

**TUCSON SUPPLEMENTAL RETIREMENT SYSTEM  
BOARD OF TRUSTEES  
Notice of Regular Meeting / Agenda**

**DATE:** Thursday, May 26, 2016  
**TIME:** 8:30 a.m.  
**PLACE:** Finance Department Conference Room, 5<sup>th</sup> floor  
City Hall, 255 West Alameda  
Tucson, Arizona 85701

**A. Consent Agenda**

1. Approval of April 28<sup>th</sup>, 2016 TSRS Board Meeting Minutes
2. Retirement ratifications for May 2016
3. April 2016 TSRS Budget Vs Actual Expenses

**B. Investment Activity Report**

1. Annual Investment Manager Review – Aberdeen Asset Management – Teri Smith, Sr. R.M. and Maree Mitchell, Sr. Equity Specialist
2. March 31, 2016 TSRS Quarterly Review of Investment Performance – Callan Associates, Inc.
3. Portfolio Transition Update – Callan Associates, Inc.
4. TSRS Portfolio Composition, Transactions and Performance Review for 04/30/2016
5. Approval of New Portfolio Composition, Transaction, and Performance Monthly Reports

**C. Administrative Discussions**

1. Priority of Future Agenda Items
2. IAPC Pension Sub-committee Formation

**D. Articles for Board Member Education / Discussion**

1. Callan Paper – Review of Past Capital Market Projections

**E. Call to Audience**

**F. Future Agenda Items**

1. Disability Audit Results
2. Education Plan for New Staff and Trustees
3. Duties and Selection of Advisory Board
4. Hiring an Intern to Free Staff for Education
5. TSRS Board Annual Evaluation of Staff and Consultants
6. Formal Evaluation of Active Managers – 1.5% over benchmark over a given period
7. RFQ for Actuarial Services
8. Action Plan for Black Swan Events
9. Would It Be Better to Index the Whole Fund

**G. Adjournment**

**Please Note: Legal Action may be taken on any agenda item**

\*Pursuant to ARS 38-431.03(A)(3) and (4): the board may hold an executive session for the purposes of obtaining legal advice from an attorney or attorneys for the Board or to consider its position and instruct its attorney(s) in pending or contemplated litigation. The board may also hold an executive session pursuant to A.R.S. 38-431.03(A)(2) for purposes of discussion or consideration of records, information or testimony exempt by law from public inspection.

**TUCSON SUPPLEMENTAL RETIREMENT SYSTEM  
BOARD OF TRUSTEES  
MEETING MINUTES**

**DATE:** Thursday, April 28, 2016  
**TIME:** 8:30 a.m.  
**PLACE:** Finance Department Conference Room, 5<sup>th</sup> floor  
City Hall, 255 West Alameda  
Tucson, Arizona 85701

Members Present: Robert Fleming, Chairman  
Kevin Larson, City Manager Appointee  
Rebecca Hill, HR Director  
Silvia Amparano, Director of Finance (arrived 8:35 AM)  
Michael Coffey, Elected Representative  
Jorge Hernández, Elected Representative  
John O'Hare, Elected Retiree Representative

Staff Present: Dave Deibel, Deputy City Attorney  
Neil Galassi, Pension Administrator  
Silvia Navarro, Treasury Administrator  
Art Cuaron, Treasury Finance Manager  
Bob Szelewski, Lead Pension Analyst  
Dmitriy Adamia, Administrative Assistant

Guests Present: Robyn A. Scott, City of Tucson Employee  
Frank Yslas, City of Tucson Employee  
Stephen J. Arnoldi, City of Tucson Employee  
Gilberto Robles, City of Tucson Employee

Absent/Excused: None

Chairman Fleming called the meeting to order at 8:31 AM.

**A. Consent Agenda**

1. Approval of March 31st, 2016 TSRS Board Meeting Minutes
2. Retirement ratifications for April 2016
3. March 2016 TSRS Budget Vs Actual Expenses

**Chairman Fleming asked for a vote on the approval of the Consent Agenda. The Consent Agenda was approved by a vote of 5-0 (Chairman Fleming did not vote, Silvia Amparano absent/excused).**

**B. Disability Retirement Application**

1. Robyn A. Scott
2. Frank Yslas
3. Stephen J. Arnoldi
4. Gilberto Robles

**A motion to enter Executive Session was made by Michael Coffey, 2<sup>nd</sup> by Rebecca Hill, and passed by a vote of 7-0.**

**A motion to return to Regular Session was made by Kevin Larson, 2<sup>nd</sup> by Silvia Amparano, and passed by a vote of 7-0.**

**A motion to approve the disability retirement application of Gilberto Robles was made by Michael Coffey, 2<sup>nd</sup> by Rebecca Hill.**

John O'Hare confirmed TSRS staff audits disability retirees with permanent disabilities.

Neil Galassi stated TSRS staff audits disability retirees on a yearly basis.

**A motion to approve the disability retirement application of Gilberto Robles passed by a vote of 7-0.**

**A motion to reconsider the disability retirement of Robyn A. Scott in 6 months after medical re-evaluation was made by Michael Coffey, 2<sup>nd</sup> by Silvia Amparano.**

Chairman Fleming asked what effect the 6 month delay will have on the disability application.

Rebecca Hill stated the 6 month delay should not have an effect on the disability application.

Dave Deibel stated Ms. Scott had FML and ADA issues which may be affected by the 6 month delay.

Ms. Hill stated Ms. Scott would be on unpaid medical leave, because she exhausted her FML. The City permits individuals to continue on medical leave, pending further review and additional medical information from Dr. Krasner and the City would take action from that point in time.

Mr. O'Hare asked for clarification as to whether Ms. Scott is not receiving income from the City.

Ms. Hill confirmed that Ms. Scott is not receiving income from the City.

**John O'Hare amended the motion to reconsider at the meeting scheduled on May 26, 2016, 2<sup>nd</sup> by Kevin Larson.**

Silvia Amparano questioned the purpose of reconsidering the application on the meeting scheduled on May 26, 2016 because the medical re-evaluation would not have been conducted by that time.

Michael Coffey asked if the re-evaluation of Ms. Scott could be done in time for the meeting scheduled on May 26, 2016.

Bob Szelewski stated the TSRS physician, Dr. Krasner, recommended Ms. Scott's re-evaluation be conducted in 6 months because of the recovery time needed for proper medical re-evaluation. Within the 6 month period Ms. Scott will have an opportunity to provide Dr. Krasner additional medical information.

Mr. O'Hare clarified the medical information should also be provided to Mr. Szelewski to be presented to the Board.

Mr. Szelewski answered in the affirmative.

**The motion to reconsider at the meeting scheduled on May 26, 2016, failed by a vote of 2-5 (Chairman Fleming, Rebecca Hill, Silvia Amparano, Michael Coffey, and Jorge Hernández dissenting).**

**The motion to reconsider the disability retirement of Robyn A. Scott in 6 months after medical re-evaluation passed by a vote of 5-2 (John O'Hare, and Kevin Larson dissenting).**

**A motion to approve the disability retirement application of Frank Yslas was made by Silvia Amparano, 2<sup>nd</sup> by Rebecca Hill and passed by a vote of 5-2 (Chairman Fleming, and Kevin Larson dissenting).**

**A motion to approve the disability retirement application of Stephen J. Arnoldi was made by Rebecca Hill, 2<sup>nd</sup> by Michael Coffey, and failed by a vote of 2-5 (Robert Fleming, John O'Hare, Silvia Amparano, Kevin Larson, and Jorge Hernández dissenting).**

**A motion to reconsider the disability retirement application of Stephen J. Arnoldi pending results from the Social Security Administration in 3 months was made by Kevin Larson, 2<sup>nd</sup> by Jorge Hernández, and passed by a vote of 6-1 (Chairman Fleming dissenting).**

**C. Investment Activity Report**

1. TSRS Portfolio Composition, Transactions and Performance Review for 03/31/2016
2. Review and Approval of New Portfolio Composition, Transaction, and Performance Report

Neil Galassi stated the Board had been provided with both the Traditional Investment Report and Executive Summary provided by staff, and New Portfolio Composition, Transaction, and Performance Report provided by Callan.

Chairman Fleming asked the Board for their evaluation of the reports presented.

Michael Coffey stated that more time is needed for an in-depth understanding and evaluation of the reports.

John O'Hare asked if the Board was discussing the report from Callan.

Chairman Fleming answered the Board is discussing the substance of both reports.

Mr. Galassi clarified staff would provide any reports requested by the Board.

Mr. Coffey suggested providing both reports until the Board had more time to evaluate the merits of each report.

Silvia Amparano stated the point of the executive summary and the Callan report was to find some efficiencies for staff since the reports are providing the same information in two different formats. Staff was just reading directly from the report during the meetings. Perhaps a combination of the executive summary and the Callan report could be provided and the Executive Summary could be read for the record.

**Chairman Fleming requested that both the Traditional Investment Report, and executive summary provided by staff and New Portfolio Composition, Transaction, and Performance Report provided by Callan be presented at the meeting scheduled on May 26, 2016.**

Mr. Galassi clarified once the Board made a decision on their preferred report format, the item would be moved to the Consent Agenda.

Chairman Fleming agreed with that statement.

Mr. O'Hare asked if the reports were providing net return rates.

Mr. Galassi answered they are net return rates. The Board has expressed interest in posting investment reports to the City webpage.

Chairman Fleming believed that is a great idea and staff should post the investment the reports on the City webpage.

Mr. Galassi stated he will prepare both the Traditional Investment Report, and executive summary provided by staff and New Portfolio Composition, Transaction, and Performance Report provided by Callan with an agenda item for discussion and approval at the next scheduled meeting on May 26, 2016.

## D. Administrative Discussions

### 1. Report from Board Member on 2015 Fall Public Funds Forum

John O'Hare attended the 2015 Fall Public Funds Forum, one speaker was Barnett Frank co-author of the Dodd-Frank Wall Street Reform and Consumer Protection Act, Mr. Frank said it was a good Act but adequate funds were not provided for the enforcement of it in the Act. Another speaker hypothesized the economy is currently in a bimobile environment instead of an environment bell shaped statistical curve.

Michael Coffey asked bimobile distribution of what.

Mr. O'Hare answered as it relates to economies of growth, most people believe that 2% will be at the top of the bell shaped curve while the speaker thought it would be a lot higher than that or the economy will be in a recession. The Federal Reserve has gone as far as they could using the monetary policy and congress is going to have to use fiscal policy which would mean changing the tax code or spending money on infrastructure. The Board should have a plan ready for implementation if necessary, for example if the trust does not meet the assumed rate of return of 7.25% for the next 5, 10, or 15 years.

### 2. 50/50 Split Employee/Employer Contributions for New Hires

Chairman Fleming asked if the Board wanted to discuss a 50/50 split employee/employer contribution rate in detail.

John O'Hare stated a 50/50 split employee/employer contribution rate could be implemented for new employees split with an 11.5% cap on the employee contributions. At this point in time the TSRS trust is the only non-public safety plan in the state without a 50/50 split employee/employer contribution rate or close to it. In his opinion Proposition 124 will pass and it will extend to all public safety pensions within the state. The City will be the only public entity in the state that does not have a 50/50 split employee/employer contribution rate, costing the City around \$3M per year.

Chairman Fleming stated the question today is not whether the 50/50 split employee/employer contribution rate is a good idea, but whether the Board should have an in-depth retreat discussion.

Mr. O'Hare asked Ms. Amparano for her opinion on the subject as the Finance Director.

Silvia Amparano stated she would answer as a fiduciary first, the current pension contribution strategy was in place to recruit qualified employees and remain competitive with local jurisdictions pay. Implementing a 50/50 split employee/employer contribution rate would make it harder to recruit and would not benefit the pension plan because under the current contribution strategy the pension plan has the necessary contributions. Council Member Steve Kozachik requested information about a 50/50 split employee/employer contribution rate and staff provided him with information. Council Member Kozachik understood the rate change would not save the general fund money and decided against pursuing the idea. A lot of the TSRS members are in enterprise funds, with only \$1M related to General Fund. She asked why should the Board consider adopting a 50/50 split employee/employer contribution rate if it does not benefit the trust in the long term.

Mr. O'Hare stated a 50/50 split employee/employer contribution rate would result in an increase of \$3M in contributions per year. Additionally a 50/50 split employee/employer contribution rate would not make it difficult to recruit employees because it will be competitive once Proposition 124 passes.

Chairman Fleming stated if the 50/50 split employee/employer contribution rate would move \$3M from the city contributions to the employee contributions, total contributions will stay the same; and asked how would the 50/50 split employee/employer contribution rate increase total contributions.

Mr. O'Hare stated the 50/50 split employee/employer contribution rate would make the fund stronger because there would be more money available in the future.

Chairman Fleming clarified Mr. O'Hare was stating if the Board saves the City \$3M in TSRS contributions, the City would invest that \$3M in the trust at a later date.

Ms. Amparano clarified if Mr. O'Hare thought because the City would save \$3M they would to put that \$3M in the trust or would the \$3M go to general fund operations.

Mr. O'Hare believed the City would invest the savings back in to the trust.

Ms. Amparano stated her understanding is the City Council is trying to hold employees harmless, because they have not received merit raises in 7 years.

Chairman Fleming stated the 50/50 split employee/employer contribution rate could possibly increase the total contributions if the City can save \$3M and use the savings for employee raises than more money would flow into the trust because of increased employee wages but, liability would increase because higher wages mean increased pension payments.

Neil Galassi agreed with Chairman Fleming.

Mr. O'Hare stated if Proposition 124 passes new PSPRS members contribution rate could be up to 25%.

Ms. Amparano stated PSPRS is a separate fund with richer benefits than TSRS, and it is a state run program. She did not see the benefit of comparing the two trusts.

Chairman Fleming asked if the Board wanted actuarial calculations for the 50/50 split employee/employer contribution rate for new hires.

Michael Coffey stated he would like more information on the subject.

Kevin Larson expressed concern about the 50/50 split employee/employer contribution rate because it was extensively covered a few years ago. Essentially the Board is hoping by increasing the individual employee contribution rate the City will have a cost reduction of \$3M. Whether or not the City chooses to fund additional assets in the plan is definitely less than 100%.

Chairman Fleming stated the Board had to recognize that they talk about a \$3M savings but that would only be applied retroactively. In 20 years when there are no other people in this pension plan than the 50/50 split employee/employer contribution rate could save \$3M, but next year it would save next to nothing because the City is not hiring new employees.

Mr. O'Hare stated the Board can scale that up. The 50/50 split employee/employer contribution rate is a 20 to 30 year proposition. The City is not in a good financial situation, and any savings could not be ignored.

Ms. Amparano stated as the Finance Director she would recommend if the City was saving \$3M, the savings should go into the general fund reserves, not the trust.

Mr. Larson stated part of the decision in 2013 was that new employees were subsidizing the retirement of employees who contributed only 5% because the contribution rate of those employees cannot be raised. If it does not change the Annual Required Contribution the City, as an organization, should be responsible for subsidizing the those retirements, not new employees.

Mr. O'Hare stated in 2006 the Board recognized the trust was not sustainable with an employee contribution rate of 5%. A 50/50 split employee/employer contribution rate was adopted and the situation improved. Once the employee contribution rate increased to over 13% the actuary provided the Board with information on contributions related to normal cost, but no one understands what that is. Mr. O'Hare believed with a contribution ceiling, the 50/50 split employee/employer contribution rate would contribute to fund sustainability and employee retention.

Mr. Larson stated in 2006 the trust was fully funded and the Board did not foresee employee contributions increasing over 13%. It would have been a good idea to cap employee contributions and for the City to contribute the difference. After the market collapse of 2008 the Board was able to convince the City to lower employee contributions and make up the difference.

Mr. O'Hare stated the Board is talking about not burdening new employees but if the trust had a 15% return over a 10 year period new employees would not have to contribute 15%.

Chairman Fleming asked if the Board wanted to continue this conversation.

Rebecca Hill stated not at this time.

Jorge Hernández agreed with Ms. Hill.

Ms. Amparano stated the 50/50 split employee/employer contribution rate for new hires discussion could be a retreat topic for educational purposes, staff could provide the Board with estimates and calculations for fiscal year 2017.

Mr. Hernández agreed with Ms. Amparano about making this a retreat topic and is interested in seeing what effect the hiring freeze will have on the actuarial calculations.

Chairman Fleming asked when the next actuarial study would be performed.

Ms. Amparano stated an actuarial study is done every year after fiscal year end to get new numbers.

Chairman Fleming asked if the actuary could provide the Board with estimates for a 50/50 split employee/employer contribution rate for new hires.

Mr. Galassi stated he had notified outside legal counsel and the actuary the Board is discussing this item. He also discussed Proposition 124 with the actuary.

Mr. O'Hare believes the Chamber of Commerce is leaning toward making a recommendation that the City adopt a 50/50 split employee/employer contribution rate for new hires, and increase tier II member contribution rates.

Ms. Amparano asked if Mr. O'Hare was on the Chamber of Commerce.

Mr. O'Hare stated no but he had the opportunity to observe a few of the Chamber of Commerce meetings.

Ms. Amparano asked where the Chamber of Commerce is getting its information on the pension plan.

Mr. O'Hare stated a presentation was made to a Chamber of Commerce subcommittee on the City Budget by Joyce Garland.

Mr. Galassi asked if the 50/50 split employee/employer contribution rate for new hires discussion will be a retreat item.

Chairman Fleming confirmed the 50/50 split employee/employer contribution rate discussion will be a retreat item.

### 3. Volkswagen Securities Litigation Update

Neil Galassi stated Robbins, Geller, Rudman, and Dowd is a law firm the Board has contracted with to look for litigation opportunities that BNY Mellon has not covered. Robbins, Geller, Rudman, and Dowd informed the

Board they have located a potential litigation opportunity, on direction from Chairman Fleming and Mr. Deibel the Board has been provided with a summary of the potential litigation.

Dave Deibel informed the Board Stephanie Rotter from Robbins, Geller, Rudman, and Dowd will be presenting the details of the litigation next month, and Catherine Langford will be available via telephone for in-depth questions. This is a German version of a class action lawsuit, the Board will be considering recommending whether to retain this firm, essentially making the Board a place holder in that litigation on a contingent fee basis. This is not litigation, this is a German version of class action lawsuit. The trust is a member of all sorts of different classes and securities litigation, if there is a settlement at the end the trust gets money for it. The Board does not have to do anything. In American class action lawsuits members must opt-out, it is reverse in German class action lawsuits. Robbins, Geller, Rudman, and Dowd retained German council and to represent the American clients. Mike Rankin, the City Attorney, has the Code authority to hire the attorneys, so the hiring authority is the City Attorney's office and the Board will see the contract at the next scheduled meeting on May 26, 2016.

Silvia Amparano confirmed the Board as a sub division of the City of Tucson that is recommending to opt-in.

Chairman Fleming stated between two different funds TSRS, lost a total of about a \$1M on Volkswagen investments, translates to a \$1M claim, or maybe a \$250K or \$4M claim.

Kevin Larson asked is there a need for in-depth discussion if the contract is on a contingent basis.

Chairman Fleming stated because the contract is on a contingent basis, the Board could proceed with a motion to participate in the class action lawsuit.

Mr. Deibel informed the Board the contract has been reviewed and the City Attorney's office is prepared to move forward. There is a non-negotiable 27.5% contingent fee on the recovery amount. Ms. Langford is familiar with Robbins, Geller, Rudman, and Dowd, they specialize in this kind of litigation in the United States. Mr. Deibel stated Ms. Langford, Mr. Galassi, and he had a long discussion with Ms. Rotter and Mr. Robin, and they were all satisfied with moving forward.

Michael Coffey asked to confirm if there is no risk in going forward.

Mr. Deibel clarified there is no risk in going forward, the only abnormality is having to opt-in.

Chairman Fleming asked if the Board could vote today to approve subject to Mr. Deibel's review of the contract.

Mr. Deibel answered in the affirmative.

**A motion to participate in the class action lawsuit against Volkswagen was made by Kevin Larson, 2<sup>nd</sup> by Silvia Amparano, and passed by a vote of 7-0.**

Chairman Fleming thanked Mr. O'Hare for finding this opportunity for the Board.

Ms. Amparano and Mr. Galassi informed the Board the TSRS office received a check from a class action lawsuit for \$111K through TSRS custodial partnership with BNY Mellon.

E. **Call to Audience** – None heard.

F. **Future Agenda Items**

1. Education Plan for New Staff and Trustees
2. Duties and Selection of Advisory Board
3. Hiring an Intern to Free Staff for Education
4. TSRS Board Annual Evaluation of Staff and Consultants
5. Formal Evaluation of Active Managers – 1.5% over benchmark over a given period

6. RFQ for Actuarial Services
7. Action Plan for Black Swan Events
8. Would It Be Better to Index the Whole Fund

G. **Adjournment** – 10:26 AM



Report ID : FIN-COT-BA-0001

Run Date : 05/16/2016

Run Time : 02:23 PM

City of Tucson  
Budget vs Actual Expenses  
Through: April, 2016  
For Fiscal Year 2016

Parameter Page

Parameters and Prompts

Fiscal Year	2016
Accounting Period	10
Fund	072
Department	*
Unit	*
Object Code	*

Report Description

The Expenses vs. Actual Report shows expenditures and encumbrances for the selected accounting period and for the selected fiscal year compared against the current expense budget and the unobligated budget balance. The report is sectioned by Department, Fund and Unit and summarized by Object.

**City of Tucson**  
**Budget vs Actual Expenses**  
**Through: April, 2016**  
**For Fiscal Year 2016**

Department	Fund	Unit	Current Period Encumbrance	Current Period Expenditure	Current Total Obligations	YTD Encumbrance	YTD Expenditure	YTD Total Obligations	Current Budgeted Amount	Unobligated Budget Balance	Percent
900 - TUCSON SUPPL RETIREMENT SYSTEM	072 - TUCSON SUPP RETIREMENT SYSTEM	9001 - Normal Retiree Benefit	0.00	5,307,651.49	5,307,651.49	0.00	51,332,376.02	51,332,376.02	63,300,000	11,967,623.98	18.91 %
<b>Total for 100 - PAYROLL CHGS</b>			<b>0.00</b>	<b>5,307,651.49</b>	<b>5,307,651.49</b>	<b>0.00</b>	<b>51,332,376.02</b>	<b>51,332,376.02</b>	<b>63,300,000</b>	<b>11,967,623.98</b>	<b>18.91 %</b>
<b>Total for Unit 9001 - Normal Retiree Benefit</b>			<b>0.00</b>	<b>5,307,651.49</b>	<b>5,307,651.49</b>	<b>0.00</b>	<b>51,332,376.02</b>	<b>51,332,376.02</b>	<b>63,300,000</b>	<b>11,967,623.98</b>	<b>18.91 %</b>

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**City of Tucson**  
**Budget vs Actual Expenses**  
**Through: April, 2016**  
**For Fiscal Year 2016**

Department	Fund	Unit	Object	900 - TUCSON SUPPL RETIREMENT SYSTEM	072 - TUCSON SUPP RETIREMENT SYSTEM	9003 - Normal Retiree Beneficiary Benefit	Current Period Encumbrance	Current Period Expenditure	Current Total Obligations	YTD Encumbrance	YTD Expenditure	YTD Total Obligations	Current Budgeted Amount	Unobligated Budget Balance	Percent
			105 - PAYROLL PENSION	0.00	0.00	304,353.96	304,353.96	304,353.96	0.00	0.00	2,939,133.02	2,939,133.02	3,100,000	160,866.98	5.19 %
			<b>Total for 100 - PAYROLL CHGS</b>	<b>0.00</b>	<b>0.00</b>	<b>304,353.96</b>	<b>304,353.96</b>	<b>304,353.96</b>	<b>0.00</b>	<b>0.00</b>	<b>2,939,133.02</b>	<b>2,939,133.02</b>	<b>3,100,000</b>	<b>160,866.98</b>	<b>5.19 %</b>
			<b>Total for Unit 9003 - Normal Retiree Beneficiary Benefit</b>	<b>0.00</b>	<b>0.00</b>	<b>304,353.96</b>	<b>304,353.96</b>	<b>304,353.96</b>	<b>0.00</b>	<b>0.00</b>	<b>2,939,133.02</b>	<b>2,939,133.02</b>	<b>3,100,000</b>	<b>160,866.98</b>	<b>5.19 %</b>

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**City of Tucson**  
**Budget vs Actual Expenses**  
**Through: April, 2016**  
**For Fiscal Year 2016**

Department	Fund	Unit	Object	900 - TUCSON SUPPL RETIREMENT SYSTEM	072 - TUCSON SUPP RETIREMENT SYSTEM	9020 - Disability Retiree Benefit	Current Period Encumbrance	Current Period Expenditure	Current Total Obligations	YTD Encumbrance	YTD Expenditure	YTD Total Obligations	Current Budgeted Amount	Unobligated Budget Balance	Percent
			105 - PAYROLL PENSION	0.00	0.00	167,099.22	167,099.22	167,099.22	167,099.22	0.00	1,695,937.37	1,695,937.37	1,975,000	279,062.63	14.13 %
<b>Total for 100 - PAYROLL CHGS</b>				<b>0.00</b>	<b>0.00</b>	<b>167,099.22</b>	<b>167,099.22</b>	<b>167,099.22</b>	<b>167,099.22</b>	<b>0.00</b>	<b>1,695,937.37</b>	<b>1,695,937.37</b>	<b>1,975,000</b>	<b>279,062.63</b>	<b>14.13 %</b>
<b>Total for Unit 9020 - Disability Retiree Benefit</b>				<b>0.00</b>	<b>0.00</b>	<b>167,099.22</b>	<b>167,099.22</b>	<b>167,099.22</b>	<b>167,099.22</b>	<b>0.00</b>	<b>1,695,937.37</b>	<b>1,695,937.37</b>	<b>1,975,000</b>	<b>279,062.63</b>	<b>14.13 %</b>

**City of Tucson**  
**Budget vs Actual Expenses**  
**Through: April, 2016**  
**For Fiscal Year 2016**

Department	Fund	Unit	Object	Current Period Encumbrance	Current Period Expenditure	Current Total Obligations	YTD Encumbrance	YTD Expenditure	YTD Total Obligations	Current Budgeted Amount	Unobligated Budget Balance	Percent
900 - TUCSON SUPPL RETIREMENT SYSTEM	072 - TUCSON SUPP RETIREMENT SYSTEM	9021 - Pension Fund Administration	101 - SALARIES & WAGES FOR PERMANENT EMPLOYEES	0.00	23,134.46	23,134.46	0.00	175,772.00	175,772.00	211,940	36,168.00	17.07 %
			102 - EXTRA TIME	0.00	0.00	0.00	0.00	93.28	93.28	0	(93.28)	0.00%
			103 - OVERTIME WAGES	0.00	0.00	0.00	0.00	195.02	195.02	0	(195.02)	0.00%
			105 - PAYROLL PENSION	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00%
			108 - DOWNTOWN ALLOWANCE & DISCOUNTED TRANSIT PASSES	0.00	126.94	126.94	0.00	844.08	844.08	1,160	315.92	27.23 %
			113 - TSRS PENSION CONTRIBUTION	0.00	7,268.58	7,268.58	0.00	48,647.49	48,647.49	58,280	9,632.51	16.53 %
			114 - FICA (SOCIAL SECURITY)	0.00	1,935.29	1,935.29	0.00	16,063.00	16,063.00	15,410	(653.00)	-4.24 %
			115 - WORKERS COMPENSATION INSURANCE	0.00	460.09	460.09	0.00	2,490.66	2,490.66	5,930	3,439.34	58.00 %
			116 - GROUP PLAN INSURANCE	0.00	1,675.04	1,675.04	0.00	19,604.70	19,604.70	30,920	11,315.30	36.60 %
			117 - STATE UNEMPLOYMENT	0.00	31.79	31.79	0.00	191.77	191.77	300	108.23	36.08 %
			171 - SICK LEAVE PAID AT RETIREMENT	0.00	0.00	0.00	0.00	17,099.87	17,099.87	0	(17,099.87)	0.00%
			185 - RETIREMENT INCENTIVE	0.00	0.00	0.00	0.00	19,011.20	19,011.20	0	(19,011.20)	0.00%
			196 - INTERDEPARTMENTAL LABOR	0.00	105,016.66	105,016.66	0.00	186,166.60	186,166.60	220,800	34,633.40	15.69 %
			<b>Total for 100 - PAYROLL CHGS</b>	<b>0.00</b>	<b>139,648.85</b>	<b>139,648.85</b>	<b>0.00</b>	<b>486,179.67</b>	<b>486,179.67</b>	<b>544,740</b>	<b>58,560.33</b>	<b>10.75 %</b>
			202 - TRAVEL	0.00	0.00	0.00	0.00	2,614.68	2,614.68	4,000	1,385.32	34.63 %
			204 - TRAINING	0.00	0.00	0.00	0.00	440.00	440.00	14,000	13,560.00	96.86 %
			205 - PARKING & SHUTTLE SERVICE	0.00	17.00	17.00	0.00	127.00	127.00	200	73.00	36.50 %
			212 - CONSULTANTS AND SURVEYS	0.00	0.00	0.00	0.00	41,930.00	41,930.00	65,000	23,070.00	35.49 %

**City of Tucson**  
**Budget vs Actual Expenses**  
**Through: April, 2016**  
**For Fiscal Year 2016**

Department	Fund	Unit	Object	Current Period Encumbrance	Current Period Expenditure	Current Total Obligations	YTD Encumbrance	YTD Expenditure	YTD Total Obligations	Current Budgeted Amount	Unobligated Budget Balance	Percent
900 - TUCSON SUPPL RETIREMENT SYSTEM	072 - TUCSON SUPP RETIREMENT SYSTEM	9021 - Pension Fund Administration	213 - LEGAL	0.00	0.00	0.00	0.00	19,942.00	19,942.00	50,000	30,058.00	60.12 %
			215 - AUDITING AND BANK SERVICES	0.00	0.00	0.00	0.00	23,845.00	23,845.00	25,000	1,155.00	4.62 %
			219 - MISCELLANEOUS PROFESSIONAL SERVICES	0.00	59,686.36	59,686.36	0.00	1,572,234.01	1,572,234.01	4,034,500	2,462,265.99	61.03 %
			221 - INSUR-PUBLIC LIABILITY	0.00	19,102.37	19,102.37	0.00	20,562.99	20,562.99	29,160	8,597.01	29.48 %
			228 - HAZARDOUS WASTE INSURANCE	0.00	60.78	60.78	0.00	354.53	354.53	560	205.47	36.69 %
			232 - R&M MACHINERY & EQUIPMENT	0.00	0.00	0.00	0.00	0.00	0.00	1,200	1,200.00	100.00 %
			245 - TELEPHONE	0.00	420.00	420.00	0.00	1,680.00	1,680.00	1,200	(480.00)	-40.00 %
			252 - RENTS EQUIPMENT	0.00	0.00	0.00	0.00	719.23	719.23	0	(719.23)	0.00 %
			260 - COMPUTER SOFTWARE MAINTENANCE AGREEMENTS	0.00	0.00	0.00	0.00	0.00	0.00	41,000	41,000.00	100.00 %
			263 - PUBLIC RELATIONS	0.00	0.00	0.00	0.00	2,043.09	2,043.09	2,560	516.91	20.19 %
			266 - ADVERTISING	0.00	0.00	0.00	0.00	411.50	411.50	0	(411.50)	0.00 %
			284 - MEMBERSHIPS AND SUBSCRIPTIONS	0.00	0.00	0.00	0.00	810.00	810.00	1,500	690.00	46.00 %
			286 - MISC OUTSIDE SERVICES	0.00	0.00	0.00	0.00	61.92	61.92	0	(61.92)	0.00 %
			<b>Total for 200 - PROF CHARGES</b>	<b>0.00</b>	<b>79,286.51</b>	<b>79,286.51</b>	<b>0.00</b>	<b>1,687,775.95</b>	<b>1,687,775.95</b>	<b>4,269,880</b>	<b>2,582,104.05</b>	<b>60.47 %</b>
			311 - OFFICE SUPPLIES	0.00	327.73	327.73	0.00	1,817.28	1,817.28	7,500	5,682.72	75.77 %
			312 - PRINTING,PHOTOGRAPHY,REPRODUCTION	0.00	21.58	21.58	0.00	5,797.34	5,797.34	7,500	1,702.66	22.70 %
			314 - POSTAGE	0.00	4,910.70	4,910.70	0.00	6,721.94	6,721.94	10,000	3,278.06	32.78 %
			341 - BOOK, PERIODICALS AND RECORDS	0.00	0.00	0.00	0.00	0.00	0.00	250	250.00	100.00 %

**City of Tucson  
Budget vs Actual Expenses  
Through: April, 2016  
For Fiscal Year 2016**

Department	Fund	Unit	Object	Current Period Encumbrance	Current Period Expenditure	Current Total Obligations	YTD Encumbrance	YTD Expenditure	YTD Total Obligations	Current Budgeted Amount	Unobligated Budget Balance	Percent
900 - TUCSON SUPPL RETIREMENT SYSTEM	072 - TUCSON SUPP RETIREMENT SYSTEM	9021 - Pension Fund Administration	345 - FURNISHINGS, EQUIPMENT AND TOOLS < \$5,000	0.00	0.00	0.00	0.00	0.00	0.00	1,000	1,000.00	100.00 %
			346 - COMPUTER EQUIPMENT < \$5,000	0.00	0.00	0.00	0.00	0.00	0.00	1,000	1,000.00	100.00 %
			392 - GENERAL SERVICES WORK ORDER SUPPLIES	0.00	298.80	298.80	0.00	298.80	298.80	0	(298.80)	0.00%
<b>Total for 300 - SUPPLIES</b>				<b>0.00</b>	<b>5,558.81</b>	<b>5,558.81</b>	<b>0.00</b>	<b>14,635.36</b>	<b>14,635.36</b>	<b>27,250</b>	<b>12,614.64</b>	<b>46.29 %</b>
<b>Total for Unit 9021 - Pension Fund Administration</b>				<b>0.00</b>	<b>224,494.17</b>	<b>224,494.17</b>	<b>0.00</b>	<b>2,188,590.98</b>	<b>2,188,590.98</b>	<b>4,841,870</b>	<b>2,653,279.02</b>	<b>54.80 %</b>

Report ID : FIN-COT-BA-0001

Run Date : 05/16/2016

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**City of Tucson**  
**Budget vs Actual Expenses**  
**Through: April, 2016**  
**For Fiscal Year 2016**

Department	Fund	Unit	Object	900 - TUCSON SUPPL RETIREMENT SYSTEM	072 - TUCSON SUPP RETIREMENT SYSTEM	9022 - Disability Retiree Beneficiary Benefit	Current Period Encumbrance	Current Period Expenditure	YTD Encumbrance	YTD Expenditure	YTD Total Obligations	Current Budgeted Amount	Unobligated Budget Balance	Percent
			105 - PAYROLL PENSION	0.00	30,418.52	0.00	30,418.52	305,490.56	305,490.56	305,490.56	350,000	44,509.44	12.72 %	
			<b>Total for 100 - PAYROLL CHGS</b>	<b>0.00</b>	<b>30,418.52</b>	<b>0.00</b>	<b>30,418.52</b>	<b>305,490.56</b>	<b>305,490.56</b>	<b>305,490.56</b>	<b>350,000</b>	<b>44,509.44</b>	<b>12.72 %</b>	
			<b>Total for Unit 9022 - Disability Retiree Beneficiary Ben</b>	<b>0.00</b>	<b>30,418.52</b>	<b>0.00</b>	<b>30,418.52</b>	<b>305,490.56</b>	<b>305,490.56</b>	<b>305,490.56</b>	<b>350,000</b>	<b>44,509.44</b>	<b>12.72 %</b>	

Report ID : FIN-COT-BA-0001

Run Date : 05/16/2016

Run Time : 02:23 PM

**City of Tucson**  
**Budget vs Actual Expenses**  
**Through: April, 2016**  
**For Fiscal Year 2016**

Department	Fund	Unit	Object	Current Period Encumbrance	Current Period Expenditure	Current Total Obligations	YTD Encumbrance	YTD Expenditure	YTD Total Obligations	Current Budgeted Amount	Unobligated Budget Balance	Percent
900 - TUCSON SUPPL RETIREMENT SYSTEM	072 - TUCSON SUPP RETIREMENT SYSTEM	9023 - ACTIVE MEMBER REFUNDS-CONTRBS	105 - PAYROLL PENSION	0.00	0.00	0.00	0.00	0.00	0.00	0	(0.00)	0.00%
			186 - TSRS REFUNDS	0.00	13,874.94	13,874.94	0.00	2,112,363.78	2,112,363.78	2,400,000	287,636.22	11.98 %
			<b>Total for 100 - PAYROLL CHGS</b>	<b>0.00</b>	<b>13,874.94</b>	<b>13,874.94</b>	<b>0.00</b>	<b>2,112,363.78</b>	<b>2,112,363.78</b>	<b>2,400,000</b>	<b>287,636.22</b>	<b>11.98 %</b>
			<b>Total for Unit 9023 - ACTIVE MEMBER REFUNDS-CON</b>	<b>0.00</b>	<b>13,874.94</b>	<b>13,874.94</b>	<b>0.00</b>	<b>2,112,363.78</b>	<b>2,112,363.78</b>	<b>2,400,000</b>	<b>287,636.22</b>	<b>11.98 %</b>

Report ID : FIN-COT-BA-0001

Run Date : 05/16/2016

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**City of Tucson**  
**Budget vs Actual Expenses**  
**Through: April, 2016**  
**For Fiscal Year 2016**

Department	Fund	Unit	Object	900 - TUCSON SUPPL RETIREMENT SYSTEM	072 - TUCSON SUPP RETIREMENT SYSTEM	9025 - INTEREST ON REFUNDS	Current Period Encumbrance	Current Period Expenditure	YTD Encumbrance	YTD Expenditure	YTD Total Obligations	Current Budgeted Amount	Unobligated Budget Balance	Percent
			186 - TSRS REFUNDS	0.00	0.00		226.13	226.13	0.00	26,434.53	26,434.53	50,000	23,565.47	47.13 %
			<b>Total for 100 - PAYROLL CHGS</b>	<b>0.00</b>	<b>0.00</b>		<b>226.13</b>	<b>226.13</b>	<b>0.00</b>	<b>26,434.53</b>	<b>26,434.53</b>	<b>50,000</b>	<b>23,565.47</b>	<b>47.13 %</b>
			<b>Total for Unit 9025 - INTEREST ON REFUNDS</b>	<b>0.00</b>	<b>0.00</b>		<b>226.13</b>	<b>226.13</b>	<b>0.00</b>	<b>26,434.53</b>	<b>26,434.53</b>	<b>50,000</b>	<b>23,565.47</b>	<b>47.13 %</b>

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**City of Tucson**  
**Budget vs Actual Expenses**  
**Through: April, 2016**  
**For Fiscal Year 2016**

Department	Fund	Unit	900 - TUCSON SUPPL RETIREMENT SYSTEM	072 - TUCSON SUPP RETIREMENT SYSTEM	9026 - DWE SYSTEM BENEFIT PAYMENT	Current Period Encumbrance	Current Period Expenditure	Current Total Obligations	YTD Encumbrance	YTD Expenditure	YTD Total Obligations	Current Budgeted Amount	Unobligated Budget Balance	Percent
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	61,918.40	61,918.40	200,000	138,081.60	69.04 %
			<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>61,918.40</b>	<b>61,918.40</b>	<b>200,000</b>	<b>138,081.60</b>	<b>69.04 %</b>
			<b>Total for 100 - PAYROLL CHGS</b>											
			<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>61,918.40</b>	<b>61,918.40</b>	<b>200,000</b>	<b>138,081.60</b>	<b>69.04 %</b>
			<b>Total for Unit 9026 - DWE SYSTEM BENEFIT PAYMEN'</b>											
			<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>61,918.40</b>	<b>61,918.40</b>	<b>200,000</b>	<b>138,081.60</b>	<b>69.04 %</b>

**City of Tucson  
Budget vs Actual Expenses  
Through: April, 2016  
For Fiscal Year 2016**

Department	Fund	Unit	Object	Current Period Encumbrance	Current Period Expenditure	Current Total Obligations	YTD Encumbrance	YTD Expenditure	YTD Total Obligations	Current Budgeted Amount	Unobligated Budget Balance	Percent
900 - TUCSON SUPPL RETIREMENT SYSTEM	072 - TUCSON SUPP RETIREMENT SYSTEM	9027 - CREDITABLE SERVICE TRANS(ASRS)	186 - TSRS REFUNDS	0.00	0.00	0.00	0.00	(8,811.37)	(8,811.37)	0	8,811.37	0.00%
<b>Total for 100 - PAYROLL CHGS</b>				<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>(8,811.37)</b>	<b>(8,811.37)</b>	<b>0</b>	<b>8,811.37</b>	<b>0.00%</b>
<b>Total for Unit 9027 - CREDITABLE SERVICE TRANS(A)</b>				<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>(8,811.37)</b>	<b>(8,811.37)</b>	<b>0</b>	<b>8,811.37</b>	<b>0.00%</b>
<b>Total for Fund 072 - TUCSON SUPP RETIREMENT SYS</b>				<b>0.00</b>	<b>6,048,118.43</b>	<b>6,048,118.43</b>	<b>0.00</b>	<b>60,653,433.29</b>	<b>60,653,433.29</b>	<b>76,216,870</b>	<b>15,563,436.71</b>	<b>20.42 %</b>
<b>Total for Department 900 - TUCSON SUPPL RETIREME</b>				<b>0.00</b>	<b>6,048,118.43</b>	<b>6,048,118.43</b>	<b>0.00</b>	<b>60,653,433.29</b>	<b>60,653,433.29</b>	<b>76,216,870</b>	<b>15,563,436.71</b>	<b>20.42 %</b>
<b>Grand Totals</b>				<b>0.00</b>	<b>6,048,118.43</b>	<b>6,048,118.43</b>	<b>0.00</b>	<b>60,653,433.29</b>	<b>60,653,433.29</b>	<b>76,216,870</b>	<b>15,563,436.71</b>	<b>20.42 %</b>

# Performance review

## Aberdeen EAFE Plus Fund

May 26, 2016

Tucson Supplemental Retirement System

**Maree Mitchell**, Senior Equity Specialist  
**Teri Smith**, Senior Relationship Manager  
Aberdeen Asset Management

In the United States, Aberdeen Asset Management (AAM) is the marketing name for the following affiliated, registered investment advisers: Aberdeen Asset Management Inc., Aberdeen Asset Managers Ltd, Aberdeen Asset Management Ltd, Aberdeen Asset Management Asia Ltd and Aberdeen Capital Management, LLC. Excluding Aberdeen Capital Management LLC, each of these advisers are wholly owned by Aberdeen Asset Management PLC. Aberdeen Capital Management LLC is a wholly-owned subsidiary of Aberdeen Asset Management Inc. "Aberdeen" is a U.S. registered service mark of Aberdeen Asset Management PLC.



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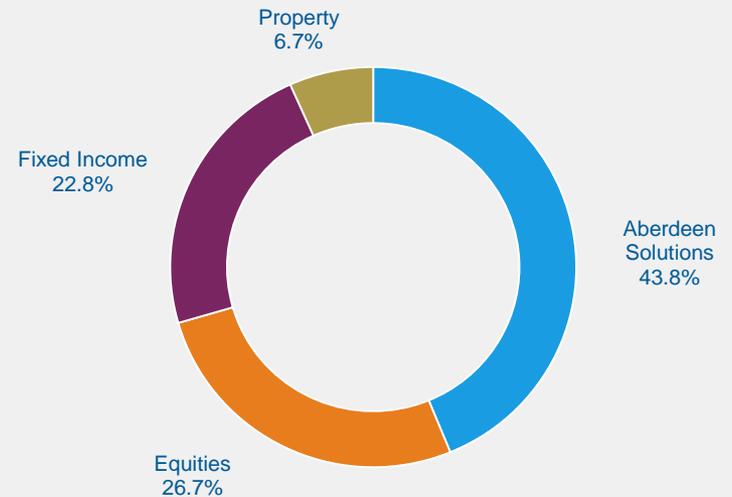
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- Organization and team update
- Overall performance
- Shifting market dynamics
- Performance attribution
- Fund activity
- Current positioning
- Outlook

# The Aberdeen group

- Aberdeen Asset Management PLC (Aberdeen) is an asset management company, founded through a management buyout in 1983
- Aberdeen is publicly traded and listed on the London Stock Exchange since 1991
- Investment offices located in UK, Singapore, USA, Japan, Hong Kong, Thailand, Malaysia, Australia, Brazil, Canada, Hungary, France and Indonesia

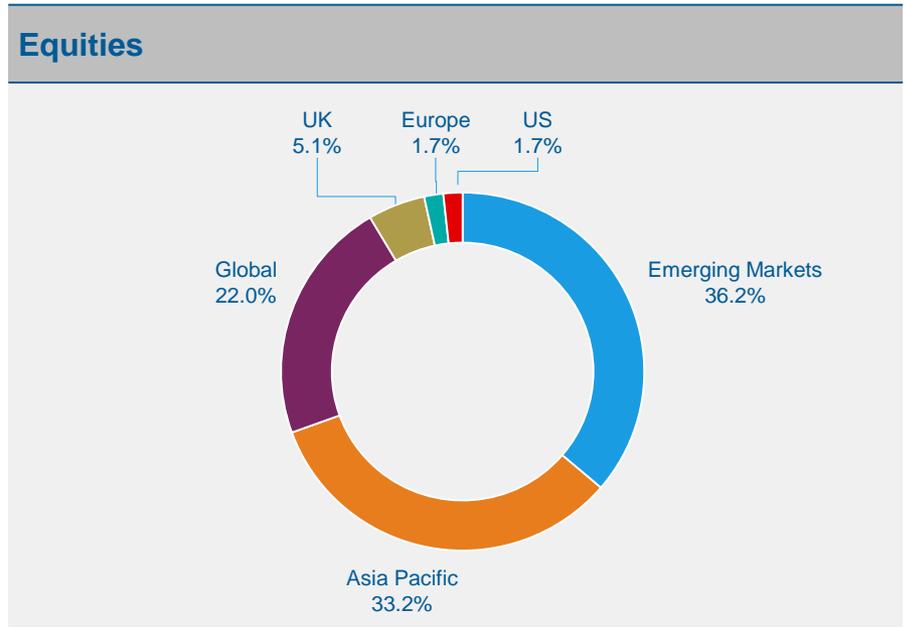
- **Total assets US\$420.9bn**
  - US\$112.5bn in equity assets
  - US\$24.8bn in Global Equities



Source: Aberdeen Asset Management PLC, 31 Mar 16  
Figures may appear not to add due to rounding. For illustrative purposes only

# Equities Assets under Management

31 Mar 16	\$bn
Emerging Markets	40.8
Asia Pacific	37.3
Global	24.8
UK	5.7
Europe	2.0
US	1.9
<b>Total Equity AuM</b>	<b>112.5</b>



Source: Aberdeen Asset Management PLC, 31 Mar 16  
 Excluding equity component of Multi-Asset mandate  
 Figures may appear not to add due to rounding. For illustrative purposes only

# Global equity – personnel update

---

<b>Additions/Transfers</b>			
<b>Name</b>	<b>Title/Responsibilities</b>	<b>Location</b>	<b>Date Joined/Moved</b>
Adam Kjorling	Analyst	Edinburgh	February 2016
James Fearon	Investment Specialist	Edinburgh	January 2016

<b>Departures/Transfers</b>			
<b>Name</b>	<b>Title/Responsibilities</b>	<b>Location</b>	<b>Date Joined/Moved</b>
Ann Charles	Senior Portfolio Analyst	Edinburgh	March 2016
Katy Napier	Analyst – Responsible Investing	Edinburgh	January 2016

Source: Aberdeen Asset Management, 31 Mar 16  
Includes affiliated persons operating under inter-company agreement

# Global equity team

Team Members	Title	Years in Industry	Years with Firm*
Stephen Docherty	Head of Global Equities	24	22
Bruce Stout	Senior Investment Manager	29	29
Stewart Methven	Senior Investment Manager	29	22
Jamie Cumming	Senior Investment Manager	15	15
Samantha Fitzpatrick	Senior Investment Manager	18	18
Martin Connaghan	Senior Investment Manager	18	18
Andy Brown	Senior Investment Manager	11	11
Ella-Kara Brown	Investment Manager	13	10
Victoria MacLean	Investment Manager	5	5
Jill Sneddon	Global Trading Co-Ordinator	17	14
James Fearon	Investment Specialist	4	4
Adam Kjorling	Investment Analyst	2	2
<b>RI Team **</b>			
Cindy Rose	Head of Research – Responsible Investing	17	17
Jamie Govan	Senior Analyst – Responsible Investing	8	8
Fionna Ross	Senior Analyst – Responsible Investing	8	8
Gail McCullie	Analyst – Responsible Investing	6	6

- Stable team with collective responsibility for investment decisions
- A mix of youth and experience
- Team members are all generalists
- Global equity team utilizes proprietary research produced by regional teams

Source: Aberdeen Asset Management PLC, 31 Mar 16

\* May include years with acquired firms

\*\* RI Team moved to stand alone function in January 2016

Includes affiliated persons operating under inter-company agreement

# Overall performance

To 30 April 2016

Performance summary					
	One year to end Dec 2015	Year to date end Apr 2016	One year to end Apr 2016	Annualized three years to end Apr 2016	Annualized since inception (4/2/2012)
<b>Fund (gross)</b>	-13.63%	5.07%	-14.38%	-3.44%	0.69%
<b>Fund (net)</b>	-14.32%	4.79%	-15.07%	-4.21%	-0.11%
<b>Benchmark</b>	-5.25%	2.45%	-10.87%	0.42%	3.35%
<b>Difference (gross)</b>	-8.38%	2.62%	-3.51%	-3.86%	-2.66%

Account valuation as at end April 2016	
<b>Tucson Supplemental Retirement System</b>	<b>\$37,327,481</b>

- In the first quarter the portfolio benefitted from a shift in market dynamics, particularly US dollar weakness and a rebound in commodities and emerging markets.
- However, over the last few years our fundamental, bottom up approach to investing has been out of favor as macro themes have driven equity markets
- Geographically, emerging markets have lagged developed markets, driven to a large extent by strength in the US/US dollar and quantitative easing in Japan and Europe
- From a sector perspective, the more cyclical companies in the portfolio have underperformed due to commodity weakness on the back of oversupply and slower emerging market growth
- Our process of identifying good quality, reasonably valued businesses and investing for the long term remains the same
- We have been actively changing the make-up of the portfolio to reflect the changing environment as opportunities to buy good businesses have presented themselves

Source: Aberdeen Asset Management, 31 Dec 15, 30 Apr 16, USD. **Past performance is not indicative of future results**

Benchmark: MSCI AC World ex USA



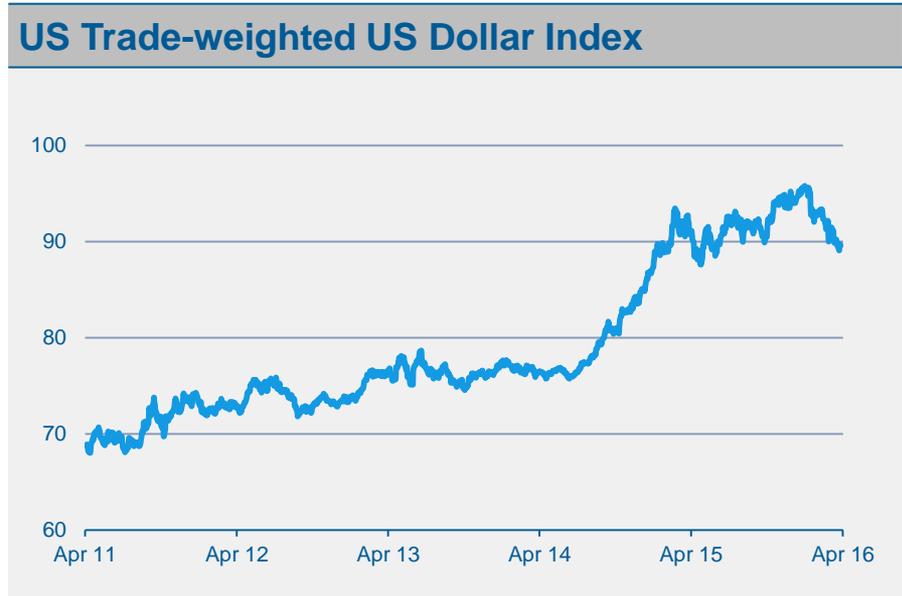
## Shifting market dynamics

# Shift #1: The USD and interest rates – about turn

- Expectations for the number of rate rises in 2016 have been reduced, resulting in a weakening in the USD – a direct contrast to 2015
- Concerns over slowing global growth and an inflation rate which remains persistently below target have influenced the Federal Reserve's rhetoric

Janet Yellen 30<sup>th</sup> March 2016:

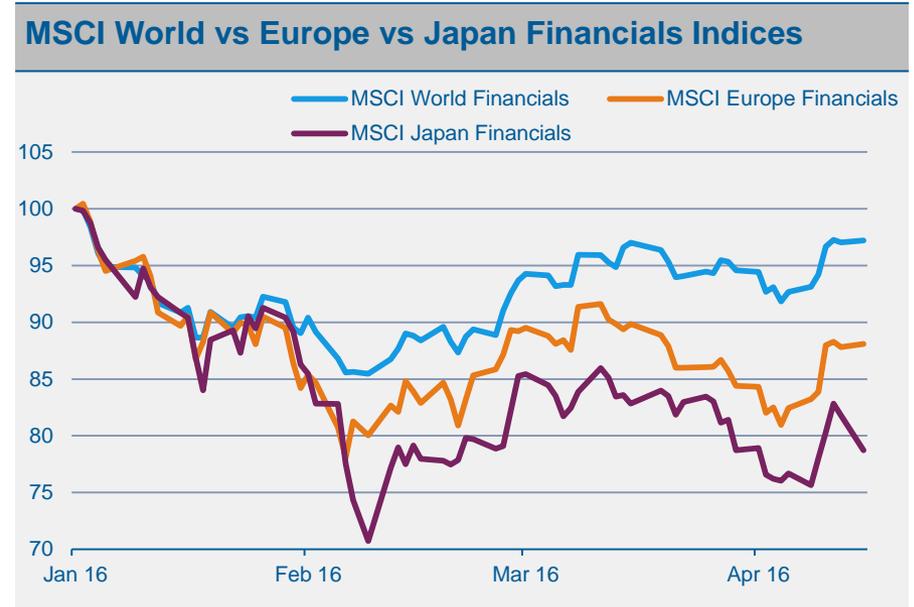
- *"The inflation outlook has also become somewhat more uncertain since the turn of the year, in part for reasons related to risks to the outlook for economic growth"*



Source: Bloomberg, Apr 16. **Past performance is not a guide to future results**  
For illustrative purposes only

## Shift #2: Doubts over the efficacy of monetary policy

- Loose monetary policy continues to be a phenomenon in developed markets.
- Japan and parts of Europe now have unprecedented negative interest rates.
- The negative rate environment in Europe and Japan has clear implications for financials, which are already struggling from pressure on net interest margins. As a result, banking stocks were among the weakest over the period.



Source: Bloomberg, Apr 16. **Past performance is not a guide to future results**  
For illustrative purposes only

# Shift #3: Commodities



- The weaker USD helped fuel a rebound in commodities.
- Within energy, there is some evidence of rationalization of supply.
- Iron ore was boosted after policy makers in China signalled that they would be prepared to support growth

Source: Bloomberg, Apr 16. **Past performance is not a guide to future results**  
For illustrative purposes only



# Performance attribution

# Performance attribution – year to date to end April 2016

## Country attribution

	Fund		Benchmark		Net Management Effects		
	Weight	Return	Weight	Return	Allocation	Selection	Total
<b>TOTAL</b>	<b>100.00</b>	<b>5.74</b>	<b>100.00</b>	<b>2.44</b>	<b>-0.03</b>	<b>3.33</b>	<b>3.30</b>
<b>EQUITIES</b>	<b>99.93</b>	<b>5.71</b>	<b>100.00</b>	<b>2.44</b>	<b>-0.17</b>	<b>3.33</b>	<b>3.16</b>
<b>JAPAN</b>	<b>12.26</b>	<b>8.78</b>	<b>16.47</b>	<b>-2.02</b>	<b>0.28</b>	<b>1.18</b>	<b>1.46</b>
<b>EUROPE</b>	<b>45.75</b>	<b>2.39</b>	<b>46.28</b>	<b>0.16</b>	<b>-0.15</b>	<b>1.23</b>	<b>1.08</b>
UK	22.41	4.16	13.92	1.07	-0.12	0.72	0.60
ITALY	1.49	13.99	1.56	-9.13	0.03	0.34	0.38
FRANCE	1.46	9.37	7.09	2.18	0.03	0.25	0.28
GERMANY	7.19	4.09	6.45	-1.19	0.06	0.21	0.27
FINLAND	--	--	0.69	-5.07	0.06	0.00	0.06
SWEDEN	1.95	6.77	2.07	2.37	0.00	0.05	0.05
BELGIUM	--	--	1.02	-0.80	0.03	0.00	0.03
SPAIN	--	--	2.31	1.05	0.03	0.00	0.03
IRELAND	--	--	0.35	-4.31	0.03	0.00	0.03
GREECE	--	--	0.09	-9.45	0.01	0.00	0.01
DENMARK	--	--	1.42	1.70	0.01	0.00	0.01
AUSTRIA	--	--	0.13	4.20	0.00	0.00	0.00
PORTUGAL	--	--	0.12	6.66	0.00	0.00	0.00
NETHERLANDS	--	--	2.15	3.63	-0.03	0.00	-0.03
NORWAY	--	--	0.43	9.84	-0.03	0.00	-0.03
SWITZERLAND	11.25	-4.81	6.49	-2.14	-0.27	-0.34	-0.61
<b>ASIA PACIFIC EX JAPAN</b>	<b>29.60</b>	<b>4.21</b>	<b>23.24</b>	<b>1.86</b>	<b>0.14</b>	<b>0.39</b>	<b>0.53</b>
SINGAPORE	6.58	11.18	0.95	5.63	0.16	0.32	0.48
CHINA	--	--	5.06	-4.99	0.41	0.00	0.41
HONG KONG	8.74	5.50	2.33	0.38	-0.08	0.32	0.24
TAIWAN	4.05	6.81	2.50	2.00	-0.02	0.19	0.16
NEW ZEALAND	--	--	0.13	14.81	-0.01	0.00	-0.01
INDONESIA	--	--	0.57	10.12	-0.04	0.00	-0.04
MALAYSIA	--	--	0.73	10.37	-0.05	0.00	-0.05
PHILIPPINES	1.08	--	0.30	3.81	-0.04	-0.03	-0.06
AUSTRALIA	1.12	5.48	5.15	5.06	-0.10	0.00	-0.10
THAILAND	1.05	--	0.48	17.91	-0.06	-0.08	-0.14
KOREA	4.30	0.15	3.31	4.74	0.01	-0.18	-0.17
INDIA	2.68	-8.92	1.74	-2.03	-0.02	-0.15	-0.17

Source: Aberdeen Asset Management, BPSS, Datastream, USD, 30 Apr 16. Past performance is not indicative of future results

Performance is gross of fees and does not reflect advisory fees, had such fees been deducted, returns would have been lower. The return on cash includes several components such as bank interest and the foreign exchange impact from the conversion of foreign cash balances and dividend payments into the base currency

Benchmark: MSCI AC World ex USA. Benchmark is constructed from country level and as such the top line figure may differ slightly from the official benchmark return

# Performance attribution – year to date to end April 2016

## Country attribution, continued

	Fund		Benchmark		Net Management Effects		Total
	Weight	Return	Weight	Return	Allocation	Selection	
<b>OTHER INTERNATIONAL</b>	<b>7.90</b>	<b>21.41</b>	<b>7.16</b>	<b>19.03</b>	<b>-0.27</b>	<b>0.78</b>	<b>0.51</b>
<b>LATIN AMERICA</b>	<b>3.95</b>	<b>30.51</b>	<b>3.00</b>	<b>26.39</b>	<b>0.19</b>	<b>0.46</b>	<b>0.65</b>
BRAZIL	1.48	88.06	1.55	41.96	0.18	0.65	0.82
COLOMBIA	--	--	0.11	29.99	-0.02	0.00	-0.02
PERU	--	--	0.10	44.24	-0.03	0.00	-0.03
CHILE	--	--	0.28	16.40	-0.03	0.00	-0.03
MEXICO	2.46	1.04	0.96	8.29	0.10	-0.19	-0.09
<b>EMEA</b>	<b>3.95</b>	<b>11.60</b>	<b>4.16</b>	<b>14.22</b>	<b>-0.46</b>	<b>0.33</b>	<b>-0.14</b>
SOUTH AFRICA	1.48	30.10	1.63	18.78	0.00	0.15	0.15
QATAR	--	--	0.20	2.42	0.00	0.00	0.00
EGYPT	--	--	0.04	6.78	0.00	0.00	0.00
CZECH REPUBLIC	--	--	0.04	9.70	0.00	0.00	0.00
POLAND	--	--	0.27	5.07	-0.01	0.00	-0.01
HUNGARY	--	--	0.07	21.19	-0.01	0.00	-0.01
ISRAEL	2.47	1.52	0.51	-7.80	-0.19	0.18	-0.02
UNITED ARAB EMIRATES	--	--	0.20	14.08	-0.02	0.00	-0.02
TURKEY	--	--	0.34	27.19	-0.07	0.00	-0.07
RUSSIA	--	--	0.86	24.76	-0.16	0.00	-0.16
<b>CANADA</b>	<b>4.42</b>	<b>13.01</b>	<b>6.85</b>	<b>19.04</b>	<b>-0.17</b>	<b>-0.25</b>	<b>-0.42</b>
<b>CASH</b>	<b>0.07</b>	<b>0.76</b>	<b>0.00</b>	<b>0.00</b>	<b>0.14</b>	<b>0.00</b>	<b>0.14</b>

Source: Aberdeen Asset Management, BPSS, Datastream, USD, 30 Apr 16. Past performance is not indicative of future results

Performance is gross of fees and does not reflect advisory fees, had such fees been deducted, returns would have been lower. The return on cash includes several components such as bank interest and the foreign exchange impact from the conversion of foreign cash balances and dividend payments into the base currency

Benchmark: MSCI AC World ex USA. Benchmark is constructed from country level and as such the top line figure may differ slightly from the official benchmark return

# Performance attribution – year to date to end April 2016

## Sector attribution

	Fund		Benchmark		Net Management Effects		
	Weight	Return	Weight	Return	Allocation	Selection	Total
<b>TOTAL</b>	<b>100.00</b>	<b>5.74</b>	<b>100.00</b>	<b>2.45</b>	<b>1.12</b>	<b>2.17</b>	<b>3.29</b>
<b>EQUITIES</b>	<b>99.93</b>	<b>5.71</b>	<b>100.00</b>	<b>2.45</b>	<b>0.99</b>	<b>2.17</b>	<b>3.15</b>
<b>FINANCIALS</b>	<b>19.02</b>	<b>5.01</b>	<b>25.85</b>	<b>-1.77</b>	<b>0.46</b>	<b>1.06</b>	<b>1.52</b>
BANKS	7.69	10.12	13.81	-1.83	0.15	0.98	1.12
DIVERSIFIED FINANCIALS	--	--	2.98	-5.62	0.26	0.00	0.26
REAL ESTATE	6.17	10.57	3.71	6.74	0.00	0.13	0.13
INSURANCE	5.16	-5.86	5.36	-4.73	0.05	-0.04	0.01
<b>CONSUMER STAPLES</b>	<b>18.64</b>	<b>8.06</b>	<b>11.01</b>	<b>5.51</b>	<b>0.21</b>	<b>0.50</b>	<b>0.71</b>
FOOD BEVERAGE & TOBACCO	14.87	8.15	6.73	5.22	0.24	0.45	0.70
FOOD & STAPLES RETAILING	--	--	1.90	6.10	0.03	0.02	0.05
HOUSEHOLD & PERSONAL PRODUCTS	3.76	4.68	2.38	5.85	-0.06	0.02	-0.03
<b>INDUSTRIALS</b>	<b>12.59</b>	<b>8.40</b>	<b>11.47</b>	<b>4.84</b>	<b>0.09</b>	<b>0.59</b>	<b>0.68</b>
CAPITAL GOODS	8.09	9.25	7.66	5.04	0.07	0.44	0.51
TRANSPORTATION	2.55	9.50	2.83	4.57	0.00	0.17	0.17
COMMERCIAL & PROFESSIONAL SERVICES	1.95	3.58	0.98	4.07	0.02	-0.01	0.01
<b>CONSUMER DISCRETIONARY</b>	<b>2.96</b>	<b>0.00</b>	<b>11.64</b>	<b>-2.71</b>	<b>0.56</b>	<b>-0.04</b>	<b>0.52</b>
AUTOMOBILES & COMPONENTS	--	--	4.41	-8.10	0.53	0.00	0.53
RETAILING	--	--	1.60	-1.60	0.07	0.00	0.07
MEDIA	--	--	1.97	0.90	0.03	0.00	0.03
CONSUMER DURABLES & APPAREL	1.05	--	2.45	1.89	-0.03	0.03	0.00
CONSUMER SERVICES	1.91	--	1.21	3.11	-0.04	-0.07	-0.11
<b>TELECOMMUNICATION SERVICES</b>	<b>9.64</b>	<b>7.57</b>	<b>5.27</b>	<b>3.88</b>	<b>0.02</b>	<b>0.34</b>	<b>0.36</b>
<b>INFORMATION TECHNOLOGY</b>	<b>12.03</b>	<b>3.22</b>	<b>8.13</b>	<b>-0.75</b>	<b>-0.08</b>	<b>0.38</b>	<b>0.30</b>
SEMICONDUCTORS & SEMICONDUCTOR EQUIPMENT	4.05	6.81	1.59	1.71	-0.04	0.20	0.16
TECHNOLOGY HARDWARE & EQUIPMENT	5.51	1.73	3.27	-3.39	-0.06	0.22	0.16
SOFTWARE & SERVICES	2.47	1.52	3.27	0.78	0.02	-0.03	-0.02
<b>UTILITIES</b>	<b>0.00</b>	<b>0.00</b>	<b>3.55</b>	<b>4.27</b>	<b>-0.06</b>	<b>0.00</b>	<b>-0.06</b>
<b>HEALTH CARE</b>	<b>12.31</b>	<b>-4.12</b>	<b>8.96</b>	<b>-3.81</b>	<b>-0.18</b>	<b>-0.06</b>	<b>-0.23</b>
HEALTH CARE EQUIPMENT & SERVICES	1.93	3.03	1.35	3.33	0.00	-0.03	-0.04
PHARMACEUTICALS BIOTECHNOLOGY & LIFE SCIENCES	10.38	-5.19	7.60	-4.97	-0.17	-0.02	-0.19
<b>MATERIALS</b>	<b>6.85</b>	<b>12.53</b>	<b>7.39</b>	<b>17.22</b>	<b>0.02</b>	<b>-0.33</b>	<b>-0.31</b>
<b>ENERGY</b>	<b>5.89</b>	<b>13.50</b>	<b>6.74</b>	<b>18.65</b>	<b>-0.05</b>	<b>-0.28</b>	<b>-0.33</b>
<b>CASH</b>	<b>0.07</b>	<b>0.76</b>	<b>0.00</b>	<b>0.00</b>	<b>0.14</b>	<b>0.00</b>	<b>0.14</b>

