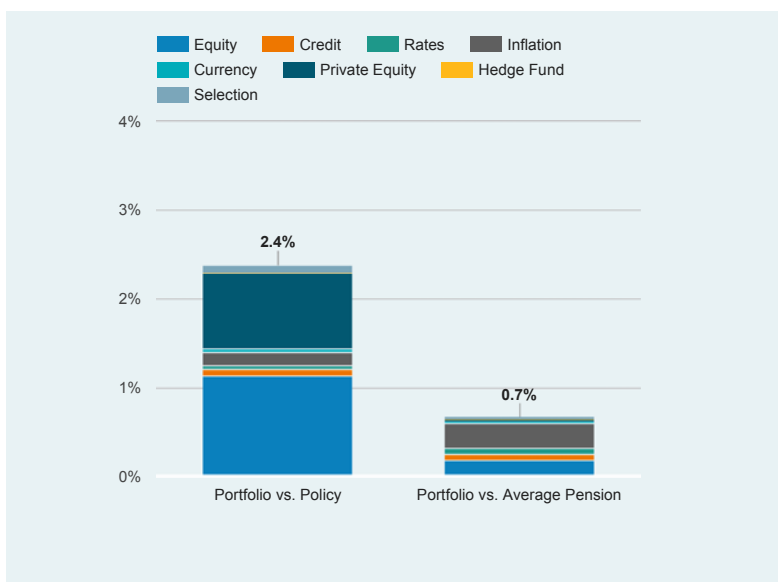
11 Tail risk – Stress tests



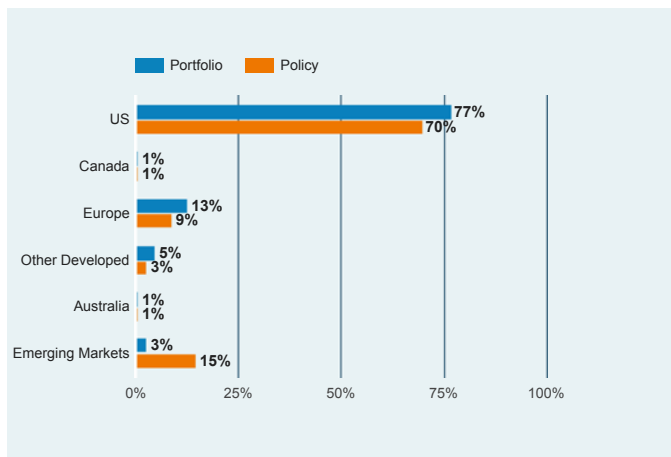
12 Risk contribution by risk factor



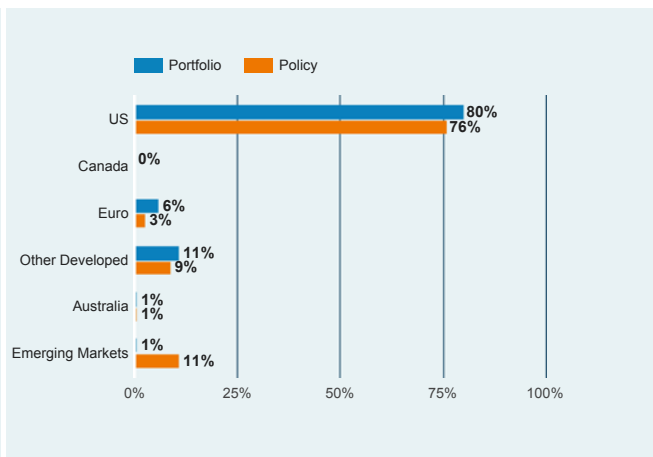
13 Active risk contribution by risk factor



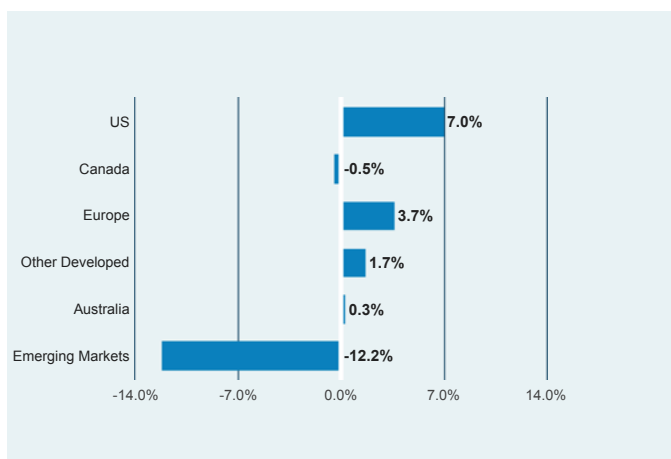
14 Geographic exposure



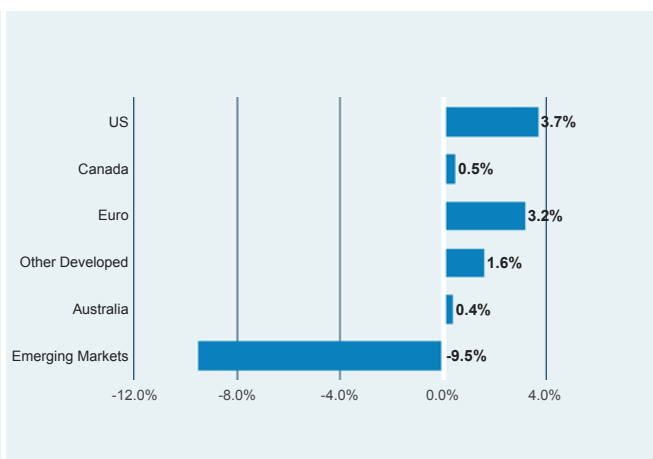
15 Currency exposure



16 Net geographic exposure



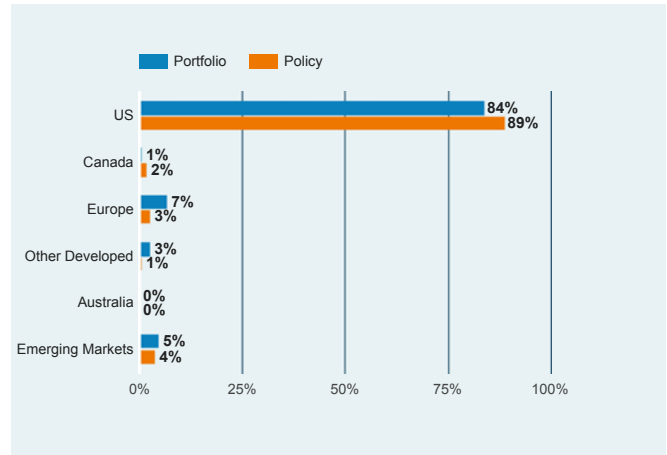
17 Net currency exposure



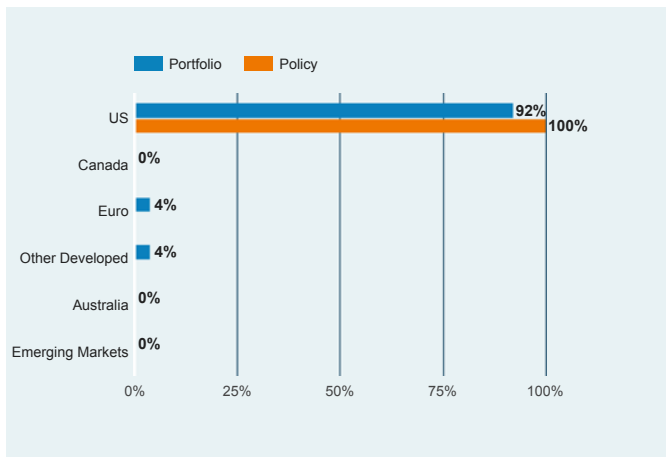
18 Interest rate bucket

	Portfolio	Policy	Difference
Duration	5.4	2.3	3.2
Yield to Maturity	2.5%	1.2%	1.3%
Wt. Avg. Rating	Aa1 / Aa2	Aa1 / Aa2	

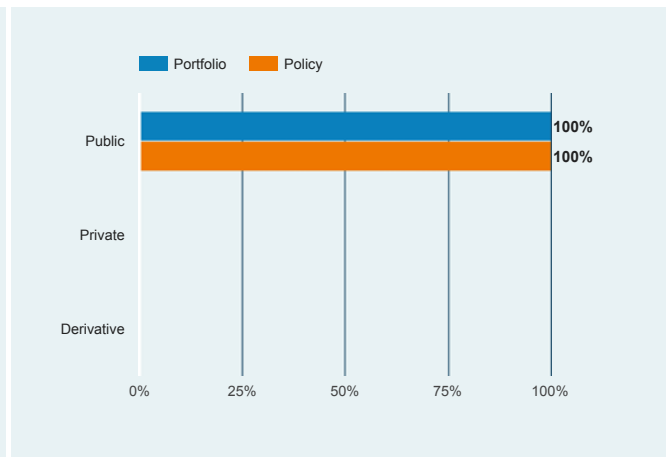
19 Rates bucket – Geographic exposure



20 Rates bucket – Currency exposure



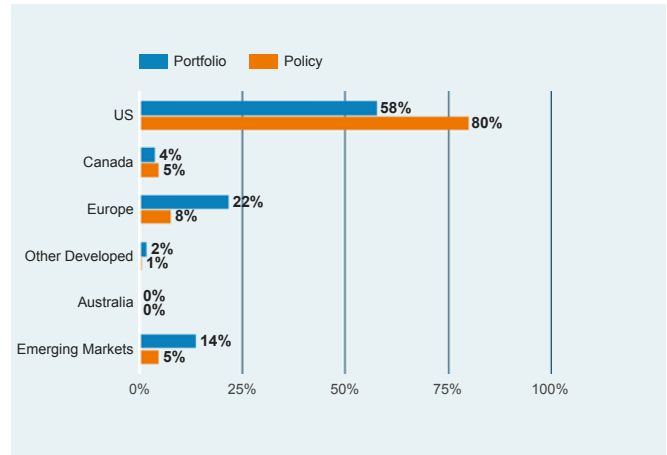
21 Rates bucket – Security type



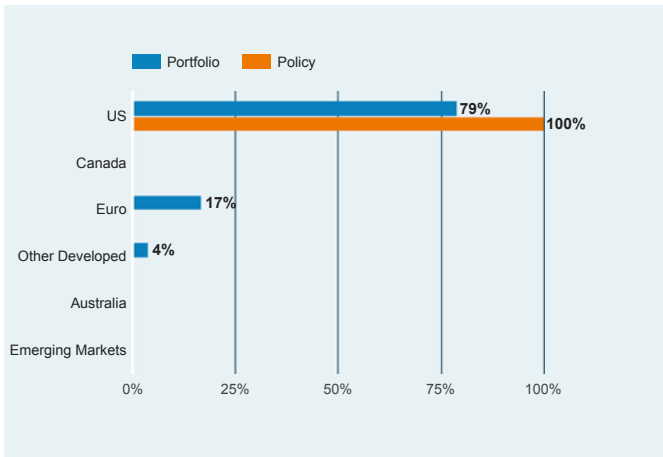
22 Credit bucket

	Portfolio	Policy	Difference
Duration	3.9	4.0	-0.0
Coupon Yield	7.0%	7.0%	0.0%
Yield to Maturity	7.4%	8.0%	-0.6%
Wt. Avg. Rating	B1	B1 / B2	

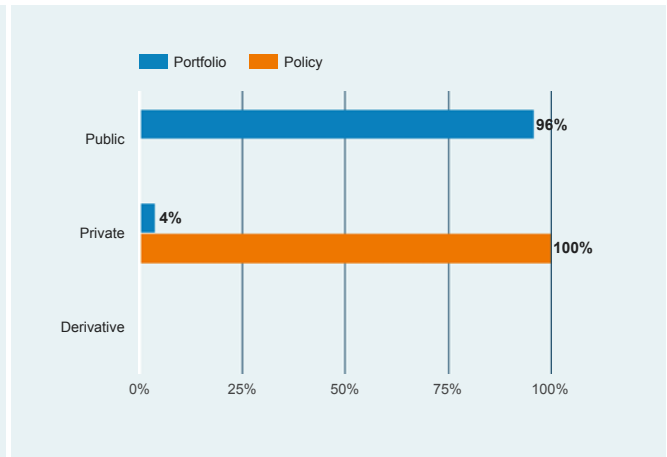
23 Credit bucket – Geographic exposure



24 Credit bucket – Currency exposure



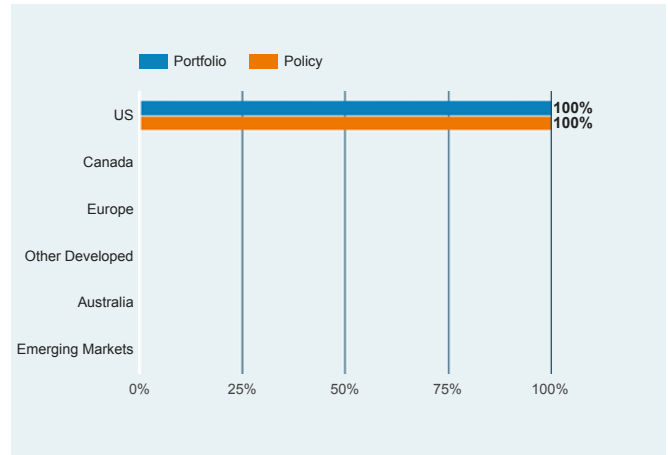
25 Credit bucket – Security type



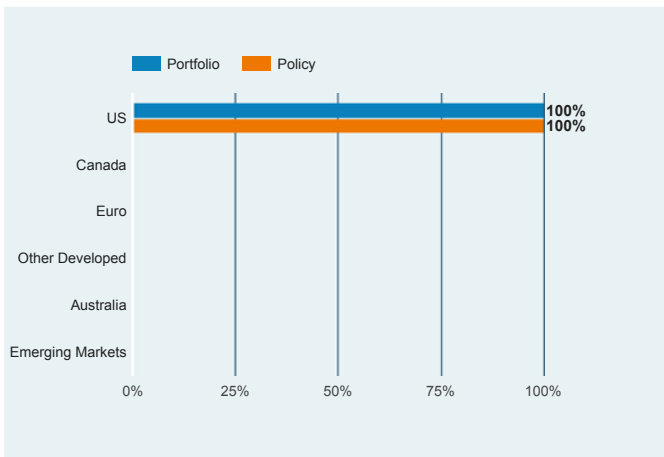
26 Inflation bucket

	Portfolio	Policy	Difference
Real Estate Allocation	11.7%	7.0%	4.7%
Other Real Assets	4.9%		

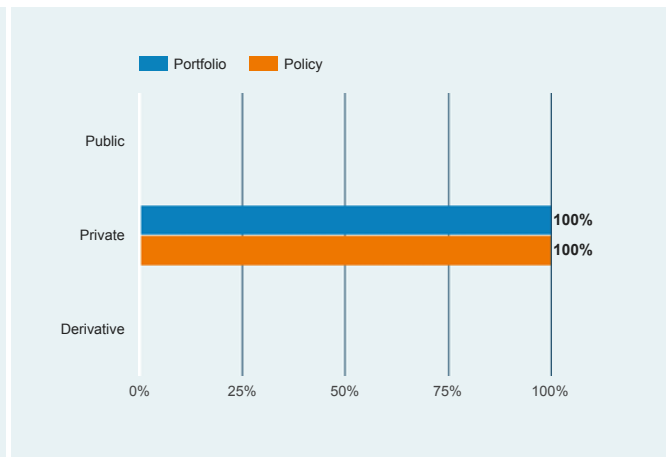
27 Inflation bucket – Geographic exposure



28 Inflation bucket – Currency exposure



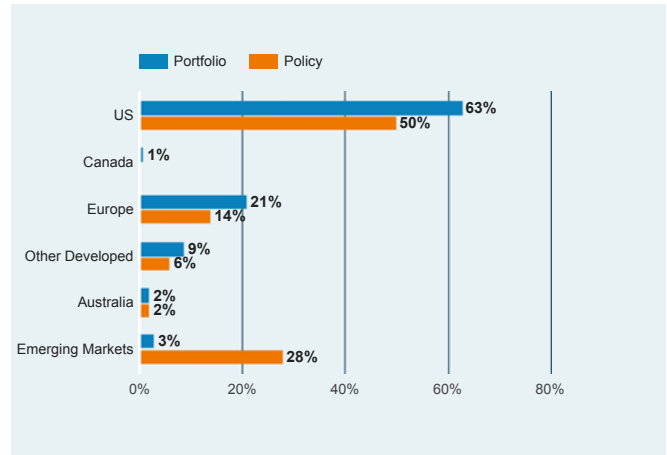
29 Inflation bucket – Security type



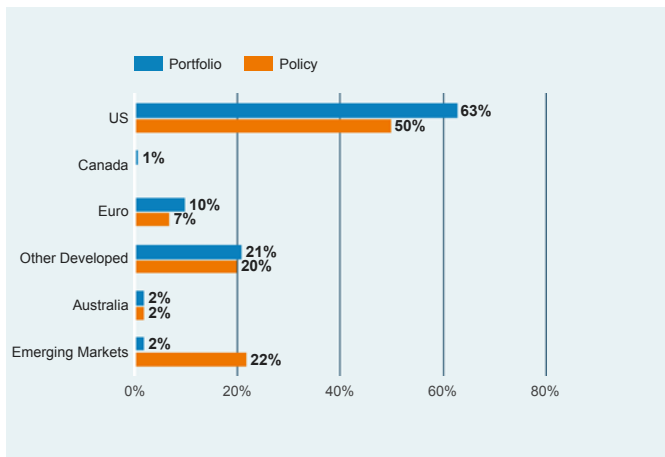
30 Equity bucket

	Portfolio	Policy	Difference
Beta	1.0	0.9	0.1
Dividend Yield	2.6%	2.9%	-0.3%
PE Ratio	19.1	23.4	-4.3

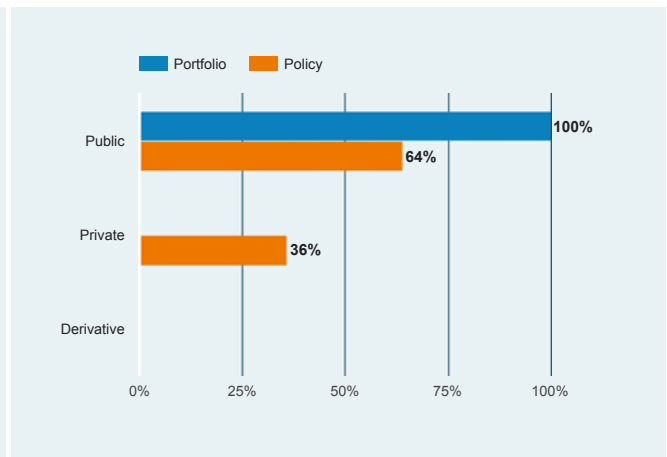
31 Equity bucket – Geographic exposure



32 Equity bucket – Currency exposure



33 Equity bucket – Security type



39 Market value summary per BarraOne

Bucket	Asset Class	Account Name	Account	Market Value (millions)
Cash	Cash	Unallocated Cash	Unallocated Cash	74.3
		Transition	Transition	0.5
		Treasurer's Fixed	Treasurer Fixed	0.0
Cash Total				74.8
Credit	High Yield Bonds	Allianz Global Investors	Allianz Global Investors	320.1
	Opportunistic Credit	Angelo Gordon Energy Credit Opportunities	Angelo Gordon Energy Credit Opportunities	14.1
Credit Total				334.1
Equity	EAFE Equity	Pyrford	Pyrford	400.6
		William Blair	William Blair	397.6
		International Equity Transition	International Equity Transition	0.5
	Global Equity	First Eagle	First Eagle	304.8
		Artisan Partners	Artisan Partners	304.3
		JP Morgan Global Opportunities	JP Morgan Global Opportunities	262.6
		Intech Global Low Vol	Intech Global Low Vol	23.6
	Private Equity	Oaktree PIF 2009	Oaktree PIF 2009	18.5
	US Equity	Robeco Boston Partners	Robeco Boston Partners	319.0
		Intech Large Cap Core	Intech Large Cap Core	299.6
		Jackson Square Partners	Jackson Square Partners	295.8
		PIMCO Stocks+ Absolute Return	PIMCO Stocks Absolute Return	246.8
		Ceredex	Ceredex	238.6
		Emerald Advisors	Emerald Advisors	215.4
	Equity Total			
Hedge Fund	Hedge Fund	Adams Street Partners	Adams Street Partners	120.3
		Energy Investor Fund III	Energy Investor Fund III	62.8
		Siguler Guff CCCERA Opportunities Fund	Siguler Guff CCCERA Opportunities Fund	55.3
		Energy Investor Fund IV	Energy Investor Fund IV	50.1
		Pathway Private Equity Fund	Pathway Private Equity Fund	44.6
		Energy Investor Fund II	Energy Investor Fund II	43.1
		Pathway 7	Pathway 7	28.3
		Pathway 6	Pathway 6	27.6
		Carpenter Bancfund	Carpenter Bancfund	27.1
		Paladin III	Paladin III	23.8
		Pathway Private Equity Fund 2008	Pathway Private Equity Fund 2008	22.9
		Adams Street Partners II	Adams Street Partners II	18.3
		Adams Street Partners Fund 5	Adams Street Partners Fund 5	16.8
		Ocean Avenue Fund II	Ocean Avenue Fund II	14.5
		Bay Area Equity Fund II	Bay Area Equity Fund II	10.8
Brinson – Venture Capital	Brinson Venture Capital	5.6		
Bay Area Equity Fund I	Bay Area Equity Fund I	5.6		

Bucket	Asset Class	Account Name	Account	Market Value (millions)
		Pathway 8	Pathway 8	3.9
		Energy Investor Fund	Energy Investor Fund	0.8
		Nogales	Nogales	0.3
Hedge Fund Total				582.5
Inflation	Real Assets	Wellington Real Total Return	Wellington Real Total Return	175.4
		PIMCO All Asset Fund	PIMCO All Asset Fund	120.3
		Aether Real Assets III	Aether Real Assets III	35.0
		Commonfund	Commonfund	18.8
		Wastewater Opportunity Fund LLC	Wastewater Opportunity Fund LLC	0.7
	Real Estate	Adelante	Adelante	95.0
		Oaktree REOF VI	Oaktree REOF VI	89.6
		LaSalle Income & Growth Fund VI	LaSalle Income Growth Fund VI	83.6
		DLJ Real Estate IV	DLJ Real Estate IV	79.3
		Siguler Guff Distressed RE Opportunities	Siguler Guff Distressed RE Opportunities	62.7
		Angelo, Gordon & Co. Realty Fund VIII	Angelo Gordon Co Realty Fund VIII	61.0
		INVESCO International REIT	INVESCO International REIT	56.7
		DLJ Real Estate III	DLJ Real Estate III	44.3
		Siguler Guff Distressed RE Opportunities II	Siguler Guff Distressed RE Opportunities II	43.8
		DLJ Real Estate V	DLJ Real Estate V	41.1
		Oaktree REOF V	Oaktree REOF V	33.4
		Long Wharf Fund IV	Long Wharf Fund IV	24.7
		Paulson Real Estate II	Paulson Real Estate II	21.8
		INVESCO Real Estate III	INVESCO Real Estate III	19.3
		INVESCO Real Estate II	INVESCO Real Estate II	14.9
		Angelo, Gordon & Co. Realty Fund IX	Angelo Gordon Co Realty Fund IX	14.0
		Long Wharf Fund III	Long Wharf Fund III	12.6
		Siguler Guff Distressed RE Opportunities II Co-Inv	Siguler Guff Distressed RE Opportunities II Co-Inv	10.0
		Willows Office Property	Willows Office Property	10.0
		INVESCO Real Estate IV	INVESCO Real Estate IV	9.5
		INVESCO Real Estate I	INVESCO Real Estate I	6.5
		Long Wharf Fund II	Long Wharf Fund II	0.0
		Hearthstone Advisors II	Hearthstone Advisors II	-0.1
Inflation Total				1,183.7
Rates	Global Bonds	Lazard	Lazard	241.1
	US Bonds	PIMCO Fixed Income	PIMCO Fixed Income	347.6
		Lord Abbett	Lord Abbett	324.5
		Goldman Sachs Core Plus	Goldman Sachs Core Plus	323.5
		AFL-CIO	AFL CIO	231.2
		Torchlight IV	Torchlight IV	61.9
		Torchlight II	Torchlight II	48.6
		Torchlight V	Torchlight V	11.2

Bucket	Asset Class	Account Name	Account	Market Value (millions)
		Torchlight III	Torchlight III	10.5
		GSAM Workout Portfolio	GSAM Workout Portfolio	0.0
Rates Total				1,600.1
Total Portfolio (millions)				7,102.9

Chart Definitions

1	Portfolio risk Total risk comparison of portfolio, Policy, and Avg. Pension. Policy is composed of 1% Cash, 14% MSCI EM, 10% MSCI EAFE, 6% S&P500, 17% Private Equity, 24% Barclays Capital 1-3 Yr Gov/Credit, 2% Barclays Capital U.S. Treasury: 7-10 Year, 7% NCREIF NPI, 17% Barclays Capital U.S. Corporate High Yield, and 2% HFRI FOF Index. Average pension is based on median allocation of DB Plans > \$1 Billion, which is composed of 1.1% Cash, 26.1% US Equity, 15.1% Global ex-US Equity, 3.4% EM Equity, 6% Private Equity, 22.5% US Fixed Income, 4.3% Global Fixed Income, 1.5% Global ex-US Fixed Income, 2.4% EM Fixed Income, 8.1% Hedge Fund, 1.05% Commodity, 1.05% Forestry, and 7.4% Real Estate.
2	Portfolio equity beta Equity risk presented by equity beta to market. Equity beta is a measure describing the sensitivity of portfolio returns with returns of the equity market (MSCI ACWI).
3	Portfolio interest rate risk – Duration Interest rate risk presented by duration and dollar movement of portfolios. Duration of a financial asset that consists of fixed cash flows is the weighted average of the times until those fixed cash flows are received (measured in years). It also measures the percentage change in price for a given change in yields (the price sensitivity to yield). DV01 \$ (dollar duration) is the change in price in dollars of a financial instrument resulting from a one basis point change in yield.
4	Portfolio credit risk – Spread duration Credit risk presented by spread duration and dollar movement of portfolios. Spread duration measures the percentage change in price for a one percentage point change in spreads.
5	Exposure allocation by asset class Exposure allocation among various asset classes.
6	Exposure allocation Exposure allocation among major risk buckets (rates, credit, equity, inflation, currency) and net currency exposure (domestic vs. foreign). Full Cash collateral is assumed for all derivatives.
7	Relative risk vs target by bucket Comparative riskiness of Portfolio vs. Policy on total portfolio and risk bucket levels: For example, equity bucket relative risk compares the riskiness of the Portfolio equity bucket vs the Policy equity bucket.
8	Relative risk vs target by risk factor Comparative riskiness of Portfolio vs. Policy on a total portfolio level and major risk factor levels.
9	Risk factor weight relative to target Contribution by factor to total relative risk of the Portfolio vs the Policy: For example, Equity is equity risk contribution to Portfolio minus equity risk contribution to the Policy, divided by total risk of the Policy. The factor overweights are additive to the total relative risk at the top line.
10	Tail risk – Scenario analysis Expected performance under various historical scenarios. For each historical scenario, the current market value is recalculated to determine total return under identical market conditions. 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.
11	Tail risk – Stress tests Expected performance under various one-risk-factor stress tests. Directly affected asset classes are revalued at the factor levels.
12	Risk contribution by risk factor Risk contribution by risk factor. Volatility measures the price variation of a portfolio or financial instrument over time.
13	Active risk contribution by risk factor Active risk in terms of annual tracking error: Tracking Error (TE) measures how closely a portfolio follows its benchmark. It is the standard deviation of the difference between the portfolio and benchmark returns.
14	Geographic exposure Geographic exposures are calculated using the notional exposure as a percentage of market value, including derivatives, cash securities and currency holdings, but excluding currency derivatives. Any portfolio that uses derivatives may have a total different than 100% because both cash and derivative country exposures are included.
15	Currency exposure Currency portfolio allocation. Currency exposures from both the underlying securities and the purchasing currency of the futures contract are included.
16	Net geographic exposure Difference between portfolio and policy allocation among major geographic areas.
17	Net currency exposure Difference between portfolio and policy allocation among major currencies.
18	Interest rate bucket Coupon yield (nominal yield) of a fixed income security is a fixed percentage of the par value that does not vary with the market price of the security. Yield to Maturity (YTM) 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. Ratings indicate credit quality of a security and the issuer's ability to make payments of interest and principal.
19	Rates bucket – Geographic exposure Geographic exposures specific to the Rates bucket are calculated using the notional exposure as a percentage of market value, including derivatives, cash securities and currency holdings, but excluding currency derivatives. Any portfolio that uses derivatives may have a total different than 100% because both cash and derivative country exposures are included.

20	Rates bucket – Currency exposure Currency allocation of interest rate instruments.
21	Rates bucket – Security type Allocation of interest rate instruments among different security types.
22	Credit bucket Various characteristics of credit instruments.
23	Credit bucket – Geographic exposure Geographic exposures specific to the Credit bucket are calculated using the notional exposure as a percentage of market value, including derivatives, cash securities and currency holdings, but excluding currency derivatives. Any portfolio that uses derivatives may have a total different than 100% because both cash and derivative country exposures are included.
24	Credit bucket – Currency exposure Currency allocation of credit instruments.
25	Credit bucket – Security type Allocation of credit instruments among different security types.
26	Inflation bucket Composition of inflation hedging instruments in portfolio and benchmark. Notional duration of real rates instruments is also included.
27	Inflation bucket – Geographic exposure Geographic exposures specific to the Inflation bucket are calculated using the notional exposure as a percentage of market value, including derivatives, cash securities and currency holdings, but excluding currency derivatives. Any portfolio that uses derivatives may have a total different than 100% because both cash and derivative country exposures are included.
28	Inflation bucket – Currency exposure Currency allocation of inflation instruments.
29	Inflation bucket – Security type Allocation of inflation instruments among different security types.
30	Equity bucket P/E ratio is a valuation ratio of a company's current share price compared to its per-share earnings. Beta measures sensitivity to Global Equities.
31	Equity bucket – Geographic exposure Geographic exposures specific to the Equity bucket are calculated using the notional exposure as a percentage of market value, including derivatives, cash securities and currency holdings, but excluding currency derivatives. Any portfolio that uses derivatives may have a total different than 100% because both cash and derivative country exposures are included.
32	Equity bucket – Currency exposure Currency allocation of equity assets.
33	Equity bucket – Security type Allocation of equity assets among different security types.
39	Market value summary per BarraOne Summary of market value of Portfolio holdings by bucket as reported through BarraOne. Some differences may exist due to timing, pricing sources and availability of information on new investments.

Tail Risk Scenario Definitions

1	2009-2010 July-January (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	2007-2009 Subprime Meltdown (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	2007-2008 Oil Price Rise (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	2001 Dot-com Slowdown (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	1997-1999 Oil Price Decline (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.
-

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Meeting Date
05/25/16
Agenda Item
#11

MEMORANDUM

Date: May 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 (currently being drafted). 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

Firm	Reason	Date Placed on Watch	Recommendation
Nogales	Performance	5/28/08	No change
Wellington	Personnel Change	4/13/16	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.

Wellington was placed on the Watch List due to the departure of the prior portfolio manager, Rick Wurster. Staff has held several meetings with Wellington, both in the CCCERA and Wellington offices. We recommend that Wellington remain on the Watch List at this time.

Proposed Additions to the Watch List

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



PERSPECTIVES THAT DRIVE ENTERPRISE SUCCESS



MAY 25, 2016

Transition Management Presentation to

Contra Costa County Employees' Retirement Association

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VERUSINVESTMENTS.COM

SEATTLE 206-622-3700

LOS ANGELES 310-297-1777

SAN FRANCISCO 415-362-3484

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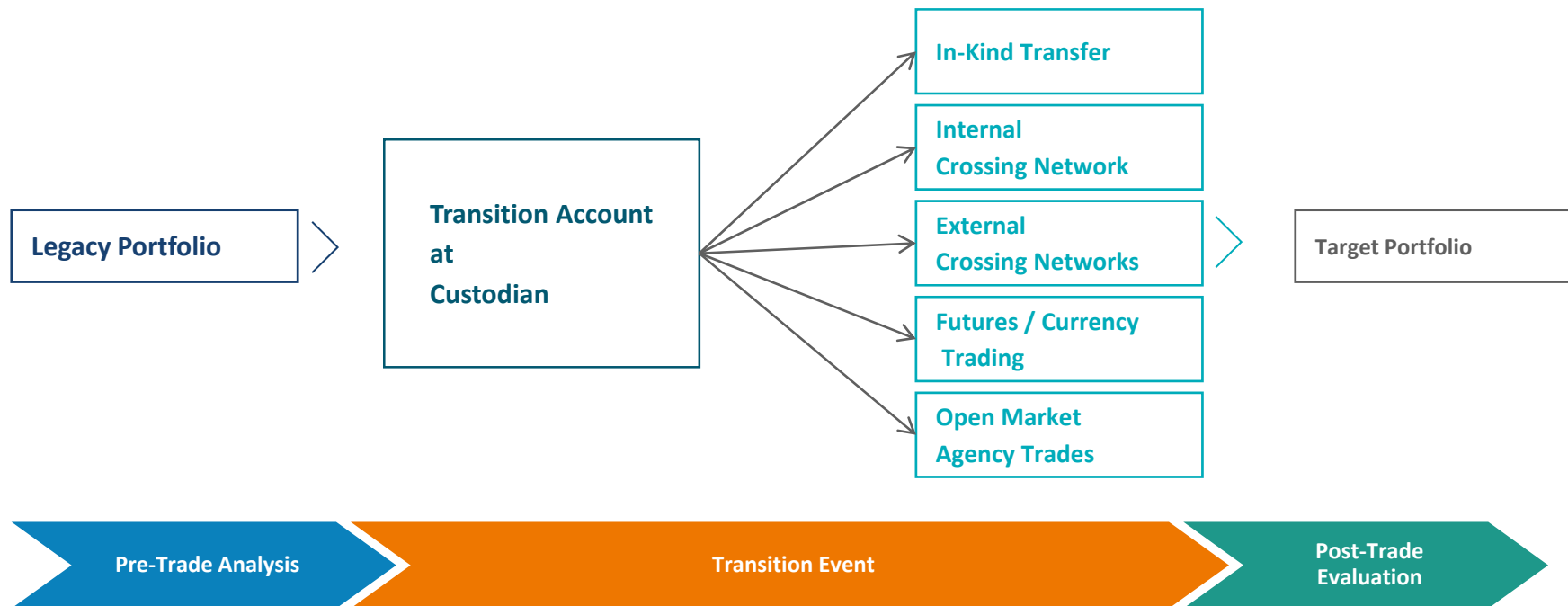
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Overview

What is transition management?

Transition management is a systematic, controlled process that uses all available sources of liquidity to minimize the total cost and risk of transitioning plan assets from one investment strategy to another.

- Using a transition manager can add accountability and transparency to the transition process.



The transition management decision

Money moving in/out/within a portfolio = risk

—Fiduciary liability

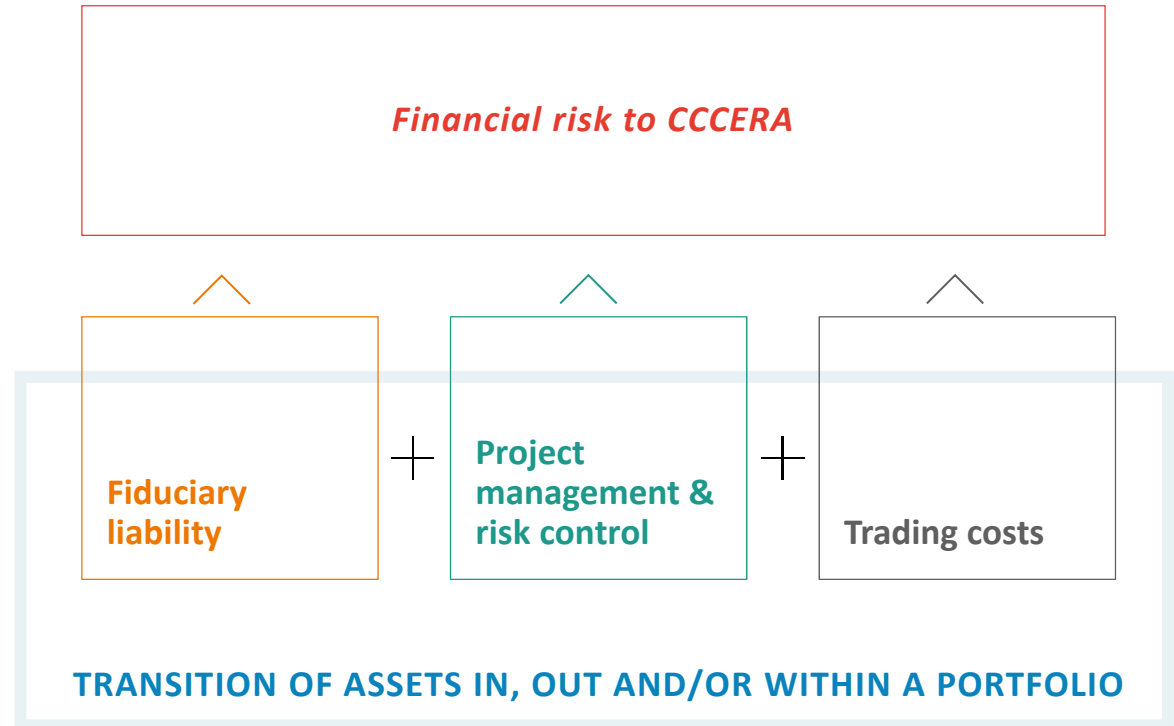
- Transition event requires fiduciary responsibility & oversight

—Project management & risk control

- Best execution of trade in a risk controlled environment
 - Maximize in-kind transfers
 - Minimize market impact

—Trading costs

- Commission costs (explicit)
- Implementation shortfall (implicit)



Every time money is moving in/out/within a client's portfolio, there are risks involved and someone is acting as transition manager.

Why transition management?

	Legacy Manager	Target Manager	Transition Manager
Accountability	<i>Assists</i> the transition	<i>Assists</i> the transition	<i>Manages</i> the transition
Alignment of Interest	Little – has just been terminated/reduced	Little – generally request performance holiday	Large – performance explicitly linked to transition
Expertise	Portfolio management Security selection & research	Portfolio management Security selection & research	Transition management Risk management, project management, trade development & execution
Execution	Often limited experience in high volume, big ticket trades	Often limited experience in high volume, big ticket trades	Experts in high volume, big ticket trades
Project Management	Minimal Client tends to be more heavily involved	Minimal Client tends to be more heavily involved	Significant - Manages and co-ordinates whole transition Client can choose level of involvement
Analysis & reporting	Limited – often just trade files; focus on performance reporting	Limited – often just trade files; focus on performance reporting	Detailed pre-trade analysis Extensive post trade analysis
Commission Rates*	Typically higher	Typically higher	Typically lower

*Commission rates for asset managers are typically higher since asset managers include soft dollar arrangements for research into the commission rates they charge. Transition management providers do not have the same arrangements and are able to offer lower commission rates on average.

Transition managers

TM Program overview

Verus conducted a search on behalf of CCCERA for transition management services to develop a platform of providers based on transition type:

- Direct
 - Transitions within the same sub-asset class (e.g. US large cap growth)
 - Providers would include: Penserra, Russell, and Vertas
- Indirect
 - Transitions within the same major asset class (e.g. domestic equities)
 - Providers would include: BlackRock, Citigroup, and Russell
- Complex
 - Transitions across asset classes
 - Providers would include: Citigroup and Russell

Once a transition is identified, Staff would have discretion to select a provider from this platform based on transition type, pre-trade analysis, past experience, and transition-specific considerations

Evaluation approach

—To help CCCERA select transition managers, the following managers have been evaluated:

- BlackRock
- Citigroup
- Penserra
- Russell
- State Street
- Vertas

— The evaluation of providers took into consideration recent developments in this space, prior experiences with providers, due diligence on-site visits and conference calls, and review of RFI and other due diligence materials.

— Each manager was evaluated on quantitative and qualitative factors, including but not limited to:

- Areas of expertise
- Business model
- Transition costs
- Tenure, depth of experience, and structure of transition management team
- Access to liquidity
- Transparency
- Potential conflicts of interest
- Historical transition activity (i.e., client type, asset class, performance, etc.)
- Prior regulatory events

TM provider overview

	BlackRock	Citigroup Global Markets	Penserra
Headquarters	New York, NY	New York, NY	New York, NY
Firm inception	1988	1812	2007
TM service inception	1993	1996	2010
Ownership	Fully owned subsidiary of BlackRock, Inc.	Fully owned subsidiary of Citigroup, Inc.	Majority employee owned
MV of assets transitioned 2014 (millions)	\$222,047	\$505,125	\$2,570
MV of assets transitioned 2014 (millions) by client type	DB - \$136,595 DC - \$3,743 E&F - \$1,500	DB - \$129,009 DC - \$79,517 E&F - \$107,188	DB - \$1,542 E&F - \$1,028
Willing to act as fiduciary?	Yes	Yes	Yes
Agency and/or principal?	Agency only	Both (almost always agency)	Agency Only
Key personnel (years experience/years with TM unit)	Lachlan French (30/7) Paul Francis (24/7) Zlatko Martinic (24/18) Jim Amorella (18/15) Richard Metzgen (18/17) Laura Peres (24/10) Jon Platt (16/1)	Will Cobbett (14/9) Sarah Kirschbaum (15/8) James Ngai (6/5) James Darch (20/1)	Keith Wilson (30/1) Sam Patel (20/2) Calvin Lee (18/2) Steve Lowden (19/4)
Personnel dedicated exclusively to TM	56	15	5
Fees	US Equity: 1-2 c/shr Non-US Developed Equity: 4-5 bps EM Equity: 8-10 bps US Fixed Income: 3-10 bps Non-US Fixed Income: 5-10 bps	No commission schedule, but rather establishes agreed upon commission rate based on size and difficulty	US Equity: 1 c/shr Non-US Developed Equity: 4 bps EM Equity: 8-12 bps

TM provider overview (cont.)

	Russell	State Street	Vertas
Headquarters	Seattle, WA	Boston, MA	Baltimore, MD
Firm inception	1936	1792	2006 (Global Transition Solutions)
TM service inception	1992	1979	2006
Ownership	Russell Investment Group will be owned by TA Associates and Reverence Capital Partners	Fully owned subsidiary of State Street Corporation	Fully owned subsidiary of Percival Financial Partners
MV of assets transitioned 2014 (millions)	\$799,437	\$338,503	\$23,430
MV of assets transitioned 2014 (millions) by client type	DB - \$540,036 DC - \$10,934 E&F - \$20,187	DB - \$235,343 DC - \$66,826 E&F - 36,334	Predominantly DB
Willing to act as fiduciary?	Yes	Yes	Yes
Agency and/or principal?	Agency Only	Agency Only	Both (all trading outsourced to ATM Cowen)
Key personnel (years experience/years with TM unit)	Steve Kirschner (22/10) Travis Bagley (21/15) Josh Houchin (10/5) Wayne Hollister (13/13) Scott Spinharney (16/16) Danny Sobba (21/19)	Nicholas Bonn (36/24) Peter Weiner (28/15) Tom Bryant (28/19)	Steve Malinowski Peter Romanelli David Bergman Kenneth Taylor
Personnel dedicated exclusively to TM	28	21	8
Fees	US Equity: 1-1.25 c/shr Non-US Equity: 4-6 c/shr EM Equity: 6-9 bps US Fixed Income: 1.5-6 bps Non-US Fixed Income: 2.5-8 bps	No set commission schedule; may on occasion agree to work on a fixed fee basis	US Equity 1 c/shr Other Asset Classes: 3 c/shr Fee structure is negotiable

Recommendations

Transition manager recommendations

Managers	Transition Type				Basis of recommendation
	US equity (direct & indirect)	Non-US equity (direct & indirect)	US fixed income	Complex multi-asset class	
BlackRock		✓	✓		As one of the world's largest asset managers, BlackRock provides access to robust liquidity pools and execution venues which are important considerations in lowering implicit costs within less liquid asset classes.
Citigroup		✓	✓	✓	Citigroup's team has experience in executing large, complex transitions, and their platform provides access to deep liquidity pools and trading networks which should be able to provide lower implicit costs in transitioning less liquid asset classes.
Penserra	✓				Penserra provides a competitive commission schedule for US equities (1 c/share).
Russell	✓	✓	✓	✓	Russell has the experience, depth of resources, and access to robust liquidity pools and trading networks required for less liquid, more complex transitions, as well as a competitive commission schedule for highly liquid asset classes.
State Street					
Vertas	✓				Vertas provides a competitive commission schedule for US equities (1 c/share).

Staff will solicit pre-trade analyses from this schedule of providers based on the transition type to select a provider.

Staff may also consider past experiences in their evaluation of transition providers.

Pre-trade analysis comparison

Verus obtained “mock” pre-trade analyses from each of the recommended transition managers using a standardized set of holdings. The sample transition would shift \$300 mm from a global equity legacy portfolio to fund a \$200 mm US equity strategy and a \$100 mm international equity strategy.

The criteria summarized in this table are key components of a pre-trade analysis which should be considered when evaluating transition event bids

Managers	Commission schedule			Mean cost estimates			Shortfall lower boundary	
	US equity	Dev. non-US equity	EM equity	Explicit costs	Implicit costs	Total costs	1 standard deviation	2 standard deviations
BlackRock	1 cent / share	4.5 bps	8.0 bps	\$296,236	\$335,793	\$652,030	\$1,603,907	\$2,555,785
Citigroup	0.50 cents / share	4.0 bps	8.0 bps	\$271,553	\$575,606	\$847,158	\$1,941,309	\$3,035,460
Penserra	0.85 cents / share	5.0 bps	10.0 bps	\$287,771	\$718,438	\$1,006,209	\$1,934,871	\$2,863,533
Russell	1.25 cents / share	5.0 bps	5.0 bps	\$314,301	\$1,047,915	\$1,362,216	\$2,385,378	\$3,408,540
Vertas	0.50 cents / share	3.0 bps	3.0 bps	\$236,529	\$2,708,228	\$2,944,757	\$3,752,542	\$4,560,327

Next steps

- Authorize the creation of the recommended pool of transition managers to be used by Staff as outlined in this presentation.
- Enter into “Evergreen” agreements with BlackRock, Citigroup, Penserra, Russell and Vertas for transition management services subject to legal review by authorizing Chief Executive Officer to execute the agreements.

Appendix

Key transition management terms

— Agency Trade

- A trade where the transition manager interfaces with the market on behalf of the asset owner and does not act as a counterparty.

— Crossing (Internal)

- Refers to the ability of a transition manager to offset (“cross”) the transition flow of its client’s legacy and target portfolios against its index funds or other internal trading flows. If natural internal crosses exit, such transactions are free of commissions with virtually no market impact.

— Crossing (External)

- Similar in concept to internal crossing; however, the transition manager uses external liquidity to “cross” its client’s transition flow. In contrast to the internal variety, external crossing exposes the transition flow to the potential of information leakage.