Source: Aberdeen Asset Management, BPSS, Datastream, USD, 30 Apr 16. **Past performance is not indicative of future results**

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Benchmark: MSCI AC World ex USA. Benchmark is constructed from sector level and as such the top line figure may differ slightly from the official benchmark return

# Performance attribution – year to date to end April 2016

## Stock attribution

Best Performing						
Non-Hold	Stock	Closing Fund Weight	Closing Benchmark Weight	Contribution to Relative Return	Return in Benchmark	Modified Dietz Return
–	BANCO BRADESCO	1.48	0.16	1.02	70.83	95.77
–	JAPAN TOBACCO	4.45	0.27	0.52	13.91	14.89
–	MTN GROUP	1.48	0.10	0.35	30.55	30.10
–	BRITISH AMERICAN TOBACCO	3.45	0.67	0.30	12.75	13.03
–	JARDINE MATHESON	2.19	0.08	0.29	--	15.49
–	ROYAL DUTCH SHELL	2.91	1.21	0.29	18.02	18.03
–	ROLLS-ROYCE	1.45	0.11	0.23	16.91	18.62
–	SINGTEL	2.76	0.13	0.21	11.01	11.31
–	CANADIAN NATIONAL RAILWAY	1.45	0.29	0.20	11.29	12.39
–	TELUS CORP	1.48	0.04	0.20	16.56	16.75

Worst Performing						
Non-Hold	Stock	Closing Fund Weight	Closing Benchmark Weight	Contribution to Relative Return	Return in Benchmark	Modified Dietz Return
–	NOVARTIS	3.90	1.02	-0.34	-8.61	-8.50
–	INMARSAT	1.49	0.04	-0.26	-18.75	-17.52
–	ROCHE	3.91	1.04	-0.25	-5.42	-5.45
–	FANUC	1.52	0.18	-0.22	-9.49	-7.07
–	HDFC	1.62	0.14	-0.19	-13.87	-15.53
–	HSBC	--	0.76	-0.16	-13.36	--
–	PRUDENTIAL	1.94	0.30	-0.16	-10.02	-11.91
–	ZURICH INSURANCE	--	0.20	-0.13	-5.93	--
–	WHITBREAD	1.91	0.06	-0.10	-12.56	--
Non-Hold	SCOTIABANK	--	0.37	-0.09	31.87	--

Source: Aberdeen Asset Management, BPSS, Datastream, Gross, USD, 30 Apr 16. **Past performance is not indicative of future results**

A full list of holdings is available upon request. This information should not be considered a recommendation to purchase or sell any security. There is no assurance that any securities discussed herein will remain in the fund at the time you receive this report or that securities sold have not been repurchased. Securities discussed do not represent the entire fund and in the aggregate may represent only a small percentage of the fund's holdings. The Modified Dietz Method takes into account the timing of cash flows, and assumes that there is a constant rate of return over a specified period of time. Benchmark: MSCI AC World ex USA

# Performance attribution – one year to end December 2015

## Country attribution

	Fund		Benchmark		Net Management Effects		
	Weight	Return	Weight	Return	Allocation	Selection	Total
<b>TOTAL</b>	<b>100.00</b>	<b>-13.41</b>	<b>100.00</b>	<b>-5.28</b>	<b>-1.17</b>	<b>-6.95</b>	<b>-8.12</b>
<b>EQUITIES</b>	<b>95.65</b>	<b>-13.73</b>	<b>100.00</b>	<b>-5.28</b>	<b>-1.23</b>	<b>-6.95</b>	<b>-8.18</b>
<b>ASIA PACIFIC EX JAPAN</b>	<b>23.02</b>	<b>-6.92</b>	<b>23.19</b>	<b>-9.10</b>	<b>0.21</b>	<b>0.45</b>	<b>0.66</b>
TAIWAN	3.55	0.52	2.49	-10.97	-0.04	0.39	0.36
AUSTRALIA	1.09	--	5.03	-9.77	0.27	0.00	0.27
KOREA	4.10	0.32	3.20	-6.30	-0.03	0.28	0.25
CHINA	--	--	5.46	-7.62	0.13	0.00	0.13
MALAYSIA	--	--	0.67	-20.06	0.11	0.00	0.11
THAILAND	--	--	0.41	-23.32	0.09	0.00	0.09
INDONESIA	--	--	0.53	-19.08	0.08	0.00	0.08
INDIA	2.13	--	1.79	-6.12	0.04	-0.03	0.01
PHILIPPINES	--	--	0.29	-6.25	0.00	0.00	0.00
NEW ZEALAND	--	--	0.12	-5.35	0.00	0.00	0.00
HONG KONG	6.34	-4.20	2.28	-0.54	0.15	-0.20	-0.05
SINGAPORE	5.81	-17.45	0.92	-17.68	-0.60	0.02	-0.59
<b>CANADA</b>	<b>5.18</b>	<b>-32.44</b>	<b>5.87</b>	<b>-23.59</b>	<b>0.28</b>	<b>-0.57</b>	<b>-0.29</b>
<b>JAPAN</b>	<b>10.78</b>	<b>8.89</b>	<b>17.25</b>	<b>9.90</b>	<b>-0.80</b>	<b>-0.08</b>	<b>-0.88</b>
<b>OTHER INTERNATIONAL</b>	<b>8.54</b>	<b>-37.64</b>	<b>6.16</b>	<b>-22.76</b>	<b>-0.96</b>	<b>-1.52</b>	<b>-2.48</b>
<b>EMEA</b>	<b>3.31</b>	<b>-34.29</b>	<b>3.73</b>	<b>-15.72</b>	<b>0.26</b>	<b>-0.86</b>	<b>-0.60</b>
TURKEY	--	--	0.28	-31.55	0.10	0.00	0.10
POLAND	--	--	0.27	-24.91	0.06	0.00	0.06
ISRAEL	1.90	--	0.56	11.08	0.18	-0.13	0.05
QATAR	--	--	0.21	-19.52	0.03	0.00	0.03
UNITED ARAB EMIRATES	--	--	0.19	-17.94	0.02	0.00	0.02
EGYPT	--	--	0.04	-23.52	0.01	0.00	0.01
CZECH REPUBLIC	--	--	0.04	-16.55	0.00	0.00	0.00
HUNGARY	--	--	0.05	36.31	-0.02	0.00	-0.02
RUSSIA	--	--	0.70	5.00	-0.07	0.00	-0.07
SOUTH AFRICA	1.40	-51.81	1.40	-25.13	-0.05	-0.73	-0.78

Source: Aberdeen Asset Management, BPSS, Datastream, USD, 31 Dec 15. **Past performance is not indicative of future results**

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Benchmark: MSCI AC World ex US. Benchmark is constructed from country level and as such the top line figure may differ slightly from the official benchmark return

# Performance attribution – one year to end December 2015

## Country attribution, continued

	Fund		Benchmark		Net Management Effects		Total
	Weight	Return	Weight	Return	Allocation	Selection	
<b>OTHER INTERNATIONAL, CONTINUED</b>							
<b>LATIN AMERICA</b>	<b>5.24</b>	<b>-38.45</b>	<b>2.44</b>	<b>-30.83</b>	<b>-1.23</b>	<b>-0.66</b>	<b>-1.88</b>
MEXICO	2.50	4.43	0.92	-14.24	-0.16	0.50	0.34
COLOMBIA	--	--	0.08	-41.80	0.06	0.00	0.06
CHILE	--	--	0.24	-16.85	0.03	0.00	0.03
PERU	--	--	0.07	-31.66	0.02	0.00	0.02
BRAZIL	2.74	-57.77	1.12	-41.18	-1.19	-1.16	-2.34
<b>EUROPE</b>	<b>48.13</b>	<b>-13.04</b>	<b>47.53</b>	<b>-2.48</b>	<b>0.05</b>	<b>-5.23</b>	<b>-5.19</b>
SWITZERLAND	14.21	-0.88	6.93	1.20	0.61	-0.26	0.35
SPAIN	--	--	2.34	-15.39	0.25	0.00	0.25
GREECE	--	--	0.10	-61.25	0.05	0.00	0.05
NORWAY	--	--	0.41	-14.22	0.04	0.00	0.04
PORTUGAL	--	--	0.11	1.88	-0.01	0.00	-0.01
AUSTRIA	--	--	0.13	3.87	-0.01	0.00	-0.01
FINLAND	--	--	0.66	3.13	-0.05	0.00	-0.05
IRELAND	--	--	0.30	16.85	-0.05	0.00	-0.05
NETHERLANDS	--	--	2.12	1.71	-0.13	0.00	-0.13
BELGIUM	--	--	1.05	12.98	-0.16	0.00	-0.16
SWEDEN	3.53	-9.49	2.11	-3.99	0.02	-0.23	-0.22
GERMANY	4.41	-5.17	6.70	-1.27	-0.09	-0.13	-0.22
DENMARK	--	--	1.40	24.41	-0.30	0.00	-0.30
ITALY	1.45	-16.51	1.74	2.99	0.09	-0.55	-0.47
FRANCE	2.96	-36.36	7.17	0.78	-0.14	-1.66	-1.80
UK	21.57	-18.20	14.27	-7.51	-0.08	-2.39	-2.47
<b>CASH</b>	<b>4.35</b>	<b>-0.59</b>	<b>0.00</b>	<b>0.00</b>	<b>0.05</b>	<b>0.00</b>	<b>0.05</b>

Source: Aberdeen Asset Management, BPSS, Datastream, USD, 31 Dec 15. **Past performance is not indicative of future results**

Performance is gross of fees and does not reflect advisory fees, had such fees been deducted, returns would have been lower. The return on cash includes several components such as bank interest and the foreign exchange impact from the conversion of foreign cash balances and dividend payments into the base currency

Benchmark: MSCI AC World ex US. Benchmark is constructed from country level and as such the top line figure may differ slightly from the official benchmark return

# Performance attribution – one year to end December 2015

## Sector attribution

	Fund		Benchmark		Net Management Effects		
	Weight	Return	Weight	Return	Allocation	Selection	Total
<b>TOTAL</b>	<b>100.00</b>	<b>-13.41</b>	<b>100.00</b>	<b>-5.30</b>	<b>0.19</b>	<b>-8.30</b>	<b>-8.11</b>
<b>EQUITIES</b>	<b>95.65</b>	<b>-13.73</b>	<b>100.00</b>	<b>-5.30</b>	<b>0.13</b>	<b>-8.30</b>	<b>-8.17</b>
<b>CONSUMER STAPLES</b>	<b>17.90</b>	<b>2.58</b>	<b>10.75</b>	<b>5.23</b>	<b>0.67</b>	<b>-0.41</b>	<b>0.26</b>
FOOD BEVERAGE & TOBACCO	14.88	11.64	6.59	5.98	0.81	0.65	1.46
HOUSEHOLD & PERSONAL PRODUCTS	1.50	--	2.31	15.94	-0.15	-0.04	-0.19
FOOD & STAPLES RETAILING	1.52	-48.05	1.86	-3.83	0.01	-1.02	-1.01
<b>ENERGY</b>	<b>5.89</b>	<b>-19.98</b>	<b>5.95</b>	<b>-21.46</b>	<b>0.05</b>	<b>0.04</b>	<b>0.09</b>
<b>INFORMATION TECHNOLOGY</b>	<b>9.56</b>	<b>-3.15</b>	<b>8.28</b>	<b>-1.28</b>	<b>-0.27</b>	<b>0.32</b>	<b>0.05</b>
SEMICONDUCTORS & SEMICONDUCTOR EQUIPMENT	3.55	0.52	1.60	-12.20	-0.10	0.42	0.32
TECHNOLOGY HARDWARE & EQUIPMENT	4.10	-6.70	3.42	-4.87	0.01	-0.02	0.00
SOFTWARE & SERVICES	1.90	--	3.27	12.57	-0.19	-0.09	-0.27
<b>UTILITIES</b>	<b>0.00</b>	<b>0.00</b>	<b>3.48</b>	<b>-8.77</b>	<b>0.03</b>	<b>-0.21</b>	<b>-0.18</b>
<b>HEALTH CARE</b>	<b>11.57</b>	<b>2.24</b>	<b>9.55</b>	<b>6.29</b>	<b>0.16</b>	<b>-0.40</b>	<b>-0.23</b>
HEALTH CARE EQUIPMENT & SERVICES	1.54	--	1.33	11.72	-0.01	-0.02	-0.03
PHARMACEUTICALS BIOTECHNOLOGY & LIFE SCIENCES	10.04	0.79	8.22	5.46	0.17	-0.37	-0.20
<b>CONSUMER DISCRETIONARY</b>	<b>0.00</b>	<b>0.00</b>	<b>12.16</b>	<b>-0.65</b>	<b>-0.51</b>	<b>0.00</b>	<b>-0.51</b>
CONSUMER SERVICES	--	--	1.12	-9.49	0.05	0.00	0.05
RETAILING	--	--	1.66	-1.79	-0.05	0.00	-0.05
MEDIA	--	--	2.04	0.33	-0.10	0.00	-0.10
CONSUMER DURABLES & APPAREL	--	--	2.41	1.48	-0.14	0.00	-0.14
AUTOMOBILES & COMPONENTS	--	--	4.93	0.54	-0.26	0.00	-0.26
<b>TELECOMMUNICATION SERVICES</b>	<b>8.35</b>	<b>-23.38</b>	<b>5.15</b>	<b>-3.94</b>	<b>0.02</b>	<b>-1.47</b>	<b>-1.45</b>
<b>INDUSTRIALS</b>	<b>14.82</b>	<b>-14.61</b>	<b>11.17</b>	<b>-3.14</b>	<b>0.11</b>	<b>-1.92</b>	<b>-1.81</b>
COMMERCIAL & PROFESSIONAL SERVICES	2.01	7.57	0.95	4.35	0.10	0.07	0.17
TRANSPORTATION	2.50	-16.87	2.75	-1.28	-0.02	-0.33	-0.35
CAPITAL GOODS	10.31	-17.67	7.47	-4.68	0.03	-1.66	-1.63
<b>FINANCIALS</b>	<b>19.69</b>	<b>-18.95</b>	<b>27.07</b>	<b>-7.97</b>	<b>0.31</b>	<b>-2.22</b>	<b>-1.91</b>
INSURANCE	5.90	-2.10	5.79	0.88	-0.01	-0.10	-0.11
DIVERSIFIED FINANCIALS	--	--	3.21	-1.30	-0.11	0.00	-0.11
REAL ESTATE	3.48	-14.74	3.57	-3.99	0.00	-0.39	-0.40
BANKS	10.31	-28.67	14.50	-13.14	0.43	-1.73	-1.30
<b>MATERIALS</b>	<b>7.86</b>	<b>-35.78</b>	<b>6.43</b>	<b>-19.53</b>	<b>-0.43</b>	<b>-2.03</b>	<b>-2.47</b>
<b>CASH</b>	<b>4.35</b>	<b>-0.59</b>	<b>0.00</b>	<b>0.00</b>	<b>0.05</b>	<b>0.00</b>	<b>0.05</b>

Source: Aberdeen Asset Management, BPSS, Datastream, USD, 31 Dec 15. **Past performance is not indicative of future results**

Performance is gross of fees and does not reflect advisory fees, had such fees been deducted, returns would have been lower. The return on cash includes several components such as bank interest and the foreign exchange impact from the conversion of foreign cash balances and dividend payments into the base currency

Benchmark: MSCI AC World ex US. Benchmark is constructed from sector level and as such the top line figure may differ slightly from the official benchmark return

# Performance attribution – one year to end December 2015

## Stock attribution

Best Performing						
Non-Hold	Stock	Closing Fund Weight	Closing Benchmark Weight	Contribution to Relative Return	Return in Benchmark	Modified Dietz Return
–	JAPAN TOBACCO	4.19	0.24	1.19	37.50	37.15
–	ROCHE	4.61	1.16	0.31	4.83	4.67
–	BRITISH AMERICAN TOBACCO	3.46	0.62	0.31	6.08	4.74
–	AIA GROUP	2.87	0.43	0.28	9.20	9.61
–	SAMSUNG ELECTRONICS	4.10	0.82	0.25	-7.88	0.32
–	FEMSA	2.50	0.10	0.24	6.92	4.43
–	EXPERIAN	2.01	0.10	0.24	7.35	7.57
–	FANUC	2.49	0.20	0.23	8.83	8.29
Non-Hold	BANCO SANTANDER	--	0.43	0.20	-37.80	--
–	NESTLE	3.74	1.42	0.18	4.46	3.67

Worst Performing						
Non-Hold	Stock	Closing Fund Weight	Closing Benchmark Weight	Contribution to Relative Return	Return in Benchmark	Modified Dietz Return
–	BANCO BRADESCO	1.72	0.10	-1.45	-51.92	-54.03
–	VALE	1.02	0.06	-1.39	-60.16	-62.56
–	MTN GROUP	1.40	0.08	-1.04	-52.18	-51.81
–	POTASH CORP	1.71	0.08	-1.01	-49.33	-50.03
–	CASINO	1.52	0.02	-0.97	-48.15	-48.05
–	WEIR GROUP	0.96	0.02	-0.71	-47.58	-48.47
–	ROLLS-ROYCE	1.48	0.09	-0.62	-35.80	-35.74
–	STANDARD CHARTERED	1.75	0.16	-0.60	-39.07	-39.13
–	ROYAL DUTCH SHELL	2.80	0.86	-0.51	-29.26	-30.47
–	CITY DEVELOPMENTS	1.33	0.01	-0.37	-29.33	-29.32

Source: Aberdeen Asset Management, BPSS, Datastream, Gross, USD, 31 Dec 15. **Past performance is not indicative of future results**

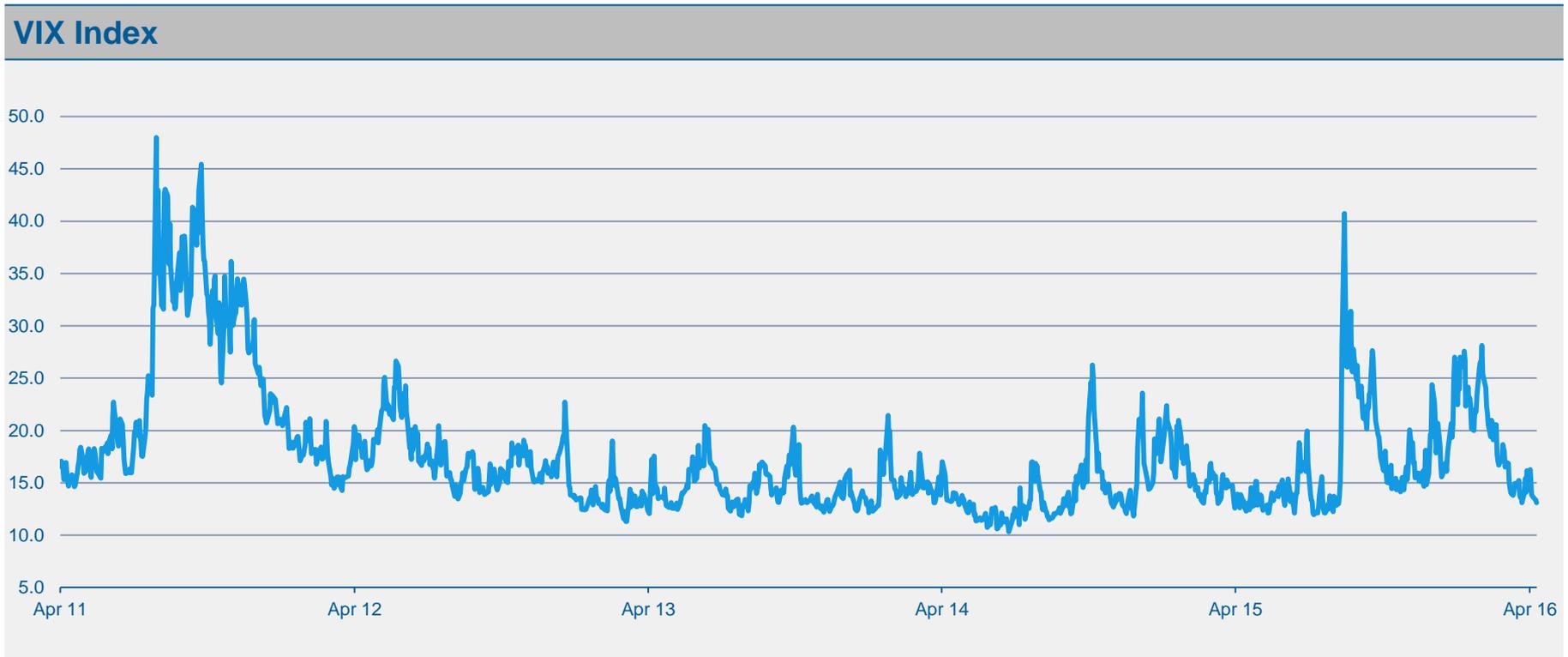
A full list of holdings is available upon request. This information should not be considered a recommendation to purchase or sell any security. There is no assurance that any securities discussed herein will remain in the fund at the time you receive this report or that securities sold have not been repurchased. Securities discussed do not represent the entire fund and in the aggregate may represent only a small percentage of the fund's holdings. The Modified Dietz Method takes into account the timing of cash flows, and assumes that there is a constant rate of return over a specified period of time. Benchmark: MSCI AC World ex US



# Fund activity

# Volatility – providing opportunities

- This has been a relatively active quarter – rising volatility has provided us with opportunities to initiate new holdings which have been on the watch list for some time, but where we have waited for valuations to become more attractive



Source: Bloomberg, Apr 16. **Past performance is not a guide to future results**  
For illustrative purposes only

# Fund activity – one year to end April 2016\*

	Stock Name	Date	Remarks
Initiated	Henkel	May-15	Initiated this German-listed household products business. It makes various chemical products including detergents and adhesives, with brands and technologies for consumer and industrial businesses. It has established market positions in its core portfolio. Business is tightly managed financially and has demonstrated the ability to earn solid returns on invested capital.
	Prudential	Sep-15	Introduced a new position in the UK-based insurance company, which has an attractive franchise and sound balance sheet.
	ITC	Oct-15	Dominant Indian tobacco company with strong raw material sourcing and distributions systems. Opportunities to leverage business and capitalize on growth opportunities.
	CSL	Nov-15	Introduced Australia-based biotechnology company CSL, which holds a solid market position in its core plasma business, and has growth opportunities in flu vaccines following the acquisition of Novartis' business.
	HDFC	Nov-15	Initiated a position in Indian bank HDFC, which has efficient operations and a well-capitalized balance sheet.
	Inmarsat	Dec-15	Initiated a position in this UK-listed telecommunications company that operates a global communications satellite system. The company benefits from high barriers to entry and has a very sticky customer base. It also has a clear growth strategy given their capabilities and the application of their technology in land, air and sea communications.
	L'Oreal	Jan-16	Initiated a position in L'Oreal, which has a strong portfolio of brands and has leading market shares in many of its key markets. The company generates stable returns and free cash flows and has a strong balance sheet. Recent market volatility has brought the valuation back to a more sensible entry point.
	MTR Corp	Jan-16	Initiated a position in the city rail operator in Hong Kong and China. Its unique rail and property model allows it to be a property developer as well as the largest land bank owner in Hong Kong. The latter providing attractive defensive qualities against an uncertain economic environment. Good operator with decent margins and a strong balance sheet and cash flows.
	Whitbread	Jan-16	Initiated a position in the UK company, which has consistently delivered strong returns from its market leading positions with Premier Inn and Costa. Potential opportunity for growth as the company looks to expand overseas. Recent volatility has brought the valuation back to a sensible point.
	Bayer	Feb-16	Initiated a position in German pharmaceutical Bayer, which has healthy returns on investment and holds steady margins. Its agriculture business is also well-placed to benefit from higher demand.
	Samsonite International	Feb-16	Initiated a position in Hong Kong-listed Samsonite International, which has strong brands, a solid balance sheet and a management team with a good track record of execution.
	Kasikornbank	Mar-16	Introduced a position in one of the leading commercial banks in Thailand, Kasikornbank. The bank benefits from a strong branch network and a market leading position in the SME segment. Management have focused on a customer-centric strategy, investing heavily in the bank's digital offering.
	Ayala Land	Apr-16	Initiated a position in Ayala Land, Diversified Philippines property player with mainly residential developments and recurring income from office and mall rentals as well as from hotels and resorts.
Keyence	Apr-16	Initiated a new position in Keyence which is well positioned to benefit from the expanding dive of automation and use of sensors. Market leader with strong balance sheet.	

Source: Aberdeen Asset Management, 30 Apr 16

\* Activity reflects strategic decisions over the period under review

# Fund activity – one year to end April 2016\*

Continued

	Stock Name	Date	Remarks
<b>Exited</b>	Schindler Holdings	Aug-15	Sold elevator and escalator manufacturer Schindler Holdings, on valuation and weakening end markets particularly China, which is the most important new installations market worldwide.
	South32	Sep-15	Sold out of the stock received from the BHP Billiton spin-off.
	Ericsson, Engie	Nov-15	Exited the positions to fund better opportunities elsewhere.
	Zurich Insurance	Jan-16	Exited the position. The European insurer faces a challenging operating environment with low yields and low interest rates. Our preference is towards AIA Group, which benefits from continued penetration of insurance products in Asia. Zurich Insurance has also struggled with management changes and poor results.
	Casino	Feb-16	Sold French retailer Casino, after it divested its Thai business, which we regarded as one of the attractive growth drivers of the company.
	Nordea Bank	Mar-16	Exited our position in Nordic bank, Nordea Bank. The company has done well since our initial investment and remains well capitalized, however compared to other investment opportunities we feel the business has limited future growth prospects and we are cautious over the exposure to the increasingly buoyant Nordic property market.
	Vale	Mar-16	Exited our remaining holding in Brazilian miner Vale on the back of a very strong rally in Brazilian assets year to date. This has been supported by the recent political news flow within Brazil and a sharp improvement in iron ore prices; however supply demand imbalances remain in this market.
	HSBC	Apr-16	Sold out given concerns over the continuing drag on returns from regulatory and compliance requirements to fund better opportunities.
	Schneider Electric	Apr-16	Sold the position to source the addition of Keyence, a more focused exposure to automation and sensors technology.

Source: Aberdeen Asset Management, 30 Apr 16

\* Activity reflects strategic decisions over the period under review



# Fund positioning

# Aberdeen EAFE Plus Fund

## Relative country positions

Country/Region	Fund 30 Apr 15%	Fund 30 Apr 16%	MSCI AC World ex USA%	Difference%
United Kingdom	21.70	22.41	13.92	8.49
Developed Asia ex Japan	11.33	16.44	8.56	7.87
Developed Middle East	0.96	2.47	0.51	1.96
Canada	4.80	4.42	6.85	-2.44
Emerging Markets	16.86	18.59	21.42	-2.84
Japan	10.39	12.26	16.47	-4.20
Europe ex UK	29.95	23.34	32.27	-8.92
Cash	4.01	0.07	0.00	0.07
<b>Total</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>0.00</b>

Source: Aberdeen Asset Management, BPSS, Datastream, Apr 15 & 16. Diversification does not ensure a profit or protect against a loss in a declining market  
Figures may appear not to add due to rounding

# Aberdeen EAFE Plus Fund

## Relative sector positions

Sector	Fund 30 Apr 15%	Fund 30 Apr 16%	MSCI AC World ex USA%	Difference%
Consumer Staples	15.23	<b>18.64</b>	11.01	7.62
Telecommunication Services	6.48	<b>9.64</b>	5.27	4.37
Information Technology	9.67	<b>12.03</b>	8.13	3.90
Health Care	9.86	<b>12.31</b>	8.96	3.35
Industrials	16.94	<b>12.59</b>	11.47	1.12
Materials	10.62	<b>6.85</b>	7.39	-0.54
Energy	6.64	<b>5.89</b>	6.74	-0.85
Utilities	0.98	<b>0.00</b>	3.55	-3.55
Financials	19.58	<b>19.02</b>	25.85	-6.83
Consumer Discretionary	0.00	<b>2.96</b>	11.64	-8.67
Cash	4.01	<b>0.07</b>	0.00	0.07
<b>Total</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>0.00</b>

Source: Aberdeen Asset Management, BPSS, Datastream, Apr 15 & 16. Diversification does not ensure a profit or protect against a loss in a declining market  
Figures may appear not to add due to rounding

# Aberdeen EAFE Plus Fund

Fund characteristics as at end April 2016

(%)	Aberdeen EAFE Plus Fund	MSCI AC World ex USA
P/E (x)	17.86	16.89
Dividend Yield	2.95	3.23
Dividend Growth (last 5 years)	11.68	10.01
Price/Book	2.02	1.50
Return on Assets (ROA)	7.06	5.18
Return on Equity (ROE)	18.20	14.44
Debt/Equity*	0.69	1.25

Source: Aberdeen Asset Management, 30 Apr 16

\* Excludes financials and insurance companies



# Outlook

# Outlook

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- We remain mindful of slowing global growth and uncertainty over policy-makers' next steps, particularly in the US where dollar strength has weighed on corporate profitability, and valuations are high.
- The lack of inflation is a common threat across the developed world as questions over the effectiveness of aggressive monetary policy in stimulating growth continue to grow.
- The potential impact of a more meaningful slowdown in China remains unknown, but policy makers appear to remain accommodating.
- In such an uncertain environment, we advocate caution in setting expectations for corporate earnings. However, we are ready to take advantage of opportunities that volatility creates where we are comfortable with quality.
- We expect our conservatively managed, cash flow generative and robustly financed business to continue to prove their worth in these challenging times.

# Disclaimer

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March 31, 2016



## Tucson Supplemental Retirement System

Investment Measurement Service  
Quarterly Review

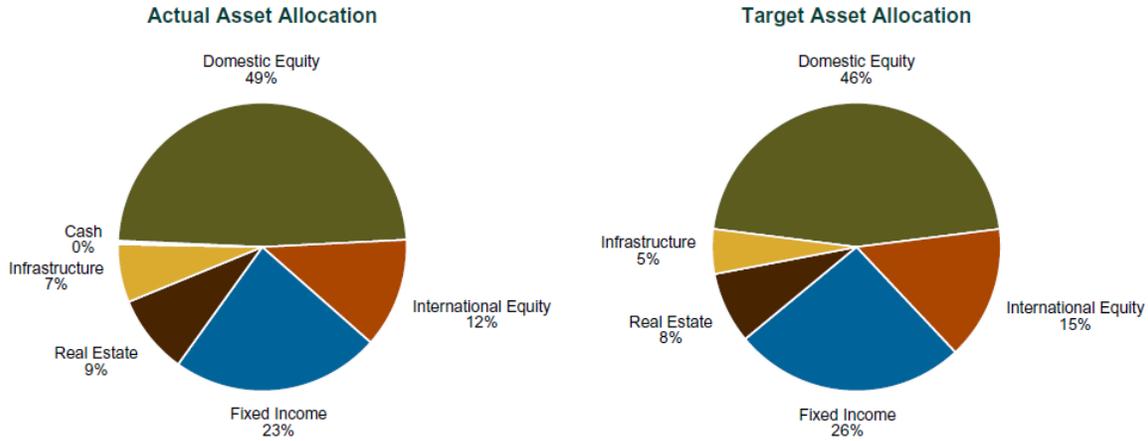
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## Tucson Supplemental Retirement System

### Executive Summary for Period Ending March 31, 2016

#### Asset Allocation



#### Total Fund Performance

##### Returns for Periods Ended March 31, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 years
<b>Total Fund Gross</b>	0.78%	0.26%	8.01%	8.14%	5.86%
<b>Total Fund Net</b>	0.68%	-0.19%	7.53%	7.61%	5.33%
<b>Total Fund Benchmark*</b>	1.62%	0.49%	7.20%	7.57%	5.77%

##### Fiscal Year Returns

	2016	2015	2014	2013	2012
<b>Total Fund Gross</b>	-0.50%	4.63%	19.64%	14.84%	2.40%
<b>Total Fund Net</b>	-0.80%	4.17%	19.11%	14.21%	1.82%
<b>Total Fund Benchmark*</b>	0.35%	4.34%	16.97%	12.87%	3.04%

\* Current Quarter Target = 36.0% S&P 500 Index, 26.0% Barclays Aggregate Index, 15.0% MSCI ACWI x US (Net), 10.0% Russell 2500 Index, 8.0% NFI-ODCE Value Weight Gr and 5.0% CPI-W+4.0%.

#### Recent Developments

- On April 6, 2016 Fidelity announced three executive-level promotions. Gerard McGraw, President of Fidelity Institutional, was named CFO of Fidelity's parent, FMR LLC, and will additionally lead a new Finance and Brokerage Operations team. Jeff Lagarce, President of FIAM, succeeds McGraw as President of Fidelity Institutional. Scott Couto, head of distribution for FIAM, will succeed Lagarce as President of FIAM.

#### Organizational Issues

- NA

## Active Manager Performance

Fund	Peer Group Ranking		
	Last Year	Last 3 Years	Last 5 Years
PIMCO Stocks Plus	42	43	16
T. Rowe Price Large Cap Growth	79	14	[28]
Champlain Mid Cap	2	18	17
FIAM Small Cap	21	22	12
Causeway International Value Equity	86	53	48
Aberdeen EAFE Plus	97	99	[90]
PIMCO Fixed Income	87	78	8
J.P. Morgan Strategic Property Fund	69	32	20
JP Morgan Income and Growth Fund	71	46	2

\* Brackets indicate actual performance linked with manager composite

- Aberdeen EAFE Plus – Callan’s Global Manager Research group maintains a positive view on Aberdeen’s Non-U.S. and Global equity strategies despite recent underperformance. Much of the recent slide has come from over exposures to Energy and Materials. We’ve questioned them on the “quality” of these exposures where they feel they’re holding companies with the highest quality managements and reserves. Given the across-the-board selloffs in these sectors throughout 2015 their quality bias has not protected them. This trend reversed in the most recent quarter with Aberdeen outperforming the benchmark (+2.8% versus -0.4%). Assets under management in the strategy were \$4.1 billion as of 3/31/16, which is down from the peak level of \$9.2 billion in 2013. Aberdeen’s performance is shown on pages 61 & 62.
- Macquarie Group holds a 36% interest in Brussels Airport, which is spread between two of their funds: MEIF I (10%) and MEIF III (26%). TSRS is in MEIF III (the Fund), which invested a total of €408.8 million in the airport in November of 2008. The Fund’s position is now valued at €885.8 million. Assets of the Fund are concentrated in two airport investments; Brussels Airport comprises 44% of the Fund and Copenhagen Airport constitutes 43%.

In March explosions went off in Brussels Airport. Macquarie reported the two explosions occurred in the departures area. The original worry was there could be structural damage to the airport, which would be expensive and time-consuming to repair. However, the damages were only cosmetic in nature and were covered by the insurance policy owned by the Fund. As a result of the attacks, the Brussels municipality and the Belgian government are now requiring an extra and extended layer of screening at the airport prior to check-in. This extra security is being outsourced to a third party and the costs are covered by the Belgian government and the Brussels municipality. Therefore, it does not affect the bottom line of the Fund. As a result of the damages and extra security, in April 2016 the airport was operating at 60% capacity in terms of passenger traffic. This led to a decline in operational performance, which is strongly driven by retail/shopping at the airport. However, in addition to covering damages, the airport’s insurance policy covers lost business

revenue, so the Fund will be compensated for any lost profits. Macquarie also reported that the extra security is temporary and expects it to be scaled back by mid-June.

Macquarie believes these attacks will have no material long term impact to the value of their investment in Brussels Airport. They added that the adverse effects should be limited to short term working capital, which is heavily mitigated by the insurance policy in place. The team did mention that insurance premiums are expected to rise for Brussels Airport; however, it does not anticipate that insurance premiums will rise for Copenhagen Airport or other assets. The initial life of MEIF III is scheduled to end in 2018, although there are two two-year extensions. The first is at the sole discretion of the General Partner, while the second requires approval from the Limited Partners.

Gordon Weightman, CFA  
Vice President

Paul Erlendson  
Senior Vice President

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## Don't Believe the Hype (or the Markets)

### ECONOMY

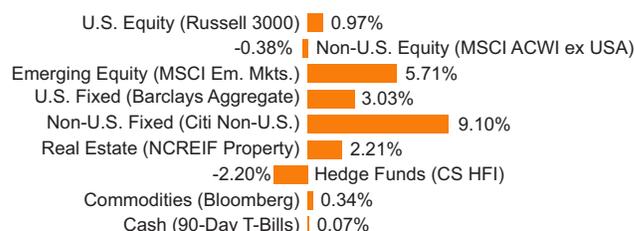
**2** The U.S. economy's expansion is now entering its seventh year. However, you'd hardly know it if you looked at the capital markets' reaction over the past nine months. First quarter GDP growth came in at a weak 0.5%, down from 1.4% the prior quarter.

## Progress Discounted

### FUND SPONSOR

**4** Global financial markets made little progress in the first quarter. Corporate funds beat other fund types, due in part to their high U.S. fixed income exposure. Endowments/foundations trailed due to more exposure to non-U.S. equity and less to U.S. fixed income.

## Broad Market Quarterly Returns



Sources: Barclays, Bloomberg, Citigroup, Credit Suisse Hedge Index, Merrill Lynch, MSCI, NCREIF, Russell Investment Group

## Tale of Two Halves

### U.S. EQUITY

**6** The first quarter of 2016 was a tale of two halves. The **S&P 500 Index** declined in the first half only to reverse course and post a positive quarterly return (+1.35%). Large capitalization companies held their lead over small cap, but in a trend of reversals, value overtook growth across capitalizations.

## Mr. Draghi's Wild Ride

### NON-U.S. EQUITY

**9** Non-U.S. equity markets endured a rocky January and February, but managed to rally in March to finish at a modest loss (**MSCI ACWI ex USA Index**: -0.38%). The **MSCI Emerging Markets Index** (+5.71%) bounced much higher than its developed counterpart (**MSCI World ex USA**: -1.95%).

## More T-Bills, Please

### U.S. FIXED INCOME

**12** Yields plummeted during a volatile first quarter. A dovish Fed fostered uncertainty over global economic growth. The **Barclays Aggregate Index** gained 3.03% and the **Barclays Corporate High Yield Index** was up 3.35%.

## A Dole of Doves

### NON-U.S. FIXED INCOME

**15** Sovereign debt surged in the first quarter, driven by risk-on sentiment and the U.S. dollar's relative weakness. The **Citi Non-U.S. World Government Bond Index** jumped 9.10%. The hard currency **JPM EMBI Global Diversified Index** rose 5.04% while the local currency **JPM GBI-EM Global Diversified** soared 11.02%.

## Slow and Low

### REAL ESTATE

**17** The **NCREIF Property Index** advanced 2.21% and the **NCREIF Open End Diversified Core Equity Index** earned 2.18%, the lowest quarterly return since 2010. Capital flows to core funds continued to decline, as more investors reached their allocation targets.

## Drip, Drip, Drip

### PRIVATE EQUITY

**19** Liquidity in the private equity market declined notably. Fundraising and company investments held relatively steady. Venture capital fundraising was surprisingly strong given the drop-off in IPO activity due to zig-zagging public equity markets.

## Market Tremors Panic Hedge Funds

### HEDGE FUNDS

**20** Investor pessimism over softening global growth slammed stocks and commodities. The **Credit Suisse Hedge Fund Index** sank 2.20% and the median manager in the **Callan Hedge Fund-of-Funds Database** fell 2.99%.

## Strong Quarter Can't Save 2015

### DEFINED CONTRIBUTION

**21** The Callan DC Index™ finished 2015 with a strong 3.50% gain in the fourth quarter. Nonetheless, the DC Index turned out a negative 2015 calendar year return: -0.34%, the weakest annual return since 2011.

# Don't Believe the Hype (or the Markets)

ECONOMY | Jay Kloepfer

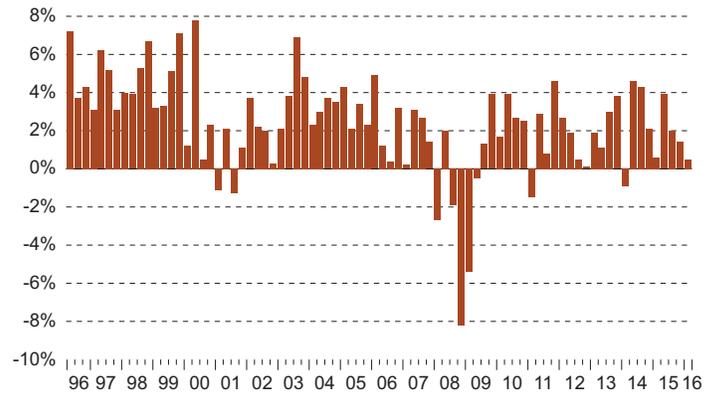
The U.S. economy's expansion—while subpar relative to past expansions in the 1980s and 1990s—has been slowly building strength and is now entering its seventh year. However, you'd hardly know it if you looked at the capital markets' reaction over the past nine months. Concerns about China, a slowing global recovery, political uncertainty in more than a few countries, and an unclear path as to future interest rates have all spurred investors to swing wildly from lows to highs and back again, all while the broad underlying economic data remain solid.

The National Bureau of Economic Research tracks four monthly indicators in order to identify turning points in the economic cycles. Only one of those—industrial production—is declining, and that decline began back in 2014, when the collapse in oil prices hit the mining sector and the U.S. dollar began to rally, hampering U.S. manufacturing and exports. The other three indicators show no signs of a slowdown, let alone a decline: employment, personal incomes, and real business sales. Adding to this incongruity is the first report on GDP growth for the first quarter of 2016. It came in at a weak 0.5%, down from 1.4% in the fourth quarter of 2015. Almost all economic indicators have been more upbeat than GDP over the past year or two, suggesting that the sum has been less than the parts, that we are misrepresenting economic growth with our GDP calculation, or that we are misreading the headwinds to aggregate growth.

Real GDP growth has continued a familiar pattern, showing anemic first-quarter growth in five of the past six years. Such a pattern is a recent development in U.S. economic history, and suggests (to us) that part of this weakness may in fact be a problematic seasonal-adjustment process within the data calculation. Consumer spending grew 1.9% in the quarter, with the bulk of that growth occurring in services (2.7% gain). The brightest spot was a 14.8% jump in housing, which contributed almost 0.5% to total GDP growth. The residential housing market has finally turned the corner after the plunge that began in late 2005, and several markets on the coasts and in a few other

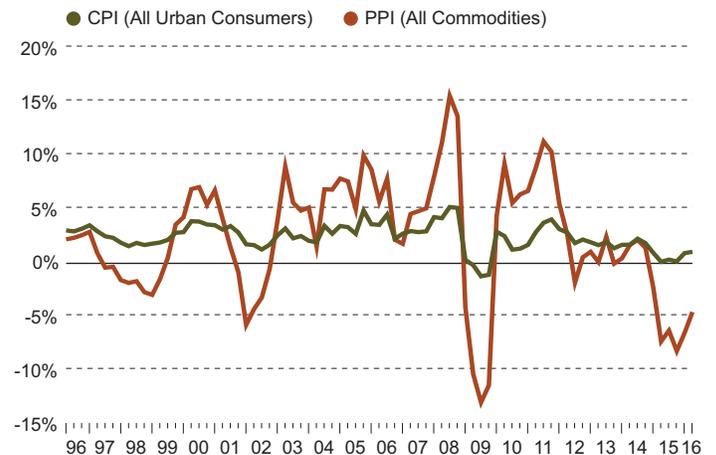
## Quarterly Real GDP Growth

(20 Years)



Source: Bureau of Economic Analysis

## Inflation Year-Over-Year



Source: Bureau of Labor Statistics

large metro areas are seeing substantial gains in existing home prices and sales. However, housing was the only bright spot in private domestic investment as non-residential sectors suffered declines, led by a 10.7% drop in structures.

The plunge in oil prices early in 2016 triggered another sharp decline in energy-sector capital spending, a trend that has hampered the sector since the initial oil price collapse in 2014. The cause of the drop in equipment spending is less

clear, but may be traced to corporate caution following the stock market turmoil that began last summer and reappeared with a vengeance this past January and February.

The continuing drag from inventories was larger than expected in the first quarter, but on the plus side, it appears that the bulk of the inventory adjustment is now behind us. The rebound in energy prices in March may spell the end of the rout in the energy sector. These factors, combined with signs of continuing economic growth, give businesses confidence and are likely to limit the decline in business fixed investment. The forward-looking Institute for Supply Management activity indices, which measure sentiment for business investment in manufacturing and non-manufacturing areas, are both back above 50, the dividing line between expansion and contraction, and are at levels consistent with GDP growth in excess of 2%.

Concerns about China's growth and its role in restraining confidence elsewhere in the global economy have fueled negative investor sentiment and subsequent capital market volatility. China adopted a new Five-Year Plan with a goal of GDP growth averaging at least 6.5% during 2016-2020. History suggests that goal may be ambitious for an economy that has reached China's level of current development. Official figures stated growth averaging 7.8% per year from 2011-2015, but economists from Capital Economics, a research consultancy based in London, and other forecasters estimate that growth has been closer to 6.5%. A more reasonable estimate for China's economy for the next five years may be closer to 5%; however, a figure that far below the official target could spur further stimulus from the Chinese government, increasing the medium-term risks to growth.

**Recent Quarterly Indicators**

Economic Indicators	1Q16	4Q15	3Q15	2Q15	1Q15	4Q14	3Q14	2Q14
Employment Cost–Total Compensation Growth	1.9%	2.0%	2.0%	2.0%	2.6%	2.2%	2.2%	2.0%
Nonfarm Business–Productivity Growth	-0.3%*	-2.2%	2.0%	3.1%	-0.8%	-1.7%	3.1%	2.4%
GDP Growth	0.5%	1.4%	2.0%	3.9%	0.6%	2.1%	4.3%	4.6%
Manufacturing Capacity Utilization	75.4%	75.4%	75.6%	75.5%	75.5%	76.0%	75.7%	75.1%
Consumer Sentiment Index (1966=100)	91.5	91.3	90.8	94.2	95.5	89.8	83.0	82.8

\*Estimate.

Sources: Bureau of Economic Analysis, Bureau of Labor Statistics, Federal Reserve, IHS Economics, Reuters/University of Michigan.

**The Long-Term View**

Index	2016 1st Qtr	Periods ended December 31, 2015			
		Year	5 Yrs	10 Yrs	25 Yrs
<b>U.S. Equity</b>					
Russell 3000	0.97	0.48	12.18	7.35	10.03
S&P 500	1.35	1.38	12.57	7.31	9.82
Russell 2000	-1.52	-4.41	9.19	6.80	10.50
<b>Non-U.S. Equity</b>					
MSCI EAFE	-3.01	-0.81	3.60	3.03	5.40
MSCI Emerging Markets	5.71	-14.92	-4.80	3.61	–
S&P ex-U.S. Small Cap	0.52	5.92	5.51	5.33	6.80
<b>Fixed Income</b>					
Barclays Aggregate	3.03	0.55	3.25	4.51	6.15
90-Day T-Bill	0.07	0.05	0.07	1.24	2.93
Barclays Long G/C	7.30	-3.30	6.98	6.45	8.08
Citi Non-U.S. Govt	9.10	-5.54	-1.30	3.05	5.37
<b>Real Estate</b>					
NCREIF Property	2.21	13.33	12.18	7.76	8.05
FTSE NAREIT Equity	6.00	3.20	11.96	7.41	12.13
<b>Alternatives</b>					
CS Hedge Fund	-2.20	-0.71	3.55	4.97	–
Cambridge PE*	–	8.66	14.70	11.80	15.74
Bloomberg Commodity	0.42	-24.66	-13.47	-6.43	–
Gold Spot Price	16.54	-10.46	-5.70	7.41	4.02
<b>Inflation – CPI-U</b>	0.68	0.73	1.53	1.86	2.30

\*Private equity data are time-weighted returns for periods ended September 30, 2015.

Sources: Barclays, Bloomberg, Citigroup, Credit Suisse, FTSE, MSCI, NCREIF, Russell Investment Group, Standard & Poor's, Thomson/Cambridge, Bureau of Economic Analysis.

The strong dollar has been a significant drag on U.S. exports and manufacturing. It has also certainly lowered the cost of imports, particularly energy. The dollar reached its most recent peak in January, but has since declined sharply. The rebound in commodity prices and a scaling back of expectations for the Fed to raise rates will continue to dictate the dollar's course over the next two years.

# Progress Discounted

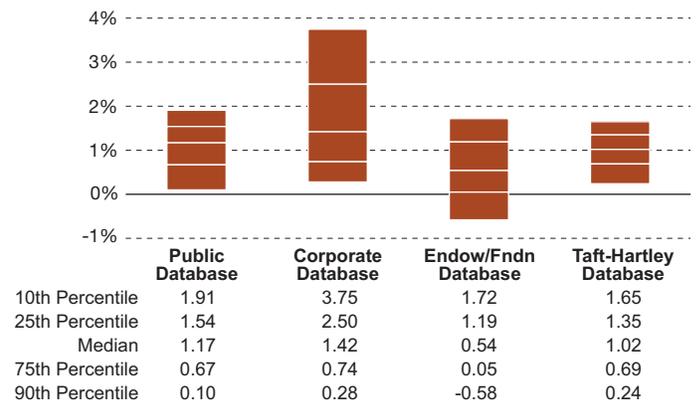
FUND SPONSOR | Rufash Lama

Global financial markets made little progress in the first quarter, as concerns over sluggish economic growth and falling oil prices led to sharp declines through mid-February. However, U.S. equity and fixed income markets staged a strong rally to end the quarter in the black. Non-U.S. equity markets (**MSCI ACWI ex USA Index**: -0.38%) lagged U.S. equity markets (**S&P 500 Index**: +1.35%) amid concerns over economic growth. The Federal Reserve's decision to delay rate hikes supported U.S. bonds (**Barclays Aggregate**: +3.03%), which nonetheless trailed the non-U.S. fixed income markets (**Citi Non-U.S. World Government Bond Index**: +9.10%).

The funded status of corporate plans deteriorated over the quarter as liabilities outgrew assets. The median and average funded status of U.S. corporate defined benefit plans fell to 80.0% and 79.9%, respectively, based on a peer group\* of seven different funded ratio measures. While assets grew for the quarter, liabilities rose faster due to a fall in discount rates.

Looking at the Callan Fund Sponsor Quarterly Returns table, we see corporate funds outperformed other fund types at the median and across percentiles. Performance dispersion was highest in the 10th percentile: corporate funds gained 3.75%,

## Callan Fund Sponsor Returns for the Quarter



Source: Callan

due in part to their high U.S. fixed income exposure, while at the low end of the spectrum Taft-Hartley funds ended the quarter at +1.65%. Endowments/foundations trailed significantly in the 90th percentile at -0.58%. Overall, endowments/foundations performed the worst due to a relatively high exposure to non-U.S. equity and low exposure to U.S. fixed income. Public funds were buoyed by greater exposure to non-U.S. fixed income as accommodative central bank policies helped fixed income markets stage a strong rally. The Barclays Global Aggregate Index gained 5.90% for the quarter.

## Callan Database Median and Index Returns\*\* for Periods ended March 31, 2016

Fund Sponsor	Quarter	Year	3 Years	5 Years	10 Years	15 Years
Public Database	1.17	-1.03	6.02	6.41	5.39	6.09
Corporate Database	1.42	-1.91	5.47	6.41	5.54	6.17
Endowments/Foundations Database	0.54	-2.72	4.79	5.48	5.11	5.85
Taft-Hartley Database	1.02	-0.13	6.56	6.73	5.27	5.76
Diversified Manager	Quarter	Year	3 Years	5 Years	10 Years	15 Years
Asset Allocator Style	0.76	-2.12	6.00	6.41	5.72	6.48
U.S. Balanced Database	1.46	-1.59	5.78	6.33	5.57	6.12
Global Balanced Database	0.45	-4.20	3.11	4.60	5.08	7.30
60% Russell 3000 + 40% Barclays Agg	1.79	0.73	7.73	8.35	6.53	6.27
60% MSCI World + 40% Barclays Gbl Agg	2.15	-0.11	4.51	4.77	4.58	5.38

\* The peer group includes funded ratio measures provided by large, institutional investment and actuarial consultants, as well as investment management firms.

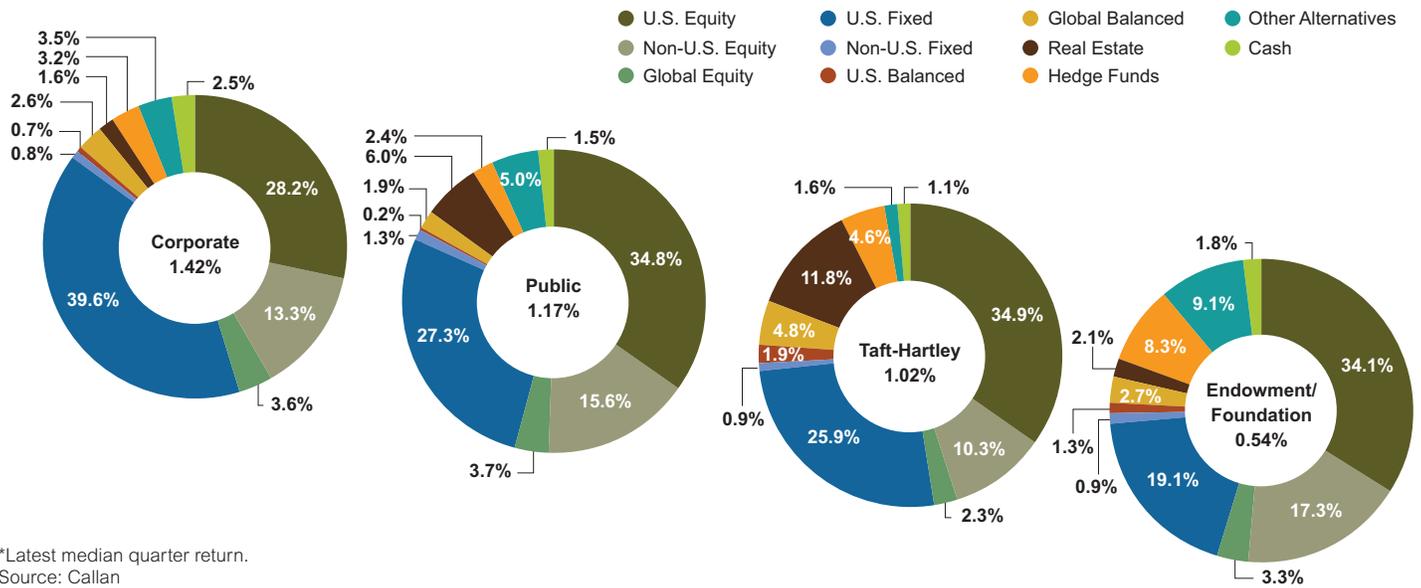
\*\*Returns less than one year are not annualized.

Sources: Callan, Barclays, MSCI, Russell Investment Group.

While one-year returns were consistently in the red, all fund types maintained performance in the +5% – +7% range for longer time periods. Taft-Hartley funds kept their lead over other fund types during three- and five-year periods, and corporate funds boasted the top returns over longer periods (10 and 15 years). Although the blended 60% Russell 3000 + 40% Barclays

Aggregate Index (+1.79%) trailed the 60% MSCI World + 40% Barclays Global Aggregate Index (+2.15%) for the quarter, the U.S.-based benchmark continues to outperform over longer time periods. Callan's U.S. Balanced Database group maintained its edge over the Global Balanced Database group across all but the longest time periods shown in the table.

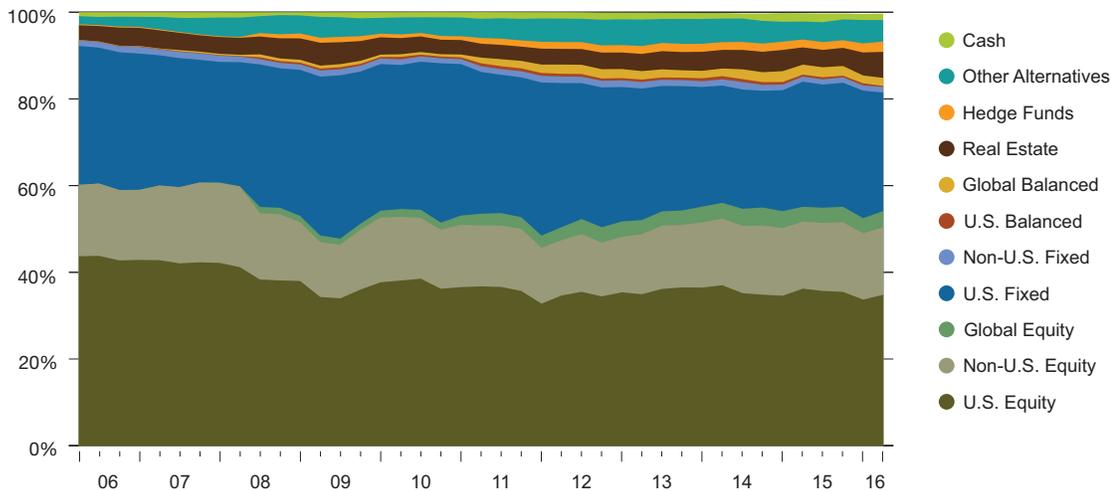
Callan Fund Sponsor Average Asset Allocation



\*Latest median quarter return. Source: Callan

Callan Public Fund Database Average Asset Allocation

(10 Years)



Source: Callan

# Tale of Two Halves

U.S. EQUITY | Lauren Mathias, CFA

The first quarter of 2016 was a tale of two halves: the **S&P 500 Index** declined in the first half only to reverse course and post a positive quarterly return (+1.35%). Large cap companies held their lead over small cap, but in the trend of reversals, value overtook growth in all capitalizations. (**Russell 1000 Index**: +1.17% and **Russell 2000 Index**: -1.52%; **Russell 1000 Value Index**: +1.64% and **Russell 1000 Growth Index**: +0.74%).

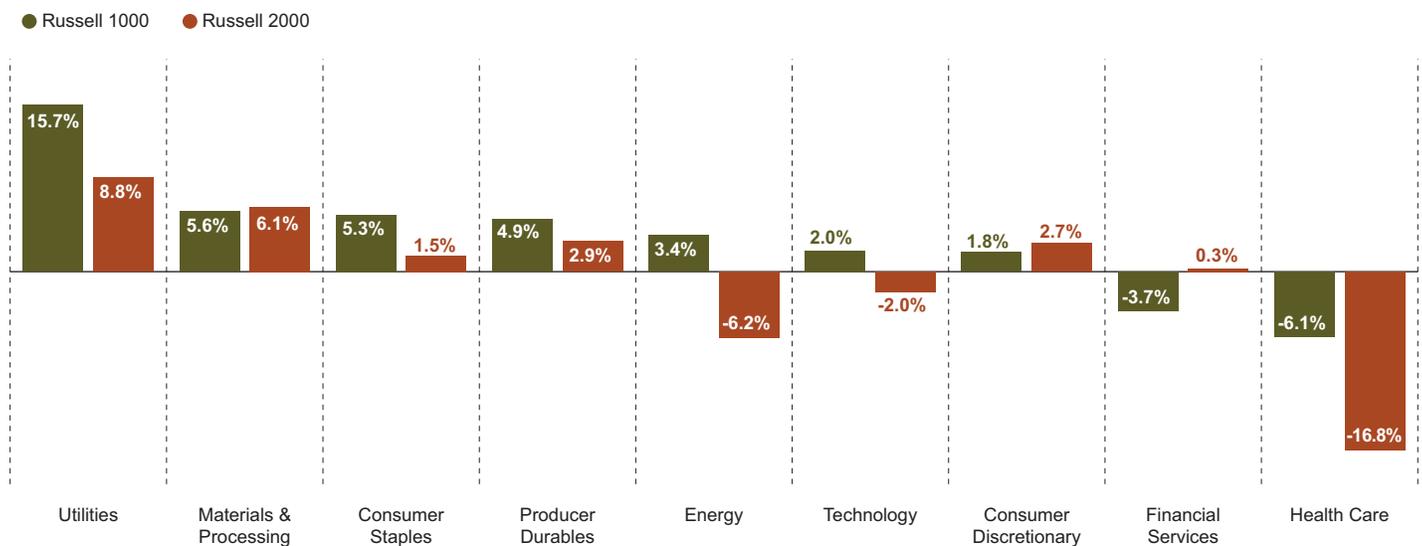
Though the S&P 500 Index ended in positive territory, during the quarter performance dipped 10%. This is the first time since the Great Depression that the S&P fell to this depth only to rebound and end in the black. January was a disappointing month as economic concerns lingered from 2015. But in February and March, U.S. manufacturing activity grew, fourth-quarter 2015 GDP was revised to 1.4% from 1.0%, the labor force participation rate expanded to 63% (from 62.4%), and the U.S. economy added 215,000 jobs in March alone. Global concerns around

the price of oil abated as the crude oil spot price ended the quarter at \$38/barrel after bottoming at \$26/barrel in mid-February. Investor sentiment rose in tandem with these positive developments. Despite some improvement, the U.S. Federal Reserve stated that global economic and financial developments continued to pose risks, and thus maintained the target range for the federal funds rate at 0.25%–0.50%.

Growth lost its lead over value. The difference was most significant within small cap (**Russell 2000 Growth Index**: -4.68% and **Russell 2000 Value Index**: +1.70). Micro and small cap companies declined while mid and large cap advanced (**Russell Microcap Index**: -5.43%, **Russell 2000 Index**: -1.52%, and **Russell Midcap Index**: +2.24%, **Russell 1000 Index**: +1.17%).

Sector performance over the quarter also revealed reversals. Cyclical areas like Energy, Industrials, and Materials added

## Economic Sector Quarterly Performance



Source: Russell Investment Group

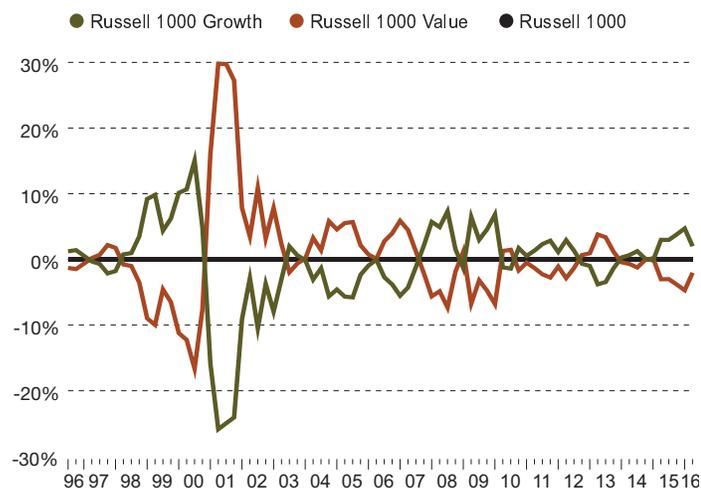
Note: As of the fourth quarter of 2015, the Capital Markets Review reports sector-specific returns using the Russell Global Sectors (RGS) classification system rather than the Global Industry Classification Standard (GICS) system. RGS uses a three-tier classification system containing nine sectors; GICS uses a four-tier system containing ten sectors.

value, and the interest rate-sensitive Utilities sector expanded, but typically defensive Health Care trailed. Not only did sectors turnabout, so did factors—valuation metrics such as price/book and yield outpaced growth metrics such as projected EPS growth and price momentum. Volatility of stocks, as measured by the daily VIX, increased during February’s pullback, ending the quarter near average levels. Correlations remained well above long-term averages and spreads between stock returns

were below average (both based on the S&P 500 universe)—a difficult environment for stock-picking strategies.

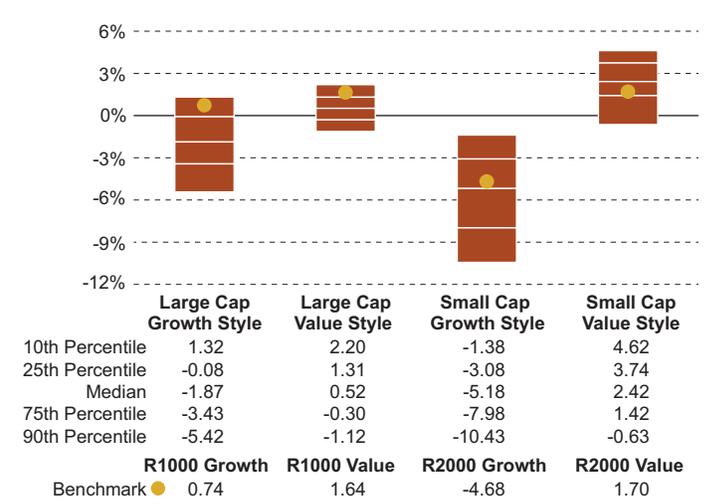
The U.S. equity market had a tumultuous start to the year, but found itself in positive territory by quarter end. This tale of two halves made it challenging for active management, with just 19% of large cap funds outperforming the S&P 500 Index during the quarter.

**Rolling One-Year Relative Returns** (vs. Russell 1000)



Source: Russell Investment Group

**Callan Style Group Quarterly Returns**



Sources: Callan, Russell Investment Group

**U.S. Equity Index Characteristics as of March 31, 2016**

	S&P 500	Rus 3000	Rus 1000	Rus Midcap	Rus 2500	Rus 2000
Cap Range Min (\$mm)	1,401	5	147	147	5	5
Cap Range Max (\$bn)	604.30	627.89	627.89	20.34	5.97	3.77
Number of Issues	504	2,978	1,017	818	2,468	1,957
% of Russell 3000	82%	100%	92%	27%	17%	7%
Wtd Avg Mkt Cap (\$bn)	128.89	107.53	116.14	12.43	4.13	1.90
Price/Book Ratio	2.7	2.6	2.6	2.4	2.1	1.9
Forward P/E Ratio	16.7	17.0	16.8	18.4	18.5	18.8
Dividend Yield	2.2%	2.1%	2.1%	1.8%	1.7%	1.6%
5-Yr Earnings (forecasted)	10.3%	10.7%	10.5%	9.4%	11.5%	13.1%

Sources: Russell Investment Group, Standard & Poor’s.

## U.S. EQUITY (Continued)

### Callan Style Median and Index Returns\* for Periods ended March 31, 2016

<b>Large Cap Equity</b>	<b>Quarter</b>	<b>Year</b>	<b>3 Years</b>	<b>5 Years</b>	<b>10 Years</b>	<b>15 Years</b>
<b>Large Cap Core Style</b>	<b>-0.12</b>	<b>-0.84</b>	<b>11.55</b>	<b>11.43</b>	<b>7.32</b>	<b>6.67</b>
<b>Large Cap Growth Style</b>	<b>-1.87</b>	<b>0.44</b>	<b>13.05</b>	<b>11.51</b>	<b>8.10</b>	<b>6.14</b>
<b>Large Cap Value Style</b>	<b>0.52</b>	<b>-2.37</b>	<b>9.67</b>	<b>10.25</b>	<b>6.40</b>	<b>7.20</b>
<b>Aggressive Growth Style</b>	<b>-3.86</b>	<b>-1.09</b>	<b>11.81</b>	<b>9.50</b>	<b>7.24</b>	<b>6.65</b>
<b>Contrarian Style</b>	<b>0.34</b>	<b>-4.94</b>	<b>9.21</b>	<b>9.77</b>	<b>6.14</b>	<b>7.33</b>
<b>Yield-Oriented Style</b>	<b>2.30</b>	<b>-0.92</b>	<b>9.16</b>	<b>9.88</b>	<b>6.97</b>	<b>7.63</b>
Russell 3000	0.97	-0.34	11.15	11.01	6.90	6.38
Russell 1000	1.17	0.50	11.52	11.35	7.06	6.28
Russell 1000 Growth	0.74	2.52	13.61	12.38	8.28	6.03
Russell 1000 Value	1.64	-1.54	9.38	10.25	5.72	6.41
S&P Composite 1500	1.57	1.18	11.53	11.34	7.05	6.37
S&P 500	1.35	1.78	11.82	11.58	7.01	5.99
NYSE	1.33	-3.91	6.67	8.39	5.70	6.31
Dow Jones Industrials	2.20	2.08	9.29	10.27	7.54	6.55
<b>Mid Cap Equity</b>	<b>Quarter</b>	<b>Year</b>	<b>3 Years</b>	<b>5 Years</b>	<b>10 Years</b>	<b>15 Years</b>
<b>Mid Cap Core Style</b>	<b>1.04</b>	<b>-3.68</b>	<b>10.56</b>	<b>10.37</b>	<b>7.71</b>	<b>9.87</b>
<b>Mid Cap Growth Style</b>	<b>-2.14</b>	<b>-7.69</b>	<b>9.55</b>	<b>8.50</b>	<b>7.47</b>	<b>8.31</b>
<b>Mid Cap Value Style</b>	<b>2.03</b>	<b>-4.34</b>	<b>9.72</b>	<b>10.02</b>	<b>7.85</b>	<b>10.16</b>
Russell Midcap	2.24	-4.04	10.45	10.30	7.45	9.11
S&P MidCap 400	3.79	-3.60	9.46	9.52	7.78	9.42
<b>Small Cap Equity</b>	<b>Quarter</b>	<b>Year</b>	<b>3 Years</b>	<b>5 Years</b>	<b>10 Years</b>	<b>15 Years</b>
<b>Small Cap Core Style</b>	<b>-0.20</b>	<b>-6.50</b>	<b>9.29</b>	<b>9.75</b>	<b>7.07</b>	<b>10.28</b>
<b>Small Cap Growth Style</b>	<b>-5.18</b>	<b>-13.12</b>	<b>7.24</b>	<b>7.69</b>	<b>6.31</b>	<b>8.07</b>
<b>Small Cap Value Style</b>	<b>2.42</b>	<b>-4.93</b>	<b>8.92</b>	<b>9.09</b>	<b>6.92</b>	<b>10.77</b>
Russell 2000	-1.52	-9.76	6.84	7.20	5.26	7.65
S&P SmallCap 600	2.66	-3.20	10.39	10.41	6.99	9.60
NASDAQ	-2.43	0.55	15.63	13.28	8.78	7.67
<b>Smid Cap Equity</b>	<b>Quarter</b>	<b>Year</b>	<b>3 Years</b>	<b>5 Years</b>	<b>10 Years</b>	<b>15 Years</b>
<b>Smid Cap Broad Style</b>	<b>0.09</b>	<b>-7.42</b>	<b>8.93</b>	<b>8.73</b>	<b>7.57</b>	<b>9.73</b>
<b>Smid Cap Growth Style</b>	<b>-3.51</b>	<b>-9.97</b>	<b>8.27</b>	<b>8.34</b>	<b>6.78</b>	<b>8.92</b>
<b>Smid Cap Value Style</b>	<b>3.00</b>	<b>-5.56</b>	<b>8.32</b>	<b>8.43</b>	<b>7.42</b>	<b>10.79</b>
Russell 2500	0.39	-7.31	8.16	8.58	6.47	8.76
S&P 1000	3.45	-3.47	9.75	9.80	7.51	9.46
<b>Russell 3000 Sectors</b>	<b>Quarter</b>	<b>Year</b>	<b>3 Years</b>	<b>5 Years</b>	<b>10 Years</b>	<b>15 Years</b>
Consumer Discretionary	1.88	2.43	13.87	15.59	9.79	—
Consumer Staples	5.22	12.19	13.98	15.64	12.35	—
Energy	3.13	-18.92	-6.73	-3.91	2.57	—
Financial Services	-3.30	-2.34	10.03	9.91	0.69	—
Health Care	-7.05	-7.62	15.51	17.25	10.20	—
Materials & Processing	5.70	-4.62	6.38	5.70	5.56	—
Producer Durables	4.76	0.59	11.59	10.27	6.42	—
Technology	1.73	4.51	15.91	11.85	8.91	—
Utilities	15.23	15.78	10.78	11.98	8.16	—

\*Returns less than one year are not annualized.

Sources: Callan, Dow Jones & Company, Russell Investment Group, Standard & Poor's, The NASDAQ Stock Market.

# Mr. Draghi's Wild Ride

NON-U.S. EQUITY | Kevin Nagy

Non-U.S. equity markets endured a rocky January and February but rallied in March to finish at a modest loss (**MSCI ACWI ex USA Index: -0.38%**). Emerging markets (**MSCI Emerging Markets Index: +5.71%**) did better than their developed counterparts (**MSCI World ex USA: -1.95%**).

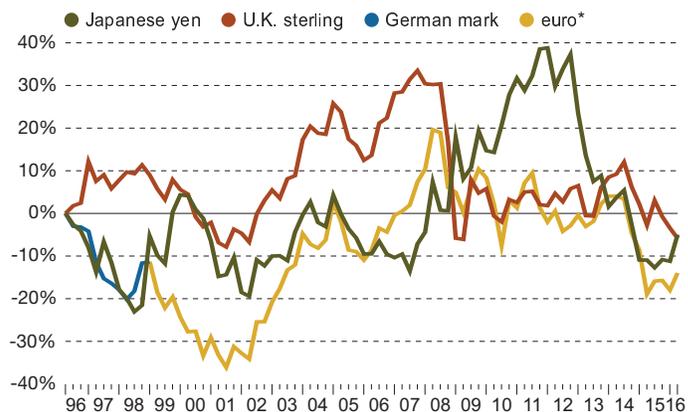
Falling oil prices, concerns about global economic growth, and declining corporate profits prompted a January sell-off, as many investors switched to a "risk-off" footing. Announcements of further European Central Bank (ECB) monetary stimulus and a modest rebound in commodity prices helped kick-start a comeback in February and March, but were not enough to drive the broader non-U.S. indices into the black.

The MSCI Emerging Markets Index (+5.71%) handily surpassed the MSCI World ex USA Index (-1.95%). Small cap stocks rode the rally further than large cap and posted a slight positive return, due to strong performance in the Utilities sector (**MSCI ACWI ex USA Small Cap Index: +0.68%**). Sector results were mixed: Energy (+9.81%) and Materials (+7.20%) were strongest while Health Care and Financials retreated (-7.50% and -4.96%, respectively).

European stocks were unable to complete their rebound despite further rate cuts and bond purchases by the ECB (**MSCI Europe Index: -2.51%**). The banking sector was hurt by slashed interest rates. Health Care also struggled, dropping 7.45% amid renewed political tension over rising drug prices. The Netherlands (+3.35%) was the top performer in Europe due to strong domestic performance from Energy (+15.73%) and Consumer Discretionary (+12.32%). Italy (-11.66%) was the worst performer; its Financial sector lost 25.84% due to Italian banks carrying massive amounts of non-performing loans on their balance sheets.

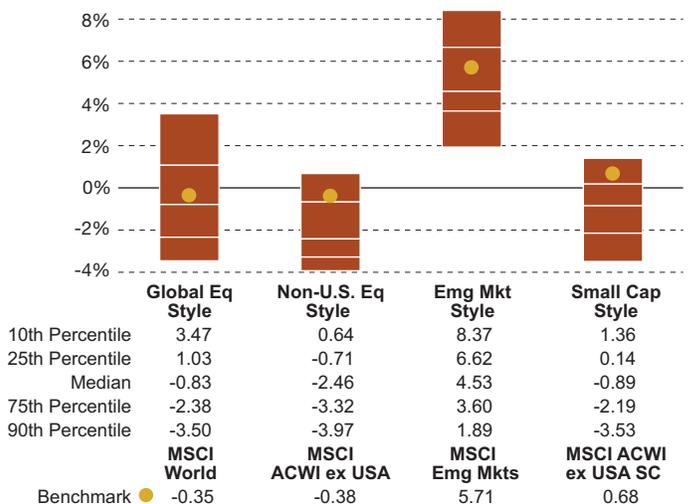
Southeast Asia and the Pacific (**MSCI Pacific Index: -3.79%**) underperformed Europe and other broad benchmarks. Japan

## Major Currencies' Cumulative Returns (vs. U.S. Dollar)



\*euro returns from 1Q99  
Source: MSCI

## Callan Style Group Quarterly Returns



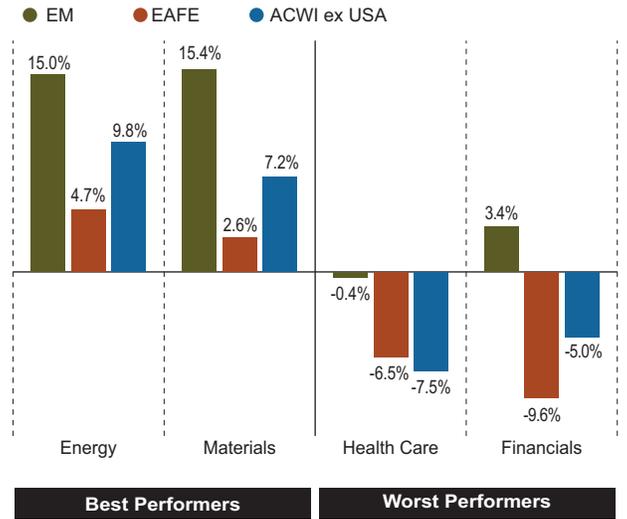
Sources: Callan, MSCI

(-6.52%) battled with tepid economic growth and large losses in the banking sector. The Financial sector was hit especially hard, losing 13.58%. Exporters also struggled due to the strengthening yen. Things were less gloomy in the rest of the region with New Zealand (+11.60%), Singapore (+5.05%), and Australia (+2.10%) benefitting from a commodities rally.

## NON-U.S. EQUITY (Continued)

China (-4.80%) continued to struggle due to concerns over slowing growth and ineffective monetary policy. In an effort to sustain the economy's growth, Chinese authorities implemented selective capital controls to slow asset withdrawals and cut the required reserve ratio. Consumer Discretionary (-10.75%), Financials (-9.68%), and Health Care (-6.65%) were three significant detractors. In keeping with the rest of the world, surging commodity prices buoyed Energy (+6.75%) and Materials (+7.26%). Latin America was the big winner of the first quarter as Brazil, Colombia, Chile, and Peru (+28.58%, +22.49%, +13.25%, and +27.02%) made the **MSCI Latin America Index** the top-performing regional index at +19.23%. The real appreciated 12% against the dollar on the back of the commodities rally and the prospect of political change.

## Quarterly Returns: Strong and Struggling Sectors



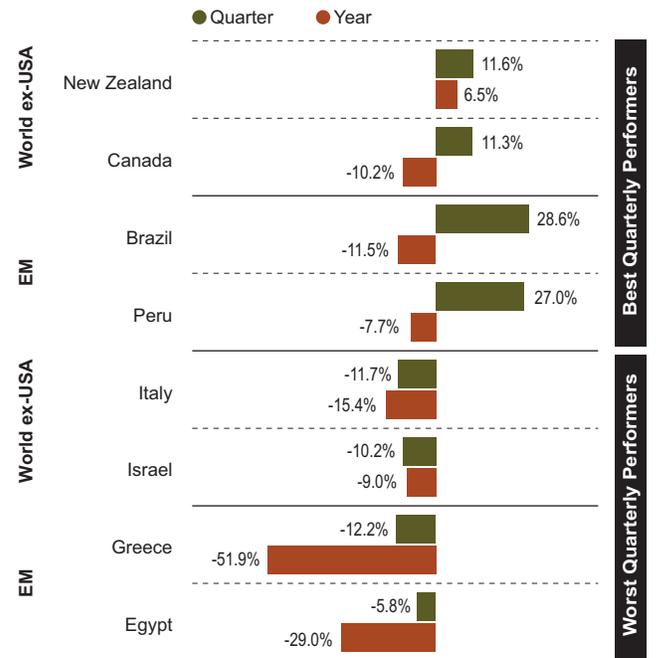
Source: MSCI

## Quarterly Return Attribution for EAFE (U.S. Dollar)

Country	Total	Local	Currency	Wtg
Australia	2.10%	-3.44%	5.73%	7.16%
Austria	-0.52%	-5.17%	4.90%	0.18%
Belgium	-2.43%	-6.99%	4.90%	1.45%
Denmark	-0.96%	-5.75%	5.08%	1.99%
Finland	-5.19%	-9.62%	4.90%	1.01%
France	0.12%	-4.56%	4.90%	9.98%
Germany	-2.50%	-7.06%	4.90%	9.17%
Hong Kong	-0.55%	-0.47%	-0.08%	3.31%
Ireland	-4.15%	-8.63%	4.90%	0.50%
Israel	-10.16%	-12.84%	3.50%	0.71%
Italy	-11.66%	-15.79%	4.90%	2.18%
Japan	-6.52%	-12.66%	7.03%	22.48%
Netherlands	3.35%	-1.30%	4.90%	3.08%
New Zealand	11.60%	10.04%	1.42%	0.18%
Norway	1.72%	-4.94%	7.01%	0.58%
Portugal	3.24%	-1.59%	4.90%	0.17%
Singapore	5.05%	-0.20%	5.35%	1.36%
Spain	-4.09%	-8.57%	4.90%	3.15%
Sweden	-0.22%	-4.05%	4.00%	2.94%
Switzerland	-5.51%	-9.60%	4.53%	9.12%
U.K.	-2.34%	0.15%	-2.48%	19.30%

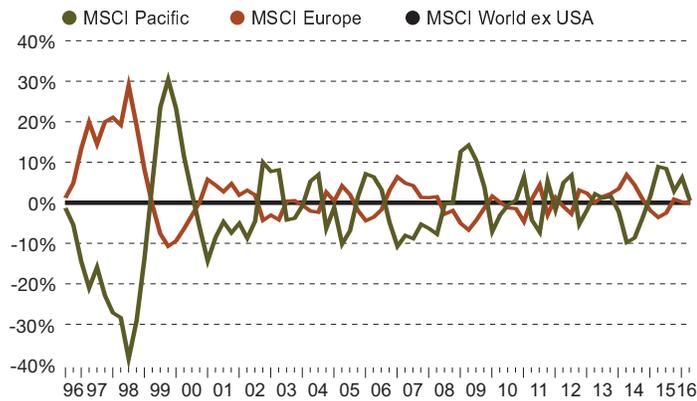
Sources: MSCI, Russell Investment Group, Standard & Poor's.

## Quarterly and Annual Country Performance Snapshot



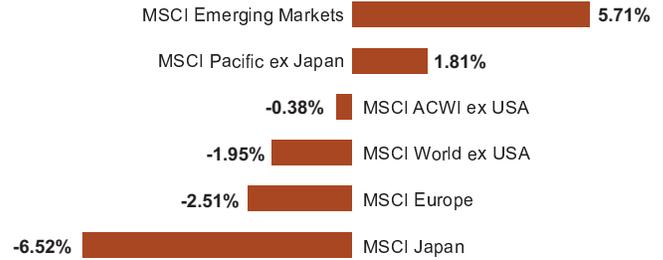
Source: MSCI

Rolling One-year Relative Returns (vs. MSCI World ex USA)



Source: MSCI

Regional Quarterly Performance (U.S. Dollar)



Source: MSCI

Style Median and Index Returns\* for Periods ended March 31, 2016

Non-U.S. Equity	Quarter	Year	3 Years	5 Years	10 Years	15 Years
<b>Non-U.S. Equity Style</b>	<b>-2.46</b>	<b>-6.23</b>	<b>3.54</b>	<b>3.45</b>	<b>3.00</b>	<b>6.32</b>
MSCI EAFE	-3.01	-8.27	2.23	2.29	1.80	4.35
MSCI EAFE (local)	-6.52	-11.17	6.47	6.20	1.72	2.76
MSCI ACWI ex USA	-0.38	-9.19	0.32	0.31	1.94	4.99
MSCI ACWI ex USA Growth	-0.34	-6.08	1.92	1.61	2.72	4.88
MSCI ACWI ex USA Value	-0.42	-12.31	-1.34	-1.03	1.11	5.03
<b>Global Equity</b>	<b>Quarter</b>	<b>Year</b>	<b>3 Years</b>	<b>5 Years</b>	<b>10 Years</b>	<b>15 Years</b>
<b>Global Equity Style</b>	<b>-0.83</b>	<b>-3.45</b>	<b>7.27</b>	<b>7.11</b>	<b>5.15</b>	<b>6.48</b>
MSCI World	-0.35	-3.45	6.82	6.51	4.27	4.97
MSCI World (local)	-1.96	-4.56	8.86	8.38	4.12	4.19
MSCI ACWI	0.24	-4.34	5.53	5.22	4.08	5.10
<b>Regional Equity</b>	<b>Quarter</b>	<b>Year</b>	<b>3 Years</b>	<b>5 Years</b>	<b>10 Years</b>	<b>15 Years</b>
MSCI Europe	-2.51	-8.44	2.71	2.07	2.05	4.46
MSCI Europe (local)	-4.92	-10.63	5.87	5.42	2.56	2.97
MSCI Japan	-6.52	-7.06	3.84	4.03	-0.42	2.27
MSCI Japan (local)	-12.66	-12.90	10.21	10.57	-0.91	1.53
MSCI Pacific ex Japan	1.81	-9.65	-2.95	0.68	5.60	9.18
MSCI Pacific ex Japan (local)	-2.11	-10.23	3.69	4.53	4.67	6.72
<b>Emerging/Frontier Markets</b>	<b>Quarter</b>	<b>Year</b>	<b>3 Years</b>	<b>5 Years</b>	<b>10 Years</b>	<b>15 Years</b>
<b>Emerging Market Style</b>	<b>4.53</b>	<b>-10.27</b>	<b>-3.47</b>	<b>-2.64</b>	<b>4.08</b>	<b>10.96</b>
MSCI Emerging Markets	5.71	-12.03	-4.50	-4.13	3.02	9.35
MSCI Emerging Markets (local)	2.73	-7.70	1.91	1.33	5.33	10.24
MSCI Frontier Markets	-0.94	-12.54	1.75	1.30	-0.78	--
<b>Non-U.S. Small Cap Equity</b>	<b>Quarter</b>	<b>Year</b>	<b>3 Years</b>	<b>5 Years</b>	<b>10 Years</b>	<b>15 Years</b>
<b>Non-U.S. Small Cap Style</b>	<b>-0.89</b>	<b>2.36</b>	<b>7.94</b>	<b>7.23</b>	<b>5.28</b>	<b>10.34</b>
MSCI World ex USA Small Cap	0.60	1.99	5.54	3.84	3.09	8.66
MSCI ACWI ex USA Small Cap	0.68	-0.60	3.67	2.39	3.87	8.91
MSCI Emerging Market Small Cap	0.97	-9.20	-2.69	-2.56	5.07	10.96

\*Returns less than one year are not annualized.  
Sources: Callan, MSCI.

# More T-Bills, Please

U.S. FIXED INCOME | Irina Sushch

Yields plummeted during a volatile first quarter. A dovish Fed fostered uncertainty over global economic growth. **The Barclays Aggregate Index** gained 3.03% and the **Barclays Corporate High Yield Index** was up 3.35%.

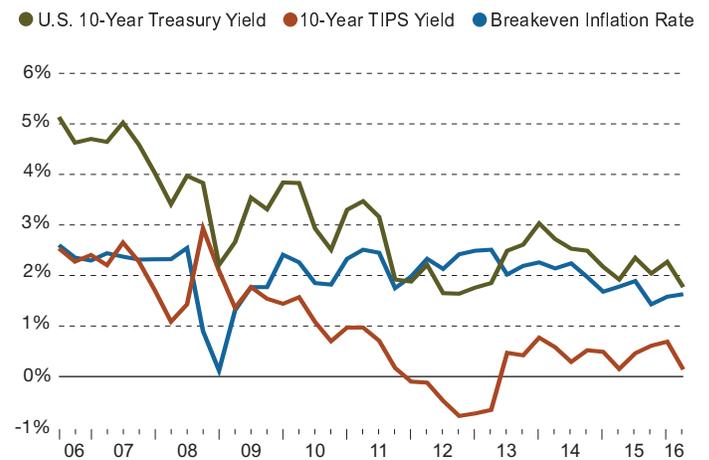
Yields fell nearly 50 bps during a volatile first quarter. The yield curve flattened further in markets abundant with uncertainty over global economic growth. Investment grade credit, mortgage-backed (MBS), commercial mortgage-backed (CMBS), and high yield spreads all tightened, while asset-backed spreads widened.

Following December's federal funds rate hike, the Federal Reserve took on a neutral outlook. The Fed stated that financial and economic conditions are less favorable than they had been in December. The U.S. economy experienced modest growth despite improving employment and housing numbers. Fed chair Janet Yellen stated that the U.S. economy would have to get much worse before the Fed would consider the use of negative interest rates (six other central banks have implemented negative interest rates). The 10-year U.S. Treasury yield tumbled to

1.77%. The breakeven inflation rate (the difference between nominal and real yields) on 10-year Treasuries ticked up 1.63% as TIPS fell 55 bps, in line with their nominal counterparts.

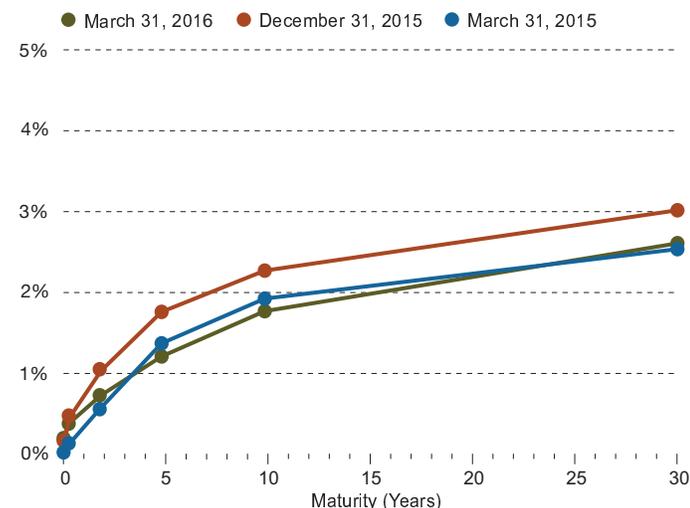
Sectors in the Barclays Aggregate posted positive returns across the board. CMBS outperformed like-duration Treasuries by 0.58% and rose 3.61% for the quarter. Credit was the highest returning sector (+3.92%), but only beat like-duration Treasuries

## Historical 10-Year Yields



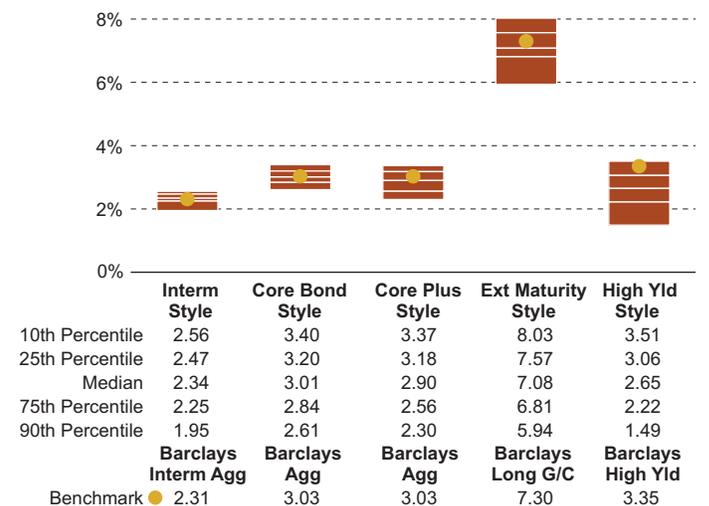
Source: Bloomberg

## U.S. Treasury Yield Curves



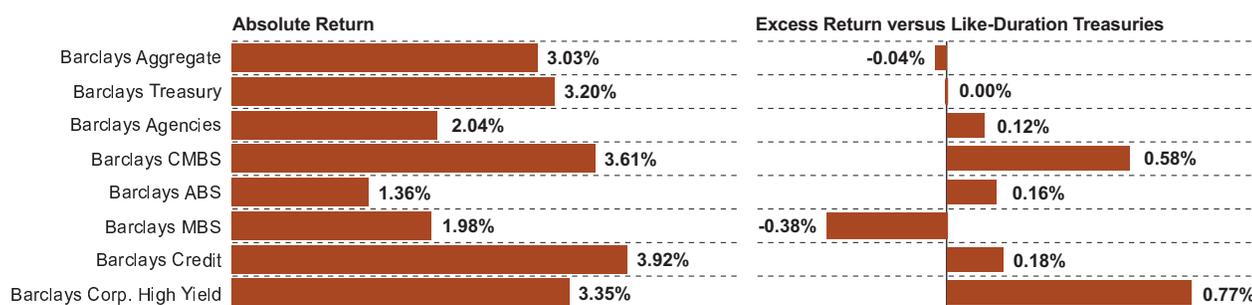
Source: Bloomberg

## Callan Style Group Quarterly Returns



Sources: Barclays, Callan

Fixed Income Index Quarterly Returns

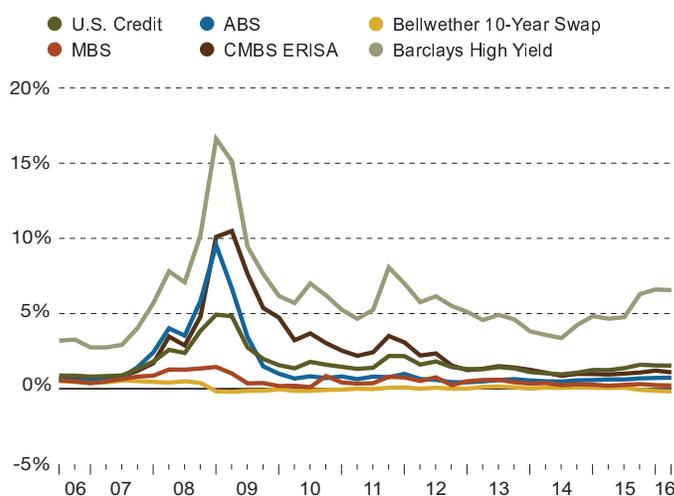


Source: Barclays

by 0.18%. MBS was the only sector to trail like-duration Treasuries (down by 0.38%), yet still rose 1.98%. Investment grade Financials, hurt by worries over persistent low or negative interest rates, underperformed like-duration Treasuries by nearly 100 bps; Industrials, buoyed by a rebound in commodity prices, outperformed by 70 bps.

High yield corporate bonds rebounded from severe underperformance in January and early February (down 5% through February 11) to finish in the black. The Barclays Corporate High Yield Index was up 3.35%, outpacing Treasuries by 77 bps. Including an upsurge in issuance in the last few weeks of the quarter, new high yield issuance was \$35.9 billion—60% lower than one year ago.

Effective Yield Over Treasuries



Source: Barclays

U.S. Fixed Income Index Characteristics as of March 31, 2016

Barclays Indices	Yield to Worst	Mod Adj Duration	Avg Maturity	% of Barclays G/C	% of Barclays Agg
Barclays Aggregate	2.16	5.47	7.79		100.00
Barclays Govt/Credit	2.09	6.48	8.73	100.00	69.44
Intermediate	1.63	4.04	4.39	78.18	54.29
Long-Term	3.74	15.22	24.30	21.82	15.15
Barclays Govt	1.31	5.96	7.29	56.54	39.26
Barclays Credit	3.10	7.15	10.61	43.46	30.18
Barclays MBS	2.35	3.06	5.70		28.21
Barclays ABS	1.57	2.31	2.47		0.50
Barclays CMBS	2.43	5.23	5.87		1.76
Barclays Corp High Yield	8.18	4.22	6.25		

Source: Barclays

## U.S. FIXED INCOME (Continued)

### Callan Style Median and Index Returns\* for Periods ended March 31, 2016

<b>Broad Fixed Income</b>	<b>Quarter</b>	<b>Year</b>	<b>3 Years</b>	<b>5 Years</b>	<b>10 Years</b>	<b>15 Years</b>
<b>Core Bond Style</b>	<b>3.01</b>	<b>2.11</b>	<b>2.76</b>	<b>4.22</b>	<b>5.35</b>	<b>5.41</b>
<b>Core Bond Plus Style</b>	<b>2.90</b>	<b>1.35</b>	<b>2.65</b>	<b>4.47</b>	<b>5.76</b>	<b>5.97</b>
Barclays Aggregate	3.03	1.96	2.50	3.78	4.90	4.97
Barclays Govt/Credit	3.47	1.75	2.42	4.04	4.93	5.03
Barclays Govt	3.12	2.37	2.11	3.42	4.52	4.57
Barclays Credit	3.92	0.93	2.86	5.00	5.70	5.79
Citi Broad Investment Grade	3.04	1.93	2.49	3.78	4.98	5.04
<b>Long-Term</b>	<b>Quarter</b>	<b>Year</b>	<b>3 Years</b>	<b>5 Years</b>	<b>10 Years</b>	<b>15 Years</b>
<b>Extended Maturity Style</b>	<b>7.08</b>	<b>0.36</b>	<b>4.95</b>	<b>8.90</b>	<b>8.14</b>	<b>7.74</b>
Barclays Long Govt/Credit	7.30	0.39	4.81	8.51	7.57	7.38
Barclays Long Govt	8.06	2.80	6.04	9.52	7.88	7.43
Barclays Long Credit	6.82	-1.08	4.10	7.77	7.25	7.40
Citi Pension Discount Curve	9.21	1.02	7.27	11.67	9.36	9.74
<b>Intermediate-Term</b>	<b>Quarter</b>	<b>Year</b>	<b>3 Years</b>	<b>5 Years</b>	<b>10 Years</b>	<b>15 Years</b>
<b>Intermediate Style</b>	<b>2.34</b>	<b>2.11</b>	<b>2.00</b>	<b>3.30</b>	<b>4.82</b>	<b>4.86</b>
Barclays Intermediate Aggregate	2.31	2.20	2.14	3.11	4.53	4.62
Barclays Intermediate Govt/Credit	2.45	2.06	1.83	3.01	4.34	4.46
Barclays Intermediate Govt	2.28	2.21	1.52	2.48	3.97	4.03
Barclays Intermediate Credit	2.70	1.82	2.36	3.98	5.16	5.26
<b>Short-Term</b>	<b>Quarter</b>	<b>Year</b>	<b>3 Years</b>	<b>5 Years</b>	<b>10 Years</b>	<b>15 Years</b>
<b>Defensive Style</b>	<b>1.01</b>	<b>1.26</b>	<b>1.16</b>	<b>1.59</b>	<b>3.13</b>	<b>3.28</b>
<b>Active Duration Style</b>	<b>2.78</b>	<b>2.22</b>	<b>2.23</b>	<b>3.83</b>	<b>4.84</b>	<b>5.05</b>
Money Market Funds (net of fees)	0.01	0.02	0.01	0.01	1.07	1.32
ML Treasury 1–3-Year	0.90	0.92	0.77	0.87	2.48	2.71
90-Day Treasury Bills	0.07	0.12	0.07	0.08	1.15	1.51
<b>High Yield</b>	<b>Quarter</b>	<b>Year</b>	<b>3 Years</b>	<b>5 Years</b>	<b>10 Years</b>	<b>15 Years</b>
<b>High Yield Style</b>	<b>2.65</b>	<b>-2.87</b>	<b>2.37</b>	<b>5.17</b>	<b>6.87</b>	<b>7.59</b>
Barclays Corporate High Yield	3.35	-3.69	1.84	4.93	7.01	7.38
ML High Yield Master	3.23	-3.90	1.76	4.71	6.78	7.20
<b>Mortgage/Asset-Backed</b>	<b>Quarter</b>	<b>Year</b>	<b>3 Years</b>	<b>5 Years</b>	<b>10 Years</b>	<b>15 Years</b>
<b>Mortgage Style</b>	<b>1.91</b>	<b>2.40</b>	<b>2.94</b>	<b>3.77</b>	<b>5.14</b>	<b>5.29</b>
Barclays MBS	1.98	2.43	2.70	3.24	4.85	4.85
Barclays ABS	1.36	1.71	1.39	2.46	3.40	3.87
Barclays CMBS	3.61	2.80	2.84	4.41	5.63	5.82
<b>Municipal</b>	<b>Quarter</b>	<b>Year</b>	<b>3 Years</b>	<b>5 Years</b>	<b>10 Years</b>	<b>15 Years</b>
Barclays Muni	1.67	3.98	3.63	5.59	4.86	4.97
Barclays Muni 1–10-Year	1.24	2.86	2.50	3.68	4.21	4.17
Barclays Muni 3-Year	0.77	1.54	1.31	1.80	3.07	3.11
<b>TIPS</b>	<b>Quarter</b>	<b>Year</b>	<b>3 Years</b>	<b>5 Years</b>	<b>10 Years</b>	<b>15 Years</b>
Barclays TIPS Full Duration	4.46	1.51	-0.71	3.02	4.62	5.49
Barclays TIPS 1-10 Year	3.60	1.84	-0.72	1.88	4.00	4.78

\*Returns for less than one year are not annualized.

Sources: Barclays, Callan, Citigroup, Merrill Lynch.

# A Dole of Doves

NON-U.S. FIXED INCOME | Kyle Fekete

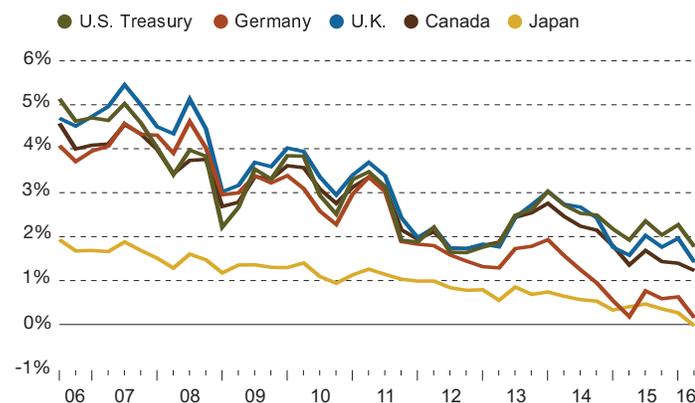
Sovereign debt rallied in the first quarter, driven by risk-on sentiment and the impact of the U.S. dollar's relative weakness. The **Citi Non-U.S. World Government Bond Index** jumped 9.10% (+4.16% on a hedged basis). The hard currency **JPM EMBI Global Diversified Index** rose 5.04% while the local currency **JPM GBI-EM Global Diversified** soared 11.02%.

The U.S. dollar weakened versus most currencies during the quarter, providing a tailwind to unhedged foreign bond returns. The yen gained 7% versus the dollar as investors sought its safe-haven status amid market turbulence in China and concerns over the health of the European banking sector. The euro was also stronger versus the dollar (+5%). In March, the ECB continued its accommodative stance, slashing interest rates and increasing asset purchases. For the first time, the ECB included

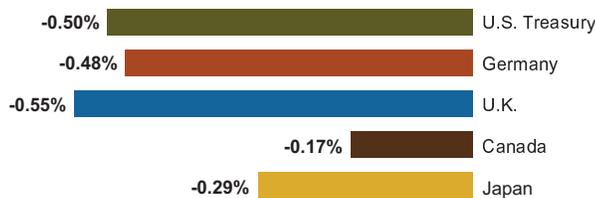
non-bank investment grade corporate bonds in its asset purchase program. Interest rates fell across developed markets, further bolstering returns. The **Barclays Global Aggregate** rose 5.90% (+3.28% hedged).

On an unhedged basis, returns approached 10% for many countries, including Japan, which was up 12% on the back of falling rates combined with yen strength. Yield on the Japanese 10-year bond reached negative territory after a surprise move by the Bank of Japan (BoJ) in January to adopt a negative interest rate policy, indicating bond investors would have to pay-to-own before adjusting for inflation. The BoJ owns approximately one-third of outstanding Japanese bonds as a result of its

## 10-Year Global Government Bond Yields



## Change in 10-Year Yields from 4Q15 to 1Q16



Source: Bloomberg

## Quarterly Return Attribution for Non-U.S. Gov't Indices (U.S. Dollar)

Country	Total	Local	Currency	Wtg
Australia	8.29%	2.42%	5.73%	2.11%
Austria	8.73%	3.64%	4.90%	1.79%
Belgium	9.93%	4.79%	4.90%	2.98%
Canada	8.60%	1.12%	7.39%	2.30%
Denmark	9.88%	4.57%	5.08%	0.79%
Finland	8.12%	3.07%	4.90%	0.76%
France	9.18%	4.08%	4.90%	11.62%
Germany	8.88%	3.79%	4.90%	8.66%
Ireland	7.62%	2.59%	4.90%	0.95%
Italy	7.60%	2.57%	4.90%	11.44%
Japan	12.05%	4.69%	7.03%	33.67%
Malaysia	12.49%	2.22%	10.05%	0.53%
Mexico	3.48%	2.68%	0.78%	1.14%
Netherlands	8.98%	3.88%	4.90%	2.88%
Norway	8.84%	1.71%	7.01%	0.36%
Poland	7.82%	1.62%	6.10%	0.73%
Singapore	10.26%	4.66%	5.35%	0.45%
South Africa	12.34%	6.63%	5.35%	0.50%
Spain	7.64%	2.61%	4.90%	6.45%
Sweden	7.02%	2.90%	4.00%	0.58%
Switzerland	5.75%	1.17%	4.53%	0.34%
U.K.	2.66%	5.28%	-2.48%	8.96%

Source: Citigroup

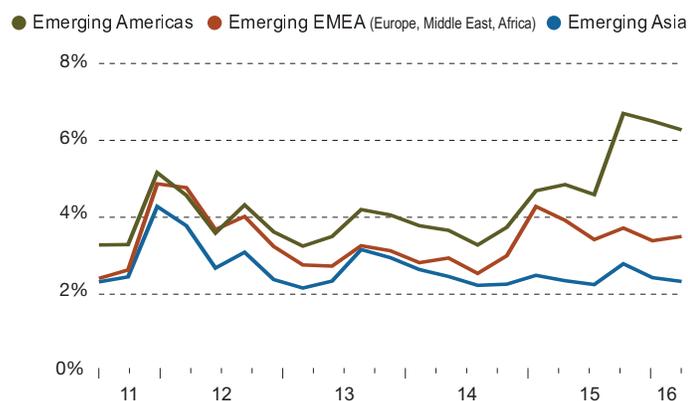
## NON-U.S. FIXED INCOME (Continued)

quantitative easing program. Regulations require the nation's banks, insurers, and pension funds to carry Japanese bonds on their balance sheets.

The unhedged U.K. gilt advanced 2.66%, hampered by the pound's 3% fall. Worries over a potential Brexit put pressure on the currency. Yield on the 10-year U.K. gilt declined more than 50 bps, hitting an all-time low early in the quarter. The Bank of England elected to maintain its relaxed monetary policy for the seventh straight year, citing weak growth and global market turmoil.

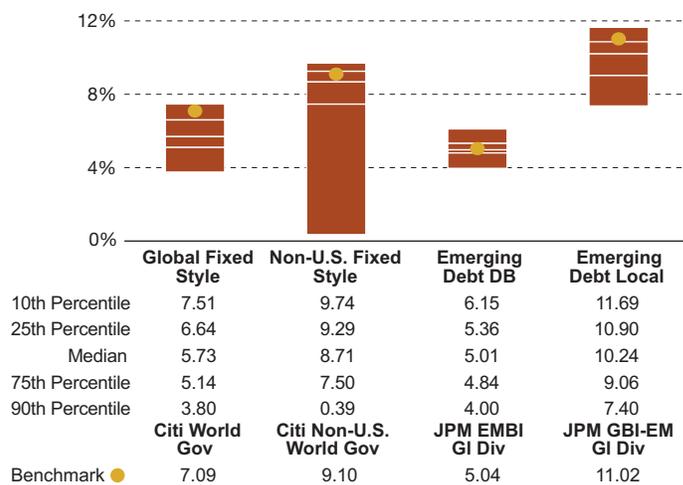
Emerging market bonds rebounded. In late February and March, commodity prices stabilized, risk appetite returned, and confidence in the Chinese renminbi stabilized. The hard currency **JPM EMBI Global Diversified Index** rose 5.04% while the local currency **JPM GBI-EM Global Diversified** soared 11.02%, bolstered by the dollar's relative weakness. Brazil led both indices as investors cheered the prospect of an impeachment of President Dilma Rousseff, hoping a new government could bring better days for the beleaguered country.

### Emerging Spreads Over Developed (By Region)



Source: Barclays

### Callan Style Group Quarterly Returns



Sources: Callan, Citigroup, JPMorgan Chase

### Callan Style Median and Index Returns\* for Periods ended March 31, 2016

Global Fixed Income	Quarter	Year	3 Years	5 Years	10 Years	15 Years
<b>Global Style</b>	<b>5.73</b>	<b>3.39</b>	<b>0.90</b>	<b>2.15</b>	<b>4.98</b>	<b>5.98</b>
Citi World Govt	7.09	5.92	0.49	1.16	4.19	5.28
Citi World Govt (Local)	3.68	2.84	4.20	4.88	4.27	4.19
Barclays Global Aggregate	5.90	4.57	0.87	1.81	4.35	5.25
Non-U.S. Fixed	Quarter	Year	3 Years	5 Years	10 Years	15 Years
<b>Non-U.S. Style</b>	<b>8.71</b>	<b>5.38</b>	<b>0.01</b>	<b>1.22</b>	<b>4.69</b>	<b>6.27</b>
Citi Non-U.S. World Govt	9.10	7.74	-0.16	0.24	3.97	5.39
Citi Non-U.S. World Govt (Local)	3.95	3.10	5.11	5.48	4.29	4.14
European Fixed	Quarter	Year	3 Years	5 Years	10 Years	15 Years
Citi Euro Govt Bond	8.50	6.95	2.45	2.49	4.57	7.15
Citi Euro Govt Bond (Local)	3.43	0.79	5.97	6.71	5.01	5.22
Emerging Markets Fixed	Quarter	Year	3 Years	5 Years	10 Years	15 Years
JPM EMBI Global Diversified	5.04	4.19	3.45	6.22	7.20	9.12
JPM GBI-EM Global Diversified	11.02	-1.65	-6.72	-2.00	4.95	--

\*Returns less than one year are not annualized.

Sources: Callan, Citigroup, JPMorgan Chase.

# Slow and Low

REAL ESTATE | Avery Robinson

The **NCREIF Property Index** advanced 2.21%, recording a 1.17% income return and a 1.04% appreciation return during the quarter. Industrial (+2.96%) and Retail (+2.96%) led property sector performance for the quarter while Hotels (+1.16%) lagged. Regionally, the West bested other areas with a 2.75% return and the East brought up the rear with 1.66%.

During the quarter there were 184 asset trades representing \$7.5 billion of overall transactional volume. This marks a considerable decline from the fourth quarter of 2015's \$11.3 billion, but it is still above the five-year quarterly transaction average of \$6.4 billion. During the first quarter of 2016, appraisal capitalization rates decreased from 4.59% to 4.54%, setting an all-time low.

The **NCREIF Open End Diversified Core Equity Index** earned 2.18%, comprising a 1.11% income return and a 1.07% appreciation return. This marks the lowest quarterly return for the Index since 2010. Capital flows to core funds continued to decline, as a growing number of institutional investors are reaching or surpassing their real estate allocation targets. As a result, entry queues have also declined by more than 40% for the ODCE funds over the past six months.

In the listed real estate market, the **FTSE EPRA/NAREIT Developed REIT Index (USD)** gained 5.43% and U.S. REITs tracked by the **FTSE NAREIT Equity REITs Index** advanced 6.00%.

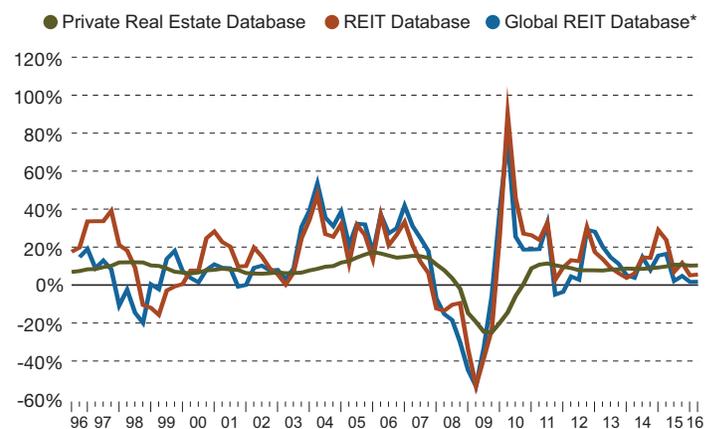
In the U.S., volatility continued as REIT sectors rebounded sharply in March to generate positive returns for the quarter. Sector performance was led once again by Self-Storage (+10.85%), followed by Retail (+8.21%), Residential (+8.38%), and Industrial (+6.49%). The only negative was single family homes (-1.03%). As of March 31, U.S. REITs were trading at a 3% premium to net asset value. This marked the first time REITs have traded at a premium over the past 10 months. U.S.

REITs raised \$15.1 billion, despite no IPO activity for the quarter. There were 24 secondary equity offerings and 14 secondary debt offerings.

In Europe, the momentum in core markets was put on pause during the first quarter as a result of the uncertainty surrounding a potential "Brexit." According to Lambert Smith Hampton, investment volume in central London offices totaled £2.2 billion—31% below the 10-year average and less than half of the £4.6 billion recorded in the previous quarter. Optimism remains strong for the medium and long term, however, as capital raising remains robust and investors continue to see value on the continent. Despite continued concerns about the economic growth outlook for China, Asian real estate funds are still attracting new capital flows, with 2015 totals surpassing 2014.

CMBS issuance reached \$19.3 billion, significantly down from the first quarter of 2015 (\$27.0 billion). This decline was widely credited to the instability in the broader financial market.

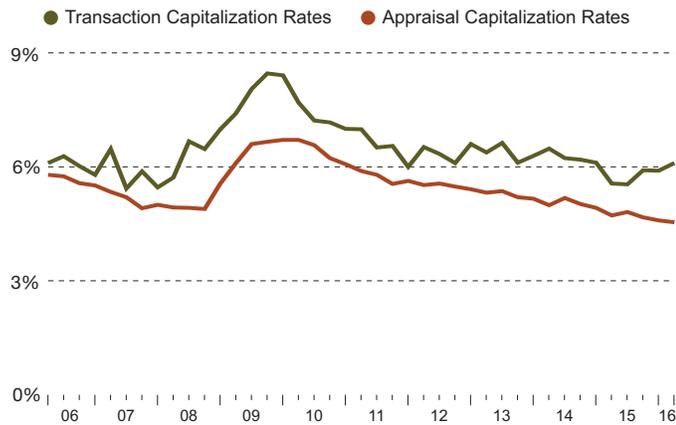
## Rolling One-Year Returns



\*Global REIT returns from 3Q96  
Source: Callan

## REAL ESTATE (Continued)

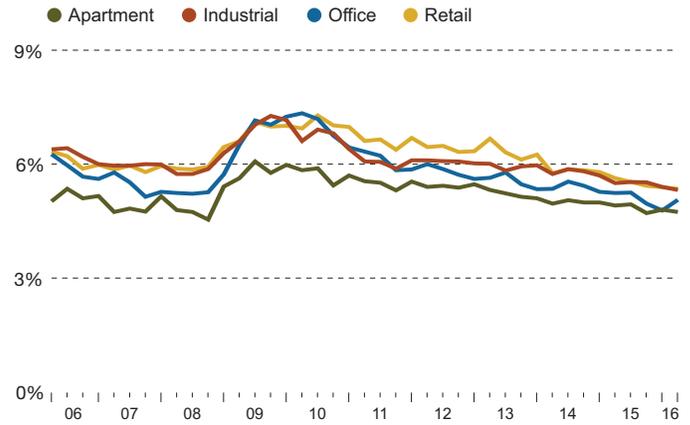
### NCREIF Transaction and Appraisal Capitalization Rates



Source: NCREIF

Note: Transaction capitalization rate is equal-weighted.

### NCREIF Capitalization Rates by Property Type



Source: NCREIF

Note: Capitalization rates are appraisal-based.

### Callan Database Median and Index Returns\* for Periods ended March 31, 2016

	Quarter	Year	3 Years	5 Years	10 Years	15 Years
<b>Private Real Estate</b>						
Real Estate Database (net of fees)	2.42	13.40	13.11	12.66	5.23	7.44
NCREIF Property	2.21	11.84	11.91	11.93	7.61	8.95
NFI-ODCE (value wtd. net)	1.95	12.62	12.59	12.20	5.38	6.93
<b>Public Real Estate</b>						
REIT Database	5.33	4.87	11.57	12.46	7.36	12.70
FTSE NAREIT Equity	6.00	4.43	10.47	11.89	6.56	11.57
<b>Global Real Estate</b>						
Global REIT Database	4.80	1.69	7.32	9.28	5.18	10.60
FTSE EPRA/NAREIT Developed REIT	5.43	1.27	6.31	8.47	4.58	9.97

\*Returns for less than one year are not annualized.

All REIT returns are reported gross in USD.

Sources: Callan, NAREIT, NCREIF, The FTSE Group. NCREIF statistics are the product of direct queries and may fluctuate over time.

# Drip, Drip, Drip

PRIVATE EQUITY | Gary Robertson

In fundraising, *Private Equity Analyst* reports that new first-quarter commitments totaled \$53.1 billion with 177 new partnerships formed. This represents a moderate start to the year. The number of funds raised increased 20% from 147 in the first quarter of 2015, but the dollar volume dropped 5% from \$56.2 billion. According to the National Venture Capital Association (NVCA), venture capital had the strongest fundraising quarter in 10 years.

According to *Buyouts* newsletter, the investment pace by funds into companies totaled 329 transactions, a 32% fall from 484 deals in the first quarter of 2015. The announced aggregate dollar volume was \$57.9 billion, up 56% from \$37.1 billion a year ago. The \$14.2 billion take-private of Keurig Green Mountain helped boost the announced value. Twelve deals with announced values of \$1 billion or more closed in the quarter.

According to the NVCA, new investments in venture capital companies totaled \$12.1 billion in 969 rounds of financing. The dollar volume and number of rounds decreased compared to the first quarter of 2015's \$13.6 billion and 1,063 rounds.

Regarding exits, *Buyouts* reports that steep declines occurred in the first quarter of 2016. There were 107 private M&A exits of buyout-backed companies, with 31 deals disclosing values totaling

## Funds Closed January 1 to March 31, 2016

Strategy	No. of Funds	Amt (\$mm)	Percent
Venture Capital	94	8,881	17%
Buyouts	60	38,237	72%
Subordinated Debt	1	158	0%
Distressed Debt	6	2,265	4%
Secondary and Other	1	94	0%
Fund-of-funds	15	3,513	7%
<b>Totals</b>	<b>177</b>	<b>53,147</b>	<b>100%</b>

Source: Private Equity Analyst

\$14.6 billion. The M&A exits count was down 27% year-over-year from 147, and the announced value declined 53% from \$30.9 billion. There were no buyout-backed IPOs in the first quarter.

Venture-backed M&A exits totaled 79 transactions, with 20 disclosing a total dollar volume of \$4.8 billion. The number of exits declined but the announced dollar volume increased from the first quarter of 2015, which had 97 sales with 18 announcing dollar values totaling \$2.8 billion. There were six VC-backed IPOs in the first quarter with a combined float of \$575 million. For comparison, the first quarter of 2015 had 17 IPOs and total issuance of \$1.4 billion.

Please see our upcoming issue of *Private Markets Trends* for more in-depth coverage.

## Private Equity Performance Database (%)

(Pooled Horizon IRRs through Sept. 30, 2015\*)

Strategy	3 Months	Year	3 Years	5 Years	10 Years	15 Years	20 Years
All Venture	2.1	24.2	15.2	14.9	9.8	9.5	27.4
Growth Equity	1.8	20.1	14.9	15.1	13.5	13.0	15.0
All Buyouts	-0.8	15.1	15.3	15.5	14.0	11.8	13.4
Mezzanine	2.6	12.5	13.1	12.1	11.0	8.3	10.2
Distressed	0.5	13.1	16.0	13.9	11.4	11.7	11.8
<b>All Private Equity</b>	<b>0.2</b>	<b>16.7</b>	<b>15.3</b>	<b>15.1</b>	<b>12.8</b>	<b>11.4</b>	<b>14.6</b>
S&P 500 Index	1.1	19.7	23.0	15.7	8.1	4.9	9.6

Private equity returns are net of fees.

Sources: Standard & Poor's, Thomson/Cambridge.

\*Most recent data available at time of publication.

Note: Transaction count and dollar volume figures across all private equity measures are preliminary figures and are subject to update in subsequent versions of Capital Market Review and other Callan publications.

# Market Tremors Panic Hedge Funds

HEDGE FUNDS | Jim McKee

Investor pessimism over softening global growth slammed stocks and commodities at the opening of 2016. The 10-Year Treasury yield fell 50 bps during the quarter as investors fled to the sidelines. Despite foreign central bankers pushing their funding rates into the negative, the dollar unexpectedly lost ground to the euro (+4.90%) and yen (+7.03%). After oil fell to new cyclical lows in February, talk of production freeze excited oil buyers. Similarly, chatter of China reopening the credit spigot to jumpstart its sagging growth revved markets. After initially falling 10% or more, stocks around the globe—particularly emerging markets—rebounded to finish mostly positive.

Illustrating performance of an unmanaged hedge fund universe, the **Credit Suisse Hedge Fund Index (CS HFI)** sank 2.20%, gross of implementation costs. Representing actual hedge fund portfolios, the median manager in the **Callan Hedge Fund-of-Funds Database** fell 2.99%, net of all fees.

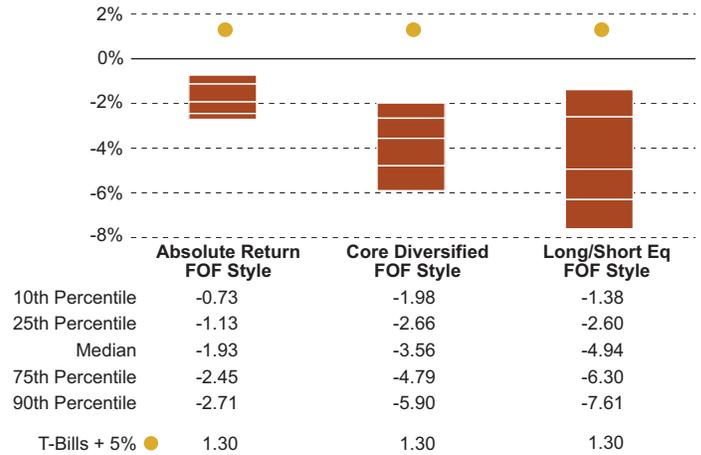
Within the CS HFI, *Managed Futures* (+4.35%) topped other strategies thanks to trend-following factors. Given the highly unusual incidence of crowded trades and related short squeezes in a de-risking market, *Event-Driven Multi-Strategy* (-5.58%) and *Long/Short Equity* (-3.85%) performed worst.

## Callan Database Median and Index Returns\* for Periods ended March 31, 2016

	Quarter	Year	3 Years	5 Years	10 Years	15 Years
<b>Hedge Fund-of-Funds Database</b>	<b>-2.99</b>	<b>-6.38</b>	<b>2.22</b>	<b>2.53</b>	<b>3.27</b>	<b>4.73</b>
CS Hedge Fund Index	-2.20	-5.25	2.33	2.65	4.19	5.80
CS Equity Market Neutral	-0.36	3.88	2.79	2.19	-1.82	1.10
CS Convertible Arbitrage	-0.39	-0.05	0.65	1.79	3.82	4.48
CS Fixed Income Arbitrage	-1.22	-0.49	1.76	4.11	3.51	4.26
CS Multi-Strategy	-0.58	0.24	5.72	5.77	5.53	6.71
CS Distressed	-1.95	-7.39	1.71	2.86	4.16	7.22
CS Risk Arbitrage	2.12	1.85	1.90	1.47	3.44	3.54
CS Event-Driven Multi-Strategy	-5.58	-13.72	-0.63	-0.71	4.00	5.85
CS Long/Short Equity	-3.85	-2.23	5.59	3.94	4.69	6.06
CS Dedicated Short Bias	-0.90	5.97	-7.71	-8.79	-8.43	-7.89
CS Global Macro	-2.23	-6.25	1.03	3.10	5.96	8.37
CS Managed Futures	4.35	-3.67	4.77	2.30	4.23	5.35
CS Emerging Markets	-1.23	-2.77	1.37	1.96	4.15	7.97

\*Returns less than one year are not annualized. Sources: Callan, Credit Suisse.

## Callan Style Group Quarterly Returns



Sources: Callan, Merrill Lynch

Market exposures did not seem to help in the first quarter within Callan's Hedge Fund-of-Funds Database. Despite mildly positive equity tailwinds, the median *Callan Long/Short Equity FOF* (-4.94%) trailed the *Callan Absolute Return FOF* (-1.93%). With diversifying exposures to both non-directional and directional styles, the *Core Diversified FOF* dropped 3.56%.

# Strong Quarter Can't Save 2015

DEFINED CONTRIBUTION | Tom Szkwarla

The Callan DC Index™ finished the year with a strong 3.50% gain in the fourth quarter. The rebound helped offset third-quarter losses, which were among the worst ever in the Index's 10-year history. This strong finish did not keep the DC Index out of negative territory for the year; a 2015 calendar year return of -0.34% is the weakest since 2011. 2016 marks the 10th anniversary of the Callan DC Index. Since inception, the Index's annualized return is 5.18%, compared to the Age 45 Target Date return of 5.25%.

The Age 45 Target Date Fund—the average of target date funds that would be selected by participants age 45 and retiring at age 65—beat the DC Index for the quarter, but underperformed it by 1.03% for the year. Both results were driven by the fact that the Age 45 Target Date Fund has a higher allocation to equities than the average DC plan: 74% for the Age 45 Target Date Fund versus 66% for the average DC plan.

The year was noteworthy for target date funds, which overtook large cap equity as the single-largest holding in the typical DC plan. As usual, target date funds absorbed a majority of cash flows during the quarter, taking in more than 80 cents of every dollar. Stable value funds continued net inflows for the third consecutive quarter. In contrast, many asset classes saw net outflows—U.S. equity (both large and small/mid cap) and company stock in particular.

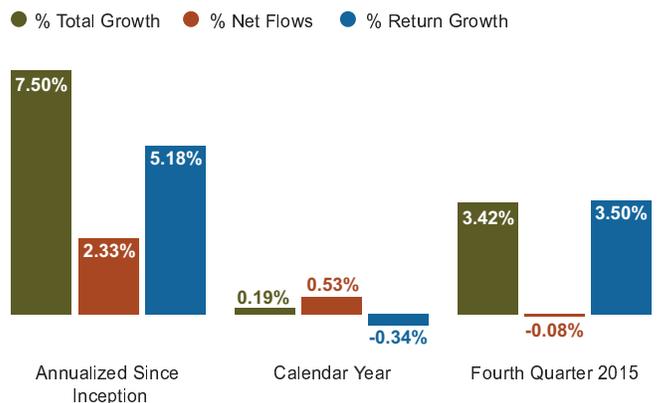
Fourth quarter turnover (i.e., net transfer activity) in the DC Index was 0.46%. Turnover has been steadily increasing since the beginning of the year, but remains below the historical average of 0.65%.

*The Callan DC Index is an equally weighted index tracking the cash flows and performance of nearly 90 plans, representing more than one million DC participants and over \$135 billion in assets. The Index is updated quarterly and is available on Callan's website, as is the quarterly DC Observer newsletter.*

## Investment Performance\*



## Growth Sources\*



## Net Cash Flow Analysis (Fourth Quarter 2015)\*

(Top Two and Bottom Two Asset Gatherers)

Asset Class	Flows as % of Total Net Flows
Target Date Funds	81.15%
Stable Value	7.15%
U.S./Global Balanced	-16.88%
U.S. Large Cap	-28.91%
<b>Total Turnover**</b>	<b>0.46%</b>

Source: Callan DC Index

Data provided here is the most recent available at time of publication.

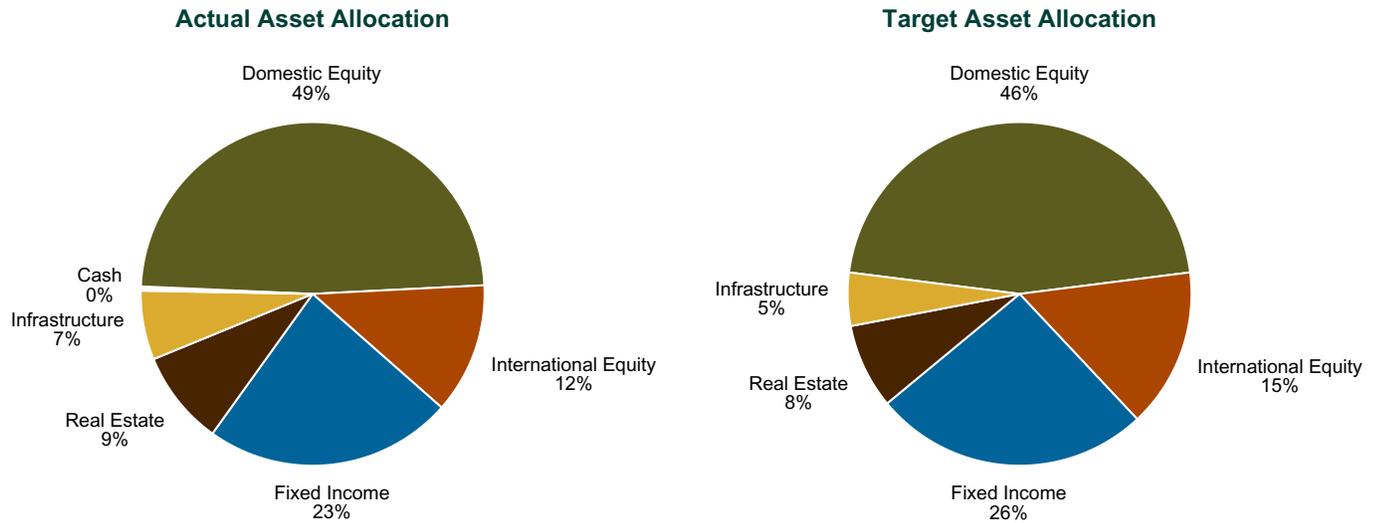
\* DC Index inception date is January 2006. DB plan performance is gross of fees.

\*\*Total Index "turnover" measures the percentage of total invested assets (transfers only, excluding contributions and withdrawals) that moved between asset classes.