— Dark Liquidity Pool

- A private alternative trading system or platform where the details of trade orders are not made available to the public. A transition manager may utilize dark pools in an attempt to mitigate market impact when trading large orders (as compared to the security’s daily trading volume).

— Explicit Costs

- The most visible costs during the transition period. Costs include commissions, market taxes, exchange fees and custody fees. While the most apparent, explicit costs are the least significant component of trade expenses.

— Legacy Portfolio

- The existing portfolio that the client seeks to exit. Also known as the incumbent portfolio.

Source: Northern Trust, Russell

Key transition management terms (cont.)

— Implementation Shortfall

- Assumes that the legacy portfolio is converted instantaneously to the target at the outset of the transition period and at zero cost. Essentially, implementation shortfall is the measure of the total cost of the transition event.

— Implicit Costs

- The least visible costs during the transition period. Costs include market impact, bid/ask spread and opportunity costs. Implicit costs represent the most significant expense of a trade.

— Information Leakage

- The release of material information about a pending trade before the actual order is placed. Information leakage increases the total cost of a transition event since it allows arbitragers to “front run” the transition.

— Market Impact

- The movement of a security’s price after placing a trade order.

— Opportunity Costs

- Costs associated with the time required to complete the full transition from the legacy to the target portfolio.

— Post-trade Analysis

- An analysis of the actual costs associated with a transition event compared to the pre-trade estimates.

Source: Northern Trust, Russell

Key transition management terms (cont.)

— Pre-hedging

- Trading on a bank's account ahead of a transition event with the potential economic gain accruing to the transition manager.

— Pre-trade Analysis

- An analysis of the estimated trading costs (both explicit and implicit) associated with a transition event compared against an unmanaged transition benchmark providing characteristics of the legacy and target portfolios.

— Principal Trade

- A trade where the transition manager becomes the counterparty to the transaction, either by supplying liquidity from its own inventory or assuming the risk of the position.

— T-Standard

- A standardized performance metric designed to calculate implementation shortfall during a transition event.

— Target Portfolio

- The portfolio that a client seeks to purchase (with the proceeds from the legacy portfolio). Also known as the destination portfolio.

— Transfer-In-Kind

- Securities that are instantaneously transferred from the legacy to the target portfolio with no liquidity impact. Since transfer-in-kind securities are not traded in the market, they incur no explicit or implicit costs.

Source: Northern Trust, Russell

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The material may include estimates, outlooks, projections and other “forward-looking statements.” Such statements can be identified by the use of terminology such as “believes,” “expects,” “may,” “will,” “should,” “anticipates,” or the negative of any of the foregoing or comparable terminology, or by discussion of strategy, or assumptions such as economic conditions underlying other statements. No assurance can be given that future results described or implied by any forward-looking information will be achieved. Actual events may differ significantly from those presented. Investing entails risks, including possible loss of principal. Risk controls and models do not promise any level of performance or guarantee against loss of principal.

Manager evaluations

Transition Management Manager Evaluation

BlackRock Institutional Trust Company, N.A.

LAST UPDATED: MAY 2016

PROVIDER DETAILS

Headquarters:	New York, NY
Firm inception:	1988
TM service inception:	1993
Ownership:	Fully owned subsidiary of BlackRock, Inc.
MV of assets transitioned in 2014 (millions):	\$222,047
MV of assets transitioned in 2014 (millions) by client type:	DB - \$136,595 DC - \$3,743 E&F - \$1,500
Willing to act as fiduciary?	Yes
Agency and/or principal?	Agency only
Key personnel (years experience / years with TM unit)	Lachlan French (30/7) Paul Francis (24/7) Zlatko Martinic (24/18) Jim Amorella (18/15) Richard Metzgen (18/17) Laura Peres (24/10) Jon Platt (16/1)
Personnel dedicated exclusively to TM	56
Fees	US Equity: 1-2 c/shr Non-US Developed Equity: 4-5 bps EM Equity: 8-10 bps US Fixed Income: 3-10 bps Non-US Fixed Income: 5-10 bps

Firm Background and History

BlackRock is one of the world's largest asset management firms and provider of investment management, risk management and advisory services to institutional, intermediary and retail clients worldwide. The firm was founded in 1988 and is based in New York with over 70 offices in 30 countries. The firm employs over 12,000 people globally and has more than \$4.6 trillion in assets under management.

BlackRock, Inc. ("BlackRock") is the parent company of BlackRock Institutional Trust Company, N.A., the entity where the Transition Management group resides.

BlackRock, Inc. is independent in ownership and governance, with no single majority stockholder and a majority of independent directors. As of 30 September 2015, the PNC Financial Services Group, Inc. ("PNC") owned 22.1% of BlackRock and institutional investors, employees and the public held economic interest of 77.9%. With regard to voting stock, PNC owned 21.1% and institutional investors, employees and the public owned 78.9% of voting shares.

Transition Management Services Overview

Through predecessor firm Barclays Global Investors ("BGI"), BlackRock has provided customized transition management services since 1985, initially developing transition management in-house through its portfolio management team. In 1987, BlackRock received one of the first crossing exemptions issued by the Department of Labor ("DOL"), delivering further transaction cost savings to their clients. In order to better serve expanding client demand, BlackRock formed a dedicated US Transition Management Team in 1993.

BlackRock currently provides a wide array of transition management services. They provide full project and portfolio management services when clients undertake a transition between investment managers including working to reduce the costs and risks of the change. Additionally, BlackRock will lead tactical asset allocation shifts in order to execute in a timely and precise manner. Through their overlay services, BlackRock has the capabilities to provide exposure management solutions to assist plans with staying in line with target asset allocation weights as well as providing liability-driven management services. Finally, BlackRock can lead portfolio builds and liquidations and seeks to add value by sourcing liquidity from their broad network of counterparties.

Areas of Expertise / Differentiation

BlackRock acts as a fiduciary in all transition assignments that they undertake. The only source of revenue that BlackRock derives from transitions is a portion of the commission charged in conjunction with trade execution or an agreed upon fee, which is disclosed prior to trade initiation.

Because BlackRock is one of the largest asset managers in the world, they are able to decrease the costs associated with transition activity by sourcing internal liquidity. BlackRock relies both on an individual DOL exemption as well as a Pension Protection Act (“PPA”) exemption in order to engage in internal crossing activity. All crosses are executed pro-rata at the closing price of each security and they do not charge any fee for internal crossing. As part of their process, they distinguish between internal crossing, which they view as non-impact, zero-commission execution, and external crossing, which they view as agency trading with potential for market impact.

In order to minimize conflicts of interest, BlackRock executes transition trading on an agency basis. Acting as an agent, BlackRock deploys an execution strategy based on the risk and liquidity characteristics of the transition. As a result, trade strategy is motivated by execution quality and cost control, rather than any financial incentives to BlackRock. With agency execution, BlackRock can access

favorable combinations of liquidity to provide cost and risk savings. In addition to agency execution, BlackRock can also access principal bids from third parties. Because of the firm’s size and scale, they are able to receive competitive bids from Wall Street on behalf of clients. At no point will BlackRock commit capital, and their agency-based model allows for continuous fiduciary responsibility throughout the transition.

BlackRock provides transition management clients with a broad range of execution venues. They are able to leverage the size and scale of their global trading operations to deliver best execution to transition management clients. BlackRock receives over 40,000 indications of interest per day and is able to source liquidity from over 100 different broker-dealers.

BlackRock has continually invested in their transition trading and risk management applications and have professionals dedicated to this research. This effort allows them to develop quantitative tools in-house. To address volatility, BlackRock extensively utilizes high speed intra-day optimizers which can optimize portfolios once a minute if required. These optimizers can tranche portfolios into slices to mitigate costs and risks efficiently.

With over 20 years of transition experience and global, cross-asset class investment management capabilities, BlackRock has the capabilities to deliver strong execution across all global public asset classes. Their service is differentiated by an ability to execute low-cost, risk-controlled transitions in those asset classes which are the most challenging such as small cap and emerging markets.

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Transition Management Manager Evaluation

Citigroup Global Markets Inc.

LAST UPDATED: MAY 2016

PROVIDER DETAILS

Headquarters:	New York, NY
Firm inception:	1812
TM service inception:	1996
Ownership:	Fully owned subsidiary of Citigroup, Inc.
MV of assets transitioned in 2014 (millions):	\$505,125
MV of assets transitioned in 2014 (millions) by client type:	DB - \$129,009 DC - \$79,517 E&F - \$107,188
Willing to act as fiduciary?	Yes
Agency and/or principal?	Both (almost always agency)
Key personnel (years experience / years with TM unit)	Will Cobbett (14/9) Sarah Kirschbaum (15/8) James Ngai (6/5) James Darch (20/1)
Personnel dedicated exclusively to TM	15
Fees	No commission schedule, but rather establishes agreed upon commission rate based on size and difficulty

and credit, corporate and investment banking, securities brokerage, trade and securities services, and wealth management services.

Citigroup Global Markets Inc., the US broker dealer and the legal entity in which the transition management group resides, is a fully owned subsidiary of Citigroup Financial Products Inc., which is in turn owned by Citigroup Global Markets Holdings Inc. and ultimately owned by Citigroup Inc. Citigroup Inc. is a publically traded company (ticker C) with a market cap of \$139.1 billion (as of April 20, 2016), making it one of the world's largest financial institutions.

Transition Management Services Overview

Citi has been providing portfolio liquidation services, the earliest form of transition management, for institutional clients for more than 25 years, and transition management services as a stand-alone business since 1996. The firm's Global Transition Management team has offices in London (EMEA), New York (Americas), and Sydney (Asia-Pacific).

The transition management group at Citi consists of a team of relationship managers and project managers who are 100% dedicated to transition management, and a network of other individuals within the broader Citi organization whom the group leverages to provide expertise in such functions as trading, legal, compliance, trade booking and settlement. There are 15 individuals dedicated to transition management at Citi.

Citi's approach to transition management is to focus on partnering with the largest asset owners around the world on their most complex transition events, rather than performing the most transitions. Citi believes that this has led to more resources available for each engagement they take on, lower costs, and a focus on client service.

Firm Background and History

Citi is one of the world's largest diversified financial services firms. The firm provides institutions, governments, corporations, and consumers with banking

Their process includes gathering information in order to understand the objectives of the transition, developing a project plan that covers all aspects of operations and clearly identifies the responsibilities of each party involved, creating a strategy for execution to minimize costs and reduce risks, implementing the strategy using Citi's firm-wide resources, and reporting throughout the pre, intra, and post transition process.

Areas of Expertise / Differentiation

Citi's transition management business model brings together the qualities of a broker-dealer and technological architecture of a custodian bank model into one integrated platform. The platform draws on the broad capabilities of one of the largest trading operations in the world in Citi Global Capital Markets, as well as those of the world's second largest global custodian bank, Citibank NA. Because of the scope and scale of Citi's platform, they are in 99% of markets worldwide across all asset classes.

Citi's approach allows them to handle all aspects of transition management including analysis, project management, trading and settlement without having to outsource any component to a third party. Because they leverage existing areas of expertise as well as technological architecture already in place, they keep their cost of doing business low and can pass along the savings to clients. A single point of control and a fiduciary umbrella which extends throughout all stages and aspects of a transition provide clients with a service that is both streamlined and fully accountable.

There are currently 11 exchanges, 3 ECNs and 50+ dark pools in the US alone, and Citi is connected to approximately 50 of these, nearly all of which are accessed as a market participant. Citi's internal dark pools, Citi Match and Citi Cross are an exception, and therefore Citi can access a wide array of liquidity sources, both internal and external. Citi ranks all the venues they access on a monthly basis officially, and weekly on an unofficial basis in order to keep on top of where the best prices are available, based on factors such as speed, latency, toxicity,

and "uniqueness." Citi's only criteria when choosing a venue is achieving best execution for their clients, and they do not rank pools based on benefits received such as rebates or quota levels.

Citi provides their transition management clients with full transparency at every step of the process. They provide time stamps for every execution, full revenue disclosure, and line-by-line crossing data on both a pre and post trade basis. Once trades are executed, Citi provides detailed post trade reporting based on the implementation shortfall methodology which captures every dollar of cost, which is then compared directly back to their pre trade estimates.

During the entire course of a transition management engagement, Citi assures fiduciary coverage as all aspects of the transition are kept in house.

Citi utilizes a proprietary Transition Management System that was built from the ground up in 2008 which is consistently upgraded and improved. This platform is used by uploading legacy and target portfolios into the system, querying multiple data providers to validate and price all securities, creating trade lists, reconciling positions versus custodial statements, and analyzing implementation costs in real time.

Potential Concerns

Dedicated transition team is smaller relative to some other providers.

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Transition Management Manager Evaluation

Penserra

LAST UPDATED: MAY 2016

PROVIDER DETAILS

Headquarters:	New York, NY
Firm inception:	2007
TM service inception:	2010
Ownership:	Majority employee owned
MV of assets transitioned in 2014 (millions):	\$2,570
MV of assets transitioned in 2014 (millions) by client type:	DB - \$1,542 E&F - \$1,028
Willing to act as fiduciary?	Yes
Agency and/or principal?	Agency only
Key personnel (years experience / years with TM unit)	Keith Wilson (30/1) Sam Patel (20/2) Calvin Lee (18/2) Steve Lowden (19/4)
Personnel dedicated exclusively to TM	5
Fees	US Equity: 1 c/shr Non-US Developed Equity: 5 bps EM Equity: 8-12 bps

which offers transition management and ETF sub-advising services as a fiduciary, and Penserra Securities LLC., which offers execution services, analytics, banking, and research.

The firm is headquartered in New York City with additional offices in San Francisco, Chicago, and Los Angeles. The firm's team members have participated in transition management engagements with corporate defined benefit/contribution plans, public pension plans, foundations, endowments, Taft-Hartley and 40 Act funds.

Transition Management Services Overview

Penserra's transition management team is comprised of 11 experienced industry professionals with previous experience working at Russell Investments, Barclays Global Investors, Knight Capital, and Susquehanna who focus entirely on transition management. In all instances, a transition manager, portfolio manager and risk manager will be involved. Based on the size and scope of the transition mandate, other members of the team will also provide support as needed.

The transition manager acts as lead project manager for each transition, and is the primary point of contact serving as a liaison between the various parties (client, consultant, custodian, and investment managers). They map out and communicate the logistics surrounding any related redemptions, contributions, security transfers, wire movements and paperwork.

The portfolio manager is responsible for analyzing and estimating the implicit/explicit costs, exposure shifts, trading horizons, and formulating cost-effective and risk-controlled trading strategies. The portfolio manager provides pre- and post-trade reports and works with the trading desk to ensure trade are executed as planned.

Firm Background and History

Penserra was founded in 2007 by George Madrigal, a former Barclays Global Investors Senior Portfolio Manager and Head of Transition Management. The privately held firm is comprised of Penserra Capital Management LLC,

There is also a dedicated risk manager on each transition engagement, responsible for independent evaluation of each transition event. During the planning phase, the risk manager will identify any potential risks that may arise over the course of the event, and monitor areas such as account set-up and maintenance, compliance issues, portfolio holdings, trading, settlement activity and portfolio distributions.

Penserra contracts as fiduciaries in all transition engagements, and employ an agency-only execution model. This extends to providing realistic pre-trade estimates and trading assumptions, monitoring of executions, performing clear and concise post-trade performance attribution, and disclosing all sources of revenue. All gains resulting from the transition trade are automatically passed along to the client. Penserra offers analysis of the total expected transition management revenue prior to the transition and attest to their actual revenue in writing.

As part of all transitions, Penserra provides clients with thorough reporting throughout every step of the process. Once the details of the event are known, they will distribute a comprehensive project plan comprised of a transition summary, goals and objectives, transition trade breakdown, proposed timeline, and key contacts. Prior to the start of the transition, a final pre-trade analysis is provided including an executive summary, portfolio transition characteristics, recommendations, estimated costs, risk profile, transaction type breakdown, and liquidity sources. After the completion of the transition, a final post-trade report provides thorough analysis including actual vs. estimated costs, performance attribution, execution details, and actual trade details.

Penserra selects execution venues (exchanges, algorithms, networks, dark pools and counterparties) that they expect will achieve the best results for clients. They monitor these venues real-time and review them regularly by the firm's best execution committee. They will also seek to add or replace to the list in pursuit of best execution.

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They will make use of crossing venues to save implementation costs, but do so only in the context of managing the opportunity risks related to the pace of trading. By using quantitative trade information, they are able to make informed decisions about the trade-off between slower, lower cost, higher-risk execution opportunities versus faster, higher cost, lower-risk execution opportunities. Additionally, any crossing they do engage in is completely anonymous in the marketplace.

Areas of Expertise / Differentiation

Penserra believes that the firm's intellectual capital and experience in transition management is a key area of differentiation for the firm. Their team has an average industry experience of over 20 years, and key personnel have all held previous transition management roles with firms such as Barclays Global Investors/BlackRock, Russell Investments, BNY Mellon Beta & Transition Management and Knight Transition Management.

Penserra also views their systematic risk management framework as a source of competitive advantage. As an additional level of scrutiny, they utilize a dedicated risk manager to independently manage and evaluate transitions from an arm's length. The risk manager's responsibility is separate from the day-to-day operations performed by the transition manager, portfolio manager and trading desks, and all findings are brought to the attention of senior management and compliance.

Finally, they view their execution capabilities as an area of expertise. They have a team of in-house global equity and fixed income trading professionals with deep market structure and trading strategy knowledge and experience, and specialize in program trading, active trading with high-touch, single stock trading, and fixed income execution.

Potential Concerns

Smaller team and firm relative to other providers. Have done less in transition volume relative to other providers.

Transition Management Manager Evaluation

Russell Investments

LAST UPDATED: MAY 2016

PROVIDER DETAILS

Headquarters:	Seattle, WA
Firm inception:	1936
TM service inception:	1992
Ownership:	Will be owned by TA Associates and Reverence Capital Partners
MV of assets transitioned in 2014 (millions):	\$799,437
MV of assets transitioned in 2014 (millions) by client type:	DB - \$540,036 DC - \$10,934 E&F - \$20,187
Willing to act as fiduciary?	Yes
Agency and/or principal?	Agency only
Key personnel (years experience / years with TM unit)	Steve Kirschner (22/10) Travis Bagley (21/15) Josh Houchin (10/5) Wayne Hollister (13/13) Scott Spinharney (16/16) Danny Sobba (21/19)
Personnel dedicated exclusively to TM	28
Fees	US Equity: 1-1.25 c/shr Non-US Equity: 4-6 c/shr EM Equity: 6-9 bps US Fixed Income: 1.5-6 bps Non-US Fixed Income: 2.5-8 bps

Firm Background and History

Founded in 1936, Russell Investments is headquartered in Seattle, WA and has over 350 investment products which focus on 5 capabilities: asset allocation, capital markets insights, factor exposures, manager research, and portfolio implementation. Russell Investments operates from U.S. offices in Seattle, WA, New York, NY, Chicago, IL, San Diego, CA, and Milwaukee WI.

Russel Investments is currently owned by the London Stock Exchange Group, however in October 2015 it was announced that private equity firms TA Associates and Reverence Capital Partners will be acquiring Russell from the London Stock Exchange Group. It is expected that Russell will retain its operational independence following the close of the transaction in June 2016.

As of December 31, 2015, Russell had approximately 1,800 employees across 21 offices worldwide, and approximately \$241.8bn in assets under management.

Transition Management Services Overview

Russell Implementation Services has been performing portfolio transitions for its parent company since 1980 and providing transition management services to external institutional clients since 1992.

Russell has approximately 65 full-time employees that are involved in the day-to-day transition process (including trading, operations, quantitative research and currency management), 28 of which dedicate all of their time to transition management.

More than 90% of Russell's transition clients contract with Russell as an investment adviser with fiduciary oversight, however, at a client's request they may contract as a broker-dealer.

Russell believes that agency execution leads to superior execution quality and better portfolio performance, so, like traditional quantitative investment managers, Russell operates in an agency only capacity, actively trading and transacting through numerous execution outlets globally. Russell utilizes a trade execution approach that seeks out best execution in the market place by aggregating liquidity across many different execution venues – direct market access, crossing networks, algorithms, dealers, and other dark pools of liquidity.

Russell does not commit capital to facilitate trading nor do they maintain proprietary trading accounts. As a result of this model, they are not motivated to use one method over the other. If a principal transaction is an effective option, they will work as the client's agent in securing the most promising terms possible, using competition amongst principal providers to garner improved pricing and execution quality. Russell's process seeks to remain flexible and unbiased, evaluating each approach with the clients' best interests in mind.

Areas of Expertise / Differentiation

Russell believes that they are able to provide transition management clients with best execution and full transparency, while having an alignment of interests with their clients due to having no affiliation with counterparties.

Russell has been executing transitions for over two decades and has built a very deep and experienced team of portfolio managers. Their ten most seasoned portfolio managers have more than 120 years of aggregate experience managing transitions at Russell, which enables them to manage large and complex plans, and anticipate issues that may affect performance.

Because their team is focused exclusively on transition management, they have developed strong client service and project management capabilities.

Russell has no proprietary trading desk that seeks to take advantage of transition trade flow or relationships with hedge funds, nor are they tied to any other internal trading desk to locate liquidity. Russell is able to take advantage of liquidity wherever it can be accessed at the most favorable execution available in the market at that point in time.

Maximizing performance is Russell's primary goal on transition engagements and their pure agency execution model has provides value and improved execution quality across all asset types for their clients. Their trading desk has been designed specifically to meet the needs of transition management, and their agency-only, non-affiliated, multi-venue execution approach leverages technology to aggregate market liquidity, determine where the deepest pools of liquidity reside, and agnostically access these pools to best serve the needs of their clients.

Russell's only source of compensation for transition management services is fully disclosed, explicit brokerage charged on securities traded, and Russell is willing to sign a revenue attestation for all transition events performed.

Potential Concerns

Two ownership changes since 2014, including a pending acquisition by two private equity firms.

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Transition Management Manager Evaluation

State Street

LAST UPDATED: MAY 2016

PROVIDER DETAILS

Headquarters:	Boston, MA
Firm inception:	1792
TM service inception:	1979
Ownership:	Fully owned subsidiary of State Street Corporation (NYSE: "STT")
MV of assets transitioned in 2014 (millions):	\$338,503
MV of assets transitioned in 2014 (millions) by client type:	DB - \$235,343 DC - \$66,826 E&F - \$36,334
Willing to act as fiduciary?	Yes
Agency and/or principal?	Agency only
Key personnel (years experience / years with TM unit)	Nicholas Bonn (36/24) Peter Weiner (28/15) Tom Bryant (28/19)
Personnel dedicated exclusively to TM	21
Fees	No set commission schedule; may on occasion agree to work on a fixed fee basis

State Street works with corporations, private and public pension plans, endowments and foundations, sovereign wealth funds, and central banks and has capabilities spanning both active and passive investment strategies in traditional and alternative asset classes. The firm also provides services to institutional investors including currency, cash, and risk management solutions. As of 12/31/2015, firm AUM was \$2.2 trillion.

Transition Management Services Overview

State Street began providing transition services in 1979, originally by the passive management team of SSGA. In 1994, State Street Bank and Trust Company formed a team to specifically focus on transition management, which has evolved into State Street's global Portfolio Solutions Group, which offers efficient reallocation of investment portfolios through transition management, agency brokerage and currency management services.

State Street has approximately 95 professionals that work on transitions (including regionally located trading personnel) with 21 of these professionals dedicated exclusively to transition management.

State Street executes equity and fixed income trades through its affiliated broker-dealers who execute both equity and fixed income trades on an agency basis.

State Street uses a variety of liquidity sources to ensure clients receive best execution. They seek to maximize liquidity and, where appropriate, operate across multiple venues and counterparties. State Street is often able to cross trade transition client trades and agency brokerage client trades. They may also execute transition client trades on BlockCross, their proprietary alternative trading

Firm Background and History

State Street Bank and Trust Company is a wholly owned subsidiary of State Street Corporation, a publicly traded bank holding company.

system and block trade crossing network. Additionally, State Street from time to time effects systematic re-balancing of certain index or model-driven client accounts or collective funds for which it acts as the investment manager which may create opportunities for transition management accounts to either buy securities from, or sell securities to, a client account in connection with a transition. State Street does not charge any transaction-based fees in connection with these types of trades.

State Street uses external crossing networks to access liquidity and help reduce market impact. Types of external crossing networks used may include alternative trading systems, electronic communication networks, multilateral trading facilities, broker-sponsored venues and exchange-sponsored matching systems. When using external crossing networks, State Street exposes only small portions of orders to avoid any information leakage.

Open market trading is undertaken by a global team of transition traders who will execute manually or via algorithms across markets. State Street's access to market leading technologies, combined with optimization tools enable their experienced market traders to find an effective liquidity venue and seek best execution.

For illiquid equities orders that cannot be traded direct to exchange, State Street utilizes a panel of specialist brokers to provide the necessary liquidity, which may be the case for listed property, emerging market, and small cap trades, given the concentrated nature of their liquidity. The majority of equity market trading, however, takes place direct to exchange.

Areas of Expertise / Differentiation

State Street believes that their transition management process provides a number of competitive advantages over other providers in the space. Their internal liquidity pool and multi-broker trading approach for illiquid assets allows them to minimize costs, and their internal liquidity

pool is a significant factor in the reduction of spreads, market impact and timing cost.

State Street has transition management experience and capabilities across a wide range of global markets and instrument types, and has invested in technology, personnel and exchange memberships which help eliminate frictional costs when accessing global markets. They believe this has created a robust global agency trading platform designed to meet the requirements of complex transitions.

State Street also believes that there are very few types of transitions that they have not already executed for their clients, as they have had a dedicated and independent transition management team for over 20 years.

The vast operational and technological resources of State Street, including their specialist portfolio solutions operations team, ensures that all operational aspects are efficiently managed in order to reduce the overall risk inherent with transition events. Additionally, they have a proprietary accounting and analytics platform ("ePAM") that allows for the straight through communication of trades and autoreconciliations with custodians via SWIFT.

State Street has also developed a full suite of customizable client reporting which provides detailed analysis of each event, before, during and after completion.

Potential Concerns

According to an April 5th, 2016 press release¹ by the U.S. Attorney's Office, two former State Street executives within the transition management business "have been charged with engaging in a scheme to defraud at least six of the bank's clients through secret commissions applied to billions of dollars of securities trades". Further details regarding this situation are pending the ongoing investigation.

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¹ Source: <https://www.justice.gov/usao-ma/pr/former-senior-executives-global-financial-services-company-charged-scheme-defraud-clients>.

Transition Management Manager Evaluation

Vertas

LAST UPDATED: MAY 2016

PROVIDER DETAILS

Headquarters:	Baltimore, MD
Firm inception:	2006 (Global Transition Solutions)
TM service inception:	2006
Ownership:	Fully owned subsidiary of Percival Financial Partners
MV of assets transitioned in 2014 (millions):	\$23,430
MV of assets transitioned in 2014 (millions) by client type:	Predominantly DB
Willing to act as fiduciary?	Yes
Agency and/or principal?	Both (all trading outsourced to ATM Cowen)
Key personnel	Steve Malinowski Peter Romanelli David Bergman Kenneth Taylor, Sr.
Personnel dedicated exclusively to TM	8
Fees	US Equity: 1 c/shr Other Asset Classes 3 c/shr Fee structure negotiable

Vertas is an independent brokerage and transition management consulting firm specializing in minimizing the costs and risks of brokerage events for institutional investors.

Vertas was formed as an independent unit of Percival Financial Partners in February, 2014, however the Vertas team has been working together managing transition events since 2006 and the trade administration team managed transition events for almost a decade prior to that. Prior to the formation of Vertas, the team performed transition management events as Global Transition Solutions, later known as GTS Advisors, and in February 2014, the team joined Percival.

Vertas has eight individuals fully dedicated to transition management, however this number does not include the 22 available portfolio traders at ATM Cowen (outsourced trading provider) or the six Cowen portfolio traders dedicated to Vertas.

Vertas is a fully owned subsidiary of Percival Financial Partners, which is owned 100% by Kenneth Taylor, Sr., the President/CEO/Chief Compliance Officer of Percival.

Transition Management Services Overview

The transition management team at Vertas is broken up into teams consisting of client consulting, trade administration, analytics/trade oversight, and sales/client relations. Their philosophy is to separate advice and administration from trade execution in order to eliminate conflicts of interest, use actual execution data to quantify broker and venue performance, utilize real time trade data and a proprietary "liquidity scorecard" to agnostically route orders to more than forty-five execution venues

Firm Background and History

With headquarters in Baltimore and professionals based in Philadelphia, New York, California, Michigan, and Florida,

based on the characteristics of each assignment, monitor trades on a real time basis and report performance.

Vertas' approach to oversight is based upon a number of philosophical ideas which they fully integrate into their process, including that pre-trade reports should be much more than a cost estimate, no single approach, broker, or venue is best suited for every transaction, broker/venue selection decisions require a combination of historical and real time quantitative data, independent, real-time trade oversight improves performance, and independent, third-party trade cost analysis is required for legitimate performance attribution.

Vertas acts as a fiduciary in overseeing and managing all transition events under whichever fiduciary standard the client wants them to be governed by (i.e., ERISA). However, it is important to note that under the Vertas model, all trading is outsourced to ATM Cowen, an independent division of Cowen & Co. ATM Cowen utilizes a venue-neutral order routing process that uses a liquidity scorecard to execute client trades wherever liquidity for a specific security may exist.

Under the outsourcing arrangement, ATM Cowen can act as an agent or principal, whichever is likely to yield the best results for the client. Vertas has no affiliation with ATM Cowen beyond their arm's length relationship as the outsourced execution provider. The arrangement between Vertas and ATM Cowen is set up such that Cowen earns greater revenues by attaining better trade performance. Vertas independently performs post trade analytics in-house which they confirm through three separate sources in order to monitor and validate the performance of ATM Cowen.

At the end of each transition event, a complete order routing table and details on the trading capacity and percentage of execution in each venue is provided to the client as part of the post trade process.

Areas of Expertise / Differentiation

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Vertas believes that a key differentiator between them and other transition management providers is their independence. Because they are an independent brokerage and transition management consulting firm, they are not tied to any execution venues.

Additionally, the dedicated transition team focuses solely on providing transition services. The core team has been working together continuously for over 7 years.

Because Vertas separates advice and administration from trade execution, clients are able to consult with them well in advance of brokerage events knowing that their trades will not be subject to information leakage.

Vertas manages the entire operational process eliminating administrative burden, and acts as a fiduciary at all stages of the transition.

Their independent pre-trade analysis of the transition event provides clients with a fully transparent estimate of all potential costs, and their post trade reporting includes a venue by venue analysis of where orders were routed as well as a multiple benchmark analysis.

In an effort to ensure their clients have access to optimal liquidity, Vertas continuously performs broker and venue research, and also provides transaction cost analysis services provided at no additional charge.

Potential Concerns

Trading is an outsourced function.

Smaller team and volume of transitions relative to other service providers.

Pre-trade analyses

BLACKROCK®

A pre-transition analysis from BlackRock for

Verus for Contra Costa County

Global Equity Rebalance

Date Prepared: May 11, 2016

FOR PROFESSIONAL CLIENTS / QUALIFIED INVESTORS ONLY

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BlackRock Institutional Trust Company, N.A. ("BTC"), a national banking association operating as a limited purpose trust company, manages the collective investment products and services discussed in this publication and provides fiduciary and custody services to various institutional investors. A collective investment fund is privately offered: prospectuses are not required. Strategies maintained by BTC are not insured by the Federal Deposit Insurance Corporation or any other agency of the U.S. government, are not an obligation or deposit of, or guaranteed by, BTC or its affiliates.

BlackRock Institutional Trust Company, N.A. ("BTC") offers transition services to both its investment management clients and third party clients. Such transition services usually include brokerage services through its wholly owned subsidiary, BlackRock Execution Services ("BES"), member FINRA. BES receives commissions from the Client for trades that BES executes in the course of transitions services. BES itself purchases clearing or other brokerage services from third parties and/or affiliates with some or all of the commission that BES receives.

Executive Summary

Overview

Verus Consulting has requested an analysis on behalf of Contra Costa County ('CCC') for a global equity rebalance. The schematic for assets in motion is below. We have analyzed the costs and risks of the proposed restructuring and present the results of the analysis in the report that follows. Our analysis is based on legacy and target asset lists provided by Verus.

Overlap

We expect the total overlap between the legacy and aggregate target portfolios to be approximately \$45 million, or 15% of the legacy value. These assets will be set aside and not traded.

Liquidity and Trading Horizon

The legacy portfolio is more liquidity constrained than the aggregate target portfolio and will drive the trading horizon. The mean percent of average daily volume is 17.5% and 2.4% for the legacy and target portfolios, respectively. The most challenging trades are listed on page 8.

We expect to complete 75% - 80% of the transition rebalance on the first trading day and over 95% after day 3. A small amount of trading may require up to 6 days to complete while minimizing market impact costs.

BlackRock Objectives

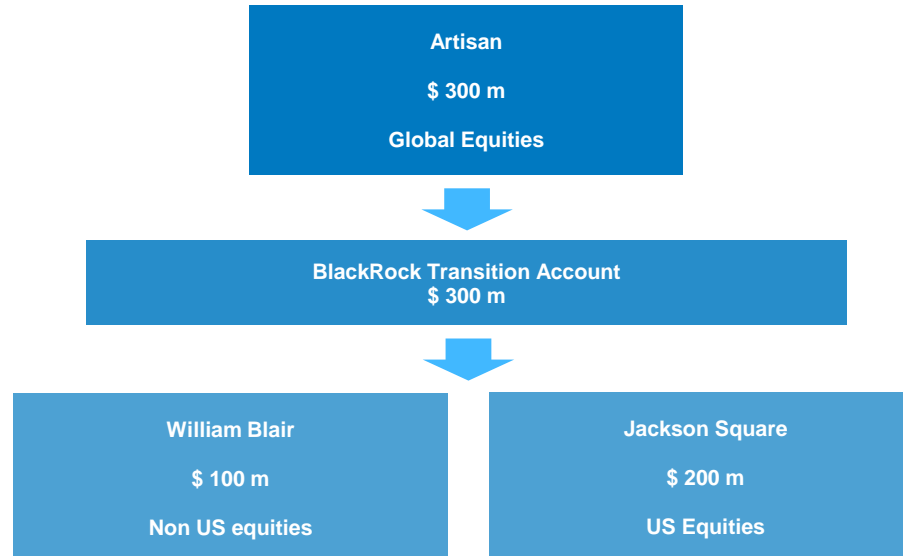
BlackRock will employ the following strategies to minimize risks and costs over the course of the transition:

- 1) Structure a multi-tranche trade to keep the portfolio with the correct exposures throughout the transition period
- 2) Source liquidity from a wide variety of counterparties via a competitive bidding process to minimize trading costs
- 3) Provide full project management support throughout the implementation timeframe

Key Considerations

The largest risks and potential costs for this event stem from the regional/country misweights and the concentrated legacy portfolio with a number of large and illiquid positions. See the following pages for BlackRock's plan to address these risks and potential costs in the context of our objectives.

Transition Structure



Addressing Key Transition Risks

The largest risks to this transition are:

- 1) Stock specific risks from the concentrated legacy portfolio
- 2) Country and regional shifts that need to be managed around the global trading clock. Specifically, the current portfolio is 12% underweight North American equities, 4% overweight to developed Asia ex Japan, 4% overweight Central/South American equities, and 4% overweight cash.

BlackRock will implement the following strategies during the course of trading to reduce risk:

Trade Sequencing

BlackRock will divide the trade into multiple tranches based on liquidity and risk characteristics. The goal is to isolate and neutralize risk through trade sequencing to the extent possible.

- Currency Hedging: We will execute currency trades at the inception of the transition in order to reduce currency risk and to hold the appropriate currencies for equity settlements. This will require trading approximately \$50M of currencies. The largest currency trades will be selling developed Asian and emerging markets currencies to buy USD and EUR. BlackRock does not earn revenue from currency trading activity.
- Spend cash: The legacy portfolio is overweight approximately \$10M of cash, which will be spent as soon as practical on liquid securities
- Correct regional misweights: BlackRock will aim to correct country/regional misweights on the first day of the transition. The largest shift will be selling developed Asian assets to fund North American purchases
- Maintain market exposure: after cash has been spent, and in line-with regional/country misweight corrections, we will trade dollar neutral by executing sells and buys in tandem. Our global trading desks will manage this *locally* around the global trading clock, beginning in Asian market hours, moving through Europe, and ending in North America

Illiquid Positions

There are several positions in the Artisan portfolio that have significant liquidity challenges. We expect approximately 15 names to require multiple days to trade in order to minimize market impact costs. In order to maintain appropriate market exposure, BlackRock will hold back an equal value of liquid target names to purchase at the same point as the illiquid are sold. The buys that will be held back will have similar risk characteristics in order to dampen price divergences. For example, we may pair an illiquid energy company with a basket of liquid buys that are also in the energy sector. BlackRock uses proprietary technology to scientifically develop pairs that minimize exposure risk.

This strategy reduces exposure risk while BlackRock traders take their time to source optimal liquidity for the less liquid names.

Information Leakage

BlackRock utilizes its agency broker 'BlackRock Execution Services' (BES) to act as an interface to the market for sourcing liquidity and protecting confidentiality. BlackRock's strategy is to source quotes selectively from multiple counterparties to achieve best execution.

Hedging Note

BlackRock considered implementing a futures hedge to correct regional misweights at the inception of the rebalance. After a cost/benefit analysis, we do not recommend this approach for this event. An optimal futures hedge would only reduce risk from 4.24% to 4.19%.

Strategy Summary (cont'd)

Costs Minimization

The rebalance will require almost \$480M of market trading and presents several large and illiquid. BlackRock will use the full scale of its equity trading desk to gain best execution.

Liquidity Sourcing

BlackRock manages over \$4 trillion in assets globally. We are a tier 1 counterparty doing business with over 100 different brokers. BlackRock maintains a global trading presence with dedicated trading teams in San Francisco, New York/Princeton, London, and Hong Kong. BlackRock transition team utilizes the greater BlackRock trading platform in executing our transitions. Each transition client always receives the follow:

- All transactions executed as fiduciary and agent for our clients
- Principals of best executions applied to every trade we execute
- Unparalleled access to liquidity and low transaction costs due to our size and scale
- 100% Transparent pricing, no mark ups applied to spreads or yields on assets
- Trades are routed to local trading hubs to be executed by local specialists real-time

Equity Trading

- BlackRock uses a pure agency open-architecture platform with direct and local market access to all key markets
- The range of available brokers and algorithms allow efficient routing of trades to the best counterparty for each region, market, equity type (large cap / small cap)
- Our Trading Research Group provides a scientific structure to determine the best approach for each scenario
- Approximately 40,000 Indications of interest (IOIs) are received daily, which help to trade less liquid positions cost effectively

Trading Analytics & Research (TAR)

- The team maintains the TAR database, which provides the data that drives our trading costs models, our multi-period optimizer (MPO), principal bid model
- TAR makes it possible to dynamically extract the performance of each counterparty by asset class, region, market selection and name. This information is used to execute trades with the strongest counterparties in each sub asset class.

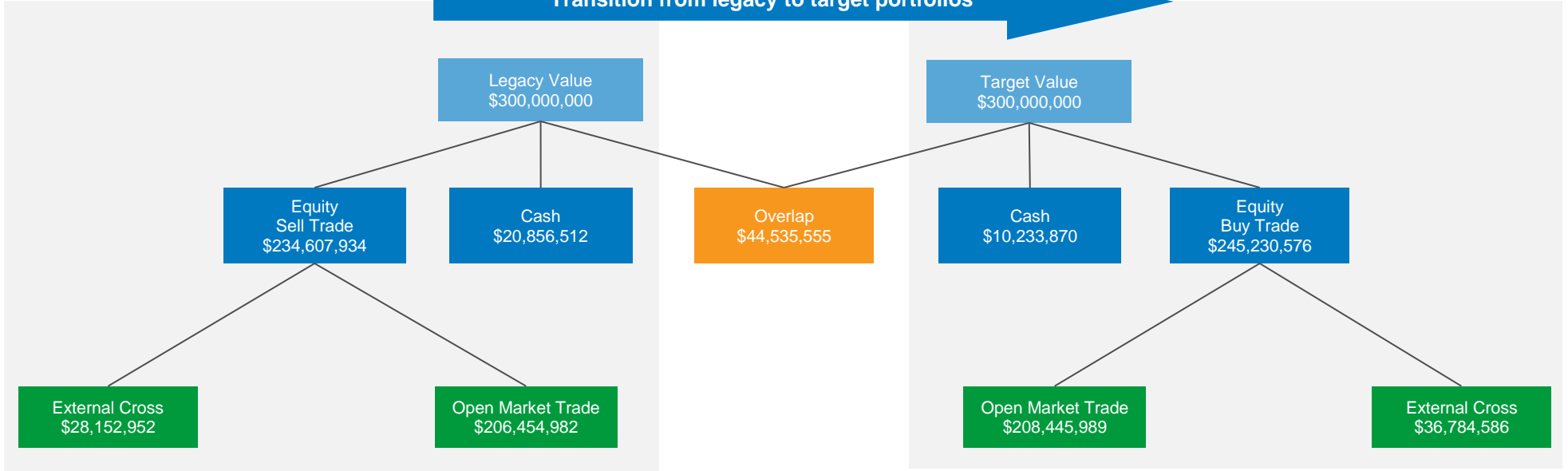
Full Service Project Management

BlackRock act as the central point of contact for the transition and will coordinate with all relevant parties on all aspects of the transition. A few key considerations for this event are below:

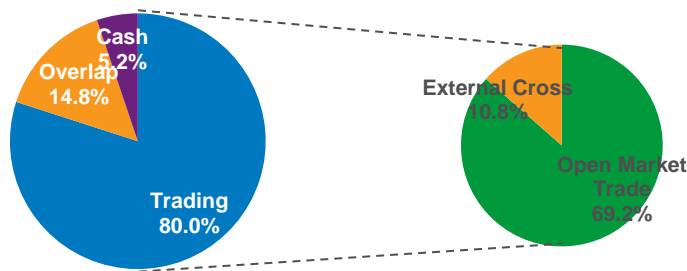
- **Timeline:** BlackRock will work with all parties to develop a timeline that meets CCC's timing objectives within key stakeholders' constraints
- **Asset Transfers:** We will coordinate funding of the target manager and ensure timely settlement
- **Custodian Operational:** BlackRock has existing relationships with all major custodians and has direct access to multiple service centers to ensure timely settlement. We would expect that all communication with your custodian will be via SWIFT. We also use SWIFT for daily cash and securities reconciliation processes

Portfolio Activity

Transition from legacy to target portfolios



Portfolio Activity Breakdown



Post-Overlap Trading Activity

	Trade Value	Total (%)
Open Market Trade	414,900,971	86.5
External Cross	64,937,538	13.5
Trading Value	479,838,510	100.0

Total percentage shown excludes overlapping assets and cash.

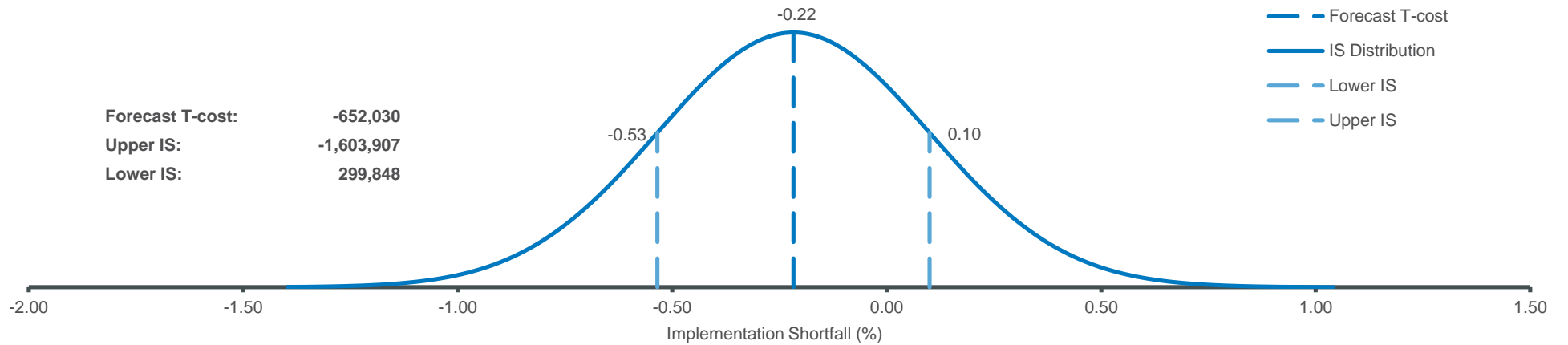
Summary of Total Costs

Estimated Transition Cost

	Sell	Buy	Total Cost	% of Legacy Portfolio Value	% of Traded Value
Commission	(69,099)	(68,681)	(137,780)	(0.05)	(0.03)
Tax	(44,017)	(114,439)	(158,456)	(0.05)	(0.03)
Spread	(77,627)	(65,035)	(142,662)	(0.05)	(0.03)
Market Impact	(141,431)	(71,700)	(213,131)	(0.07)	(0.04)
Total Transaction Costs	(332,174)	(319,855)	(652,030)	(0.22)	(0.14)

Implementation Shortfall Estimate

	Total Cost	% of Legacy Portfolio Value	% of Traded Value
Opportunity Risk (+/-)	951,878	0.32	0.20
Implementation Shortfall - lower cost estimate (1 σ)	299,848	0.10	0.06
Implementation Shortfall - higher cost estimate (1 σ)	(1,603,907)	(0.53)	(0.33)
Implementation Shortfall - lower cost estimate (2 σ)	1,251,726	0.42	0.26
Implementation Shortfall - higher cost estimate (2 σ)	(2,555,785)	(0.85)	(0.53)



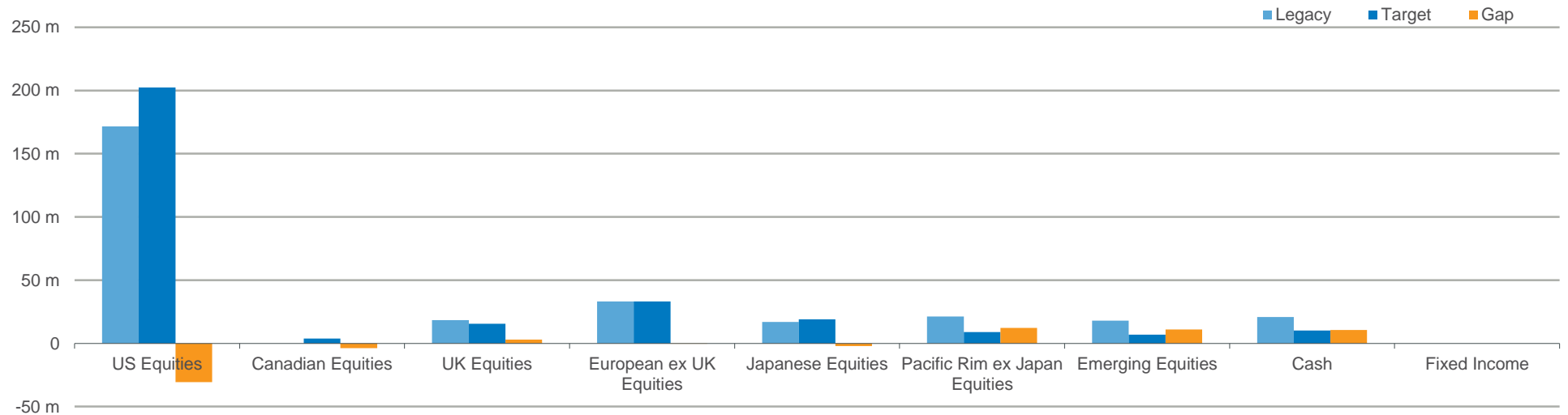
The above pre-trade cost estimate assumes that market returns are normally distributed. However, returns within equity markets are frequently observed to exhibit characteristics which do not fit a normal distribution and therefore outliers in IS may occur more often than expected by the theoretical normal distribution.