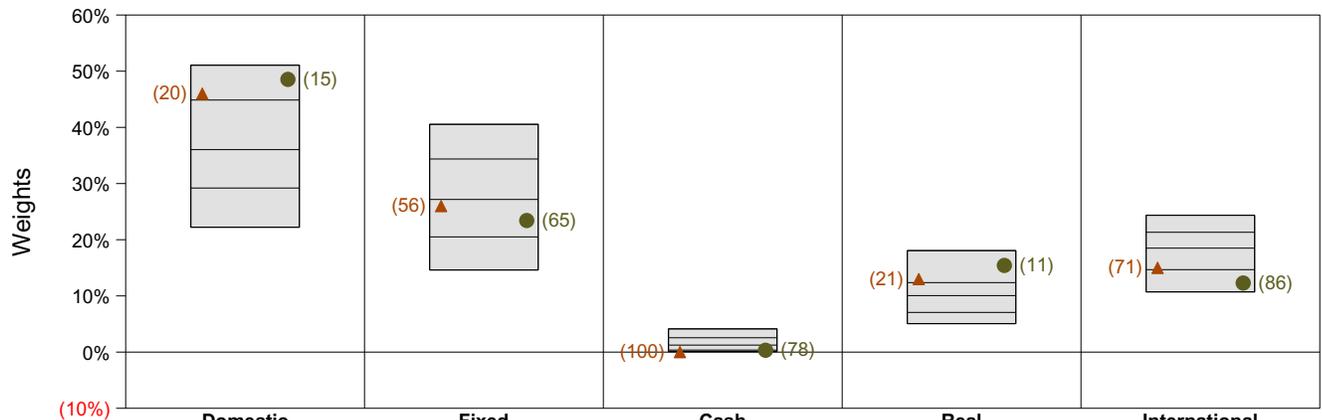
## Actual vs Target Asset Allocation As of March 31, 2016

The top left chart shows the Fund's asset allocation as of March 31, 2016. The top right chart shows the Fund's target asset allocation as outlined in the investment policy statement. The bottom chart ranks the fund's asset allocation and the target allocation versus the Public Fund Sponsor Database.



Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Domestic Equity	345,428	48.5%	46.0%	2.5%	18,088
International Equity	87,449	12.3%	15.0%	(2.7%)	(19,292)
Fixed Income	166,636	23.4%	26.0%	(2.6%)	(18,382)
Real Estate	63,378	8.9%	8.0%	0.9%	6,449
Infrastructure	46,387	6.5%	5.0%	1.5%	10,807
Cash	2,331	0.3%	0.0%	0.3%	2,331
Total	711,609	100.0%	100.0%		

### Asset Class Weights vs Public Fund Sponsor Database



	Domestic Equity	Fixed Income	Cash	Real Estate	International Equity
10th Percentile	51.06	40.54	4.14	18.07	24.35
25th Percentile	44.86	34.37	2.55	12.37	21.33
Median	36.04	27.17	1.25	10.05	18.50
75th Percentile	29.20	20.50	0.36	7.06	14.67
90th Percentile	22.22	14.61	0.10	5.06	10.71
<b>Fund</b> ●	48.54	23.42	0.33	15.42	12.29
<b>Target</b> ▲	46.00	26.00	0.00	13.00	15.00
% Group Invested	98.97%	96.92%	70.26%	61.03%	97.95%

\* Current Quarter Target = 36.0% S&P 500 Index, 26.0% Barclays Aggregate Index, 15.0% MSCI ACWI ex US, 10.0% Russell 2500 Index, 8.0% NFI-ODCE Value Weight Gr and 5.0% CPI-W+4.0%.

## Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of March 31, 2016, with the distribution as of December 31, 2015. The change in asset distribution is broken down into the dollar change due to Net New Investment and the dollar change due to Investment Return.

### Asset Distribution Across Investment Managers

	March 31, 2016		Net New Inv.	Inv. Return	December 31, 2015	
	Market Value	Weight			Market Value	Weight
<b>Domestic Equity</b>	<b>\$345,427,916</b>	<b>48.54%</b>	<b>\$(208,778)</b>	<b>\$(1,993,821)</b>	<b>\$347,630,515</b>	<b>49.18%</b>
<b>Large Cap Equity</b>	<b>\$264,527,088</b>	<b>37.17%</b>	<b>\$(119,293)</b>	<b>\$(2,226,430)</b>	<b>\$266,872,812</b>	<b>37.75%</b>
Alliance S&P Index	83,139,473	11.68%	(18,253)	1,082,369	82,075,358	11.61%
PIMCO StocksPLUS	37,841,114	5.32%	0	342,678	37,498,435	5.30%
BlackRock Russell 1000 Value	72,441,932	10.18%	(7,387)	1,174,782	71,274,537	10.08%
T. Rowe Price Large Cap Growth	71,104,569	9.99%	(93,653)	(4,826,259)	76,024,481	10.75%
<b>Small/Mid Cap Equity</b>	<b>\$80,900,828</b>	<b>11.37%</b>	<b>\$(89,485)</b>	<b>\$232,609</b>	<b>\$80,757,704</b>	<b>11.42%</b>
Champlain Mid Cap	42,210,368	5.93%	(88,073)	1,119,601	41,178,840	5.83%
Pyramis Small Cap	38,690,460	5.44%	(1,412)	(886,991)	39,578,864	5.60%
<b>International Equity</b>	<b>\$87,448,834</b>	<b>12.29%</b>	<b>\$(166,992)</b>	<b>\$(1,450,324)</b>	<b>\$89,066,150</b>	<b>12.60%</b>
Causeway International Value Equity	50,918,483	7.16%	(97,721)	(2,457,386)	53,473,591	7.56%
Aberdeen EAFE Plus	36,530,351	5.13%	(69,271)	1,007,062	35,592,560	5.03%
<b>Fixed Income</b>	<b>\$166,635,889</b>	<b>23.42%</b>	<b>\$(141,823)</b>	<b>\$5,221,837</b>	<b>\$161,555,875</b>	<b>22.85%</b>
BlackRock U.S. Debt Fund	63,749,833	8.96%	(8,532)	1,898,772	61,859,594	8.75%
PIMCO Fixed Income	102,886,056	14.46%	(133,291)	3,323,065	99,696,282	14.10%
<b>Real Estate</b>	<b>\$63,378,085</b>	<b>8.91%</b>	<b>\$(164,429)</b>	<b>\$1,255,389</b>	<b>\$62,287,125</b>	<b>8.81%</b>
JP Morgan Strategic Property Fund	45,700,763	6.42%	(109,014)	844,049	44,965,728	6.36%
JP Morgan Income and Growth Fund	17,677,322	2.48%	(55,415)	411,340	17,321,397	2.45%
<b>Infrastructure</b>	<b>\$46,387,420</b>	<b>6.52%</b>	<b>\$(159,750)</b>	<b>\$2,392,262</b>	<b>\$44,154,909</b>	<b>6.25%</b>
Macquarie European Infrastructure	21,726,832	3.05%	(8,658)	1,015,239	20,720,251	2.93%
SteelRiver Infrastructure	24,660,588	3.47%	(151,093)	1,377,023	23,434,658	3.32%
<b>Cash Composite</b>	<b>\$2,330,534</b>	<b>0.33%</b>	<b>\$104,740</b>	<b>\$1,148</b>	<b>\$2,224,646</b>	<b>0.31%</b>
Cash	2,330,534	0.33%	104,740	1,148	2,224,646	0.31%
<b>Total Plan</b>	<b>\$711,608,679</b>	<b>100.0%</b>	<b>\$(737,033)</b>	<b>\$5,426,492</b>	<b>\$706,919,221</b>	<b>100.0%</b>

## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended March 31, 2016. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

	Returns for Periods Ended March 31, 2016				
	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>Gross of Fees</b>					
<b>Domestic Equity</b>	<b>(0.57%)</b>	<b>(0.56%)</b>	<b>11.87%</b>	<b>11.46%</b>	<b>6.63%</b>
Total Domestic Equity Target (1)	1.14%	(0.26%)	11.04%	10.95%	6.93%
<b>Large Cap Equity</b>	<b>(0.83%)</b>	<b>(0.36%)</b>	<b>12.06%</b>	<b>11.41%</b>	<b>6.24%</b>
S&P 500 Index	1.35%	1.78%	11.82%	11.58%	7.01%
Alliance S&P Index	1.32%	1.85%	11.82%	11.57%	7.07%
PIMCO StocksPLUS	0.91%	(0.25%)	11.76%	12.62%	8.83%
S&P 500 Index	1.35%	1.78%	11.82%	11.58%	7.01%
BlackRock Russell 1000 Value Index	1.65%	(1.36%)	9.51%	10.36%	5.88%
Russell 1000 Value Index	1.64%	(1.54%)	9.38%	10.25%	5.72%
T. Rowe Price Large Cap Growth	(6.34%)	(1.85%)	14.92%	12.68%	9.09%
Russell 1000 Growth Index	0.74%	2.52%	13.61%	12.38%	8.28%
<b>Small/Mid Cap Equity U.S. Equity</b>	<b>0.30%</b>	<b>(1.26%)</b>	<b>11.19%</b>	<b>11.47%</b>	<b>8.02%</b>
Russell 2500 Index	0.39%	(7.31%)	8.16%	8.58%	6.47%
Champlain Mid Cap	2.75%	1.21%	11.77%	11.42%	10.22%
Russell MidCap Index	2.24%	(4.04%)	10.45%	10.30%	7.45%
Pyramis Small Cap	(2.24%)	(3.86%)	10.47%	11.37%	8.61%
Russell 2000 Index	(1.52%)	(9.76%)	6.84%	7.20%	5.26%
<b>International Equity</b>	<b>(1.62%)</b>	<b>(11.02%)</b>	<b>0.53%</b>	<b>0.52%</b>	<b>1.89%</b>
MSCI ACWI x US (Net)	(0.38%)	(9.19%)	0.32%	0.31%	1.94%
Causeway International Value Equity	(4.59%)	(10.17%)	3.41%	3.57%	3.91%
MSCI EAFE Index	(3.01%)	(8.27%)	2.23%	2.29%	1.80%
Aberdeen EAFE Plus	2.83%	(12.17%)	(3.00%)	0.83%	3.72%
MSCI ACWI x US (Net)	(0.38%)	(9.19%)	0.32%	0.31%	1.94%
<b>Fixed Income</b>	<b>3.23%</b>	<b>0.79%</b>	<b>2.49%</b>	<b>4.65%</b>	<b>5.68%</b>
Barclays Aggregate Index	3.03%	1.96%	2.50%	3.78%	4.90%
BlackRock U.S. Debt Fund	3.07%	2.06%	2.62%	3.90%	5.03%
Barclays Aggregate Index	3.03%	1.96%	2.50%	3.78%	4.90%
PIMCO Fixed Income	3.34%	0.01%	2.41%	5.26%	6.24%
Custom Index (2)	3.94%	2.33%	3.04%	4.97%	5.98%

(1) The Total Domestic Equity target is currently composed of 78% S&P 500 and 22% Russell 2500 Index.

(2) The custom index is currently composed of 25% Barclays Mortgage, 25% Barclays Credit, 25% Barclays High Yield, and 25% JP Morgan EMBI Global. Prior to 2/1/2012, the custom index was composed of 70% Barclays Mortgage, 15% Barclays Credit, and 15% Barclays High Yield.

## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended March 31, 2016. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

	Returns for Periods Ended March 31, 2016				
	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>Gross of Fees</b>					
<b>Real Estate</b>	<b>2.02%</b>	<b>13.32%</b>	<b>13.82%</b>	<b>13.82%</b>	<b>5.92%</b>
NFI-ODCE Value Weight Gr	2.18%	13.67%	13.63%	13.26%	6.36%
JP Morgan Strategic Property Fund	1.88%	12.93%	13.51%	13.64%	7.08%
NFI-ODCE Value Weight Gr	2.18%	13.67%	13.63%	13.26%	6.36%
JP Morgan Income and Growth Fund	2.37%	14.36%	15.40%	17.60%	4.44%
NFI-ODCE Value Weight Gr	2.18%	13.67%	13.63%	13.26%	6.36%
<b>Infrastructure</b>	<b>5.43%</b>	<b>14.82%</b>	<b>8.02%</b>	<b>6.55%</b>	<b>-</b>
CPI + 4%	1.58%	4.50%	4.42%	5.09%	5.75%
Macquarie European Infrastructure	4.90%	11.35%	3.78%	5.04%	-
SteelRiver Infrastructure	5.89%	17.49%	12.66%	8.19%	-
CPI + 4%	1.58%	4.50%	4.42%	5.09%	5.75%
<b>Cash Composite</b>	<b>0.05%</b>	<b>0.06%</b>	<b>0.02%</b>	<b>0.03%</b>	<b>1.28%</b>
<b>Total Fund</b>	<b>0.78%</b>	<b>0.26%</b>	<b>8.01%</b>	<b>8.14%</b>	<b>5.86%</b>
Total Fund Benchmark*	1.62%	0.49%	7.20%	7.57%	5.77%

\* Current Quarter Target = 36.0% S&P 500 Index, 26.0% Barclays Aggregate Index, 15.0% MSCI ACWI ex US, 10.0% Russell 2500 Index, 8.0% NFI-ODCE Value Weight Gr and 5.0% CPI-W+4.0%.

## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended March 31, 2016. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

	6/2015- 3/2016	FY 2015	FY 2014	FY 2013	FY 2012
<b>Gross of Fees</b>					
<b>Domestic Equity</b>	<b>(1.59%)</b>	<b>9.01%</b>	<b>26.67%</b>	<b>23.35%</b>	<b>2.92%</b>
Total Domestic Equity Target (1)	(0.41%)	7.15%	24.84%	21.70%	3.77%
<b>Large Cap Equity</b>	<b>(0.76%)</b>	<b>7.96%</b>	<b>27.15%</b>	<b>22.41%</b>	<b>3.48%</b>
S&P 500 Index	1.50%	7.42%	24.61%	20.60%	5.45%
Alliance S&P Index	1.56%	7.43%	24.50%	20.51%	5.48%
PIMCO StocksPLUS S&P 500 Index	(0.24%)	7.57%	27.61%	24.51%	5.80%
	1.50%	7.42%	24.61%	20.60%	5.45%
BlackRock Russell 1000 Value Index	(1.53%)	4.34%	23.88%	25.36%	3.07%
Russell 1000 Value Index	(1.65%)	4.13%	23.81%	25.32%	3.01%
T. Rowe Price Large Cap Growth Russell 1000 Growth Index	(2.77%)	12.35%	32.80%	20.37%	5.19%
	2.39%	10.56%	26.92%	17.07%	5.76%
<b>Small/Mid Cap Equity U.S. Equity</b>	<b>(4.40%)</b>	<b>12.68%</b>	<b>24.97%</b>	<b>26.35%</b>	<b>0.64%</b>
Russell 2500 Index	(6.99%)	5.92%	25.58%	25.61%	(2.29%)
Champlain Mid Cap Russell MidCap Index	(1.52%)	10.27%	26.20%	22.88%	0.78%
	(2.54%)	6.63%	26.85%	25.41%	(1.65%)
Pyramis Small Cap Russell 2000 Index	(7.38%)	15.07%	23.59%	29.74%	0.44%
	(10.14%)	6.49%	23.64%	24.21%	(2.08%)
<b>International Equity</b>	<b>(11.03%)</b>	<b>(5.79%)</b>	<b>21.26%</b>	<b>17.18%</b>	<b>(14.49%)</b>
MSCI ACWI x US (Net)	(9.66%)	(5.26%)	21.75%	13.63%	(14.57%)
Causeway International Value Equity MSCI EAFE Index	(11.10%)	(2.38%)	23.76%	22.07%	(10.83%)
	(8.83%)	(4.22%)	23.57%	18.62%	(13.83%)
Aberdeen EAFE Plus MSCI ACWI x US (Net)	(10.93%)	(10.16%)	18.20%	11.69%	(4.27%)
	(9.66%)	(5.26%)	21.75%	13.63%	(14.57%)
<b>Fixed Income</b>	<b>2.53%</b>	<b>0.78%</b>	<b>7.64%</b>	<b>1.84%</b>	<b>8.32%</b>
Barclays Aggregate Index	3.71%	1.86%	4.37%	(0.69%)	7.47%
BlackRock U.S. Debt Fund Barclays Aggregate Index	3.79%	1.99%	4.49%	(0.48%)	7.55%
	3.71%	1.86%	4.37%	(0.69%)	7.47%
PIMCO Fixed Income Custom Index (2)	1.77%	0.05%	9.60%	3.27%	9.56%
	3.59%	0.75%	8.48%	2.41%	7.63%

(1) The Total Domestic Equity target is currently composed of 78% S&P 500 and 22% Russell 2500 Index.

(2) The custom index is currently composed of 25% Barclays Mortgage, 25% Barclays Credit, 25% Barclays High Yield, and 25% JP Morgan EMBI Global. Prior to 2/1/2012, the custom index was composed of 70% Barclays Mortgage, 15% Barclays Credit, and 15% Barclays High Yield.

## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended March 31, 2016. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

	6/2015- 3/2016	FY 2015	FY 2014	FY 2013	FY 2012
<b>Gross of Fees</b>					
<b>Real Estate</b>	<b>8.82%</b>	<b>13.92%</b>	<b>13.27%</b>	<b>16.00%</b>	<b>11.63%</b>
NFI-ODCE Value Weight Gr	9.49%	14.43%	12.75%	12.17%	12.42%
JP Morgan Strategic Property Fund	8.90%	13.37%	14.08%	14.08%	12.00%
NFI-ODCE Value Weight Gr	9.49%	14.43%	12.75%	12.17%	12.42%
JP Morgan Income and Growth Fund	8.63%	16.19%	11.66%	25.49%	18.15%
NFI-ODCE Value Weight Gr	9.49%	14.43%	12.75%	12.17%	12.42%
<b>Infrastructure</b>	<b>9.06%</b>	<b>(2.75%)</b>	<b>16.31%</b>	<b>3.27%</b>	<b>5.68%</b>
CPI + 4%	2.31%	3.62%	6.05%	5.76%	5.58%
Macquarie European Infrastructure	4.35%	(9.64%)	14.63%	13.28%	0.54%
SteelRiver Infrastructure	13.20%	5.97%	18.46%	(7.19%)	13.03%
CPI + 4%	2.31%	3.62%	6.05%	5.76%	5.58%
<b>Cash Composite</b>	<b>0.06%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.05%</b>	<b>0.03%</b>
<b>Total Fund</b>	<b>(0.50%)</b>	<b>4.63%</b>	<b>19.64%</b>	<b>14.84%</b>	<b>2.40%</b>
Total Fund Benchmark*	0.35%	4.34%	16.97%	12.87%	3.04%

\* Current Quarter Target = 36.0% S&P 500 Index, 26.0% Barclays Aggregate Index, 15.0% MSCI ACWI ex US, 10.0% Russell 2500 Index, 8.0% NFI-ODCE Value Weight Gr and 5.0% CPI-W+4.0%.

## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended March 31, 2016. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

	Returns for Periods Ended March 31, 2016				
	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>Net of Fees</b>					
<b>Domestic Equity</b>	<b>(0.63%)</b>	<b>(0.83%)</b>	<b>11.56%</b>	<b>11.09%</b>	<b>6.23%</b>
Total Domestic Equity Target (1)	1.14%	(0.26%)	11.04%	10.95%	6.93%
<b>Large Cap Equity</b>	<b>(0.87%)</b>	<b>(0.51%)</b>	<b>11.90%</b>	<b>11.21%</b>	<b>5.98%</b>
S&P 500 Index	1.35%	1.78%	11.82%	11.58%	7.01%
Alliance S&P Index	1.31%	1.81%	11.77%	11.52%	7.02%
PIMCO StocksPLUS	0.91%	(0.25%)	11.76%	12.44%	8.71%
S&P 500 Index	1.35%	1.78%	11.82%	11.58%	7.01%
BlackRock Russell 1000 Value Index	1.64%	(1.39%)	9.47%	10.33%	5.86%
Russell 1000 Value Index	1.64%	(1.54%)	9.38%	10.25%	5.72%
T. Rowe Price Large Cap Growth	(6.47%)	(2.34%)	14.40%	12.15%	8.56%
Russell 1000 Growth Index	0.74%	2.52%	13.61%	12.38%	8.28%
<b>Small/Mid Cap Equity U.S. Equity</b>	<b>0.18%</b>	<b>(1.94%)</b>	<b>10.35%</b>	<b>10.61%</b>	<b>7.19%</b>
Russell 2500 Index	0.39%	(7.31%)	8.16%	8.58%	6.47%
Champlain Mid Cap	2.50%	0.35%	10.83%	10.48%	9.30%
Russell MidCap Index	2.24%	(4.04%)	10.45%	10.30%	7.45%
Pyramis Small Cap	(2.24%)	(4.37%)	9.74%	10.60%	7.83%
Russell 2000 Index	(1.52%)	(9.76%)	6.84%	7.20%	5.26%
<b>International Equity</b>	<b>(1.81%)</b>	<b>(11.66%)</b>	<b>(0.19%)</b>	<b>(0.22%)</b>	<b>1.11%</b>
MSCI ACWI x US (Net)	(0.38%)	(9.19%)	0.32%	0.31%	1.94%
Causeway International Value Equity	(4.76%)	(10.75%)	2.74%	2.89%	3.22%
MSCI EAFE Index	(3.01%)	(8.27%)	2.23%	2.29%	1.80%
Aberdeen EAFE Plus	2.63%	(12.89%)	(3.78%)	0.02%	2.90%
MSCI ACWI x US (Net)	(0.38%)	(9.19%)	0.32%	0.31%	1.94%
<b>Fixed Income</b>	<b>3.15%</b>	<b>0.47%</b>	<b>2.17%</b>	<b>4.33%</b>	<b>5.40%</b>
Barclays Aggregate Index	3.03%	1.96%	2.50%	3.78%	4.90%
BlackRock U.S. Debt Fund	3.06%	2.04%	2.57%	3.88%	5.01%
Barclays Aggregate Index	3.03%	1.96%	2.50%	3.78%	4.90%
PIMCO Fixed Income	3.21%	(0.47%)	1.92%	4.78%	5.81%
Custom Index (2)	3.94%	2.33%	3.04%	4.97%	5.98%

(1) The Total Domestic Equity target is currently composed of 78% S&P 500 and 22% Russell 2500 Index.

(2) The custom index is currently composed of 25% Barclays Mortgage, 25% Barclays Credit, 25% Barclays High Yield, and 25% JP Morgan EMBI Global. Prior to 2/1/2012, the custom index was composed of 70% Barclays Mortgage, 15% Barclays Credit, and 15% Barclays High Yield.

## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended March 31, 2016. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns for Periods Ended March 31, 2016					
	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>Net of Fees</b>					
<b>Real Estate</b>	<b>1.75%</b>	<b>12.15%</b>	<b>12.58%</b>	<b>12.56%</b>	<b>4.69%</b>
NFI-ODCE Equal Weight Net	2.22%	13.12%	12.60%	12.22%	5.17%
JP Morgan Strategic Property Fund	1.63%	11.84%	12.42%	12.54%	6.02%
NFI-ODCE Equal Weight Net	2.22%	13.12%	12.60%	12.22%	5.17%
JP Morgan Income and Growth Fund	2.05%	12.94%	13.73%	15.93%	2.79%
NFI-ODCE Equal Weight Net	2.22%	13.12%	12.60%	12.22%	5.17%
<b>Infrastructure</b>	<b>5.34%</b>	<b>13.73%</b>	<b>7.13%</b>	<b>5.18%</b>	<b>-</b>
CPI + 4%	1.58%	4.50%	4.42%	5.09%	5.75%
Macquarie European Infrastructure	4.90%	10.36%	3.28%	3.90%	-
SteelRiver Infrastructure	5.74%	16.32%	11.24%	6.52%	-
CPI + 4%	1.58%	4.50%	4.42%	5.09%	5.75%
<b>Cash Composite</b>	<b>0.05%</b>	<b>0.06%</b>	<b>0.02%</b>	<b>0.03%</b>	<b>1.28%</b>
<b>Total Fund</b>	<b>0.68%</b>	<b>(0.19%)</b>	<b>7.53%</b>	<b>7.61%</b>	<b>5.33%</b>
Total Fund Benchmark*	1.62%	0.49%	7.20%	7.57%	5.77%

\* Current Quarter Target = 36.0% S&P 500 Index, 26.0% Barclays Aggregate Index, 15.0% MSCI ACWI ex US, 10.0% Russell 2500 Index, 8.0% NFI-ODCE Value Weight Gr and 5.0% CPI-W+4.0%.

## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended March 31, 2016. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

	6/2015- 3/2016	FY 2015	FY 2014	FY 2013	FY 2012
<b>Net of Fees</b>					
<b>Domestic Equity</b>	<b>(1.80%)</b>	<b>8.72%</b>	<b>26.30%</b>	<b>22.90%</b>	<b>2.50%</b>
Total Domestic Equity Target (1)	(0.41%)	7.15%	24.84%	21.70%	3.77%
<b>Large Cap Equity</b>	<b>(0.88%)</b>	<b>7.83%</b>	<b>26.95%</b>	<b>22.21%</b>	<b>3.21%</b>
S&P 500 Index	1.50%	7.42%	24.61%	20.60%	5.45%
Alliance S&P Index	1.53%	7.40%	24.45%	20.46%	5.43%
PIMCO StocksPLUS S&P 500 Index	(0.24%) 1.50%	7.57% 7.42%	27.61% 24.61%	23.83% 20.60%	5.56% 5.45%
BlackRock Russell 1000 Value Index	(1.55%)	4.30%	23.83%	25.35%	3.07%
Russell 1000 Value Index	(1.65%)	4.13%	23.81%	25.32%	3.01%
T. Rowe Price Large Cap Growth	(3.14%)	11.93%	32.16%	19.79%	4.67%
Russell 1000 Growth Index	2.39%	10.56%	26.92%	17.07%	5.76%
<b>Small/Mid Cap Equity U.S. Equity</b>	<b>(4.88%)</b>	<b>11.80%</b>	<b>24.00%</b>	<b>25.36%</b>	<b>(0.16%)</b>
Russell 2500 Index	(6.99%)	5.92%	25.58%	25.61%	(2.29%)
Champlain Mid Cap Russell MidCap Index	(2.16%) (2.54%)	9.33% 6.63%	25.16% 26.85%	21.86% 25.41%	(0.08%) (1.65%)
Pyramis Small Cap Russell 2000 Index	(7.71%) (10.14%)	14.24% 6.49%	22.70% 23.64%	28.79% 24.21%	(0.31%) (2.08%)
<b>International Equity</b>	<b>(11.52%)</b>	<b>(6.46%)</b>	<b>20.41%</b>	<b>16.34%</b>	<b>(15.16%)</b>
MSCI ACWI x US (Net)	(9.66%)	(5.26%)	21.75%	13.63%	(14.57%)
Causeway International Value Equity MSCI EAFE Index	(11.55%) (8.83%)	(3.01%) (4.22%)	22.98% 23.57%	21.27% 18.62%	(11.43%) (13.83%)
Aberdeen EAFE Plus MSCI ACWI x US (Net)	(11.47%) (9.66%)	(10.90%) (5.26%)	17.28% 21.75%	10.80% 13.63%	(5.04%) (14.57%)
<b>Fixed Income</b>	<b>2.29%</b>	<b>0.46%</b>	<b>7.30%</b>	<b>1.51%</b>	<b>8.03%</b>
Barclays Aggregate Index	3.71%	1.86%	4.37%	(0.69%)	7.47%
BlackRock U.S. Debt Fund Barclays Aggregate Index	3.76% 3.71%	1.97% 1.86%	4.43% 4.37%	(0.49%) (0.69%)	7.55% 7.47%
PIMCO Fixed Income Custom Index (2)	1.40% 3.59%	(0.43%) 0.75%	9.07% 8.48%	2.77% 2.41%	9.15% 7.63%

(1) The Total Domestic Equity target is currently composed of 78% S&P 500 and 22% Russell 2500 Index.

(2) The custom index is currently composed of 25% Barclays Mortgage, 25% Barclays Credit, 25% Barclays High Yield, and 25% JP Morgan EMBI Global. Prior to 2/1/2012, the custom index was composed of 70% Barclays Mortgage, 15% Barclays Credit, and 15% Barclays High Yield.

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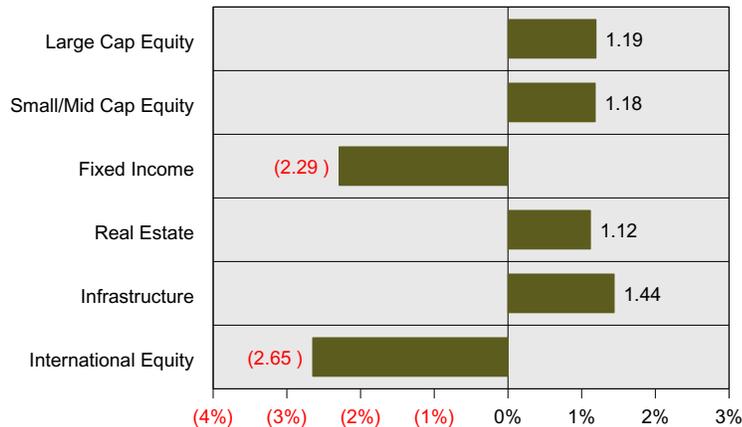
	6/2015- 3/2016	FY 2015	FY 2014	FY 2013	FY 2012
<b>Net of Fees</b>					
<b>Real Estate</b>	<b>7.97%</b>	<b>12.74%</b>	<b>12.03%</b>	<b>14.67%</b>	<b>10.34%</b>
NFI-ODCE Equal Weight Net	9.09%	13.64%	11.37%	10.80%	11.46%
JP Morgan Strategic Property Fund	8.11%	12.28%	12.98%	12.95%	10.90%
NFI-ODCE Equal Weight Net	9.09%	13.64%	11.37%	10.80%	11.46%
JP Morgan Income and Growth Fund	7.61%	14.74%	9.93%	23.54%	16.49%
NFI-ODCE Equal Weight Net	9.09%	13.64%	11.37%	10.80%	11.46%
<b>Infrastructure</b>	<b>8.83%</b>	<b>(3.82%)</b>	<b>15.32%</b>	<b>1.39%</b>	<b>3.61%</b>
CPI + 4%	2.31%	3.62%	6.05%	5.76%	5.58%
Macquarie European Infrastructure	4.35%	(10.56%)	14.11%	11.61%	(1.44%)
SteelRiver Infrastructure	12.76%	4.67%	16.80%	(9.28%)	10.85%
CPI + 4%	2.31%	3.62%	6.05%	5.76%	5.58%
<b>Cash Composite</b>	<b>0.06%</b>	<b>(0.00%)</b>	<b>0.00%</b>	<b>0.05%</b>	<b>0.03%</b>
<b>Total Fund</b>	<b>(0.80%)</b>	<b>4.17%</b>	<b>19.11%</b>	<b>14.21%</b>	<b>1.82%</b>
Total Fund Benchmark*	0.35%	4.34%	16.97%	12.87%	3.04%

\* Current Quarter Target = 36.0% S&P 500 Index, 26.0% Barclays Aggregate Index, 15.0% MSCI ACWI ex US, 10.0% Russell 2500 Index, 8.0% NFI-ODCE Value Weight Gr and 5.0% CPI-W+4.0%.

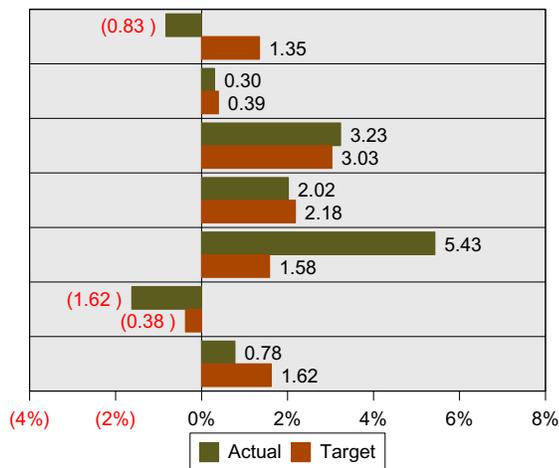
## Quarterly Style Attribution - March 31, 2016

The following analysis approaches Total Fund Attribution from the perspective of relative return. Relative return attribution separates and quantifies the sources of total fund excess return relative to its target. This excess return is separated into two relative attribution effects: Style Allocation Effect and Manager Selection Effect. The Style Allocation Effect represents the excess return due to the actual total fund style allocation differing from the target style allocation. Manager Selection Effect represents the total fund impact of the individual managers excess returns relative to their benchmarks.

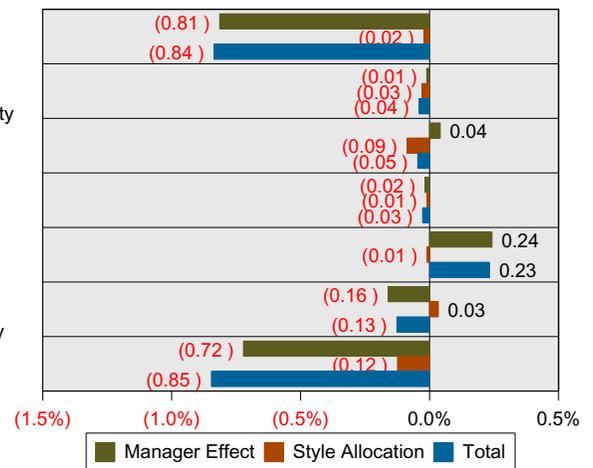
### Style Class Under or Overweighting



### Actual vs Target Returns



### Relative Attribution by Style Class



### Relative Attribution Effects for Quarter ended March 31, 2016

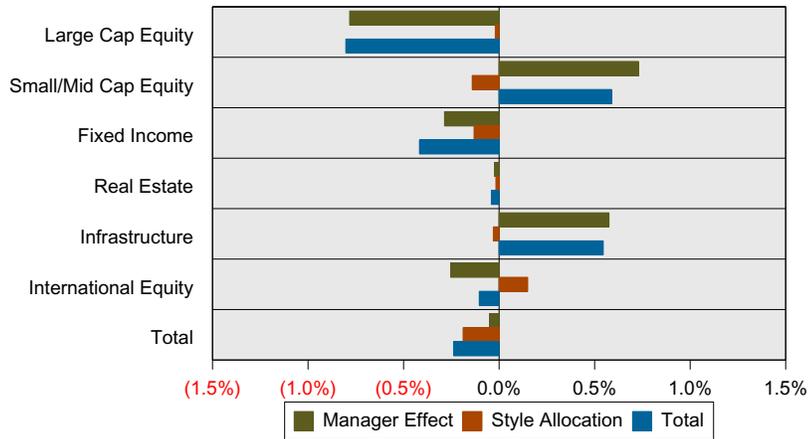
Style Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Style Allocation	Total Relative Return
Large Cap Equity	37%	36%	(0.83%)	1.35%	(0.81%)	(0.02%)	(0.84%)
Small/Mid Cap Equity	11%	10%	0.30%	0.39%	(0.01%)	(0.03%)	(0.04%)
Fixed Income	24%	26%	3.23%	3.03%	0.04%	(0.09%)	(0.05%)
Real Estate	9%	8%	2.02%	2.18%	(0.02%)	(0.01%)	(0.03%)
Infrastructure	6%	5%	5.43%	1.58%	0.24%	(0.01%)	0.23%
International Equity	12%	15%	(1.62%)	(0.38%)	(0.16%)	0.03%	(0.13%)
<b>Total</b>			<b>0.78%</b>	<b>1.62%</b>	<b>(0.72%)</b>	<b>(0.12%)</b>	<b>(0.85%)</b>

\* Current Quarter Target = 36.0% S&P 500 Index, 26.0% Barclays Aggregate Index, 15.0% MSCI ACWI ex US, 10.0% Russell 2500 Index, 8.0% NFI-ODCE Value Weight Gr and 5.0% CPI-W+4.0%.

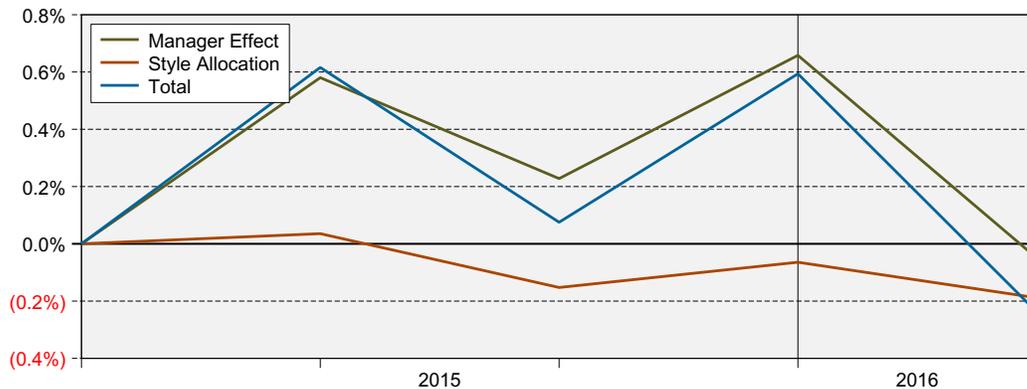
## Cumulative Style Relative Attribution - March 31, 2016

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by style class. These relative attribution effects separate the cumulative sources of total fund excess return into Style Allocation Effect and Manager Selection Effect.

### One Year Relative Attribution Effects



### Cumulative Relative Attribution Effects



### One Year Relative Attribution Effects

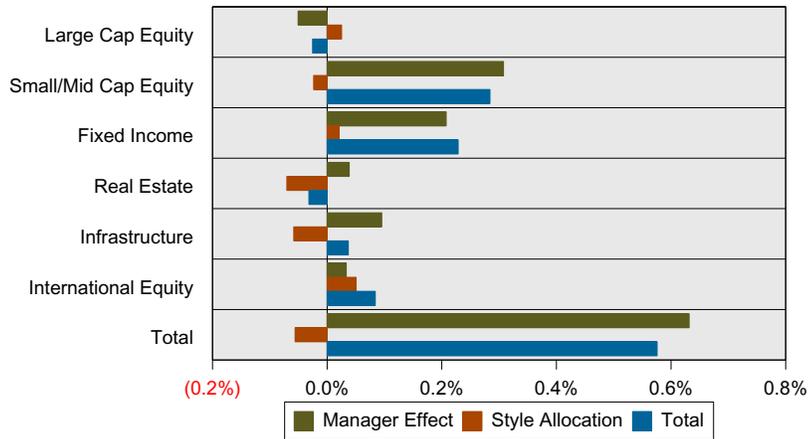
Style Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Style Allocation	Total Relative Return
Large Cap Equity	39%	36%	(0.36%)	1.78%	(0.78%)	(0.02%)	(0.80%)
Small/Mid Cap Equity	11%	10%	(1.26%)	(7.31%)	0.73%	(0.14%)	0.59%
Fixed Income	23%	26%	0.79%	1.96%	(0.29%)	(0.13%)	(0.42%)
Real Estate	8%	8%	13.32%	13.67%	(0.02%)	(0.02%)	(0.04%)
Infrastructure	6%	5%	14.82%	4.50%	0.58%	(0.03%)	0.55%
International Equity	13%	15%	(11.02%)	(9.19%)	(0.25%)	0.15%	(0.10%)
<b>Total</b>			<b>0.26%</b>	<b>0.49%</b>	<b>(0.05%)</b>	<b>(0.19%)</b>	<b>(0.24%)</b>

\* Current Quarter Target = 36.0% S&P 500 Index, 26.0% Barclays Aggregate Index, 15.0% MSCI ACWI ex US, 10.0% Russell 2500 Index, 8.0% NFI-ODCE Value Weight Gr and 5.0% CPI-W+4.0%.

## Cumulative Style Relative Attribution - March 31, 2016

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by style class. These relative attribution effects separate the cumulative sources of total fund excess return into Style Allocation Effect and Manager Selection Effect.

### Five Year Annualized Relative Attribution Effects



### Cumulative Relative Attribution Effects



### Five Year Annualized Relative Attribution Effects

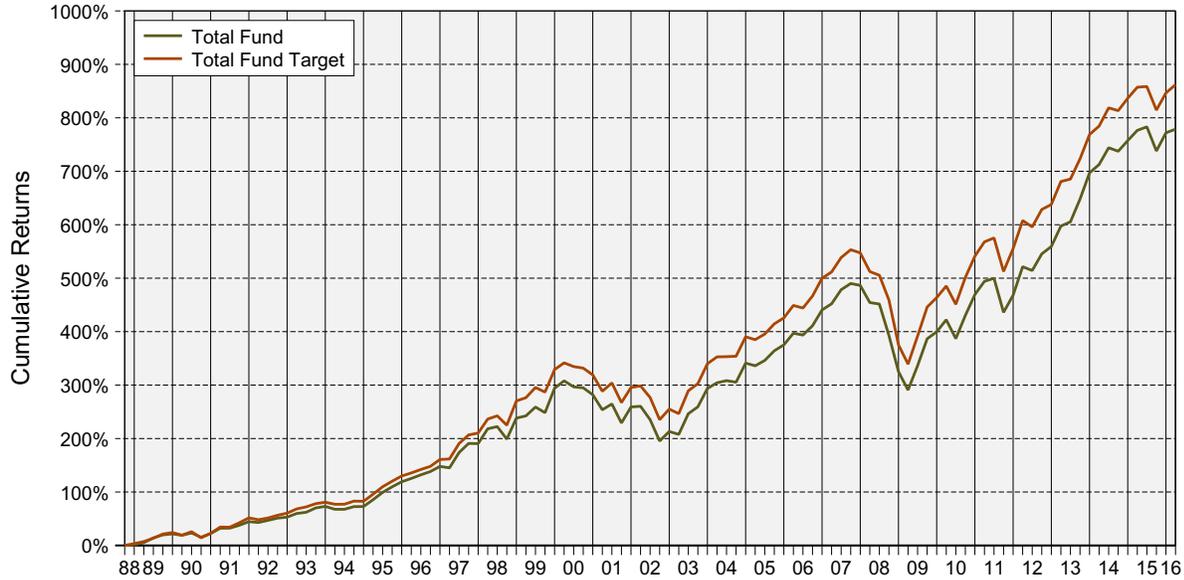
Style Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Style Allocation	Total Relative Return
Large Cap Equity	38%	36%	11.41%	11.58%	(0.05%)	0.03%	(0.03%)
Small/Mid Cap Equity	11%	10%	11.47%	8.58%	0.31%	(0.02%)	0.28%
Fixed Income	24%	26%	4.65%	3.81%	0.21%	0.02%	0.23%
Real Estate	8%	8%	13.82%	13.26%	0.04%	(0.07%)	(0.03%)
Infrastructure	6%	5%	6.55%	5.09%	0.10%	(0.06%)	0.04%
International Equity	14%	15%	0.52%	0.31%	0.03%	0.05%	0.08%
<b>Total</b>			<b>8.14%</b>	<b>7.57%</b>	<b>+ 0.63%</b>	<b>+ (0.06%)</b>	<b>0.58%</b>

\* Current Quarter Target = 36.0% S&P 500 Index, 26.0% Barclays Aggregate Index, 15.0% MSCI ACWI ex US, 10.0% Russell 2500 Index, 8.0% NFI-ODCE Value Weight Gr and 5.0% CPI-W+4.0%.

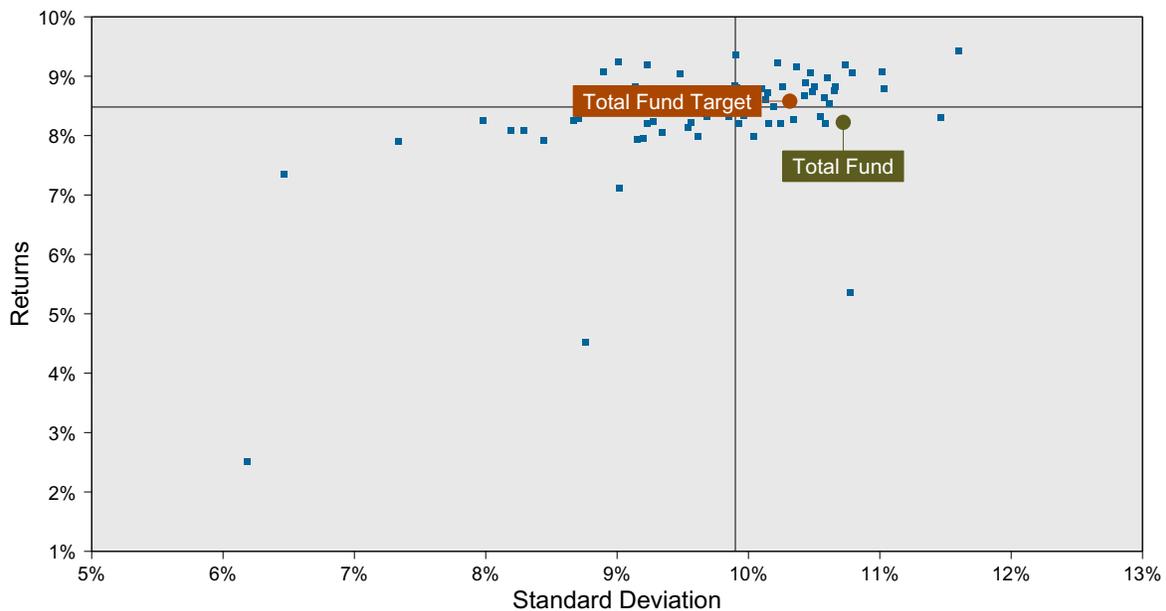
## Cumulative Performance Relative to Target

The first chart below illustrates the cumulative performance of the Total Fund relative to the cumulative performance of the Fund's Target Asset Mix. The Target Mix is assumed to be rebalanced each quarter with no transaction costs. The second chart below shows the return and the risk of the Total Fund and the Target Mix, contrasted with the returns and risks of the funds in the Public Fund Sponsor Database.

### Cumulative Returns Actual vs Target



### Twenty-Seven and One-Half Year Annualized Risk vs Return



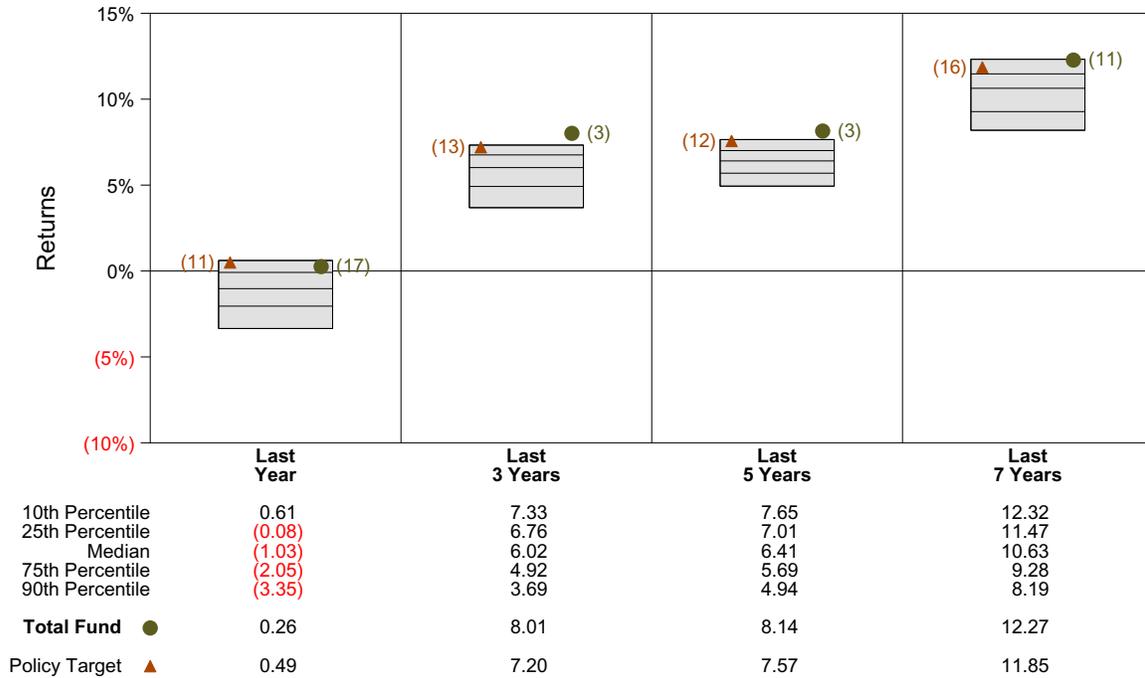
Squares represent membership of the Public Fund Sponsor Database

\* Current Quarter Target = 36.0% S&P 500 Index, 26.0% Barclays Aggregate Index, 15.0% MSCI ACWI ex US, 10.0% Russell 2500 Index, 8.0% NFI-ODCE Value Weight Gr and 5.0% CPI-W+4.0%.

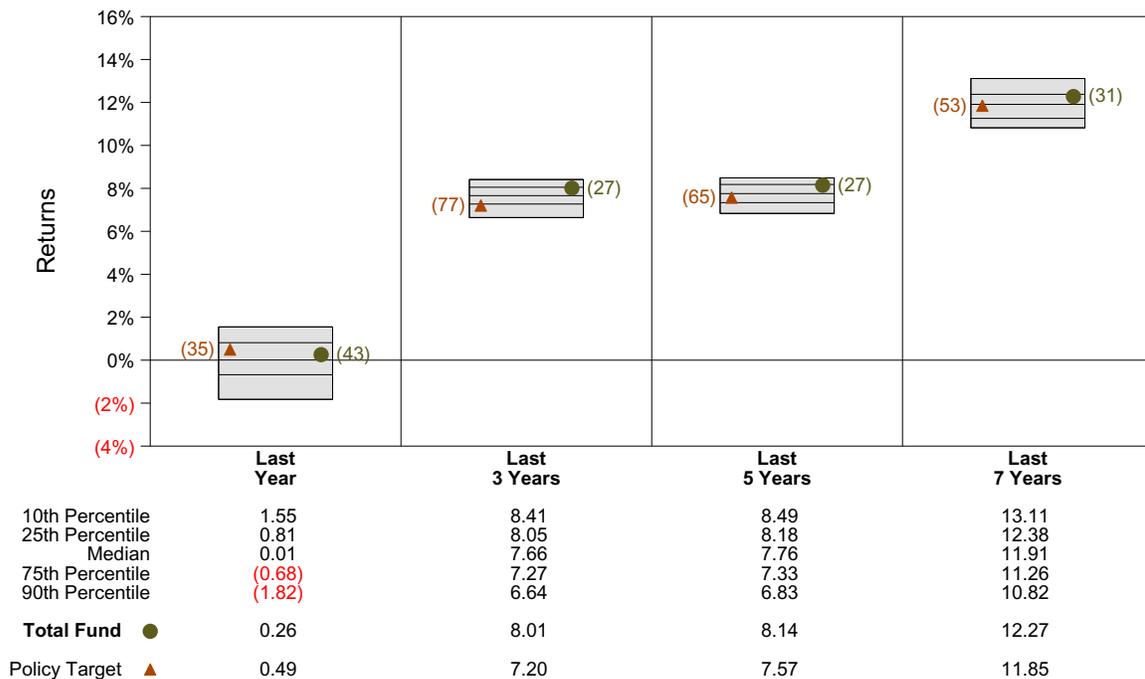
## Total Fund Ranking

The first two charts show the ranking of the Total Fund's performance relative to that of the Public Fund Sponsor Database for periods ended March 31, 2016. The first chart is a standard unadjusted ranking. In the second chart each fund in the database is adjusted to have the same historical asset allocation as that of the Total Fund.

### Public Fund Sponsor Database



### Asset Allocation Adjusted Ranking

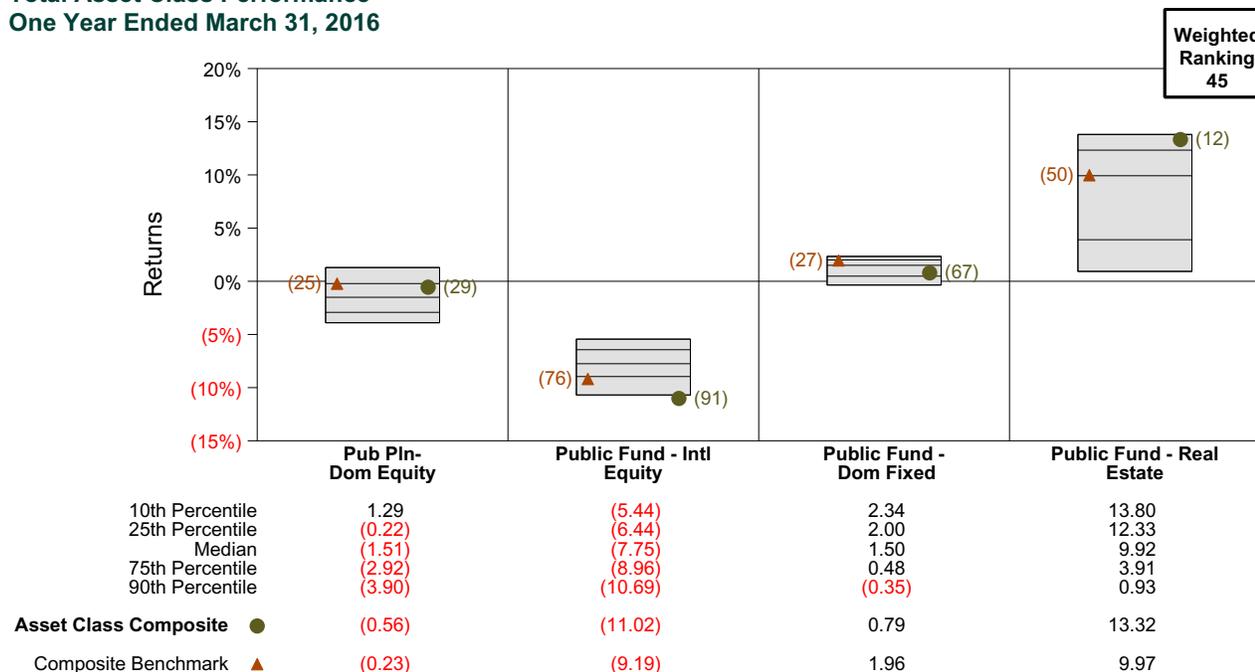


\* Current Quarter Target = 36.0% S&P 500 Index, 26.0% Barclays Aggregate Index, 15.0% MSCI ACWI ex US, 10.0% Russell 2500 Index, 8.0% NFI-ODCE Value Weight Gr and 5.0% CPI-W+4.0%.

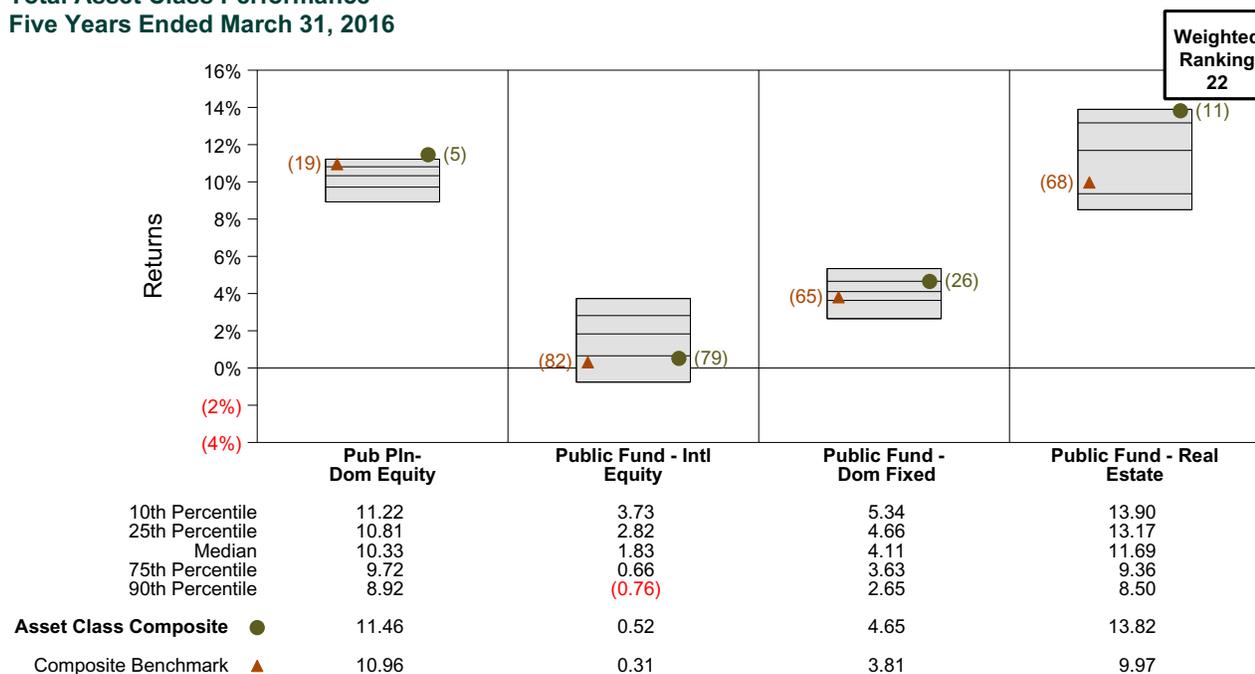
## Asset Class Rankings

The charts below show the rankings of each asset class component of the Total Fund relative to appropriate comparative databases. In the upper right corner of each graph is the weighted average of the rankings across the different asset classes. The weights of the fund's actual asset allocation are used to make this calculation. The weighted average ranking can be viewed as a measure of the fund's overall success in picking managers and structuring asset classes.

### Total Asset Class Performance One Year Ended March 31, 2016



### Total Asset Class Performance Five Years Ended March 31, 2016



\* Current Quarter Target = 36.0% S&P 500 Index, 26.0% Barclays Aggregate Index, 15.0% MSCI ACWI ex US, 10.0% Russell 2500 Index, 8.0% NFI-ODCE Value Weight Gr and 5.0% CPI-W+4.0%.

# Total Fund Period Ended March 31, 2016

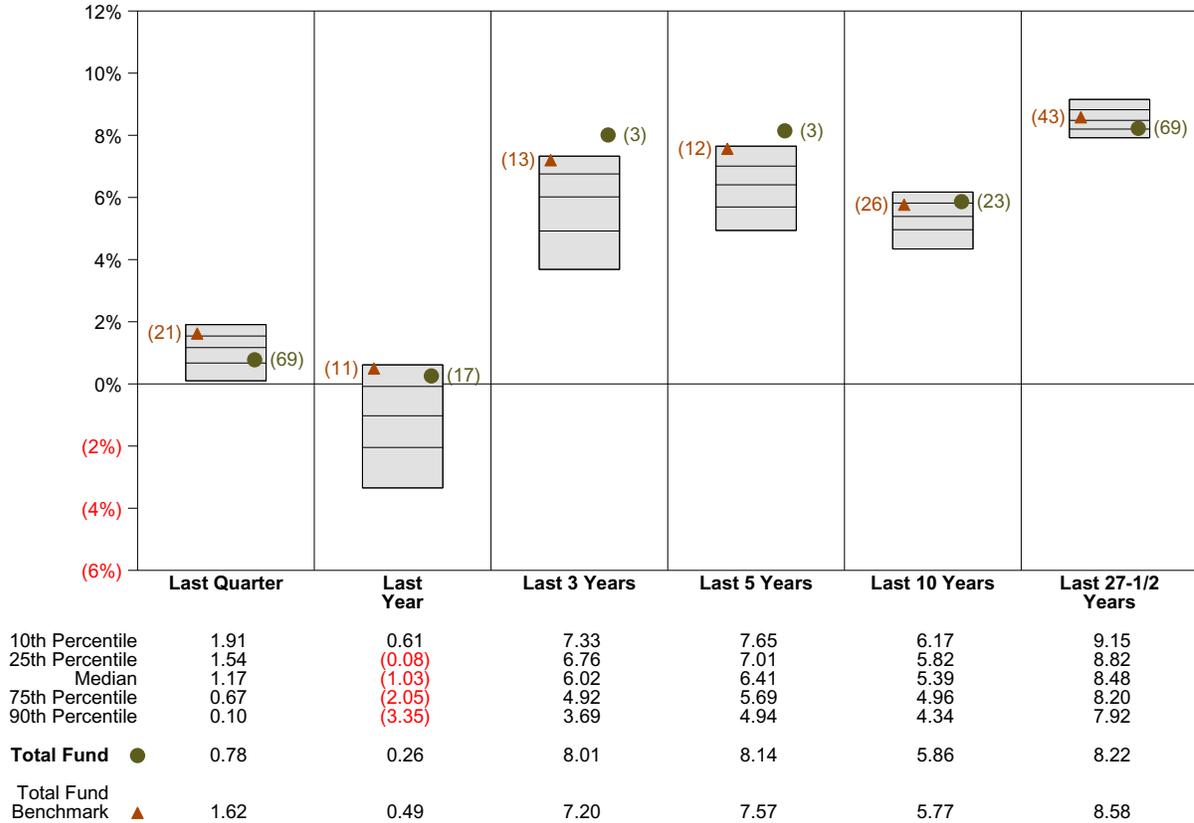
## Investment Philosophy

The total fund return stream starts the third quarter of 1988.

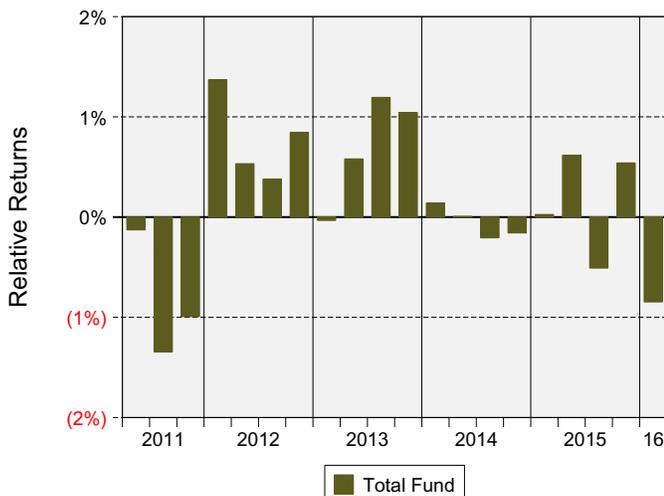
## Quarterly Summary and Highlights

- Total Fund's portfolio posted a 0.78% return for the quarter placing it in the 69 percentile of the Public Fund Sponsor Database group for the quarter and in the 17 percentile for the last year.
- Total Fund's portfolio underperformed the Total Fund Benchmark by 0.85% for the quarter and underperformed the Total Fund Benchmark for the year by 0.24%.

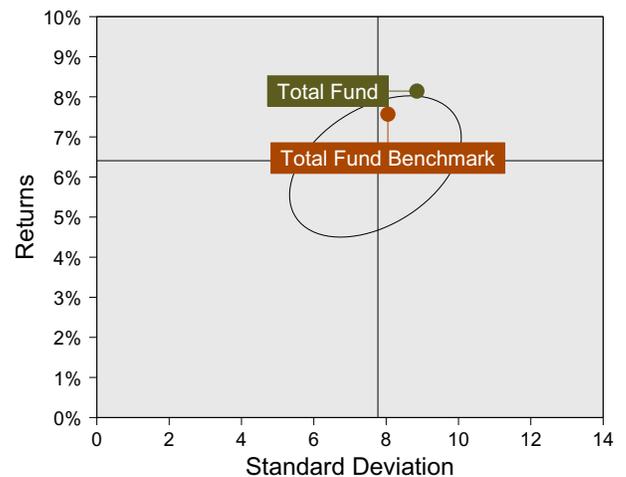
## Performance vs Public Fund Sponsor Database (Gross)



## Relative Return vs Total Fund Benchmark



## Public Fund Sponsor Database (Gross) Annualized Five Year Risk vs Return





# Domestic Equity Period Ended March 31, 2016

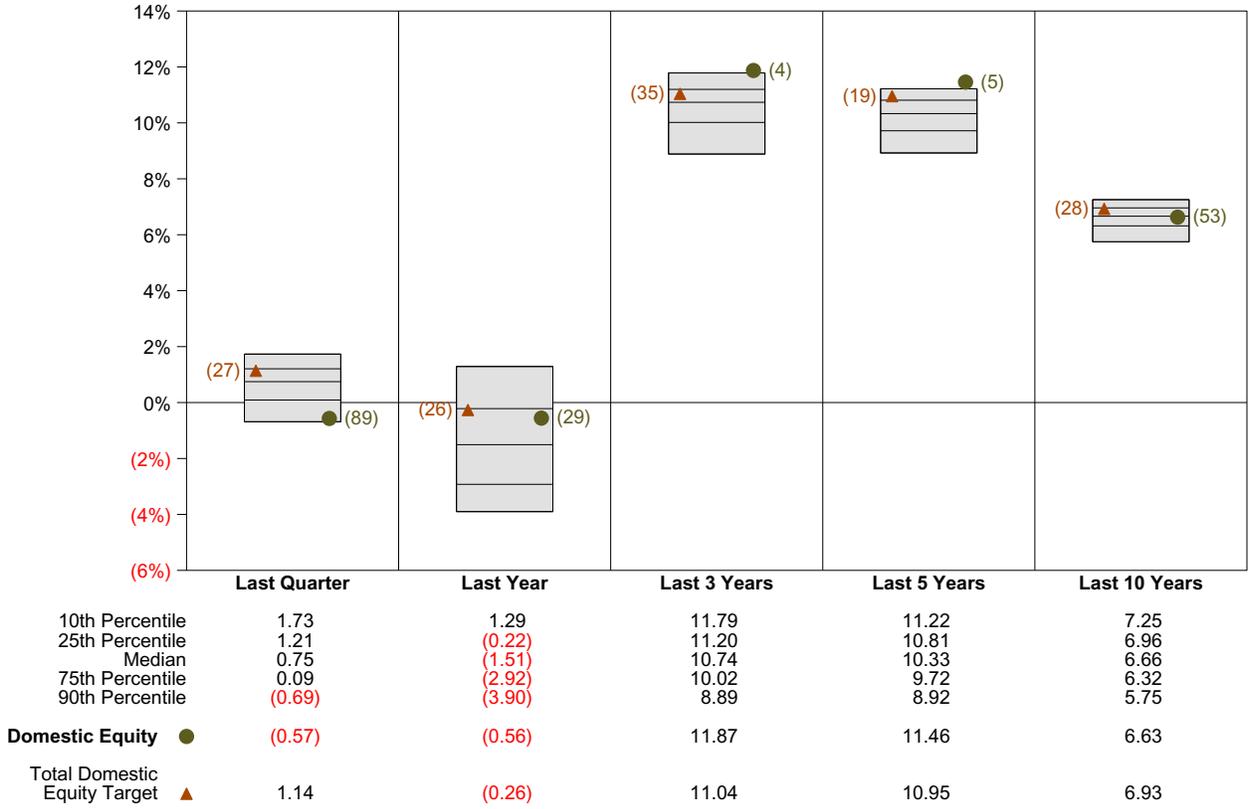
## Investment Philosophy

The Total Domestic Equity target is currently composed of 78% S&P 500 Index and 22% Russell 2500 Index.

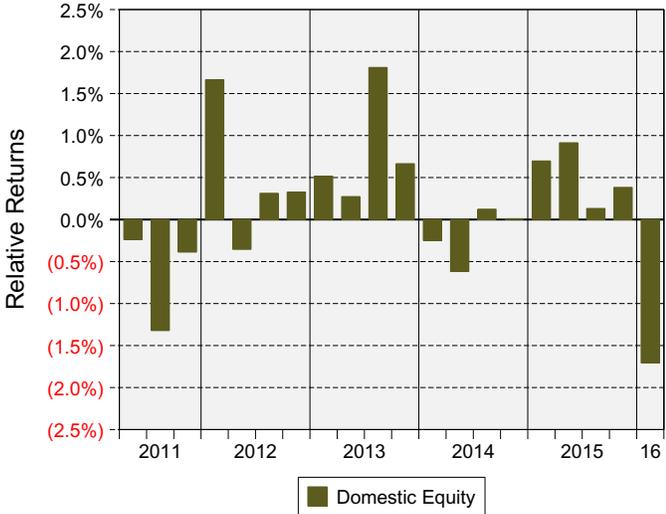
## Quarterly Summary and Highlights

- Domestic Equity's portfolio posted a (0.57)% return for the quarter placing it in the 89 percentile of the Pub Pln-Domestic Equity group for the quarter and in the 29 percentile for the last year.
- Domestic Equity's portfolio underperformed the Total Domestic Equity Target by 1.71% for the quarter and underperformed the Total Domestic Equity Target for the year by 0.29%.

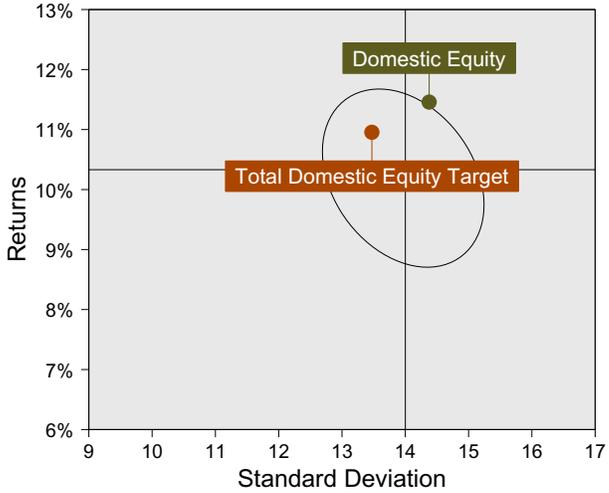
## Performance vs Pub Pln- Domestic Equity (Gross)



## Relative Returns vs Total Domestic Equity Target



## Pub Pln- Domestic Equity (Gross) Annualized Five Year Risk vs Return

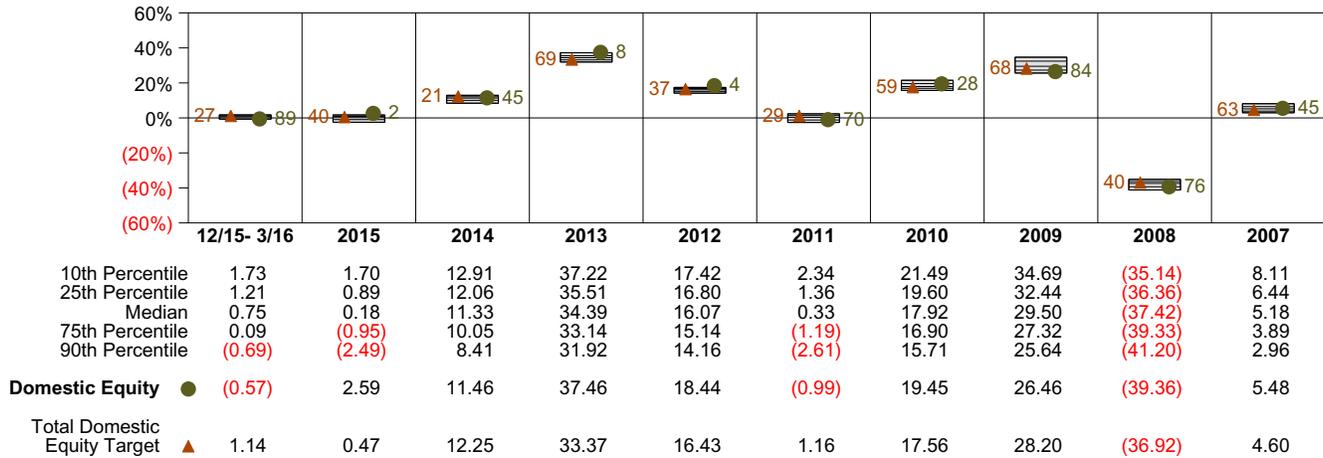


# Domestic Equity Return Analysis Summary

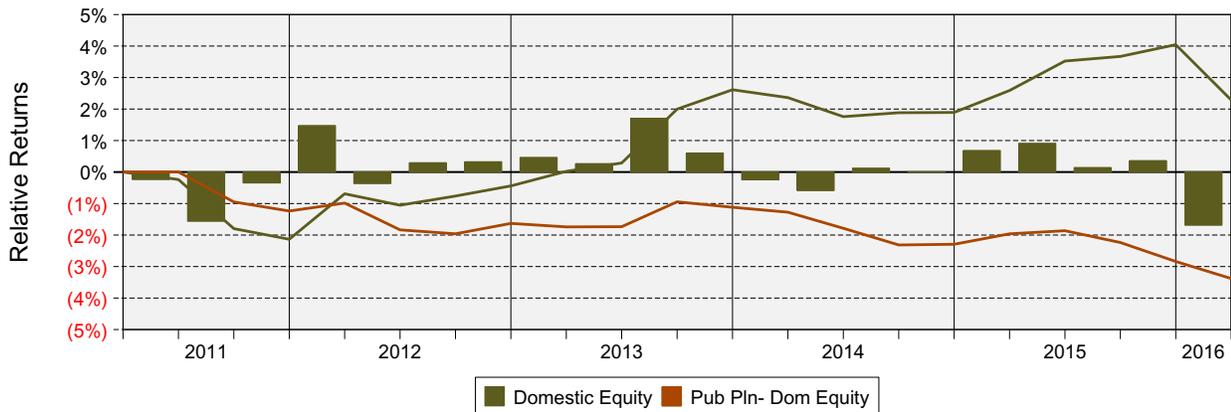
## Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last two charts illustrate the manager's ranking relative to their style using various risk-adjusted return measures.

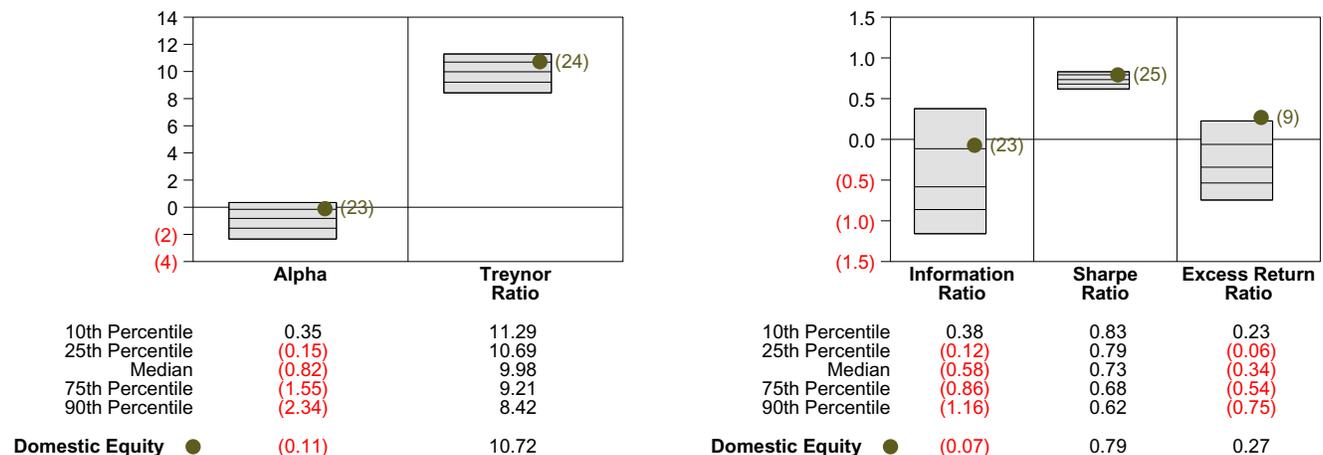
### Performance vs Pub Pln- Domestic Equity (Gross)



### Cumulative and Quarterly Relative Return vs Total Domestic Equity Target



### Risk Adjusted Return Measures vs Total Domestic Equity Target Rankings Against Pub Pln- Domestic Equity (Gross) Five Years Ended March 31, 2016



# Alliance S&P Index Period Ended March 31, 2016

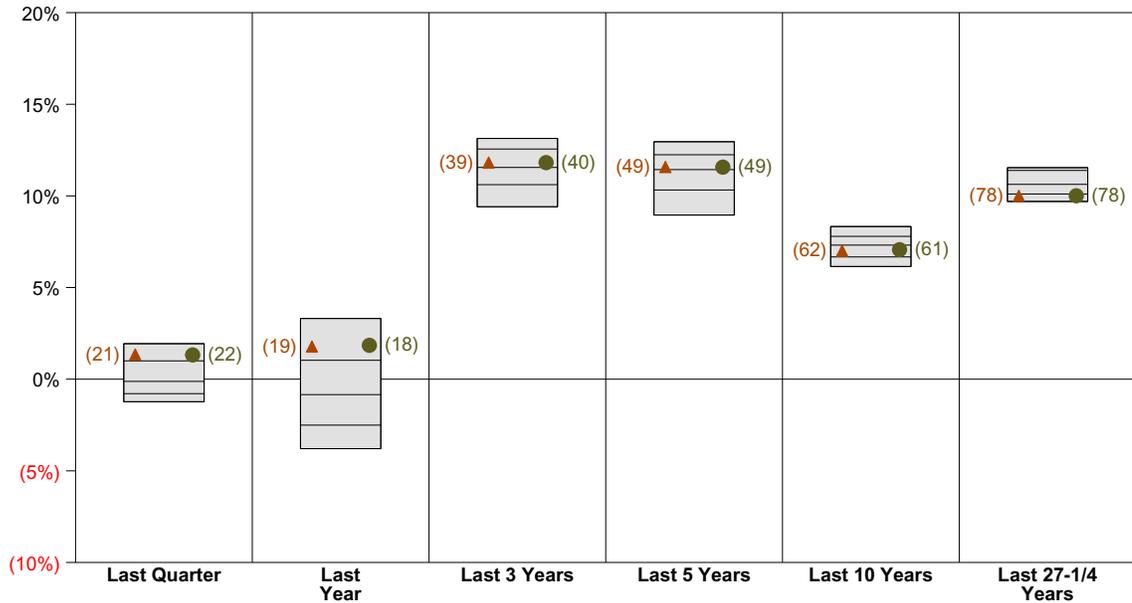
## Investment Philosophy

Alliance uses a stratified sampling methodology and purchases a majority of the index stocks to replicate the Standard and Poor's 500. The product was funded during the third quarter of 1988.

## Quarterly Summary and Highlights

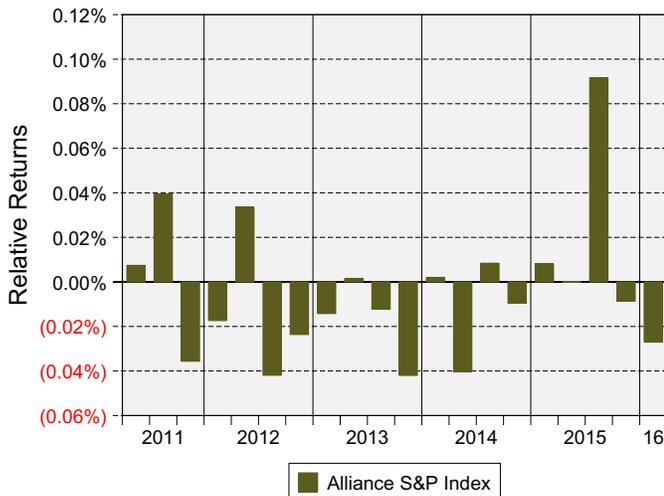
- Alliance S&P Index's portfolio posted a 1.32% return for the quarter placing it in the 22 percentile of the CAI Large Cap Core Style group for the quarter and in the 18 percentile for the last year.
- Alliance S&P Index's portfolio underperformed the S&P 500 Index by 0.03% for the quarter and outperformed the S&P 500 Index for the year by 0.06%.

## Performance vs CAI Large Cap Core Style (Gross)

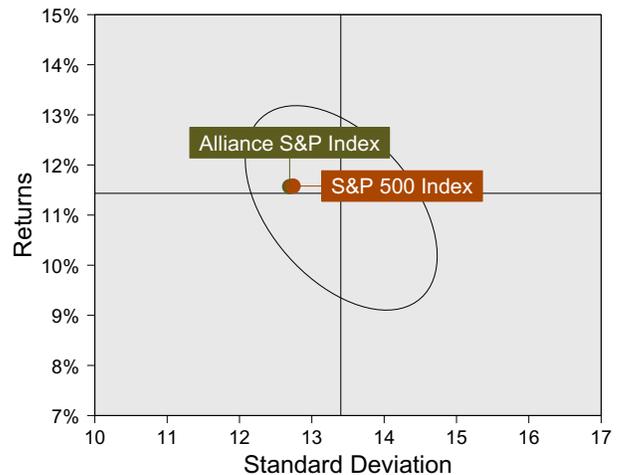


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years	Last 27-1/4 Years
10th Percentile	1.94	3.31	13.14	12.96	8.33	11.54
25th Percentile	1.00	1.03	12.56	12.25	7.79	11.39
Median	(0.12)	(0.84)	11.55	11.43	7.32	10.63
75th Percentile	(0.79)	(2.51)	10.61	10.32	6.67	10.10
90th Percentile	(1.23)	(3.79)	9.41	8.96	6.15	9.70
Alliance S&P Index ●	1.32	1.85	11.82	11.57	7.07	10.01
S&P 500 Index ▲	1.35	1.78	11.82	11.58	7.01	10.01

## Relative Return vs S&P 500 Index



## CAI Large Cap Core Style (Gross) Annualized Five Year Risk vs Return

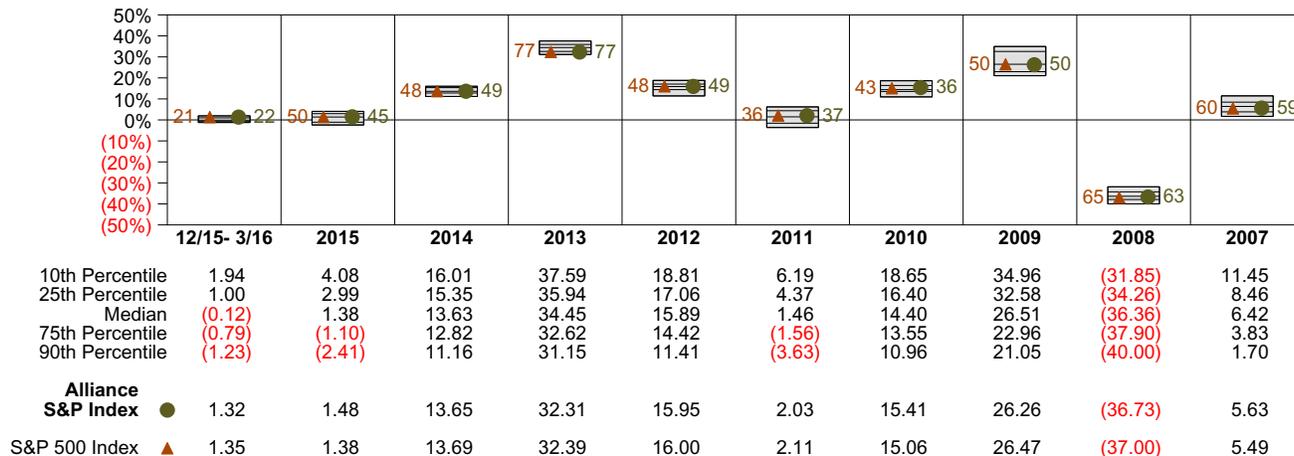


# Alliance S&P Index Return Analysis Summary

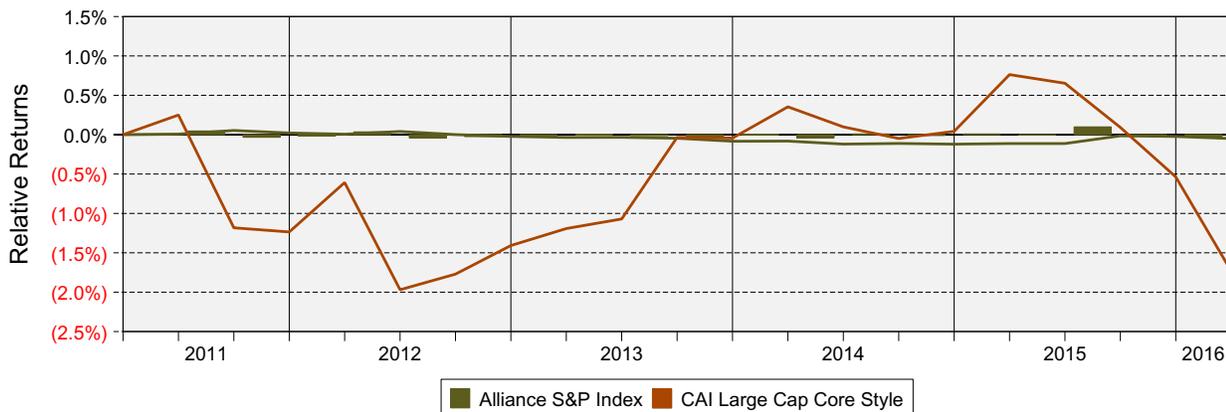
## Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last two charts illustrate the manager's ranking relative to their style using various risk-adjusted return measures.

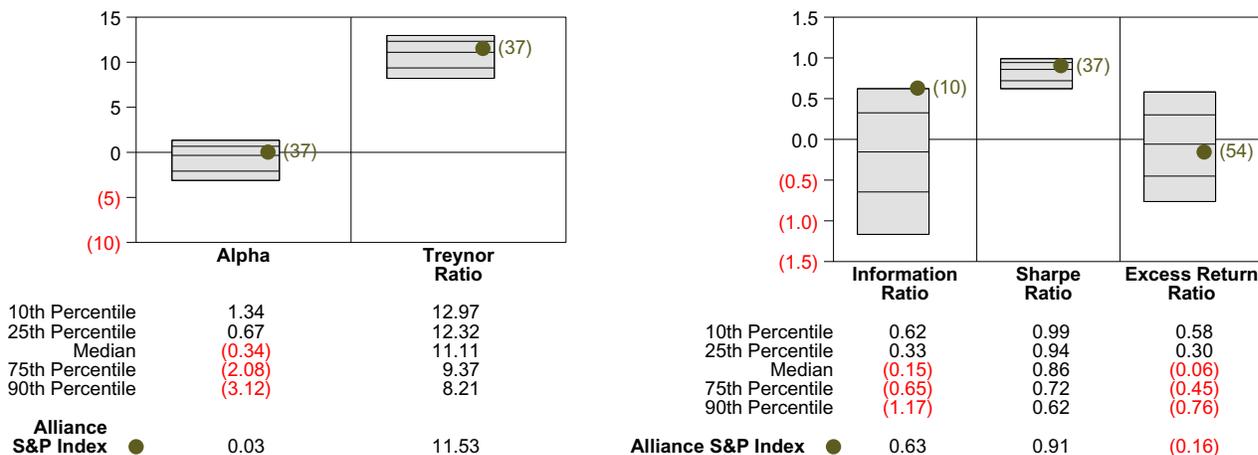
### Performance vs CAI Large Cap Core Style (Gross)



### Cumulative and Quarterly Relative Return vs S&P 500 Index



### Risk Adjusted Return Measures vs S&P 500 Index Rankings Against CAI Large Cap Core Style (Gross) Five Years Ended March 31, 2016



# PIMCO StocksPLUS Period Ended March 31, 2016

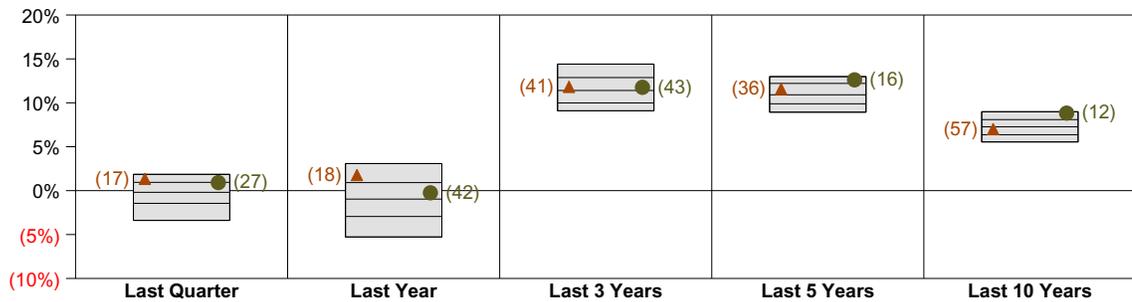
## Investment Philosophy

PIMCO's StocksPLUS investment philosophy is based on the principal that stock index futures and swaps, when used as a non-leveraged vehicle for obtaining long-term equity exposure, offer an attractive means for enhancing equity market returns. The strategy seeks a longer time horizon of their investors relative to that of typical money market investors. This long time horizon allows PIMCO to use their fixed income and associated risk management skill set to seek out attractive yields relative to money market financing rates on a portion of the high quality fixed-income securities they use to back the futures contracts. Since they only require sufficient liquidity to meet a worst case margin outflow caused by a stock market decline, a portion of their fixed-income portfolio can be invested in somewhat less liquid, higher yielding securities. In addition, they generally take advantage of the typical upward slope of the short end of the yield curve by extending their duration to six months in most market environments and sometimes up to one year. PIMCO also feels that it is appropriate in most market environments to capture both the credit yield premium provided by holding a portion of the fixed-income portfolio in low duration corporate securities and the volatility yield premium provided by holding high quality mortgage securities. The product was funded during the first quarter of 2006.

## Quarterly Summary and Highlights

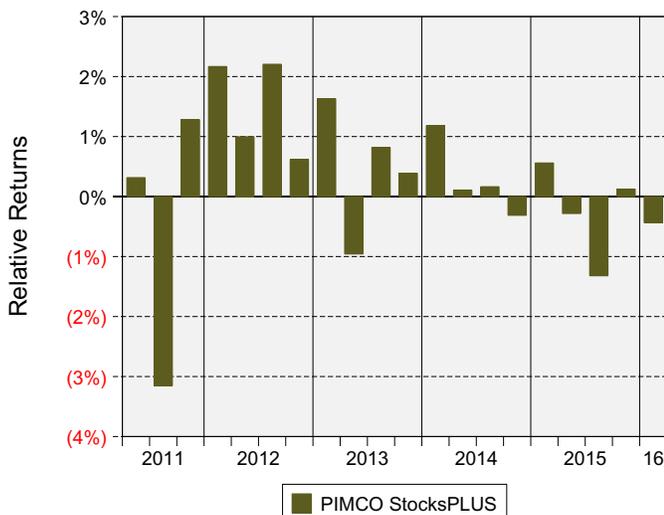
- PIMCO StocksPLUS's portfolio posted a 0.91% return for the quarter placing it in the 27 percentile of the CAI Large Capitalization Style group for the quarter and in the 42 percentile for the last year.
- PIMCO StocksPLUS's portfolio underperformed the S&P 500 Index by 0.43% for the quarter and underperformed the S&P 500 Index for the year by 2.03%.

## Performance vs CAI Large Capitalization Style (Gross)

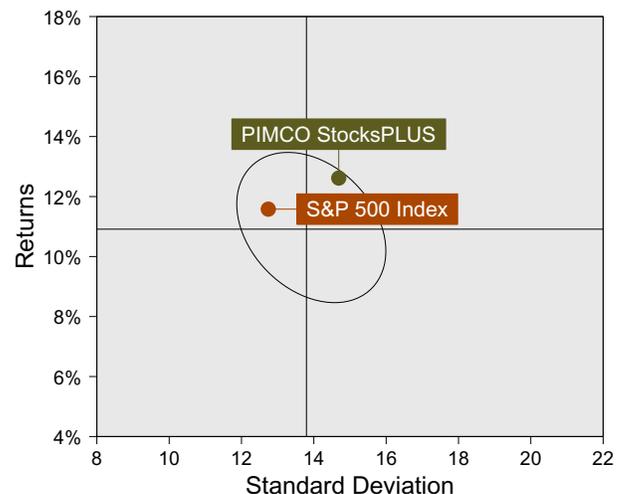


10th Percentile	1.85	3.08	14.41	12.98	8.99
25th Percentile	0.95	0.92	12.87	12.21	8.09
Median	(0.19)	(0.96)	11.40	10.91	7.27
75th Percentile	(1.45)	(2.94)	9.99	9.89	6.37
90th Percentile	(3.39)	(5.28)	9.09	8.93	5.55
<b>PIMCO StocksPLUS</b>	0.91	(0.25)	11.76	12.62	8.83
<b>S&amp;P 500 Index</b>	1.35	1.78	11.82	11.58	7.01

## Relative Return vs S&P 500 Index



## CAI Large Capitalization Style (Gross) Annualized Five Year Risk vs Return

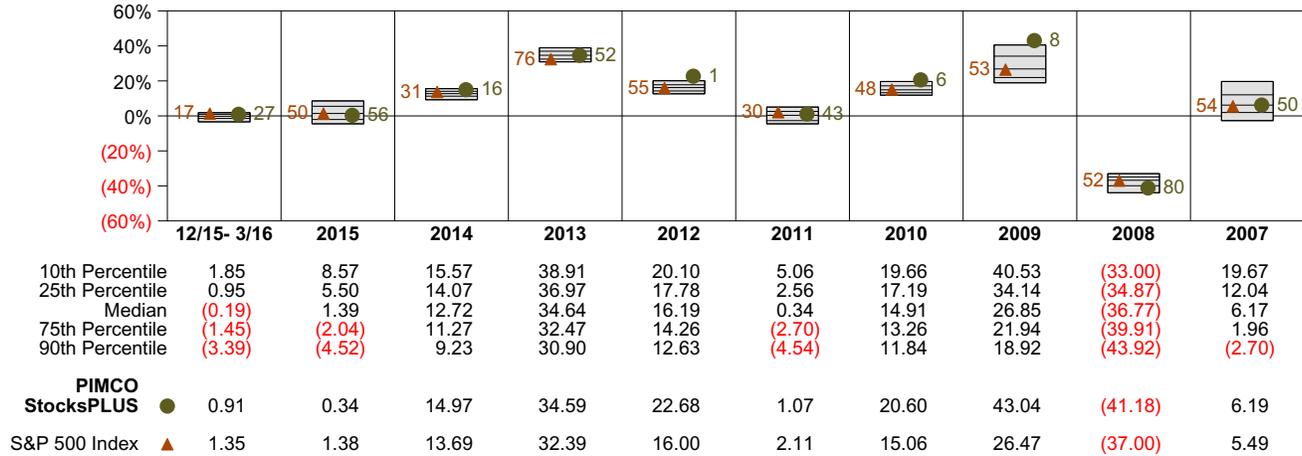


# PIMCO StocksPLUS Return Analysis Summary

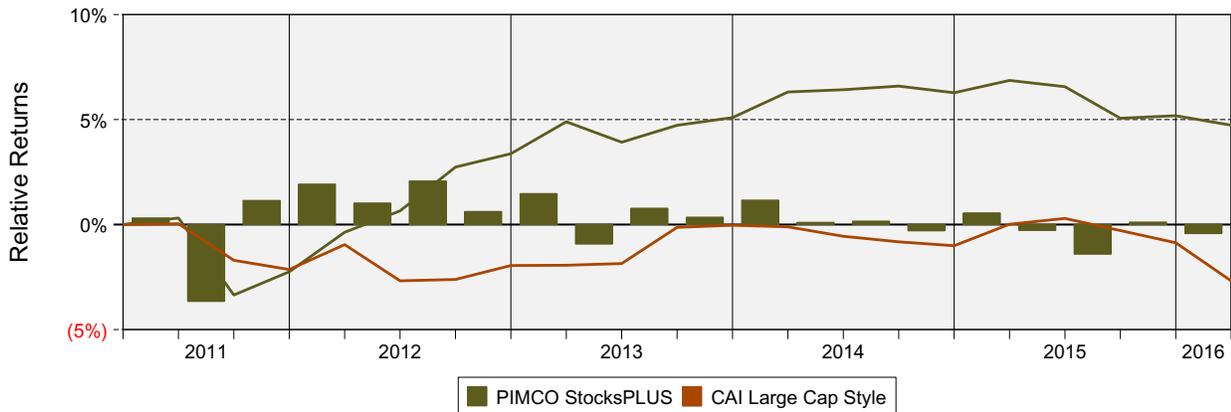
## Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last two charts illustrate the manager's ranking relative to their style using various risk-adjusted return measures.

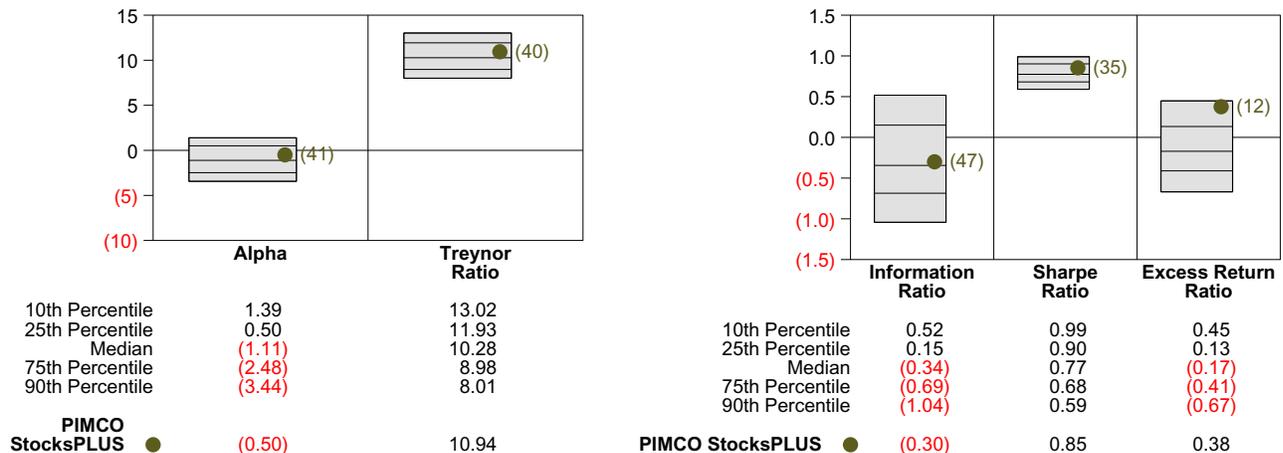
### Performance vs CAI Large Capitalization Style (Gross)



### Cumulative and Quarterly Relative Return vs S&P 500 Index



### Risk Adjusted Return Measures vs S&P 500 Index Rankings Against CAI Large Capitalization Style (Gross) Five Years Ended March 31, 2016



# BlackRock Russell 1000 Value Period Ended March 31, 2016

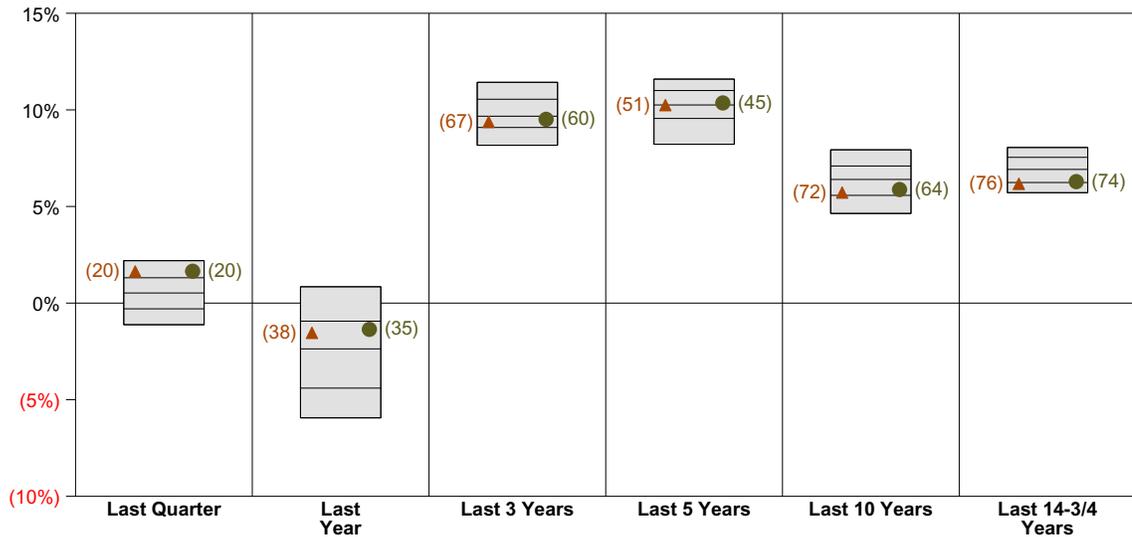
## Investment Philosophy

The objective of the Russell 1000 Value Index Fund is to track the performance of its benchmark, the Russell 1000 Value Index. They seek to deliver a high quality and cost-effective index-based solution to institutional investors. The product was funded during the second quarter of 2001.

## Quarterly Summary and Highlights

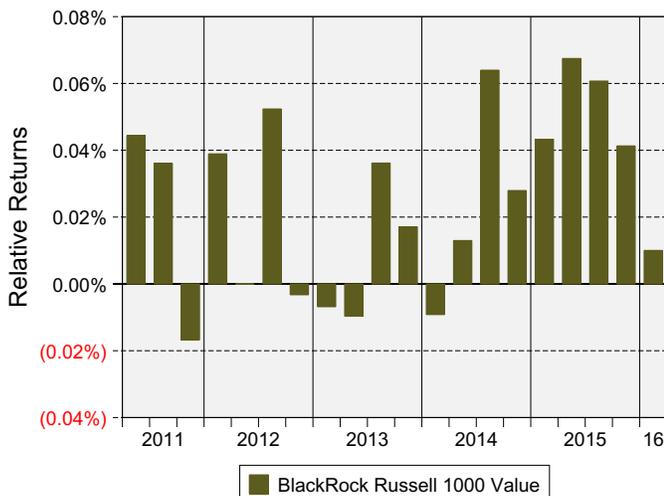
- BlackRock Russell 1000 Value's portfolio posted a 1.65% return for the quarter placing it in the 20 percentile of the CAI Large Cap Value Style group for the quarter and in the 35 percentile for the last year.
- BlackRock Russell 1000 Value's portfolio outperformed the Russell 1000 Value Index by 0.01% for the quarter and outperformed the Russell 1000 Value Index for the year by 0.18%.

## Performance vs CAI Large Cap Value Style (Gross)

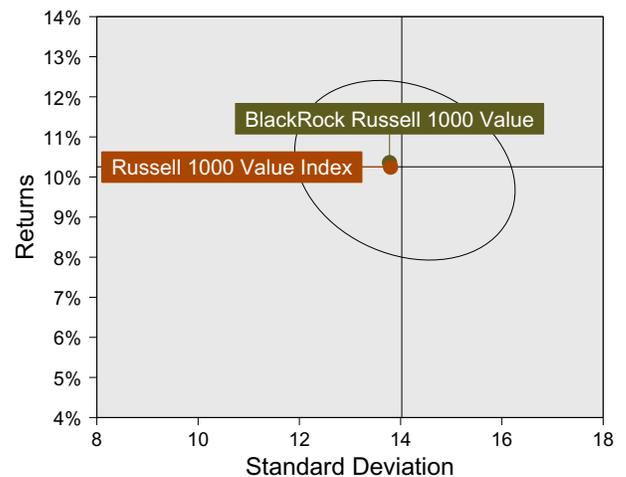


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years	Last 14-3/4 Years
10th Percentile	2.19	0.85	11.43	11.59	7.93	8.05
25th Percentile	1.31	(0.94)	10.55	11.00	7.10	7.54
Median	0.52	(2.37)	9.67	10.25	6.40	6.92
75th Percentile	(0.30)	(4.40)	9.09	9.56	5.58	6.24
90th Percentile	(1.12)	(5.94)	8.17	8.22	4.64	5.71
<b>BlackRock Russell 1000 Value</b>	● 1.65	(1.36)	9.51	10.36	5.88	6.28
Russell 1000 Value Index	▲ 1.64	(1.54)	9.38	10.25	5.72	6.17

## Relative Return vs Russell 1000 Value Index



## CAI Large Cap Value Style (Gross) Annualized Five Year Risk vs Return

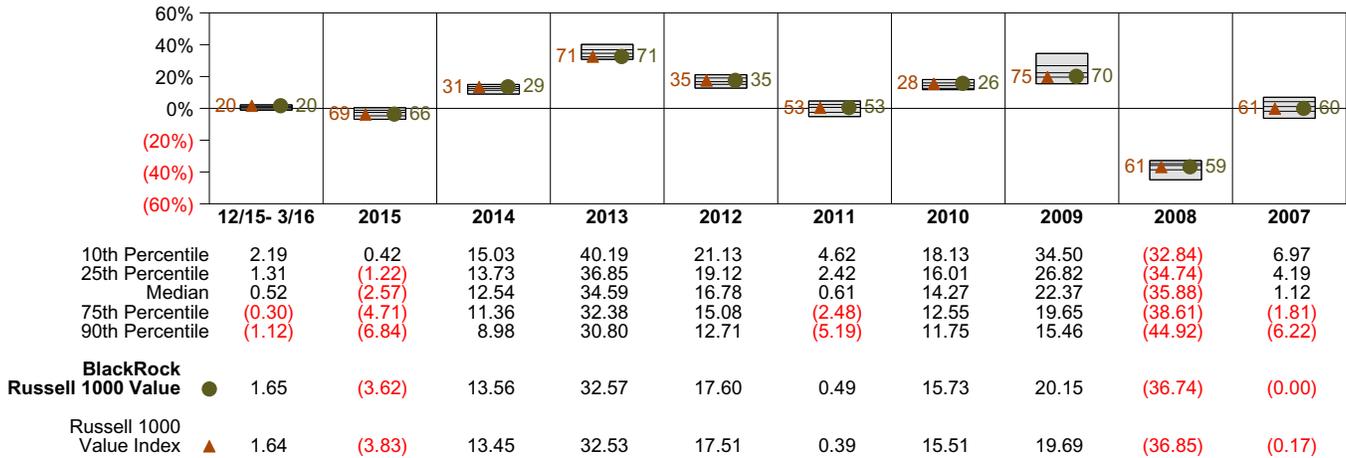


# BlackRock Russell 1000 Value Return Analysis Summary

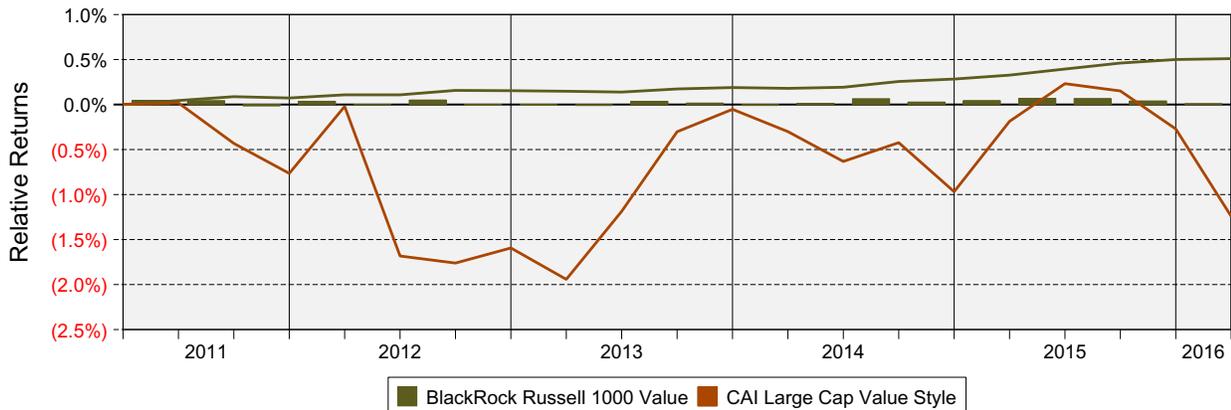
## Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last two charts illustrate the manager's ranking relative to their style using various risk-adjusted return measures.

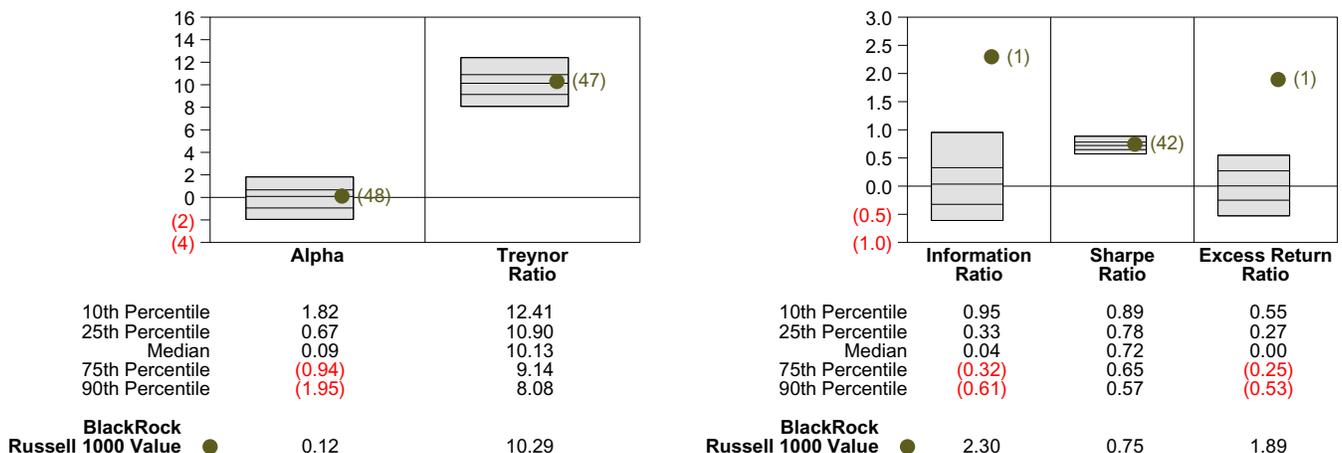
### Performance vs CAI Large Cap Value Style (Gross)



### Cumulative and Quarterly Relative Return vs Russell 1000 Value Index



### Risk Adjusted Return Measures vs Russell 1000 Value Index Rankings Against CAI Large Cap Value Style (Gross) Five Years Ended March 31, 2016



# T. Rowe Price Large Cap Growth Period Ended March 31, 2016

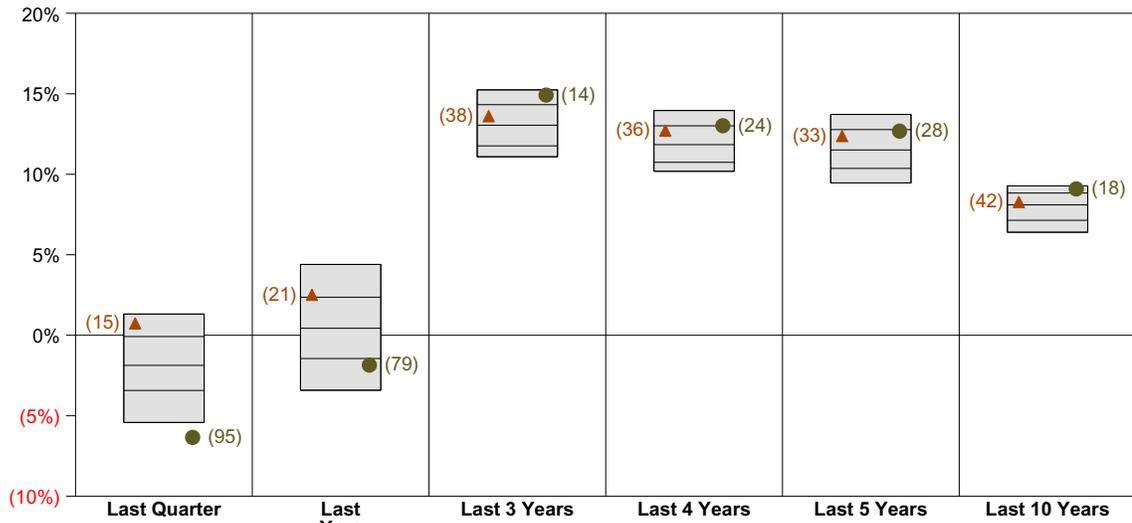
## Investment Philosophy

The Large-Cap Growth Strategy is a fundamentally driven, active approach to large company growth investing. The investment philosophy is centered around the manager's belief that long-term growth in earnings and cash flow drive stockholder returns. The product was funded during the first quarter of 2012. Performance prior is that of the composite.

## Quarterly Summary and Highlights

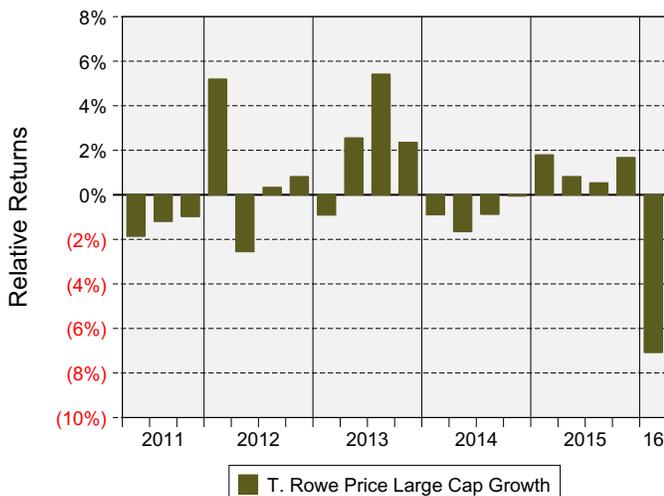
- T. Rowe Price Large Cap Growth's portfolio posted a (6.34)% return for the quarter placing it in the 95 percentile of the CAI Large Cap Growth Style group for the quarter and in the 79 percentile for the last year.
- T. Rowe Price Large Cap Growth's portfolio underperformed the Russell 1000 Growth Index by 7.08% for the quarter and underperformed the Russell 1000 Growth Index for the year by 4.37%.

## Performance vs CAI Large Cap Growth Style (Gross)

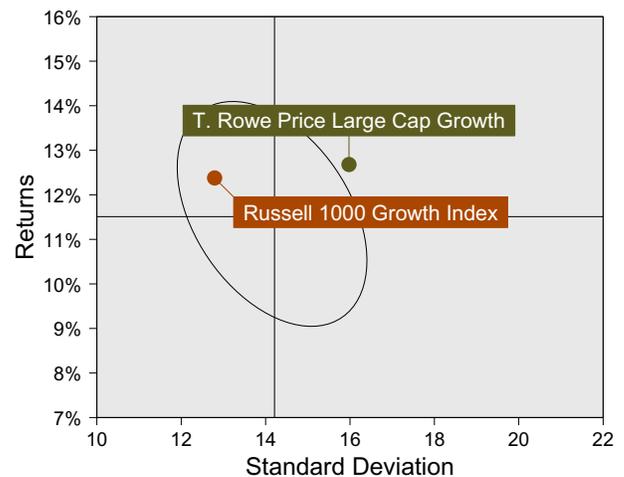


	Last Quarter	Last Year	Last 3 Years	Last 4 Years	Last 5 Years	Last 10 Years
10th Percentile	1.32	4.40	15.24	13.96	13.72	9.28
25th Percentile	(0.08)	2.37	14.32	13.01	12.78	8.83
Median	(1.87)	0.44	13.05	11.84	11.51	8.10
75th Percentile	(3.43)	(1.45)	11.76	10.74	10.36	7.14
90th Percentile	(5.42)	(3.42)	11.09	10.19	9.46	6.40
<b>T. Rowe Price Large Cap Growth</b>	● (6.34)	(1.85)	14.92	13.02	12.68	9.09
Russell 1000 Growth Index	▲ 0.74	2.52	13.61	12.72	12.38	8.28

## Relative Return vs Russell 1000 Growth Index



## CAI Large Cap Growth Style (Gross) Annualized Five Year Risk vs Return

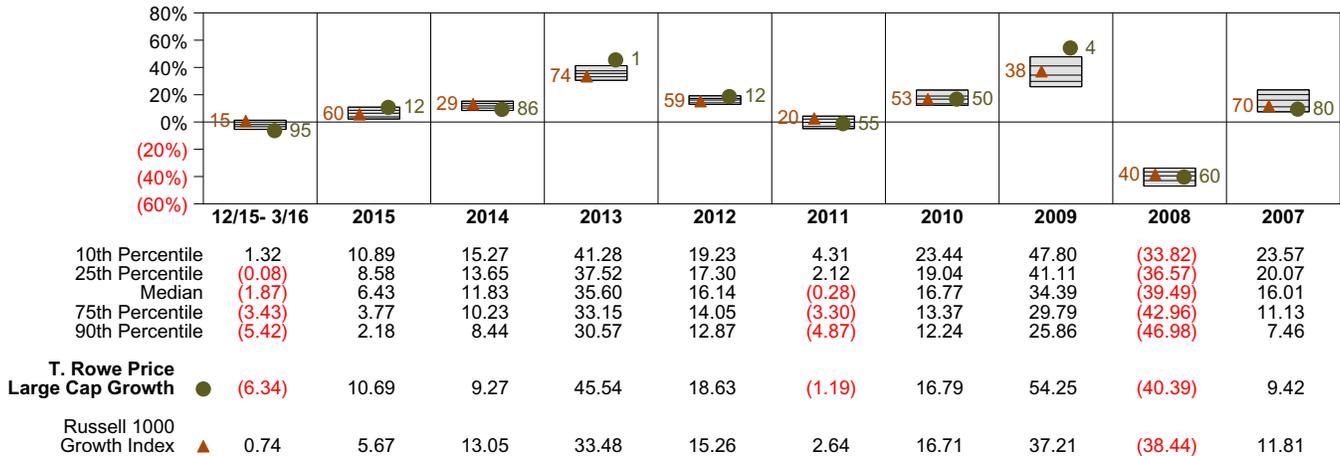


# T. Rowe Price Large Cap Growth Return Analysis Summary

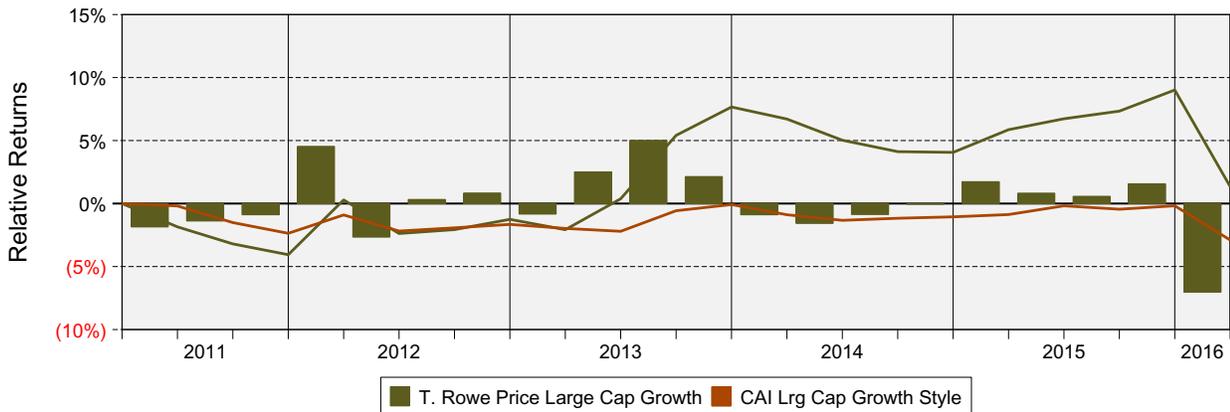
## Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last two charts illustrate the manager's ranking relative to their style using various risk-adjusted return measures.

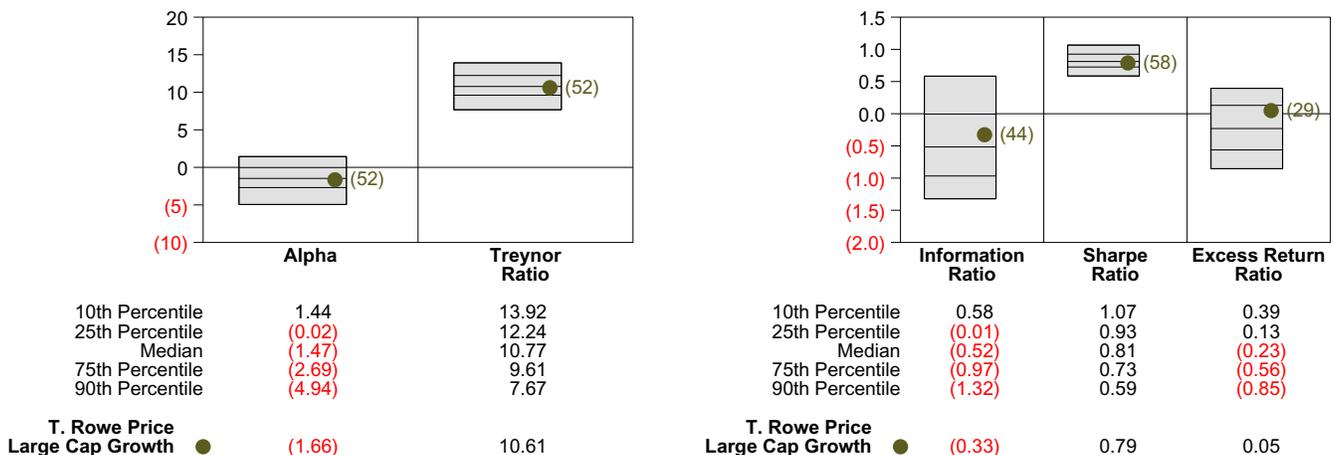
### Performance vs CAI Large Cap Growth Style (Gross)



### Cumulative and Quarterly Relative Return vs Russell 1000 Growth Index



### Risk Adjusted Return Measures vs Russell 1000 Growth Index Rankings Against CAI Large Cap Growth Style (Gross) Five Years Ended March 31, 2016



# Champlain Mid Cap Period Ended March 31, 2016

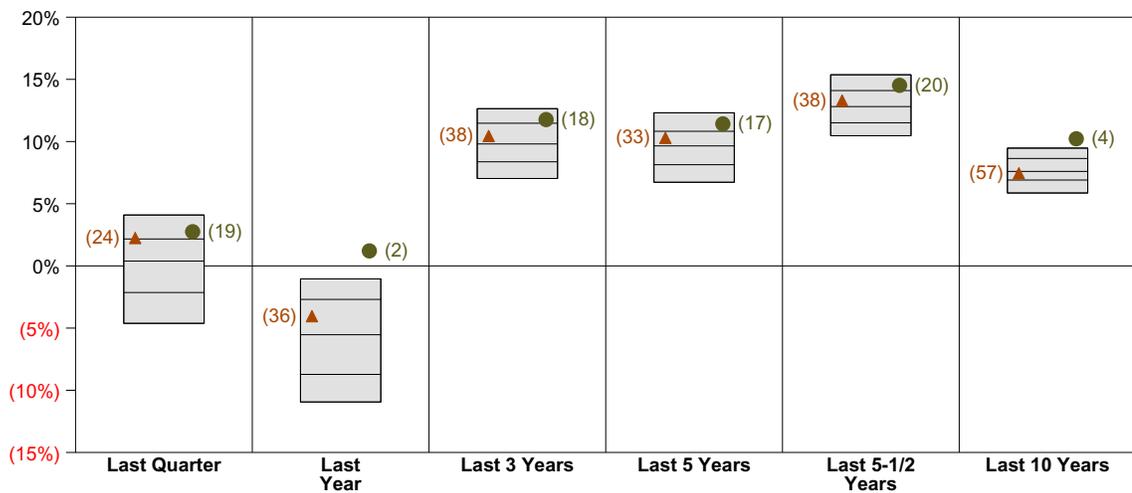
## Investment Philosophy

Champlain Investment Partners believes buying the shares of superior businesses with credible and sincere managements at a discount to fair or intrinsic value gives investors several potential paths to wealth creation. First, the market may bid the shares to a premium over fair value. Second, management may grow the fair value over time at a faster rate than market appreciation. Third, the company may be bought by a larger company or private market investor. They are willing to sell over-priced stocks and harvest gains, reducing valuation risk. The product was funded during the third quarter of 2010. Performance prior is that of the composite.

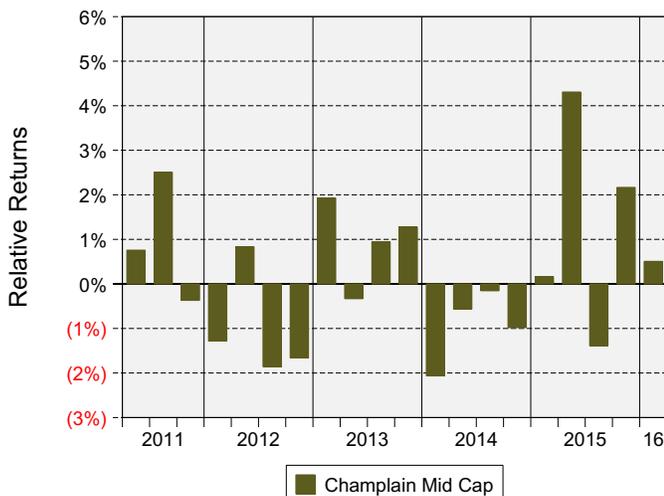
## Quarterly Summary and Highlights

- Champlain Mid Cap's portfolio posted a 2.75% return for the quarter placing it in the 19 percentile of the CAI Mid Capitalization Style group for the quarter and in the 2 percentile for the last year.
- Champlain Mid Cap's portfolio outperformed the Russell MidCap Index by 0.50% for the quarter and outperformed the Russell MidCap Index for the year by 5.25%.

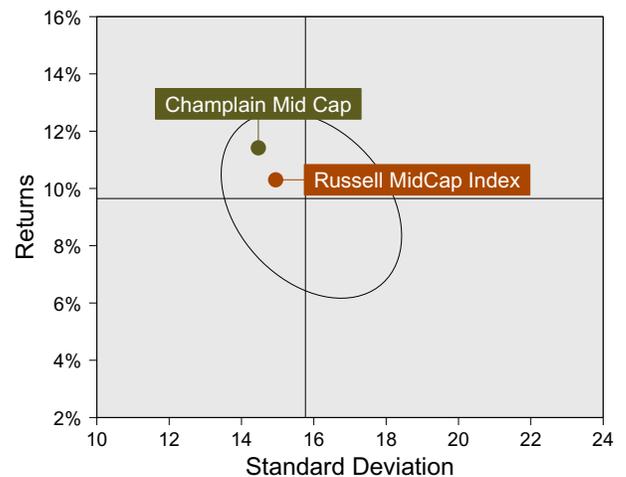
## Performance vs CAI Mid Capitalization Style (Gross)



## Relative Return vs Russell MidCap Index



## CAI Mid Capitalization Style (Gross) Annualized Five Year Risk vs Return

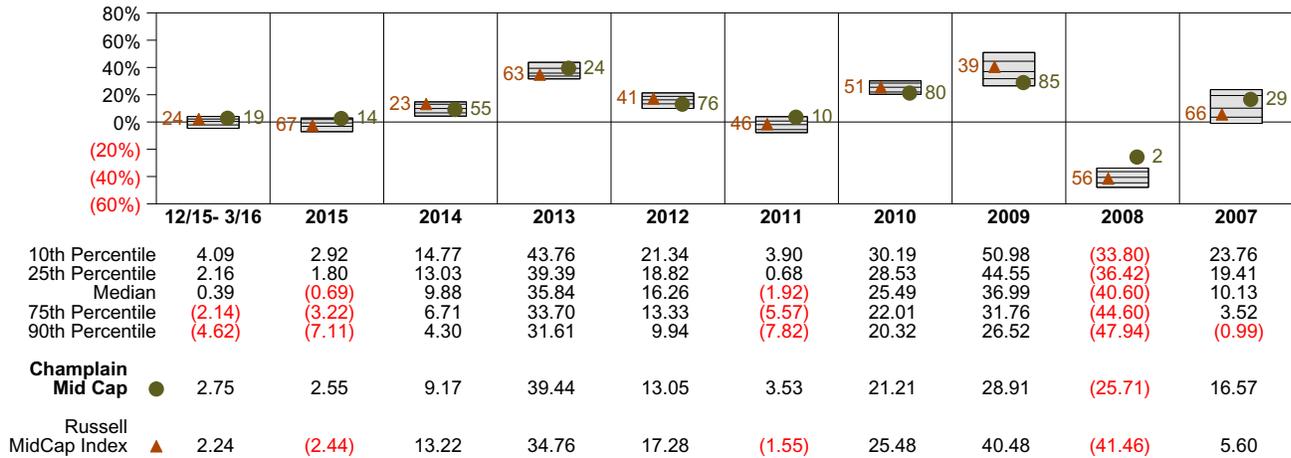


# Champlain Mid Cap Return Analysis Summary

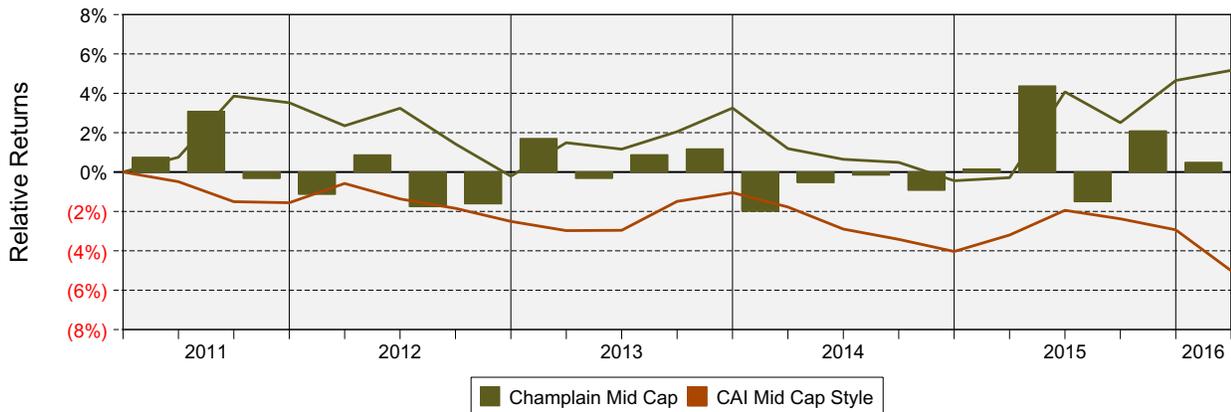
## Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last two charts illustrate the manager's ranking relative to their style using various risk-adjusted return measures.

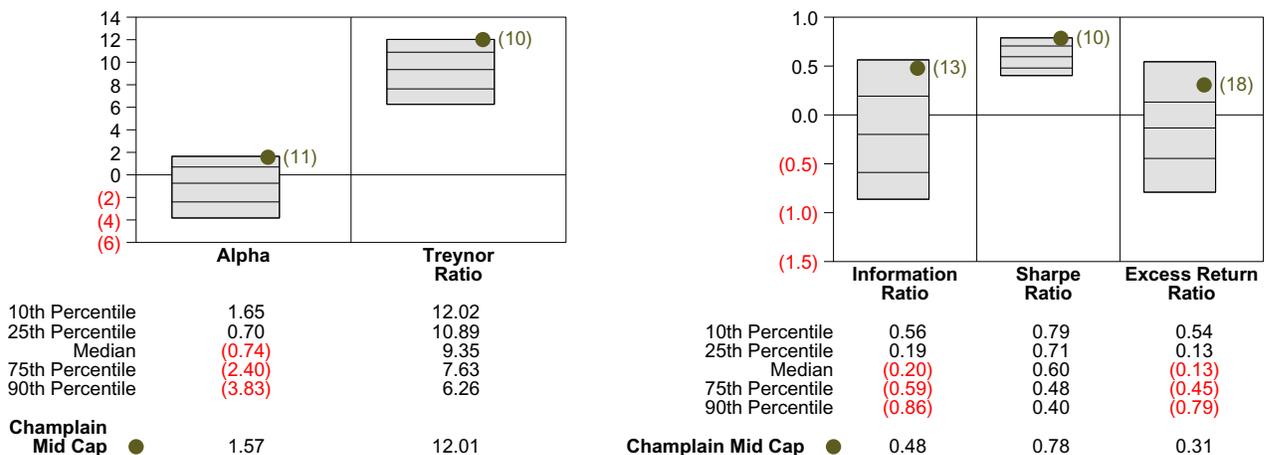
### Performance vs CAI Mid Capitalization Style (Gross)



### Cumulative and Quarterly Relative Return vs Russell MidCap Index



### Risk Adjusted Return Measures vs Russell MidCap Index Rankings Against CAI Mid Capitalization Style (Gross) Five Years Ended March 31, 2016



# Pyramis Small Cap Period Ended March 31, 2016

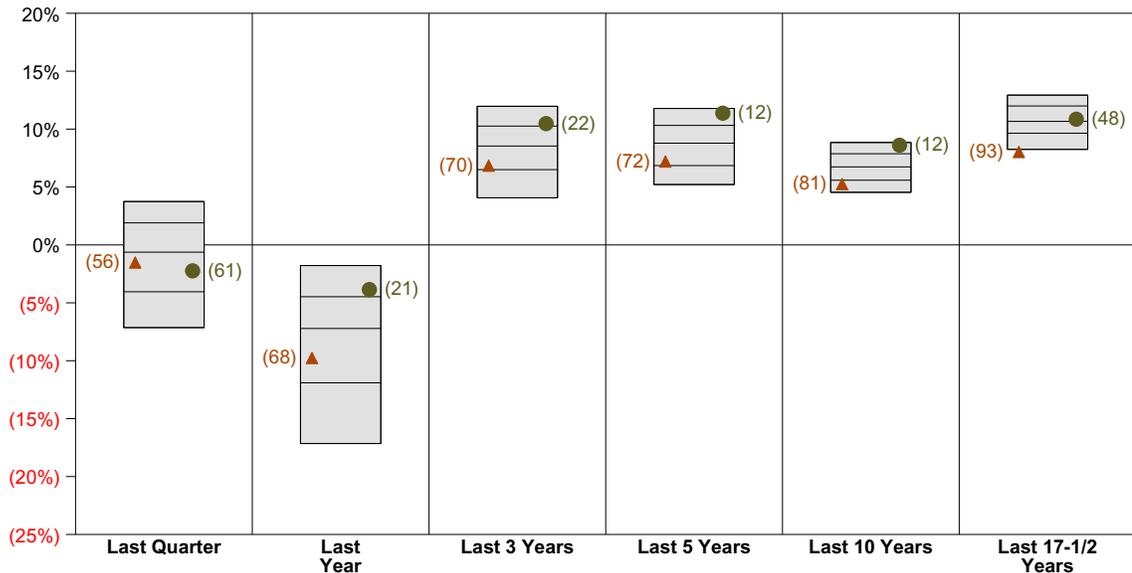
## Investment Philosophy

FIAM believes that equity markets are semi-efficient and that pricing anomalies exist within the marketplace. The Small Cap Core strategy seeks to build a balanced portfolio where returns will be driven by stock selections and not by systemic biases or exposures to market factors. The product was funded during the third quarter of 1998.