Portfolio Structure - Region

Region	Legacy		Target		Gap	
	Market Value	% Market Value	Market Value	% Market Value	Market Value	% Market Value
US Equities	171,654,633	57.22%	202,402,487	67.47%	-30,747,853	-10.25%
Canadian Equities	-	-	3,830,972	1.28%	-3,830,972	-1.28%
UK Equities	18,362,711	6.12%	15,454,440	5.15%	2,908,270	0.97%
European ex UK Equities	33,184,730	11.06%	33,228,658	11.08%	-43,928	-0.01%
Japanese Equities	16,907,723	5.64%	19,059,112	6.35%	-2,151,389	-0.72%
Pacific Rim ex Japan Equities	21,153,876	7.05%	8,889,184	2.96%	12,264,692	4.09%
Emerging Equities	17,879,816	5.96%	6,901,276	2.30%	10,978,539	3.66%
Fixed Income	-	-	-	-	-	-
Cash	20,856,512	6.95%	10,233,870	3.41%	10,622,641	3.54%
Total	300,000,000	100.00%	300,000,000	100.00%	-	-

Market Value by Region

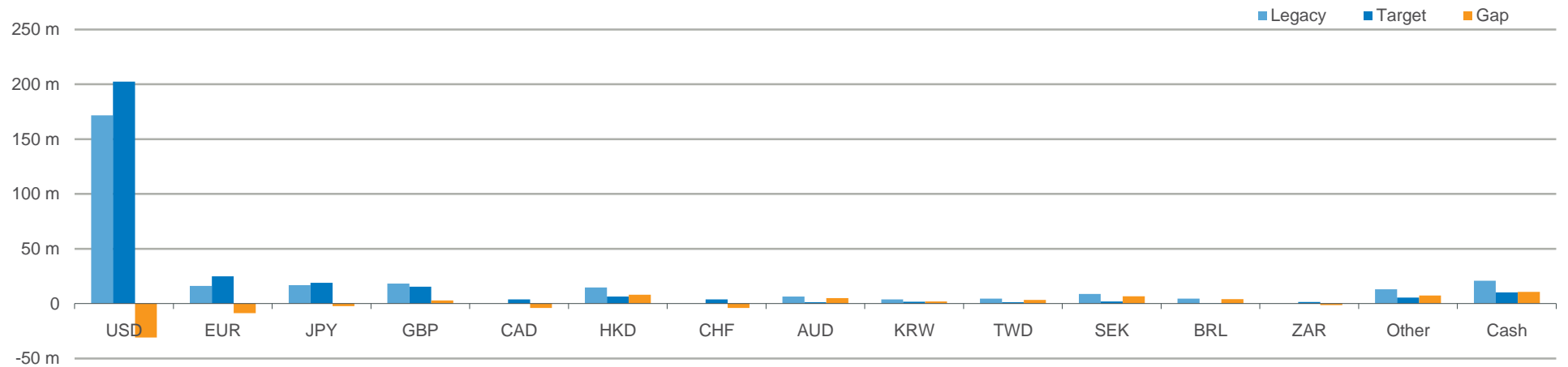
Legacy vs. Target Portfolio Misweights



Portfolio Structure - Equity Currency

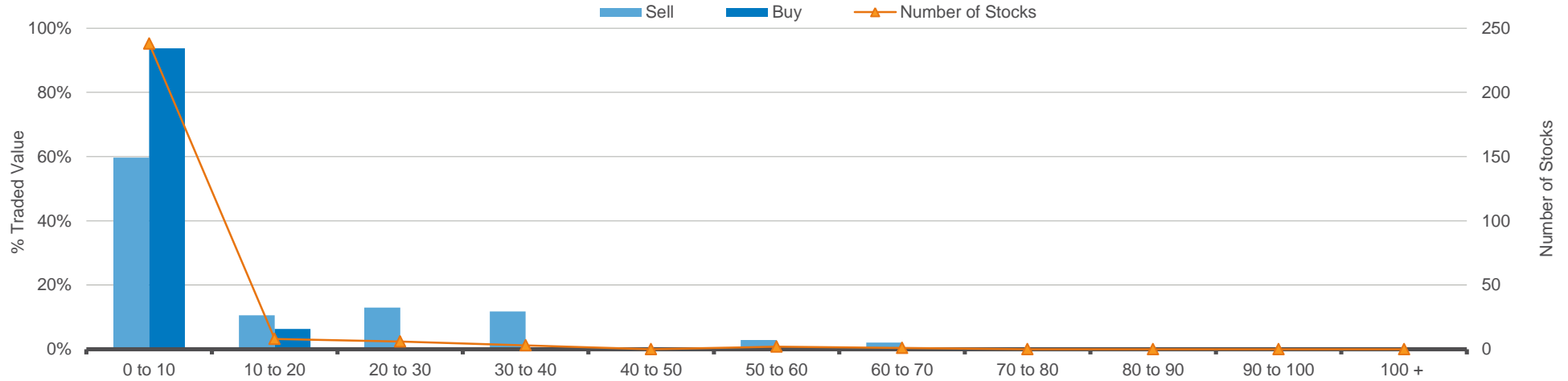
Currency	Legacy		Target		Gap	
	Market Value	% Market Value	Market Value	% Market Value	Market Value	% Market Value
USD	171,654,633	57.22%	202,402,487	67.47%	-30,747,853	-10.25%
EUR	16,202,297	5.40%	24,806,331	8.27%	-8,604,034	-2.87%
JPY	16,907,723	5.64%	19,059,112	6.35%	-2,151,389	-0.72%
GBP	18,362,711	6.12%	15,454,440	5.15%	2,908,270	0.97%
CAD	-	-	3,830,972	1.28%	-3,830,972	-1.28%
HKD	14,762,948	4.92%	6,518,750	2.17%	8,244,198	2.75%
CHF	-	-	3,940,968	1.31%	-3,940,968	-1.31%
AUD	6,390,928	2.13%	1,310,344	0.44%	5,080,584	1.69%
KRW	3,870,589	1.29%	1,819,986	0.61%	2,050,603	0.68%
TWD	4,617,861	1.54%	1,250,342	0.42%	3,367,519	1.12%
SEK	8,731,265	2.91%	1,980,554	0.66%	6,750,711	2.25%
BRL	4,530,656	1.51%	400,103	0.13%	4,130,553	1.38%
ZAR	-	-	1,420,397	0.47%	-1,420,397	-0.47%
Other	13,111,878	4.37%	5,571,344	1.86%	7,540,534	2.51%
Cash	20,856,512	6.95%	10,233,870	3.41%	10,622,641	3.54%
Total	300,000,000	100.00%	300,000,000	100.00%	-	-

Market Value by Currency Legacy vs. Target Portfolio Misweights



Liquidity Analysis

Equity Liquidity % ADV Summary



Most Illiquid Securities

SEDOL	Name	Country	Trade Value	%ADV
B84XBP2	Infraestructura Energetica Nova	Mexico	(4,860,710)	67.7
5972643	Eurofins Scientific	France	(5,060,652)	55.3
6108179	Harmonic Drive Systems Inc	Japan	(1,770,245)	52.4
B08L7X6	Ihs Inc Class A	United States	(14,642,188)	39.1
B7FQV64	Raia Drogasil Sa	Brazil	(4,530,656)	33.7
BY9D0Y1	Direct Line Insurance Plc	United Kingdom	(8,491,236)	32.6
B1XF7L2	Hexagon B	Sweden	(7,171,037)	29.3
BN7PJF6	Markit Ltd	United States	(6,660,975)	27.8
B60QWJ2	James Hardie Industries Cdi Plc	Australia	(6,390,928)	27.3
BQV0SV7	Zalando Se	Germany	(4,020,515)	27.2
BGLP232	Moncler	Italy	(3,570,524)	23.4
B4YVF56	Brenntag Ag	Germany	(2,620,305)	21.0
B144703	Liberty Interactive Qvc Group Corp	United States	8,780,872	17.8
4595739	Genmab	Denmark	(8,251,168)	16.4
3092725	Asos Plc	United Kingdom	(4,740,699)	13.3

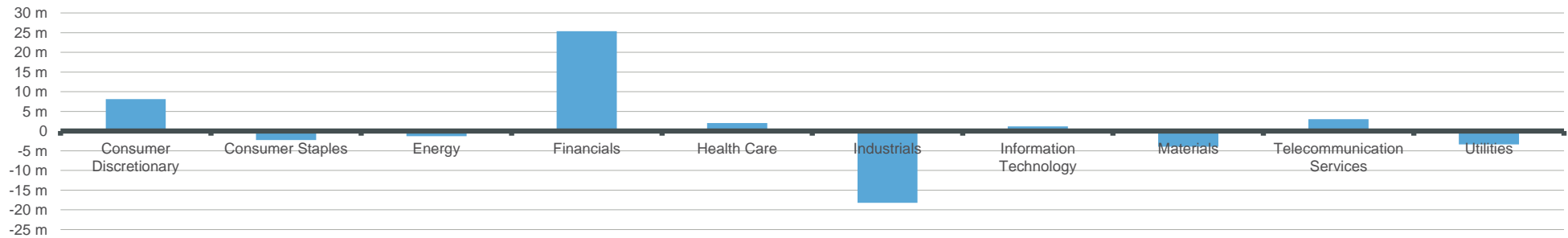
Risk Analysis

The predicted tracking error (PTE) of the legacy portfolio relative to the target portfolio is expected to be approximately 4.24% on an annualized basis.

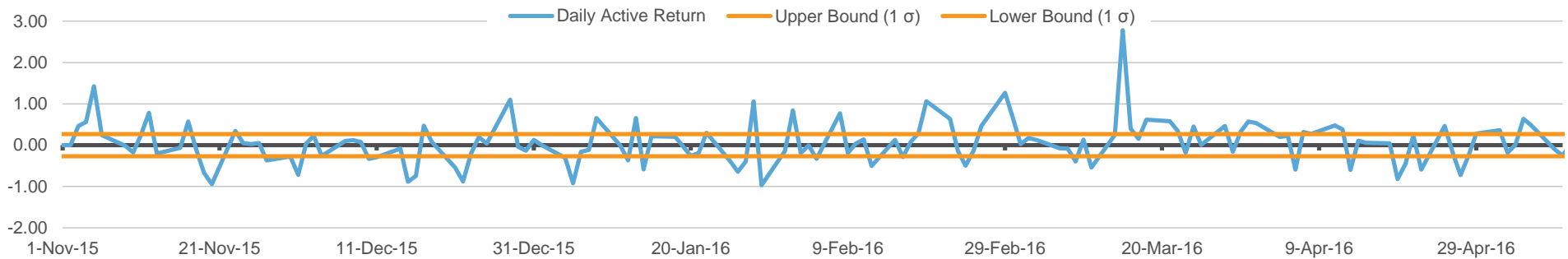
Exposure Risk		
Risk Factor	Contribution to Tracking Error	
	(bps)	(%)
Sector	10	2%
Idiosyncratic	371	88%
Style	30	7%
FX	3	1%
Country	10	2%
Total	424	100%

Operational Table		
	Buy	Sell
No. of Names	211	47
No. of Currencies	20	12

Exposure Shift Net Trading by Sector



Daily Portfolio Risk Daily Active Return vs. Daily Tracking Error Estimate



Conflicts of Interest

Examining the True Cost of a Transition

Transparency is a very important part of evaluating your transition manager. BlackRock created five straightforward questions to help identify and quantify the hidden costs in a transition. These costs represent a conflict of interest between the client and transition manager.

Transition Transparency Tool

	BlackRock U.S. Transitions
Do you earn revenue by trading foreign exchange?	NO
Do you earn revenue from internal crossing?	NO
Do you earn revenue by acting in a principal capacity?	NO
Do you receive revenue from an affiliate who acts in a principal capacity?	NO
Do you earn revenue from order-flow payment, or participate in soft-dollar arrangements?	NO
TOTAL HIDDEN REVENUE	\$0

BlackRock Transition Management earns revenue solely from commissions and fees fully disclosed to clients.

BlackRock's Fiduciary Responsibility:

- ✓ No "for-profit" affiliate for crossing
- ✓ No "for-profit" affiliate for foreign exchange
- ✓ No charge for foreign exchange executions

Disclaimer

BlackRock Institutional Trust Company, N.A. (“BTC”) offers transition services to both its investment management clients and third party clients. Such transition services usually include brokerage services through its wholly owned subsidiary, BlackRock Execution Services (“BES”), member FINRA. BES receives commissions from the Client for trades that BES executes in the course of transitions services. BES itself purchases clearing or other brokerage services from third parties and/or affiliates with some or all of the commission that BES receives.

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Certain information contained in this document constitutes “forward-looking statements,” which can be identified by the use of forward-looking terminology such as “may”, “will”, “should”, “expect”, “anticipate”, “target”, “project”, “estimate”, “intend”, “continue” or “believe” or the negatives thereof or other variations thereon or comparable terminology. Due to various risks and uncertainties, actual events or results or the actual performance of the Strategy may differ materially from those reflected or contemplated in such forward-looking statements.



Project Mock Bid | 11-May-2016

Citi Global Transition Management

Global Equity Transition

Pre-Trade Analysis prepared for CCCERA and Verus



Executive Summary

\$300 million Global Equity Transition

- In this transition, \$300M in international equities will be reallocated from Artisan's Global Equity fund into two new target portfolios for Jackson Square's Domestic Equity Fund (\$200M) and William Blair's International Equity Fund (\$100M). Of the legacy securities, \$44.5M, or 15%, will transfer in-kind to the target side
- The sell names pose the key challenge to both expected costs and risks:
 - They are five times less liquid than the buys (13.3% vs. 2.6% of average daily volume), thereby driving the transition's overall completion schedule, and expected to incur 77% of total market impact (pages 6 and 8)
 - They are also heavily concentrated with the top 5 largest sells (HIS, REGN, ABT, ILMN, and APPL) accounting for 24% of the sell list value. This concentration exposes the transition's performance more to idiosyncratic risks, as the chance for a stock specific driver to influence performance increases with a portfolio's concentration (page 7). A factor model analysis (page 17) indicated that over 70% of the tracking risk is idiosyncratic and attributed to a handful of concentrated names
- The annualized tracking error between the buys and sells is fairly stable, looking back through different observations periods: 3.16% over the past trading year, 3.22% over the past 6 months, 3.32% over the past 3 months. For the purposes of this analysis, we used the one year number. Underlying the tracking error between sells and buys are the following skews, which we would seek to close out early in the trade window:
 - **Sector Risk:** Prominent selling out of Industrials (-4% | \$18M) and buying into Financials (+5% | \$25M)
 - **Geographic Risk:** Large buy skew into the Americas/US (+6%) and moderate skew selling out of Asia Ex Japan (-2%)
- We checked for earnings catalysts and macro catalysts through the beginning of June that might influence performance during the transition:
 - Earnings will peak on May 18th when 4 names (3.34% of the transition value) will be affected by announcements
 - In terms of macro events, all eyes are on the FOMC Minutes release on May 18th which may create uncertain market conditions and volatility (page 16)
- To address the risks and potential costs highlighted above, Citi would trade tactically over ~3 days along an optimized schedule designed to keep the fund invested while minimizing residual tracking risk and reducing the skews highlighted above. The bulk of trading (99.97% of transition value) would be executed by local Citi trading desks around the globe and 94.80% will self clear through Citi's walls:

Total Forecast Cost = Central Point Estimate \$847,158 +/- 1 σ Tracking Risk of \$1,094,151

Executive Summary

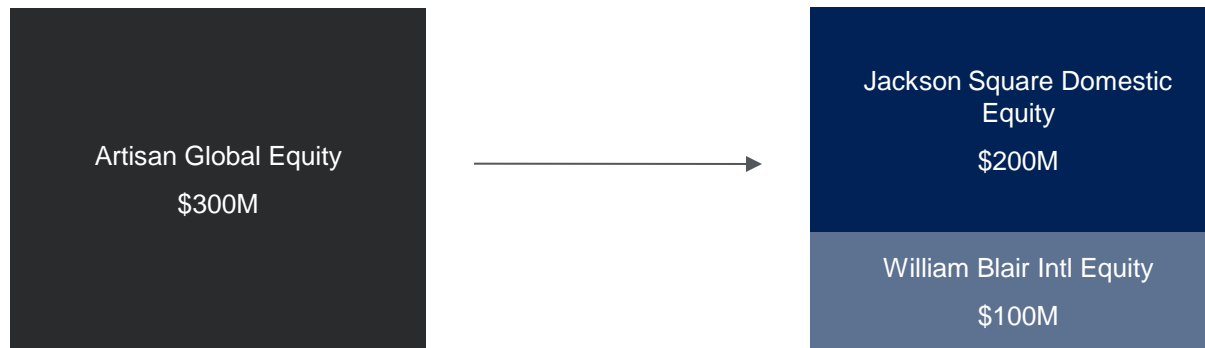
Blue Print

Transition Parameters

Project Code Name	Mock Bid
Funds Under Transition	300,000,000
Target Trade Start	TBD
Target Transition Conclude	TBD
Target Hand-Over Date	TBD

Outgoing	Securities	Cash	Total USD
Artisan Global Equity	277,853,675	20,862,968	298,716,643
Cash for Green Mountain (Takeover)		1,283,357	1,283,357
Total	277,853,675	22,146,325	300,000,000

Incoming	Securities	Cash	Total USD
Jackson Square Domestic Equity	193,592,572	4,203,847	197,796,419
Cash for Sirona Dental (Takeover)	0	2,203,581	2,203,581
William Blair International Equity	96,165,078	3,834,922	100,000,000
Total	289,757,650	10,242,350	300,000,000



Portfolio Analysis

Transaction Characteristics

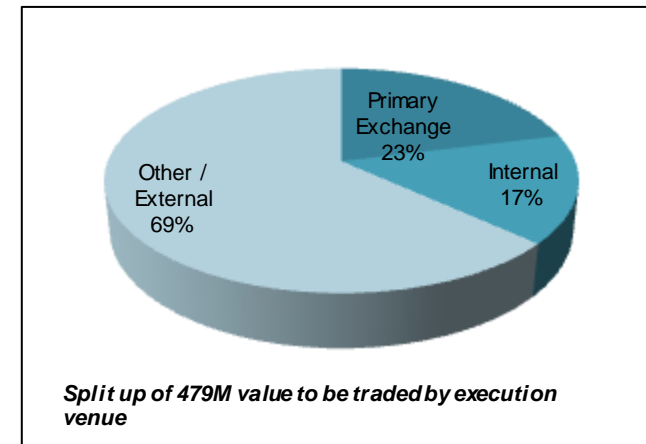
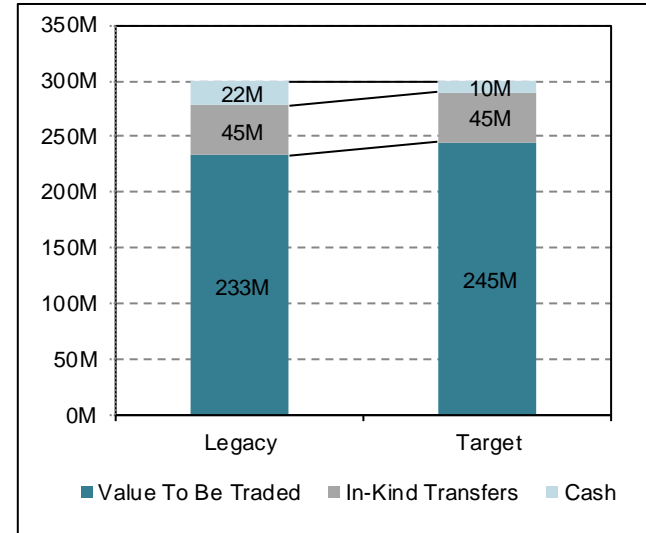
\$44.5M, or 15% of the legacy funds would move in-kind to the target side. Post in-kind trading will amount to \$233M to sell and \$245M to buy.

Portfolios	USD		
	Legacy	Target	Combined
Total Value	300,000,000	300,000,000	600,000,000
Equity	277,853,675	289,757,650	567,611,325
Cash	22,146,325	10,242,350	32,388,675

In-Kind Cross	USD		
	Legacy	Target	Combined
Equity Value	44,534,603	44,534,603	89,069,206
Securities	13	13	
Shares	400,218	400,218	

Transition Trade	USD		
	Sells	Buy	Combined
Post In-Kind Trade	233,319,072	245,223,047	478,542,119
Securities	46	212	258
% Weight Top 5 Names	24.14%	20.34%	22.2%
Shares	8,345,968	9,469,383	17,815,351
Bid Ask (full, bps)	11.4	6.1	8.7
1-Day Impact (bps)	12.5	2.0	7.1
% Average Daily Volume (ADV)	13.26	2.64	7.82

Transition Risk	USD		
	Sells	Buy	Combined
Post In-Kind Volatility			
Annualized Volatility	16.00%	14.64%	3.16%
Daily Volatility / Tracking Cost	1.01%	0.92%	0.20%
Daily Value at Risk	2,351,635	2,261,529	952,592
Beta to MSCI AC World	1.04	1.05	0.03



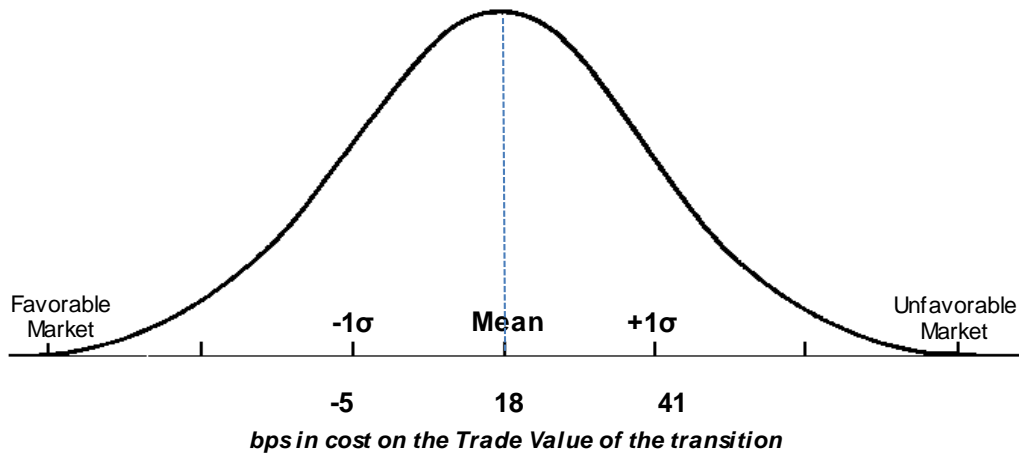
Portfolio Analysis

Transition Strategy & Costs

Transition Cost Estimate	Value	bps on Trade	bps on Fund	Contribution to Total Cost
All Commissions	119,977	2.5	4.0	14%
Equity Commission	108,863	2.3	3.6	13%
FX Commission	11,113	0.2	0.4	1%
Stamp Duty & Fees	151,576	3.2	5.1	18%
Explicit Cost Total	271,553	5.7	9.1	32%
Equity Market Impact	339,298	7.1	11.3	40%
Bid-Ask Cost	207,927	4.3	6.9	25%
FX Restricted (Custodian)	28,381	0.6	0.9	3%
Implicit Cost Total	575,606	12.0	19.2	68%
Mean Transaction Estimate	847,158	17.7	28.2	100%
Tracking Risk Estimate	1,094,151	22.9	36.5	

Strategy

Citi would trade tactically over ~3 days along an optimized schedule designed to keep CCCERA's fund invested, while minimizing residual tracking risk and the regional skews embedded in the transition



Comm Rate by Asset Class			Comm (USD)
0.50	cents	Domestic Equity	21,564
4.0	bp	Developed Equity	66,236
8.0	bp	EM Equity (18 bps for India)	21,064
2.0	bp	Freely Traded FX	11,113
			119,977

Observation	Annualized Vol
21 Days	3.29%
63 Days	3.32%
126 Days	3.22%
252 Days	3.16%

Portfolio Analysis

Liquidity Risk Analysis

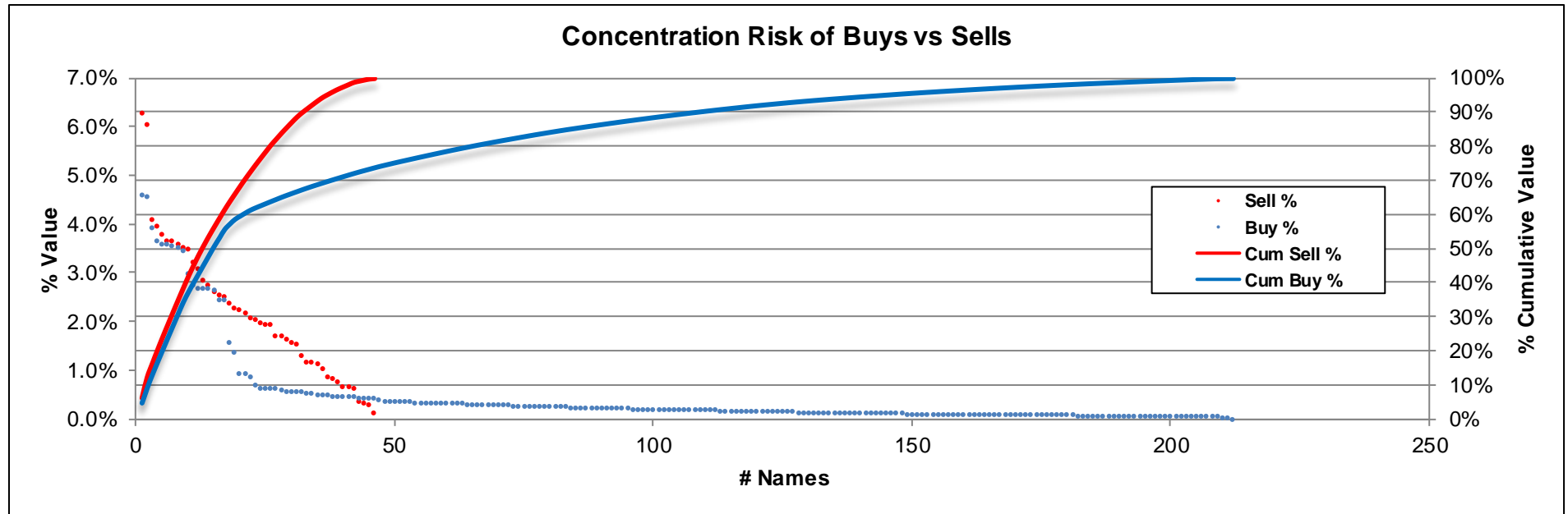
The % of average daily volume on the legacy side is 13.3% and on the target it is 2.6%.

Liquidity Buckets by % ADV	Sells	USD	%	Buys	USD	%	Net Value	% Trade	Cum. Value	% Trade	Impact	% Total Impact
0 - 1	10	30,303,022	13%	114	80,918,105	33%	50,615,083	11%	111,221,127	23%		5%
1 - 3	8	47,072,266	20%	83	121,365,106	49%	74,292,840	16%	168,437,372	35%		14%
3 - 5	7	43,391,183	19%	10	18,211,087	7%	(25,180,096)	-5%	61,602,270	13%		13%
5 - 8	4	18,399,736	8%	3	9,223,229	4%	(9,176,507)	-2%	27,622,965	6%		7%
8 - 10	1	3,693,098	2%	1	6,720,246	3%	3,027,148	1%	10,413,344	2%		2%
10 - 15	3	12,856,759	6%	0	-	0%	(12,856,759)	-3%	12,856,759	3%		4%
15 - 20	3	20,294,895	9%	1	8,785,269	4%	(11,509,626)	-2%	29,080,164	6%		7%
20 - 25	3	13,294,278	6%	0	-	0%	(13,294,278)	-3%	13,294,278	3%		7%
25 - 30	2	11,025,125	5%	0	-	0%	(11,025,125)	-2%	11,025,125	2%		10%
30 - 40	2	21,294,242	9%	0	-	0%	(21,294,242)	-4%	21,294,242	4%		13%
40 - 50	1	1,760,231	1%	0	-	0%	(1,760,231)	0%	1,760,231	0%		5%
50 - 60	0	-	0%	0	-	0%	-	0%	-	0%		0%
60 - 80	2	9,934,235	4%	0	-	0%	(9,934,235)	-2%	9,934,235	2%		13%
80 - 100	0	-	0%	0	-	0%	-	0%	-	0%		0%
	46	233,319,070	100%	212	245,223,042	100%	11,903,972	2%	478,542,112	100%	547,225	100%
							478,542,112		478,542,112			

Portfolio Analysis

Concentration Risk

Concentration risk is **high** for the sells and moderate for the buys. The top 5 biggest names to buy and 5 to sell comprise 22% of the trade value.



Top 5 Sells by Market Value

Ticker	USD	% Sell
IHS US	14,645,867	6.3%
REGN US	14,071,170	6.0%
ABT US	9,547,320	4.1%
ILMN US	9,204,953	3.9%
AAPL US	8,843,995	3.8%

56,313,305 24.1%

Top 5 Buys by Market Value

Ticker	USD	% Buy
CELG US	11,305,635	4.6%
AGN US	11,161,699	4.6%
QCOM US	9,629,750	3.9%
WBA US	8,973,125	3.7%
MSFT US	8,808,436	3.6%

49,878,645 20.3%

Average Ticket Size

Side	# Names	Avg Size (USD)
Sell	46	5,072,154
Buy	212	1,156,712

Portfolio Analysis

Top Stocks by ADV & Relative Impact

Below we show the top 10 most illiquid and impactful names to trade for the transition:

Top 10 Stocks by % of ADV

ID	Name	Weight %	Mkt Value USD	Shares	B/S	ADV %
5972643	EUROFINS SCIENTIFIC ORD	1.06	5,070,361	13,732	S	73.2
B84XBP2	INFRAESTRUCTURA ENERGETICA NOV	1.02	4,863,874	1,264,685	S	72.5
6108179	HARMONIC DRIVE ORD	0.37	1,760,231	75,602	S	43.8
B08L7X6	IHS CL A ORD	3.06	14,645,867	120,156	S	36.3
BN7PJF6	MARKIT ORD	1.39	6,648,375	192,762	S	34.6
B3WH021	HERMES ORD	0.97	4,632,230	157,782	S	29.2
B60QWJ2	JAMES HARDIE INDUSTRIES CDI	1.34	6,392,895	440,510	S	28.9
B7FQV64	RAIA DROGASIL ORD	0.95	4,534,011	286,533	S	22.7
3092725	ASOS ORD	0.99	4,752,689	86,358	S	22.6
BQV0SV7	ZALANDO ORD	0.84	4,007,578	119,805	S	22.2

Top 10 Stocks by Relative Impact

ID	Name	Weight %	Mkt Value USD	Shares	B/S	Relative Impact %
B08L7X6	IHS CL A ORD	3.06	14,645,867	120,156	S	7.7
B84XBP2	INFRAESTRUCTURA ENERGETICA NOV	1.02	4,863,874	1,264,685	S	7.6
B60QWJ2	JAMES HARDIE INDUSTRIES CDI	1.34	6,392,895	440,510	S	6.2
5972643	EUROFINS SCIENTIFIC ORD	1.06	5,070,361	13,732	S	5.2
BN7PJF6	MARKIT ORD	1.39	6,648,375	192,762	S	4.9
6108179	HARMONIC DRIVE ORD	0.37	1,760,231	75,602	S	4.5
BYV2325	S&P GLOBAL ORD	1.57	7,502,054	71,475	S	4.5
2730190	REGENERON PHARMACEUTICALS ORD	2.94	14,071,170	36,466	S	4.5
B3WH021	HERMES ORD	0.97	4,632,230	157,782	S	4.3
B7FQV64	RAIA DROGASIL ORD	0.95	4,534,011	286,533	S	3.0

Portfolio Analysis

Sector Analysis

The sector risk in this transition is high with skews selling out of Industrials (-4% | \$18M) and buying into Financials (+5% | \$25M).

Sectors	Sells	USD	%	Buys	USD	%	Net Value	% Trade	Cum. Value	% Trade	Impact	% Total Impact
Consumer Discretionary	8	36,854,050	16%	44	44,980,900	18%	8,126,850	2%	81,834,950	17%	66,852	12%
Consumer Staples	5	16,629,216	7%	15	15,623,664	6%	(1,005,552)	0%	32,252,880	7%	48,851	9%
Energy	2	5,004,484	2%	4	3,708,589	2%	(1,295,895)	0%	8,713,073	2%	2,858	1%
Financials	4	26,628,795	11%	52	52,005,157	21%	25,376,362	5%	78,633,952	16%	93,584	17%
Health Care	5	46,134,769	20%	20	48,194,208	20%	2,059,439	0%	94,328,977	20%	95,454	17%
Industrials	5	26,987,585	12%	24	8,762,077	4%	(18,225,508)	-4%	35,749,662	7%	80,506	15%
Information Technology	15	63,823,402	27%	34	65,083,921	27%	1,260,519	0%	128,907,323	27%	80,776	15%
Materials	1	6,392,895	3%	10	2,395,959	1%	(3,996,936)	-1%	8,788,854	2%	35,142	6%
Telecommunication Services	0	-	0%	5	3,013,149	1%	3,013,149	1%	3,013,149	1%	1,055	0%
Utilities	1	4,863,874	2%	4	1,455,418	1%	(3,408,456)	-1%	6,319,292	1%	42,148	8%
Unclassified	0	-	0%	-	-	0%	-	0%	-	0%	-	0%
	46	233,319,070	100%	212	245,223,042	100%	11,903,972	2%	478,542,112	100%	547,225	100%
							478,542,112		478,542,112			

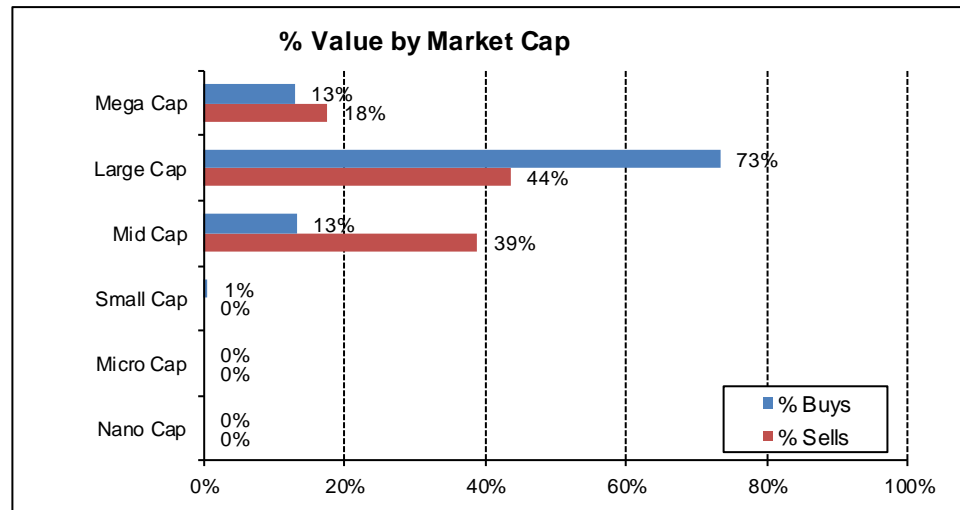
Portfolio Analysis

Market Capitalization Analysis

The weighted average market cap for the sells is \$70.B and \$60.1B for the buys.

Capitalization	Sells	USD	% Sells	Buys	USD	% Buys	Net Value	% Trade	Cum. Value	% Trade	Impact	% Total Impact
Nano Cap	0	-	0%	0	-	0%	-	0%	-	0%		0%
Micro Cap	0	-	0%	0	-	0%	-	0%	-	0%		0%
Small Cap	0	-	0%	3	1,426,909	1%	1,426,909	0%	1,426,909	0%		0%
Mid Cap	19	90,705,600	39%	79	32,425,772	13%	(58,279,828)	-12%	123,131,372	26%		59%
Large Cap	19	101,511,894	44%	120	179,665,617	73%	78,153,723	16%	281,177,511	59%		37%
Mega Cap	8	41,101,576	18%	10	31,704,744	13%	(9,396,832)	-2%	72,806,320	15%		4%
	46	233,319,070	100%	212	245,223,042	100%	11,903,972	2%	478,542,112	100%		100%
							478,542,112		478,542,112			

Capitalization	Range (USD)	
Nano Cap	0M	50M
Micro Cap	50M	300M
Small Cap	300M	2B
Mid Cap	2B	10B
Large Cap	10B	100B
Mega Cap	100B	+



Portfolio Analysis

Country Risk Analysis

The country risk embedded in this restructuring is moderate though there is a notable skew buying into the United States (+\$32M | 7%). 100% of the traded value will be executed by Citi local trading desks, and 95% of the traded value will self-clear within Citi's extensive global network.

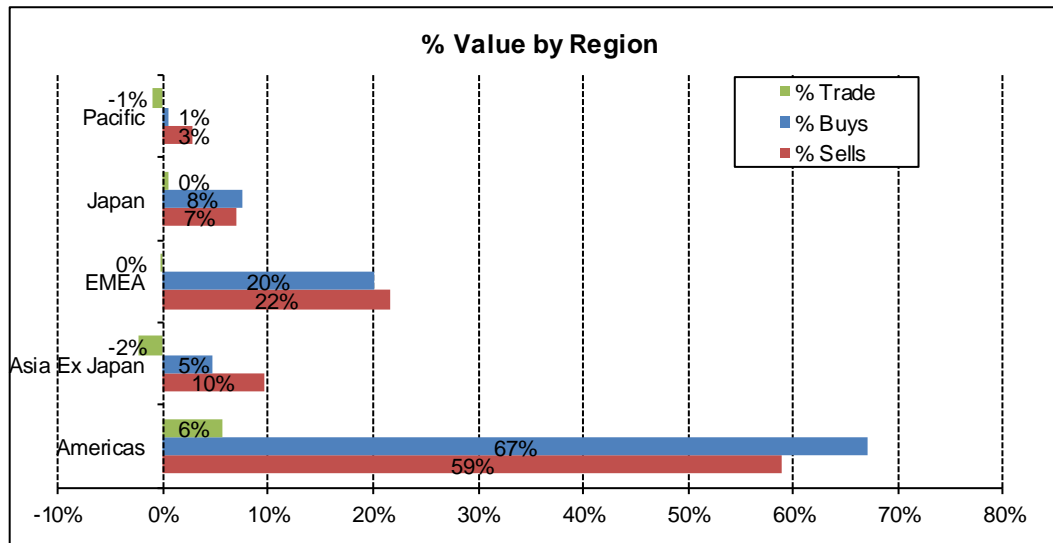
Countries	Sells	USD	% Sells	Buys	USD	% Buys	Net Value	% Trade	Cum. Value	% Trade	Impact	% Total Impact	Holidays
Hong Kong	3	13,998,250	6%	8	5,768,352	2%	(8,229,898)	-2%	19,766,602	4%	23,969	4%	No
Sweden	2	8,716,619	4%	6	1,978,964	1%	(6,737,655)	-1%	10,695,583	2%	7,974	1%	No
Denmark	1	8,240,965	4%	5	1,947,702	1%	(6,293,263)	-1%	10,188,667	2%	9,782	2%	16-May-16
Australia	1	6,392,895	3%	4	1,304,114	1%	(5,088,781)	-1%	7,697,009	2%	34,409	6%	No
Mexico	1	4,863,874	2%	1	177,175	0%	(4,686,699)	-1%	5,041,049	1%	41,588	8%	No
Brazil	1	4,534,011	2%	2	407,019	0%	(4,126,992)	-1%	4,941,030	1%	16,696	3%	26-May-16
Taiwan	1	4,632,230	2%	5	1,295,199	1%	(3,337,031)	-1%	5,927,429	1%	24,489	4%	No
UK	4	18,393,759	8%	29	15,430,746	6%	(2,963,013)	-1%	33,824,505	7%	27,000	5%	30-May-16
Germany	2	6,632,774	3%	9	4,552,464	2%	(2,080,310)	0%	11,185,238	2%	10,747	2%	16-May-16
South Korea	1	3,693,098	2%	3	1,632,423	1%	(2,060,675)	0%	5,325,521	1%	9,025	2%	No
Italy	1	3,555,568	2%	4	2,395,219	1%	(1,160,349)	0%	5,950,787	1%	6,988	1%	No
UAE	0	-	0%	1	147,934	0%	147,934	0%	147,934	0%	116	0%	No
Indonesia	0	-	0%	1	205,721	0%	205,721	0%	205,721	0%	127	0%	No
Portugal	0	-	0%	2	434,875	0%	434,875	0%	434,875	0%	163	0%	No
Norway	0	-	0%	2	539,408	0%	539,408	0%	539,408	0%	348	0%	16-May-16
Ireland	0	-	0%	2	569,469	0%	569,469	0%	569,469	0%	763	0%	No
Singapore	0	-	0%	2	1,056,798	0%	1,056,798	0%	1,056,798	0%	689	0%	No
Belgium	0	-	0%	2	1,108,791	0%	1,108,791	0%	1,108,791	0%	356	0%	No
South Africa	0	-	0%	3	1,424,690	1%	1,424,690	0%	1,424,690	0%	469	0%	No
India	0	-	0%	5	1,473,995	1%	1,473,995	0%	1,473,995	0%	756	0%	No
Finland	0	-	0%	3	1,880,726	1%	1,880,726	0%	1,880,726	0%	455	0%	No
Netherlands	0	-	0%	3	1,962,672	1%	1,962,672	0%	1,962,672	0%	316	0%	No
Japan	5	16,378,494	7%	38	18,550,357	8%	2,171,863	0%	34,928,851	7%	59,103	11%	No
France	1	5,070,361	2%	13	7,999,379	3%	2,929,018	1%	13,069,740	3%	29,794	5%	No
Spain	0	-	0%	6	2,949,491	1%	2,949,491	1%	2,949,491	1%	602	0%	No
Canada	0	-	0%	8	3,832,351	2%	3,832,351	1%	3,832,351	1%	950	0%	23-May-16
Switzerland	0	-	0%	7	3,947,292	2%	3,947,292	1%	3,947,292	1%	2,104	0%	16-May-16
United States	22	128,216,172	55%	38	160,249,716	65%	32,033,544	7%	288,465,888	60%	237,447	43%	30-May-16
	46	233,319,070	100%	212	245,223,042	100%	11,903,972	2%	478,542,112	100%	547,225	100%	
							478,542,112		478,542,112				

Portfolio Analysis

Regional Risk Analysis

The regional risks embedded in this restructuring are high given the buy skew into the Americas (+65) and skew selling out of Asia Ex Japan (-2%).

Regions	Sells	USD	% Sells	Buys	USD	% Buys	Net Value	% Trade	Cum. Value	% Trade	Impact	% Total Impact
Americas	24	137,614,057	59%	49	164,666,261	67%	27,052,204	6%	302,280,318	63%	296,682	54%
Asia Ex Japan	5	22,323,578	10%	24	11,432,488	5%	(10,891,090)	-2%	33,756,066	7%	59,055	11%
EMEA	11	50,610,046	22%	97	49,269,822	20%	(1,340,224)	0%	99,879,868	21%	97,976	18%
Japan	5	16,378,494	7%	38	18,550,357	8%	2,171,863	0%	34,928,851	7%	59,103	11%
Pacific	1	6,392,895	3%	4	1,304,114	1%	(5,088,781)	-1%	7,697,009	2%	34,409	6%
	46	233,319,070	100%	212	245,223,042	100%	11,903,972	2%	478,542,112	100%	547,225	100%
							478,542,112		478,542,112			



Portfolio Analysis

Foreign Exchange Analysis

Currency Code	Underlying Country	Trade Status	Legacy USD	Target USD	Net Trade USD	Forecast Cost USD	bps
Total			255,465,395	255,465,392	0	39,494	
AUD	Australia	Free	6,392,895	1,304,114	-5,088,781	1,018	2.0
JPY	Japan	Free	16,378,494	18,550,357	2,171,863	434	2.0
HKD	Hong Kong	Free	13,998,250	5,768,352	-8,229,898	1,646	2.0
INR	India	Restricted	0	1,473,995	1,473,995	3,685	25.0
IDR	Indonesia	Restricted	0	205,721	205,721	514	25.0
SGD	Singapore	Free	0	1,056,798	1,056,798	211	2.0
KRW	South Korea	Restricted	3,693,098	1,632,423	-2,060,675	5,152	25.0
TWD	Taiwan	Restricted	4,632,230	1,295,199	-3,337,031	8,343	25.0
GBP	Britain	Free	18,393,759	15,430,746	-2,963,013	593	2.0
DKK	Denmark	Free	8,240,965	1,947,702	-6,293,263	1,259	2.0
EUR	Eurozone	Free	15,258,703	23,853,086	8,594,383	1,719	2.0
NOK	Norway	Free	0	539,408	539,408	108	2.0
ZAR	South Africa	Free	0	1,424,690	1,424,690	285	2.0
SEK	Sweden	Free	8,716,619	1,978,964	-6,737,655	1,348	2.0
CHF	Switzerland	Free	0	3,947,292	3,947,292	789	2.0
AED	Dinar	Restricted	0	147,934	147,934	370	25.0
BRL	Brazil	Restricted	4,534,011	407,019	-4,126,992	10,317	25.0
CAD	Canada	Free	0	3,832,351	3,832,351	766	2.0
MXN	Mexico	Free	4,863,874	177,175	-4,686,699	937	2.0
USD	United States	Free	150,362,497	170,492,066	20,129,569	0	0.0
Freely-Traded Comm (Executed by Citi)					55,566,094	11,113	2.0
Restricted Impact (Executed by Custodian)					11,352,348	28,381	25.0
Total					66,918,442	39,494	5.9

- This transition will involve a net sell of \$20M in foreign currencies versus the USD, of which \$8M are in restricted currency sells
- In order to minimize FX impact costs and risk, Citi would execute the freely traded currency trades using agency-only algorithms. The trades would be executed in each region in line with the equity executions taking place there
- Citi would provide full transparency around the orders, delivering post trade reporting which includes timestamps and the intra-dealer market at the time of every child fill
- Note, restricted FX orders (red) cannot be dealt by a third party. As your transition manager, Citi would review the executions to ensure reasonable execution levels

Portfolio Analysis

Commissions, Stamp Duty & Exchange Fees Analysis

Stamp, duty, and fees comprise 7% of the mean cost estimate.

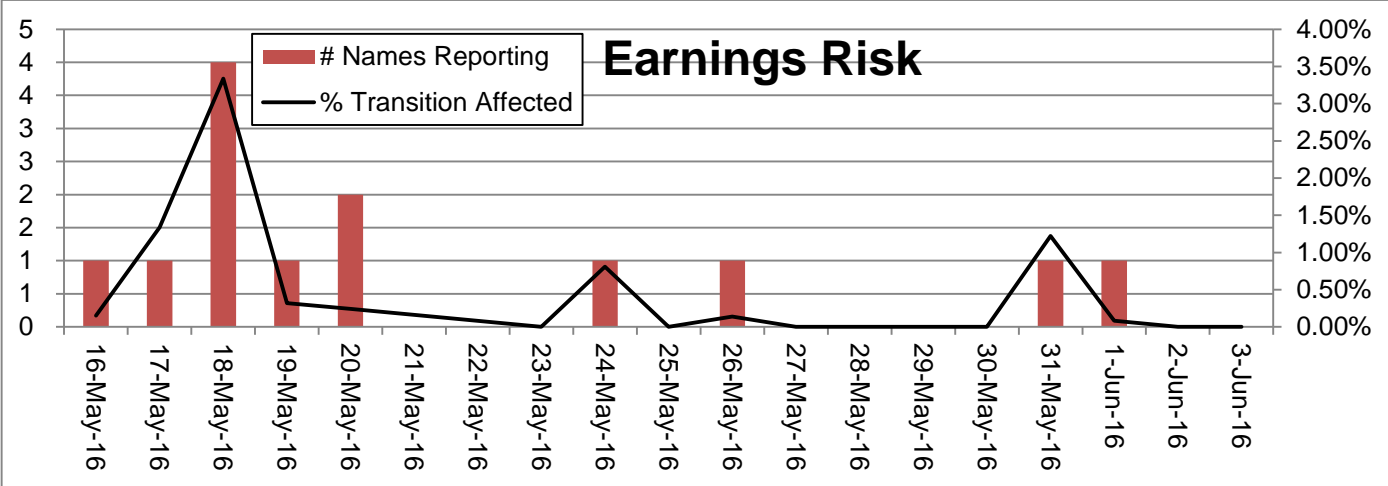
Countries	Type	Sells (USD)	Buys (USD)	Comm Rate (bps)	Comm (USD)	Stamp Duty Rate Sells (bps)	Stamp Duty Rate Buys (bps)	Stamp Duty Total (USD)
United States	US	128,216,172	160,249,716	0.5 ¢/share	21,564	0.218	-	2,795
Australia	DM	6,392,895	1,304,114	4.00	3,079	-	-	-
Hong Kong	DM	13,998,250	5,768,352	4.00	7,907	10.77	10.77	21,289
India	EM	-	1,473,995	18.00	2,653	10.00	10.00	1,474
Indonesia	EM	-	205,721	8.00	165	15.10	5.10	105
Japan	DM	16,378,494	18,550,357	4.00	13,972	-	-	-
Singapore	DM	-	1,056,798	4.00	423	3.25 (max SGD 600)	3.25 (max SGD 600)	343
South Korea	EM	3,693,098	1,632,423	8.00	4,260	30.00	-	11,079
Taiwan	EM	4,632,230	1,295,199	8.00	4,742	30.00	-	13,897
Belgium	DM	-	1,108,791	4.00	444	-	-	-
Denmark	DM	8,240,965	1,947,702	4.00	4,075	-	-	-
Finland	DM	-	1,880,726	4.00	752	-	-	-
France	DM	5,070,361	7,999,379	4.00	5,228	-	20.00	16,701
Germany	DM	6,632,774	4,552,464	4.00	4,474	-	-	-
Ireland	DM	-	569,469	4.00	228	-	100.00	5,695
Italy	DM	3,555,568	2,395,219	4.00	2,380	-	10.00	2,395
Netherlands	DM	-	1,962,672	4.00	785	-	-	-
Norway	DM	-	539,408	4.00	216	-	-	-
Portugal	DM	-	434,875	4.00	174	-	-	-
South Africa	EM	-	1,424,690	8.00	1,140	-	25.00	3,562
Spain	DM	-	2,949,491	4.00	1,180	-	-	-
Sweden	DM	8,716,619	1,978,964	4.00	4,278	-	-	-
Switzerland	DM	-	3,947,292	4.00	1,579	-	-	-
United Arab Emirates	EM	-	147,934	8.00	118	12.50	12.50	185
United Kingdom	DM	18,393,759	15,430,746	4.00	13,530	-	50.00	70,451
Brazil	EM	4,534,011	407,019	8.00	3,953	3.25	3.25	1,606
Canada	DM	-	3,832,351	4.00	1,533	-	-	-
Mexico	EM	4,863,874	177,175	8.00	4,033	-	-	-
		233,319,070	245,223,042		108,863			151,576

Catalyst Monitor

Earnings Activity Monitor

Earnings will peak on May 18th when 4 names (3.34% of the transition value) will be affected by announcements.

Exp. Report Date	# Names Reporting	% Transition Affected
16-May-16	1	0.15%
17-May-16	1	1.34%
18-May-16	4	3.34%
19-May-16	1	0.32%
20-May-16	2	0.24%
23-May-16	0	0.00%
24-May-16	1	0.81%
25-May-16	0	0.00%
26-May-16	1	0.14%
27-May-16	0	0.00%
30-May-16	0	0.00%
31-May-16	1	1.22%
1-Jun-16	1	0.08%
2-Jun-16	0	0.00%
3-Jun-16	0	0.00%



Catalyst Monitor

International Economic Calendar – May 2016

		May-11	May-12	May-13
		Japan flash Mar Leading Index CI Japan flash Mar Coincident Index UK Mar Industrial Production MoM UK Apr NIESR GDP Estimate US Apr Monthly Budget Statement Japan Mar BoP Current Account Balance Japan Buying Foreign Stocks & Bonds Japan Foreign Buying Stocks & Bonds **Japan Apr Eco Watchers Survey Current	Eurozone Mar Industrial Prod. SA MoM UK May BOE Meeting UK Bank of England Inflation Report US Apr Import Price Index MoM US Initial Jobless Claims US Bloomberg Consumer Comfort Japan Apr Money Stock M2 YoY	Japan Mar Tertiary Industry Index MoM Germany final Apr CPI YoY Germany flash 1Q GDP SA QoQ UK Mar Construction Output SA MoM Eurozone flash 1Q GDP SA QoQ US Apr Retail Sales Advance MoM US Apr PPI Final Demand MoM US Mar Business Inventories US flash May U. of Mich. Sentiment
May-16	May-17	May-18	May-19	May-20
Japan flash Apr Machine Tool Orders YoY US May Empire Manufacturing US Mar Net Long-term TIC Flows **Japan Apr Nationwide Dept Sales YoY	Japan Mar Capacity Utilization MoM Japan final Mar Industrial Prod. MoM	Eurozone final Apr CPI YoY US MBA Mortgage Applications US U.S. April FOMC Minutes Japan 1Q Housing Loans YoY Japan Mar Machine Orders MoM Japan Buying Foreign Bonds & Stocks Japan Foreign Buying Bonds & Stocks	Japan Mar All Ind. Activity Index MoM Japan final Apr Machine Tool Orders YoY Eurozone Mar ECB Current Account SA Eurozone Mar Construction Output MoM Eurozone ECB Minutes US Apr Chicago Fed Nat Activity Index US Initial Jobless Claims US May Philadelphia Fed Biz Outlook US Bloomberg Consumer Comfort US Apr Leading Index	Germany Apr PPI MoM Japan Apr Convenience Store Sales YoY US Apr Existing Home Sales
May-23	May-24	May-25	May-26	May-27
Japan final Mar Leading Index CI Japan final Mar Coincident Index Germany flash May Markit/BME Mfg PMI Eurozone flash May Markit Mfg PMI Eurozone flash May Markit Services PMI Eurozone flash May Markit Composite PMI US flash May Markit Manufacturing PMI Japan flash May Nikkei PMI Mfg	Germany final 1Q GDP SA QoQ Germany May ZEW Survey Curr. Situation Germany May ZEW Survey Expectations	Germany May IFO Business Climate Eurozone May ZEW Survey Expectations US Mar FHFA House Price Index MoM US flash May Markit Services PMI US flash May Markit Composite PMI Japan Apr PPI Services YoY Japan Buying Foreign Bonds & Stocks Japan Foreign Buying Bonds & Stocks China Apr Swift Global Payments CNY	UK flash 1Q GDP QoQ US Initial Jobless Claims US flash Apr Durable Goods Orders US flash Apr Cap Goods Orders Nondef US Bloomberg Consumer Comfort US Apr Pending Home Sales MoM US May Kansas City Fed Manf. Activity Japan Apr Natl CPI YoY China Apr Industrial Profits YoY	US 1Q GDP Annualized QoQ US 1Q Core PCE QoQ US final May U. of Mich. Sentiment **Germany Apr Retail Sales MoM **China Apr Leading Index

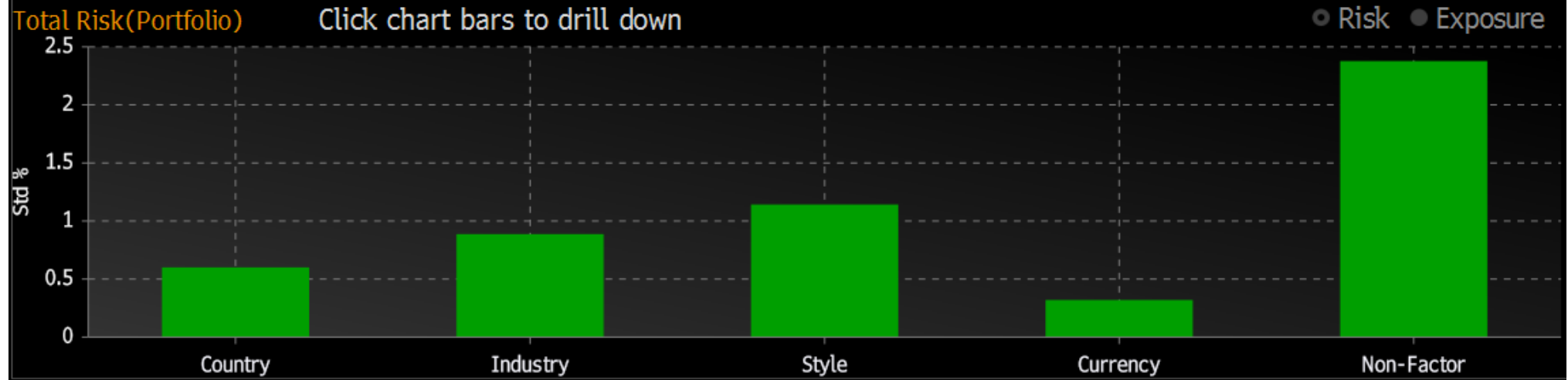
* Source: Citi US Equity Trading Strategy

Portfolio Analysis

Ex-Ante Tracking Risk

- 29% of ex-ante tracking risk (predicted risk) can be explained by factors such as Equity (Style, Industry). The remaining 71% of the ex-ante tracking risk are contributed from non-factor risks (please see the next page for breakdown).

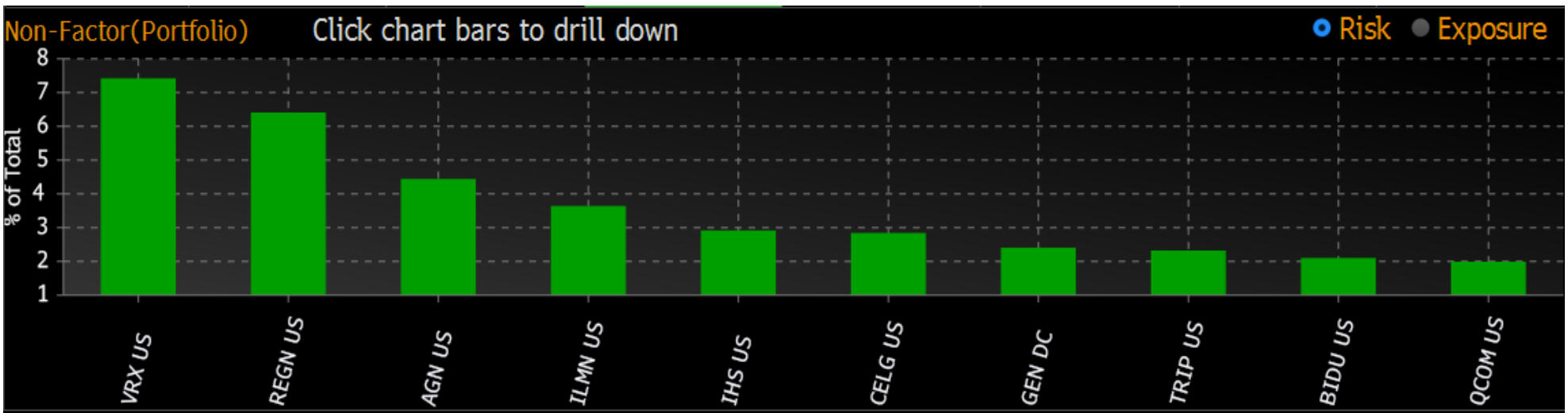
Item	Risk Contribution (%)			Factor Risk Contribution (%)			
	Total Risk	Factor	Non-Factor	Country	Industry	Style	Currency
Portfolio	100.00	29.87	70.13	5.21	8.32	15.35	0.98
Benchmark	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Active	100.00	29.87	70.13	5.21	8.32	15.35	0.98



Portfolio Analysis

Ex-Ante Tracking Risk

Please see below the single names that are the non-factor risks of the model.



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Citi works with its clients in greenhouse gas intensive industries to evaluate emerging risks from climate change and, where appropriate, to mitigate those risks.

efficiency, renewable energy and mitigation



Contra Costa County Employees' Retirement Association

Global Equity Pre-Trade Analysis

May 11, 2016

EXECUTIVE SUMMARY

Penserra Transition Management LLC ("Penserra") is pleased to present the following pre-trade report to Contra Costa County Employees' Retirement Association ("CCCERA") and their consultant Verus ("Verus"). The report analyzes a restructuring of global equities between three (3) investment managers.

Specifically, the event involves a shift of approximately \$300 million from a Artisan global equity strategy ("Legacy Portfolio") to fund approximately \$200 million in a Jackson Square U.S. equity strategy and approximately \$100 million in a William Blair international equity strategy (collectively, the two target strategies referred to as "Target Portfolios"). Approximately \$43.2 million of the Legacy Portfolio, or 14%, is projected to overlap with the Target Portfolios.

All portfolios analyzed are based on actual holdings provided by Verus, and valued as of May 9, 2016 closing prices.

KEY ATTRIBUTES

- The active risk (or tracking error) between the Legacy Portfolio and the Target Portfolios is measured to be 5.33% annualized, which equates to approximately +/- 31.0 basis points (BPS) over the projected trading period.
- The extent to which we experience a deviation in price from the previous night's close to execution will drive the risk outcome.
- All relatively less liquid securities are in the Artisan legacy portfolio with 9 names representing between 27% and 122% ADV. We expect to complete 93% of trading on day 1 with potentially three days to complete the balance.

ESTIMATED COSTS AND PERFORMANCE

- The total cost of the transition event is estimated at -\$1,006,209 or about -33.5 BPS of the Legacy Portfolio's value.
- Using an implementation shortfall framework, our analysis shows a trade with a one standard deviation shortfall range of +/- 31.0 BPS around a central case trading cost estimate of -33.5 BPS.
- Recent volatility levels, as measured by some of the market's more widely used volatility indices, have not only stabilized but moved slightly lower over the past 20 days having been higher in early March. The performance between the Legacy Portfolio and Target Portfolios has been relatively in line with our standard factor model estimate over the same period.

PROPOSED TRADE STRATEGY

- We believe that managing risk is the best way to control costs and, ultimately, preserve capital. Using a combination of algorithms and trading techniques, we will create a strategy that identifies and addresses the largest contributors to risk.
- We evaluated futures based strategies to manage the exposure mismatches across regions but determined that trade scheduling around regional closings and openings is a more efficient solution. We plan to hold approximately \$19 million in liquid net sells in Asia Pacific until near the close and re-establish exposure shortly thereafter as EMEA markets open.
- With the remaining trade, we will execute in a dollar neutral fashion (purchase buy names in line as proceeds are raised from sells) through EMEA and Americas markets as we maximize crossing opportunities and source liquidity through various execution venues.
- We propose to trade net currency at the Trade Date - 1 day (T-1) benchmark 4:00 London Fix to manage currency exposure risk. Small true-up trades will be required once all underlying equity trading has been completed.
- Target portfolios include approximately \$5 million in emerging markets securities that are non-transferable and hence cannot be purchased in the transition account. We have included target cash in lieu for these securities as they will need to be purchased by the target managers.
- Additionally, we will be mindful of any upcoming corporate earnings (36 in total for the remainder of November) and decide on whether to trade before, through or around the announcement periods.

ADDITIONAL CONSIDERATIONS

- **Project Management** - As the lead project manager, it will be our responsible to devise a clear and effective plan (with close oversight) for all relevant parties to follow.
- **Economic Calendar** - We will monitor the economic news to be released around the anticipated trading period, and assess the impact individually. Specific news to be provided once a timeline has been agreed to.
- **Corporate Actions** - There is only one (1) corporate actions to report through the end of May.

INVESTMENT MANAGER SUMMARY

The table below summarizes the aggregate asset values of both the legacy and target managers evaluated for the proposed transition. For managers that are retained but have their mandate notional reduced/increased, only the net change will be shown as the inkind is

Managers	Equity Value	Cash Value	Legacy Value	Target Value	Weight
Artisan	276,553,711	23,446,289	300,000,000	-	100%
Jackson Square	192,474,606	4,246,962	-	196,721,568	66%
William Blair	94,577,064	8,701,368	-	103,278,432	34%
Total			300,000,000	300,000,000	

Managers (aggregate)	Equity Value	Cash Value	Legacy Value	Target Value	Weight
Legacy Portfolio	276,553,711	23,446,289	300,000,000	-	100.00%
Target Portfolios	287,051,670	12,948,330	-	300,000,000	100.00%
Total			300,000,000	300,000,000	

Note - The above cash values include requested cash, cash in lieu (for non-transferrable securities) and a cash cushion to account for market volatility.

TRADE BREAKDOWN

Stocks	Names	Shares	Value	Avg. Price	Inkind Value	Trade Shares	Trade Value
Legacy / Sell	47	8,821,045	276,553,711	31.35	43,197,589	8,419,545	233,356,122
Target / Buy	208	9,126,848	287,051,670	31.45	43,197,589	8,725,849	243,854,081
Total	255	17,947,893	563,605,381		86,395,178	17,145,394	477,210,203

Cash	Value
Legacy / Sell	23,446,289
Target / Buy	12,948,330
Net	10,497,959

EXPOSURE ANALYSIS

We highlight the net difference between the legacy and target exposures to frame the regional risk discussion. Our convention is to view the sell program (Legacy portfolio less inkind) as "Long" exposure while the buy program (Target portfolio less inkind) is expressed as "Short" exposure. Managing the exposure can significantly reduce active risk within the transition horizon, which in turn helps to manage costs and thus preserve asset value.

Region	Legacy	Target	Inkind	Sell	Buy	Net Buy/Sell
Pacific	6,390,533	(1,303,643)	-	6,390,533	(1,303,643)	5,086,890
Asia Pacific Ex Japan	23,304,036	(7,566,547)	932,354	22,371,681	(6,634,193)	15,737,489
Japan	16,913,069	(19,118,302)	531,758	16,381,311	(18,586,544)	(2,205,233)
Asia Pacific Subtotal	46,607,637	(27,988,491)	1,464,112	45,143,526	(26,524,379)	18,619,146
EMEA Ex United Kingdom	31,768,738	(34,247,403)	932,678	30,836,060	(33,314,725)	(2,478,666)
United Kingdom	18,404,183	(15,792,793)	-	18,404,183	(15,792,793)	2,611,390
GDR	-	-	-	-	-	-
EMEA Subtotal	50,172,921	(50,040,197)	932,678	49,240,243	(49,107,519)	132,724
Americas Ex United States	9,437,647	(4,440,050)	-	9,437,647	(4,440,050)	4,997,597
United States	170,335,506	(204,582,932)	40,800,799	129,534,707	(163,782,133)	(34,247,426)
Americas Subtotal	179,773,153	(209,022,982)	40,800,799	138,972,354	(168,222,183)	(29,249,829)
Overall	276,553,711	(287,051,670)	43,197,589	233,356,122	(243,854,081)	(10,497,959)

COST ESTIMATES

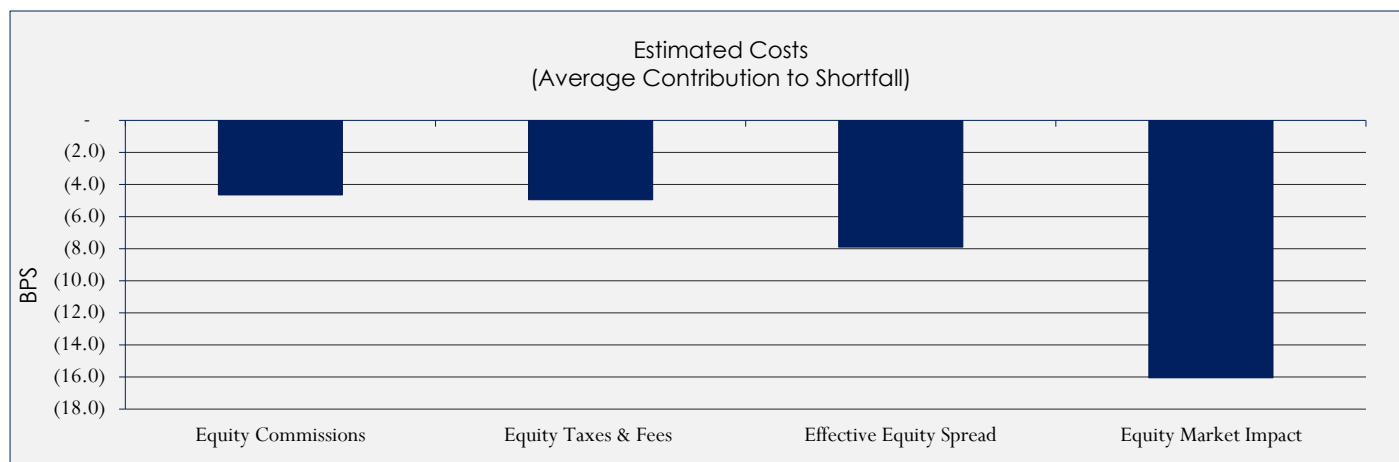
Total trading cost estimates are comprised of explicit and implicit costs. Explicit cost totals include measurable costs such as commissions, taxes and fees. Implicit cost totals include spread and impact using statistical models that incorporate liquidity, observed bid/ask spreads, historical volatility and correlation matrices.

Commission Schedule		
U.S. (CPS)	DEV (BPS)	EM (BPS)
0.85	5.0	10
Trading Cost Item	Mean Estimate	Mean BPS
Equity Commissions	(139,340)	(4.6)
Equity Taxes & Fees	(148,432)	(4.9)
Explicit Total	(287,771)	(9.6)

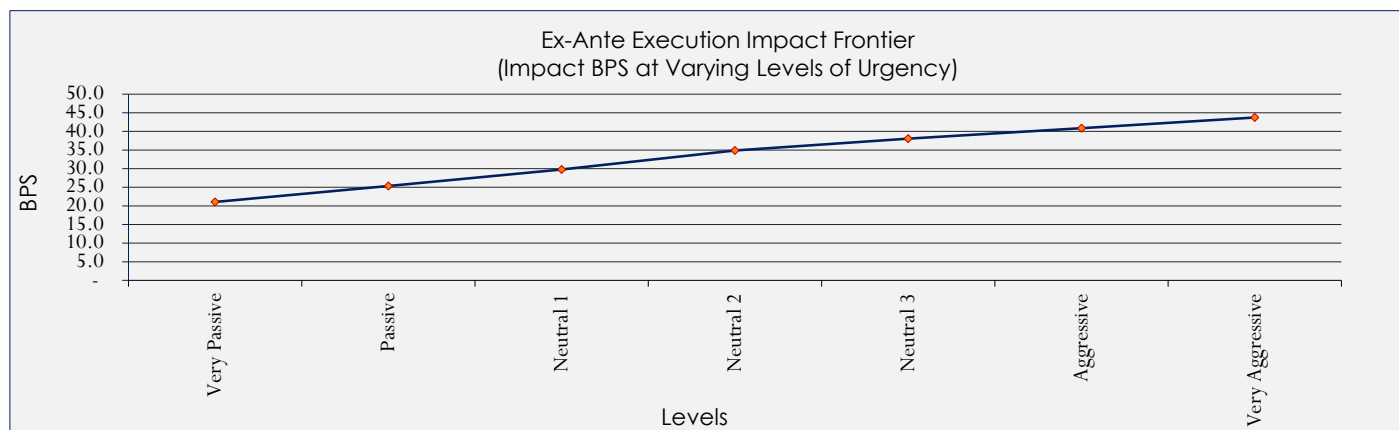
Crossing Estimates by Exchange		
Exchange	Ext. Cross	Open Market
U.S.	155,457,925	137,858,915
World	38,656,503	145,422,082
Total (41%)	194,114,428	283,280,996

Effective Equity Spread	(237,085)	(7.9)
Equity Market Impact	(481,353)	(16.0)
Implicit Total	(718,438)	(23.9)
Total Estimated Costs	(1,006,209)	(33.5)

Note: Mean BPS based on the total notional value of the Legacy Portfolio.



The following graph represents the trade-off between the level of aggressiveness and impact (cost) with a given trade strategy. In general, the more aggressive you are in executing a trade the larger its expected impact (cost) to the transition. That said, a strategy on the top right side of the frontier would be utilized when seeking to achieve an immediate benchmark with minimal cost considerations. Conversely, the bottom left side of the frontier would indicate utilizing a more cost-controlled approach with no set time constraints on achieving a benchmark.



RISK ESTIMATES

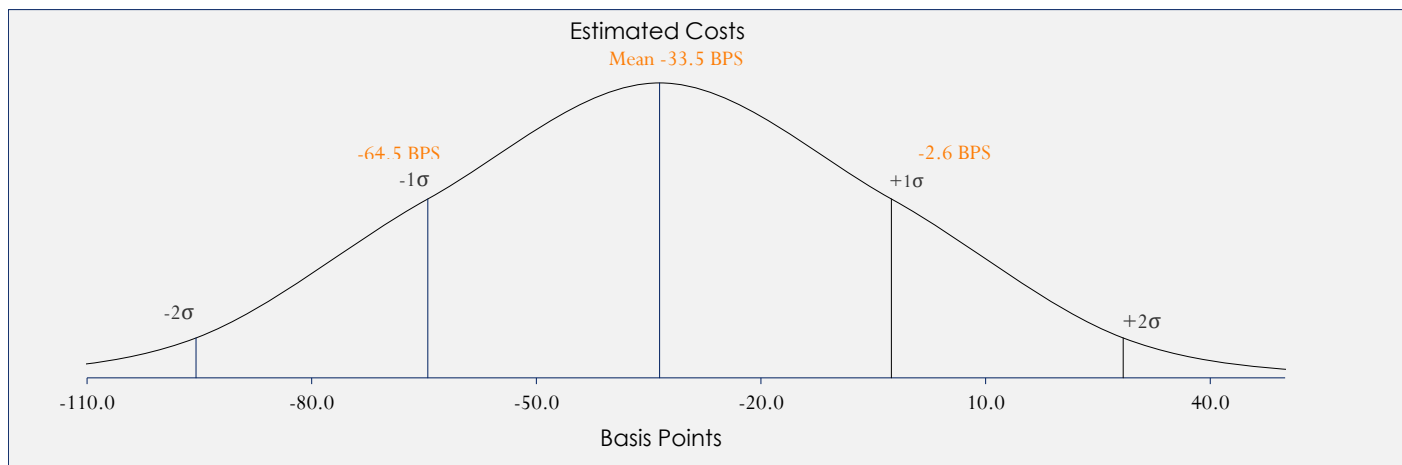
Because the legacy and target portfolios do not track each other perfectly, there is risk associated with the fact that during a transition horizon, prices of target securities we are buying may move at a different rate than prices of legacy securities we are selling. We work to reduce this market related risk through optimized trading and an overall focus on exposure management. Penserra estimates active risk between legacy and target using factor models. This active risk, when applied to our transition horizon, is the framework for creating a confidence interval or range of likely shortfall outcomes around our central trading cost estimate.

	Mean BPS
Total Estimated Costs	(33.5)

	Annual (%)	De-annualized (BPS) *
Risk Projections (effective range)	5.33	+/- 31.0

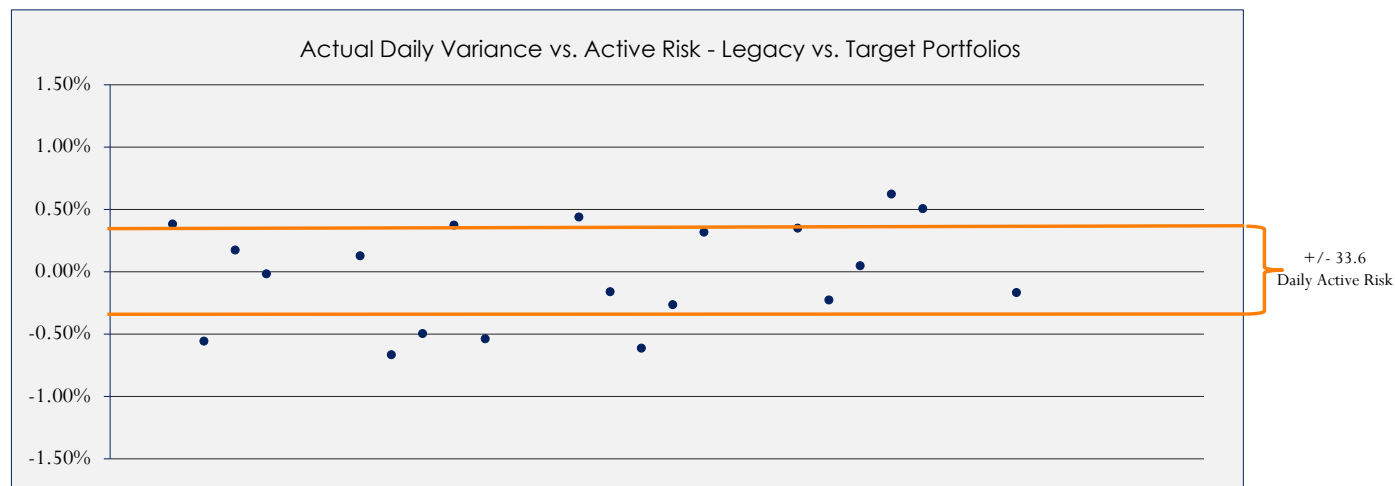
* Assumes less than a day's worth of risk.

	Lower Est.	Upper Est.	Lower BPS	Upper BPS
Shortfall Boundary (68% Range)	-1,934,871	-77,547	-64.5	-2.6
Shortfall Boundary (95% Range)	-2,863,533	851,115	-95.5	28.4



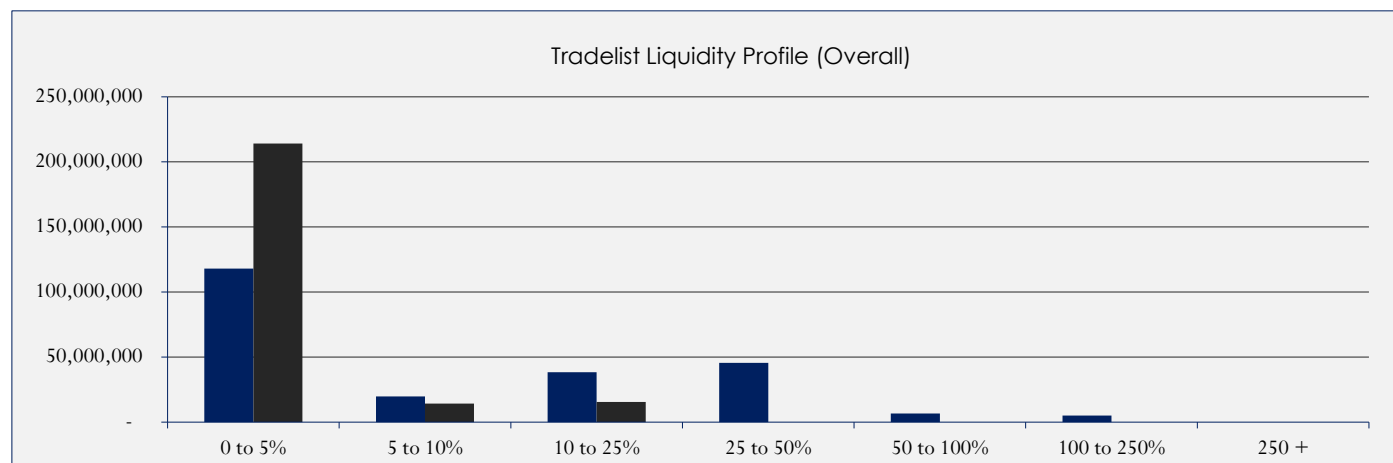
RISK AND TREND ANALYSIS

All markets experience unpredictable periods of volatility that are not effectively captured in model forecasts. For this reason, Penserra analyzes the actual performance of portfolios over the previous 20 days. We then compare and contrast these results with our models to better identify momentum trends and actual top/bottom contributors to overall risk when determining our final estimates.



LIQUIDITY PROFILE ANALYSIS

Estimated Completion Rate (Day 1):			93%			
ADV Range	Sell Value	Buy Value	Sell Shares	Buy Shares	Sell Names	Buy Names
0 to 5%	118,012,434	214,068,706	1,820,600	8,045,664	23	189
5 to 10%	19,793,019	14,250,031	224,590	216,975	4	5
10 to 25%	38,321,758	15,535,344	2,514,062	463,210	9	3
25 to 50%	45,552,143	-	2,473,335	-	6	-
50 to 100%	6,610,538	-	1,373,100	-	2	-
100 to 250%	5,066,230	-	13,858	-	1	-
250 +	-	-	-	-	-	-
Total	233,356,122	243,854,081	8,419,545	8,725,849	45	197



TOP 10 TRADES BY DESCENDING % ADV (SELL PROGRAM)

Name	Sell	Sell MV	% ADV	%WT to Legacy	Region
Eurofins Scientific	14,633	5,066,230	122.03	1.69	EMEA Ex United Kingdom
Infraestructura Energetica N	1,297,800	4,848,997	82.54	1.62	Americas Ex United States
Harmonic Drive Systems Inc	75,300	1,761,542	51.27	0.59	Japan
Ihs Inc-Class A	119,900	14,642,188	42.55	4.88	United States
Raia Drogasil Sa	296,500	4,588,650	37.75	1.53	Americas Ex United States
Zalando Se	131,030	4,004,309	30.60	1.33	EMEA Ex United Kingdom
Markit Ltd	193,300	6,649,520	30.43	2.22	United States
Direct Line Insurance Group	1,553,171	8,503,169	30.30	2.83	United Kingdom
Hexagon Ab-B Shs	186,828	7,164,307	27.19	2.39	EMEA Ex United Kingdom
James Hardie Industries-Cdi	446,847	6,390,533	24.92	2.13	Pacific

TOP 10 TRADES BY DESCENDING % ADV (BUY PROGRAM)

Name	Buy	Buy MV	% ADV	%WT to Legacy	Region
Kingspan Group Plc	8,210	216,790	20.97	0.07	EMEA Ex United Kingdom
Liberty Interactive Corp Q-A	332,500	8,784,650	18.13	2.93	United States
Novo-Nordisk A/S-Spons Adr	122,500	6,719,125	11.03	2.24	United States
Banca Generali Spa	14,719	398,884	8.85	0.13	EMEA Ex United Kingdom
Dentsply Sirona Inc	73,400	4,442,168	6.24	1.48	United States
Hiscox Ltd	19,659	263,404	5.21	0.09	United Kingdom
Crown Castle Intl Corp	96,200	8,607,014	5.19	2.87	United States
Smurfit Kappa Group Plc	12,997	353,340	5.03	0.12	United Kingdom
Techtronic Industries Co Ltd	129,500	493,715	4.98	0.16	Asia Pacific Ex Japan
Equinix Inc	25,500	8,696,520	4.77	2.90	United States

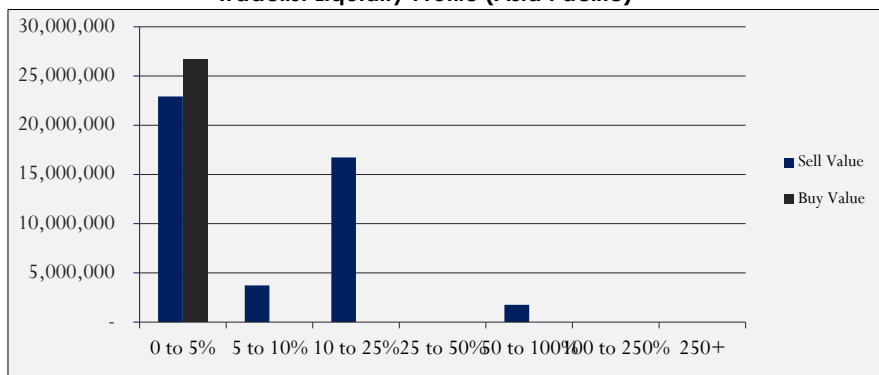
LIQUIDITY PROFILE

Utilizing smart order routing technology that incorporates liquidity from exchanges, dark pools, algorithms and crossing networks, we have the ability to access both lit and dark liquidity. Our trading platform aggregates all of the trading venues, real-time fills, and performance numbers under one view so we can manage the trading process and risk associated with a specific transitions. Our approach is built upon complete transparency in execution venue and method.

ASIA-PACIFIC

Bucket	Sell Value	Buy Value
0 to 5%	22,926,727	26,709,601
5 to 10%	3,729,566	-
10 to 25%	16,725,691	-
25 to 50%	-	-
50 to 100%	1,761,542	-
100 to 250%	-	-
250+	-	-
Total	45,143,526	26,709,601

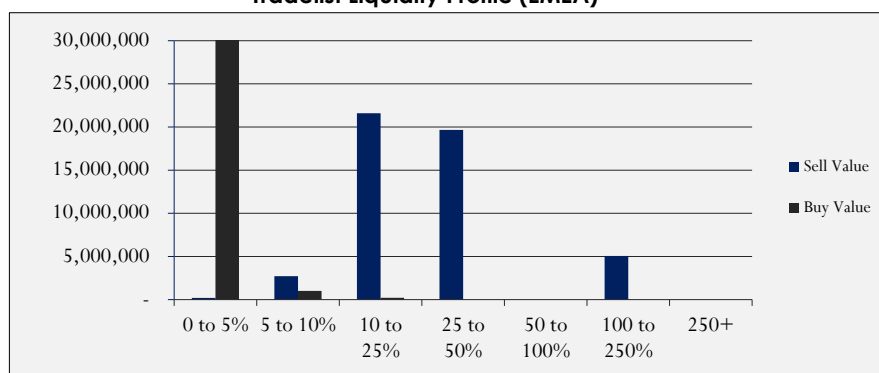
Tradelist Liquidity Profile (Asia Pacific)



Europe/Middle East/Asia (EMEA)

Bucket	Sell Value	Buy Value
0 to 5%	190,380	47,875,100
5 to 10%	2,715,781	1,015,628
10 to 25%	21,596,067	216,790
25 to 50%	19,671,785	-
50 to 100%	-	-
100 to 250%	5,066,230	-
250+	-	-
Total	49,240,243	49,107,519

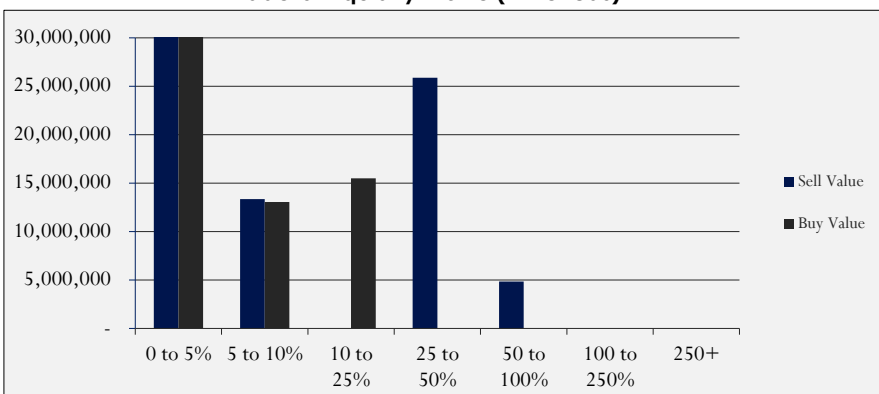
Tradelist Liquidity Profile (EMEA)



AMERICAS

Bucket	Sell Value	Buy Value
0 to 5%	94,895,327	139,484,005
5 to 10%	13,347,672	13,049,182
10 to 25%	-	15,503,775
25 to 50%	25,880,358	-
50 to 100%	4,848,997	-
100 to 250%	-	-
250+	-	-
Total	138,972,354	168,036,962

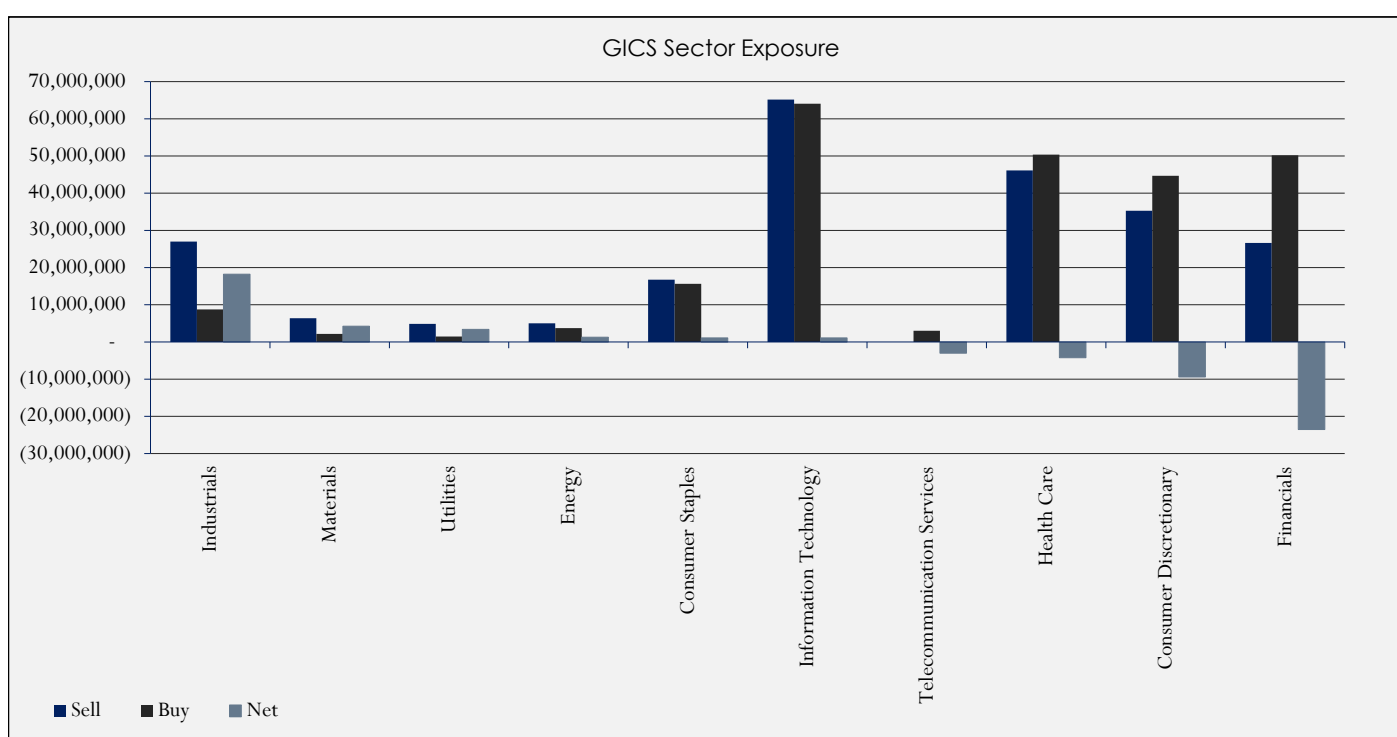
Tradelist Liquidity Profile (Americas)



SECTOR PROFILE

Sector misweights contribute to the active risk of a transition. We systematically look for opportunities to address sector misweights within an exposure neutral implementation strategy. Managing sector exposures provides an opportunity to minimize active risk and thus allow additional time to source liquidity and minimize market impact costs.

GICS	Legacy Value	Weight	Target Value	Weight	Difference
Industrials	26,981,041	11.57%	8,760,765	3.59%	18,220,276
Materials	6,390,533	2.74%	2,157,296	0.88%	4,233,237
Utilities	4,848,997	2.08%	1,452,523	0.60%	3,396,474
Energy	4,999,607	2.14%	3,712,136	1.52%	1,287,471
Consumer Staples	16,725,249	7.17%	15,619,851	6.40%	1,105,397
Information Technology	65,158,902	27.95%	64,071,602	26.25%	1,087,300
Telecommunication Services	-	0.00%	3,013,438	1.23%	(3,013,438)
Health Care	46,129,810	19.78%	50,380,275	20.64%	(4,250,465)
Consumer Discretionary	35,294,432	15.14%	44,689,358	18.31%	(9,394,926)
Financials	26,637,172	11.42%	50,182,059	20.56%	(23,544,886)



MARKET CAP PROFILE

Global market capitalization characteristics are valuable in creating a macro perspective for transition events. Market capitalization details often provide insights into portfolio level liquidity and trading cost characteristics and are therefore useful in the early stages of strategy development.

Bucket	Sell Value	Buy Value
Micro	190,380	-
Small	-	-
Mid	22,805,870	(8,971,273)
Large	210,359,872	(234,882,808)
Total	233,356,122	(243,854,081)

EQUITY EXPOSURE PROFILE

Country exposure differences within a transition can introduce trade timing risk - the risk associated with not being able to buy target securities at the same time legacy securities are sold. To manage global exposures, we can apply trade scheduling or derivative solutions within the transition horizon to create transition strategies designed to minimize shortfall.