## Quarterly Summary and Highlights

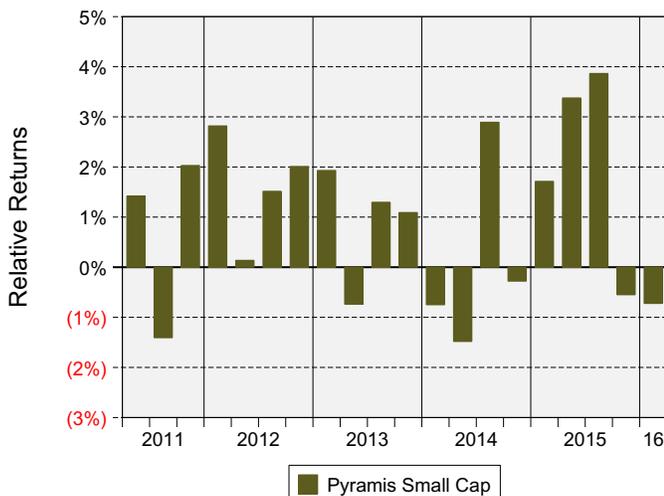
- Pyramis Small Cap's portfolio posted a (2.24)% return for the quarter placing it in the 61 percentile of the CAI Small Capitalization Style group for the quarter and in the 21 percentile for the last year.
- Pyramis Small Cap's portfolio underperformed the Russell 2000 Index by 0.72% for the quarter and outperformed the Russell 2000 Index for the year by 5.90%.

## Performance vs CAI Small Capitalization Style (Gross)

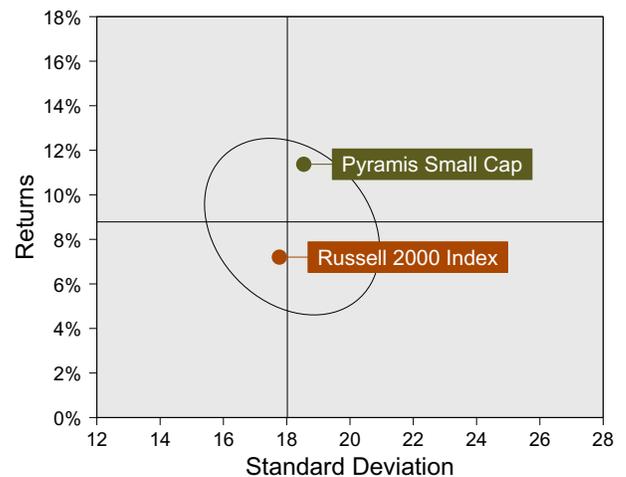


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years	Last 17-1/2 Years
10th Percentile	3.75	(1.78)	11.97	11.78	8.84	12.93
25th Percentile	1.90	(4.47)	10.26	10.32	7.87	12.00
Median	(0.63)	(7.22)	8.54	8.78	6.74	10.67
75th Percentile	(4.04)	(11.91)	6.50	6.85	5.59	9.65
90th Percentile	(7.14)	(17.15)	4.07	5.21	4.54	8.25
<b>Pyramis Small Cap</b>	<b>● (2.24)</b>	<b>(3.86)</b>	10.47	11.37	8.61	10.85
<b>Russell 2000 Index</b>	<b>▲ (1.52)</b>	<b>(9.76)</b>	6.84	7.20	5.26	8.03

## Relative Return vs Russell 2000 Index



## CAI Small Capitalization Style (Gross) Annualized Five Year Risk vs Return

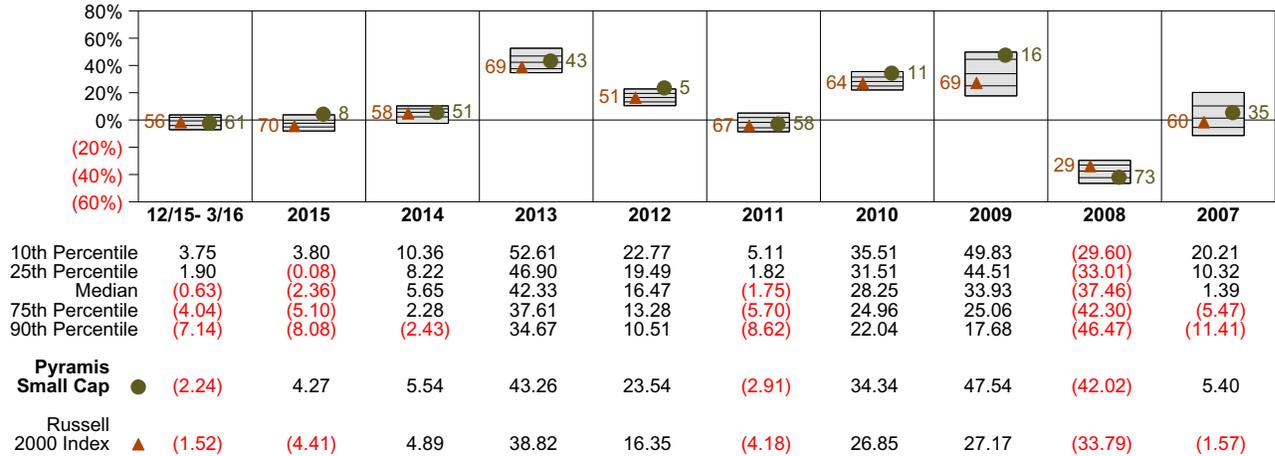


# Pyramis Small Cap Return Analysis Summary

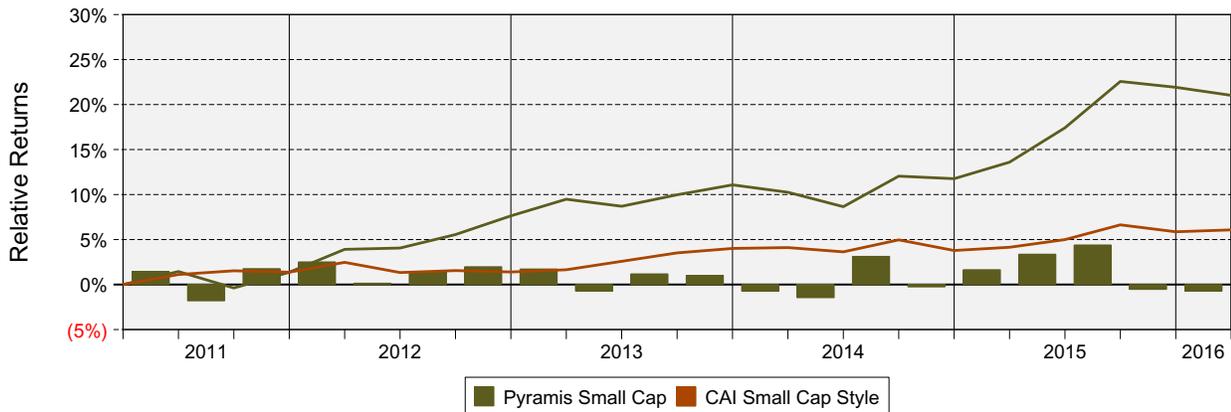
## Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last two charts illustrate the manager's ranking relative to their style using various risk-adjusted return measures.

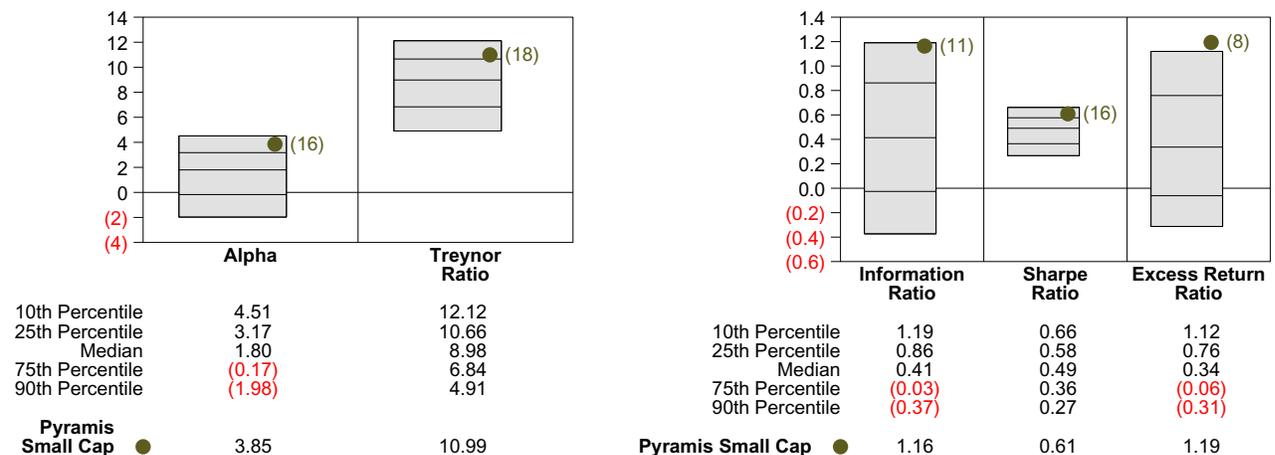
### Performance vs CAI Small Capitalization Style (Gross)



### Cumulative and Quarterly Relative Return vs Russell 2000 Index



### Risk Adjusted Return Measures vs Russell 2000 Index Rankings Against CAI Small Capitalization Style (Gross) Five Years Ended March 31, 2016



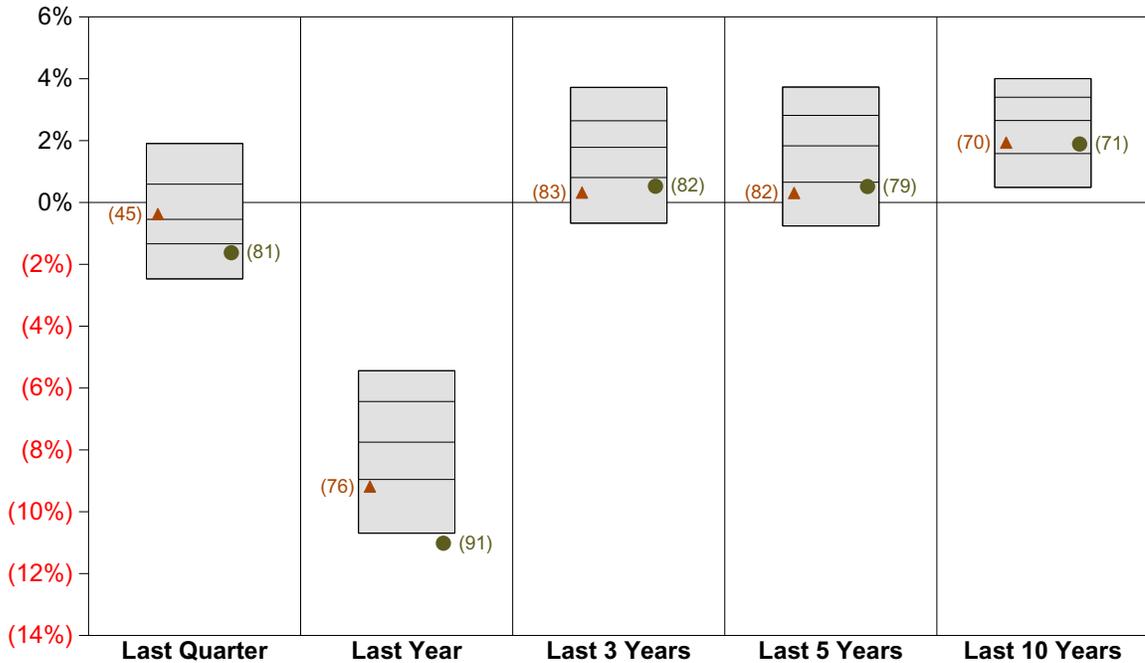


# International Equity Period Ended March 31, 2016

## Quarterly Summary and Highlights

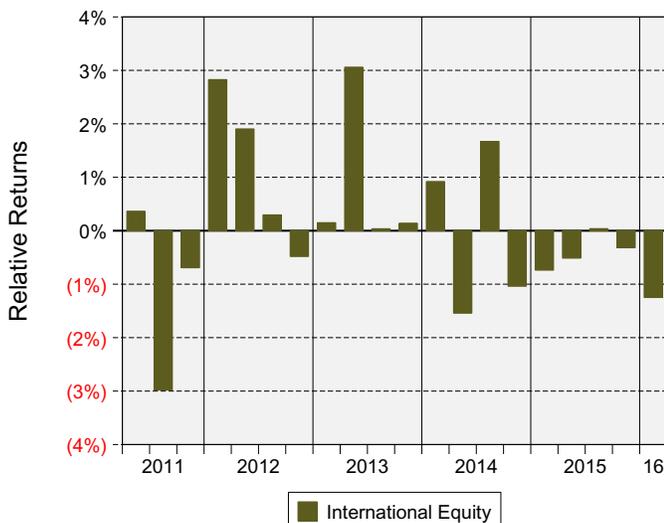
- International Equity's portfolio posted a (1.62)% return for the quarter placing it in the 81 percentile of the Pub Pln- International Equity group for the quarter and in the 91 percentile for the last year.
- International Equity's portfolio underperformed the MSCI ACWI ex US by 1.25% for the quarter and underperformed the MSCI ACWI ex US for the year by 1.83%.

## Performance vs Pub Pln- International Equity (Gross)

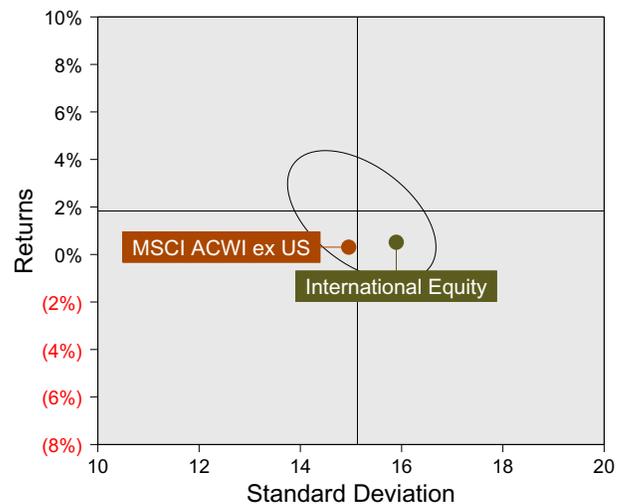


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
10th Percentile	1.91	(5.44)	3.72	3.73	4.00
25th Percentile	0.59	(6.44)	2.64	2.82	3.40
Median	(0.55)	(7.75)	1.78	1.83	2.65
75th Percentile	(1.34)	(8.96)	0.81	0.66	1.58
90th Percentile	(2.47)	(10.69)	(0.67)	(0.76)	0.49
International Equity	(1.62)	(11.02)	0.53	0.52	1.89
MSCI ACWI ex US	(0.38)	(9.19)	0.32	0.31	1.94

## Relative Return vs MSCI ACWI ex US



## Pub Pln- International Equity (Gross) Annualized Five Year Risk vs Return

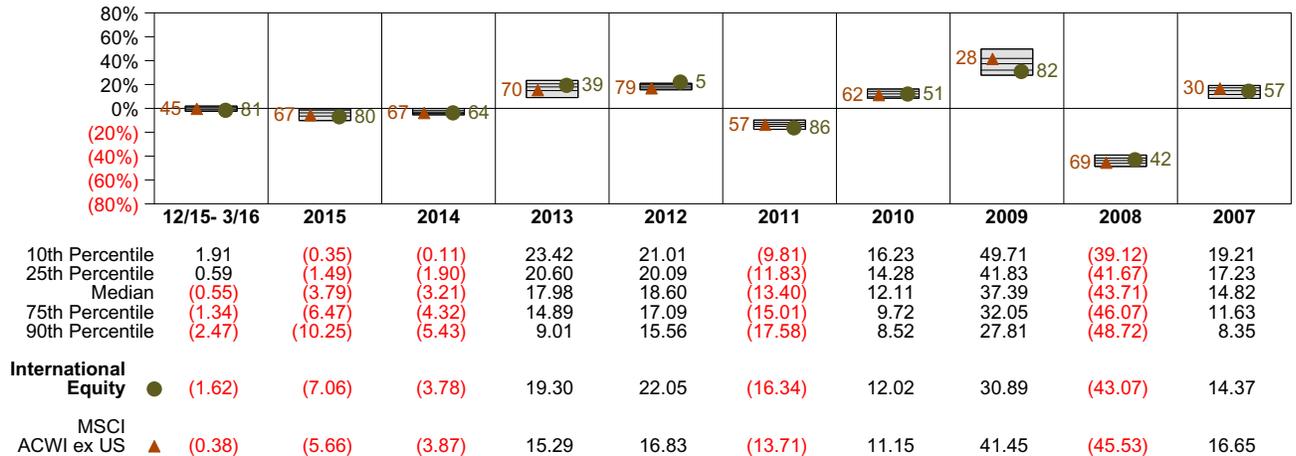


# International Equity Return Analysis Summary

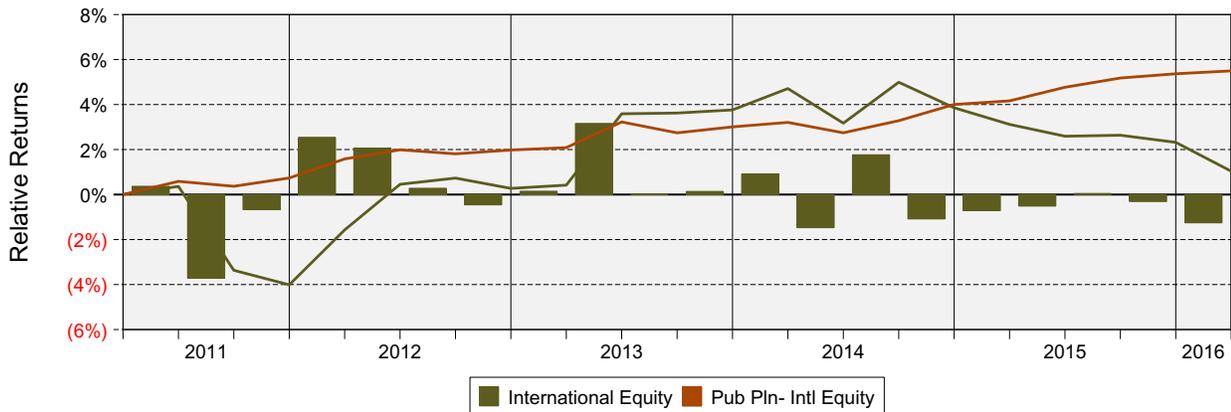
## Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last two charts illustrate the manager's ranking relative to their style using various risk-adjusted return measures.

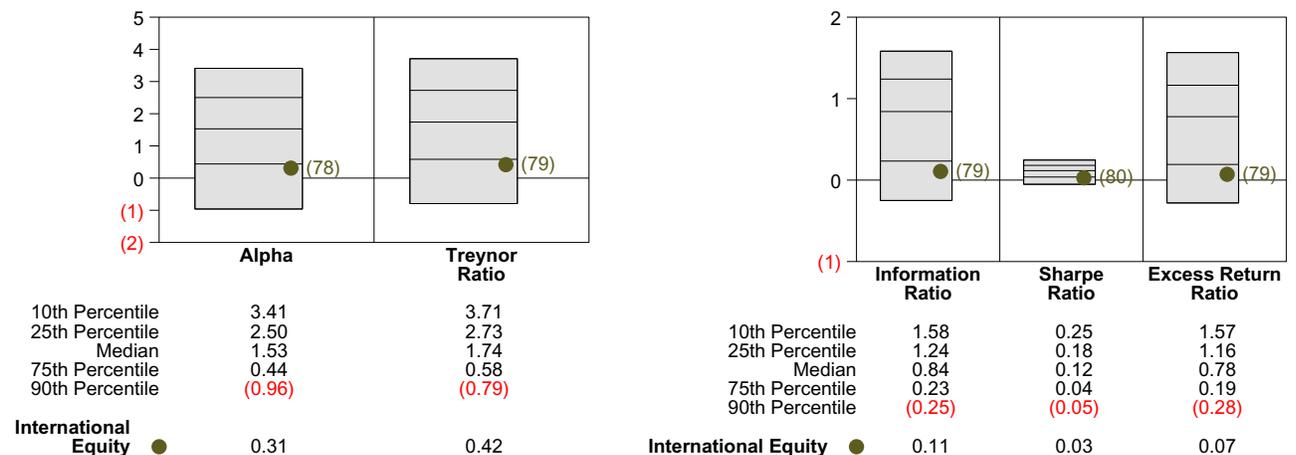
### Performance vs Pub Pln- International Equity (Gross)



### Cumulative and Quarterly Relative Return vs MSCI ACWI ex US



### Risk Adjusted Return Measures vs MSCI ACWI ex US Rankings Against Pub Pln- International Equity (Gross) Five Years Ended March 31, 2016



# Causeway International Value Equity Period Ended March 31, 2016

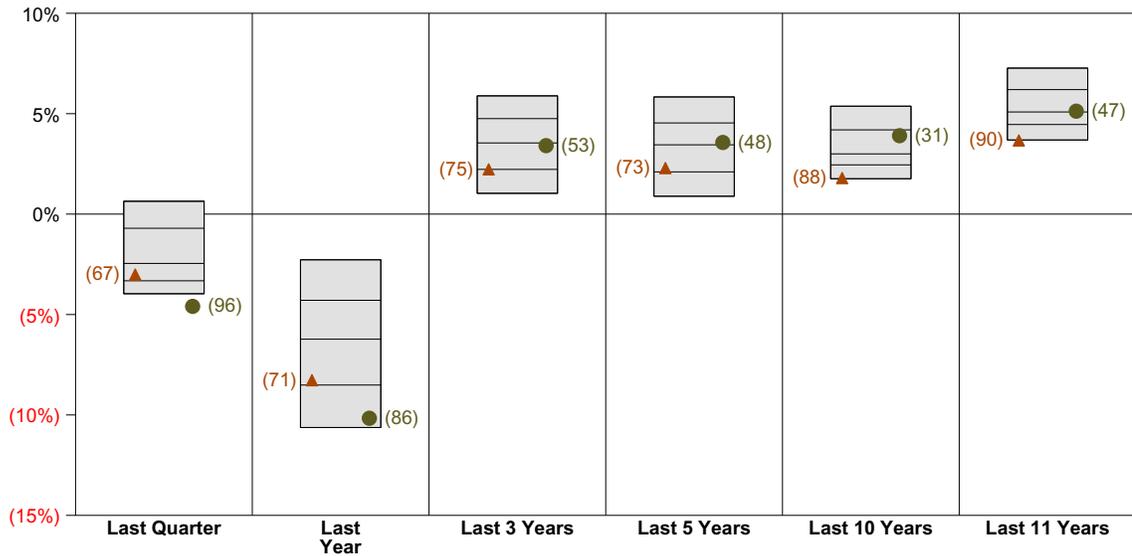
## Investment Philosophy

Causeway utilizes a value-driven, bottom-up approach in constructing their international portfolios. The firm attempts to identify stocks that have high relative dividend and earnings yields as well as exhibit superior financial strength. The product was funded during the first quarter of 2005.

## Quarterly Summary and Highlights

- Causeway International Value Equity's portfolio posted a (4.59)% return for the quarter placing it in the 96 percentile of the CAI Non-U.S. Equity Style group for the quarter and in the 86 percentile for the last year.
- Causeway International Value Equity's portfolio underperformed the MSCI EAFE by 1.59% for the quarter and underperformed the MSCI EAFE for the year by 1.90%.

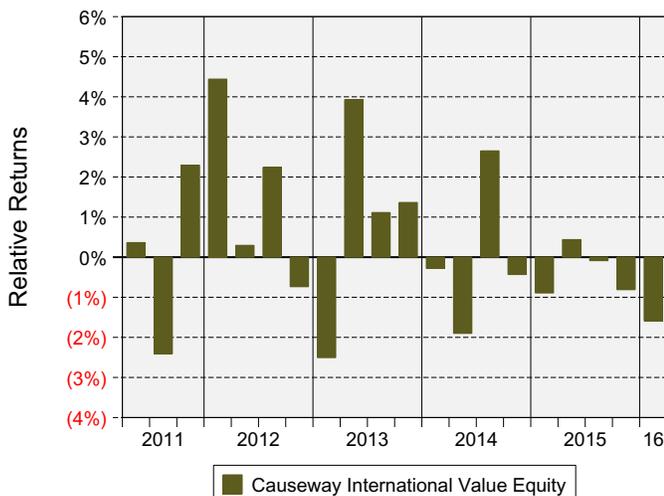
## Performance vs CAI Non-U.S. Equity Style (Gross)



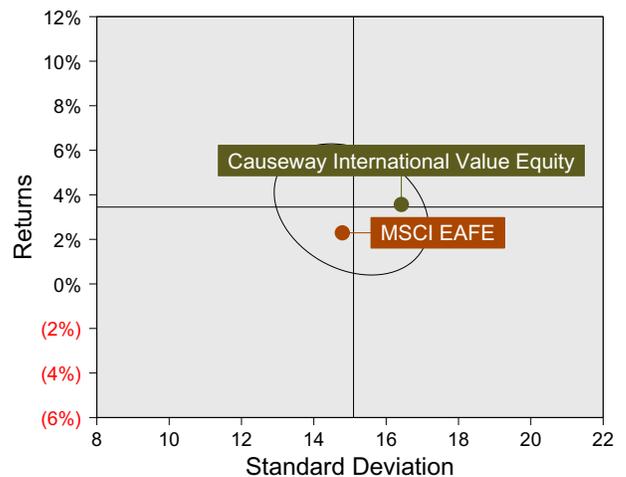
10th Percentile	0.64	(2.27)	5.89	5.84	5.37	7.27
25th Percentile	(0.70)	(4.29)	4.75	4.54	4.20	6.20
Median	(2.46)	(6.23)	3.54	3.45	3.00	5.09
75th Percentile	(3.32)	(8.51)	2.23	2.10	2.45	4.46
90th Percentile	(3.97)	(10.63)	1.03	0.89	1.76	3.69

<b>Causeway International Value Equity</b>	●	(4.59)	(10.17)	3.41	3.57	3.91	5.12
<b>MSCI EAFE</b>	▲	(3.01)	(8.27)	2.23	2.29	1.80	3.67

## Relative Return vs MSCI EAFE



## CAI Non-U.S. Equity Style (Gross) Annualized Five Year Risk vs Return

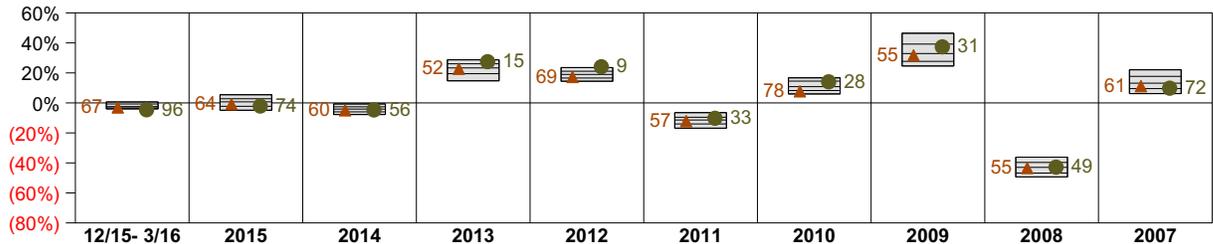


# Causeway International Value Equity Return Analysis Summary

## Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last two charts illustrate the manager's ranking relative to their style using various risk-adjusted return measures.

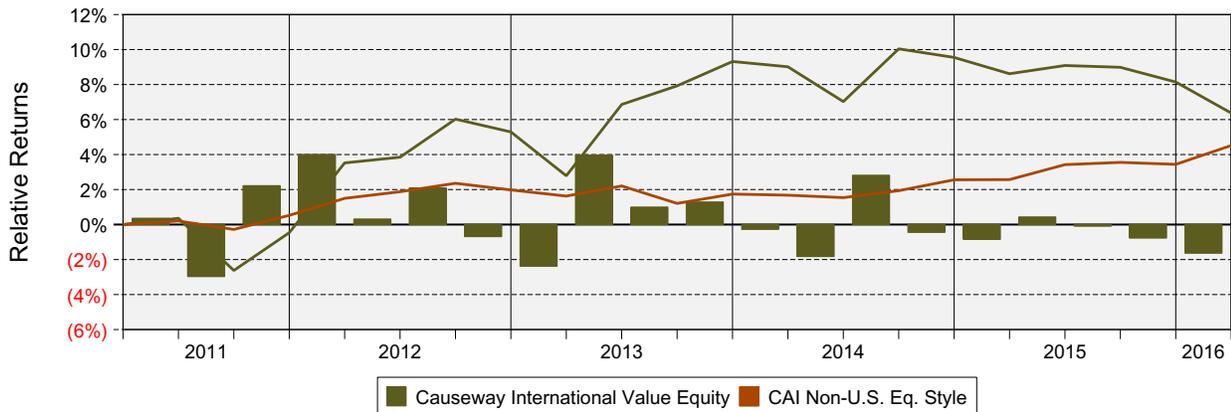
### Performance vs CAI Non-U.S. Equity Style (Gross)



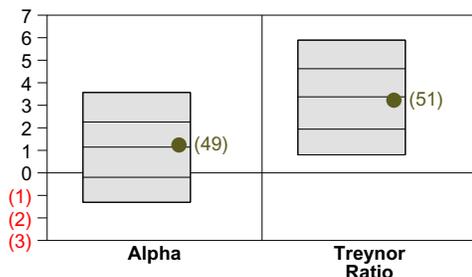
10th Percentile	0.64	5.45	(0.67)	28.72	23.54	(6.48)	16.72	46.43	(36.18)	22.09
25th Percentile	(0.70)	2.78	(2.59)	26.08	21.12	(9.56)	14.53	39.21	(39.67)	17.70
Median	(2.46)	0.72	(4.12)	23.32	18.99	(11.40)	10.84	32.89	(42.97)	13.15
75th Percentile	(3.32)	(2.26)	(5.97)	19.49	16.61	(14.02)	8.27	27.71	(46.76)	9.54
90th Percentile	(3.97)	(4.89)	(7.74)	14.73	14.45	(16.87)	5.97	24.60	(49.34)	6.21

<b>Causeway International Value Equity</b>	●	(4.59)	(2.09)	(4.70)	27.47	24.10	(10.24)	14.06	37.35	(42.83)	9.82
<b>MSCI EAFE</b>	▲	(3.01)	(0.81)	(4.90)	22.78	17.32	(12.14)	7.75	31.78	(43.38)	11.17

### Cumulative and Quarterly Relative Return vs MSCI EAFE

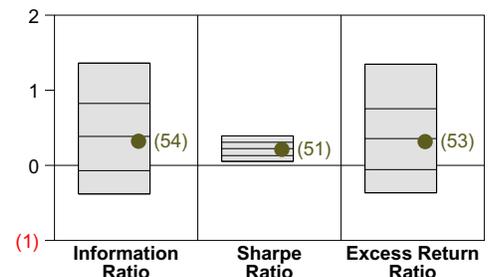


### Risk Adjusted Return Measures vs MSCI EAFE Rankings Against CAI Non-U.S. Equity Style (Gross) Five Years Ended March 31, 2016



10th Percentile	3.57	5.89
25th Percentile	2.26	4.62
Median	1.14	3.37
75th Percentile	(0.20)	1.94
90th Percentile	(1.31)	0.80

<b>Causeway International Value Equity</b>	●	1.24	3.22
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10th Percentile	1.36	0.39	1.35
25th Percentile	0.82	0.31	0.75
Median	0.39	0.22	0.36
75th Percentile	(0.07)	0.13	(0.06)
90th Percentile	(0.38)	0.05	(0.37)

<b>Causeway International Value Equity</b>	●	0.32	0.21	0.32
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# Aberdeen EAFE Plus Period Ended March 31, 2016

## Investment Philosophy

Aberdeen believes that given the inefficiency of markets, superior long-term returns are achieved by identifying high quality stocks, buying them at reasonable/cheap prices, and ultimately investing in those securities for the long term. Absolute return is held to be of the utmost importance. The strategy is benchmark aware, but not benchmark driven. This benchmark stance is born from their belief that indices do not provide meaningful guidance to the prospects of a company or its inherent worth.

## Quarterly Summary and Highlights

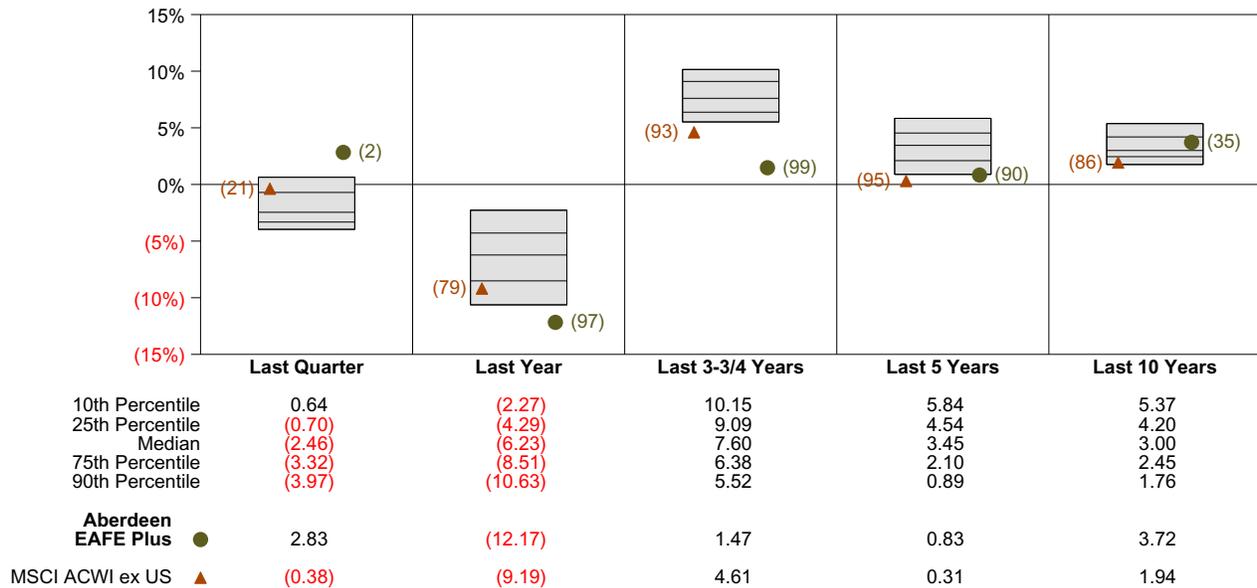
- Aberdeen EAFE Plus's portfolio posted a 2.83% return for the quarter placing it in the 2 percentile of the CAI Non-U.S. Equity Style group for the quarter and in the 97 percentile for the last year.
- Aberdeen EAFE Plus's portfolio outperformed the MSCI ACWI ex US by 3.21% for the quarter and underperformed the MSCI ACWI ex US for the year by 2.99%.

## Quarterly Asset Growth

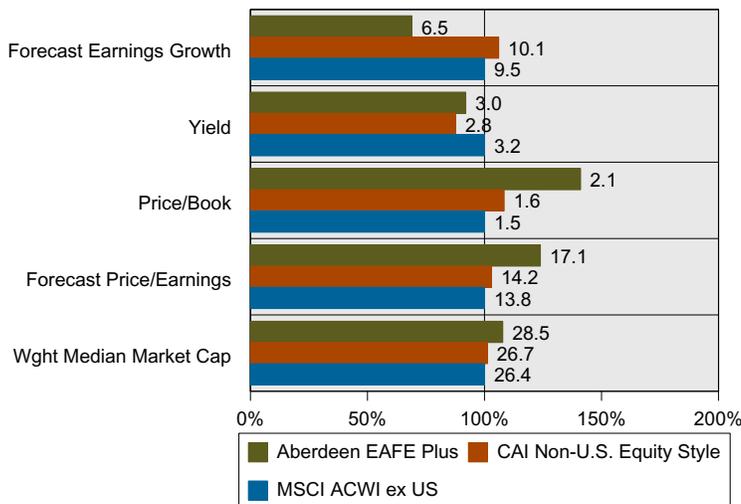
Beginning Market Value	\$35,592,560
Net New Investment	\$-69,271
Investment Gains/(Losses)	\$1,007,062
Ending Market Value	\$36,530,351

**Percent Cash: 0.0%**

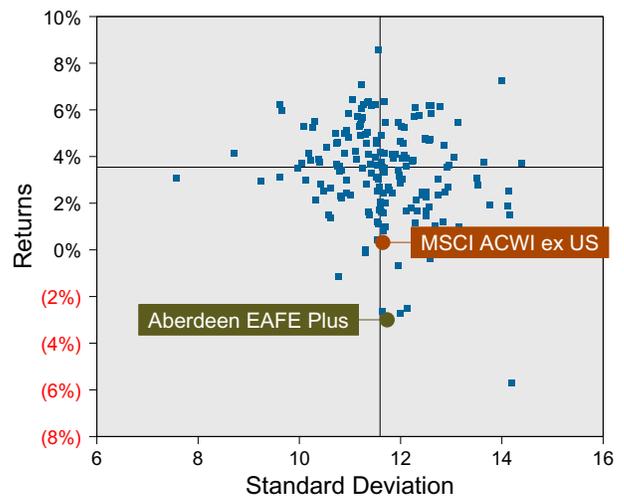
## Performance vs CAI Non-U.S. Equity Style (Gross)



## Portfolio Characteristics as a Percentage of the MSCI ACWI ex US



## CAI Non-U.S. Equity Style (Gross) Annualized Three Year Risk vs Return

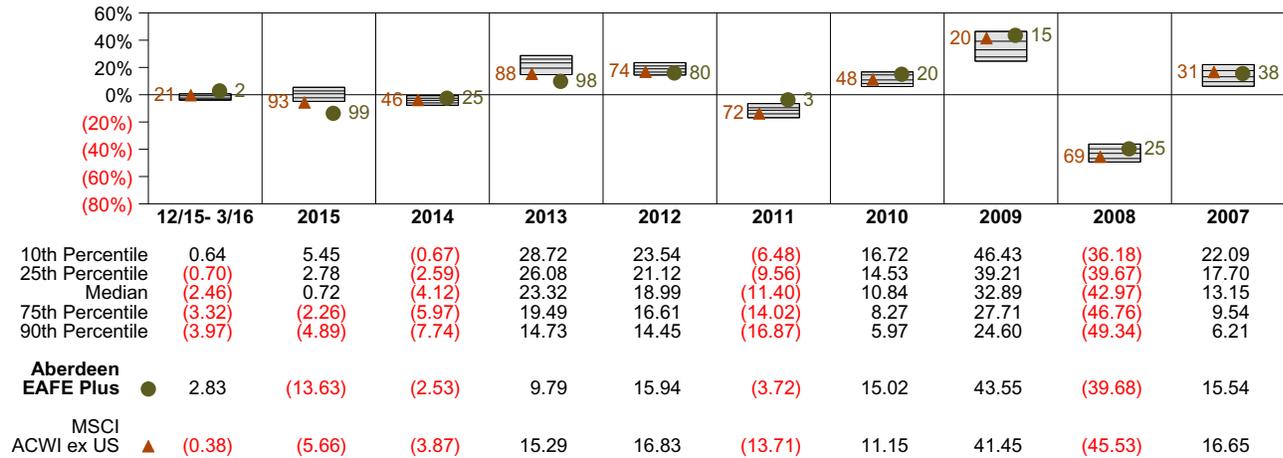


# Aberdeen EAFE Plus Return Analysis Summary

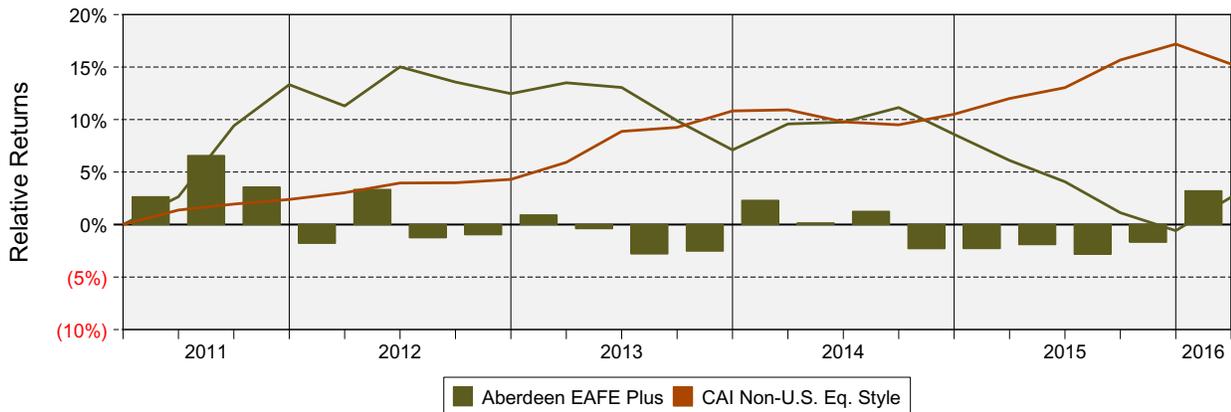
## Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last two charts illustrate the manager's ranking relative to their style using various risk-adjusted return measures.

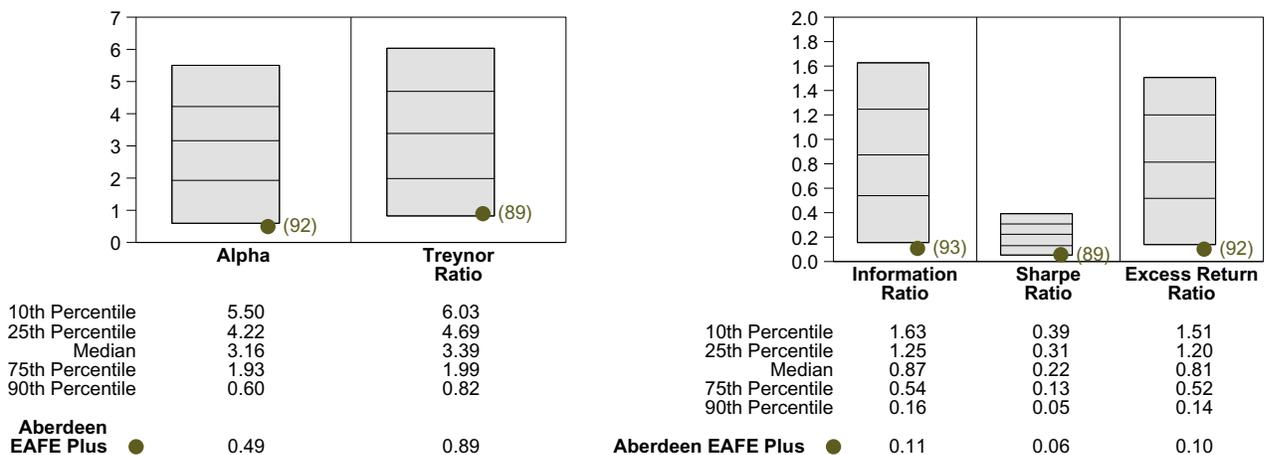
### Performance vs CAI Non-U.S. Equity Style (Gross)



### Cumulative and Quarterly Relative Return vs MSCI ACWI ex US



### Risk Adjusted Return Measures vs MSCI ACWI ex US Rankings Against CAI Non-U.S. Equity Style (Gross) Five Years Ended March 31, 2016



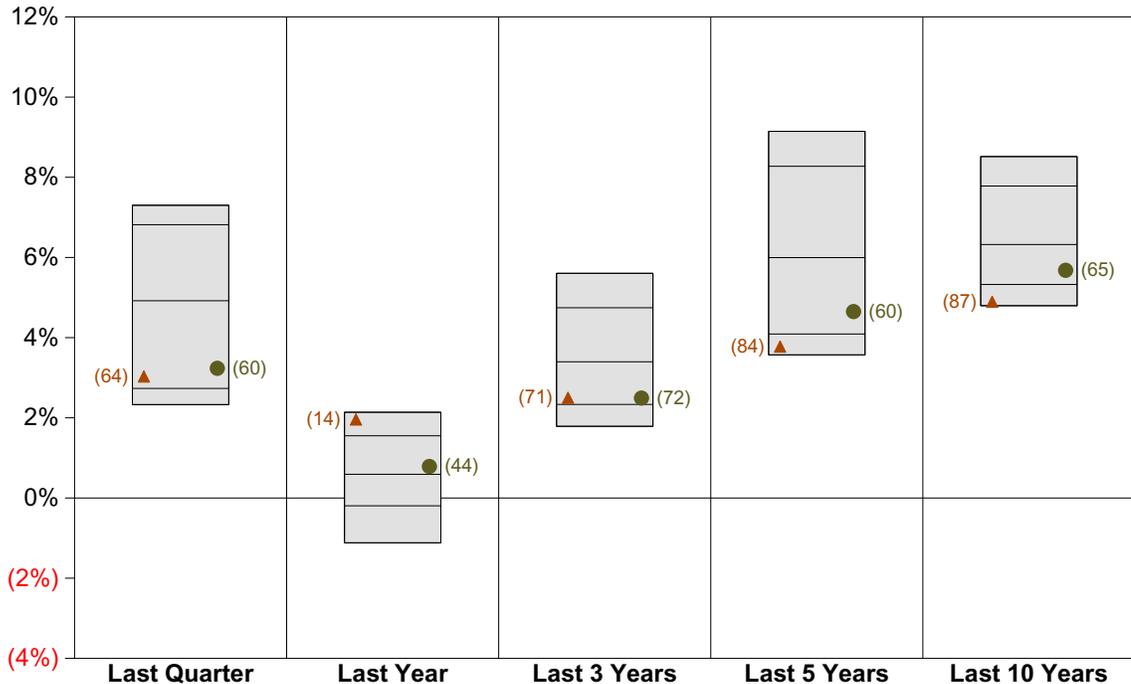


# Fixed Income Period Ended March 31, 2016

## Quarterly Summary and Highlights

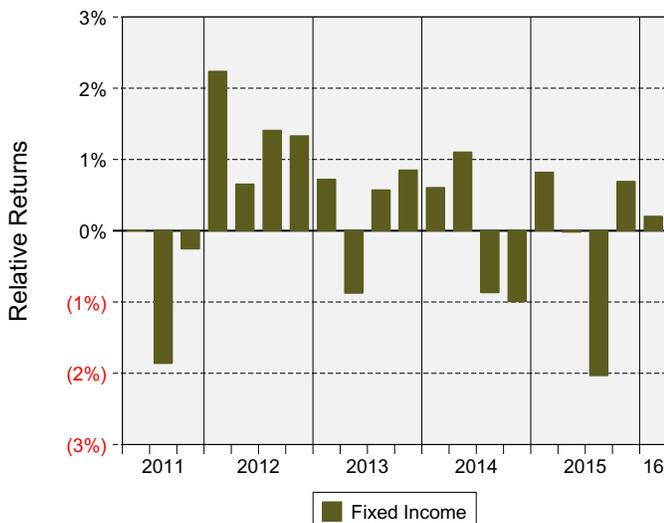
- Fixed Income's portfolio posted a 3.23% return for the quarter placing it in the 60 percentile of the Corp Pln- Domestic Fixed group for the quarter and in the 44 percentile for the last year.
- Fixed Income's portfolio outperformed the Barclays Aggregate Index by 0.20% for the quarter and underperformed the Barclays Aggregate Index for the year by 1.17%.

## Performance vs Corp Pln- Domestic Fixed (Gross)

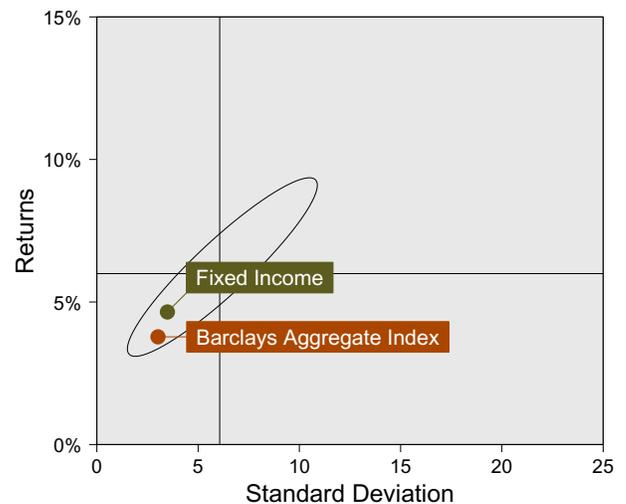


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
10th Percentile	7.30	2.14	5.60	9.15	8.52
25th Percentile	6.82	1.55	4.75	8.27	7.78
Median	4.92	0.59	3.40	6.00	6.32
75th Percentile	2.73	(0.19)	2.33	4.09	5.33
90th Percentile	2.33	(1.12)	1.79	3.57	4.80
<b>Fixed Income</b> ●	3.23	0.79	2.49	4.65	5.68
Barclays Aggregate Index ▲	3.03	1.96	2.50	3.78	4.90

## Relative Return vs Barclays Aggregate Index



## Corp Pln- Domestic Fixed (Gross) Annualized Five Year Risk vs Return

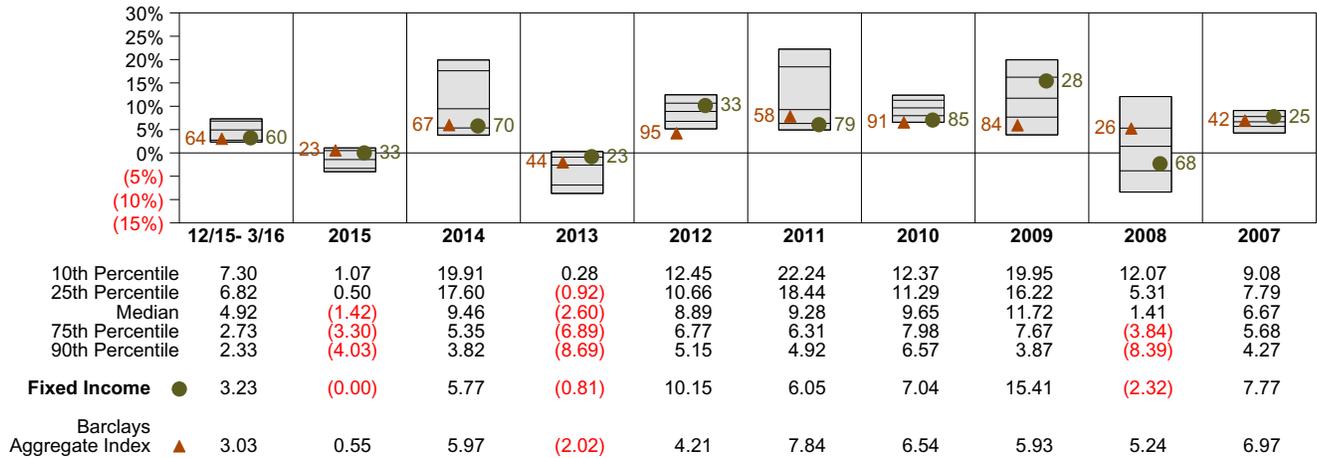


# Fixed Income Return Analysis Summary

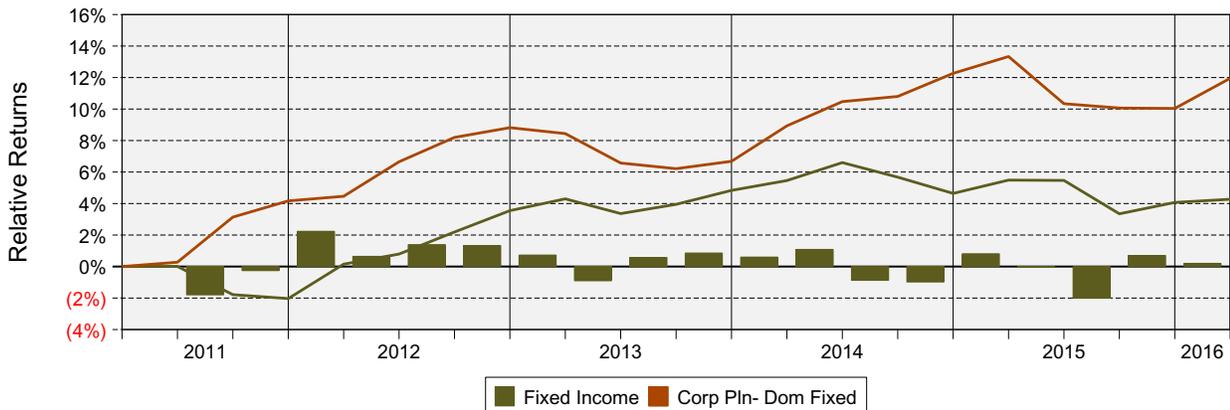
## Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last two charts illustrate the manager's ranking relative to their style using various risk-adjusted return measures.

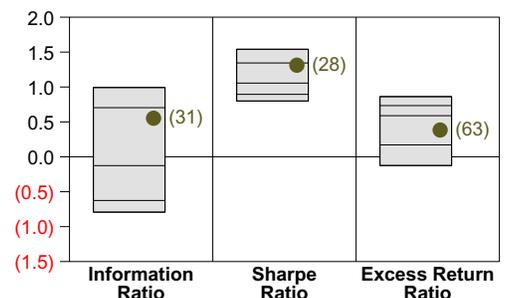
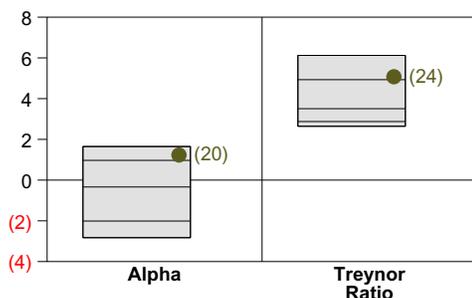
### Performance vs Corp Pln- Domestic Fixed (Gross)



### Cumulative and Quarterly Relative Return vs Barclays Aggregate Index



### Risk Adjusted Return Measures vs Barclays Aggregate Index Rankings Against Corp Pln- Domestic Fixed (Gross) Five Years Ended March 31, 2016



# BlackRock U.S. Debt Fund Period Ended March 31, 2016

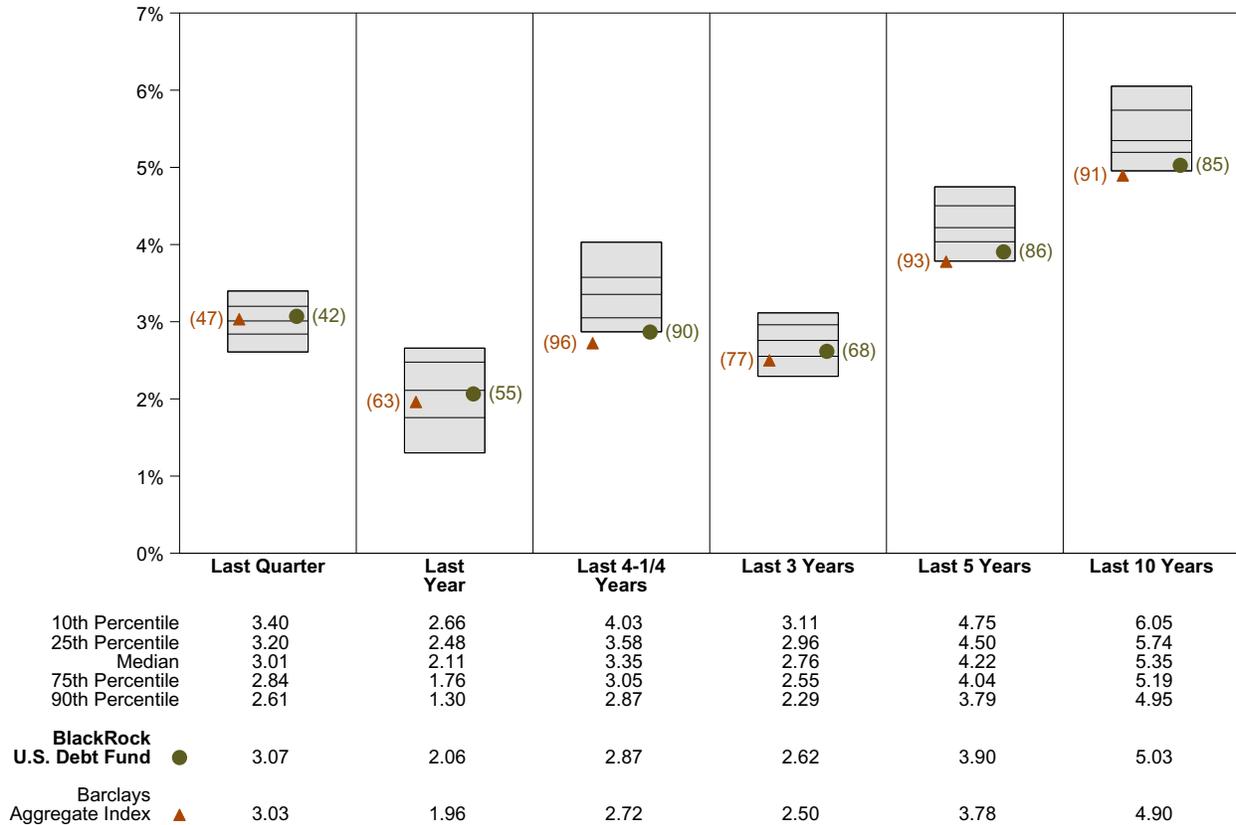
## Investment Philosophy

The product was funded during the fourth quarter of 2011. Performance prior is that of the composite.

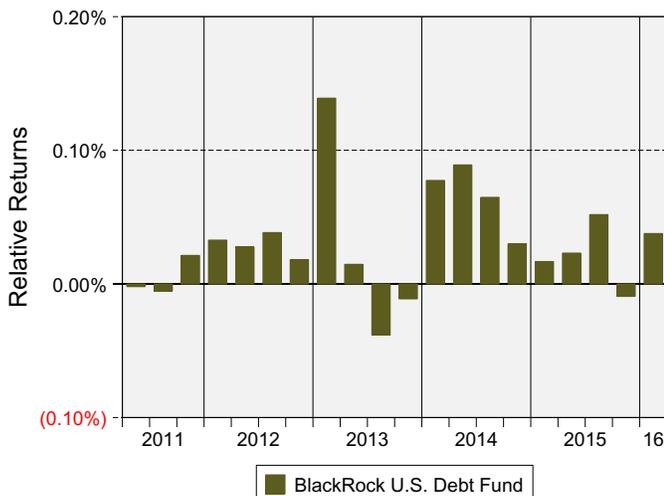
## Quarterly Summary and Highlights

- BlackRock U.S. Debt Fund's portfolio posted a 3.07% return for the quarter placing it in the 42 percentile of the CAI Core Bond Fixed-Inc Style group for the quarter and in the 55 percentile for the last year.
- BlackRock U.S. Debt Fund's portfolio outperformed the Barclays Aggregate Index by 0.04% for the quarter and outperformed the Barclays Aggregate Index for the year by 0.10%.

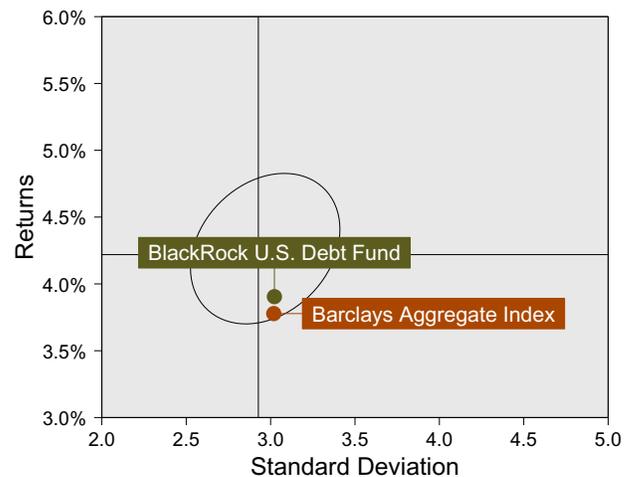
## Performance vs CAI Core Bond Fixed-Inc Style (Gross)



## Relative Return vs Barclays Aggregate Index



## CAI Core Bond Fixed-Inc Style (Gross) Annualized Five Year Risk vs Return

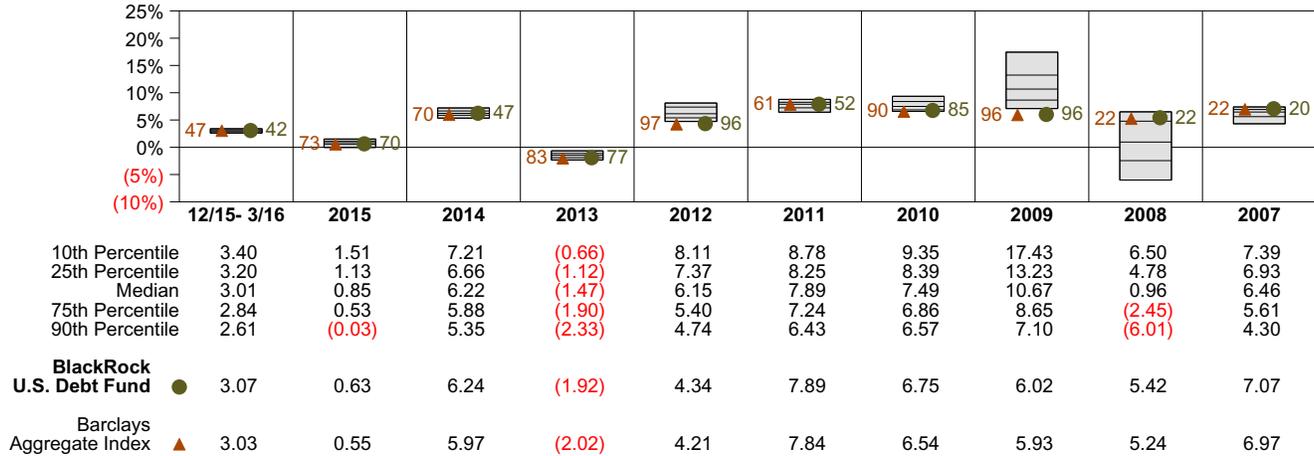


# BlackRock U.S. Debt Fund Return Analysis Summary

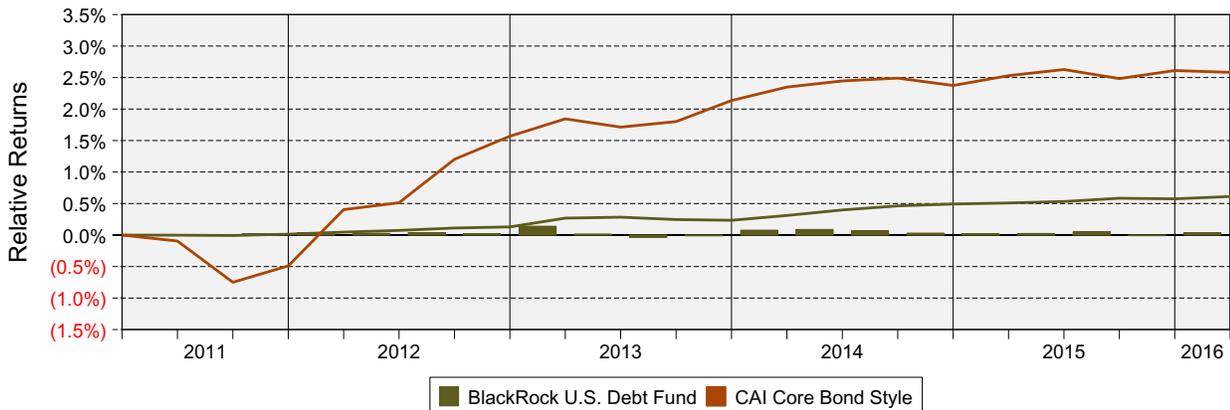
## Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last two charts illustrate the manager's ranking relative to their style using various risk-adjusted return measures.