Code	Exchange	Sell	Buy	Net	Taxes + Fees	Country
AU	ASX	6,400,830	(1,305,413)	7,706,243	-	Australia
AR	Argentina	-	-	-	-	Argentina
AV	Vienna	-	-	-	-	Austria
BB	EN Brussels	-	(1,109,382)	1,109,382	-	Belgium
BZ	Sao Paulo	4,592,294	(412,011)	5,004,305	-	Brazil
CB	Bogota	-	-	-	-	Colombia
CH	Shanghai	-	-	-	-	China
CI	Sant. Comerc	-	-	-	-	Chile
CN	Toronto	-	(3,857,501)	3,857,501	-	Canada
CP	Prague-SPAD	-	-	-	-	Czech Republic
DC	Copenhagen	8,241,599	(1,948,860)	10,190,458	-	Denmark
EY	Egypt (EGX)	-	-	-	-	Egypt
FH	Helsinki	-	(1,881,769)	1,881,769	-	Finland
FP	EN Paris	5,070,253	(8,003,721)	13,073,974	15,986	France
GA	Athens	-	-	-	-	Greece
GR	Xetra	6,632,669	(4,038,325)	10,670,995	-	Germany
HB	Budapest	-	-	-	-	Hungary
HK	Hong Kong	14,009,326	(5,771,911)	19,781,237	21,739	Hong Kong
ID	Dublin	-	-	-	-	Ireland
IJ	Indonesia	-	-	-	-	Indonesia
IM	Brsaltaliana	3,555,499	(2,396,519)	5,952,018	2,393	Italy
IN	Natl India	-	-	-	-	India
IT	Tel Aviv	-	-	-	-	Israel
JP	Tokyo /JASDAQ	16,394,319	(18,611,786)	35,006,105	-	Japan
KS	Korea SE	3,732,528	-	3,732,528	11,189	S. Korea
LI	London Intl	-	-	-	-	United Kingdom
LN	London	18,418,798	(16,031,326)	34,450,123	80,048	United Kingdom
MC	Casablanca	-	-	-	-	Morocco
MK	Kuala Lumpur	-	-	-	-	Malaysia
MM	Mexico	4,852,847	(176,568)	5,029,416	-	Mexico
NA	EN Amsterdam	-	(1,963,804)	1,963,804	-	The Netherlands
NO	Oslo	-	(539,829)	539,829	-	Norway
NZ	NZX	-	-	-	-	New Zealand
PA	Pakistan	-	-	-	-	Pakistan
PL	EN Lisbon	-	(435,111)	435,111	-	Portugal
PR	Lima	-	-	-	-	Peru
PM	Philippines	-	-	-	-	The Philippines
PW	Warsaw	-	-	-	-	Poland
RM	MICEX Main	-	-	-	-	Russia
RU	RTS	-	-	-	-	Russia
SJ	Johannesburg	-	(1,427,493)	1,427,493	-	S. Africa
SM	Continuous	-	(2,951,073)	2,951,073	-	Spain
SP	Singapore	-	(1,056,764)	1,056,764	-	Singapore
SS	Stockholm	7,169,996	(1,980,415)	9,150,411	-	Sweden
TB	Bangkok	-	-	-	-	Thailand
TI	Istanbul	-	-	-	-	Turkey
SW	Switzerland	-	(985,662)	985,662	-	Switzerland
TT	Taiwan	4,647,593	-	4,647,593	-	Taiwan
US	NYSE/NASDAQ	129,637,571	(164,004,560)	293,642,131	2,850	United States
VC	Caracas	-	-	-	-	Venezuela
VX	SIX Swiss Ex	-	(2,964,278)	2,964,278	296	Switzerland

ATTESTATION FROM PENSERRA

As an appointed Transition Manager, we execute all events to the best of our ability and declare the following statements to be true:

- Penserra manages all transitions as a fiduciary.
- Penserra does not operate an internal dark pool or electronic communication network (ECN).
- Penserra does not advertise order flow.
- Penserra does not earn any revenues from trading foreign currencies (FX).
- Penserra does not earn revenue from internal cross trades.
- Lastly, Penserra earns no other revenues other than those listed on this report and itemized in the post-trade report.

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The Penserra Transition Management team would like to thank you for the opportunity to provide this analysis. Please feel free to reach out to us at 1 (855) 736-7337.

Thank you.

DISCLAIMER

The information included in this material has been taken from trade and other sources considered reliable. No representation is made that this information is complete and should not be relied upon as such. Any opinions expressed in this material reflect our judgment at this date and are subject to change. This material is not intended to provide investment advice. All strategies referred to herein are among various investment strategies that are managed by Penserra Transition Management LLC as part of its investment management fiduciary services. Penserra Transition Management LLC is a registered investment advisor in the State of New York. Investing and trading involves risk, including possible loss of principal. Past performance does not guarantee future results.

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Verus Investments

**Pre-Transition Summary & Analysis – Contra Costa
County Employees' Retirement Association (CCCERA)**
\$300mm global equity restructure

MAY 2016

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Why Russell for this transition? Results matter

1. Russell Implementation Services Inc. (RIS) acts as a 1940 Act Investment Advisor, the highest fiduciary standard, with a duty of loyalty and standard of care equivalent to our Client's ongoing investment managers.

Other transition providers may contract as an advisor or trustee, but then delegate all trading to an affiliated firm which does not have the same fiduciary responsibility to the Client.

2. RIS will approach this event as a portfolio management project, designing an implementation strategy using derivatives to minimize opportunity costs and deliver the best outcome for the Client.
3. RIS has an extensive track record of delivering successful outcomes for our transition clients.
4. RIS delivers high quality execution through our agency-only multi-venue platform. We use a diverse set of quality execution venues to minimize transaction costs for our clients. We encourage you to review our SEC 606 Report to see our most often used venues: <http://www.russell.com/us/institutional-investors/disclosures/sec-606.page>

Other transition providers may offer marginally lower commission rate without the high quality execution. They often concentrate their orders in low quality execution venues which have low explicit costs, but deliver inferior execution and are saturated with conflicts that are detrimental to the transition client's performance. We suggest a simple Google search for other providers SEC 606 reports and compare them to RIS. The difference is obvious.

5. RIS transparency - "Russell brings honesty and transparency to an industry that unfortunately lacks both." - Consultant, PLANSPONSOR Magazine 2006 Transition Management Survey



Understanding the incentives

Questions for consultant or client to ask

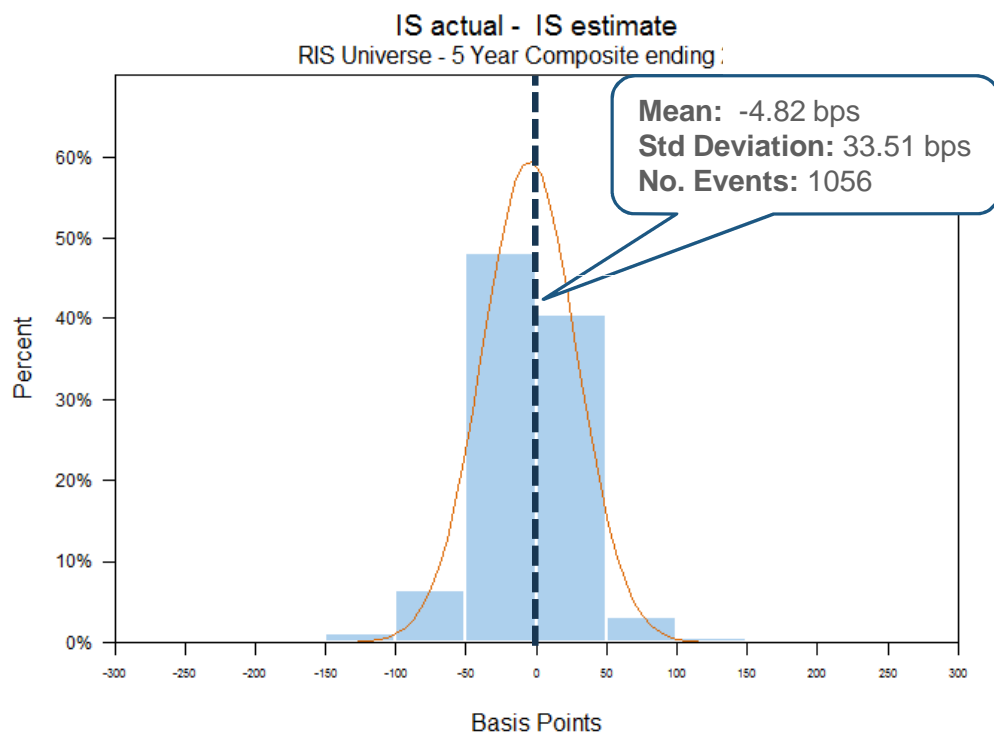
	RIS TM	Other Provider
Do you provide your TM services as a fiduciary?	Yes, as 1940 Act Investment Advisor	?
Does your TM contract delegate trading to a non-fiduciary affiliate?	No	?
Does your firm have an affiliated execution venue (ECN, crossing network, etc.) that it regularly sends TM orders to?	No. RIS has no internal venue bias	?
Does your firm or its affiliates receive payments from external execution venues for TM trade flow? Please provide a copy of your most recent SEC Rule 606 report.	No. SEC Rule 606 report at the following link: http://www.russell.com/us/institutional-investors/disclosures/sec-606.page	?
Does your firm or its affiliates execute securities, currency or derivative trades in a principal capacity?	No. RIS only trades in an agency capacity	?
Are any of the execution and/or clearing costs for equity trades deducted from the execution price of the trade rather than the commission (ie Net Trading)?	No. Execution and clearing fees are deducted from the gross commission	?

Proven track record

Consistency in estimates and maximized risk-adjusted performance...

Implementation shortfall (IS) vs. estimate

Russell implementation universe – 5 year composite ending December 2015



In 2015, Russell Investments was ranked **#1 in “Global Cost Performance vs. Estimate”** in CIO’s “2015 Transition Manager Survey”. The 2015 results were based on responses from 385 global asset owners on the portfolio transitions they mandated and the managers they used in 2014.

Source: Russell Transition Management Performance Composites, 5 year composite ending 2015. Past performance is not a guarantee of future results. For illustrative purposes only.

Consistently reduced market impact relative to peers

Externally verified by Elkins McSherry

Quarter	Russell Market Impact (bps)	Elkins/McSherry Market Impact (bps)	Russell Saving vs. Elkins/McSherry Market Impact Average
Q1-2010	-9.3	-19.2	9.9
Q2-2010	-4.6	-22.8	18.2
Q3-2010	-13.7	-22.2	8.5
Q4-2010	-13.2	-23.1	9.9
Q1-2011	-12.5	-21.4	8.9
Q2-2011	-6.8	-25.4	18.6
Q3-2011	-15.4	-20.1	4.7
Q4-2011	-7.9	-24.8	16.9
Q1-2012	-4.6	-11.7	7.1
Q2-2012	-7.8	-21.3	13.5
Q3-2012	-5.9	-22.9	17.0
Q4-2012	-9.4	-24.7	15.3
Q1-2013	-5.1	-18.6	13.5
Q2-2013	-9.7	-23.2	13.5
Q3-2013	-8.4	-20.6	12.2
Q4-2013	-7.9	-27.1	19.2
Q1-2014	-15	-27.1	12.1
Q2-2014	-5.6	-24.1	18.5
Q3-2014	-2.8	-23.6	20.8
Q4-2014	-5.4	-21.6	16.2
Q1-2015	-10.6	-22.8	12.2
Q2-2015	-14.8	-31.3	16.5
Q3-2015	-10.8	-25.1	14.3
Q4-2015	-15.1	-27.2	16.0
Average	-12.8	-26.6	14.8

Source: Elkins McSherry. Data as of 31 December 2015. Highlight cost of global equity trading relative to full Elkins McSherry universe (both buy and sell side firms). Data is benchmarked against the "arrival price".

Transition matrix

Legacy allocation

10-May-16

Manager	Mandate	Market Value	Weight
Artisan	Global Equity	300,000,000	100.0%
Total		\$ 300,000,000	100.0%

Target allocation

10-May-16

Manager	Mandate	Market Value	Weight
Jackson Square	Domestic Equity	200,000,000	66.7%
William Blair	International Equity	100,000,000	33.3%
Total		\$ 300,000,000	100.0%

- › The above matrix displays the allocation of legacy and target assets for the proposed restructure as of May 10th, 2016.
- › For this restructure, a transition account would be recommended to liquidate the legacy assets and build the target portfolios.
- › Russell will work with the legacy and target managers to coordinate, instruct and manage all asset transfers to and from the transition account thus reducing the workload on Verus/CCCERA's staff while providing operational risk controls to the transfer process.
- › Russell would communicate closely with the target managers to deliver the desired target portfolio in a prompt manner.
- › Russell will create, execute and manage a tailored project/implementation plan to achieve the client's timeline and exposure objectives.

Solution overview

Keys to a successful outcome:

- › Meticulous project management to mitigate operational risks, while minimizing burden on Verus/CCCERA's staff.
- › Portfolio risk management within an execution platform that minimizes the impact costs for the set of portfolios involved in this event.

Category	Estimate or Assumption
Value to trade	› ~USD 478.7 million or 159.5% of the beginning portfolio value.
Retained security value	› ~USD 44.6 million or 14.9% of the beginning portfolio value.
Transaction costs	› Mean expected cost of -45.4 bps at the portfolio level. › +/- 34.1 bps for 1 standard deviation (68% confidence level) at the portfolio level.
Tracking error	› 5.25% annualized tracking error between the legacy and target portfolios (ex-ante).
Trade horizon & strategy	› 2 days for 90+% completion, 5 days for 100%.
Factor analysis	› Please see appendix for detailed attribution.
Strategy	› We recommend a risk reducing strategy of investing available cash as soon as possible on day one, then trade dollar neutral until the transition is complete.

This pre-transition summary is based on analysis of the legacy and target portfolio regarding the number of securities retained by the target portfolio from the legacy portfolio, the tracking error between the legacy and target portfolio, and the liquidity of the amount to be traded.

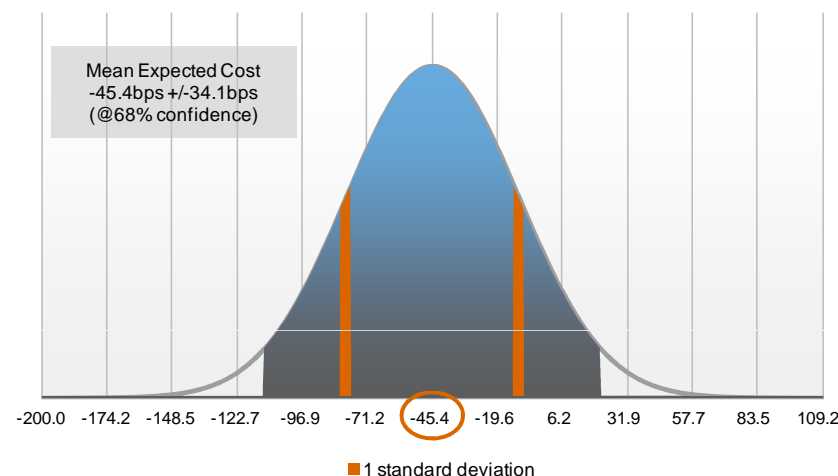
Cost estimate and performance distribution



Assets	Value USD	Weight
Portfolio value	300,153,791	100.0%
Equity security value	278,007,466	92.6%
Cash value	22,146,325	7.4%
Retained security value	44,577,895	14.9%
Value traded ¹	478,738,881	159.5%

Expected costs	Value USD	% of portfolio ²	% of value traded ³
Explicit impact	314,301	10.5 bp	6.6 bp
Equity brokerage ⁵	159,095	5.3 bp	3.3 bp
Foreign exchange brokerage ⁵	10,923	0.4 bp	0.2 bp
Taxes and market fees	144,283	4.8 bp	3.0 bp
Implicit impact	1,047,915	34.9 bp	21.9 bp
Equity spread and impact	1,027,485	34.2 bp	21.5 bp
Foreign exchange spread and impact	20,430	0.7 bp	0.4 bp
Expected transaction cost	1,362,216	45.4 bp	28.5 bp

Transition cost outcomes



The **cost estimate table** to the left breaks down the explicit and implicit costs associated with the transition.

Mean Performance Estimate: -45.4 basis points.

Performance Risk: ± 34.1 bps at 1 standard deviation (68% confidence level).

The chart **above** illustrates the distribution of potential transition outcomes centered on the expected mean cost. It is based upon the tracking error between the legacy and target portfolio (5.25% ex-ante), the trade horizon and a risk decay function based on this transitions specific trading strategy.

1- 'Value traded' - equals the total value of all securities bought and all securities sold;
 2 - '% of portfolio' - percentage calculated by taking cost/ portfolio value.
 3 - '% of value traded' - percentage calculated by taking cost / value traded.
 5 - Agency brokerage rates: US equity: 125 cps, CA equity: 125 cps, Non-US equity: 5 bps, Foreign exchange: 2 bps

Risk management

Risk and performance factors

Performance factors

RIS strategy

Confidentiality	<ul style="list-style-type: none"> To protect CCCERA, RIS will be discrete with event information keeping event details on a “need to know basis” to mitigate information leakage
Market Exposure Risk	<ul style="list-style-type: none"> Due to the regional deltas and shifting of assets, cash exposure will need to be managed carefully. To reduce cash exposure, opportunity risk and tracking error to the target portfolio, RIS will: <ul style="list-style-type: none"> Implement and execute a trade strategy that allows us to move quickly and efficiently into the target. Utilize a dollar neutral trade strategy once cash exposures are in line.
Currency Risk	<ul style="list-style-type: none"> Currency shifts exist due to regional shifts. Special consideration must be given to prefunding markets such as TWD in the target portfolio. Given the recent volatility observed in the currency markets, Russell would propose utilizing a currency hedge and use of currency forwards to reduce this risk.

Risk Factor	vs. Target (% annualized)
Tracking Error	5.25%

Risk Factor	Contribution (% Active Risk)
Asset Selection (idiosyncratic)	90.0%
Common Factor	10.0%
Style	4.0%
Industries	2.4%
Country	2.5%
Currency	0.2%
Market	1.0%
Covariance	0.0%
Total	100.0%

The **risk table** above shows the risk factor breakdown and contribution of common factor risk characteristics to the total ex-ante tracking error as calculated by Axioma. This model is forward looking in that it analyzes the factor exposures between the two portfolios and then uses a co-variance matrix to predict the tracking error.

Risk management

Risk and performance factors (continued)

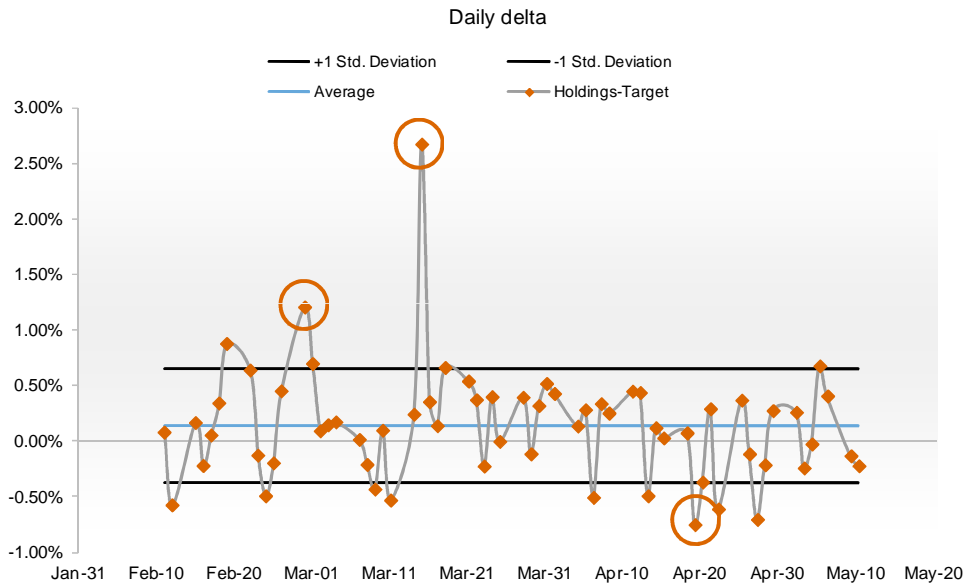
Performance factors

RIS strategy

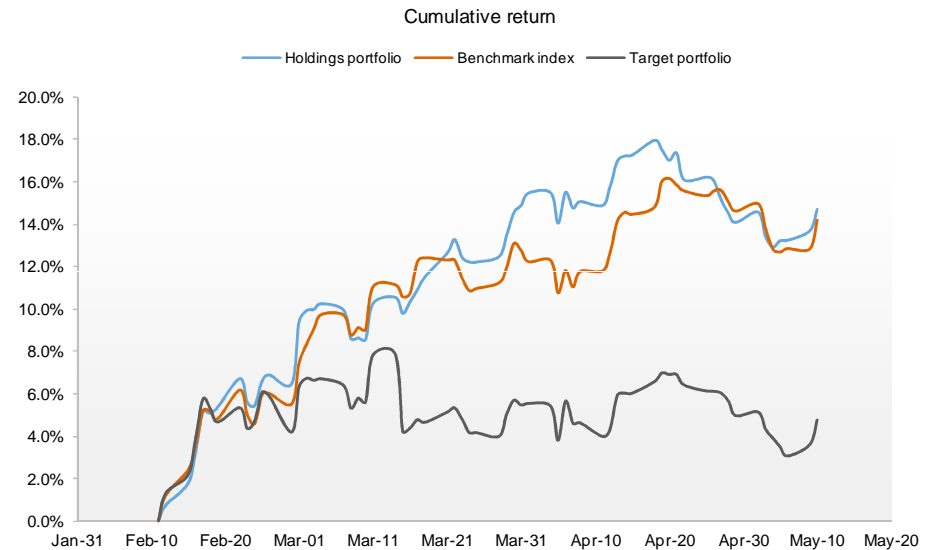
Liquidity	<ul style="list-style-type: none"> › The overall liquidity of the transition is expected to be moderate with ~100% completion following 5 days of trading. › Prompt trading into the target positions is required to best reduce the risk between legacy and target portfolios. › The sell side is slightly less liquid hence, will drive the pace of trading. › The liquidity profile allows for the prompt reduction of risk. The proposed timeline for trading best balances opportunity costs which increase with time against the spread and impact controllable costs which decrease with the period over which the trade occurs.
Asset Risk	<ul style="list-style-type: none"> › We will leverage RIS's multi-venue execution platform which aggregates liquidity provided by all available venues, allowing us to move out of the legacy and into the target portfolio efficiently and quickly. › RIS will explore and act on crossing opportunities saving on spread and impact thus reducing minor costs when and where it makes sense. › RIS will maintain anonymity in the marketplace, mask intent and protect the Client's assets against performance deterioration associated with information leakage by using a wide array of non-affiliated execution venues.
Operational Risk & Cash Management	<ul style="list-style-type: none"> › This transition involves regional shifts which require precise management of transition account cash and matching of settlement cycles. RIS will ensure that settlement cycles are matched-off, cash is meticulously managed all leading to a seamless funding of the target portfolio. › This transition also involves emerging markets which can prove to be non-transferable if an omnibus custodial structure is not in place. RIS will work with the custodian and target managers to implement the most cost effective and efficient trade strategy.
Project Management	<ul style="list-style-type: none"> › Commingled fund in-kind redemptions and require strong project management and coordination. › RIS's goal is to reduce the impact of the transition on the Verus/CCCERA's investment staff. Through careful communication, daily transition updates and a detailed calendar and deliverables schedule, Russell will keep Verus and the CCCERA apprised of daily activity. › RIS will act as a Fiduciary and manage all aspects of the transition from beginning to end ensuring administrative burden is minimized for Verus and the CCCERA's staff.

Risk management

Historical returns



The **daily delta chart** illustrates the daily performance difference between the legacy and target portfolio over the past three months. As shown, there are several instances where the daily delta is greater than one standard deviation and times where it exceeds two.



The **cumulative return chart** illustrates the historical returns of the legacy and target portfolio and the benchmark (MSCI *World Index*) over the prior three months. The annualized tracking error analyzing the raw returns of the portfolios (ex post) over the past 3 months was 8.1%.

Appendix

Factor analysis	Liquidity summary	14
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Factor analysis

Liquidity summary

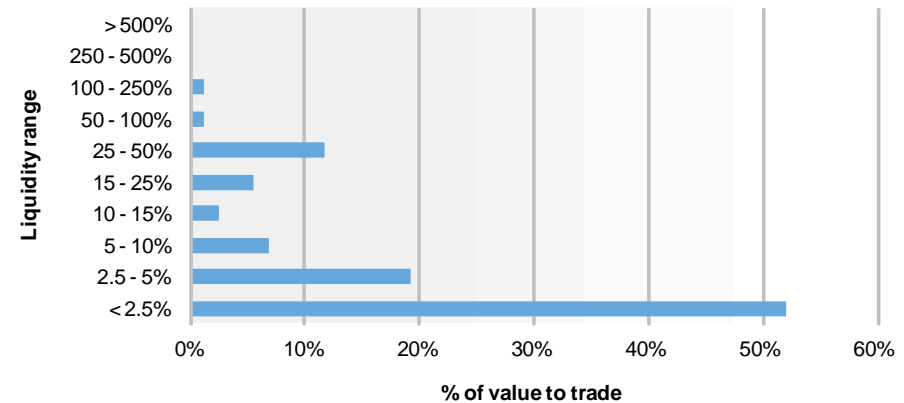
Liquidity Range	#	Total		
		Shares	Value USD	Weight
< 2.5%	157	7,990,065	223,863,845	51.9%
2.5 - 5%	26	1,557,037	82,912,633	19.2%
5 - 10%	9	491,201	29,877,674	6.9%
10 - 15%	3	1,434,194	11,060,033	2.6%
15 - 25%	5	649,445	23,442,318	5.4%
25 - 50%	7	2,623,216	50,188,912	11.6%
50 - 100%	1	1,268,500	4,880,175	1.1%
100 - 250%	1	13,719	5,076,195	1.2%
250 - 500%	0	0	0	0.0%
> 500%	0	0	0	0.0%
Total	209	16,027,377	431,301,786	100.0%

#	Sell		
	Shares	Value USD	Weight
16	968,100	70,251,264	34.1%
5	724,043	36,924,689	17.9%
4	222,466	19,758,929	9.6%
2	1,311,894	4,339,648	2.1%
3	311,506	14,439,230	7.0%
7	2,623,216	50,188,912	24.4%
1	1,268,500	4,880,175	2.4%
1	13,719	5,076,195	2.5%
0	0	0	0.0%
0	0	0	0.0%
39	7,443,444	205,859,043	100.0%

#	Buy		
	Shares	Value USD	Weight
141	7,021,965	153,612,581	68.1%
21	832,994	45,987,944	20.4%
5	268,735	10,118,745	4.5%
1	122,300	6,720,385	3.0%
2	337,939	9,003,088	4.0%
0	0	0	0.0%
0	0	0	0.0%
0	0	0	0.0%
0	0	0	0.0%
0	0	0	0.0%
170	8,583,933	225,442,743	100.0%

Top 5 largest positions	Side	Shares	Value USD	% ADV
IHS INC-CLASS A (ihs)	Sell	120,200	14,651,178	40.7%
REGENERON PHARMACEUTIC (regn)	Sell	36,500	14,084,255	4.5%
CELGENE CORP (celg)	Buy	109,500	11,305,875	2.4%
ALLERGAN PLC (agn)	Buy	49,600	11,160,000	1.0%
QUALCOMM INC (qcom)	Buy	184,700	9,632,105	1.9%

Top 5 illiquid positions	Side	Shares	Value USD	% ADV
EUROFINS SCIENTIFIC (5972643)	Sell	13,719	5,076,195	117.4%
INFRASTRUCTURA ENERGIE (B84XBf)	Sell	1,268,500	4,880,175	75.1%
IHS INC-CLASS A (ihs)	Sell	120,200	14,651,178	40.7%
RAIA DROGASIL SA (B7FQV64)	Sell	287,400	4,545,638	35.2%
DIRECT LINE INSURANCE (BY9D0Y1)	Sell	1,551,447	8,517,799	30.1%



Factor analysis

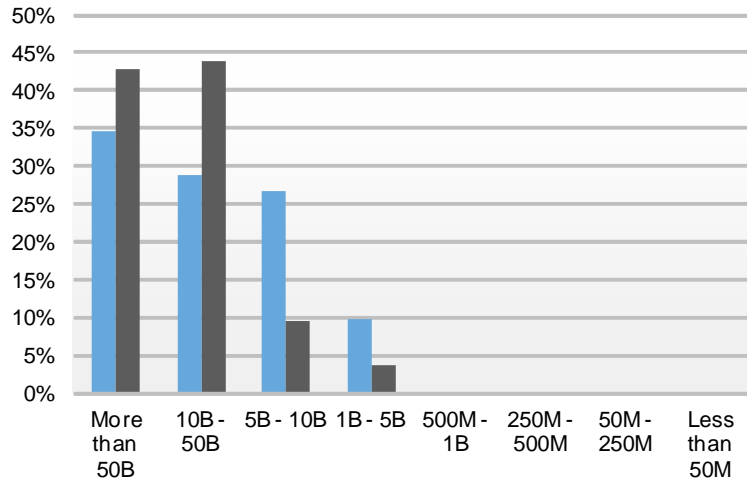
Market cap summary

Legacy portfolio		
Market Cap	Value USD	Weight
More than 50B	96,033,997	34.5%
10B - 50B	80,484,959	29.0%
5B - 10B	74,628,759	26.8%
1B - 5B	26,859,752	9.7%
500M - 1B	0	0.0%
250M - 500M	0	0.0%
50M - 250M	0	0.0%
Less than 50M	0	0.0%
Total	278,007,466	100.0%

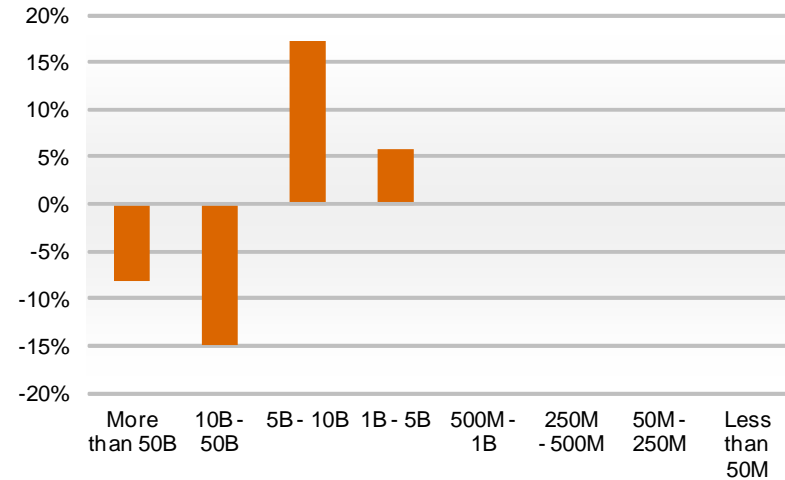
Target portfolio		
Market Cap	Portfolio Value USD	Portfolio Weight
More than 50B	124,026,755	42.8%
10B - 50B	126,977,014	43.8%
5B - 10B	27,891,116	9.6%
1B - 5B	10,967,488	3.8%
500M - 1B	0	0.0%
250M - 500M	0	0.0%
50M - 250M	0	0.0%
Less than 50M	0	0.0%
Total	289,862,373	100.0%

Active differences		
Market Cap	Portfolio Value USD	Portfolio Weight
More than 50B	-27,992,759	-8.2%
10B - 50B	-46,492,055	-14.9%
5B - 10B	46,737,642	17.2%
1B - 5B	15,892,264	5.9%
500M - 1B	0	0.0%
250M - 500M	0	0.0%
50M - 250M	0	0.0%
Less than 50M	0	0.0%
Total	-11,854,907	0.0%

■ Legacy portfolio ■ Target portfolio



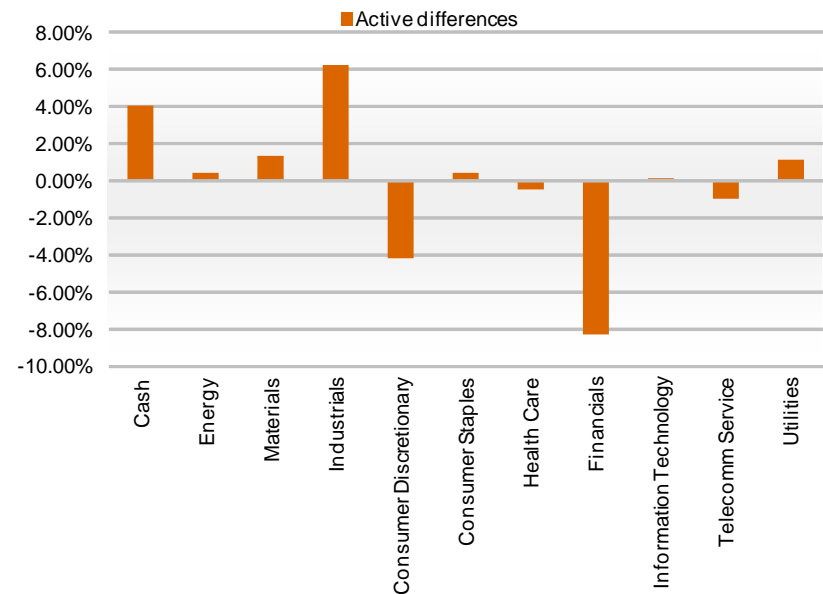
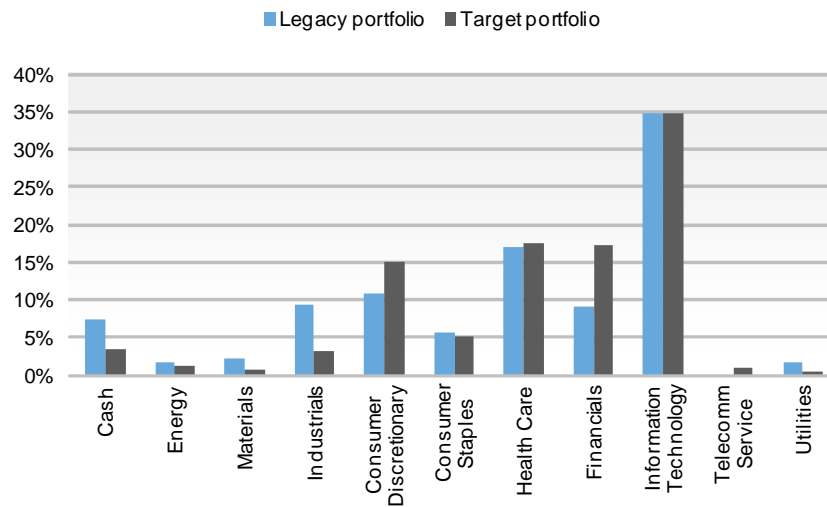
■ Active differences



Factor analysis

Sector summary

Legacy portfolio			Target portfolio			Active differences		
Sectors	Value USD	Weight	Sectors	Value USD	Weight	Sectors	Value USD	Weight
Cash	22,146,325	7.5%	Cash	10,242,027	3.4%	Cash	11,904,298	4.1%
Energy	5,004,271	1.7%	Energy	3,710,740	1.2%	Energy	1,293,531	0.5%
Materials	6,414,655	2.2%	Materials	2,402,789	0.8%	Materials	4,011,866	1.4%
Industrials	27,949,371	9.5%	Industrials	9,719,477	3.2%	Industrials	18,229,894	6.2%
Consumer Discretionary	32,368,161	11.0%	Consumer Discretionary	45,265,580	15.1%	Consumer Discretionary	-12,897,419	-4.1%
Consumer Staples	16,833,495	5.7%	Consumer Staples	15,815,446	5.3%	Consumer Staples	1,018,050	0.4%
Health Care	50,240,588	17.0%	Health Care	52,270,464	17.4%	Health Care	-2,029,876	-0.4%
Financials	26,652,933	9.0%	Financials	52,056,361	17.3%	Financials	-25,403,429	-8.3%
Information Technology	102,911,516	34.8%	Information Technology	104,169,054	34.7%	Information Technology	-1,257,538	0.1%
Telecomm Service	0	0.0%	Telecomm Service	3,016,369	1.0%	Telecomm Service	-3,016,369	-1.0%
Utilities	4,880,175	1.7%	Utilities	1,460,924	0.5%	Utilities	3,419,251	1.2%



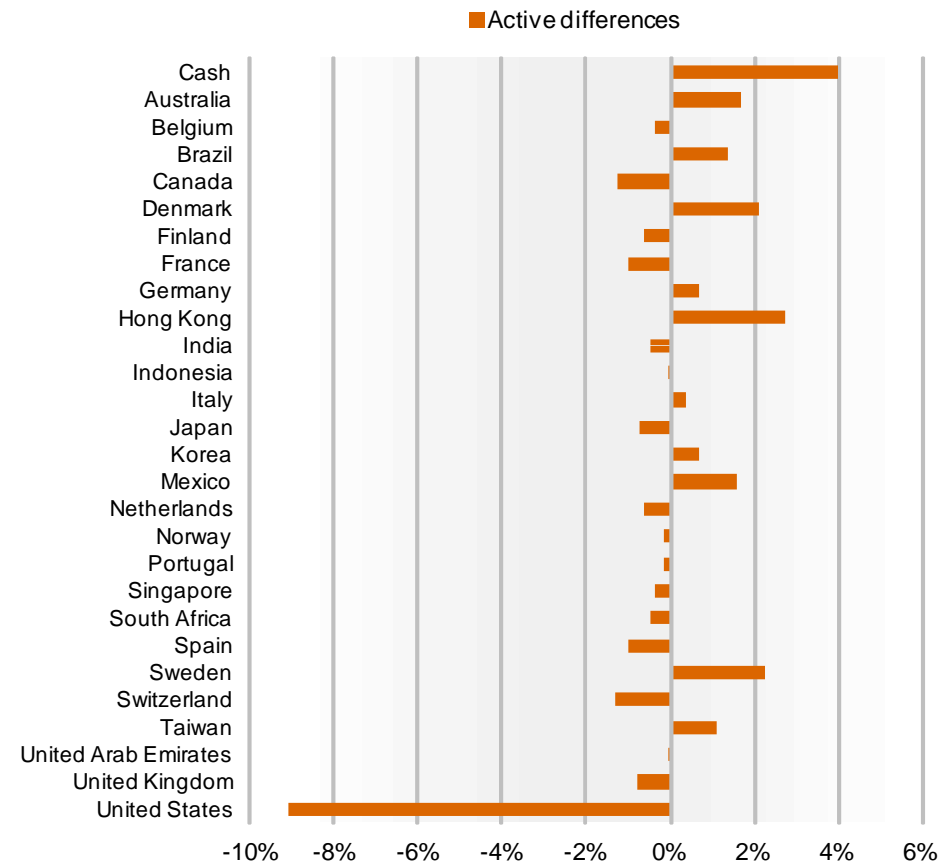
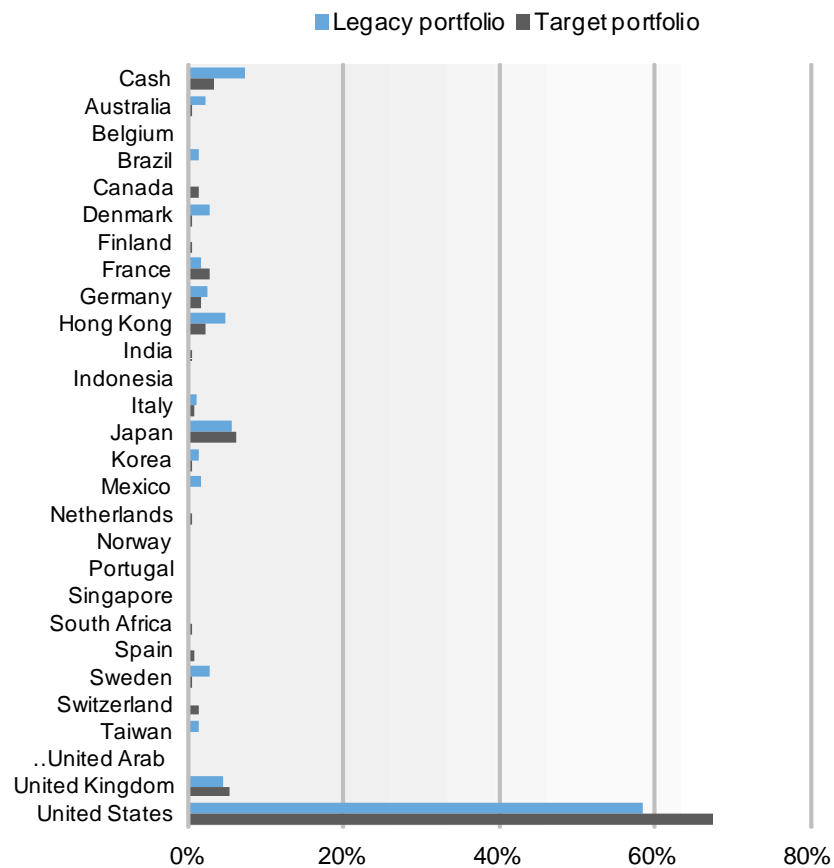
Factor analysis

Country summary

Legacy portfolio			Target portfolio			Active differences		
Countries	Value USD	Weight	Countries	Value USD	Weight	Countries	Value USD	Weight
Cash	22,146,325	7.4%	Cash	10,242,027	3.4%	Cash	11,904,298	4.0%
Australia	6,414,655	2.1%	Australia	1,308,549	0.4%	Australia	5,106,107	1.7%
Belgium	0	0.0%	Belgium	1,110,097	0.4%	Belgium	-1,110,097	-0.4%
Brazil	4,545,638	1.5%	Brazil	408,669	0.1%	Brazil	4,136,968	1.4%
Canada	0	0.0%	Canada	3,853,057	1.3%	Canada	-3,853,057	-1.3%
Denmark	8,251,130	2.7%	Denmark	1,950,119	0.6%	Denmark	6,301,011	2.1%
Finland	0	0.0%	Finland	1,882,966	0.6%	Finland	-1,882,966	-0.6%
France	5,359,994	1.8%	France	8,292,623	2.8%	France	-2,932,629	-1.0%
Germany	7,291,335	2.4%	Germany	5,208,513	1.7%	Germany	2,082,822	0.7%
Hong Kong	14,746,325	4.9%	Hong Kong	6,522,461	2.2%	Hong Kong	8,223,864	2.7%
India	0	0.0%	India	1,475,680	0.5%	India	-1,475,680	-0.5%
Indonesia	0	0.0%	Indonesia	206,132	0.1%	Indonesia	-206,132	-0.1%
Italy	3,559,785	1.2%	Italy	2,398,047	0.8%	Italy	1,161,737	0.4%
Japan	16,938,398	5.6%	Japan	19,092,844	6.4%	Japan	-2,154,446	-0.7%
Korea	3,871,723	1.3%	Korea	1,812,819	0.6%	Korea	2,058,904	0.7%
Mexico	4,880,175	1.6%	Mexico	177,649	0.1%	Mexico	4,702,526	1.6%
Netherlands	0	0.0%	Netherlands	1,964,909	0.7%	Netherlands	-1,964,909	-0.7%
Norway	0	0.0%	Norway	539,135	0.2%	Norway	-539,135	-0.2%
Portugal	0	0.0%	Portugal	435,388	0.1%	Portugal	-435,388	-0.1%
Singapore	0	0.0%	Singapore	1,057,045	0.4%	Singapore	-1,057,045	-0.4%
South Africa	0	0.0%	South Africa	1,434,117	0.5%	South Africa	-1,434,117	-0.5%
Spain	0	0.0%	Spain	2,953,002	1.0%	Spain	-2,953,002	-1.0%
Sw eden	8,720,368	2.9%	Sw eden	1,979,832	0.7%	Sw eden	6,740,536	2.2%
Sw itzerland	0	0.0%	Sw itzerland	3,953,752	1.3%	Sw itzerland	-3,953,752	-1.3%
Taiw an	4,640,320	1.5%	Taiw an	1,263,697	0.4%	Taiw an	3,376,623	1.1%
United Arab Emirates	0	0.0%	United Arab Emirates	147,928	0.0%	United Arab Emirates	-147,928	0.0%
United Kingdom	13,672,259	4.6%	United Kingdom	16,039,628	5.3%	United Kingdom	-2,367,369	-0.8%
United States	175,115,361	58.3%	United States	202,418,547	67.4%	United States	-27,303,186	-9.1%

Factor analysis

Country summary



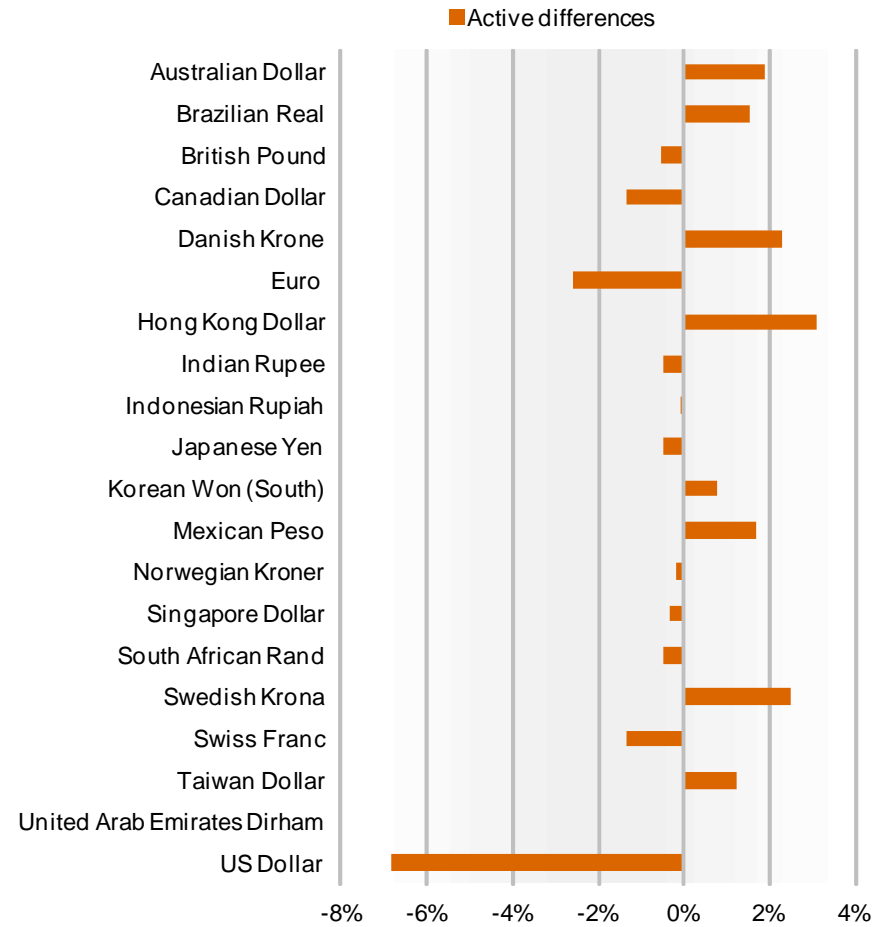
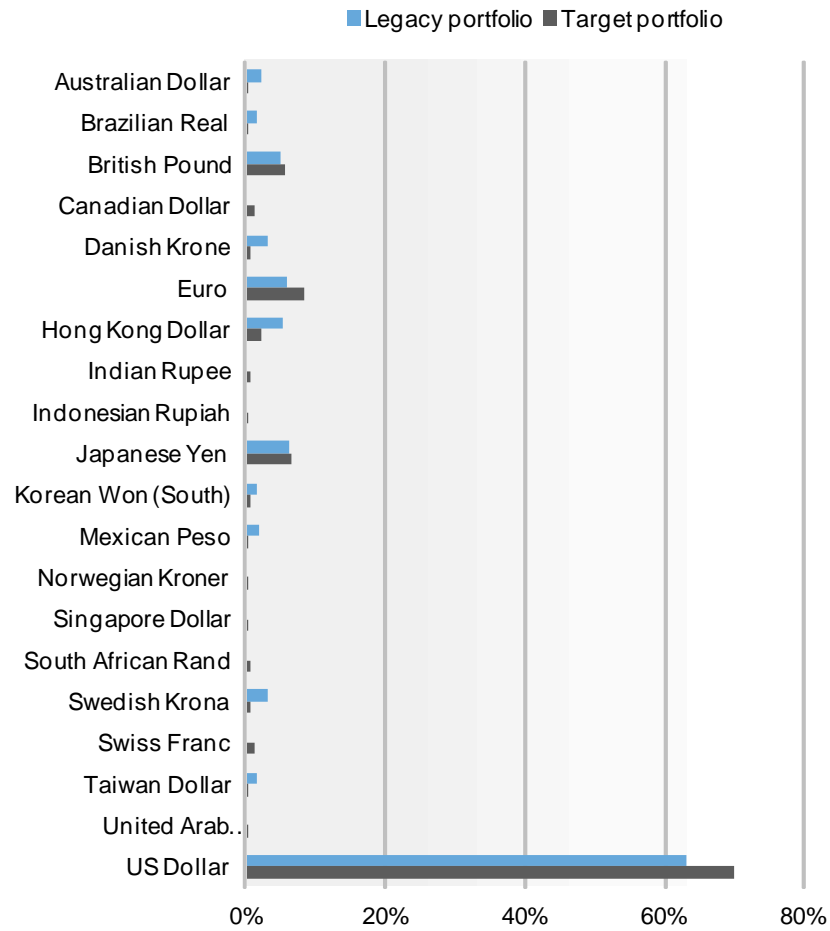
Factor analysis

Currency summary

Legacy portfolio			Target portfolio			Active differences		
Currency	Value USD	Weight	Currency	Value USD	Weight	Currency	Value USD	Weight
Australian Dollar	6,414,655	2.3%	Australian Dollar	1,308,549	0.5%	Australian Dollar	5,106,107	1.9%
Brazilian Real	4,545,638	1.6%	Brazilian Real	408,669	0.1%	Brazilian Real	4,136,968	1.5%
British Pound	13,672,259	4.9%	British Pound	15,822,412	5.5%	British Pound	-2,150,153	-0.5%
Canadian Dollar	0	0.0%	Canadian Dollar	3,853,057	1.3%	Canadian Dollar	-3,853,057	-1.3%
Danish Krone	8,251,130	3.0%	Danish Krone	1,950,119	0.7%	Danish Krone	6,301,011	2.3%
Euro	16,211,114	5.8%	Euro	24,462,762	8.4%	Euro	-8,251,648	-2.6%
Hong Kong Dollar	14,746,325	5.3%	Hong Kong Dollar	6,522,461	2.2%	Hong Kong Dollar	8,223,864	3.1%
Indian Rupee	0	0.0%	Indian Rupee	1,475,680	0.5%	Indian Rupee	-1,475,680	-0.5%
Indonesian Rupiah	0	0.0%	Indonesian Rupiah	206,132	0.1%	Indonesian Rupiah	-206,132	-0.1%
Japanese Yen	16,938,398	6.1%	Japanese Yen	19,092,844	6.6%	Japanese Yen	-2,154,446	-0.5%
Korean Won (South)	3,871,723	1.4%	Korean Won (South)	1,812,819	0.6%	Korean Won (South)	2,058,904	0.8%
Mexican Peso	4,880,175	1.8%	Mexican Peso	177,649	0.1%	Mexican Peso	4,702,526	1.7%
Norwegian Kroner	0	0.0%	Norwegian Kroner	539,135	0.2%	Norwegian Kroner	-539,135	-0.2%
Singapore Dollar	0	0.0%	Singapore Dollar	1,057,045	0.4%	Singapore Dollar	-1,057,045	-0.4%
South African Rand	0	0.0%	South African Rand	1,434,117	0.5%	South African Rand	-1,434,117	-0.5%
Swedish Krona	8,720,368	3.1%	Swedish Krona	1,979,832	0.7%	Swedish Krona	6,740,536	2.5%
Swiss Franc	0	0.0%	Swiss Franc	3,953,752	1.4%	Swiss Franc	-3,953,752	-1.4%
Taiwan Dollar	4,640,320	1.7%	Taiwan Dollar	1,263,697	0.4%	Taiwan Dollar	3,376,623	1.2%
United Arab Emirates Dirham	0	0.0%	United Arab Emirates Dirham	147,928	0.1%	United Arab Emirates Dirham	-147,928	-0.1%
US Dollar	175,115,361	63.0%	US Dollar	202,418,547	69.8%	US Dollar	-27,303,186	-6.8%

Factor analysis

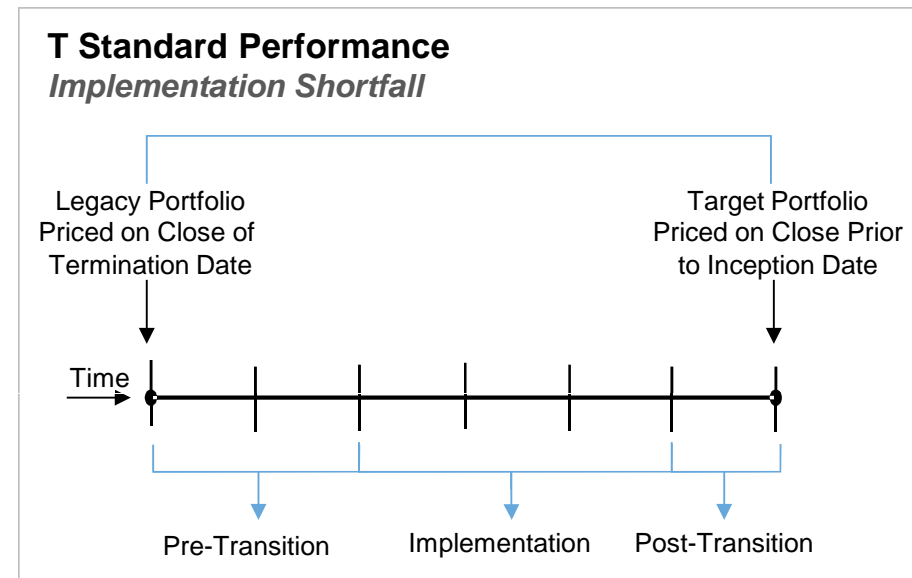
Currency summary



T Standard performance overview

Russell led the development of the T Standard and has been using the T Standard since its 2003 inception*.