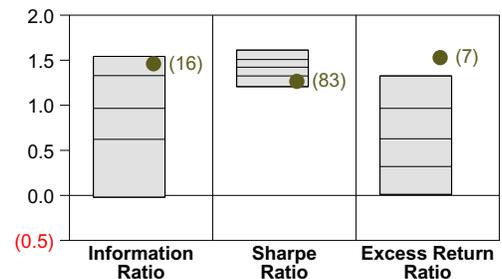
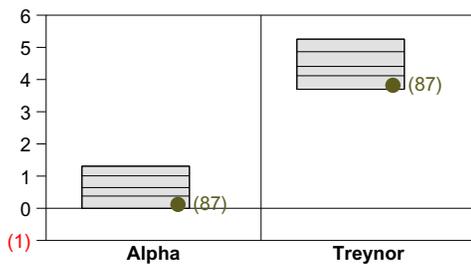
### Performance vs CAI Core Bond Fixed-Inc Style (Gross)



### Cumulative and Quarterly Relative Return vs Barclays Aggregate Index



### Risk Adjusted Return Measures vs Barclays Aggregate Index Rankings Against CAI Core Bond Fixed-Inc Style (Gross) Five Years Ended March 31, 2016



10th Percentile	1.31	5.26
25th Percentile	1.01	4.86
Median	0.64	4.41
75th Percentile	0.38	4.12
90th Percentile	(0.00)	3.70

10th Percentile	1.54	1.61	1.33
25th Percentile	1.33	1.51	0.97
Median	0.97	1.42	0.63
75th Percentile	0.62	1.33	0.32
90th Percentile	(0.02)	1.21	0.01

**BlackRock U.S. Debt Fund** ● 0.12 3.82

**BlackRock U.S. Debt Fund** ● 1.46 1.27 1.53

# PIMCO Fixed Income Period Ended March 31, 2016

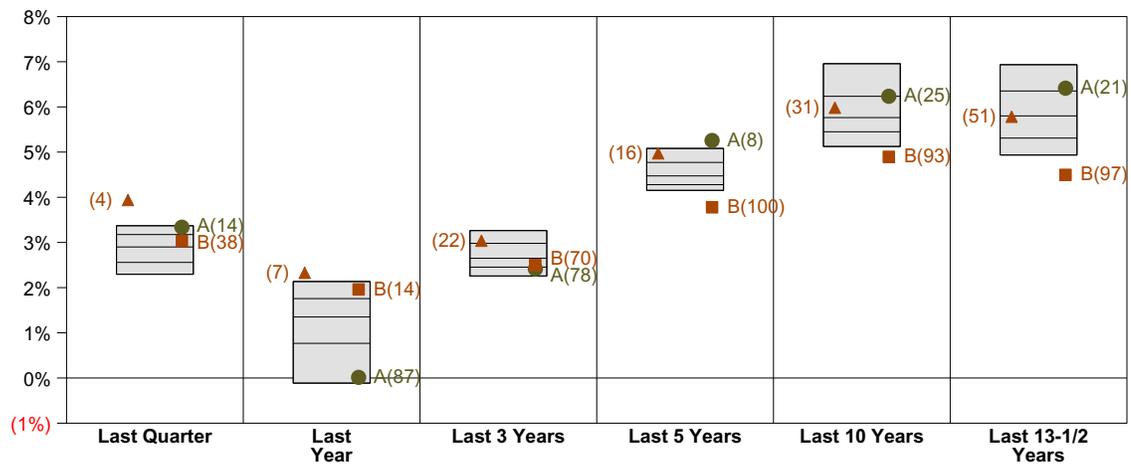
## Investment Philosophy

PIMCO emphasizes adding value by rotating through the major sectors of the domestic and international bond markets. They also seek to enhance returns through duration management. The product was funded during the third quarter of 2002. The custom index is currently composed of 25% Barclays Mortgage, 25% Barclays Credit, 25% Barclays High Yield, and 25% JP Morgan EMBI Global. Prior to 2/1/2012, the custom index was composed of 70% Barclays Mortgage, 15% Barclays Credit, and 15% Barclays High Yield.

## Quarterly Summary and Highlights

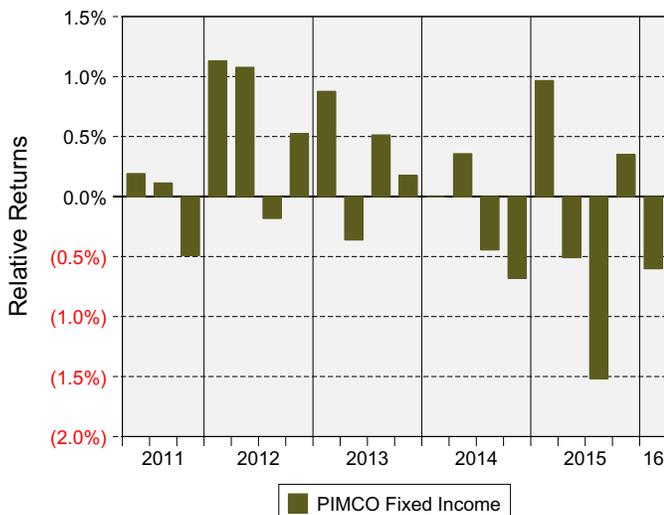
- PIMCO Fixed Income's portfolio posted a 3.34% return for the quarter placing it in the 14 percentile of the CAI Core Bond Plus Style group for the quarter and in the 87 percentile for the last year.
- PIMCO Fixed Income's portfolio underperformed the Custom Index by 0.60% for the quarter and underperformed the Custom Index for the year by 2.31%.

## Performance vs CAI Core Bond Plus Style (Gross)

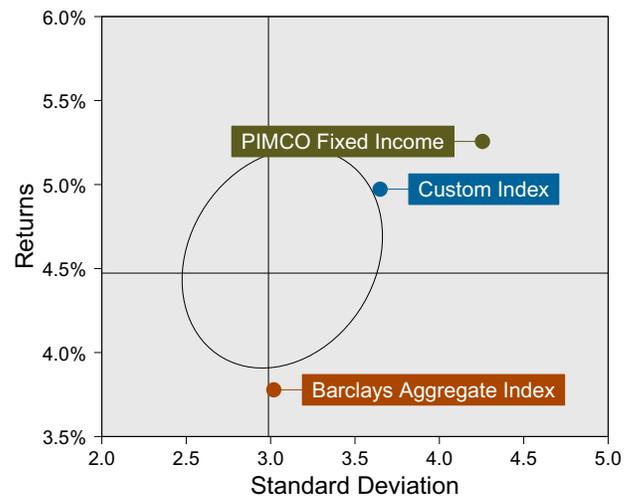


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years	Last 13-1/2 Years
10th Percentile	3.37	2.14	3.26	5.08	6.96	6.93
25th Percentile	3.17	1.76	2.98	4.77	6.24	6.35
Median	2.90	1.35	2.65	4.47	5.76	5.80
75th Percentile	2.56	0.77	2.45	4.28	5.45	5.31
90th Percentile	2.30	(0.11)	2.26	4.15	5.12	4.93
PIMCO Fixed Income (A)	3.34	0.01	2.41	5.26	6.24	6.41
Barclays Aggregate Index (B)	3.03	1.96	2.50	3.78	4.90	4.50
Custom Index (C)	3.94	2.33	3.04	4.97	5.98	5.78

## Relative Return vs Custom Index



## CAI Core Bond Plus Style (Gross) Annualized Five Year Risk vs Return

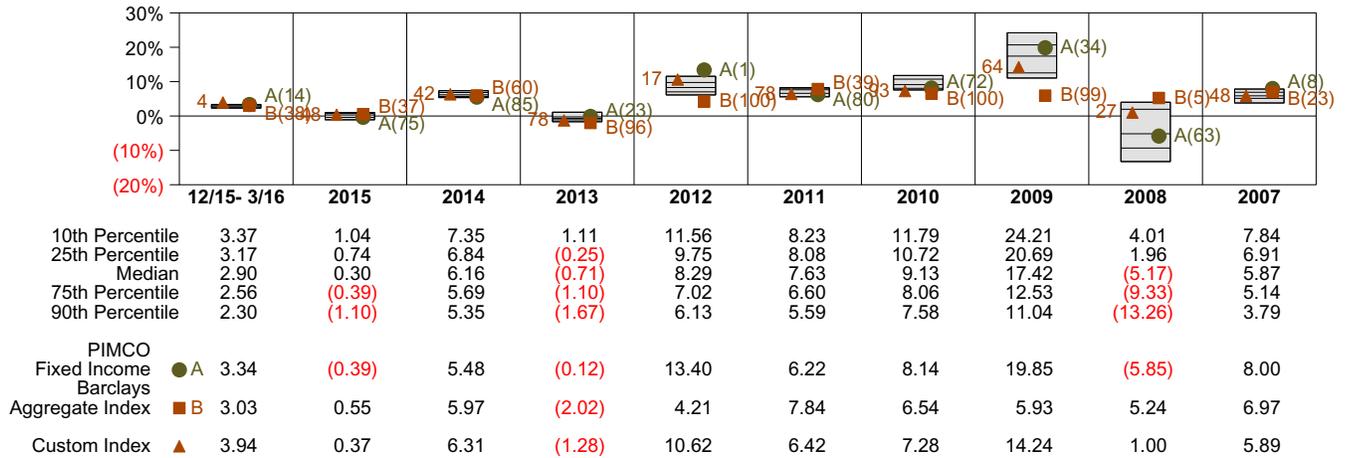


# PIMCO Fixed Income Return Analysis Summary

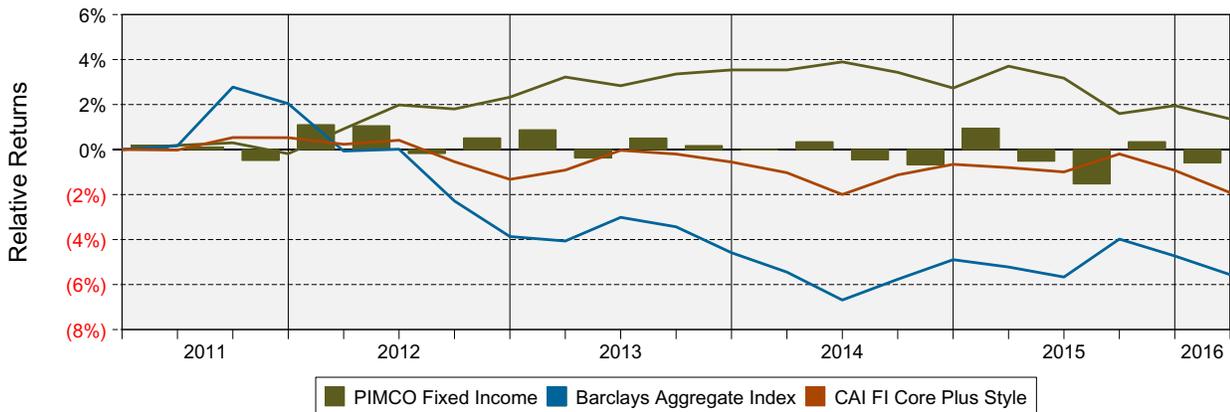
## Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last two charts illustrate the manager's ranking relative to their style using various risk-adjusted return measures.

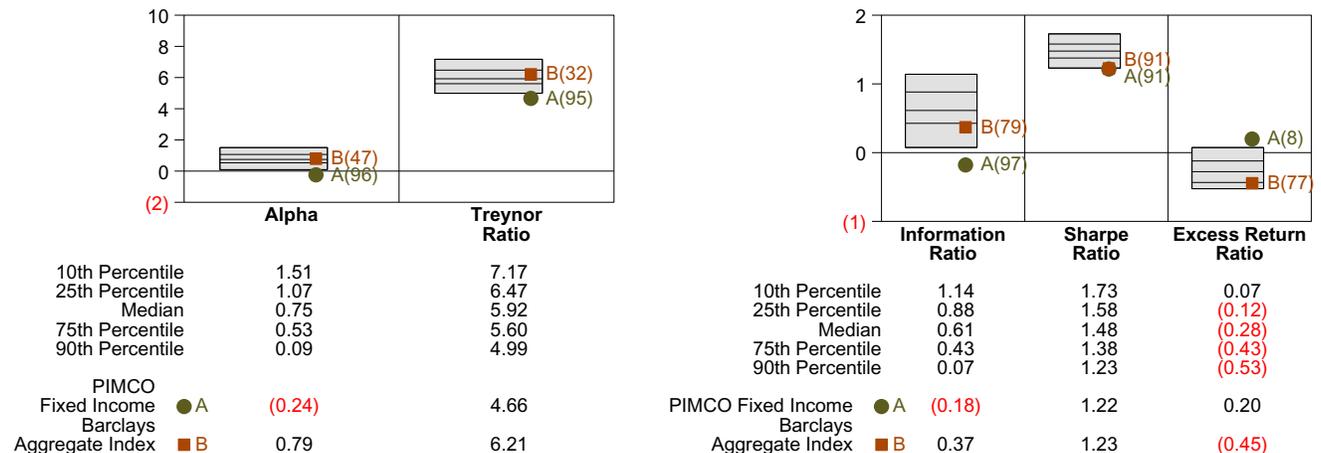
### Performance vs CAI Core Bond Plus Style (Gross)



### Cumulative and Quarterly Relative Return vs Custom Index



### Risk Adjusted Return Measures vs Custom Index Rankings Against CAI Core Bond Plus Style (Gross) Five Years Ended March 31, 2016





# Real Estate Period Ended March 31, 2016

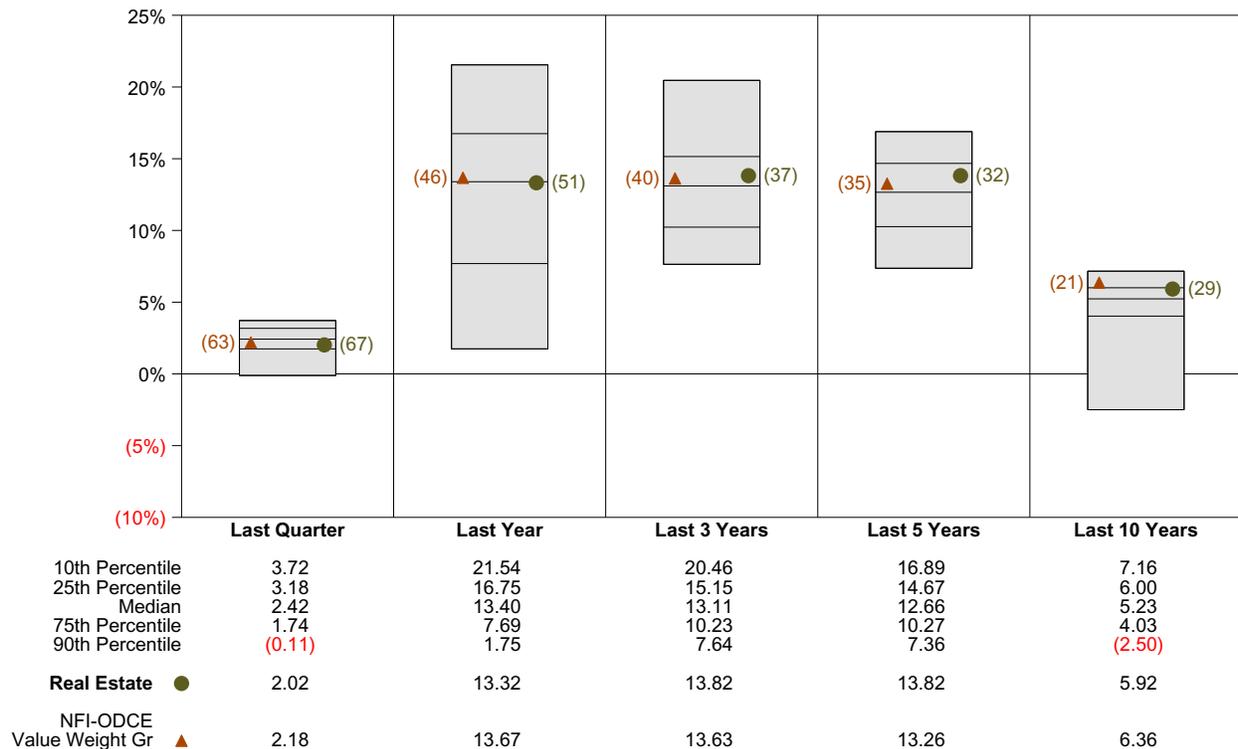
## Investment Philosophy

The Total Real Estate Funds Database consists of both open and closed-end commingled funds as well as separate accounts managed by real estate firms. The returns represent the overall performance of institutional capital invested in real estate properties.

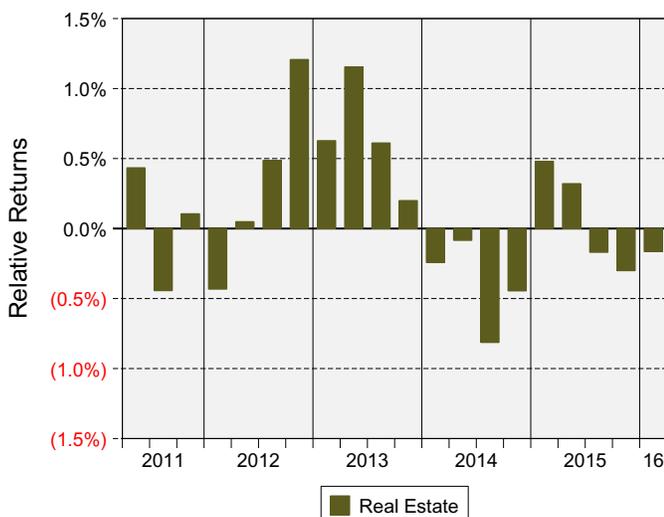
## Quarterly Summary and Highlights

- Real Estate's portfolio posted a 2.02% return for the quarter placing it in the 67 percentile of the Total Real Estate DB group for the quarter and in the 51 percentile for the last year.
- Real Estate's portfolio underperformed the NFI-ODCE Value Weight Gr by 0.16% for the quarter and underperformed the NFI-ODCE Value Weight Gr for the year by 0.35%.

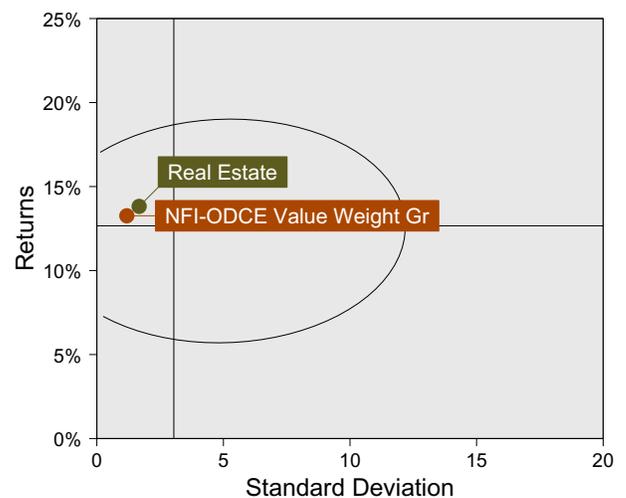
## Performance vs Total Real Estate DB (Net)



## Relative Return vs NFI-ODCE Value Weight Gr



## Total Real Estate DB (Net) Annualized Five Year Risk vs Return

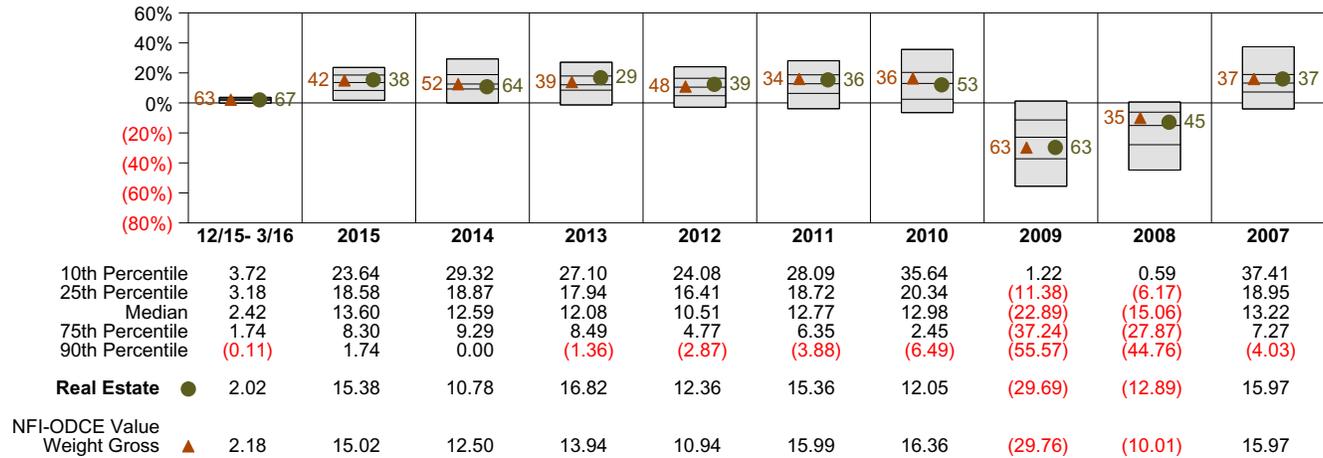


# Real Estate Return Analysis Summary

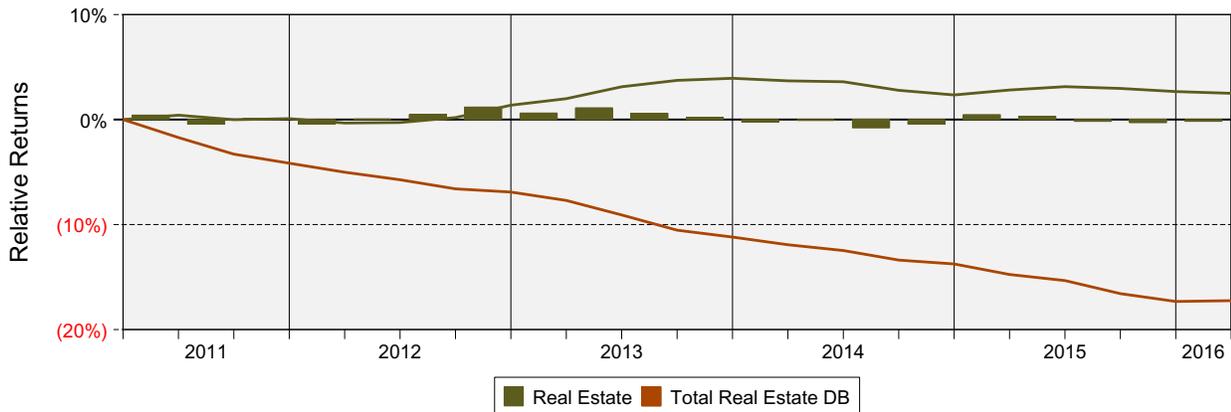
## Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last two charts illustrate the manager's ranking relative to their style using various risk-adjusted return measures.

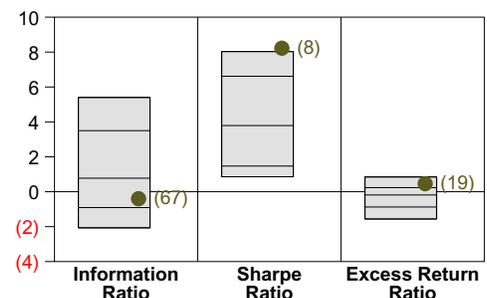
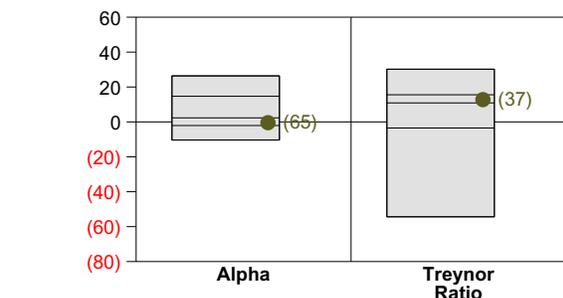
### Performance vs Total Real Estate DB (Net)



### Cumulative and Quarterly Relative Return vs NFI-ODCE Value Weight Gross



### Risk Adjusted Return Measures vs NFI-ODCE Value Weight Gross Rankings Against Total Real Estate DB (Net) Five Years Ended March 31, 2016



# JP Morgan Strategic Property Fund

## Period Ended March 31, 2016

### Investment Philosophy

J.P. Morgan's Strategic Property Fund is an actively managed diversified, core, open-end commingled pension trust fund. It seeks an income-driven rate of return of 100 basis points over the NFI-ODCE Equal Weight Net Index over a full market cycle (three to five year horizon) through asset, geographic and sector selection and active asset management. The Fund invests in high quality stabilized assets with dominant competitive characteristics in markets with attractive demographics throughout the United States. The product was funded in the fourth quarter of 2008.

### Quarterly Summary and Highlights

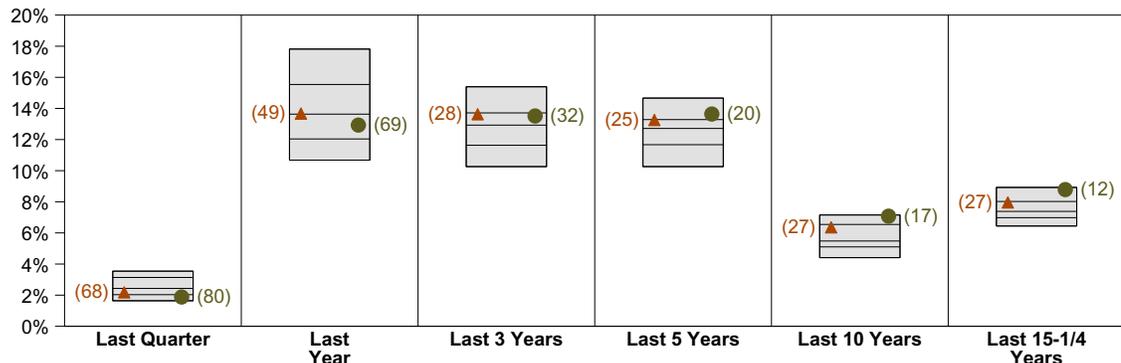
- JP Morgan Strategic Property Fund's portfolio posted a 1.88% return for the quarter placing it in the 80 percentile of the CAI Open-End Real Estate Funds group for the quarter and in the 69 percentile for the last year.
- JP Morgan Strategic Property Fund's portfolio underperformed the NFI-ODCE Value Weight Gross by 0.30% for the quarter and underperformed the NFI-ODCE Value Weight Gross for the year by 0.74%.

### Quarterly Asset Growth

Beginning Market Value	\$44,965,728
Net New Investment	\$-109,014
Investment Gains/(Losses)	\$844,049
Ending Market Value	\$45,700,763

**Percent Cash: 0.0%**

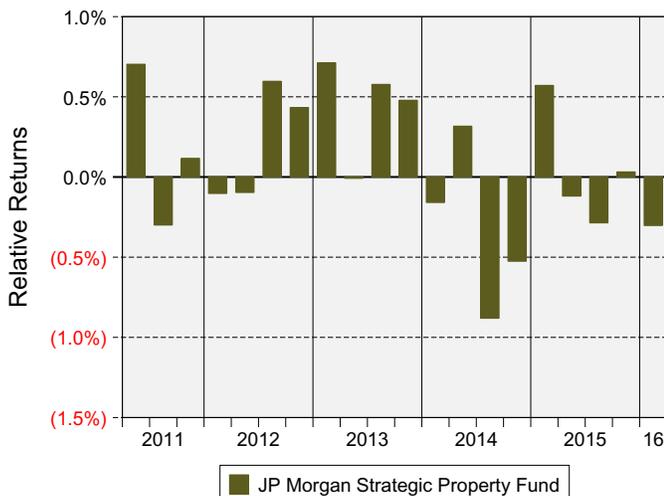
### Performance vs CAI Open-End Real Estate Funds (Net)



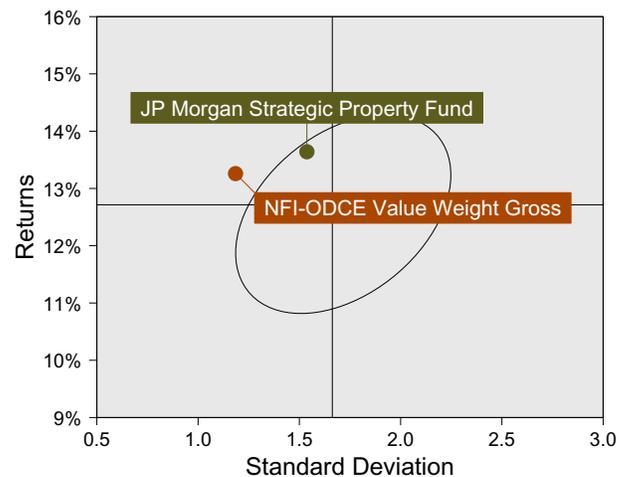
JP Morgan Strategic Property Fund ●

NFI-ODCE Value Weight Gross ▲

### Relative Returns vs NFI-ODCE Value Weight Gross



### CAI Open-End Real Estate Funds (Net) Annualized Five Year Risk vs Return

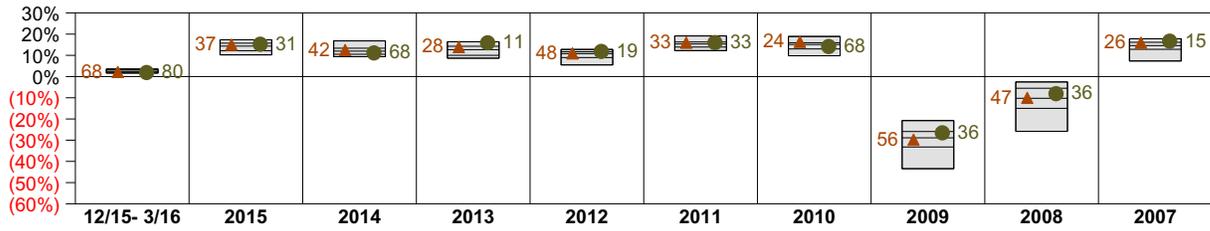


# JP Morgan Strategic Property Fund Return Analysis Summary

## Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last two charts illustrate the manager's ranking relative to their style using various risk-adjusted return measures.

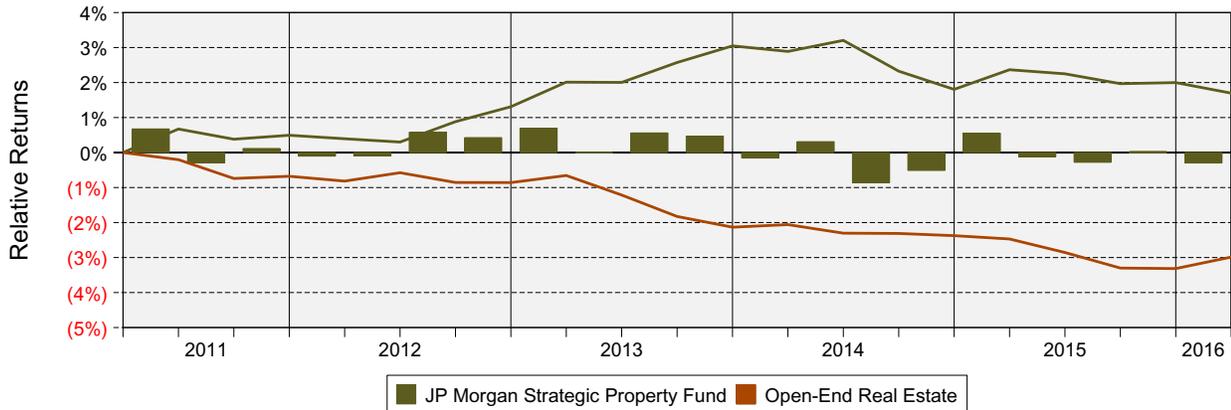
### Performance vs CAI Open-End Real Estate Funds (Net)



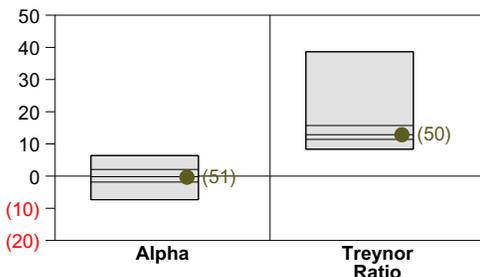
	12/15- 3/16	2015	2014	2013	2012	2011	2010	2009	2008	2007
10th Percentile	3.54	17.33	16.81	16.41	12.79	19.15	18.90	(20.77)	(2.54)	17.80
25th Percentile	3.14	15.74	13.36	14.28	11.67	16.29	15.94	(25.92)	(5.51)	16.15
Median	2.43	14.35	11.99	12.67	10.80	15.33	15.09	(28.89)	(10.25)	14.59
75th Percentile	2.03	12.19	10.52	10.02	8.95	13.91	13.02	(33.22)	(14.99)	12.84
90th Percentile	1.64	10.22	9.38	8.65	5.49	12.22	9.80	(43.44)	(25.83)	7.34

<b>JP Morgan Strategic Property Fund</b>	●	1.88	15.24	11.14	15.90	11.84	15.99	14.16	(26.53)	(8.09)	16.67
<b>NFI-ODCE Value Weight Gross</b>	▲	2.18	15.02	12.50	13.94	10.94	15.99	16.36	(29.76)	(10.01)	15.97

### Cumulative and Quarterly Relative Return vs NFI-ODCE Value Weight Gross

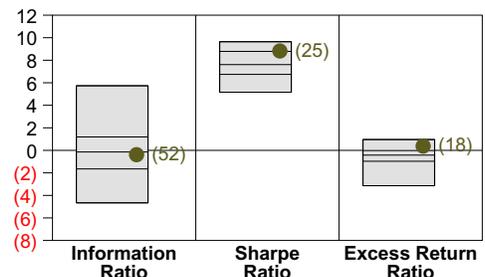


### Risk Adjusted Return Measures vs NFI-ODCE Value Weight Gross Rankings Against CAI Open-End Real Estate Funds (Net) Five Years Ended March 31, 2016



	Alpha	Treynor Ratio
10th Percentile	6.38	38.64
25th Percentile	2.05	15.71
Median	(0.19)	12.87
75th Percentile	(1.86)	11.40
90th Percentile	(7.35)	8.35

<b>JP Morgan Strategic Property Fund</b>	●	(0.35)	12.84
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	Information Ratio	Sharpe Ratio	Excess Return Ratio
10th Percentile	5.73	9.64	0.96
25th Percentile	1.19	8.78	(0.02)
Median	(0.14)	7.61	(0.42)
75th Percentile	(1.65)	6.74	(0.97)
90th Percentile	(4.66)	5.16	(3.14)

<b>JP Morgan Strategic Property Fund</b>	●	(0.39)	8.82	0.38
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# JP Morgan Income and Growth Fund Period Ended March 31, 2016

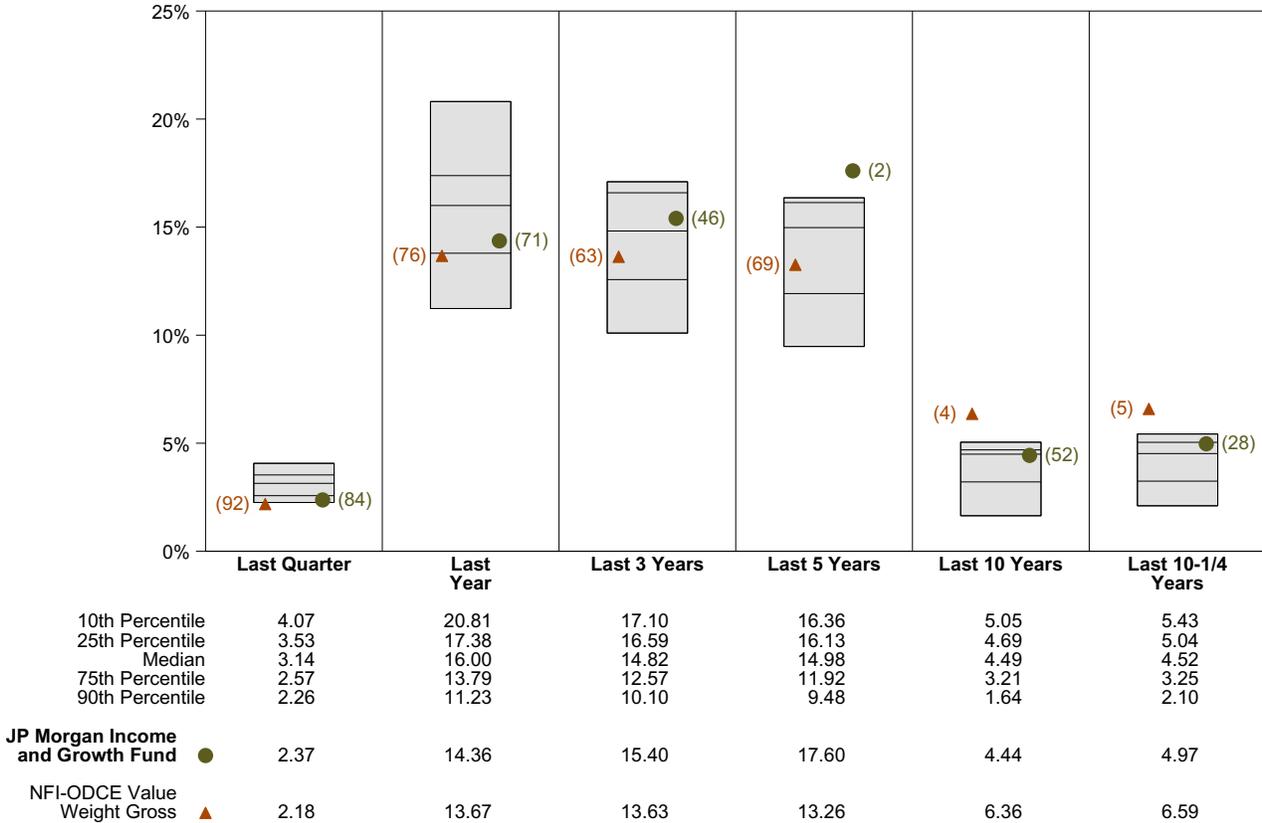
## Investment Philosophy

The product was funded in the fourth quarter of 2005.

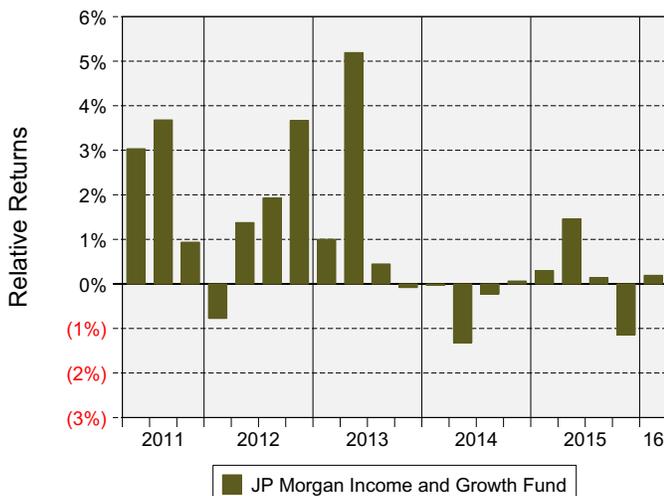
## Quarterly Summary and Highlights

- JP Morgan Income and Growth Fund's portfolio posted a 2.37% return for the quarter placing it in the 84 percentile of the Real Estate Value Added Open End Funds group for the quarter and in the 71 percentile for the last year.
- JP Morgan Income and Growth Fund's portfolio outperformed the NFI-ODCE Value Weight Gross by 0.19% for the quarter and outperformed the NFI-ODCE Value Weight Gross for the year by 0.69%.

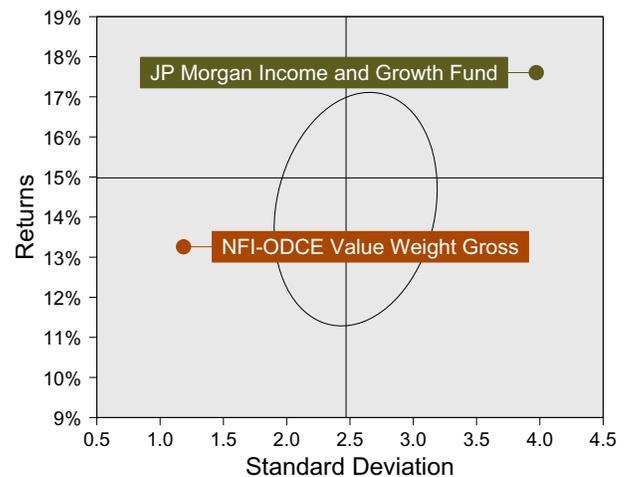
## Performance vs Real Estate Value Added Open End Funds (Net)



## Relative Returns vs NFI-ODCE Value Weight Gross



## Real Estate Value Added Open End Funds (Net) Annualized Five Year Risk vs Return

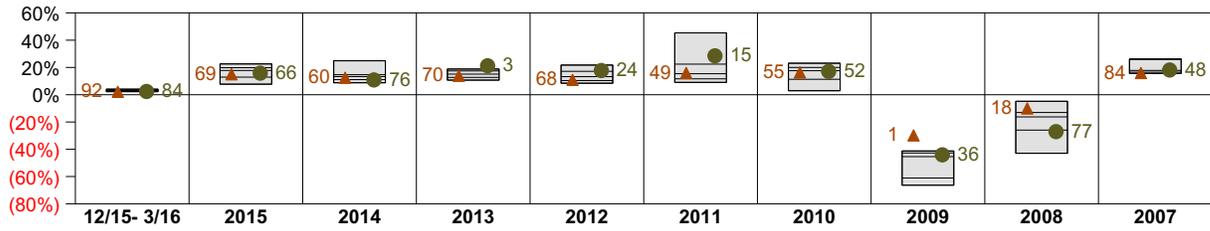


# JPM Income and Growth Fund Return Analysis Summary

## Return Analysis

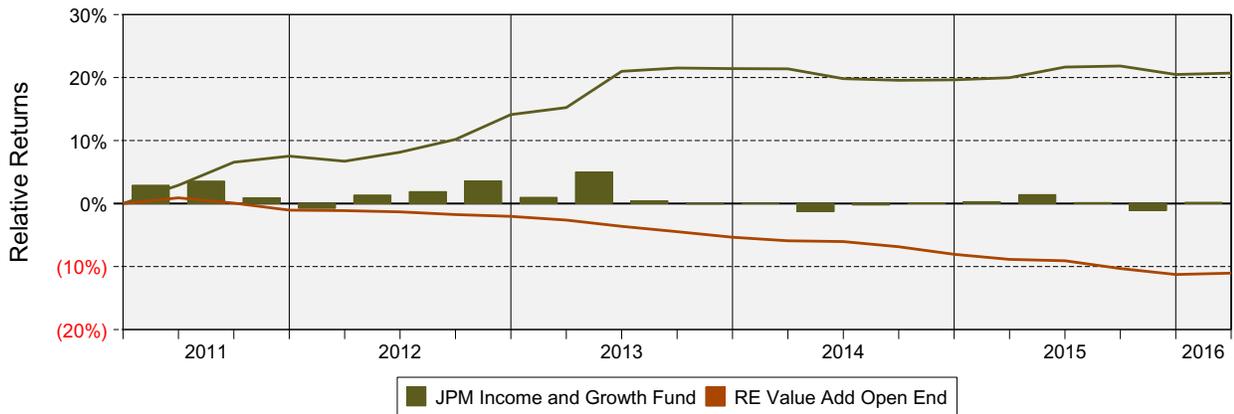
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last two charts illustrate the manager's ranking relative to their style using various risk-adjusted return measures.

### Performance vs Real Estate Value Added Open End Funds (Net)

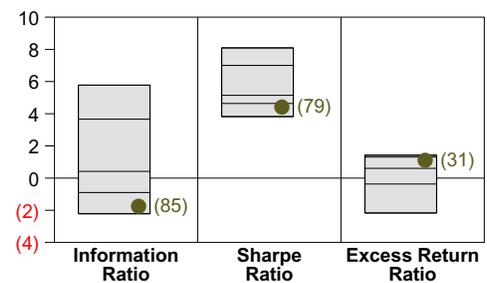
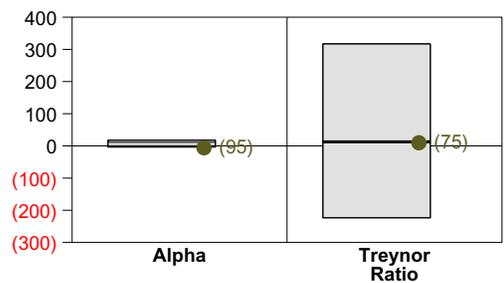


	12/15- 3/16	2015	2014	2013	2012	2011	2010	2009	2008	2007
10th Percentile	4.07	22.58	24.91	18.81	21.75	45.34	23.11	(41.24)	(4.81)	26.17
25th Percentile	3.53	19.83	14.68	17.45	17.17	22.42	20.00	(42.72)	(13.03)	25.97
Median	3.14	17.79	13.32	15.13	13.28	15.42	17.62	(45.40)	(16.25)	17.80
75th Percentile	2.57	12.91	11.07	12.70	10.39	11.66	11.32	(61.06)	(25.95)	16.47
90th Percentile	2.26	7.73	8.77	10.70	8.43	9.06	2.94	(66.35)	(42.95)	15.61
<b>JPM Income and Growth Fund</b>	2.37	15.83	10.85	21.23	17.74	28.52	17.11	(44.09)	(27.07)	18.11
<b>NFI-ODCE Value Weight Gross</b>	2.18	15.02	12.50	13.94	10.94	15.99	16.36	(29.76)	(10.01)	15.97

### Cumulative and Quarterly Relative Return vs NFI-ODCE Value Weight Gross



### Risk Adjusted Return Measures vs NFI-ODCE Value Weight Gross Rankings Against Real Estate Value Added Open End Funds (Net) Five Years Ended March 31, 2016



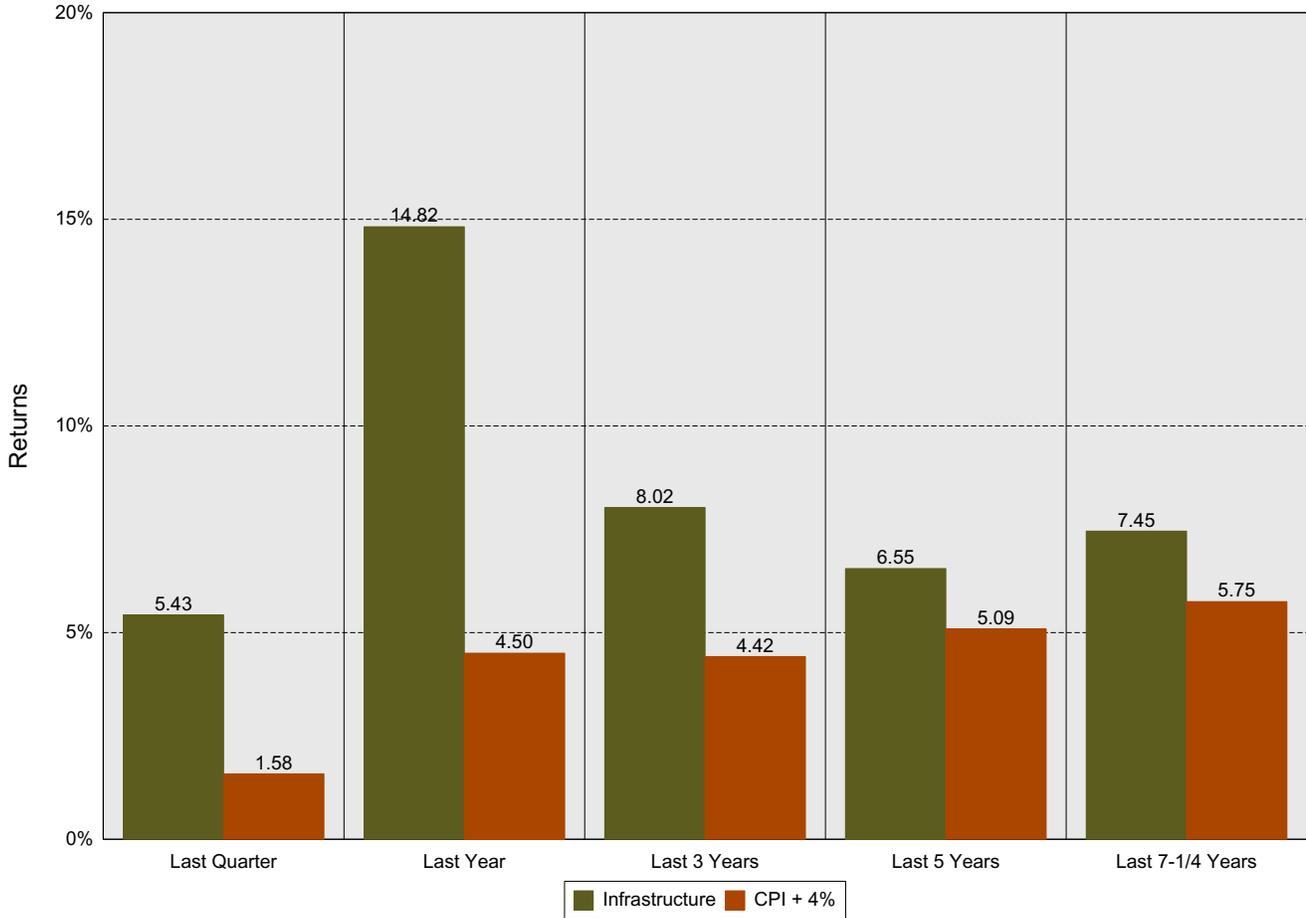
	Alpha	Treynor Ratio	Information Ratio	Sharpe Ratio	Excess Return Ratio
10th Percentile	17.69	317.10	5.78	8.09	1.42
25th Percentile	11.28	15.74	3.66	7.00	1.31
Median	0.58	11.99	0.42	5.15	0.61
75th Percentile	(1.73)	9.64	(0.90)	4.64	(0.37)
90th Percentile	(3.58)	(223.39)	(2.22)	3.82	(2.17)
<b>JPM Income and Growth Fund</b>	(6.00)	9.72	(1.75)	4.41	1.11



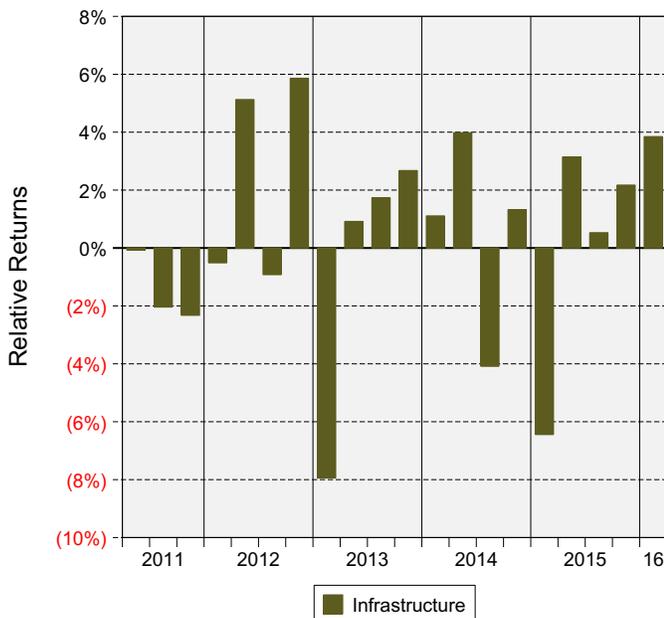
# Infrastructure Period Ended March 31, 2016

## Quarterly Summary and Highlights

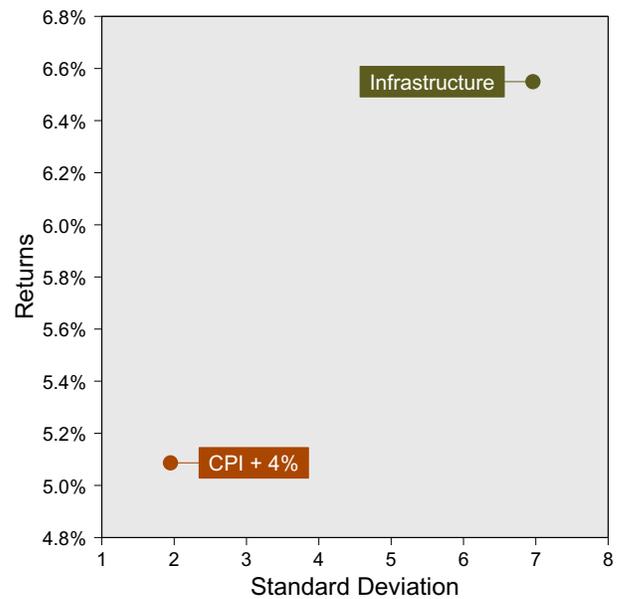
- Infrastructure's portfolio outperformed the CPI + 4% by 3.84% for the quarter and outperformed the CPI + 4% for the year by 10.32%.



Relative Return vs CPI + 4%



Annualized Five Year Risk vs Return



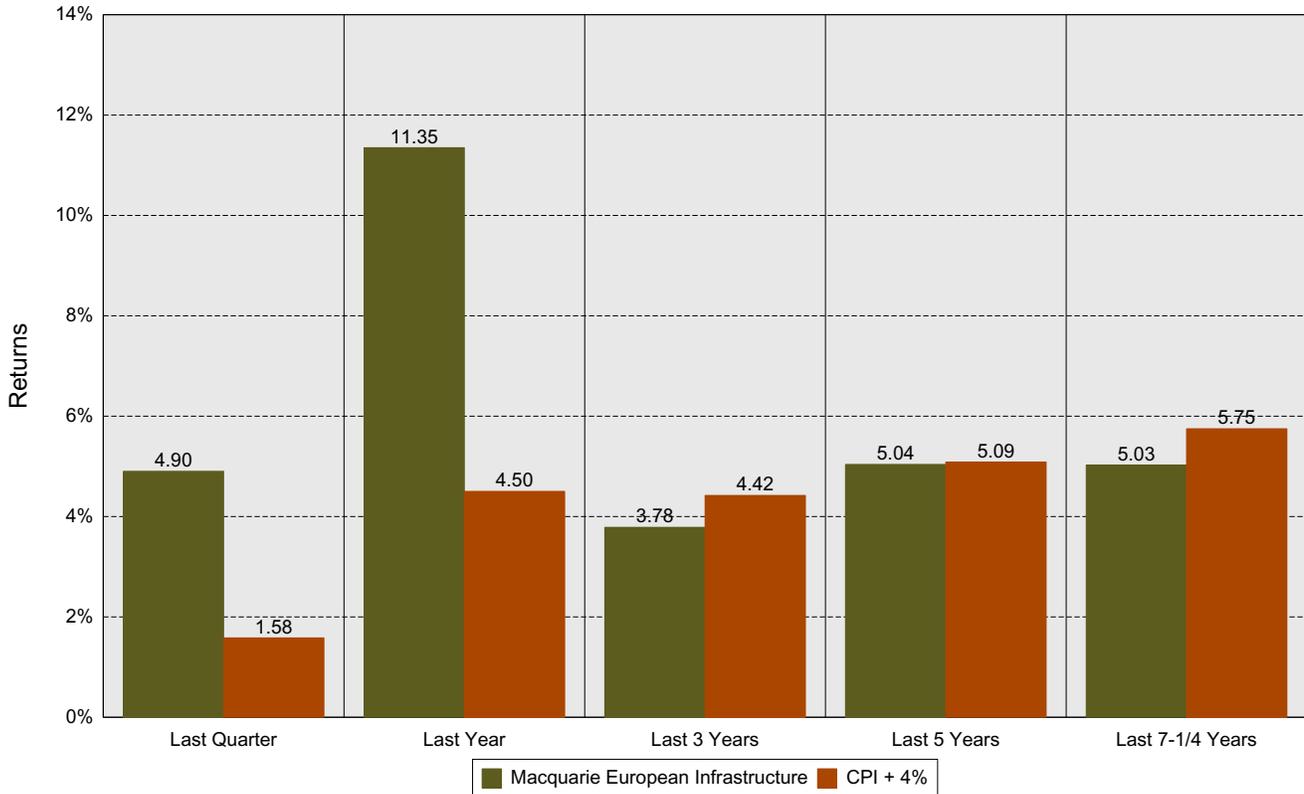
# Macquarie European Infrastructure Period Ended March 31, 2016

## Investment Philosophy

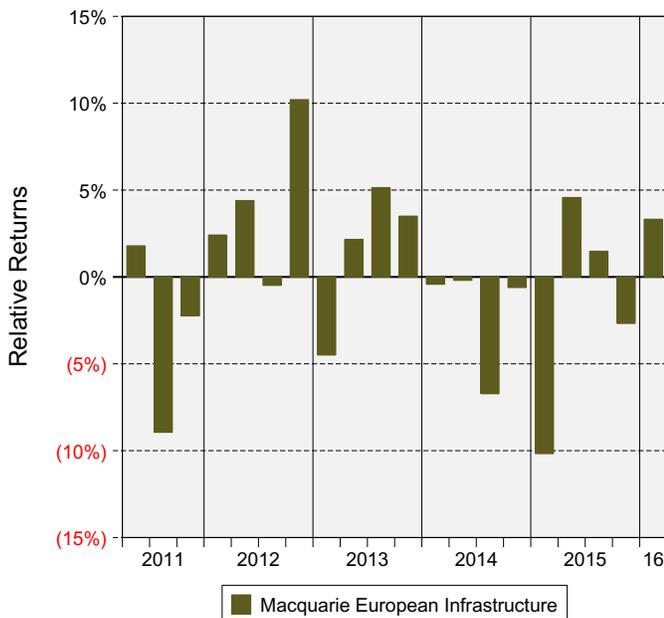
The product was funded in the fourth quarter of 2008.

## Quarterly Summary and Highlights

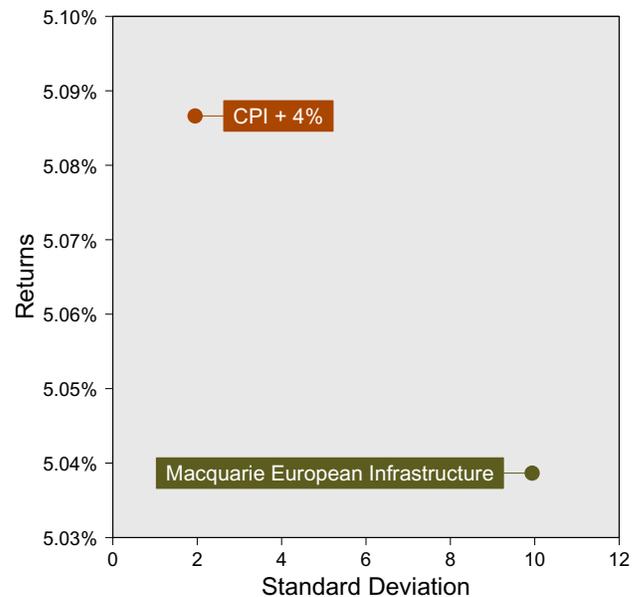
- Macquarie European Infrastructure's portfolio outperformed the CPI + 4% by 3.32% for the quarter and outperformed the CPI + 4% for the year by 6.85%.



Relative Return vs CPI + 4%



Annualized Five Year Risk vs Return



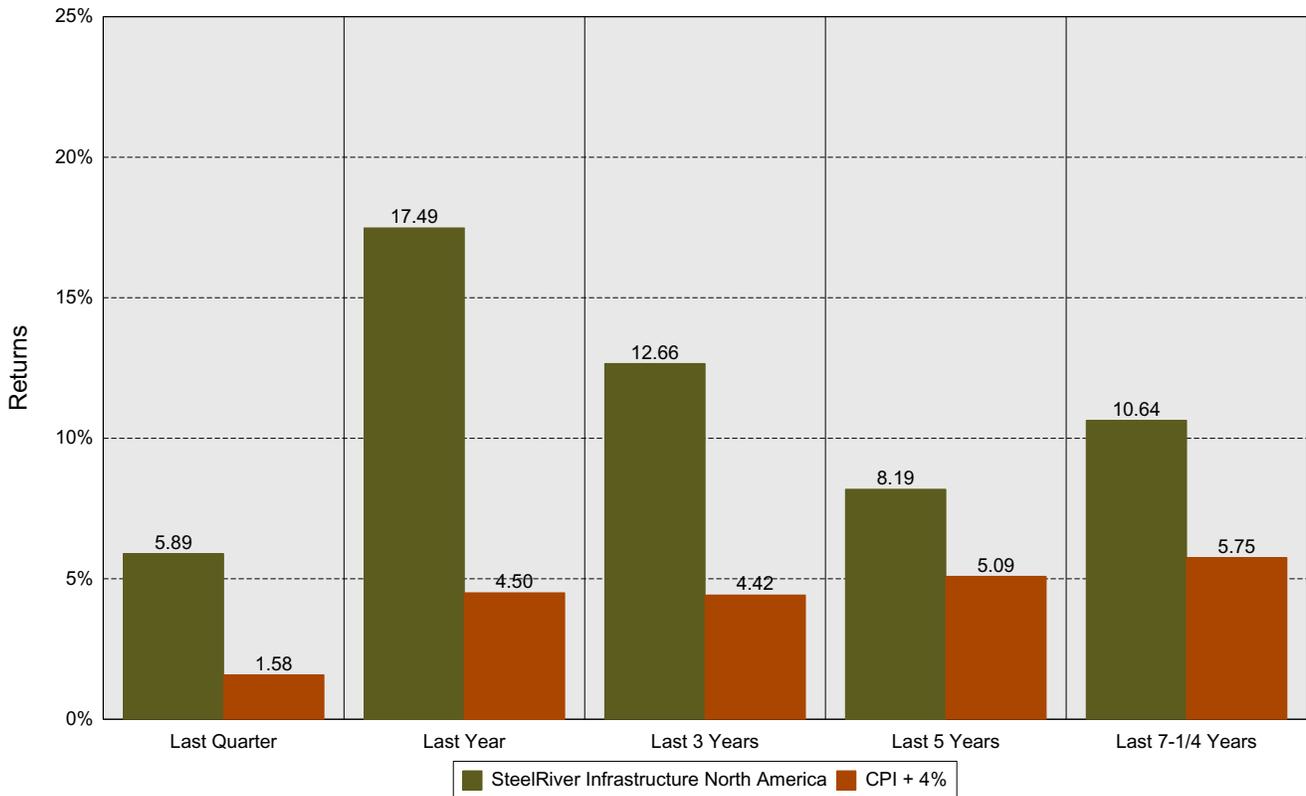
# SteelRiver Infrastructure North America Period Ended March 31, 2016

## Investment Philosophy

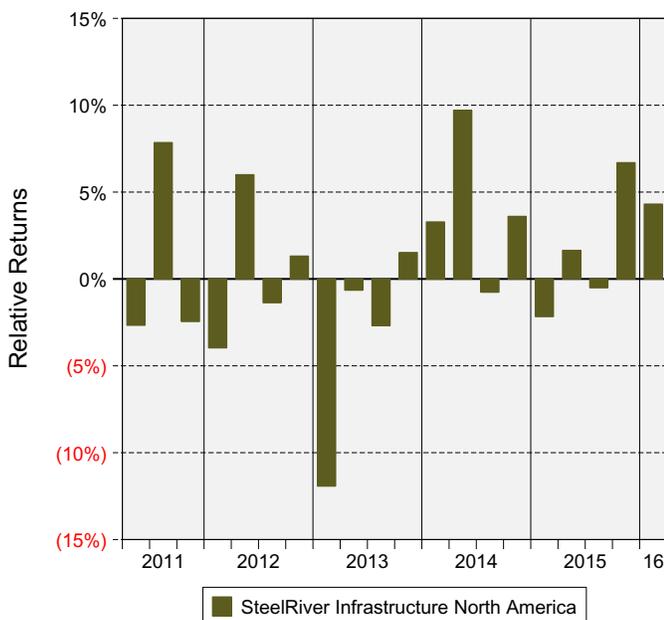
The product was funded in the fourth quarter of 2008.

## Quarterly Summary and Highlights

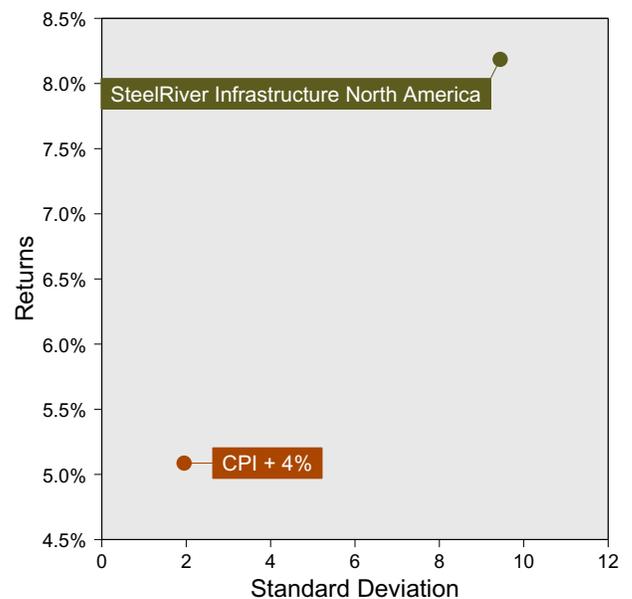
- SteelRiver Infrastructure North America's portfolio outperformed the CPI + 4% by 4.31% for the quarter and outperformed the CPI + 4% for the year by 12.98%.



Relative Return vs CPI + 4%



Annualized Five Year Risk vs Return

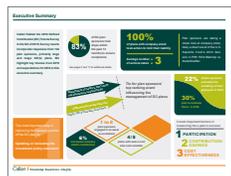




## Research and Educational Programs

The Callan Investments Institute provides research that updates clients on the latest industry trends while helping them learn through carefully structured educational programs. Visit [www.callan.com/research](http://www.callan.com/research) to see all of our publications, or for more information contact Anna West at 415.974.5060 / [institute@callan.com](mailto:institute@callan.com).

### Recent Research



**2016 DC Survey & Key Findings** Callan's 2016 DC Trends Survey highlights plan sponsors' key themes from 2015 and expectations for 2016; the Key Findings summarize the Survey.

**Periodic Table & Periodic Table Collection** Depicts annual investment returns for 10 major asset classes, ranked from best to worst. The Collection includes 10 additional variations.

**Spotlight: Six Key Themes** Callan reflects on some of the ongoing trends within institutional investing and considers how they may develop in the coming year.

**Inside Callan's Database, 4th Quarter 2015** This report graphs performance and risk data from Callan's proprietary database alongside relevant market indices.

**Capital Market Review, 4th Quarter 2015** Insights on the economy and recent performance in equities, fixed income, alternatives, real estate, and more.