- The T Standard is an industry-standard methodology defining rules for treatment of the critical factors that drive portfolio performance during a transition. It is analogous to the CFA Institute's performance standards.
- The T Standard is a simple, time-weighted rate of return. It "plugs the gap" by measuring the entire transition time frame and allows performance attribution for pre-transition, implementation and post-transition periods. T Standard implementation shortfall is the arithmetic difference between the return of the transition portfolio and the return of the target, performed daily.
- This methodology brings the same rigor and consistency that institutional investors expect from their traditional investment managers to transition management.



T Standard reporting

Estimated Transition Costs	Equities (USD)	Bonds (USD)	FX (USD)	Futures/Hedging Instruments (USD)	Other (USD)	Total (USD)	Total %*	
Transition Manager Commissions & Fees (ex other broker commissions)	159,095	-	10,923			170,018	0.057%	
Other Broker Commissions				-		-	0.000%	
Taxes & Other Charges	144,283					144,283	0.048%	
Bid Offer Spread & Market Impact	1,027,485	-	20,430	-		1,047,915	0.349%	
Risk Fee (i.e. for principal trades)						-	0.000%	
Pooled Fund Spreads or Charges (not included above)	-					-	0.000%	
Total Implementation Shortfall (IS) Mean Estimate	1,330,863	-	31,353	-	-	1,362,216	0.454%	
Opportunity Cost						+/-	1,023,524	0.341%
Implementation Shortfall - Upper Estimate (+1 s.d.)							2,385,741	0.795%
Implementation Shortfall - Lower Estimate (-1 s.d.)							338,692	0.113%
Tracking error (Target to Legacy portfolio)							+/-	5.3%

* All % figures to be expressed as a % of the Total Value of Assets in Transition

T Standard reporting

Asset Values	Equities	Bonds	Pooled Funds	Cash	Other	Total
	(USD)	(USD)	(not included in other categories) (USD)	(USD)	(USD)	(USD)
Legacy Value of Assets	278,007,466	-	-	22,146,325		300,153,791
Target Value of Assets	289,887,205			10,266,586		300,153,791
Value of Retained Assets (i.e. in kind transfers)	44,577,895					44,577,895
Transaction Values						
Value of Assets to Sell (inc crossing)	233,429,571	-	-		-	233,429,571
Value of Assets to Buy (inc crossing)	245,309,310	-	-		-	245,309,310
Total Value of Transactions	478,738,881	-	-		-	478,738,881
Transaction Information						
Estimated Value of Crosses	143,621,664					143,621,664
Day 1 % Complete	90%	%	%		%	90%
Day 3 % Complete	99%	%	%		%	99%
Day 5 % Complete	99%	%	%		%	99%

T Standard

Calculation & methodology

The T Standard method for the calculation of portfolio performance during a transition is as follows:

1. Implementation shortfall shall be taken as the arithmetical difference between the return on the actual portfolio and the return on the target portfolio.

Example:

- A portfolio starts with a value of \$121,650,000, and the target portfolio has the same value. The actual portfolio ends with a value of \$119,987,000, while the target portfolio ends with a value of \$120,351,000. The target portfolio is a paper portfolio rather than an actual one
- The return on the actual portfolio is $(119,987,000 \div 121,650,000) - 1 = -1.37\%$
- The return on the target portfolio is $(120,351,000 \div 121,650,000) - 1 = -1.07\%$
- The implementation shortfall is 0.30% or 30 basis points in this case. This is equivalent to saying that performance against a target portfolio benchmark was -30 basis points over the relevant period

2. Calculation of returns shall be performed daily.
The performance report to the client should include this daily breakdown.
3. Returns shall be based on time-weighted total portfolio return, using closing prices.

This should include the impact of all factors affecting the portfolio or the benchmark, including corporate actions, target portfolio changes, etc.

Pricing sources used by a transition manager should be consistent and verifiable; this includes foreign exchange rates used to value non-domestic holdings. Pricing sources should be disclosed, as should the treatment of holidays.

4. Returns shall be calculated from the date on which the terminated manager no longer has discretion over the portfolio until the date on which the incoming manager has discretion. Where there is no terminated manager (such as a funding from cash, or a rebalancing event where an existing portfolio is being reduced but not terminated) returns shall be calculated from the earliest reasonable date (The Total Transition Period”).

The transition manager will not generally be aware of the termination at the time it occurs, and may indeed not even have been formally appointed. As a result, and because the target portfolio is probably unknown at this point, the calculation of returns should be backdated once this information is available (including corporate actions).

T Standard

Calculation & methodology

5. The total transition period shall be split into pre-implementation, implementation and post-implementation periods. The implementation period begins at the close prior to all of the external factors being resolved that are necessary for the transition manager to be able to trade. In practice this normally means the close prior to a certified list of holdings being delivered to the transition manager.

Questions over the accuracy of the certified list should not delay the start of the implementation period unless they are so large as to preclude the start of activity.

It is conceivable that trading (for example, hedging activity) might begin before the certified list is delivered or all of the other external factors are resolved, in which case performance from the close prior to the start of trading to the start of the implementation period (the initial implementation period, which might in the case of hedging activity be termed the hedging period) should be separately broken out.

The start of trading is the point at which the price of any trade is set. For example, some trading strategies involve the trade being processed on one day, but based on a price referenced to the previous day's close. This is equivalent in effect to trading on the close of the previous day. The implementation period therefore cannot be based on the price achieved, since it has potentially been influenced by the trade itself. A further day back must be used as the start of the implementation period.

It is important for clients to understand the relevance of the start of the implementation period when assessing the results of a transition.

The end of the implementation period is the close after trading ends.

6. Changes to the target portfolio and cash flows shall be incorporated with effect from the previous night's close.

The target portfolio is the complete list of holdings desired by the incoming managers), including any cash explicitly requested. This includes those securities or instruments that are not actually purchased by the transition manager.

Target portfolios sometimes get changed, for a number of reasons, and these changes should be reflected in the return calculation for the target portfolio from when they are made. To be consistent with the methodology proposed in these standards, this means the target portfolio should be updated as at the close prior to the change in target list being reviewed.

The holdings in the target portfolio for the calculation of its return should not, however, be rebalanced unless indicated by the incoming manager. Even if the target list consists of percentages in specified holdings, the target portfolio should be struck in terms of number of shares at the start of the implementation period and only rebalanced to the indicated percentages if directed by the incoming manager.

T Standard

Calculation & methodology

7. Where externally-managed pooled funds are involved in the target or initial portfolio, these shall be included in the total return calculation wherever possible, irrespective of how investment/disinvestment is actually handled.

Example:

- A target portfolio consists at the close on May 10th of 100,000 units of a weekly-valued pooled fund, which is worth \$4,056,000 based on the most recent valuation, which was May 5th, and \$58,946,000 in direct holdings. The total target portfolio value at May 10th is taken as \$63,002,000.
 - In some situations, costs may be incurred on externally-managed pooled funds that do not hit the transition account, for example, a different NAV may apply to a client exiting a pooled fund than applies to other clients. The transition manager should make every reasonable effort to identify any material costs and include these in the performance calculation. If, despite these efforts, costs remain unknown then this fact should be disclosed.
8. If a transition manager shows, in addition to the results described above, additional results calculated on a different basis, then all differences in the calculation should be clearly disclosed.

The calculation set out above is based on the outcome experienced by the investor. Depending on the circumstances of the particular event, the transition manager may want to provide additional information to throw light on the factors that produced that outcome.

There are a number of ways in which a transition manager might validly argue that a better assessment of his own performance is given by a different calculation than the one described above, either in terms of the time period covered, the holdings included or some other aspect of the calculation.

Example:

- A firm might show a second set of results, which removes the impact of “stale” valuations for pooled funds or illiquid holdings.

The basis of such additional calculations should be clearly disclosed and consistently applied. To this end, transition managers are encouraged to identify in advance the basis for any additional results they will be calculating. Clients should pay particular attention to calculations which have not been identified in advance, to calculations identified in advance but not made, to calculations not widely made by other transition managers, to calculations which appear to have been made selectively and to calculations which might exclude performance impacts which are attributable to the transition manager. In all cases, these calculations are in addition to and not in place of the standard calculation.

Glossary of terms

Assumptions	
The following fixed assumptions apply	
Implementation Shortfall (IS)	Calculation is consistent with T Standard methodology from close of business the day prior to trading commencing (i.e. cob T - 1). Calculation includes the estimated cost of completing all transactions, except for any assets specified in the Excluded Assets table below is calculated as a percentage of the value of assets in transition.
IS - Mean Estimate	Reflects the transition manager's realistic assessment of the expected mean cost (excluding opportunity cost).
Opportunity Cost	The potential variation in expected cost.
IS - Upper Estimate	A higher estimate of implementation shortfall which may result from unfavourable market movements (calculated to a one standard deviation confidence interval).
IS - Lower Estimate	A lower estimate of implementation shortfall which may result from favourable market movements (calculated to a one standard deviation confidence interval).
Risk Fee	The all inclusive cost of executing all or part of the required transactions via a principal trade.
Retained Assets	The value of retained assets (i.e. in kind transfers) reflects the value of existing assets in the Legacy portfolio that can be retained for the Target portfolio the value of retained assets is calculated on one side of the in kind transfers only.
Transactions Required	The value of transactions assumes the completion of all transactions, except for any assets specified in the Excluded Assets table below the value of transactions includes crossing but excludes retained assets.
Crossing	Crossing is a transaction that the transition manager reasonably expects will incur zero, or minimal, bid offer spread and market impact cost.
Other Costs	Unless otherwise specified, this estimate makes no allowance for other costs such as custody, legal or consultant fees.

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www.russellinvestments.com/institutional





PRE-TRADE ANALYSIS

Contra Costa County Global/Domestic Equity May 11, 2016

Vertas Brokerage Consulting
Village Square II, Suite #252
Baltimore, MD 21210-1935
Phone: 646-479-7706
E-Mail: smalinowski@vertasgroup.com

INDEPENDENT BROKERAGE CONSULTING | FIDUCIARY OVERSIGHT | REAL TIME TRADE COST
ANALYTICS | VENUE NEUTRAL ORDER ROUTING | EXCEPTIONAL CLIENT SERVICE

PRE TRADE EXECUTIVE SUMMARY

Vertas Brokerage Consulting has developed the following estimate of expected costs and savings associated with the proposed equity transition on behalf of the Contra Costa County.

The transition involves:

- Transition: Current holdings of \$300 Million in global equities targeting \$300 Million in global/domestic equities
- Net trade value: Liquidating \$233.15 Million (Sells), Purchasing \$244.83 Million (Buys)
- Liquidity Issues: High
- Volatility Level: Moderate
- Trade Duration: Two -Three Days

PORTFOLIO SUMMARY

	Legacy	Target	Total
Number of Securities	46	212	258
Total Value (USD)	\$ 300,000,000.00	\$ 300,000,000.00	\$ 600,000,000.00
Total Shares	8,719,632.00	9,857,201.00	18,576,833.00
Average Position Size	180,857.52	44,608.56	68,901.01
Average Position Value	\$ 5,068,383.04	\$ 1,154,878.21	\$ 1,852,634.89
In Kinds	400,186.00	400,186.00	800,372.00
In Kind Value (USD)	\$ 44,535,229.00	\$ 44,535,229.00	\$ 89,070,458.00
Net Shares	8,319,446.00	9,457,015.00	17,776,461.00
Cash	\$ 22,319,151.00	\$ 10,630,590.00	\$ 32,949,741.00
(T-1) Value (USD)	\$ 233,145,620.00	\$ 244,834,181.00	\$ 477,979,801.00

Managers

Legacy	Target
Artisan Global	Jackson Square William Blair

Trade Balance



Regions	% Country	%
Europe	20.78%	United States 61.69%
Asia	14.66%	Japan 7.32%
North America	62.47%	United Kingdom 7.08%
Latin America	2.09%	Hong Kong 4.13%
		France 2.71%
		Germany 2.32%
		Sweden 2.24%
		Denmark 2.10%
		Taiwan 1.25%
		Italy 1.22%
		South Korea 1.11%
		Mexico 1.06%
		Brazil 1.03%
		Switzerland 0.82%

Sector	%
Technology	23.31%
Healthcare	18.38%
Cyclical Consumer Goods & Services	18.15%
Industrials	13.86%
Financials	13.33%
Non-Cyclical Consumer Goods & Services	6.68%
Basic Materials	2.44%
Energy	1.87%
Utilities	1.31%
Telecommunication Services	0.69%

ADTV %	Portfolio %
5%	100%
10%	10%
25%	13%
50%	6%
100%	2%
200%+	1%

TRADING STRATEGY

Vertas Trading Strategy

Recommended Trading Strategy For This Trade: **Implementation Shortfall**

Implementation Shortfall: This strategy seeks to minimize cost by managing the risk associated with overnight market movement, estimated transaction costs, intra-day volatility and liquidity. The Vertas system employs institutional trading algorithms and accesses multiple liquidity sources to quantitatively "parcel" the portfolio relative to portfolio performance and market movement on the trade date in order to achieve proceeds improvement versus T-1 valuations.

BROKER SELECTION

The Vertas venue-agnostic, liquidity seeking evaluation model utilizes real time trade cost analytics and conflict free order routing to optimally source liquidity from more than 45 execution alternatives in order to achieve best execution and timing without the revenue-driven concerns of "broker" owned dark pools and the associated potential conflicts of interest inherent in today's decentralized market structure.

In addition to the \$8 trillion historical data set members of the Vertas team pioneered in the development of the industry's first performance based broker selection model, our risk management oversight process now utilizes the industry's first "Venue Neutral Liquidity Scorecard", a proprietary, multi-factor client protection platform for monitoring intraday price movement and execution optimization. The "Scorecard" provides the Vertas Trade Oversight Team with enhanced state-of-the-art capability to monitor liquidity on a venue by venue basis and measure slippage versus a variety of real-time benchmarks (T-1, implementation shortfall, arrival price, execution price before and after each execution, short term momentum and reversion and average fill size). The result is a fully transparent, Fiduciary-compliant process that optimizes performance, reduces risk and ensures best execution with no conflicts of interest.

Liquidity Scorecard										
Liquidity Venue	Distribution of Executions	Slippage vs. 2s Bmk (bps)	Slippage vs. 5s Bmk (bps)	Slippage vs. 10s Bmk (bps)	Post Lit	Remove Lit	Dark	Route out	Fill Rate	Avg. Exec. Size
ARCA	8.0%	0.58	0.59	0.98	23.9%	63.2%	0.0%	12.9%	31.6%	146
Broker/Venue A	12.0%	1.40	1.60	2.01	25.3%	61.2%	0.0%	13.5%	38.4%	122
Broker/Venue B	4.0%	1.68	1.86	1.99	21.9%	72.5%	0.0%	5.6%	20.4%	167
BATS	0.1%	3.14	3.18	2.92	0.0%	0.0%	100.0%	0.0%	10.9%	131
Broker/Venue C	2.3%	0.37	0.35	0.32	0.0%	0.0%	100.0%	0.0%	2.5%	178
BATS Y	20.6%	-0.09	0.14	0.44	78.2%	21.8%	0.0%	0.0%	42.7%	112
Broker/Venue D	0.4%	3.27	3.71	3.96	0.0%	0.0%	100.0%	0.0%	0.8%	137
Broker/Venue E	1.1%	-0.16	-0.17	-0.21	0.0%	0.0%	100.0%	0.0%	10.9%	155
Broker/Venue F	23.2%	-0.93	-0.69	-0.22	93.1%	4.8%	0.0%	2.1%	66.8%	116
EDGA	3.0%	0.88	1.05	1.84	11.0%	78.8%	0.0%	10.2%	20.1%	184
EDGX	0.9%	4.91	5.19	5.34	0.0%	0.0%	100.0%	0.0%	2.0%	122
GETCO	1.0%	0.26	0.28	0.26	0.0%	0.0%	100.0%	0.0%	5.5%	160
NASDAQ	0.2%	-0.22	-0.26	-0.44	0.0%	0.0%	100.0%	0.0%	3.4%	129
Broker/Venue G	1.2%	4.55	5.08	5.58	0.0%	0.0%	100.0%	0.0%	2.3%	214
Broker/Venue H	0.0%	-0.08	-0.12	-0.08	100.0%	0.0%	0.0%	0.0%	1.2%	178
Broker/Venue I	0.6%	0.10	0.16	0.14	68.0%	32.0%	0.0%	0.0%	1.1%	213
NASDAQ BOSX	9.0%	0.98	1.49	2.14	29.6%	67.9%	0.0%	2.6%	20.1%	145
NYSE	10.3%	0.95	1.41	1.84	9.8%	70.9%	0.0%	19.4%	62.5%	208
Broker/Venue J	2.0%	4.10	4.34	4.53	0.0%	0.0%	100.0%	0.0%	28.4%	127
TOTAL	100.00%	0.34	0.59	0.98	47.3%	36.8%	10.1%	5.8%		

The performance versus benchmark statistics show price reversion versus short term execution benchmarks, calculated by observing the mid-quote price X seconds before and after each execution. Positive numbers represent slippage relative to the benchmark average price. Negative values represent relative outperformance relative to the benchmark average price.

*THE ABOVE TABLE IS A SAMPLE ONLY AND NOT INDICATIVE OF THE ACTUAL ROUTING OF YOUR TRADE NOR ITS' PERFORMANCE



TRADE SUMMARY

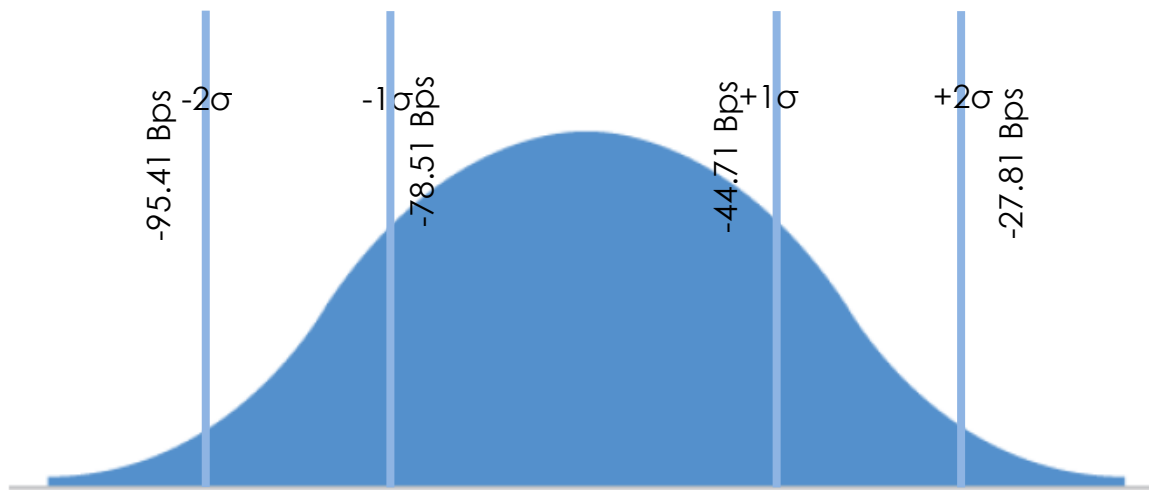
Execution Type	Market Value	Shares	% of Transition
Inkind Transfer	\$ 89,070,458.00	800,372.00	15.71%
Traded Positions	\$ 477,979,801.00	17,776,461.00	84.29%
Total	\$ 567,050,259.00	18,576,833.00	100.00%

COST ESTIMATES

	Bps	\$
Fixed Costs	-1.65	\$ (78,853.58)
Market Impact / Spread	-54.70	\$ (2,614,549.51)
FX Spread Cost	-1.96	\$ (93,678.24)
Taxes & Fees	-3.30	\$ (157,675.53)
Cost Subtotal	-61.61	\$ (2,944,756.86)

		-1σ	+1σ
Volatility Range (Timing)	Bps	-16.90	16.90
	\$	(\$807,785.86)	\$807,785.86

		-1σ	+1σ
Total Cost Range	Bps	-78.51	-44.71
	\$	(\$3,752,542.72)	(\$2,136,970.99)



BROKER SELECTION

VERTAS GLOBAL EQUITY BROKER NETWORK			
<u>Europe</u>		<u>Asia</u>	
<u>Lit</u>	<u>Dark</u>	<u>Lit</u>	<u>Dark</u>
BATS Chi-Ex	BATS Chi-Ex Dark	KSE	Chi-Ex Aus Dark
LSE	UBS MTF	Shanghai (China)	Chi-Ex Japan Dark
Euronext	Turquoise Dark	ASX	
Xetra	ITG Posit	Taiwan (TWSE)	
Turquoise	Sigma X MTF	TSE	
SIX Swiss	Instinet Blockmatch	Hong Kong	
Nasdaq OMX	Liquidnet Dark	Singapore	
Bolsa de Madrid	Nordic@Mid	Chi-Ex Aus	
<u>Global Americas</u>			
<u>Lit</u>	<u>Dark</u>		
Barclays DirectEx	Crossfinder		
Liquidnet Negotiated	UBS ATS		
Citi LIQUIFI	SuperX		
Liquidnet H2O	IEX		
Instinet Crossing	MS POOL (ATS-4)		
Weeden XE	Instinct X		
BIDS	SIGMA X		
	POSIT		
	JPM-X		
	KCG Matchit		
	Barclays ATS ("LX")		
	LEVEL ATS		

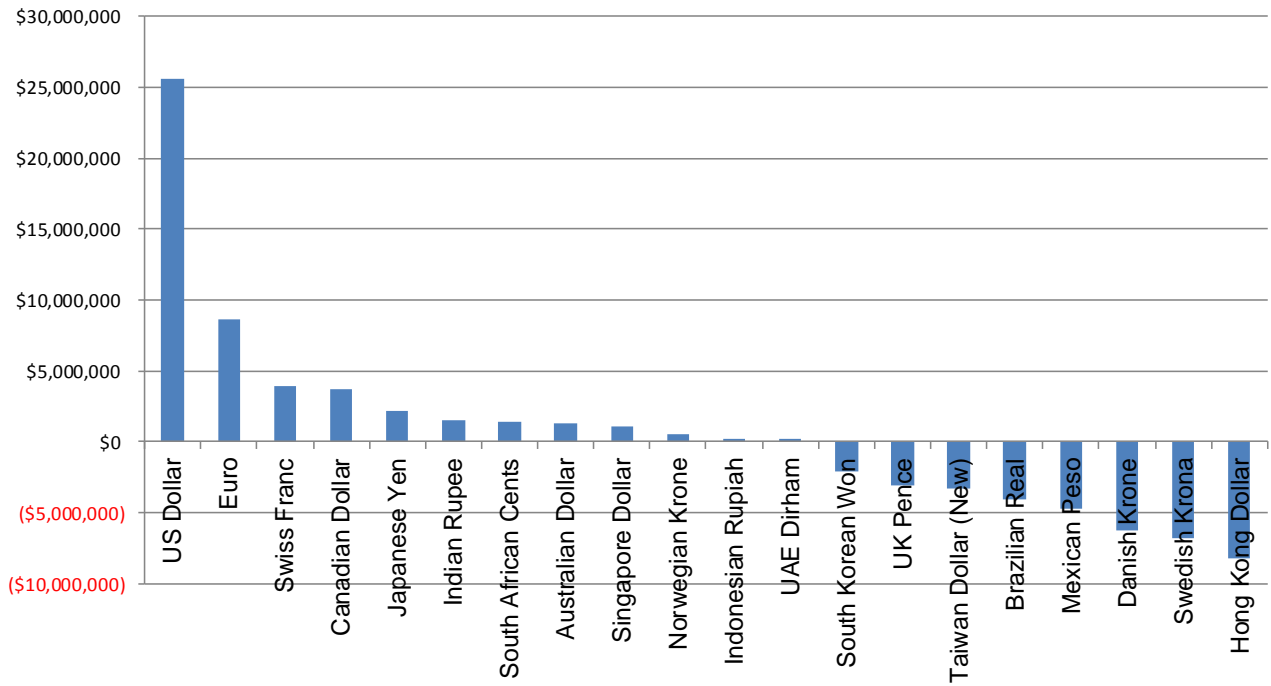
TOP 10 OUTLIERS: LARGEST TIMING COST

Ticker	Side	Potential Timing Cost (Bps)	% of Basket Value
VRX	Buy	-2.41	1.36%
DIB	Buy	-1.83	0.03%
2474	Buy	-1.69	0.05%
2308	Buy	-1.59	0.08%
6504	Buy	-1.53	0.03%
6770	Buy	-1.51	0.04%
2454	Buy	-1.48	0.04%
3658	Sell	-1.47	0.97%
YELP	Buy	-1.34	0.22%
3008	Buy	-1.33	0.04%

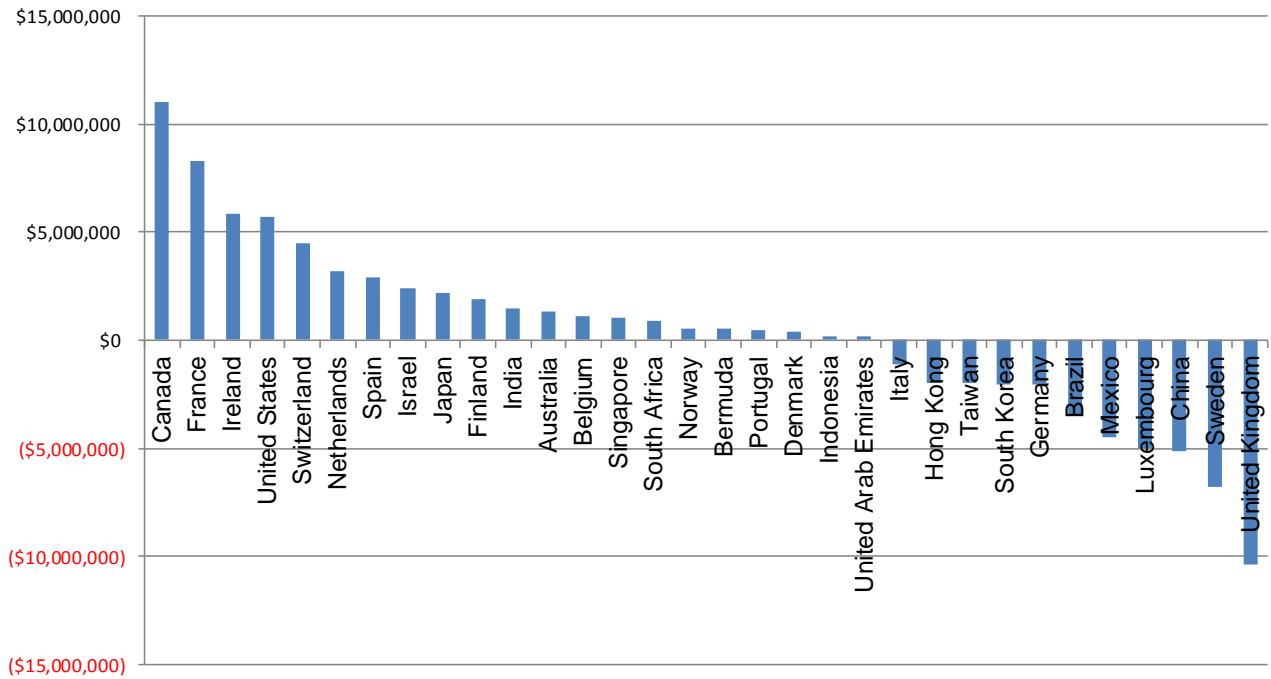
TOP 10 OUTLIERS: LARGEST LIQUIDITY COST

Ticker	Side	Potential Liquidity Cost (Bps)	% of Basket Value
JHX	Sell	-1,258.65	1.33%
RADL3	Sell	-133.77	0.94%
6324	Sell	-112.89	0.37%
ERF	Sell	-88.80	1.05%
IHS	Sell	-81.53	3.06%
ASC	Sell	-65.95	0.99%
REGN	Sell	-59.60	2.94%
MRKT	Sell	-57.06	1.39%
VRX	Buy	-52.06	1.36%
ZAL	Sell	-38.08	0.81%

CURRENCY DISTRIBUTION:



COUNTRY TRADE BALANCE:



DISCLOSURE: This pre trade report is an estimate of costs and is not a guarantee of future results. This document is for information purposes only, is not intended to provide a sufficient basis on which to make an investment decision and should not be regarded as an offer to sell or a solicitation of an offer to buy any financial product. Vertas Brokerage Consulting is a unit of Percival Financial Partners, Ltd. The information in this document is confidential and intended for use only by the designated recipient(s). It is the property of Vertas Brokerage Consulting or its affiliates. If you are not the intended recipient, please return the document to Vertas Brokerage Consulting and destroy all copies of it, including any copies from your computer. Unauthorized use, disclosure, dissemination or copying of this document or any part hereof is strictly prohibited.

Placement Agent Disclosures

CONTRA COSTA COUNTYEMPLOYEES' RETIREMENT ASSOCIATION
DISCLOSURE STATEMENT RE: USE OF PLACEMENT AGENTS

The undersigned is a current or proposed "External Manager" for the Contra Costa County Employees' Retirement Association ("CCCERA"), as defined under CCCERA's Placement Agent Disclosure Policy, adopted on June 9, 2010 ("Policy.") We have received a copy of the Policy from CCCERA. We hereby disclose to CCCERA the following information, which we represent and warrant to be true and correct as of the date hereof:

1. Neither we nor any of our principals, employees, agents or affiliates has compensated or agreed to compensate, directly or indirectly, any person or entity to act as a Placement Agent (as defined in the Policy) in connection with any investment by CCCERA, **except as disclosed on Attachment 1 to this Disclosure Statement.**

[IF THERE IS NOTHING TO DISCLOSE IN ATTACHMENT 1, ITEMS 2-6 ARE INAPPLICABLE.]

2. To the extent of any disclosure set forth on Attachment 1, we attach as Attachment 2 to this Disclosure Statement a resume for each officer, partner or principal of the Placement Agent (and any employee providing similar services) detailing the person's education, professional designations, regulatory licenses and investment and work experience, and whether any such person is a current or former CCCERA Board member, employee or Consultant or a member of the immediate family of any such person.
3. To the extent of any disclosure set forth on Attachment 1, we attach as Attachment 3 to this Disclosure Statement a description of any and all compensation of any kind we have provided or have agreed to provide to a Placement Agent, including the nature, timing and value thereof.
4. To the extent of any disclosure set forth on Attachment 1, we attach as Attachment 4 to this Disclosure Statement a description of the services to be performed by the Placement Agent.
5. To the extent of any disclosure set forth on Attachment 1, we attach as Attachment 5 to this Disclosure Statement a statement whether the Placement Agent or any of its affiliates are registered with the Securities and Exchange Commission or the Financial Industry Regulatory Association or any similar regulatory agent in a country other than the United States and the details of such registration or explanation of why no registration is required.

6. To the extent of any disclosure set forth on Attachment 1, we attached as Attachment 6 to this Disclosure Statement a statement whether the Placement Agent or any of its affiliates are registered as a lobbyist with any state or national government.

We further represent and warrant as follows:

A. We shall provide an update of any changes to any of the information included in this Disclosure Statement within fourteen (14) business days of the occurrence of the change in information.

B. We shall cause our engaged Placement Agent, if any, prior to acting as a Placement Agent with regard to CCCERA, to disclose to CCCERA in writing any campaign contribution, gift (as defined in Government Code section 82028) or other item of value made or given to any member of the CCCERA Board or Staff, or Consultant (as defined in the Policy), during the prior twenty-four month period.

C. We shall cause our engaged Placement Agent, during the time it is receiving compensation in connection with a CCCERA investment, to disclose to CCCERA any campaign contribution, gift or other item of value made or given to any member of the CCCERA Board or Staff, or Consultant, during such period.

Dated: MARCH 27, 2016

EXTERNAL MANAGER

BLACK ROCK

Name of Entity

By: Laura Champion
Authorized Signatory

Print Name LAURA CHAMPION

Its VICE PRESIDENT

Please note that Taylor is my maiden name and attachments 5 and 6 are filed with the agencies and state with my married name of Samantha Chew.

Attachment 1

As an employee of BlackRock Institutional Trust Company, N.A. Samantha Taylor receives a salary and discretionary bonus, which is not in connection with any one investment and/or client. See Attachment 3 for more information on BlackRock's approach to compensation.

Attachment 2

Samantha Taylor, Vice President, is a member of BlackRock's Institutional Client Business (ICB). She is responsible for developing and maintaining relationships with institutional investors, including private and public pension plans. Prior to moving to her current role, she was responsible for developing and implementing marketing strategies and messaging within BlackRock's Institutional Marketing team. Prior to joining Blackrock in 2010, Ms. Taylor was a Marketing Manager at Forward Management. She was responsible for all aspects of marketing for separately managed and institutional accounts. Prior to joining Forward Management in 2003, Ms. Taylor was an Associate Regional Director at ING Managed Account Group in New York where she was responsible for managing internal sales and client service for separately managed accounts for financial advisors. Ms. Taylor earned a BS degree in business administration from College of Charleston. Ms. Taylor has a FINRA Series 7 and a FINRA/SEC 66 licenses.

Attachment 3

BlackRock's approach to compensation reflects the value senior management places on its employees and its client relationships. Consequently, the compensation structure has been designed to attract and retain the best talent, to reinforce stability throughout the organization, to encourage teamwork, and to align our interests with those of our clients. The predominant compensation model includes salary and a discretionary bonus reflecting firm, business area and individual performance and the success of the business product are. There is no dollar amount specifically allocable to the proposed CCCERA investments.

Attachment 4

Samantha Taylor is an employee of BlackRock Institutional Trust Company, N.A. (BTC) and associated with a BlackRock affiliated broker dealer. As an employee of BTC, Placement Agent acts as account manager to various institutional accounts managed by BTC and its affiliates.

Attachment 5

Samantha Taylor is registered with the Financial Regulatory Association (FINRA) and the Securities Exchange Commission (SEC).

Attachment 6

Samantha Taylor is registered as a lobbyist with the State of California.

Attachment 1

As an employee of BlackRock Financial Management, Inc. Laura Champion receives a salary and discretionary bonus, which is not in connection with any one investment and/or client. See Attachment 3 for more information on BlackRock's approach to compensation.

Attachment 2

Laura Champion, Vice President, is a member of the US and Canada Institutional team within BlackRock's Institutional Client Business. She is responsible for developing and maintaining relationships with institutional investors, including public and private pension plans, foundations and endowments.

Ms. Champion's service with the firm dates back to 2011. Before assuming her current responsibilities, Ms. Champion previously worked as a Business Development Associate in iShares within the Wealth Advisory channel where she was responsible for developing and maintaining relationships with financial advisors across the retail business. Prior to joining BlackRock in 2011, Laura worked for Bank of America Merrill Lynch in Institutional Equity Research Sales in San Francisco where she focused on developing and maintaining relationships with institutional investors, corporate management teams and research analysts with an emphasis on regional roadshow coordination and marketing.

Ms. Champion received a B.A. in Global and International Studies and a B.A. in French Literature from the University of California Santa Barbara. She holds the Series 7 and 63 licenses.

Attachment 3

BlackRock's approach to compensation reflects the value senior management places on its employees and its client relationships. Consequently, the compensation structure has been designed to attract and retain the best talent, to reinforce stability throughout the organization, to encourage teamwork, and to align our interests with those of our clients. The predominant compensation model includes salary and a discretionary bonus reflecting firm, business area and individual performance and the success of the business product are. There is no dollar amount specifically allocable to the proposed CCCERA investments.

Attachment 4

Laura Champion is an employee of BlackRock Financial Management, Inc.(BFM) and associated with a BlackRock affiliated broker dealer. As an employee of BFM, Placement Agent acts as account manager to various institutional accounts managed by BFM and its affiliates, including BlackRock Institutional Trust Company, N.A. (BTC, which manages Transition Management mandates).

Attachment 5

Laura Champion is registered with FINRA as Registered Representatives of BlackRock Investments, LLC (BRIL), an affiliated broker-dealer of BFM and BTC.

Attachment 6

Laura Champion is registered as a lobbyist with the State of California.

**CONTRA COSTA COUNTYEMPLOYEES' RETIREMENT ASSOCIATION
DISCLOSURE STATEMENT RE: USE OF PLACEMENT AGENTS**

The undersigned is a current or proposed "External Manager" for the Contra Costa County Employees' Retirement Association ("CCCERA"), as defined under CCCERA's Placement Agent Disclosure Policy, adopted on June 9, 2010 ("Policy.") We have received a copy of the Policy from CCCERA. We hereby disclose to CCCERA the following information, which we represent and warrant to be true and correct as of the date hereof:

1. Neither we nor any of our principals, employees, agents or affiliates has compensated or agreed to compensate, directly or indirectly, any person or entity to act as a Placement Agent (as defined in the Policy) in connection with any investment by CCCERA, **except as disclosed on Attachment 1 to this Disclosure Statement.**

[IF THERE IS NOTHING TO DISCLOSE IN ATTACHMENT 1, ITEMS 2-6 ARE INAPPLICABLE.]

2. To the extent of any disclosure set forth on Attachment 1, we attach as Attachment 2 to this Disclosure Statement a resume for each officer, partner or principal of the Placement Agent (and any employee providing similar services) detailing the person's education, professional designations, regulatory licenses and investment and work experience, and whether any such person is a current or former CCCERA Board member, employee or Consultant or a member of the immediate family of any such person.
3. To the extent of any disclosure set forth on Attachment 1, we attach as Attachment 3 to this Disclosure Statement a description of any and all compensation of any kind we have provided or have agreed to provide to a Placement Agent, including the nature, timing and value thereof.
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We further represent and warrant as follows:

A. We shall provide an update of any changes to any of the information included in this Disclosure Statement within fourteen (14) business days of the occurrence of the change in information.

B. We shall cause our engaged Placement Agent, if any, prior to acting as a Placement Agent with regard to CCCERA, to disclose to CCCERA in writing any campaign contribution, gift (as defined in Government Code section 82028) or other item of value made or given to any member of the CCCERA Board or Staff, or Consultant (as defined in the Policy), during the prior twenty-four month period.

C. We shall cause our engaged Placement Agent, during the time it is receiving compensation in connection with a CCCERA investment, to disclose to CCCERA any campaign contribution, gift or other item of value made or given to any member of the CCCERA Board or Staff, or Consultant, during such period.

Dated: 18-March-2016

EXTERNAL MANAGER

Citigroup Global Markets Inc
Name of Entity

By: [Signature]
Authorized Signatory

Print Name Charles Puffly O'Connell

Its _____

CONTRA COSTA COUNTYEMPLOYEES' RETIREMENT ASSOCIATION
DISCLOSURE STATEMENT RE: USE OF PLACEMENT AGENTS

The undersigned is a current or proposed "External Manager" for the Contra Costa County Employees' Retirement Association ("CCCERA"), as defined under CCCERA's Placement Agent Disclosure Policy, adopted on June 9, 2010 ("Policy.") We have received a copy of the Policy from CCCERA. We hereby disclose to CCCERA the following information, which we represent and warrant to be true and correct as of the date hereof:

1. Neither we nor any of our principals, employees, agents or affiliates has compensated or agreed to compensate, directly or indirectly, any person or entity to act as a Placement Agent (as defined in the Policy) in connection with any investment by CCCERA, **except as disclosed on Attachment 1 to this Disclosure Statement.**

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Dated: March 17, 2016

EXTERNAL MANAGER

Penserra Transition Management LLC
Name of Entity

By: 
Authorized Signatory

Print Name George Madrigal

Its CEO

**CONTRA COSTA COUNTYEMPLOYEES' RETIREMENT ASSOCIATION
DISCLOSURE STATEMENT RE: USE OF PLACEMENT AGENTS**

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Dated: March 18, 2016

EXTERNAL MANAGER

Russell Implementation Services Inc.
Name of Entity

By: 
Authorized Signatory

Print Name Troy L. Rucker

Its _____

Troy L. Rucker
Managing Director
Russell Implementation Services Inc.

Attachment 1

Steve Cauble, an employee of Russell Investment Group, acts as a Placement Agent (as defined in the Policy) in connection with investments by CCCERA.

Brittany Meisner, an employee of Russell Investment Group, acts as a Placement Agent (as defined in the Policy) in connection with investments by CCCERA through contact with their Consultant.

Attachment 2

Education, professional designations, regulatory licenses and investment and work experience for Steve Cauble and Brittany Meisner are below. Neither Steve nor Brittany is a current or former CCCERA Board member, employee or Consultant or a member of the immediate family of any such person.

Steve Cauble, Regional Director - Americas Institutional
B.A. in Finance from the University of Arizona.
Licensed Registered Representative, FINRA Series 7 and 66.

Steve Cauble is a regional director for Russell Investments' Americas institutional business. He leads Russell's business relationships with major corporate and public pension plan clients and other large pools of capital in the western U.S. Steve is responsible for coordinating Russell's advice, asset management, and implementation resources to create customized investment solutions to improve fund performance and reduce risk for clients.

Steve joined Russell in 2001 with the Analytical Services group. In his previous role, he worked as a strategic partner to plan sponsors, leveraging the Russell Indexes, peer group universe data, and risk and analytics tools to monitor investment managers and overall fund performance.

Prior to joining Russell, Steve spent four years in London with WRQ Incorporated, where he established WRQ UK, Plc, a Regional office providing sales and technical support to clients in the UK, Ireland, and South Africa.

Steve started his career at Rank Xerox New Zealand, Ltd. and Xerox Corporation where was active in sales, management, and product launch specialist roles.

Steve is a registered representative of Russell Institutional Services Inc., an SEC registered investment adviser and FINRA member firm.

Brittany N. Meisner, CFA, CAIA - Regional Director, U.S. Consultant Relations, Americas Institutional
B.S., Business Finance, University of Nevada, Las Vegas
Licensed Registered Representative, FINRA Series 7, 66

Brittany Meisner is a Regional Director for the Consultant Relations group of the Americas Institutional business at Russell Investments. Brittany communicates Russell's value to institutional consultants through Russell's defined contribution services, investment management and implementation management services.

Brittany became a member of Russell's Americas Institutional Group in August 2015. Prior to joining Russell Brittany was a member of the Consultant Relations team at Neuberger Berman where she was responsible for assisting in the development of the firm's institutional consultant relationships. Prior to Neuberger Berman Brittany was a Senior Marketing and Research Associate for the Institutional Consultant Relations team at Nuveen Investments. She began her career as a Senior Performance Analyst at NEPC.

Brittany is a CFA® charterholder and is a member of the CFA Society of Chicago and Seattle. She has earned the Chartered Alternative Investment Analyst designation.

Attachment 3

Russell Investment Group has not previously provided any placement agent compensation of any kind relating to CCCERA. To date we have not done any business with CCCERA.

Were CCCERA to contract with Russell Investment Group compensation would be made to Steve Cauble and Brittany Meisner as per their compensation packages.

Steve Cauble's compensation is based off a percentage of revenue to Russell ranging from 5%-20% and is payable upon receipt for payment of services rendered.

Brittany Meisner's compensation is a discretionary bonus taking into account relationships won and lost as well as other performance based metrics.

Attachment 4

Please refer to Attachment 2 for a description of services performed by each Placement Agent.

Attachment 5

Details of the registrations Russell Institutional Services Inc. are below:

- Registered as a broker-dealer with the U.S. Securities and Exchange Commission (“SEC”) and the States of Washington, Ohio, New York, Rhode Island, Texas and Vermont.
- Registered as an investment advisor with the SEC.
- Member firm of the Financial Industry Regulatory Authority (“FINRA”), with worldwide brokerage correspondent relationships. Exempt from registration as an international dealer with the Ontario Securities Commission.
- Registered as an MSRB and appointed to the Irish Regulatory Authority.
- Subject to examination and reporting requirements of the SEC and FINRA.
- Cleared by Central Bank of Ireland to act as an investment manager of Irish funds (since August 20, 2007).

Steve Cauble is a Licensed Registered Representative, FINRA Series 7 and 66.

Brittany Meisner is a Licensed Registered Representative, FINRA Series 7 and 66.

Attachment 6

Steve Cauble is not registered as a lobbyist with any state or national government.

Brittany Meisner is not registered as a lobbyist with any state or national government.

**CONTRA COSTA COUNTYEMPLOYEES' RETIREMENT ASSOCIATION
DISCLOSURE STATEMENT RE: USE OF PLACEMENT AGENTS**

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Dated: 3/17/2016

EXTERNAL MANAGER

Percival Financial Partners, Ltd. d/b/a Vertas
Name of Entity

By: 
Authorized Signatory

Print Name Kenneth P. Taylor, Sr.

Its President/CEO

Attachment 1

Percival Financial Partners d/b/a Vertas Brokerage Consulting has agreed to compensate Cary Hally. Not in connection with any investment as the policy states, but in connection with transition services.

Attachment 2

Kenneth Taylor, Sr. is the only officer, partner or principal of Vertas.

Mr. Taylor began Percival Financial Partners, Ltd. in October 1996. Prior to starting his own firm, he was Vice President for National development at a Maryland based investment banking firm, and VP at a local Maryland bank for 17 years. Mr. Taylor holds a B.A. degree in economics from Morgan State University. His current licenses include: Series 6, 7, 24, 28 and 63.

Attachment 3

Cary Hally is a full time employee paid a salary plus a sliding scale (10%-15%) of all revenue generated by any of his accounts. CCCERA will be designated as his account, so to the extent there are fees generated, he will get his resulting commission. Again Cary Hally works only for Vertas and is an internal employee of the company.

Attachment 4

Cary Hally will be the direct liaison with the fund and its investment consultant. He will ensure that the lead consultant and administration team at Vertas is aware of any and all issues with CCCERA and will ensure daily that the proper human assets are made available when and if our services are needed. He will help do any on-site and telephonic pre and post trade reporting and manage the relationship.

Attachment 5

Cary Hally is Series 7/63 registered with FINRA.

Attachment 6

Cary Hally is not registered as a lobbyist with any governmental entity.



**PERSPECTIVES
THAT DRIVE
ENTERPRISE
SUCCESS**



MAY 25, 2016

Cash Overlay Providers

Contra Costa County Employees' Retirement Association

Table of contents



VERUSINVESTMENTS.COM

SEATTLE 206-622-3700

LOS ANGELES 310-297-1777

SAN FRANCISCO 415-362-3484

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Past performance is no guarantee of future results. This document is provided for informational purposes only and is directed to institutional clients and eligible institutional counterparties only and is not intended for retail investors. Nothing herein constitutes investment, legal, accounting or tax advice, or a recommendation to buy, sell or hold a security or pursue a particular investment vehicle or any trading strategy. This document may include or imply estimates, outlooks, projections and other “forward-looking statements.” No assurance can be given that future results described or implied by any forward looking information will be achieved. Investing entails risks, including possible loss of principal. Verus Advisory Inc. and Verus Investors, LLC (“Verus”) file a single form ADV under the United States Investment Advisors Act of 1940, as amended.

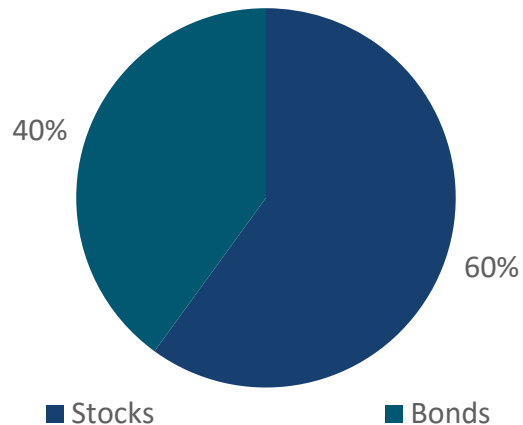
Overview

The challenge

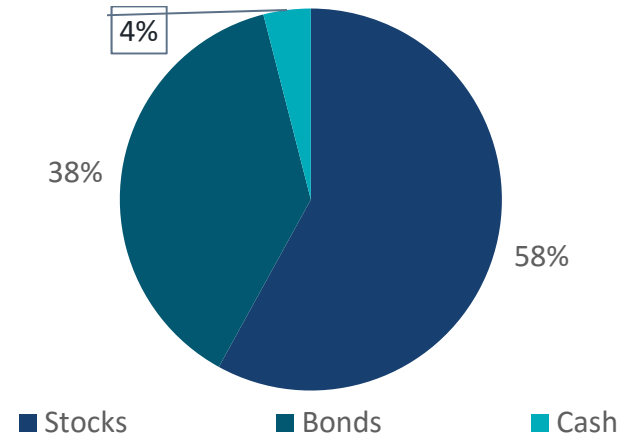
Holding cash in a portfolio is usually necessary, but comes with side effects

- Excess cash prevents the portfolio from being fully invested according to policy
 - Example: a 60/40 portfolio with 4% cash may actually be a 58/38/4 portfolio
- Tracking error thus results from the portfolio being out of balance relative to its policy
- Over time, cash generates a “drag” on return since it underperforms most other asset classes

INTENDED PORTFOLIO



ACTUAL PORTFOLIO



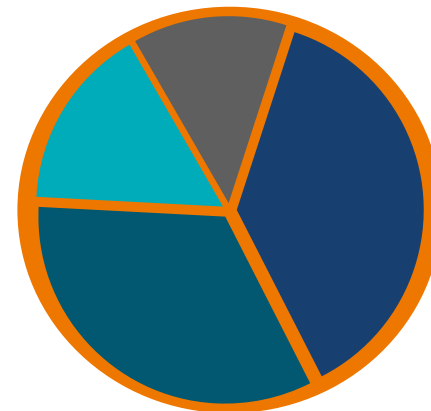
The solution

- Through the use of derivatives, cash overlay strategies efficiently gain exposures in a portfolio to reduce the effects of holding cash.
- Derivatives allow the portfolio to gain the expected exposures to various asset classes without investing in the “physical” securities.
- Overlay strategies may “equitize” the cash position or rebalance a portfolio as desired.
- For CCCERA, overlay offers operational efficiency to effect general asset class rebalancing while specific investment strategies are being identified

PORTFOLIO WITHOUT CASH OVERLAY



PORTFOLIO WITH CASH OVERLAY



Services and expected benefits

Strategy	Expected Benefit
Cash equitization / liquidity management	Improve returns and flexibility
Passive rebalancing / asset allocation	Allows the realignment of asset class exposures without the transaction costs associated with physicals and does not disrupt underlying managers
Duration matching / liability-driven investing	Provide low cost and flexible means to modify effective duration or to match assets to liabilities
Volatility management	Provides flexibility for cheaply adjusting beta risk and implementing hedges
Active insights	Discretionary tilts and active management with the goals of increasing returns

Overlay provider search

- Verus conducted a search on behalf of CCCERA for the following overlay services:
 - **Cash equitization** – Will allow CCCERA to maintain its 1% cash allocation in order to meet its liquidity needs while neutralizing the drag on performance associated with holding cash over the long term; and/or
 - **Rebalancing** – Will provide CCCERA with a flexible and cost efficient means of maintaining target asset class exposures.

Overlay providers

Provider details

	Parametric Portfolio Associates, LLC	Russell Investments	State Street Global Advisors
Headquarters	Seattle, WA	Seattle, WA	Boston, MA
Firm Inception	1987	1936	1792
Overlay Service Inception	1987	1992	1995
Ownership	Majority-owned subsidiary of Eaton Vance Corp.	Will be owned by TA Associates and Reverence Capital Partners	Wholly-owned subsidiary of State Street Corporation
Indicative Fee Schedule	<ul style="list-style-type: none"> - \$1,500/month plus - 0.15% first \$50 mil of notional value - 0.10% on the next \$100 mil - 0.05% on the next \$350 mil - 0.03% on the next \$500 mil - 0.02% thereafter - Minimum Fee: \$75,000 per year 	<ul style="list-style-type: none"> - Option 1: Annual \$200,000 base fee plus - 0.015% to 0.05% of notional value - Option 2: Annual \$50,000 base fee plus - 0.05% to 0.10% of notional value 	<ul style="list-style-type: none"> - 0.05% first \$100 mil of notional value - 0.04% next \$400 mil of notional value - 0.03% thereafter - Minimum Fee: \$50,000 per year
Fees at notional amounts:			
\$250mm	\$243,000	\$175,000 - \$325,000	\$110,000
\$500mm	\$368,000	\$275,000 - \$550,000	\$210,000
\$1,000mm	\$518,000	\$350,000 - \$1,050,000	\$360,000
Product Mix	<ul style="list-style-type: none"> - Fund cash equitization - Manager cash equitization - Overlay transition and reallocation management - Rebalancing - Exposure management - Currency management - Interest rate management 	<ul style="list-style-type: none"> - Cash equitization - Exposure management - Beta management for portable alpha - Liability-driven investing - Fund restructuring - Tactical asset allocation - Currency overlays - Liquidity management 	<ul style="list-style-type: none"> - Beta replication - Liquidity management / cash equitization - Completion - Custom hedging - Currency management - Tactical overlay - Income generation

Sources: Parametric, Russell, State Street

Provider details (continued)

	Parametric Portfolio Associates, LLC	Russell Investments	State Street Global Advisors
Reporting	<p>Daily tracking report available online which include</p> <ul style="list-style-type: none"> - fund cash levels - manager values - asset class exposures - margin summary - custom portfolio metrics 	<p>Customized reporting that can include:</p> <ul style="list-style-type: none"> - synthetic index replication analysis - counterparty exposure - total fund risk management - liquidity at risk - overlay highlights 	<p>Full suite of customizable daily reporting that can include:</p> <ul style="list-style-type: none"> - portfolio exposures - manager balances - summary of flows - attribution - counterparty exposure
Advantages	<ul style="list-style-type: none"> - Core business is focused on portfolio solutions - Experience with highly customized overlays - Extensive use of asset class, sub-asset class, and style specific instruments including futures, forwards, swaps, and ETFs - Daily tracking reports available online - Low relative base fee 	<ul style="list-style-type: none"> - Experience with large overlay mandates - Largest asset base - Two separate fee structures available - Customized reporting available 	<ul style="list-style-type: none"> - Most competitive fee structure - Overlay management is a core business at SSGA - Experience with highly customized overlays - Extensive use of asset class, sub-asset class, and style specific instruments including futures, forwards, and ETFs - Customized reporting available - Global trading desk
Considerations	<ul style="list-style-type: none"> - Smaller relative client and asset base - High relative asset based fee 	<ul style="list-style-type: none"> - Two ownership changes since 2014 - High relative base fee (specifically “option 1”) - Overlay exposures gained primarily through the use of broad market futures 	<ul style="list-style-type: none"> - Smallest relative client and asset base.

Sources: Parametric, Russell, State Street

Recommendation

Overlay provider recommendation

- Retain Parametric as the overlay manager subject to due diligence, a successful onsite visit, and legal review by authorizing the Chief Executive Officer to execute the necessary agreements.

Appendix

Risks

Risk	Description
Basis risk	Risk attributable to uncertain movements in the spread between a futures price and a spot price
Communication / Information risk	Overlay index exposures are maintained based on underlying investment values provided by one or more third parties. There are often delays in the receipt of updated information which can lead to exposure imbalance risks. Inadequate communication regarding cash flow moves into and out of fund and manager changes can lead to unwanted asset class exposures and loss.
Tracking error	Futures (synthetic) returns do not perfectly track benchmark index returns. This divergence between the price behavior of a position or portfolio and the price behavior of a benchmark is tracking error and impacts performance.
Margin / Liquidity risk	Potential that the market moves in a manner adverse to the futures or swap position causing a mark-to-market loss of capital to the fund and a resulting need to raise liquidity or to close positions; this could happen at a time when underlying fund or positions are also declining in value.
Leverage	Creation of market exposure in excess of underlying collateral value may lead to significant capital losses and result in position liquidation.
Counterparty	Counterparty credit risk on OTC trading and trade disruption risk related to exchange traded futures.
Collateral	The program may experience losses on the underlying designated assets in addition to potential losses on the index market exposure overlaying these assets.
Market risk	Market performs in a way that was not anticipated. For example, cash outperforms capital markets.

Forwards and Futures

- **Forward contracts**: More credit risk, price fixed at the start, cash flows settled on delivery
 - Traded OTC as customized contracts that are privately negotiated between parties
 - Entail more credit risk and market risk as they are not backed by the exchange's clearing house
 - Settled at the forward price agreed on at the trade date
 - No cash flows until delivery
- **Futures contracts**: Protected by clearing house, price fixed on last trading day, cash flows settled with margin calls
 - Exchange traded, standardized instruments transacted through brokerage firms
 - Default exposure lives with the exchange's clearing house
 - Settled at the settlement price fixed on the last trading day of the contract
 - Requires initial margin and periodic margin calls
- **Similarities**: Forward settlement via cash or physical asset, require leverage
 - Both contracts are binding agreements to act at a later date
 - May be physically settled or cash settled
 - Both require leverage

Notices & disclosures

Past performance is no guarantee of future results. The information presented in this report is provided pursuant to the contractual agreement (the “Contract”) by and between Contra Costa County Employees’ Retirement Association (“Client”) and Verus Advisory, Inc. (“Company”). In the event of conflict between the terms of this disclosure and the Contract, the Contract shall take precedence. Client is an institutional counter-party and in no event should the information presented be relied upon by a retail investor.

The information presented has been prepared by the Company from sources that it believes to be reliable and the Company has exercised all reasonable professional care in preparing the information presented. However, the Company cannot guarantee the accuracy of the information contained therein. The Company shall not be liable to Client or any third party for inaccuracy or in-authenticity of information obtained or received from third parties in the analysis or for any errors or omissions in content.

The information presented does not purport to be all-inclusive nor does it contain all information that the Client may desire for its purposes. The information presented should be read in conjunction with any other material furnished by the Company. The Company will be available, upon request, to discuss the information presented in the report that Client may consider necessary, as well as any information needed to verify the accuracy of the information set forth therein, to the extent Company possesses the same or can acquire it without unreasonable effort or expense. Nothing contained therein is, or should be relied on as, a promise, representation, or guarantee as to future performance or a particular outcome. Even with portfolio diversification, asset allocation, and a long-term approach, investing involves risk of loss that the client should be prepared to bear.

The material may include estimates, outlooks, projections and other “forward-looking statements.” Such statements can be identified by the use of terminology such as “believes,” “expects,” “may,” “will,” “should,” “anticipates,” or the negative of any of the foregoing or comparable terminology, or by discussion of strategy, or assumptions such as economic conditions underlying other statements. No assurance can be given that future results described or implied by any forward-looking information will be achieved. Actual events may differ significantly from those presented. Investing entails risks, including possible loss of principal. Risk controls and models do not promise any level of performance or guarantee against loss of principal.

Manager evaluations

Overlay Services Manager Evaluation

Parametric Portfolio Associates, LLC

LAST UPDATED: MAY 2016

PROVIDER DETAILS

Headquarters:	Seattle, WA
Firm Inception:	1987 (Parametric) 1972 (predecessor firm)
Overlay Services Inception:	1987
Ownership:	Majority-owned subsidiary of Eaton Vance Corp.
Product Mix:	Fund cash equitization Manager cash equitization Overlay transition and reallocation management Rebalancing Exposure management Currency management Interest rate management
Indicative Fee Schedule:	<p>\$1,500/month plus:</p> <ul style="list-style-type: none"> - 0.15% first \$50 mil of notional value - 0.10% on the next \$100 mil - 0.05% on the next \$350 mil - 0.03% on the next \$500 mil - 0.02% thereafter <p>Minimum Fee: \$75,000 per year</p>
Fee at notional amounts:	
\$250mm	\$293,000
\$500mm	\$543,000
\$1,000mm	\$1,043,000

Firm Background and History

Parametric Portfolio Associates, founded in 1987, is a majority-owned subsidiary of Eaton Vance Corp that focuses on the delivery of engineered portfolio solutions, including rules-based alpha-seeking equity, alternative and options strategies, as well as implementation services including tax-managed core equity, futures overlay and centralized portfolio management.

Eaton Vance owns 93% of the firm with the remaining equity ownership at Parametric distributed among senior management and investment professionals. Parametric is comprised of three investment centers – Seattle (headquarters), Minneapolis and Westport, CT. The firm's institutional overlay strategies reside within the Minneapolis investment center which was formerly The Clifton Group (founded in 1972) prior to Parametric's acquisition of the firm in 2012.

As of December 31, 2015, Parametric had 318 employees, including 76 investment professionals, and approximately \$152bn in assets under management including \$65bn in overlay strategies managed out of Minneapolis.

Strategy Background

Parametric has over 30 years of exposure management experience dating back to The Clifton Group. The firm's cash overlay services are known internally at Parametric as Policy Implementation Overlay Services (PIOS). The objectives of PIOS are to: 1) increase day-to-day availability of cash and provide operational efficiency for cash flow management, 2) eliminate performance drag due to unintended cash, 3) enable staff to obtain a daily snapshot of total fund exposures, and 4) maintain asset class exposure during manager changes.

Key Investment Professionals

The Minneapolis investment center's team is experienced and deep with 35 investment professionals and 80 team members in total, and is focused predominantly on providing overlay services. Minneapolis CIO Jack Hansen has been with the firm for more than 30 years.

Parametric uses a team approach whereby no one individual manages a client portfolio. Parametric believes that the team approach is a key aspect in providing clients with continuity as it mitigates the risks involved with the departure of key personnel, and brings together the experience and perspective of a number of investment professionals. Each team consists of portfolio managers and investment analysts who all work closely together to manage each client's overlay mandate.

Process

Parametric's cash overlay program provides an efficient way for portfolios to maintain their target asset allocation in a systematic fashion through cash securitization at the fund and manager level and to rebalance asset classes back to target within defined bands.

The process for establishing an overlay program begins with the creation of detailed investment policy guidelines. Parametric works with the client's staff, board, and consultant in developing an overlay investment philosophy to reflect specific fund objectives. Items to be determined include: assets to be incorporated in the program, target allocations, how cash is to be applied to the overlay program, fund rebalancing thresholds, asset class benchmarks, and reporting needs. The final guideline document is used to determine how overlay positions are adjusted as markets, exposures, and cash balances change over time.

The cash overlay program is invested using a wide array of instruments including futures, forwards, swaps, index funds, and ETFs. The decision to use specific instruments is made based on client guidelines, market availability of

instruments for the specific asset class or sub-asset class, liquidity, tracking error, and cost.

Cash balances are reviewed daily by Parametric's analysts and portfolio managers, and changes to exposures are made based on the client's guidelines. All open futures positions are marked-to-market daily, and trades are reviewed and verified by the portfolio management team and trade order managements system prior to execution to ensure compliance with policy guidelines. A daily account specific tracking report is posted to Parametric's website for client viewing that includes a comprehensive view of the portfolio's exposures including fund cash levels, manager values, asset class exposures and imbalances relative to target allocations, margin summary, and custom portfolio metrics (e.g. funded ratio).

Risk Management

Parametric seeks to minimize risks through a team-based portfolio management approach that utilizes electronic trade confirmation, a daily portfolio monitoring process, and operational safeguards including daily mark-to-market and segregated margin accounts. Parametric also utilizes a proprietary risk management system that incorporates accounting, trading and portfolio management functions.

Performance

Parametric estimates that a 2% residual cash balance over the last 10 years in a plan with a policy mix of 60% equities, 35% fixed income, and 5% commodities would have resulted in performance slippage of 9 bps per year.

Potential Concerns

Minneapolis CIO Jack Hansen remains actively involved in the firm; however, succession planning should be monitored given that Hansen has been with Parametric for over 30 years.

Smaller relative client and asset base.

Higher relative asset based fee.

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*The material may include estimates, outlooks, projections and other "forward-looking statements." Due to a variety of factors, actual events may differ significantly from those presented. Investing entails risks, including possible loss of principal. **Past performance is no guarantee of future results.***

Overlay Services Manager Evaluation

Russell Investments

LAST UPDATED: MAY 2016

PROVIDER DETAILS

Headquarters:	Seattle, WA
Firm Inception:	1936
Overlay Services Inception:	1992
Ownership:	Will be owned by TA Associates and Reverence Capital Partners
Product Mix:	Cash equitization Exposure management Beta management for portable alpha Liability-driven investing Fund restructuring Tactical asset allocation Currency overlays Liquidity management
Indicative Fee Schedule:	Option 1: Annual \$200,000 base fee plus: - 0.015% to 0.05% of notional value Option 2: Annual \$50,000 base fee plus: - 0.05% to 0.10% of notional value
Fee at notional amounts:	
\$250mm	\$175,000 - \$325,000
\$500mm	\$275,000 - \$550,000
\$1,000mm	\$350,000 - \$1,050,000

Firm Background and History

Founded in 1936, Russell Investments is headquartered in Seattle, WA and has over 350 investment products which focus on 5 capabilities: asset allocation, capital markets insights, factor exposures, manager research, and portfolio implementation. Russell operates from U.S. offices in Seattle, New York, Chicago, San Diego, and Milwaukee.

Russel Investments is currently owned by the London Stock Exchange Group, however in October 2015 it was announced that private equity firms TA Associates and Reverence Capital Partners will be acquiring Russell from the London Stock Exchange Group. It is expected that Russell will retain its operational independence following the close of the transaction in June 2016.

As of December 31, 2015, Russell had approximately 1,800 employees across 21 offices worldwide, and approximately \$241.8bn in assets under management including \$509bn in exposure management strategies. Russell has approximately 76 exposure management clients globally including large public funds, corporate plans, foundations, insurance companies, and other institutions.

Strategy Background

Russell has over 25 years of overlay services experience, known internally at Russell as Dynamic Exposure Management. The objectives of these services are to identify, analyze, and minimize unintended exposures in order to increase return and reduce risk using a variety of synthetic tools.

Key Investment Professionals

Russel's overlay team is comprised of 23 dedicated team members. Portfolio managers have an average of 13 years of experience.

The portfolio management team is responsible for the overall outcome of the client's overlay program, and manage all portfolio and custodial data including margin and collateral. They monitor daily cash balances to ensure there is sufficient liquidity to meet the client's obligations, as well as perform reconciliations with the client's custodian.

Process

Russell's Dynamic Exposure Management services seek to provide plans with increased efficiency as overlays provide more flexibility to enact changes to portfolios in a cheaper and quicker way compared to trading physical assets.

While plans must often hold cash in order to make benefit payments, capital calls and distributions, and purchases and redemptions, Russell's Dynamic Exposure Management services seek to reduce the unintended impact of cash by overlaying with futures in order to capture desired risk premium while retaining immediate liquidity and reducing transaction costs.

Mandates can be designed in various ways based on the client's preference of where they want discretion to reside. On one end of the spectrum, "client-directed" mandates rely on the client to direct Russell to make allocation changes. This option is used by clients who are looking to make periodic updates to tactical asset allocation targets, make tactical market access trades, and use options as tactical hedges. Under "guideline-specified" mandates, Russell uses rules-based overlays, set by the client, in order to manage cash, currency, or asset class exposure, and is often used as part of a liability driven investing program. Finally, clients can grant discretion to Russell to manage their overlay program which often takes the form of enhanced asset allocation overlays, downside protection programs, and derivative-based smart beta.

Risk Management

While the portfolio management team is responsible for the day to day activities and monitoring of the overlay

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program, Russell has dedicated quant, operations, and trading teams to assist in the implementation and risk management of the overlay program. The quant team is responsible for designing custom strategies and providing analytical support, the trading team provides 24-hour trading services, and the compliance team performs daily compliance reviews and periodic internal audits.

Another facet of Russell's risk management program is the broad and diverse list of counterparties used by the Dynamic Exposure Management team. Russell uses a panel of over two dozen global, non-affiliated banks and four trading platforms in order to diversify counterparty risk and manage execution costs.

Russell also provides customized reporting to overlay clients in order to help provide detailed information about portfolio exposures including but not limited to counterparty exposure, total fund risk management, liquidity at risk, and overlay highlight reports.

Performance

Using back-tested market data from December 31, 1987 through December 31, 2014, Russell estimates that overlaying a 2.5% average cash exposure would have resulted in a 12 bps gain per year for the total fund.

In general, Russell expects that managing total fund liquidity utilizing an equitization overlay can add 10-15 bps to total fund returns annually, and reduce tracking error by 75%.

Potential Concerns

Two ownership changes since 2014.

High relative base fee (specifically "option 1").

Overlay exposures gained primarily through the use of broad market futures.

Overlay Services Manager Evaluation

State Street Global Advisors (“SSGA”)

LAST UPDATED: MAY 2016

PROVIDER DETAILS

Headquarters:	Boston, MA
Firm Inception:	1792
Overlay Services Inception:	1995
Ownership:	SSGA is a division of State Street Bank and Trust Company, a wholly-owned subsidiary of State Street Corporation (NYSE: “STT”)
Product Mix:	Beta replication Liquidity management / cash equitization Completion Custom hedging Currency management Tactical overlay Income generation
Indicative Fee Schedule:	.05% on the first \$100 mil .04% on the next \$400 mil .03% thereafter
Fee at notional amounts:	
\$250mm	\$110,000
\$500mm	\$210,000
\$1,000mm	\$360,000

SSGA is the investment management arm of State Street Corporation, and works with corporations, private and public pension plans, endowments and foundations, sovereign wealth funds, and central banks. SSGA is well known as a pioneer in index investing, and has capabilities spanning both active and passive strategies and traditional and alternative asset classes. The firm also provides services to institutional investors including currency, cash, and risk management solutions. As of 12/31/2015, firm AUM was \$2.2 trillion.

Strategy Background

All overlay services, including beta replication, completion strategies, return seeking strategies and various applications of custom hedging, are conducted by SSGA’s Investment Solutions Group (“ISG”) out of their headquarters in Boston, MA.

Overlay management is a core business at SSGA. The firm’s first dedicated cash equitization strategy was created in 1983, and they began managing their first exposure management mandate in 1995. Today, ISG manages 66 exposure management portfolios accounting for approximately \$38.6 billion of ISG’s more than \$167 billion of assets under management (as of December 31, 2015).

There are four key principles underlying State Street’s philosophy for overlay strategies: 1) Exposure management is an investment management function and requires an understanding of how asset classes, currencies, and key portfolio characteristics interact in order to best create the desired exposures; 2) Liabilities matter and therefore portfolio design should reflect a thorough understanding of these liabilities and associated risks; 3) Decisions should be driven by trade-offs between costs and risks as clients have varying tolerances for tracking error, liquidity risk, and counterparty risk; 4) Ongoing management and monitoring is critical.

Firm Background and History

State Street Global Advisors (“SSGA”) is a unit of State Street Bank and Trust Company which is a wholly owned subsidiary of State Street Corporation, a publicly traded bank holding company.

Key Investment Professionals

State Street's ISG is led by CIO Daniel Farley, supported by a team of 16 portfolio management professionals in Boston. SSGA utilizes a team based approach to managing overlays and there are roughly 25 investment professionals globally, including 12 portfolio managers, that work directly on exposure management mandates. All overlay clients are assigned a lead portfolio manager to serve as a primary point of contact as well as multiple backup portfolio managers.

Process

SSGA's exposure management investment process brings together many investment and operational functions within the broader organization in order to effectively manage exposures in line with client objectives. SSGA works with clients to define the mandate in terms of the scope of services to provide, and once the mandate is defined, the team's focus turns to portfolio design. At that point, the team selects the optimal basket of derivatives and physical instruments based upon the client's preferences in terms of cost versus tracking error, liquidity and counterparty risk. The baskets may be as simple as a single future or more complex including futures/swaps, ETFs and funds where appropriate.

The primary portfolio manager builds the client portfolio within State Street's proprietary exposure management system according to client documentation, which includes external manager mapping to asset classes and benchmarks, setting up policy benchmark and ranges, establishing currency benchmarks, and defining the instrument universe. Both portfolio setup and ongoing basket creation require formal approval by a backup portfolio manager.

Once the initial portfolio is constructed, the next step in the process is the monitoring and management stage. At this point, the specific responsibilities are dependent upon the nature of the mandate but typically encompass assessing market data, manager balances, and cash flow information in conjunction with the targeted market

exposures of the overlay and instructing on any required trades.

Risk Management

SSGA's independent Risk Management Group was established in 2008 and is comprised of investment, model, counterparty, liquidity, and operational risk management teams, and as such takes on a variety of roles with regards to monitoring, supporting and managing risks for overlay clients. SSGA uses proprietary and third-party risk models (such as MSCI BarraOne or Barclays POINT) to assess various elements of portfolio risk.

State Street's philosophy on risk management in overlay portfolios is that unlike single strategy active managers, plan level overlays typically cover all or most of a client's portfolio and consequently entail commensurate risks. As a result, it is important to have strong risk controls. SSGA has created a robust platform to manage overlay mandates with a series of overlapping checks and balances across investment, liquidity and operational guidelines.

The daily process of risk monitoring exposures involves multiple teams within State Street and relies heavily on the firm's portfolio management, operations, and trading functions. One of State Street's key risk controls is to require a "four eyes check" on any trade before it can be sent to the trade desk. Therefore it is essential that a number of PMs are keenly aware of the intricacies of each client portfolio.

Performance

State Street believes that each 1% held in cash is projected to cost about 3 bps in return for a portfolio with strategic targets of 60% global equities, 30% fixed income, and 10% private equity.

Potential Concerns

Smaller relative overlay client and asset base compared to other overlay providers.

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Placement Agent Disclosures

CONTRA COSTA COUNTYEMPLOYEES' RETIREMENT ASSOCIATION
DISCLOSURE STATEMENT RE: USE OF PLACEMENT AGENTS

The undersigned is a current or proposed "External Manager" for the Contra Costa County Employees' Retirement Association ("CCCERA"), as defined under CCCERA's Placement Agent Disclosure Policy, adopted on June 9, 2010 ("Policy.") We have received a copy of the Policy from CCCERA. We hereby disclose to CCCERA the following information, which we represent and warrant to be true and correct as of the date hereof:

1. Neither we nor any of our principals, employees, agents or affiliates has compensated or agreed to compensate, directly or indirectly, any person or entity to act as a Placement Agent (as defined in the Policy) in connection with any investment by CCCERA, **except as disclosed on Attachment 1 to this Disclosure Statement.**

[IF THERE IS NOTHING TO DISCLOSE IN ATTACHMENT 1, ITEMS 2-6 ARE INAPPLICABLE.]

2. To the extent of any disclosure set forth on Attachment 1, we attach as Attachment 2 to this Disclosure Statement a resume for each officer, partner or principal of the Placement Agent (and any employee providing similar services) detailing the person's education, professional designations, regulatory licenses and investment and work experience, and whether any such person is a current or former CCCERA Board member, employee or Consultant or a member of the immediate family of any such person.
3. To the extent of any disclosure set forth on Attachment 1, we attach as Attachment 3 to this Disclosure Statement a description of any and all compensation of any kind we have provided or have agreed to provide to a Placement Agent, including the nature, timing and value thereof.
4. To the extent of any disclosure set forth on Attachment 1, we attach as Attachment 4 to this Disclosure Statement a description of the services to be performed by the Placement Agent.
5. To the extent of any disclosure set forth on Attachment 1, we attach as Attachment 5 to this Disclosure Statement a statement whether the Placement Agent or any of its affiliates are registered with the Securities and Exchange Commission or the Financial Industry Regulatory Association or any similar regulatory agent in a country other than the United States and the details of such registration or explanation of why no registration is required.

6. To the extent of any disclosure set forth on Attachment 1, we attached as Attachment 6 to this Disclosure Statement a statement whether the Placement Agent or any of its affiliates are registered as a lobbyist with any state or national government.

We further represent and warrant as follows:

A. We shall provide an update of any changes to any of the information included in this Disclosure Statement within fourteen (14) business days of the occurrence of the change in information.

B. We shall cause our engaged Placement Agent, if any, prior to acting as a Placement Agent with regard to CCCERA, to disclose to CCCERA in writing any campaign contribution, gift (as defined in Government Code section 82028) or other item of value made or given to any member of the CCCERA Board or Staff, or Consultant (as defined in the Policy), during the prior twenty-four month period.

C. We shall cause our engaged Placement Agent, during the time it is receiving compensation in connection with a CCCERA investment, to disclose to CCCERA any campaign contribution, gift or other item of value made or given to any member of the CCCERA Board or Staff, or Consultant, during such period.

Dated: 5/3/16

EXTERNAL MANAGER

Parametric Portfolio Associates LLC

Name of Entity

By: Ronan He

Authorized Signatory

Print Name Randall Hegarty

Its Chief Compliance Officer

**CONTRA COSTA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
DISCLOSURE STATEMENT RE: USE OF PLACEMENT AGENTS**

Attachment 1

Parametric Portfolio Associates LLC ("Parametric") has agreed to compensate its employee Benjamin Lazarus to act as a Placement Agent in connection with an investment by CCCERA.

CONTRA COSTA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

DISCLOSURE STATEMENT RE: USE OF PLACEMENT AGENTS

Attachment 2

Benjamin Spencer Lazarus, CFA

5929 Halifax Avenue South
Edina, Minnesota 55424

(612) 812-7667
bslazarus@gmail.com

PROFILE Extensive institutional investor knowledge with client service and communication expertise leading to a solid history of sales success. Proven ability to generate revenue by explaining complex investment concepts to all decision makers. Strong planning skills combined with internal team development to meet growth goals. Self-starter with efficient work habits and desire to do whatever it takes to meet firm objectives.

- Over 11 years of institutional distribution experience
- Passion for developing personal relationships with clients and consultants
- Consistently exceeded goals for firm AUM and revenue through thoughtful brand management

EMPLOYMENT

2004 – 2015; 2016-present **Senior Director, Institutional Relationships** Parametric

Manage all business development and client service functions for Western North America. Work with public and corporate pension funds, endowments, foundations, and other fund sponsors to recommend various derivative-based and structured portfolio strategies designed to address various investment needs. Provide education and guidance to institutional investors and consultants on the application of derivative instruments within overall portfolios. Work with portfolio managers and analysts to create scenario-based models and case studies related to customized strategies. Directed and managed the Sales & Marketing department for five years. Responsible for all aspects of the sales cycle including: cold calling, relationship cultivation, board presentations, new client set-up, and client service.

Key Achievements

- As head of Sales & Marketing organization added over \$24 billion in AUM from 2004 to 2009
- Directly responsible for adding over 60 new clients relationships (approximately \$20 billion in AUM) in derivative based and traditional equity strategies from 2004 to 2015
- Won large mandates in low volatility equity, covered call selling, and emerging markets from 2012-2015
- Cultivated, hired, and managed individuals in the Sales and Marketing department
- Designed presentation material resulting in better communication of complex concepts to all stakeholders

2015 – 2016 **Senior Vice President, Institutional US Sales** Nuveen Investments

Responsible for initiating, building and maintaining high quality relationships public and corporate pension funds, endowments, foundations, and other fund sponsors in Western US. Represent the entire Nuveen platform including all of its affiliated asset managers.

Key Achievements

- Within the first 30 days, initiated dialogue and was selected as a finalist for custom mandate at a former client
- Several trips within the first 90 days that have resulted in institutional investors understanding the Nuveen brand which has led to a proposal in our Solutions Group and materials being sent on other strategies
- Recognized for superior institutional industry knowledge in being selected for the Strategy Committee with senior leadership to shape the future of Nuveen Investments

1996 – 2004

Director of Sales Strategy and Account Manager

Deluxe Financial Services

Developed relationships within internal departments, provided recommendations to sales leadership, and oversaw implementation in a client acquisition worth approximately \$6 million in revenue per year. Responsible for proactive strategies that led to contract extensions with the firm's largest clients for multiple years.

Key Achievements

- Communicated actionable best practices and tools to multi-functional teams which contributed to \$5 million per year in combined increased revenue and cost savings, exceeding objective by 12%
- Facilitated knowledge transfer in contract language, GAAP policies, and finance principals to sales teams which resulted in executed agreements with mitigated financial risk
- Achieved 105% of quota (\$3.9 million in sales) in 1999 and 111% of quota (\$1.4 million in sales) in 1998
- Received the Credit Union Segment Acquisition Award for gaining the most new accounts in 2000

EDUCATION AND DESIGNATIONS

- Passed all three levels of the Charter Financial Analyst (CFA) exam on the first attempt
- M.B.A., Carlson School of Management, University of Minnesota, 2004
- B.A. (Psychology), University of California, San Diego, 1996
- Series 3, 7, and 63 License

**CONTRA COSTA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
DISCLOSURE STATEMENT RE: USE OF PLACEMENT AGENTS**

Attachment 3

Mr. Lazarus is paid a base salary, a commission, and receives annual incentive compensation. His base salary is paid bi-weekly and his commission is paid quarterly.

**CONTRA COSTA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
DISCLOSURE STATEMENT RE: USE OF PLACEMENT AGENTS**

Attachment 4

As Institutional Sales Associate, Mr. Lazarus finds and solicits prospective clients in the western North America region in connection with offering the investment management services of Parametric and its wholly-owned subsidiary, Parametric Risk Advisors LLC.

**CONTRA COSTA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
DISCLOSURE STATEMENT RE: USE OF PLACEMENT AGENTS**

Attachment 5

Mr. Lazarus is a FINRA-registered representative of Eaton Vance Distributors, Inc. ("EVD"), an affiliate of Parametric, for the purpose of selling EVD-sponsored mutual funds that are subadvised by Parametric.

**CONTRA COSTA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
DISCLOSURE STATEMENT RE: USE OF PLACEMENT AGENTS**

Attachment 6

Mr. Lazarus is registered as a lobbyist with the State of California.

**CONTRA COSTA COUNTYEMPLOYEES' RETIREMENT ASSOCIATION
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1. Neither we nor any of our principals, employees, agents or affiliates has compensated or agreed to compensate, directly or indirectly, any person or entity to act as a Placement Agent (as defined in the Policy) in connection with any investment by CCCERA, **except as disclosed on Attachment 1 to this Disclosure Statement.**

[IF THERE IS NOTHING TO DISCLOSE IN ATTACHMENT 1, ITEMS 2-6 ARE INAPPLICABLE.]

2. To the extent of any disclosure set forth on Attachment 1, we attach as Attachment 2 to this Disclosure Statement a resume for each officer, partner or principal of the Placement Agent (and any employee providing similar services) detailing the person's education, professional designations, regulatory licenses and investment and work experience, and whether any such person is a current or former CCCERA Board member, employee or Consultant or a member of the immediate family of any such person.
3. To the extent of any disclosure set forth on Attachment 1, we attach as Attachment 3 to this Disclosure Statement a description of any and all compensation of any kind we have provided or have agreed to provide to a Placement Agent, including the nature, timing and value thereof.
4. To the extent of any disclosure set forth on Attachment 1, we attach as Attachment 4 to this Disclosure Statement a description of the services to be performed by the Placement Agent.
5. To the extent of any disclosure set forth on Attachment 1, we attach as Attachment 5 to this Disclosure Statement a statement whether the Placement Agent or any of its affiliates are registered with the Securities and Exchange Commission or the Financial Industry Regulatory Association or any similar regulatory agent in a country other than the United States and the details of such registration or explanation of why no registration is required.

6. To the extent of any disclosure set forth on Attachment 1, we attached as Attachment 6 to this Disclosure Statement a statement whether the Placement Agent or any of its affiliates are registered as a lobbyist with any state or national government.

We further represent and warrant as follows:

A. We shall provide an update of any changes to any of the information included in this Disclosure Statement within fourteen (14) business days of the occurrence of the change in information.

B. We shall cause our engaged Placement Agent, if any, prior to acting as a Placement Agent with regard to CCCERA, to disclose to CCCERA in writing any campaign contribution, gift (as defined in Government Code section 82028) or other item of value made or given to any member of the CCCERA Board or Staff, or Consultant (as defined in the Policy), during the prior twenty-four month period.

C. We shall cause our engaged Placement Agent, during the time it is receiving compensation in connection with a CCCERA investment, to disclose to CCCERA any campaign contribution, gift or other item of value made or given to any member of the CCCERA Board or Staff, or Consultant, during such period.

Dated: March 18, 2016

EXTERNAL MANAGER

Russell Implementation Services Inc.
Name of Entity

By: 
Authorized Signatory

Print Name Troy L. Rucker

Its _____

Troy L. Rucker
Managing Director
Russell Implementation Services Inc.

Attachment 1

Steve Cauble, an employee of Russell Investment Group, acts as a Placement Agent (as defined in the Policy) in connection with investments by CCCERA.

Brittany Meisner, an employee of Russell Investment Group, acts as a Placement Agent (as defined in the Policy) in connection with investments by CCCERA through contact with their Consultant.

Attachment 2

Education, professional designations, regulatory licenses and investment and work experience for Steve Cauble and Brittany Meisner are below. Neither Steve nor Brittany is a current or former CCCERA Board member, employee or Consultant or a member of the immediate family of any such person.

Steve Cauble, Regional Director - Americas Institutional
B.A. in Finance from the University of Arizona.
Licensed Registered Representative, FINRA Series 7 and 66.

Steve Cauble is a regional director for Russell Investments' Americas institutional business. He leads Russell's business relationships with major corporate and public pension plan clients and other large pools of capital in the western U.S. Steve is responsible for coordinating Russell's advice, asset management, and implementation resources to create customized investment solutions to improve fund performance and reduce risk for clients.

Steve joined Russell in 2001 with the Analytical Services group. In his previous role, he worked as a strategic partner to plan sponsors, leveraging the Russell Indexes, peer group universe data, and risk and analytics tools to monitor investment managers and overall fund performance.

Prior to joining Russell, Steve spent four years in London with WRQ Incorporated, where he established WRQ UK, Plc, a Regional office providing sales and technical support to clients in the UK, Ireland, and South Africa.

Steve started his career at Rank Xerox New Zealand, Ltd. and Xerox Corporation where was active in sales, management, and product launch specialist roles.

Steve is a registered representative of Russell Institutional Services Inc., an SEC registered investment adviser and FINRA member firm.

Brittany N. Meisner, CFA, CAIA - Regional Director, U.S. Consultant Relations, Americas Institutional
B.S., Business Finance, University of Nevada, Las Vegas
Licensed Registered Representative, FINRA Series 7, 66

Brittany Meisner is a Regional Director for the Consultant Relations group of the Americas Institutional business at Russell Investments. Brittany communicates Russell's value to institutional consultants through Russell's defined contribution services, investment management and implementation management services.

Brittany became a member of Russell's Americas Institutional Group in August 2015. Prior to joining Russell Brittany was a member of the Consultant Relations team at Neuberger Berman where she was responsible for assisting in the development of the firm's institutional consultant relationships. Prior to Neuberger Berman Brittany was a Senior Marketing and Research Associate for the Institutional Consultant Relations team at Nuveen Investments. She began her career as a Senior Performance Analyst at NEPC.

Brittany is a CFA® charterholder and is a member of the CFA Society of Chicago and Seattle. She has earned the Chartered Alternative Investment Analyst designation.

Attachment 3

Russell Investment Group has not previously provided any placement agent compensation of any kind relating to CCCERA. To date we have not done any business with CCCERA.

Were CCCERA to contract with Russell Investment Group compensation would be made to Steve Cauble and Brittany Meisner as per their compensation packages.

Steve Cauble's compensation is based off a percentage of revenue to Russell ranging from 5%-20% and is payable upon receipt for payment of services rendered.

Brittany Meisner's compensation is a discretionary bonus taking into account relationships won and lost as well as other performance based metrics.

Attachment 4

Please refer to Attachment 2 for a description of services performed by each Placement Agent.

Attachment 5

Details of the registrations Russell Institutional Services Inc. are below:

- Registered as a broker-dealer with the U.S. Securities and Exchange Commission (“SEC”) and the States of Washington, Ohio, New York, Rhode Island, Texas and Vermont.
- Registered as an investment advisor with the SEC.
- Member firm of the Financial Industry Regulatory Authority (“FINRA”), with worldwide brokerage correspondent relationships. Exempt from registration as an international dealer with the Ontario Securities Commission.
- Registered as an MSRB and appointed to the Irish Regulatory Authority.
- Subject to examination and reporting requirements of the SEC and FINRA.
- Cleared by Central Bank of Ireland to act as an investment manager of Irish funds (since August 20, 2007).

Steve Cauble is a Licensed Registered Representative, FINRA Series 7 and 66.

Brittany Meisner is a Licensed Registered Representative, FINRA Series 7 and 66.

Attachment 6

Steve Cauble is not registered as a lobbyist with any state or national government.

Brittany Meisner is not registered as a lobbyist with any state or national government.

CONTRA COSTA COUNTYEMPLOYEES' RETIREMENT ASSOCIATION
DISCLOSURE STATEMENT RE: USE OF PLACEMENT AGENTS

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1. Neither we nor any of our principals, employees, agents or affiliates has compensated or agreed to compensate, directly or indirectly, any person or entity to act as a Placement Agent (as defined in the Policy) in connection with any investment by CCCERA, **except as disclosed on Attachment 1 to this Disclosure Statement.**

[IF THERE IS NOTHING TO DISCLOSE IN ATTACHMENT 1, ITEMS 2-6 ARE INAPPLICABLE.]

2. To the extent of any disclosure set forth on Attachment 1, we attach as Attachment 2 to this Disclosure Statement a resume for each officer, partner or principal of the Placement Agent (and any employee providing similar services) detailing the person's education, professional designations, regulatory licenses and investment and work experience, and whether any such person is a current or former CCCERA Board member, employee or Consultant or a member of the immediate family of any such person.
3. To the extent of any disclosure set forth on Attachment 1, we attach as Attachment 3 to this Disclosure Statement a description of any and all compensation of any kind we have provided or have agreed to provide to a Placement Agent, including the nature, timing and value thereof.
4. To the extent of any disclosure set forth on Attachment 1, we attach as Attachment 4 to this Disclosure Statement a description of the services to be performed by the Placement Agent.
5. To the extent of any disclosure set forth on Attachment 1, we attach as Attachment 5 to this Disclosure Statement a statement whether the Placement Agent or any of its affiliates are registered with the Securities and Exchange Commission or the Financial Industry Regulatory Association or any similar regulatory agent in a country other than the United States and the details of such registration or explanation of why no registration is required.

6. To the extent of any disclosure set forth on Attachment 1, we attached as Attachment 6 to this Disclosure Statement a statement whether the Placement Agent or any of its affiliates are registered as a lobbyist with any state or national government.

We further represent and warrant as follows:

A. We shall provide an update of any changes to any of the information included in this Disclosure Statement within fourteen (14) business days of the occurrence of the change in information.

B. We shall cause our engaged Placement Agent, if any, prior to acting as a Placement Agent with regard to CCCERA, to disclose to CCCERA in writing any campaign contribution, gift (as defined in Government Code section 82028) or other item of value made or given to any member of the CCCERA Board or Staff, or Consultant (as defined in the Policy), during the prior twenty-four month period.

C. We shall cause our engaged Placement Agent, during the time it is receiving compensation in connection with a CCCERA investment, to disclose to CCCERA any campaign contribution, gift or other item of value made or given to any member of the CCCERA Board or Staff, or Consultant, during such period.

Dated: 4/27/2016

EXTERNAL MANAGER

State Street Global Advisors
Name of Entity

By: [Signature]
Authorized Signatory

Print Name Barry F.X. Smith

Its Senior Managing Director

Contra Costa County Employees' Retirement Association
Disclosure Statement re: Use of Placement Agents

Attachment 1

Neither we nor any of our principals, employees, agents or affiliates has compensated or agreed to compensate, directly or indirectly, any person or entity to act as a Placement Agent (as defined in the Policy) in connection with any investment by CCCERA, **except as disclosed on Attachment 1 to this Disclosure Statement.**

The following employees of SSGA act as a Placement Agent (as defined in the Contra Costa County Employees' Retirement Association Placement Agent Disclosure Policy):

- Rosalind Jacobsen;
- Andrew Yurkewych; and
- John Farley

Contra Costa County Employees' Retirement Association
Disclosure Statement re: Use of Placement Agents

Attachment 2

To the extent of any disclosure set forth on Attachment 1, we attach as Attachment 2 to this Disclosure Statement a resume for each officer, partner or principal of the Placement Agent (and any employee providing similar services) detailing the person's education, professional designations, regulatory licenses and investment and work experience, and whether any such person is a current or former CCCERA Board member, employee or Consultant or a member of the immediate family of any such person.

Resumes are attached for Rosalind Jacobsen, Andrew Yurkewych, and John Farley.

Rosalind Jacobsen, Andrew Yurkewych, and John Farley are not current or former CCCERA Board members, employees or Consultants, nor are any of their respective immediate family members.

Rosalind Meade Jacobsen

rosalind_jacobsen@ssga.com

State Street Global Advisors | 1998 to present

Managing Director – Institutional Client Group – Western Region

- Manage the team of institutional client facing sales and relationship managers for SSGA's western region

Vice President – Global Defined Contribution Team

- Head of Relationship Management for recordkeeper/advisor relationships for SSGA's global defined contribution team

Vice President – Relationship Management Team

- Managed client relationships for SSGA's western region

Mellon Capital Management | 1995-1997

Associate – Client Service Team

- Supported Mellon Capital Management's US based client service team

Education

Bachelor of Arts in Economics
University of California, Irvine

Licenses

Series 7 - General Securities Representative
Series 63 - Uniform Securities Agent State Law
Series 3 - National Commodities Futures
Series 30 – National Futures Association Branch Manager

John P Farley

104 Second Street, Sausalito, CA 94965 | 617 413 2017 | jpf7m1@gmail.com

State Street Global Advisors | San Francisco, CA USA | 2014 - Present

Senior Consultant Liaison
Vice President

Responsible for establishing and maintaining relationships with investment consultants to support the Company's Institutional Sales effort.

- Managed relationships with more than 20 investment consulting firms located across the US
- Coordinated with Sales and Relationship Management Teams on strategy and positioning of the Company's investment products

F&C Management plc. | Boston, MA USA | 2005 - 2014

Managing Director, US and Canada, 2010 – 2014
Director, US and Canada, 2007-2010
Senior Vice President, 2005 – 2007

Started and grew an innovative and successful institutional investment business in the US and Canada. Built and lead multiple teams comprising investment management, sales, marketing, client service, and product management. Grew assets and revenues while controlling costs to become the Company's most profitable operation. Managed 13 direct reports and more than 40 dotted-line reports.

- Started and grew the Company's investment business in the US and Canada reaching profitability in less than 3 years and ultimately generating more than \$86 million in profits
- Grew assets under management in the US and Canada to more than \$2.5 billion generating more than \$18 million in annual revenue. Assets grew by more than 18% per year and revenues by more than 27% per year on average.
- Became the Company's most profitable business with operating margins averaging 78%

Investment Management, Product Management

- Lead the development of 12 investment strategies and funds to capture market share and grow the Company's business
- Devised consulting and engagement services for investors to address Environmental, Social and Governance concerns and meet United Nations Principles for Responsible Investment obligations resulting in more than \$5 million in annual revenue
- Developed an umbrella fund structure for US and Canadian funds that greatly reduced fund start up and operational costs by as much as 50% from comparable fund structures

Sales, Marketing and Client Services

- Started sales and marketing programs for the US and Canadian markets, racking up 28 new business wins. Grew the Sales, Marketing and Client Service teams in the US from 1 to 10 professionals covering Consultant Relations, Sales, Marketing, Client Service, Databases and RFPs.
- Consultant Relations and Sales
 - Head of Consultant Relations and North American Sales teams consisting of 4 professionals
 - Forged excellent relationships with all investment consulting firms in the US and Canada
 - Sales team covered all institutional client types across the US and Canada earning a win rate of more than 33% for new business finals presentations
 - Set system of goals, quotas and bonus compensation for Sales and Consultant Relations Teams based on Revenue Growth Targets
- Marketing
 - Set marketing priorities for US and Canadian markets

- Managed a team of 4 marketing professionals responsible for design and content of marketing materials, databases and RFPs
- Client Services
 - Built Client Service team of 2 professionals to manage and support relationships with US and Canadian clients
 - "100% retention", the team was responsible for reporting, client queries and requests and client due diligence meetings.

Evergreen Investments | Boston, MA USA | 2004 - 2005
Consultant Relations Analyst

Supported nascent Consultant Relations team at a large investment manager

- Worked with senior management to identify market trends and develop marketing strategy for the Company's investment products
- Oversaw origination and development of the Company's database team

NEPC | Cambridge, MA USA | 2002 - 2004
Senior Analyst

Combined consulting, client service and analytics roles to support the Company's institutional investing consulting business

- Successfully worked with consultants, CEO's, CIO's and other key decision makers to develop investment and risk mitigation strategies for institutional investors
- Responsible for research and manager due diligence with expertise in International Equities and Fixed Income, Emerging Markets, High Yield, Bank Loans, Socially Responsible investments, and various alternative and absolute return strategies

Mobius Group | Durham, NC USA | 1998 - 2002
Senior Analyst 2000-2002
Analyst 1998-2000

Conducted Research and Analysis for an institutional investment consulting firm.

Education

Masters of Business Administrations (MBA)

The Fuqua School of Business at Duke University

Received "The E. Allan Lind Award for Creative Leadership" by faculty and classmates for repeatedly delivering creative, innovative and original solutions to challenges across disciplines and industries

Bachelor of Arts in History

The University of Virginia

Interned for two years with Woodsdale Capital Management, a local VC firm
Supported 100% of college costs by working full time in addition to a full course load

Licenses

Series 7 - General Securities Representative
Series 63 - Uniform Securities Agent State Law
Series 3 - National Commodities Futures

Associations

Union Boat Club
Trustees of Reservations

PROFESSIONAL EXPERIENCE

STATE STREET GLOBAL ADVISORS

2004 to Present

Vice President, Senior Client Service Manager (2012 to Present)

- Led efforts as the senior member of the West Coast client service team
- Contributed to the development of best practices across all aspects of the role
- Coordinated workflow between internal functional groups in order to meet client needs
- Assisted clients with onboarding documentation and facilitated contract negotiations
- Provided the best client experience possible in order to support successful revenue retention

Relationship Manager (2010 to 2012)

- Served as the primary point of contact at SSgA for institutional clients
- Assist clients with the coordination of new business installations and required paperwork
- Conducted portfolio reviews
- Utilize research and resources of the firm to develop strategic partnerships with clients

Junior Relationship Manager (2007 to 2010)

- Supported team of six Senior Relationship Managers
- Assisted clients with the coordination of new business installations and required paperwork
- Facilitated client trade instruction to ensure trade security and timely flow of cash

Corporate Actions Associate (2006 to 2007)

- Key player in the creation of a new voluntary corporate actions processing team, both developing efficient best practices and training new associates
- Developed procedures for implementing complex corporate action terms in accordance with specific investment strategies using various software applications, databases, and accounting systems

Investment Operations Associate (2004 to 2006)

- Assisted portfolio managers as a senior member of an investment operations team responsible for daily portfolio administration of various equity investment teams including Domestic and International Passive, Enhanced, and Tax Efficient Market Capture

STATE STREET CORPORATION – Boston, MA

2003 to 2004

Portfolio Accountant

- Managed daily operations for fixed income, equity, and currency overlay portfolios

EDUCATION AND CREDENTIALS

B.S. in Management Information Systems (2002)

UNIVERSITY OF MASSACHUSETTS BOSTON – Boston, Massachusetts

LICENSES

Series 7 and 63 registrations

Registered Lobbyist in the State of California

Contra Costa County Employees' Retirement Association
Disclosure Statement re: Use of Placement Agents

Attachment 3

To the extent of any disclosure set forth on Attachment 1, we attach as Attachment 3 to this Disclosure Statement a description of any and all compensation of any kind we have provided or have agreed to provide to a Placement Agent, including the nature, timing and value thereof.

- Rosalind Jacobsen: Base salary, plus discretionary bonus
- Andrew Yurkewych: Base salary, plus discretionary bonus
- John Farley: Base salary, plus discretionary bonus

Contra Costa County Employees' Retirement Association
Disclosure Statement re: Use of Placement Agents

Attachment 4

To the extent of any disclosure set forth on Attachment 1, we attach as Attachment 4 to this Disclosure Statement a description of the services to be performed by the Placement Agent.

- Rosalind Jacobsen has sales and client servicing responsibility for SSGA.
- Andrew Yurkewych has client servicing responsibility for SSGA.
- John Farley is a Senior Consultant Liaison for SSGA and is responsible for working with Contra Costa County Employees' Retirement Association's consultant to access and understand SSGA's investment management capabilities.

Contra Costa County Employees' Retirement Association
Disclosure Statement re: Use of Placement Agents

Attachment 5

To the extent of any disclosure set forth on Attachment 1, we attach as Attachment 5 to this Disclosure Statement a statement whether the Placement Agent or any of its affiliates are registered with the Securities and Exchange Commission or the Financial Industry Regulatory Association or any similar regulatory agent in a country other than the United States and the details of such registration or explanation of why no registration is required.

Rosalind Jacobsen, Andrew Yurkewych and John Farley are registered with the Financial Industry Regulatory Association as representatives of State Street Global Markets, a broker-dealer affiliated with State Street. Rosalind Jacobsen and John Farley are registered with the National Futures Association associated persons of SSGA Funds Management, a commodity trading adviser affiliated with State Street. Ms. Jacobsen holds Series 3, 30, 7 and 63 licenses; Mr. Yurkewych holds Series 7 and 63 licenses; Mr. Farley holds Series 3, 7 and 63 licenses.

For point of clarification, as a division of State Street Bank & Trust Company, a bank, SSGA is exempt from having to register as an investment adviser with the Securities and Exchange Commission under Section 202(a)(11)(a) of the Investment Advisers Act of 1940, as Amended. Additionally, while the employees noted hold the licenses described, no FINRA licenses are required to sell bank commingled funds. As employees of SSGA, Ms. Jacobsen, Mr. Yurkewych and Mr. Farley are officers of State Street Bank & Trust Company.

Contra Costa County Employees' Retirement Association
Disclosure Statement re: Use of Placement Agents

Attachment 6

To the extent of any disclosure set forth on Attachment 1, we attached as Attachment 6 to this Disclosure Statement a statement whether the Placement Agent or any of its affiliates are registered as a lobbyist with any state or national government.

- Andrew Yurkewych is registered as lobbyist with the State of California as a consequence of his registration under the California placement agent law. We have no knowledge of Mr. Yurkewych being registered as a lobbyist with any other state or the federal government.
- Rosalind Jacobsen and John Farley are not registered with the State of California as a lobbyist and are not registered as a lobbyist with any other state of the federal government at this time. Ms. Jacobsen is currently applying for lobbyist registration with the State of California. We have no knowledge of Ms. Jacobsen or Mr. Farley being registered with any other state of the federal government.



Meeting Date
05/25/16
Agenda Item
#16

MEMORANDUM

Date: May 25, 2016
To: CCCERA Board of Retirement
From: Christina Dunn, Retirement Admin/HR Manager
Subject: Consider and take possible action to authorize the CEO to execute a lease agreement with Caltronics for copier machines

Background

In 2004, Contra Costa County Employees' Retirement Association (CCCERA) entered into a lease agreement with Rabbit Office Automation to provide copier machines. At that time the three year lease provided for 753,000 black and white copies at a cost of \$2,250.42 per month with an additional cost for any copies over the 753,000. In 2013 CCCERA renewed the lease for an additional three years. In August 2015 CCCERA reached the 753,000 copy limit in the three year lease and began paying overage charges averaging \$500 per month. After receiving quotes from three different copier machine providers, it was determined that it was cost effective for CCCERA to change the copier machine provider from Rabbit Office Automation to Caltronics Business Systems.

Recommendation

Consider and take possible action to authorize the CEO to execute a lease agreement with Caltronics for copier machines for the period of June 1, 2016 to June 1, 2019, in the amount of \$1,299.75 per month.

DLJ Real Estate Capital Partners
2016 Annual Limited Partners Meeting
Wednesday, June 15, 2016

Meeting Date
05/25/16
Agenda Item
#17a.

Location:
Eventi Hotel
New York City

Preliminary Agenda

Registration	9:30am - 10:00am
DLJ RECP PRESENTATION	
Introduction and Portfolio Overview	10:00am - 11:00am
Guest Speaker	11:00am - 12:00pm
Break and Working Lunch	12:00pm - 12:15pm
Review of Key Assets	12:15pm - 1:45pm
Closing Remarks	1:45pm - 2:00pm
Advisory Board Meeting	3:00pm - 4:30pm

To RSVP contact Noelle McHugh at (212) 901-4942 or nmchugh@dljrecp.com

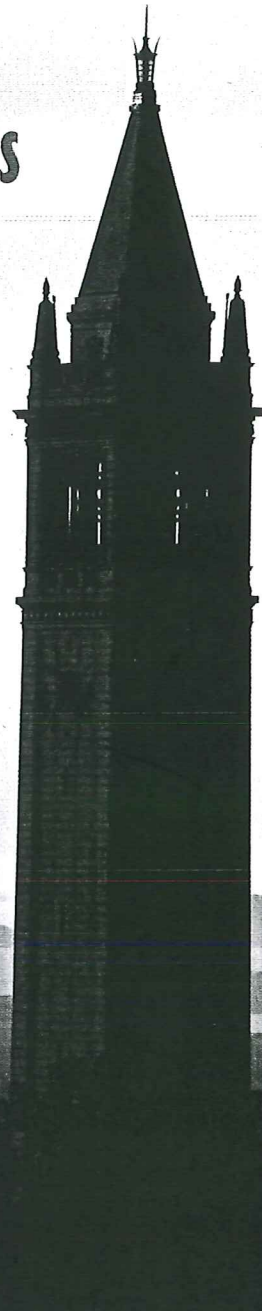


REGISTER TODAY!

Meeting Date
05/25/16
Agenda Item
#17b.

Modern Investment Theory & Practice for Retirement Systems

SACRS PUBLIC PENSION
INVESTMENT MANAGEMENT PROGRAM 2016



July 17-20, 2016

center for
UC Berkeley
executive education



PROGRAM SCHEDULE*

Much has changed in finance in the last 50 years; this four-day program will bring you to the frontier of current investment theory and practice. The program is presented on the beautiful and dynamic campus of UC Berkeley and is taught by the world renowned Finance faculty from UC Berkeley's Haas School of Business.

SUNDAY July 17, 2016 INVESTING FUNDAMENTALS: NEW TRUSTEES	MONDAY July 18, 2016 MATCHING LIABILITIES	TUESDAY July 19, 2016 PORTFOLIO RISK	WEDNESDAY July 20, 2016 PENSION FUND LEADERSHIP
Registration Claremont Hotel 8:00am	7:45am Begin Loading Bus Meet at the front of hotel 8:00am Depart Hotel to UC Berkeley	7:45am Begin Loading Bus Meet at the front of hotel 8:00am Depart Hotel to UC Berkeley	7:45am Begin Loading Bus Meet at the front of hotel 8:00am Depart Hotel to UC Berkeley
Opening Remarks SACRS / John O'Brien 8:30am-9:00am	Overview SACRS / John O'Brien 8:30-8:45am	Overview SACRS / John O'Brien 8:30-8:45am	Risk Management: Illinois Case Discussion Gregory LaBlanc 8:30am-10:00am
Pension Fund and Investment Basics Thomas Gilbert 9:00am-10:30am	Systematic Risk and Luck vs. Skill DFA Case Discussion Thomas Gilbert 8:45am-10:15am	Is Smart Beta Smart? Trends in Dynamic Asset Allocation TBD 8:45am-10:15am	
10:30am Break	Group Photo 10:15am Break	10:15am Break	10:00am Break
Return, Risk and Diversification Thomas Gilbert 11:00am-12:30pm	Forecasting Liabilities: Actuarial Science Thomas Gilbert and Graham Schmidt 10:45am-12:15pm	Real Assets Robert Edelstein 10:45am-12:15pm	Behavioral Finance: Overconfidence and Expertise Gregory LaBlanc 10:30am-12:30pm
12:00-1:00pm Lunch Claremont Hotel	12:15-1:30pm Lunch Women's Faculty Club	12:15pm-1:30pm Lunch Women's Faculty Club	12:30-1:30pm Lunch Stadium Classroom
Practical Mean-Variance Analysis Thomas Gilbert 1:30pm-3:00pm	Pension Math: An Overview Joshua Rauh Stanford University 1:30pm-3:00pm	Alternative Investment Strategies: PE Case Discussion Gregory LaBlanc 1:30pm-3:00pm	Pension Fund Governance Panel Gregory LaBlanc, Jennifer Urdan, Cambridge Associates 1:30pm-3:00pm
3:00pm Break	3:00pm Break	3:00pm Break	3:00pm Break
CAPM and Luck vs. Skill Thomas Gilbert 3:30pm-5:00pm	Health Care Liabilities: How Large are They? Joshua Rauh Stanford University 3:30pm-5:00pm	Alternative Investment Strategies: Hedge Funds Gregory LaBlanc 3:30pm-5:00pm	Leadership and the Role of the Trustee TBD 3:30pm-5:00pm
Adjourn at 5:00pm	Adjourn at 5:00pm	Adjourn at 5:00pm	Final Evaluations & Certificates
Reception Claremont Hotel 5:30pm-6:30pm	Reception Claremont Hotel 5:45pm-6:45pm	Reception Claremont Hotel 5:45pm-6:45pm	Adjourn

* AGENDA SUBJECT TO CHANGE



SACRS Class of 2015

Join Us for SACRS Public Pension Investment Management Program 2016

Public pension trustees and retirement staff won't want to miss the 2016 SACRS Public Pension Investment Management Program, taking place July 17 – 20, 2016. Entitled "Modern Investment Theory and Practice for Retirement Systems," the event is presented in partnership with the UC Berkeley Center for Executive Education, which has developed a four-day program for trustees and staff who are ready to take their education to the next level.

The SACRS Public Pension Investment Management Program blends the expertise of the Berkeley-Haas School of Business's distinguished faculty with a network of industry experts to teach the fundamentals of public pension management. As the spotlight on public pensions grows hotter, trustees and staff are increasingly challenged to grapple with alternative investments, policy and governance changes, cost pressures, and much more. After completing this program, attendees will understand the larger context and history of public pension funds and will have the skills and knowledge to make better decisions.

Day 1, features a public pension primer that provides both a sturdy foundation for new trustees and staff, and a valuable refresher for veteran fiduciaries. The basic language of finance and portfolio management will be introduced, and participants will explore the building blocks of portfolio construction.

Day 2, will build on the fundamentals with an exploration of the tradeoff between risk and return, liability forecasting, and asset-liability matching.

Day 3, attendees will explore more deeply the financial concepts that underlie pension fund management, and see how different choices and assumptions impact portfolio performance. After taking a look at trends in dynamic asset allocation, participants will take a deep dive into real assets and real estate investments and learn how world events might affect risk and return.

Day 4, we put theory into practice: participants will see how different choices, assumptions and modes of leadership impact portfolio performance.

Located in one of the most stimulating business environments in the world, the Berkeley campus is at the intersection of business and academia. Berkeley-Haas is renowned for developing innovative business leaders – individuals who redefine the business landscape by putting new ideas into action in all areas of their organizations. Education is the cornerstone of SACRS' mission. The UC Berkeley Center for Executive Education staff along with the SACRS Affiliate team is committed to the continual development and delivery of content that is current, innovative, results-driven, and responds to the needs of public pension trustees and staff. Participants in this program will not only gain new insight and knowledge, but will add to the core strengths of our organization--the range of expertise and the diversity of perspective found in the public pension community.

Thank you. We look forward to your participation.

Sincerely,

Yves Chery
Yves Chery
SACRS President
Los Angeles County

Sulema H. Peterson
Sulema H. Peterson
SACRS Administrator

WELLINGTON
MANAGEMENT



LORD ABBETT

EatonVance
Investment Managers

AEW

NUVEEN
Investments

Verus⁷⁷

Fidelity

CHEIRON



nikko
Hillio Asset Management

BNY MELLON

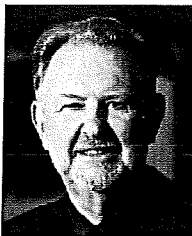
GREGORY LABLANC



Gregory LaBlanc has been a lecturer at UC Berkeley since 2004, teaching courses in Finance, Accounting, Law, and Strategy in the Haas School, the Law School (Boalt Hall) and the department of Economics. Prior to joining the Berkeley faculty, he studied Economics, Business, and Law at the Wharton School of the

University of Pennsylvania, George Mason University Law School, Duke Law School, and Berkeley Law (Boalt Hall). He has previously taught Finance, Management, Law and Economics at the Wharton School, Duke University and the University of Virginia and has been a consultant in the fields of IP litigation and competitive intelligence. His research focuses on the impact of tax policy on organizational design, capital formation, and innovation. He has received several teaching awards and has previously been involved in executive education programs at the Wharton School and Darden School.

JOHN O'BRIEN



John O'Brien is Adjunct Professor and Academic Advisor to the Master's in Financial Engineering (MFE) program at the Haas School of Business. Prior to joining Haas in 2000, Mr. O'Brien was Managing Director at Credit Suisse Asset Management responsible for the performance measurement and risk management functions.

Prior to Credit Suisse, Mr. O'Brien was co-founder, Chairman and CEO of Leland O'Brien Rubinstein (LOR) Associates, and Chairman of the Capital Market Fund, and the S&P 500 SuperTrust – the first exchange traded fund (ETF). Prior to LOR, Mr. O'Brien co-founded Wilshire Associates (originally operated as O'Brien Associates), and co-developed the Wilshire 5000 common stock index (originally named and published as the O'Brien 5000 Index).

Mr. O'Brien has received various awards, including the Financial Analyst's Graham and Dodd Scroll Award, the Matthew R. McArthur Award from the Investment Management Consultants Association for lifetime contributions to investment consulting. Mr. O'Brien was named among Fortune Magazine's ten Businessmen of the Year in 1987. Mr. O'Brien holds a S.B. in economics from MIT, and an M.S. in operations research from UCLA. He served as a Lieutenant in the United States Air Force.

“Yes, I feel that all staff and board members should take advantage of this course. This course has been a refresher and update on many of the concepts used at board meeting level.”

*— Sharon Naramore,
Contra Costa County Employees
Retirement Association*



THOMAS GILBERT



Thomas Gilbert graduated from the Finance Ph.D. Program at the Haas School of Business in May 2008. Thomas is currently an Assistant Professor of Finance and Business Economics at the Michael G. Foster School of Business, University of Washington. His research lies in the area of

information aggregation and the role of macroeconomic announcements on stock prices. Since 2003, he has taught parts of the Certified Investment Management Analyst program (CIMA®) and the Berkeley Finance Series within the Finance Executive Programs at the Haas School of Business. He has also taught in the Undergraduate, Full-Time MBA, and Evening & Weekend MBA programs at Haas, for which he won the Best Graduate Student Instructor Award in 2005, 2006, and 2007. He holds a Masters in Finance from U.C. Berkeley and a Masters in Physics from Imperial College (United Kingdom).

GRAHAM SCHMIDT, CHEIRON



Graham Schmidt (Associate-SOA, Member-AAA, Fellow-CCA) served as the Senior Vice President of EFI Actuaries for ten years before joining Cheiron as a consulting actuary upon the merger of EFI and Cheiron in 2013. Graham is a frequent speaker at public employer conferences, on

topics including actuarial funding policies, asset-liability management and GASB-related issues. In recent years, he has spoken at national meetings sponsored by NCPERS, the Society of Actuaries, the Academy of Actuaries and other regional organizations, such as SACRS and CALAPRS.

Graham is the SACRS-appointed representative to the California Actuarial Advisory Panel (CAAP), and is also a member of the Academy of Actuaries Public Plans Subcommittee and the Conference of Consulting Actuaries Public Plans Committee, the primary actuarial committees dealing with public sector retirement issues in the US.

ARTHUR HIDALGO, CARPENTER COMMUNITY BANCFUND



Arthur Hidalgo is a co-founder and Managing Partner of a private equity-impact investment fund that invests in community banks in California. Arthur has been in the institutional investment management industry for over 15 years. He also served as Trustee and Vice Chair of the Orange

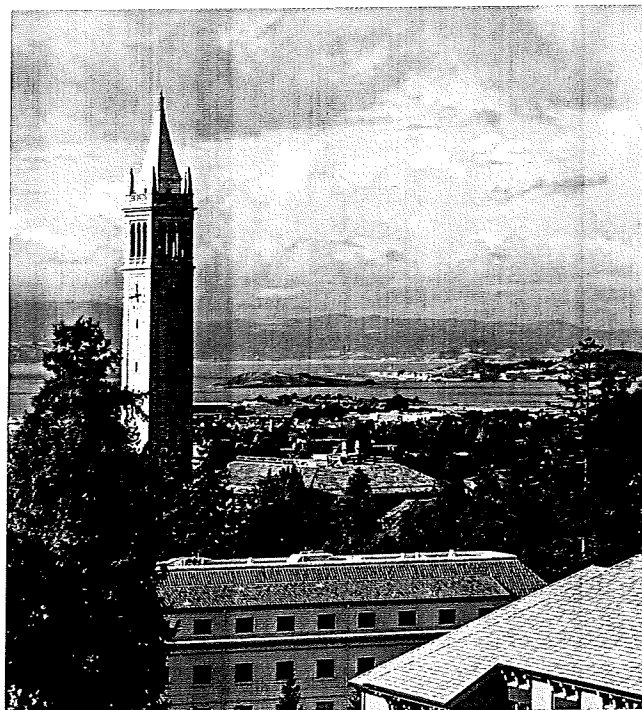
County Employees Retirement System. Arthur is a long time participant and supporter of SACRS.

DAN LASS, DIRECTOR, PUBLIC FUNDS, BNY MELLON



Dan Lass has over 30 years of investment industry experience. Dan was previously a Senior Vice President of Standish, responsible for sales and marketing to U.S. Public Funds. Dan joined Standish in 2009 directing marketing and sales for Coefficient Global Macro

Funds. Prior to joining Standish, Dan was a Partner and Managing Director of Pareto Partners in London and in New York. Previous to Pareto, Dan was Vice President at Bankers Trust Company in Los Angeles and London and began his professional career as Deputy Director and in-house counsel to the Minneapolis Employees' Retirement Fund. Dan earned his J.D. from the University of Notre Dame and his B.S. from the University of Minnesota.



**BENJAMIN LAZARUS,
NUVEEN INVESTMENTS**



Ben Lazarus joined Nuveen Investments in 2015, and is responsible for the firm's institutional sales and client service efforts in the Western Region of the United States. Prior, he spent over 10 years at Parametric Portfolio Associates, LLC (formerly The Clifton Group) and served as

Director of Institutional Relationships for the Western Region of the United States and Canada. Ben has extensive knowledge in developing and executing business development plans and has presented on the use of derivatives at various industry events. Before his time at Parametric, Ben was Director of Sales Strategy at Deluxe Corporation in St. Paul, Minnesota.

Ben holds a B.A. in Psychology from the University of California, San Diego and an M.B.A. in Marketing and Strategic Management from the University of Minnesota. He is a CFA charterholder and a member of the CFA Society of Minnesota.

TERI NOBLE, AMERICAN REALTY ADVISORS



Teri Noble is responsible for marketing American Realty Advisors' full line of real estate investment management services, including commingled fund and separate account investment programs to institutional clients in the Western United States.

Most recently, Ms. Noble served as the Senior Vice President of Relationship Management at Convergenx where she was responsible for relationship management with plan sponsors and consultants and developing new business opportunities throughout the institutional investor and investment consultant community. Ms. Noble is the Vice President of the National Association of Securities Professionals - San Francisco Chapter and recently served as Board Director for the Financial Women's Association of San Francisco and as Vice President for the NASP (San Francisco Chapter).

DELIA M. ROGES, INVESCO

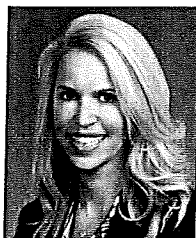


Delia M. Roges, Invesco is a member of the Invesco US Institutional Sales and Service Team. As managing director, she is responsible for relationship management and new business generation for institutional investors in public funds in the western United States. Ms. Roges

has been in the institutional investment management business since 1991.

Prior to joining Invesco in 2011, she was a senior member of a boutique investment banking and private placement firm focused on securing capital for private equity and real estate general partnerships. She served previously as a Senior Vice President at Trust Company of the West where she was responsible for advising institutional clients and developing product solutions for new business development. Ms. Roges serves on the Board of Regents to Loyola Marymount University and on the Board of Visitors at the School of Education at LMU. She earned an MBA at the University of Southern California and a Bachelors in Business Administration from Loyola Marymount University.

**KRISTIN V. SHOFNER, FIDELITY
INSTITUTIONAL ASSET MGMT.**



Kristin Shofner is Senior Vice President, Business Development at Fidelity Institutional Asset Mgmt. In this role, she leads the development of relationships with public pension plans.

Prior to joining Fidelity in 2013, Kristin was a Director of Institutional Sales and Marketing at Lord Abbett & Co, Inc since June 2003. Her previous positions include serving as a manager of Institutional Sales and Client Services from 2000 to 2003 and as a manager research associate from 1998 to 2000 at Asset Strategy Consulting/InvestorForce, Inc. She has been in the industry since 1998. Kristin earned her bachelor of arts degree in history and sociology from the University of California at Santa Barbara.



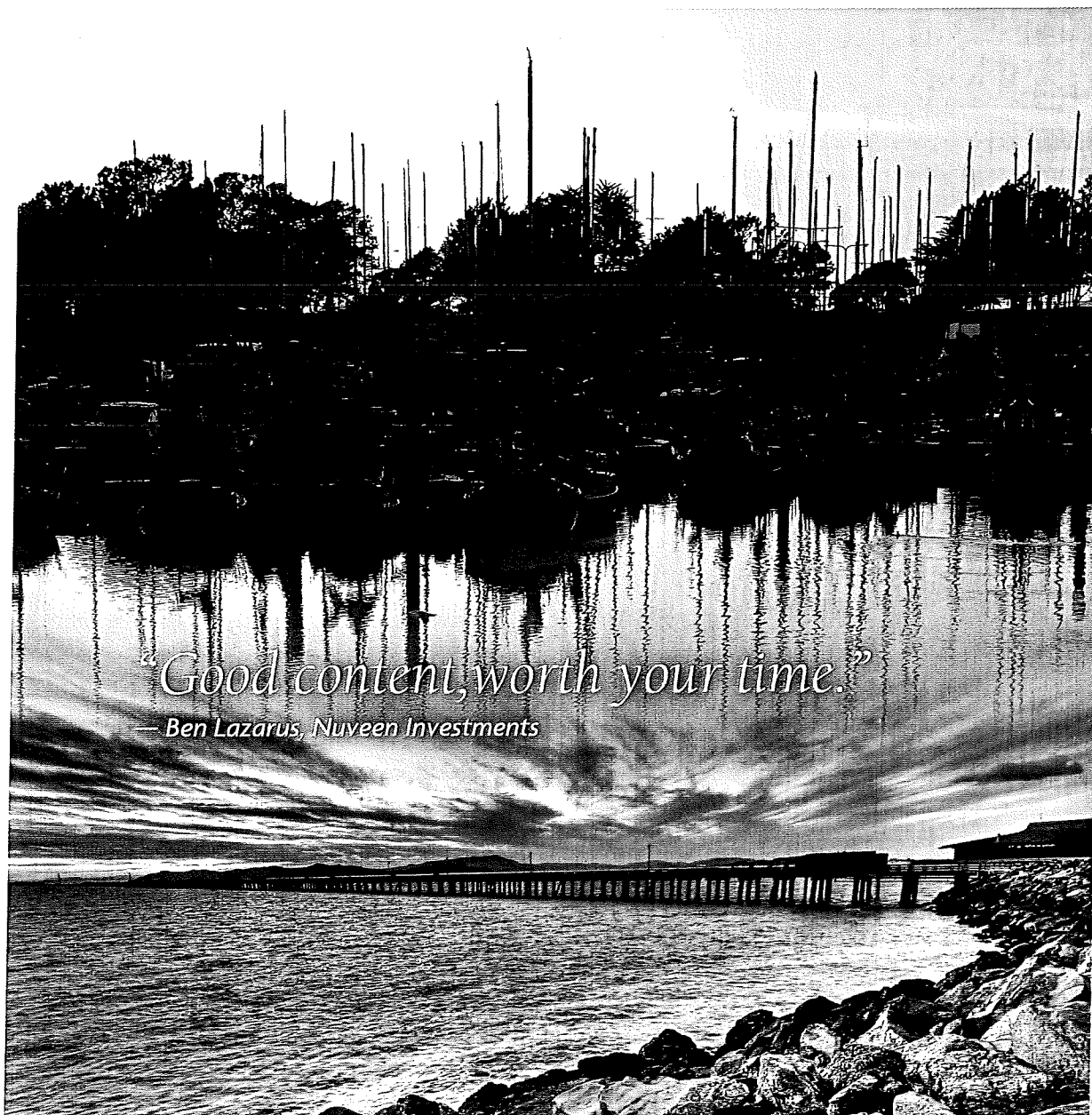
SCOTT WHALEN, VERUS



Scott J. Whalen, Executive Vice President and Senior Consultant, joined Verus in 2002. Mr. Whalen serves primarily to provide high quality strategic investment advice and ensure his clients meet their long-term investment objectives. Mr. Whalen is a Verus shareholder and a key member of the Verus leadership team; he sits on the Management Committee and oversees the Los Angeles consulting staff. Prior to joining Verus, Mr. Whalen built a distinguished career in management consulting with McKinsey & Company and

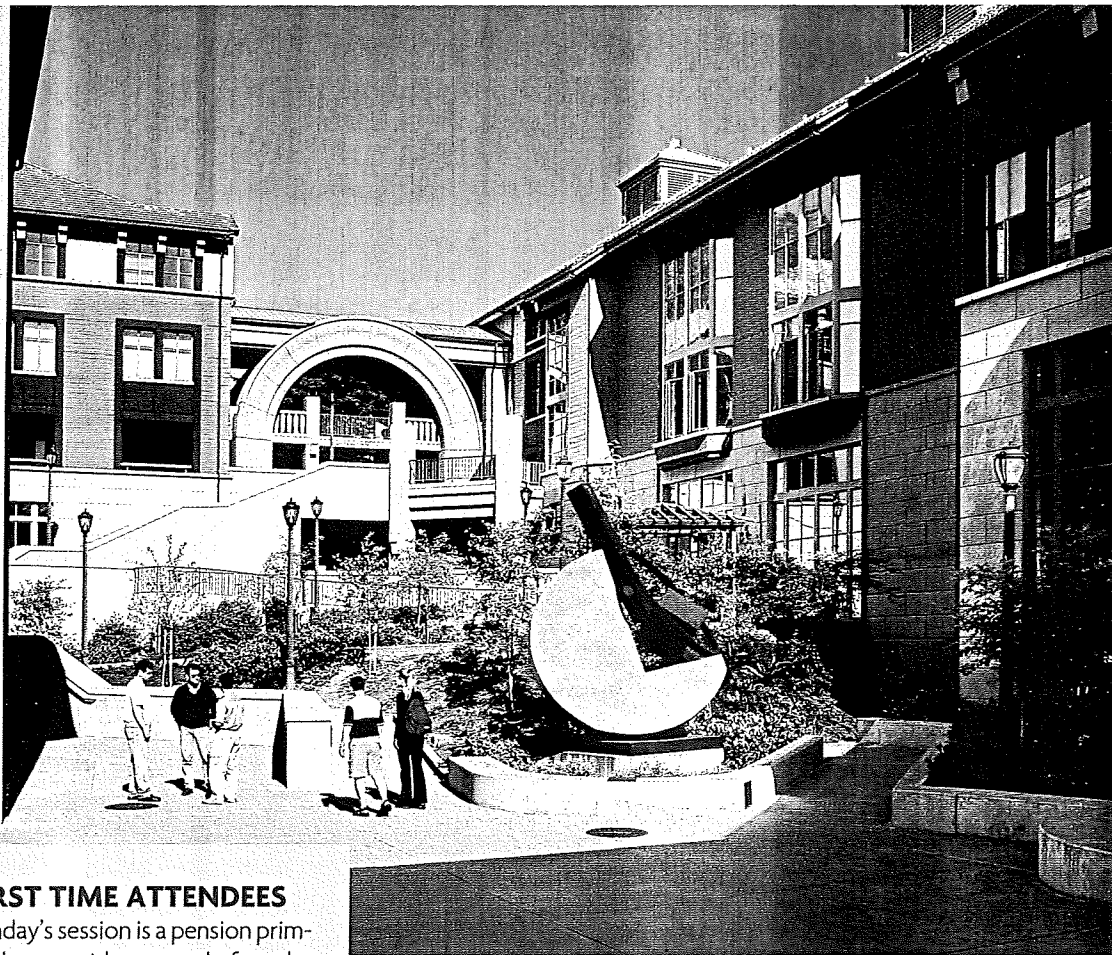
Ernst & Young, where he led corporate and public sector institutions to increase efficiency and improve operational performance. Through his vast experience working with multiple stakeholders across industries, Mr. Whalen has honed his ability to drive effective decision-making, often in challenging environments.

Mr. Whalen received a Bachelor of Arts degree in Economics from Wake Forest University and a Masters in Business Administration (MBA) from the University of Southern California. He is a recipient of the Chartered Financial Analyst (CFA) designation and a member of the CFA Institute and the CFA Society of Los Angeles.



“Good content, worth your time.”

— Ben Lazarus, Nuveen Investments



FIRST TIME ATTENDEES

Sunday's session is a pension primer that provides a sturdy foundation for new trustees and staff. The basic language of finance and portfolio management will be introduced, and participants will explore the building blocks of portfolio construction, time value of money, the tradeoff between risk and return, liability forecasting, and asset-liability matching.

RETURNING ATTENDEES

We encourage returning attendees, trustees and staff, to participate during Sunday's session to give you both a valuable refresher on the basics and an opportunity to share your experiences as veteran fiduciaries with your fellow classmates.



The strength of the Berkeley-Haas School of Business is expressed in its motto, "Leading through Innovation." Successful Retirement Plan Managers recognize innovation as an opportunity to maximize the creation of value. This program focuses on individual, team, and organizational levels of innovative potential.

The Public Pension Investment Management Program is carefully designed to give participants the tools, knowledge and networks they need to master their particular challenges. Bringing perspective from their own Retirement Plans to the program, and exposed to that of their peers, participants have the opportunity to further define and develop their knowledge and objectives under the guidance of the same faculty who teach in Berkeley-Haas's renowned Masters of Financial Engineering program, including top finance experts John O'Brien and Thomas Gilbert.

The programs are on the absolute cutting edge of today's research. The programs are taught by the very same top faculty who teach in the UC Berkeley's Business Program—ranked Number 1 in the world. Outstanding faculty includes the top names of classical finance, Thomas Gilbert, and of behavioral finance, Greg LeBlanc.



ATTENDEE INFORMATION

PLEASE COMPLETE ONE REGISTRATION PER ATTENDEE AND RETURN TO SACRS.

Name: _____

(Print exactly for name badge)

Company: _____ Position Title: _____

Address (No P.O. Boxes Please): _____

City/State/Zip: _____

Business Telephone: _____ Fax: _____

Home Telephone: _____ E-mail address: _____

List any special needs you may require during your stay:

(Dietary, Handicap Accessible, etc.) _____

Emergency Contact Name: _____ Emergency Phone: _____

HOTEL ACCOMMODATIONS

Arrival Date: _____ Departure Date: _____

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BILLING INFORMATION

CREDIT CARD BILL ME SEND INVOICE TO THE FOLLOWING INDIVIDUAL

Name: _____

Address (No P.O. Boxes Please): _____

City/State/Zip: _____

Telephone: _____ Fax: _____

MEMBERSHIP INFORMATION

Type of Member: _____ Name of County or Firm: _____

Principal Activity of the Firm (e.g. Retirement, Marketing, Consulting, Non-Profit): _____

Organization Type: Other Government Non-Profit Public Private



CONFERENCE REGISTRATION

Registration online at sacrs.org
JULY 17–20, 2016

All conference activities will take place on the campus of **UC Berkeley Center for Executive Education**. The host hotel is the **Claremont Club & Spa, a Fairmont Hotel**. Both locations are tucked away in the beautiful Berkeley hillside. Price for the session is \$2500 per person. (Price includes registration, training materials, food and beverage and daily transportation to and from the Claremont Club & Spa/UC Berkeley.)

PROGRAM LOCATION

UC Berkeley Center for Executive Education
2220 Piedmont Ave., Berkeley, CA 94720-1900

In order to receive a refund, you must cancel your registration by June 27, 2016. After June 27, 2016 no refunds will be permitted.

PARTICIPATION IS LIMITED.

Register early by visiting www.sacrs.org. To submit your registration, complete the enclosed form and:

MAIL TO:

SACRS

C/O Sulema Peterson
1415 L Street, Suite 1000
Sacramento, CA 95814

OR E-MAIL TO: Sulema@sacrs.org

OR VISIT: sacrs.org and submit online



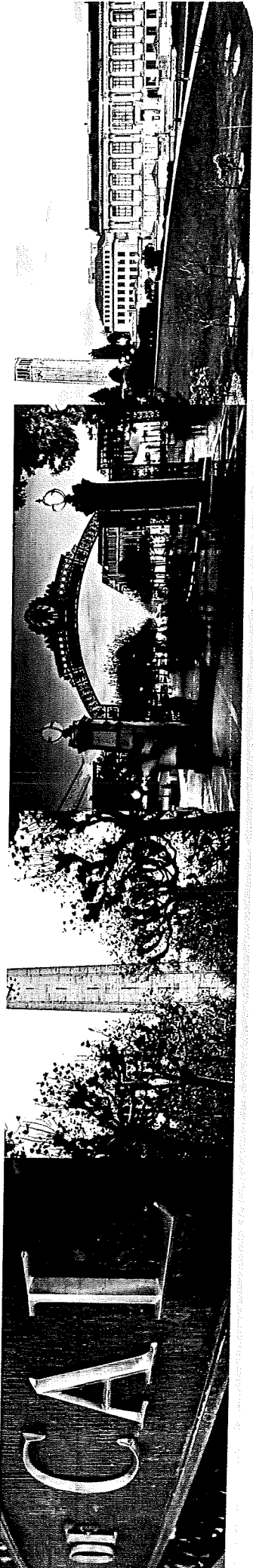
HOTEL RESERVATIONS

Claremont Club & Spa, a Fairmont Hotel
 41 Tunnel Road, Berkeley, CA 94705
 Tel: (510) 843-3000

Accommodations will be made for confirmed attendees at the **Claremont Club & Spa, a Fairmont Hotel** located just minutes away from UC Berkeley in the beautiful Berkeley Hills. Shuttle service between the hotel and UC Berkeley will be provided. **SACRS room rate is \$239 per room (not including tax).** Overnight parking is available at \$20.00 per day per vehicle. Additionally, the hotel charges guests a \$15.00 (plus tax) resort fee per room/per day. This fee is to cover use of the computers and internet in the business center, high speed internet access in guest room, access to the private club & fitness center and all fitness classes, local calls, newspaper delivery and in-room coffee.

Cancellation with no penalties is 72 hours prior to arrival. **All hotel reservations will be made through SACRS. Please do not call the hotel directly to make reservations!** To reserve your hotel accommodations, contact Sulema H. Peterson, SACRS Administrator at the following: Sulema@sacrs.org or (916) 441-1850.

An informal and collegial atmosphere develops at the SACRS UC Berkeley Program. Program faculty and participants enjoy lunchtime meals together, when topics from daily discussions are often reinforced, vetted and simplified. During the evening, participants enjoy dinner together as a group, taking in Berkeley's local restaurants within walking distance from the hotel.



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