**Market Pulse Flipbook, 4th Quarter 2015** A quarterly reference guide covering investment and fund sponsor trends in the U.S. economy, the capital markets, and defined contribution.

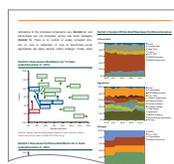
**October Regional Workshop Summary** We reviewed real assets and the implementation implications of building out a robust real assets allocation in portfolios.

**Capital Market Projections** This charticle summarizes key figures from Callan's 2016 capital market projections.

**Global Equity Benchmark Review** This annual report examines FTSE, MSCI, Russell, and S&P indices alongside Callan Active Manager Style Groups.

**Hedge Fund Monitor, 4th Quarter 2015** Our cover story, "David versus Goliath: Sizing Up the Odds," compares the respective advantages and challenges of smaller and larger hedge funds.

**The Renaissance of Stable Value** In this paper, we seek to answer questions about stable value funds, and how they have evolved since the financial crisis.



**Real Assets Reporter, Winter/Spring 2016** In this issue, we look at implementing diversified real asset portfolios, focusing on a process that helps evaluate financial and operational risks.

**U.S. Equity Benchmark Review** This annual report compares CRSP, Russell, and S&P index metrics alongside Callan Active Manager Style Groups.

**DC Observer, 4th Quarter 2015** Cover story: In-Plan Annuities: The Stuff That Dreams Are Made Of?

**The Costs of Closing: Nuclear Decommissioning Trusts** In this video, Julia Moriarty discusses hedging costs, the impact of license extension, and more.

**Private Markets Trends, Winter 2016** Gary Robertson summarizes the market environment, recent events, performance, and other issues involving private equity.

## Events

Miss out on a Callan conference or workshop? Event summaries and speakers' presentations are available on our website: <https://www.callan.com/education/CII/>

Our next **Regional Workshop**, June 28 in Atlanta and June 29 in San Francisco, will consist of two separate one-hour presentations given by our specialists. This year, we look at the impact the Pension Protection Act has had on defined benefit and defined contribution retirement plans a decade after its enactment, and look ahead to the next 10 years.

Save the date for our fall **Regional Workshop**, October 25 in New York and October 26 in Chicago, and our **National Conference**, January 23–25, 2017, at the Palace Hotel in San Francisco.

For more information about events, please contact Barb Geraty: 415.974.5060 / [institute@callan.com](mailto:institute@callan.com)

## The Center for Investment Training Educational Sessions

The Center for Investment Training, better known as the “Callan College,” provides a foundation of knowledge for industry professionals who are involved in the investment decision-making process. It was founded in 1994 to provide clients and non-clients alike with basic- to intermediate-level instruction. Our next session is:

### Introduction to Investments

*San Francisco, CA, July 19–20, 2016*

*Chicago, IL, October 18–19, 2016*

This session familiarizes fund sponsor trustees, staff, and asset management advisors with basic investment theory, terminology, and practices. It lasts one-and-a-half days and is designed for individuals who have less than two years of experience with asset-management oversight and/or support responsibilities. Tuition for the Introductory “Callan College” session is \$2,350 per person. Tuition includes instruction, all materials, breakfast and lunch on each day, and dinner on the first evening with the instructors.

### Customized Sessions

The “Callan College” is equipped to customize a curriculum to meet the training and educational needs of a specific organization. These tailored sessions range from basic to advanced and can take place anywhere—even at your office.

Learn more at <https://www.callan.com/education/college/> or contact Kathleen Cunnie: 415.274.3029 / [cunnie@callan.com](mailto:cunnie@callan.com)

## Education: By the Numbers

500

Attendees (on average) of the Institute's annual National Conference

50+

Unique pieces of research the Institute generates each year

3,300

Total attendees of the “Callan College” since 1994

1980

Year the Callan Investments Institute was founded



“We think the best way to learn something is to teach it. Entrusting client education to our consultants and specialists ensures that they have a total command of their subject matter. This is one reason why education and research have been cornerstones of our firm for more than 40 years.”

Ron Peyton, Chairman and CEO



## List of Callan's Investment Manager Clients

Confidential – For Callan Client Use Only

Callan takes its fiduciary and disclosure responsibilities to clients very seriously. We recognize that there are numerous potential conflicts of interest encountered in the investment consulting industry and that it is our responsibility to manage those conflicts effectively and in the best interest of our clients. At Callan, we employ a robust process to identify, manage, monitor and disclose potential conflicts on an on-going basis.

The list below is an important component of our conflicts management and disclosure process. It identifies those investment managers that pay Callan fees for educational, consulting, software, database or reporting products and services. We update the list quarterly because we believe that our fund sponsor clients should know the investment managers that do business with Callan, particularly those investment manager clients that the fund sponsor clients may be using or considering using. Please refer to Callan's ADV Part 2A for a more detailed description of the services and products that Callan makes available to investment manager clients through our Institutional Consulting Group, Independent Adviser Group and Fund Sponsor Consulting Group. Due to the complex corporate and organizational ownership structures of many investment management firms, parent and affiliate firm relationships are not indicated on our list.

Fund sponsor clients may request a copy of the most currently available list at any time. Fund sponsor clients may also request specific information regarding the fees paid to Callan by particular fund manager clients. Per company policy, information requests regarding fees are handled exclusively by Callan's Compliance Department.

Manager Name
13D Management
1607 Capital Partners, LLC
Aberdeen Asset Management PLC
Acadian Asset Management LLC
AEGON USA Investment Management
Affiliated Managers Group, Inc.
AllianceBernstein
Allianz Global Investors
Allianz Life Insurance Company of North America
AlphaOne Investment Services
American Century Investment Management
Amundi Smith Breeden LLC
Analytic Investors
Angelo, Gordon & Co.
Apollo Global Management
AQR Capital Management
Ares Management LLC
Ariel Investments, LLC
Aristotle Capital Management, LLC
Artisan Holdings
Atlanta Capital Management Co., LLC
Aviva Investors Americas
AXA Investment Managers
Babson Capital Management
Baillie Gifford Overseas Limited
Baird Advisors
Bank of America
Baring Asset Management
Baron Capital Management, Inc.
Barrow, Hanley, Mewhinney & Strauss, LLC
BlackRock
BMO Asset Management, Corp.
BNP Paribas Investment Partners
BNY Mellon Asset Management
Boston Partners
Brandes Investment Partners, L.P.
Brandywine Global Investment Management, LLC

Manager Name
Brown Brothers Harriman & Company
Cambiar Investors, LLC
Capital Group
CastleArk Management, LLC
Causeway Capital Management
Charles Schwab Investment Management
Chartwell Investment Partners
ClearBridge Investments, LLC
Cohen & Steers Capital Management, Inc.
Columbia Management Investment Advisers, LLC
Columbus Circle Investors
Corbin Capital Partners, L.P.
Cornerstone Capital Management
Cramer Rosenthal McGlynn, LLC
Crawford Investment Counsel, Inc.
Credit Suisse Asset Management
Crestline Investors, Inc.
DE Shaw Investment Management, LLC
Delaware Investments
DePrince, Race & Zollo, Inc.
Deutsche Asset Management
Diamond Hill Investments
Duff & Phelps Investment Mgmt. Co.
Eagle Asset Management, Inc.
EARNEST Partners, LLC
Eaton Vance Management
Epoch Investment Partners, Inc.
Fayez Sarofim & Company
Federated Investors
Fidelity Institutional Asset Management
Fiera Capital Global Asset Management
First Eagle Investment Management, LLC
First Hawaiian Bank
Fisher Investments
Fort Washington Investment Advisors, Inc.
Franklin Templeton Institutional
Fred Alger Management, Inc.

Manager Name
Fuller & Thaler Asset Management, Inc.
GAM (USA) Inc.
GE Asset Management
GMO
Goldman Sachs Asset Management
Grand-Jean Capital Management
Guggenheim Investments
Guggenheim Real Estate LLC
GW&K Investment Management
Harbor Capital Group Trust
Hartford Funds
Hartford Investment Management Co.
Henderson Global Investors
Hotchkis & Wiley Capital Management, LLC
HSBC Global Asset Management
Income Research + Management, Inc.
Insight Investment Management Limited
Institutional Capital LLC
INTECH Investment Management, LLC
Invesco
Investec Asset Management
Janus Capital Management, LLC
Jensen Investment Management
J.P. Morgan Asset Management
KeyCorp
Lazard Asset Management
Legal & General Investment Management America
Lincoln National Corporation
LMCG Investments, LLC
Longview Partners
Loomis, Sayles & Company, L.P.
Lord Abbett & Company
Los Angeles Capital Management
LSV Asset Management
MacKay Shields LLC
Man Investments Inc.
Manulife Asset Management
Martin Currie Inc.
Mellon Capital Management
MFS Investment Management
MidFirst Bank
Mondrian Investment Partners Limited
Montag & Caldwell, LLC
Morgan Stanley Investment Management
Mountain Lake Investment Management LLC
MUFG Union Bank, N.A.
Neuberger Berman
Newton Capital Management
Nicholas Investment Partners
Nikko Asset Management Co., Ltd.
Northern Trust Asset Management
Nuveen Investments, Inc.
OFI Global Asset Management
Old Mutual Asset Management

Manager Name
Opus Capital Management Inc.
Pacific Investment Management Company
Parametric Portfolio Associates
Peregrine Capital Management, Inc.
PGIM
PineBridge Investments
Pinnacle Asset Management L.P.
Pioneer Investments
PNC Capital Advisors, LLC
Polen Capital Management
Principal Global Investors
Private Advisors, LLC
Putnam Investments, LLC
QMA (Quantitative Management Associates)
RBC Global Asset Management
Regions Financial Corporation
RidgeWorth Capital Management, Inc.
Rockefeller & Co., Inc.
Rothschild Asset Management, Inc.
Russell Investments
Santander Global Facilities
Schroder Investment Management North America Inc.
Scout Investments
SEI Investments
Seminole Advisory Services, LLC
Smith, Graham & Co. Investment Advisors, L.P.
Smith Group Asset Management
Standard Life Investments Limited
Standish
State Street Global Advisors
Stone Harbor Investment Partners, L.P.
Systematic Financial Management
T. Rowe Price Associates, Inc.
Taplin, Canida & Habacht
The Boston Company Asset Management, LLC
The Hartford
The London Company
The TCW Group, Inc.
Tri-Star Trust Bank
UBS Asset Management
Van Eck Global
Versus Capital Group
Victory Capital Management Inc.
Vontobel Asset Management, Inc.
Voya Investment Management (fka ING)
Waddell & Reed Asset Management Group
WCM Investment Management
WEDGE Capital Management
Wellington Management Company, LLP
Wells Capital Management
Western Asset Management Company
William Blair & Company

# Manager Allocations Compared with Policy Levels

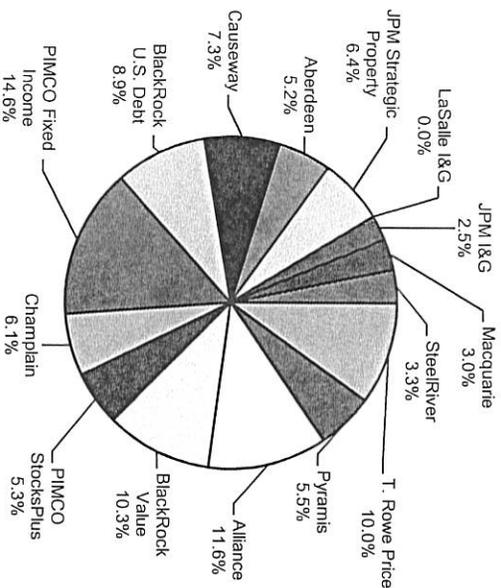
## Monthly Report as of: 04/30/16

Managers and Asset Class	Actual		Target		Differences		Range		Outside Range
	(000s)	%	(000s)	%	From Target	Min	Max		
T. Rowe Price	\$ 71,502	9.9%	\$ 71,997	10.0%	-0.1%	8.0%	12.0%	0.0%	
Alliance (S&P 500)	83,434	11.6%	79,196	11.0%	0.6%	8.0%	14.0%	0.0%	
BlackRock Value	73,943	10.3%	71,997	10.0%	0.3%	8.0%	12.0%	0.0%	
PIMCO StocksPlus	38,135	5.3%	35,998	5.0%	0.3%	3.0%	7.0%	0.0%	
Large Cap U.S. Equity	267,014	37.1%	259,187	36.0%	1.1%	31.0%	41.0%	0.0%	
Pyramis	39,386	5.5%	35,998	5.0%	0.5%	3.0%	7.0%	0.0%	
Champlain	43,798	6.1%	35,998	5.0%	1.1%	3.0%	7.0%	0.0%	
Small/Mid Cap U.S. Equity	83,184	11.6%	71,997	10.0%	1.6%	6.0%	14.0%	0.0%	
Causeway Capital Mgmt	52,555	7.3%	53,997	7.5%	-0.2%	5.5%	9.5%	0.0%	
Aberdeen Asset Mgmt	37,327	5.2%	53,997	7.5%	-2.3%	5.5%	9.5%	-0.3%	
International Equity	89,883	12.5%	107,995	15.0%	-2.5%	13.0%	17.0%	-0.5%	
<b>Total Stocks</b>	<b>440,081</b>	<b>61.2%</b>	<b>439,179</b>	<b>61.0%</b>	<b>0.2%</b>	<b>56.0%</b>	<b>66.0%</b>	<b>0.0%</b>	
PIMCO Fixed Income	104,901	14.6%	115,194	16.0%	-1.4%	13.0%	19.0%	0.0%	
BlackRock U.S. Debt	64,008	8.9%	71,997	10.0%	-1.1%	8.0%	12.0%	0.0%	
<b>Total Bonds</b>	<b>168,909</b>	<b>23.5%</b>	<b>187,191</b>	<b>26.0%</b>	<b>-2.5%</b>	<b>21.0%</b>	<b>31.0%</b>	<b>0.0%</b>	
JPM Strategic Property	45,816	6.4%	35,998	5.0%	1.4%	3.0%	7.0%	0.0%	
LaSalle Income & Growth IV	-	0.0%	10,799	1.5%	-1.5%	0.0%	3.0%	0.0%	
JPM Income & Growth	17,678	2.5%	10,799	1.5%	1.0%	0.0%	3.0%	0.0%	
<b>Total Real Estate</b>	<b>63,494</b>	<b>8.9%</b>	<b>57,597</b>	<b>8.0%</b>	<b>0.9%</b>	<b>6.0%</b>	<b>10.0%</b>	<b>0.0%</b>	
Macquarie	21,834	3.0%	17,999	2.5%	0.5%	1.5%	3.5%	0.0%	
SteelRiver	23,377	3.2%	17,999	2.5%	0.7%	1.5%	3.5%	0.0%	
<b>Total Infrastructure</b>	<b>45,212</b>	<b>6.2%</b>	<b>35,998</b>	<b>5.0%</b>	<b>1.2%</b>	<b>3.0%</b>	<b>7.0%</b>	<b>0.0%</b>	
<b>Liquidity Fund</b>	<b>2,270</b>	<b>0.3%</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	
<b>Total Fund</b>	<b>\$ 719,965</b>	<b>100%</b>	<b>\$ 719,965</b>	<b>100%</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	

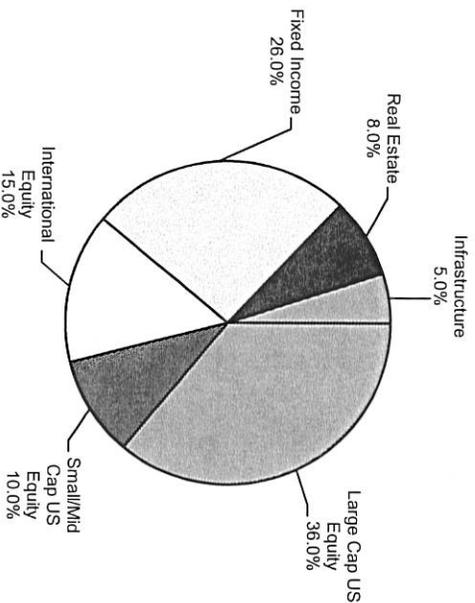
# Allocation Summaries

As of: 04/30/16

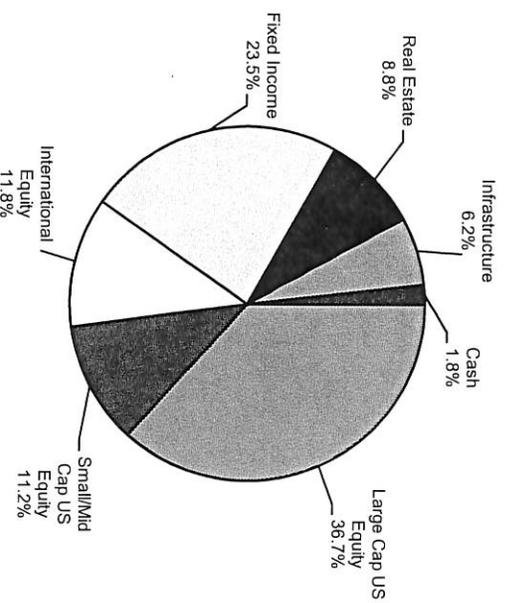
## Manager Allocations



## Target Asset Allocation



## Actual Asset Allocation



## Investment Manager Allocation:

Investment Account	(000s)
1 T. Rowe Price	71,502
2 Pyramis	39,386
3 Alliance	83,434
4 BlackRock Value	73,943
5 PIMCO StocksPlus	38,135
6 Champlain	43,798
7 PIMCO Fixed Income	104,901
8 BlackRock U.S. Debt	64,008
9 Causeway	52,555
10 Aberdeen	37,327
11 JPM Strategic Property	45,816
12 LaSalle I&G	-
13 JPM I&G	17,678
14 Macquarie	21,834
15 SteelRiver	23,377
Liquidity Account	2,270
<b>Total Assets</b>	<b>\$ 719,965</b>

## Target Asset Allocation:

Asset Class	(000s)
Large Cap US Equity	259,187
Small/Mid Cap US Equity	71,997
International Equity	107,995
Fixed Income	187,191
Real Estate	57,597
Infrastructure	35,998
<b>Total Assets</b>	<b>\$ 719,965</b>

## Actual Asset Allocation:

Asset Class	(000s)
Large Cap US Equity	264,226
Small/Mid Cap US Equity	80,577
International Equity	85,103
Fixed Income	168,909
Real Estate	63,494
Infrastructure	44,653
Cash	13,004
<b>Total Assets</b>	<b>\$ 719,965</b>

**TUCSON SUPPLEMENTAL RETIREMENT SYSTEM  
CALENDAR YEAR 2016 PERFORMANCE BY MANAGER  
NET OF FEES AND CUSTODIAL CHARGES**

	Total Fund	BlackRock U.S. Debt	PIMCO	Total Fixed	Alliance S&P 500	BlackRock Value	PIMCO StocksPlus	T RowePrice	Pyramis	Champlain	Aberdeen	Causeway Capital	Total Equities	JP Morgan Strat Prop	LaSalle I & G	JP Morgan I & G	Total Real Estate	SteelRiver Capital	Total Infrastructure	
JAN	-4.76%	1.45%	-0.16%	0.46%	-4.98%	-5.16%	-16.66%	-9.95%	-8.73%	-6.73%	-5.93%	-7.91%	-7.92%	0.49%	0.00%	1.88%	0.87%	-0.11%	-0.39%	-0.25%
FEB	0.16%	0.67%	0.56%	0.60%	-0.12%	-0.01%	-0.51%	-1.26%	-0.44%	0.85%	1.02%	-1.84%	-0.38%	0.19%	0.00%	0.00%	0.14%	6.79%	0.37%	3.68%
MAR	4.80%	0.91%	2.79%	2.06%	6.73%	7.18%	7.38%	5.19%	7.58%	8.97%	8.00%	5.34%	6.83%	0.95%	-100.00%	0.00%	0.68%	-0.39%	4.88%	2.08%
APR	1.41%	0.41%	1.96%	1.36%	0.35%	2.07%	0.78%	0.56%	1.80%	3.76%	2.18%	3.18%	1.66%	0.25%	0.00%	2.06%	0.75%	0.25%	0.49%	0.37%
MAY	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
JUN	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
JUL	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
AUG	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
SEP	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
OCT	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
NOV	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
DEC	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<b>CYTD</b>	<b>1.38%</b>	<b>3.48%</b>	<b>5.22%</b>	<b>4.55%</b>	<b>1.65%</b>	<b>3.74%</b>	<b>-10.27%</b>	<b>-5.95%</b>	<b>-0.48%</b>	<b>6.35%</b>	<b>4.87%</b>	<b>-1.75%</b>	<b>-0.38%</b>	<b>1.89%</b>	<b>-100.00%</b>	<b>3.98%</b>	<b>2.46%</b>	<b>6.52%</b>	<b>5.37%</b>	<b>5.96%</b>

Benchmark Returns:																				
Latest Month	0.82%	0.38%	1.80%	0.38%	0.39%	2.10%	0.39%	-0.91%	1.57%	1.06%	2.63%	2.90%	1.19%	2.18%	2.18%	2.18%	2.18%	0.80%	0.80%	0.80%
Chdr Yr to Date	2.46%	3.43%	5.50%	3.43%	1.75%	3.76%	1.75%	-0.17%	0.03%	3.33%	2.25%	-0.19%	1.59%	2.18%	2.18%	2.18%	2.18%	2.49%	2.49%	2.49%
Index	Custom Plan Index	Barclays Aggregate	Fixed Inc Custom	Barclays Aggregate	S & P 500	Russell 1000 Value	S & P 500	Russell 1000 Growth	Russell 2000	Russell Midcap	MSCI All Country Wld x-US N	MSCI EAFE Net Divd	Equity Composite	NCREIF-ODCE (1)	NCREIF-ODCE (1)	NCREIF-ODCE (1)	NCREIF-ODCE (1)	CPI +4% (2)	CPI +4% (2)	CPI +4% (2)

(1) CYTD Index returns thru: 03/31/2016

(2) CYTD Index Returns thru: 03/31/2016

**TUCSON SUPPLEMENTAL RETIREMENT SYSTEM  
FISCAL YEAR 2016 PERFORMANCE BY MANAGER  
NET OF FEES AND CUSTODIAL CHARGES**

	Total Fund	BlackRock U.S. Debt	PIMCO	Total Fixed	Alliance S&P 500	BlackRock Value	PIMCO StocksPlus	T.RowePrice	Pyramis	Champlain	Aberdeen	Causeway Capital	Total Equities	JP Morgan Strat Prop	LaSalle I & G	JP Morgan I & G	Total Real Estate	SteelRiver	Macquarie Capital	Total Infrastructure
JUL	1.16%	0.68%	0.57%	0.61%	2.12%	0.48%	2.15%	5.03%	1.16%	-1.52%	-1.48%	1.73%	1.55%	0.85%	0.00%	0.00%	0.61%	0.00%	-0.84%	-0.44%
AUG	-3.97%	-0.13%	-1.06%	-0.71%	-5.99%	-5.96%	-6.64%	-5.75%	-5.24%	-4.69%	-8.19%	-6.46%	-6.07%	0.97%	0.00%	0.00%	0.70%	0.00%	1.42%	0.74%
SEP	-3.20%	0.71%	-1.70%	-0.79%	-2.46%	-3.01%	-3.27%	-10.49%	-4.20%	-3.67%	-5.86%	-5.93%	-4.99%	1.30%	0.00%	0.00%	0.94%	-0.22%	1.41%	0.64%
OCT	4.38%	0.00%	2.26%	1.39%	2.29%	7.57%	8.68%	8.67%	3.97%	7.02%	7.51%	7.12%	6.41%	0.57%	0.00%	3.50%	1.37%	0.00%	-1.05%	-0.55%
NOV	0.50%	-0.26%	-0.54%	-0.43%	0.28%	0.41%	0.18%	0.35%	3.33%	1.53%	-2.78%	-2.04%	0.15%	1.52%	0.00%	0.00%	1.10%	19.98%	-6.30%	6.19%
DEC	-1.84%	-0.34%	-1.26%	-0.91%	-1.56%	-8.43%	-1.36%	-0.18%	-4.27%	-2.84%	-3.09%	-1.16%	-2.93%	1.00%	-95.71%	0.00%	0.63%	-3.93%	5.19%	0.29%
JAN	-4.76%	1.45%	-0.16%	0.46%	-4.98%	-5.16%	-16.66%	-9.95%	-8.73%	-6.73%	-5.93%	-7.91%	-7.92%	0.49%	0.00%	1.88%	0.87%	-0.11%	-0.39%	-0.25%
FEB	0.16%	0.67%	0.56%	0.60%	-0.12%	-0.01%	-0.51%	-1.26%	-0.44%	0.85%	1.02%	-1.84%	-0.38%	0.19%	0.00%	0.00%	0.14%	6.79%	0.37%	3.68%
MAR	4.80%	0.91%	2.79%	2.06%	6.73%	7.18%	7.38%	5.19%	7.58%	8.97%	8.00%	5.34%	6.83%	0.95%	-100.00%	0.00%	0.68%	-0.39%	4.88%	2.08%
APR	1.41%	0.41%	1.96%	1.36%	0.35%	2.07%	0.78%	0.56%	1.80%	3.76%	2.18%	3.18%	1.66%	0.25%	0.00%	2.06%	0.75%	0.25%	0.49%	0.37%
MAY	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
JUN	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
FYTD	-1.83%	4.16%	3.36%	3.65%	-3.89%	-5.96%	-11.11%	-9.28%	-6.01%	1.52%	-9.55%	-8.78%	-6.60%	8.38%	-100.00%	7.62%	8.06%	22.51%	4.81%	13.28%

Benchmark Returns:																				
Latest Month	0.82%	0.38%	1.81%	0.38%	0.39%	2.10%	0.39%	-0.91%	1.57%	1.06%	2.63%	2.90%	1.19%	2.21%	2.21%	2.21%	2.21%	0.80%	0.80%	0.80%
Fiscal Yr to Date	1.22%	4.13%	3.86%	4.13%	1.92%	0.41%	1.92%	1.47%	-8.72%	-1.52%	-7.28%	-6.19%	-1.72%	9.48%	9.48%	9.48%	9.48%	3.61%	3.61%	3.61%
Index	Custom Plan Index	Barclays Aggregate	Fixed Inc Custom	Barclays Aggregate	S & P 500	Russell 1000 Value	S & P 500	Russell 1000 Growth	Russell 2000	Russell Midcap	MSCI All Country Wild x-US N	MSCI EAFE Net Divd	Equity Composite	NCREIF - ODCE (1)	CPI +4% (2)	CPI +4% (2)	CPI +4% (2)			

(1) FYTD Index returns thru: 03/31/2016

(2) FYTD Index returns thru: 04/30/2016

**TUCSON SUPPLEMENTAL RETIREMENT SYSTEM  
ONE YEAR TO DATE PERFORMANCE BY MANAGER  
NET OF FEES AND CUSTODIAL CHARGES**

	Total Fund	BlackRock U.S. Debt	PIMCO	Total Fixed	Alliance S&P 500	BlackRock Value	PIMCO StocksPlus	T.RowePrice	Pyramis	Champlain	Aberdeen	Causeway Capital	Total Equities	JP Morgan Strat Prop	LaSalle I & G	JP Morgan I & G	Total Real Estate	SteelRiver	Macquarie Capital	Total Infrastructure	
MAY '15	0.70%	-0.29%	0.12%	-0.03%	1.29%	1.21%	1.38%	2.03%	3.79%	1.47%	-2.01%	-1.14%	1.05%	1.02%	0.00%	0.00%	0.73%	1.47%	-2.16%	-0.43%	
JUN '15	-1.08%	-1.10%	-1.77%	-1.52%	-1.92%	-1.93%	-2.11%	-1.20%	1.19%	0.06%	-4.19%	-2.71%	-1.66%	1.49%	24.40%	4.95%	2.45%	1.66%	3.61%	2.66%	
JUL '15	1.16%	0.68%	0.57%	0.61%	2.12%	0.48%	2.15%	5.03%	1.16%	-1.52%	-1.48%	1.73%	1.55%	0.85%	0.00%	0.00%	0.61%	0.00%	-0.84%	-0.44%	
AUG '15	-3.97%	-0.13%	-1.06%	-0.71%	-5.99%	-5.96%	-6.64%	-5.75%	-5.24%	-4.69%	-8.19%	-6.46%	-6.07%	-0.97%	0.00%	0.00%	0.70%	0.00%	1.42%	0.74%	
SEP '15	-3.20%	7.10%	-1.70%	-0.79%	-2.46%	-3.01%	-3.27%	-10.49%	-4.20%	-3.67%	-5.86%	-5.93%	-4.99%	1.30%	0.00%	0.00%	0.94%	-0.22%	1.41%	0.64%	
OCT '15	4.38%	0.00%	2.26%	1.39%	2.29%	7.57%	8.68%	8.67%	3.97%	7.02%	7.51%	7.12%	6.41%	0.57%	0.00%	3.50%	1.37%	0.00%	-1.05%	-0.55%	
NOV '15	0.50%	-0.26%	-0.54%	-0.43%	0.28%	0.41%	0.18%	0.35%	3.33%	1.53%	-2.78%	-2.04%	0.15%	1.52%	0.00%	0.00%	1.10%	19.98%	-6.30%	6.19%	
DEC '15	-1.84%	-0.34%	-1.26%	-0.91%	-1.56%	-8.43%	-1.36%	-0.18%	-4.27%	-2.84%	-3.09%	-1.16%	-2.93%	1.00%	-95.71%	0.00%	0.63%	-3.93%	5.19%	0.29%	
JAN '16	-4.76%	1.45%	-0.16%	0.46%	-4.98%	-5.16%	-16.66%	-9.95%	-8.73%	-6.73%	-5.93%	-7.91%	-7.92%	0.49%	0.00%	1.88%	0.87%	-0.11%	-0.39%	-0.25%	
FEB '16	0.16%	0.67%	0.56%	0.60%	-0.12%	-0.01%	-0.51%	-1.26%	-0.44%	0.85%	1.02%	-1.84%	-0.38%	0.19%	0.00%	0.00%	0.14%	6.79%	0.37%	3.68%	
MAR '16	4.80%	0.91%	2.79%	2.06%	6.73%	7.18%	7.38%	5.19%	7.58%	8.97%	8.00%	5.34%	6.83%	0.95%	-100.00%	0.00%	0.68%	-0.39%	4.88%	2.08%	
APR '16	1.41%	0.41%	1.96%	1.36%	0.35%	2.07%	0.78%	0.56%	1.80%	3.76%	2.18%	3.18%	1.66%	0.25%	0.00%	2.06%	0.75%	0.25%	0.49%	0.37%	
1-YTD	-2.21%	9.23%	1.65%	2.04%	-4.52%	-6.66%	-11.78%	-8.55%	-1.29%	3.07%	-15.08%	-12.26%	-7.19%	8.98%	-100.00%	12.95%	11.52%	26.38%	6.25%	15.79%	
Benchmark Returns:																					
Latest Month	0.82%	0.38%	1.80%	0.38%	0.39%	2.10%	0.39%	-0.91%	1.57%	1.06%	2.63%	2.90%	1.19%	2.18%	2.18%	2.18%	2.18%	0.80%	0.80%	0.80%	
One Yr to Date	0.92%	2.50%	1.94%	2.50%	2.54%	0.77%	2.54%	2.51%	-3.80%	-0.72%	-12.66%	-9.77%	-2.03%	13.66%	13.66%	13.66%	13.66%	6.07%	6.07%	6.07%	
Index	Custom Plan Index	Barclays Aggregate	Fixed Inc Custom	Barclays Aggregate	S & P 500	Russell 1000 Value	S & P 500	Russell 1000 Growth	Russell 2000	Russell Midcap	MSCI All Country Wild x-US N	MSCI EAFE Net Divd	Equity Composite	NCREIF - ODCE (1)	NCREIF - ODCE (1)	NCREIF - ODCE (1)	NCREIF - ODCE (1)	CPI +4% (2)	CPI +4% (2)	CPI +4% (2)	

(1) One Yr Index returns thru: 3/31/2016

(2) One Yr Index returns thru: 4/30/2016

Tucson Supplemental Retirement System (TSRS)  
 BNY Mellon - Securities Lending & Custodial Fee Summary  
 FY16

July 1, 2015 - June 30, 2016

	Gross		Gross Client		FY16		FY15	
	Earnings	Rebate Paid	Earnings	Administration Fee	Net Client Earnings	Client Earnings	Custodian Fees	Custodian Fees
July	\$ 2,924	\$ (7,613)	\$ 4,214	\$ 6,323	\$ 6,323	\$ 6,816	\$ -	\$ -
August	2,712	(7,968)	4,271	6,410	6,410	5,775	-	-
September	2,016	(10,251)	4,905	7,362	7,362	6,239	74,053	73,879
October	2,230	(10,678)	5,162	7,746	7,746	6,970	-	-
November	2,563	(6,447)	3,603	5,407	5,407	6,002	-	-
December	4,516	(8,780)	5,316	7,979	7,979	6,655	67,264	71,675
January	5,571	(5,972)	4,615	6,928	6,928	7,214	-	-
February	5,290	(5,588)	4,349	6,529	6,529	8,612	-	-
March	6,881	(9,430)	6,522	9,789	9,789	11,248	-	75,962
April	6,872	(7,932)	5,919	8,886	8,886	11,082	-	-
May	-	-	-	-	-	13,175	-	-
June	-	-	-	-	-	8,769	-	74,582
<b>Totals</b>	<b>\$ 41,575</b>	<b>\$ (80,659)</b>	<b>\$ 48,877</b>	<b>\$ 73,357</b>	<b>\$ 73,357</b>	<b>\$ 98,557</b>	<b>\$ 141,317</b>	<b>\$ 296,098</b>

cross check:

73,357

**TSRS**

**Schedule of Cash Transfers Between Investment Accounts and/or Fund 072**

**FY 16**

*FROM (Transfers Out):*

*TO (Transfers In):*

**NOTES:**

Transfer Date	Account #	Account Desc.	Amount	Account #	Account Desc.	Amount	Notes			
07/17/15	TSRF1002002	Pyramis Small Cap Account	(2,000,000.00)	FUND 072 (1)	INVESTMENT POOL ACCOUNT	2,000,000.00	To meet cash liquidity needs & rebalance portfolio			
07/13/15	TSRF4001002	JP Morgan Strategic Property Fund	(3,67)	TSRF2001002	Liquidity Cash Account	3,67	Automatic transfer of excess cash to liquidity account			
07/16/15	TSRF5002002	SteelRiver IFNA	(216,262.81)	TSRF2001002	Liquidity Cash Account	216,262.81	Automatic transfer of excess cash to liquidity account			
07/31/15	TSRF5002002	SteelRiver IFNA	(84,628.18)	TSRF2001002	Liquidity Cash Account	84,628.18	Automatic transfer of excess cash to liquidity account			
08/13/15	TSRF5001002	Macquarie Capital Infrastructure Fund	(8,901.96)	TSRF2001002	Liquidity Cash Account	8,901.96	Automatic transfer of excess cash to liquidity account			
09/30/15	TSRF10012002	T Rowe Price	(5,000,000.00)	FUND 072 (1)	INVESTMENT POOL ACCOUNT	5,000,000.00	To meet cash liquidity needs & rebalance portfolio			
09/30/15	TSRF20010002	SteelRiver IFNA	(41,792.49)	TSRF2001002	Liquidity Cash Account	41,792.49	Automatic transfer of excess cash to liquidity account			
10/29/15	TSRF10030002	Alliance S&P 500	(5,000,000.00)	FUND 072 (1)	INVESTMENT POOL ACCOUNT	5,000,000.00	To meet cash liquidity needs & rebalance portfolio			
10/07/15	TSRF40010002	JP Morgan Strategic Property Fund	(3,06)	TSRF2001002	Liquidity Cash Account	3,06	Automatic transfer of excess cash to liquidity account			
11/03/15	TSRF50010002	Macquarie Capital Infrastructure Fund	(409,921.51)	TSRF2001002	Liquidity Cash Account	409,921.51	Automatic transfer of excess cash to liquidity account			
11/03/15	TSRF50010002	Macquarie Capital Infrastructure Fund	(8,903.99)	TSRF2001002	Liquidity Cash Account	8,903.99	Automatic transfer of excess cash to liquidity account			
11/04/15	TSRF50020002	SteelRiver IFNA	(32,832.28)	TSRF2001002	Liquidity Cash Account	32,832.28	Automatic transfer of excess cash to liquidity account			
12/02/16	TSRF10050002	Blackrock Value	(5,000,000.00)	FUND 072 (1)	INVESTMENT POOL ACCOUNT	5,000,000.00	Automatic transfer of excess cash to liquidity account			
12/16/15	TSRF50020002	SteelRiver IFNA	(896,634.93)	TSRF2001002	Liquidity Cash Account	896,634.93	Automatic transfer of excess cash to liquidity account			
12/30/15	TSRF40020002	Lasalle	(59,809.47)	TSRF2001002	Liquidity Cash Account	59,809.47	Automatic transfer of excess cash to liquidity account			
01/04/16	TSRF10090002	Pimco Stocks Plus	(5,000,000.00)	FUND 072 (1)	INVESTMENT POOL ACCOUNT	5,000,000.00	To meet cash liquidity needs & rebalance portfolio			
01/08/16	TSRF40010002	JP Morgan Strategic Property Fund	(5,82)	TSRF2001002	Liquidity Cash Account	5,82	Automatic transfer of excess cash to liquidity account			
01/20/16	TSRF50020002	SteelRiver IFNA	(24,862.12)	TSRF2001002	Liquidity Cash Account	24,862.12	Automatic transfer of excess cash to liquidity account			
01/29/16	TSRF20010002	Liquidity Cash Account	(13,96)	TSRF50010002	Macquarie Capital Infrastructure Fund	13,96	For Distribution			
02/02/16	TSRF50010002	Macquarie Capital Infrastructure Fund	(8,671.90)	TSRF20010002	Liquidity Cash Account	8,671.90	For Distribution			
03/24/16	TSRF50020002	SteelRiver IFNA	(90,565.53)	TSRF20010002	Liquidity Cash Account	90,565.53	Automatic transfer of excess cash to liquidity account			
04/05/16	TSRF40010002	JP Morgan Strategic Property Fund	(7,69)	TSRF20010002	Liquidity Cash Account	7,69	Automatic transfer of excess cash to liquidity account			
04/21/16	TSRF20010002	Liquidity Cash Account	61,010.00	TSRF50020002	SteelRiver IFNA	61,010.00	Capital Call			
<b>TOTALS</b>			<b>(23,822,811.37)</b>			<b>23,944,831.37</b>	<b>122,020.00</b>			
<b>(1) - INVESTMENT POOL ACCOUNT (Fund 072) Transfer-In Summary:</b>										
FY16 - To Date	FY15	FY14	FY13	FY12	FY11	FY10	FY09	FY08	FY07	FY06
2,000,000.00	28,400,000	24,900,000	21,700,000	27,202,000	29,950,000	20,872,362	26,760,000	10,000,000	17,500,000	2,500,000
5,000,000.00	2,366,667	2,075,000	1,808,333	2,266,833	2,495,833	1,739,363	2,230,000	833,333	1,458,333	208,333
5,000,000.00										
5,000,000.00										
<b>Credit to account: 072-121-1030-2733 (Corresponding Debit goes to 072-121-1000)</b>										

April 30, 2016



## Tucson Supplemental Retirement System

Investment Measurement Service  
Monthly Review

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The following report was prepared by Callan Associates Inc. ("CAI") using information from sources that include the following: fund trustee(s); fund custodian(s); investment manager(s); CAI computer software; CAI investment manager and fund sponsor database; third party data vendors; and other outside sources as directed by the client. CAI assumes no responsibility for the accuracy or completeness of the information provided, or methodologies employed, by any information providers external to CAI. Reasonable care has been taken to assure the accuracy of the CAI database and computer software. Callan does not provide advice regarding, nor shall Callan be responsible for, the purchase, sale, hedge or holding of individual securities, including, without limitation securities of the client (i.e., company stock) or derivatives in the client's accounts. In preparing the following report, CAI has not reviewed the risks of individual security holdings or the conformity of individual security holdings with the client's investment policies and guidelines, nor has it assumed any responsibility to do so. Advice pertaining to the merits of individual securities and derivatives should be discussed with a third party securities expert. Copyright 2016 by Callan Associates Inc.

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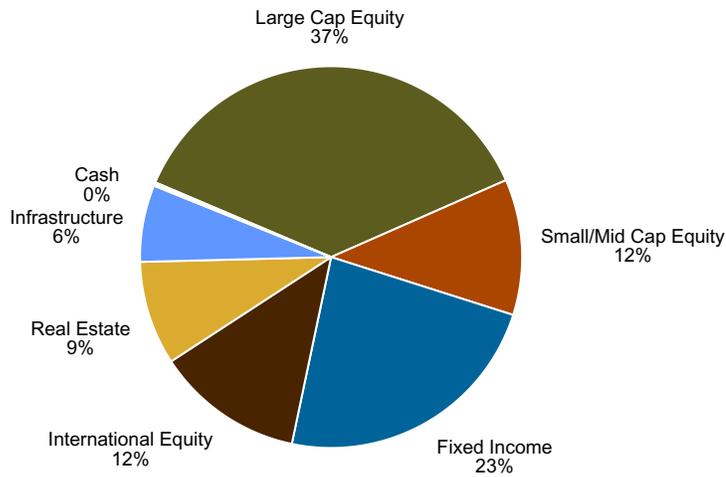
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**Tucson Supplemental Retirement System**  
**April 30, 2016**

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Investment Manager Performance	3
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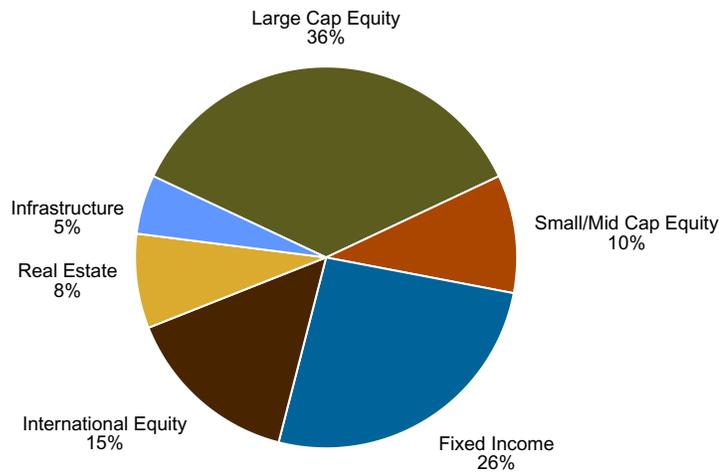
## Actual vs Target Asset Allocation

The first chart below shows the Fund's asset allocation as of April 30, 2016. The second chart shows the Fund's target asset allocation as outlined in the investment policy statement.

### Actual Asset Allocation



### Target Asset Allocation



Asset Class	\$000s Actual	Percent Actual	Percent Target	Percent Difference	\$000s Difference
Large Cap Equity	267,011	37.0%	36.0%	1.0%	7,341
Small/Mid Cap Equity	83,184	11.5%	10.0%	1.5%	11,053
Fixed Income	168,909	23.4%	26.0%	(2.6%)	(18,631)
International Equity	89,883	12.5%	15.0%	(2.5%)	(18,313)
Real Estate	63,494	8.8%	8.0%	0.8%	5,789
Infrastructure	46,556	6.5%	5.0%	1.5%	10,491
Cash	2,270	0.3%	0.0%	0.3%	2,270
<b>Total</b>	<b>721,307</b>	<b>100.0%</b>	<b>100.0%</b>		

\*Current Month Target Performance is calculated using monthly rebalancing.

## Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of April 30, 2016, with the distribution as of March 31, 2016. The change in asset distribution is broken down into the dollar change due to Net New Investment and the dollar change due to Investment Return.

### Asset Distribution Across Investment Managers

	April 30, 2016		Net New Inv.	Inv. Return	March 31, 2016	
	Market Value	Percent			Market Value	Percent
<b>Domestic Equity</b>	<b>\$350,195,356</b>	<b>48.55%</b>	<b>\$(172,099)</b>	<b>\$4,939,538</b>	<b>\$345,427,916</b>	<b>48.54%</b>
<b>Large Cap Equity</b>	<b>\$267,011,355</b>	<b>37.02%</b>	<b>\$(90,594)</b>	<b>\$2,574,861</b>	<b>\$264,527,088</b>	<b>37.17%</b>
Alliance S&P Index	83,431,605	11.57%	(7,776)	299,907	83,139,473	11.68%
PIMCO StocksPLUS	38,135,360	5.29%	0	294,247	37,841,114	5.32%
BlackRock Russell 1000 Value	73,942,876	10.25%	0	1,500,944	72,441,932	10.18%
T. Rowe Price Large Cap Growth	71,501,514	9.91%	(82,818)	479,763	71,104,569	9.99%
<b>Small/Mid Cap Equity</b>	<b>\$83,184,001</b>	<b>11.53%</b>	<b>\$(81,505)</b>	<b>\$2,364,677</b>	<b>\$80,900,828</b>	<b>11.37%</b>
Champlain Mid Cap	43,797,684	6.07%	(83,260)	1,670,576	42,210,368	5.93%
Pyramis Small Cap	39,386,317	5.46%	1,755	694,102	38,690,460	5.44%
<b>International Equity</b>	<b>\$89,882,756</b>	<b>12.46%</b>	<b>\$(80,482)</b>	<b>\$2,514,404</b>	<b>\$87,448,834</b>	<b>12.29%</b>
Causeway International Value Eq	52,555,276	7.29%	(80,482)	1,717,275	50,918,483	7.16%
Aberdeen EAFE Plus	37,327,481	5.17%	0	797,129	36,530,351	5.13%
<b>Fixed Income</b>	<b>\$168,908,873</b>	<b>23.42%</b>	<b>\$(123,731)</b>	<b>\$2,396,715</b>	<b>\$166,635,889</b>	<b>23.42%</b>
BlackRock U.S. Debt Fund	64,008,326	8.87%	0	258,492	63,749,833	8.96%
PIMCO Fixed Income	104,900,548	14.54%	(123,731)	2,138,223	102,886,056	14.46%
<b>Real Estate</b>	<b>\$63,493,990</b>	<b>8.80%</b>	<b>\$(112,422)</b>	<b>\$228,327</b>	<b>\$63,378,085</b>	<b>8.91%</b>
JPM Strategic Property Fund	45,815,675	6.35%	(112,422)	227,333	45,700,763	6.42%
JPM Income and Growth Fund	17,678,315	2.45%	0	993	17,677,322	2.48%
<b>Infrastructure</b>	<b>\$46,555,889</b>	<b>6.45%</b>	<b>\$61,010</b>	<b>\$107,459</b>	<b>\$46,387,420</b>	<b>6.52%</b>
Macquarie European	21,834,291	3.03%	0	107,459	21,726,832	3.05%
SteelRiver Infrastructure	24,721,598	3.43%	61,010	0	24,660,588	3.47%
<b>Total Cash</b>	<b>\$2,269,961</b>	<b>0.31%</b>	<b>\$(61,002)</b>	<b>\$430</b>	<b>\$2,330,534</b>	<b>0.33%</b>
Cash	2,269,961	0.31%	(61,002)	430	2,330,534	0.33%
<b>Total Fund</b>	<b>\$721,306,826</b>	<b>100.0%</b>	<b>\$(488,725)</b>	<b>\$10,186,872</b>	<b>\$711,608,679</b>	<b>100.0%</b>

## Investment Manager Returns

The table below details the rates of return for the fund's investment managers over various time periods ended April 30, 2016. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

### Returns for Periods Ended April 30, 2016

	Last Month	Last 12 Months	Last 36 Months	Last 60 Months
<b>Gross of Fees</b>				
<b>Domestic Equity</b>	<b>1.43%</b>	<b>0.33%</b>	<b>12.01%</b>	<b>11.16%</b>
Total Domestic Equity Target (1)	0.69%	(0.33%)	10.54%	10.29%
<b>Large Cap Equity</b>	<b>0.97%</b>	<b>(0.10%)</b>	<b>11.84%</b>	<b>11.02%</b>
S&P 500 Index	0.39%	1.21%	11.26%	11.02%
Alliance S&P Index	0.36%	1.27%	11.24%	11.00%
S&P 500 Index	0.39%	1.21%	11.26%	11.02%
PIMCO StocksPLUS	0.78%	(0.24%)	11.24%	12.01%
S&P 500 Index	0.39%	1.21%	11.26%	11.02%
BlackRock Russell 1000 Value	2.07%	(0.25%)	9.71%	10.23%
Russell 1000 Value Index	2.10%	(0.40%)	9.59%	10.13%
T. Rowe Price Large Cap Growth	0.67%	(1.41%)	14.81%	12.48%
Russell 1000 Growth Index	(0.91%)	1.07%	12.47%	11.44%
<b>Small/Mid Cap Equity</b>	<b>2.92%</b>	<b>1.69%</b>	<b>12.56%</b>	<b>11.46%</b>
Russell 2500 Index	1.47%	(4.27%)	8.57%	8.28%
Champlain Mid Cap	3.96%	3.94%	13.52%	11.77%
Russell MidCap Index	1.06%	(2.14%)	10.37%	9.88%
Pyramis Small Cap	1.79%	(0.84%)	11.41%	10.96%
Russell 2000 Index	1.57%	(5.94%)	7.53%	6.98%
<b>International Equity</b>	<b>2.88%</b>	<b>(12.79%)</b>	<b>0.21%</b>	<b>(0.03%)</b>
MSCI ACWI x US (Net)	2.63%	(11.28%)	(0.02%)	(0.13%)
Causeway International Value Eq	3.37%	(11.62%)	3.18%	2.90%
MSCI EAFE Index	2.90%	(9.32%)	1.48%	1.69%
Aberdeen EAFE Plus	2.18%	(14.38%)	(3.44%)	-
MSCI ACWI x US (Net)	2.63%	(11.28%)	(0.02%)	(0.13%)
<b>Fixed Income</b>	<b>1.44%</b>	<b>2.39%</b>	<b>2.45%</b>	<b>4.64%</b>
Barclays Aggregate Index	0.38%	2.72%	2.29%	3.60%
BlackRock U.S. Debt Fund	0.41%	2.78%	2.41%	3.73%
Barclays Aggregate Index	0.38%	2.72%	2.29%	3.60%
PIMCO Fixed Income	2.08%	2.17%	2.48%	5.37%
Custom Index (2)	1.46%	3.34%	2.89%	5.02%

(1) The Total Domestic Equity target is currently composed of 72% S&P 500 and 28% Russell 2500 index.

(2) The custom index is currently composed of 25% Barclays Mortgage, 25% Barclays Credit, 25% Barclays High Yield, and 25% JP Morgan EMBI Global. Prior to 2/1/2012, the custom index was composed of 70% Barclays Mortgage, 15% Barclays Credit, and 15% Barclays High Yield.

## Investment Manager Returns

The table below details the rates of return for the fund's investment managers over various time periods ended April 30, 2016. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

### Returns for Periods Ended April 30, 2016

	Last Month	Last 12 Months	Last 36 Months	Last 60 Months
<b>Gross of Fees</b>				
<b>Real Estate</b>	<b>0.36%</b>	<b>12.81%</b>	<b>13.30%</b>	<b>13.38%</b>
NFI-ODCE Value Weight Gr*	0.72%	13.07%	13.43%	13.08%
JPM Strategic Property Fund	0.50%	12.21%	13.29%	13.36%
JPM Income and Growth Fund	0.01%	14.36%	13.93%	15.89%
NFI-ODCE Value Weight Gr*	0.72%	13.07%	13.43%	13.08%
<b>Infrastructure</b>	<b>0.23%</b>	<b>12.58%</b>	<b>7.48%</b>	<b>5.78%</b>
CPI + 4%	0.84%	4.83%	4.65%	5.04%
Macquarie European Infrastructure Fund	0.49%	7.26%	3.05%	3.92%
SteelRiver Infrastructure North Amer.**	0.00%	17.49%	12.43%	7.97%
CPI + 4%	0.84%	4.83%	4.65%	5.04%
<b>Total Fund</b>	<b>1.43%</b>	<b>0.60%</b>	<b>7.93%</b>	<b>7.82%</b>
Total Fund Target	0.88%	0.42%	6.93%	7.21%

\* Current Month Target = 36.0% S&P 500 Index, 26.0% Barclays Aggregate Index, 15.0% MSCI ACWI ex US, 10.0% Russell 2500 Index, 8.0% NFI-ODCE Value Weight Gr and 5.0% CPI-W+4.0%.

\*The NFI-ODCE Value Weight benchmark current quarter return is preliminary.

\*\*SteelRiver Infrastructure's performance reflects prior month's market value adjusted for flows.

## Investment Manager Returns

The table below details the rates of return for the fund's investment managers over various time periods ended April 30, 2016. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

### Returns for Periods Ended April 30, 2016

	Last Month	Last 12 Months	Last 36 Months	Last 60 Months
<b>Net of Fees</b>				
<b>Domestic Equity</b>	<b>1.38%</b>	<b>0.05%</b>	<b>11.70%</b>	<b>10.79%</b>
Total Domestic Equity Target (1)	0.69%	(0.33%)	10.54%	10.29%
<b>Large Cap Equity</b>	<b>0.94%</b>	<b>(0.25%)</b>	<b>11.68%</b>	<b>10.82%</b>
S&P 500 Index	0.39%	1.21%	11.26%	11.02%
Alliance S&P Index	0.35%	1.22%	11.20%	10.96%
S&P 500 Index	0.39%	1.21%	11.26%	11.02%
PIMCO StocksPLUS	0.78%	(0.24%)	11.24%	11.83%
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Russell 1000 Value Index	2.10%	(0.40%)	9.59%	10.13%
T. Rowe Price Large Cap Growth	0.55%	(1.89%)	14.30%	11.94%
Russell 1000 Growth Index	(0.91%)	1.07%	12.47%	11.44%
<b>Small/Mid Cap Equity</b>	<b>2.82%</b>	<b>0.98%</b>	<b>11.74%</b>	<b>10.59%</b>
Russell 2500 Index	1.47%	(4.27%)	8.57%	8.28%
Champlain Mid Cap	3.76%	3.07%	12.57%	10.81%
Russell MidCap Index	1.06%	(2.14%)	10.37%	9.88%
Pyramis Small Cap	1.79%	(1.37%)	10.74%	10.20%
Russell 2000 Index	1.57%	(5.94%)	7.53%	6.98%
<b>International Equity</b>	<b>2.78%</b>	<b>(13.42%)</b>	<b>(0.50%)</b>	<b>(0.77%)</b>
MSCI ACWI x US (Net)	2.63%	(11.28%)	(0.02%)	(0.13%)
Causeway International Value Eq	3.21%	(12.20%)	2.52%	2.20%
MSCI EAFE Index	2.90%	(9.32%)	1.48%	1.69%
Aberdeen EAFE Plus	2.18%	(15.08%)	(4.22%)	-
MSCI ACWI x US (Net)	2.63%	(11.28%)	(0.02%)	(0.13%)
<b>Fixed Income</b>	<b>1.36%</b>	<b>2.08%</b>	<b>2.13%</b>	<b>4.31%</b>
Barclays Aggregate Index	0.38%	2.72%	2.29%	3.60%
BlackRock U.S. Debt Fund	0.41%	2.75%	2.37%	3.70%
Barclays Aggregate Index	0.38%	2.72%	2.29%	3.60%
PIMCO Fixed Income	1.96%	1.67%	1.98%	4.87%
Custom Index (2)	1.46%	3.34%	2.89%	5.02%

(1) The Total Domestic Equity target is currently composed of 72% S&P 500 and 28% Russell 2500 index.

(2) The custom index is currently composed of 25% Barclays Mortgage, 25% Barclays Credit, 25% Barclays High Yield, and 25% JP Morgan EMBI Global. Prior to 2/1/2012, the custom index was composed of 70% Barclays Mortgage, 15% Barclays Credit, and 15% Barclays High Yield.

## Investment Manager Returns

The table below details the rates of return for the fund's investment managers over various time periods ended April 30, 2016. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

### Returns for Periods Ended April 30, 2016

	Last Month	Last 12 Months	Last 36 Months	Last 60 Months
<b>Net of Fees</b>				
<b>Real Estate</b>	<b>0.18%</b>	<b>11.63%</b>	<b>12.09%</b>	<b>12.11%</b>
NFI-ODCE Value Weight Gr*	0.72%	13.07%	13.43%	13.08%
JPM Strategic Property Fund	0.25%	11.12%	12.19%	12.22%
JPM Income and Growth Fund	0.01%	12.94%	12.40%	14.27%
NFI-ODCE Value Weight Gr*	0.72%	13.07%	13.43%	13.08%
<b>Infrastructure</b>	<b>0.23%</b>	<b>11.51%</b>	<b>6.65%</b>	<b>4.45%</b>
CPI + 4%	0.84%	4.83%	4.65%	5.04%
Macquarie European Infrastructure Fund	0.49%	6.31%	2.54%	2.83%
SteelRiver Infrastructure North Amer.**	0.00%	16.32%	11.15%	6.34%
CPI + 4%	0.84%	4.83%	4.65%	5.04%
<b>Total Fund</b>	<b>1.36%</b>	<b>0.15%</b>	<b>7.46%</b>	<b>7.29%</b>
Total Fund Target	0.88%	0.42%	6.93%	7.21%

\* Current Month Target = 36.0% S&P 500 Index, 26.0% Barclays Aggregate Index, 15.0% MSCI ACWI ex US, 10.0% Russell 2500 Index, 8.0% NFI-ODCE Value Weight Gr and 5.0% CPI-W+4.0%.

\*The NFI-ODCE Value Weight benchmark current quarter return is preliminary.

\*\*SteelRiver Infrastructure's performance reflects prior month's market value adjusted for flows.



# TSRS Portfolio Performance Review

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**DATE:** May 19, 2016

**TO:** The Board of Trustees  
Tucson Supplemental Retirement System

**FROM:** Neil S. Galassi, CPA  
Pension Administrator

**SUBJECT:** April 2016 Summary Performance Report

**SUMMARY:**

This report presents the Tucson Supplemental Retirement System's investment portfolio as of April 30, 2016. Attached to this summary are the detailed reports which the Board has been accustomed to reviewing at monthly Board meetings.

As of March 31, 2016 and April 30, 2016, the Total Fund balance was \$709.9 million and \$721.3 million, respectively. This represents a \$11.4 million increase from the prior month. There were no withdrawals from the Total Fund to support pension payments totaled during the recent month, and \$22 million has been withdrawn during fiscal year 2016.

For the month of April, the Total Fund performance was a positive 1.36% which was slightly better than the custom benchmark return of positive 0.88% by 48 basis points. Total Fund performance was impacted by increases in all three of the equity markets and increases in the value of fixed income holdings; the S&P 500 Index fell 6.39% during the month.

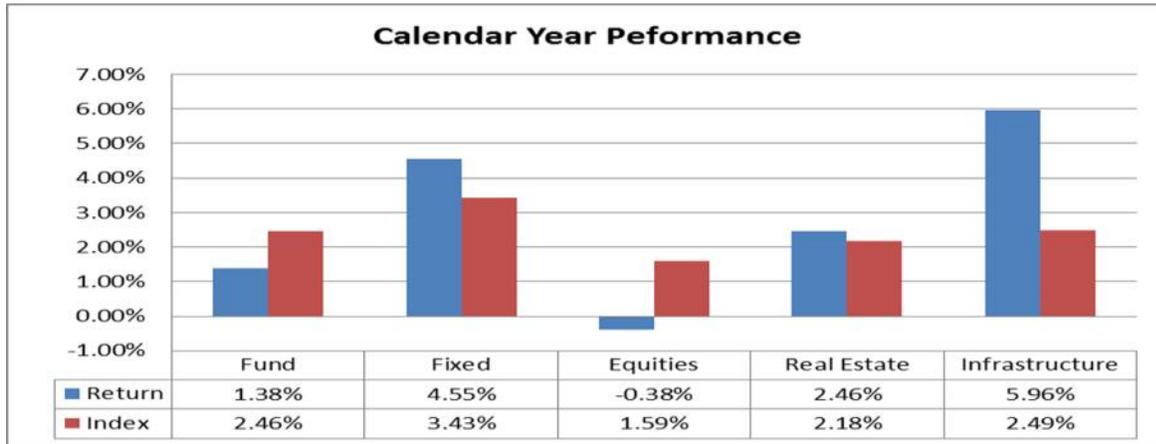
For the last twelve months the Total Fund performance was a positive .15% which was behind the custom benchmark of .42% by 27 basis points. The Total Fund performance was impacted by a large decrease in the International Equity Markets of negative 13.42% which was lower than the previous month 12 year return of negative 1.81%. The equity market returns appear consistent with the benchmarks for the same 12 month period with the exception of Small/Mid Cap Equity which outperformed the benchmark by 5.25% and International Equity which underperformed relative to the benchmark by 2.14%. The negative equity returns were somewhat counterbalanced by 12 month positive return on Fixed Income of 2.08% and returns on the Real Estate and Infrastructure of 11.63% and 11.51% respectively.

In regards to equity funds over the past 12 month period, the Small/Mid Cap Equity funds for Champlain Mid Cap and Pyramis Small Cap performed well above their benchmark by 5.21% and 4.57% respectively while the Large Cap Equity fund managers were relatively consistent with their benchmark. The international equity funds of Causeway and Aberdeen trailed their benchmark by 2.88% and 3.80% respectively. For fixed income funds, the PIMCO Fixed Income Fund underperformed the benchmark by 1.67%, while the Barclay's U.S. Debt Fund was consistent with the benchmark. For Real Estate fund managers, the JPM Strategic Property Fund and the JPM Income and Growth Funds trailed the benchmark by 1.95% and .13%. The Macquarie European Infrastructure Fund was 1.48% above the benchmark, and the Steel River Infrastructure fund also outperformed the benchmark by 11.49%.

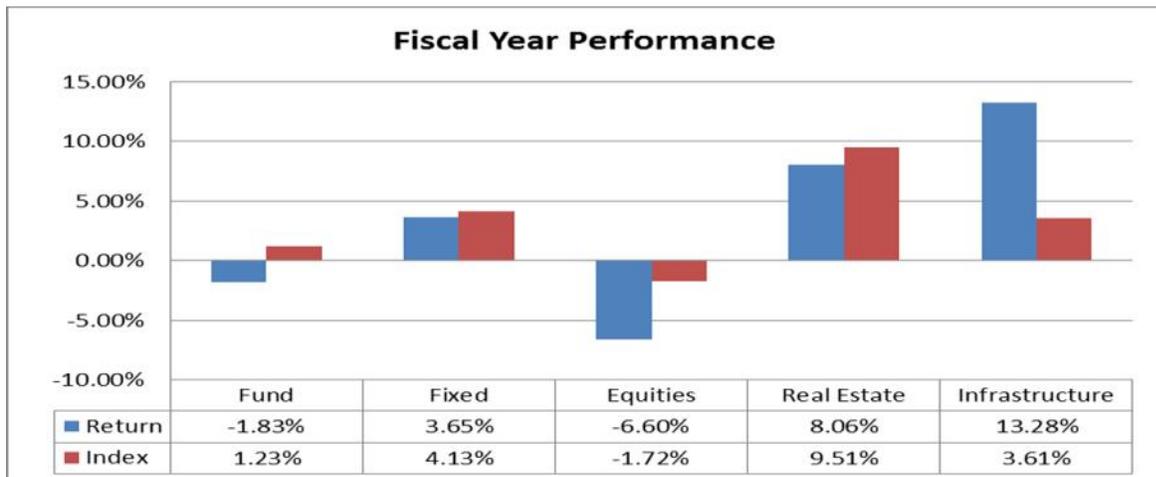
The Total Fund total as of today, May 20, 2016 was \$710.4 million. This represents a decrease of \$9.6 million (1.33%), over the balance as of March 31, 2016. The increase was primarily a result of a 1.57% decrease in asset balances for all equity asset classes.

Summary graphs are as follows:

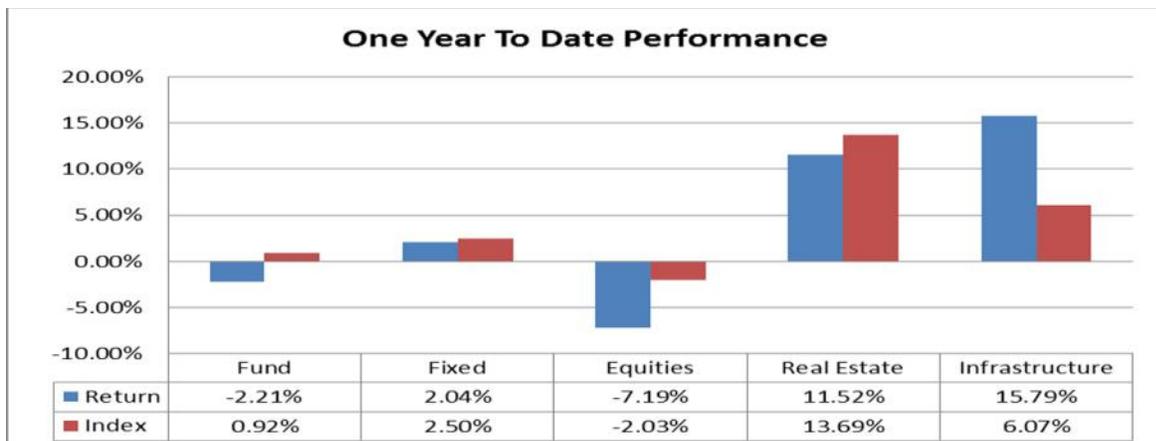
**Calendar Year Metrics:**



**Fiscal Year Metrics:**



**One Year to Date Performance Metrics:**



April 2016



## **Review of Past Capital Market Projections**

Long-Term Projections: 1989 to 2011

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## Introduction

In the pages that follow, the accuracy of Callan's long-term capital market projections is compared to actual historical results. The 1989 through 2008 projection periods represent five-year expectations. Callan moved to a 10-year projection period in 2009. As a result, the analyses on pages 23-25 which compare Callan's 2009, 2010 and 2011 projections to actual results are incomplete as the 10-year projection periods are still in progress. Projected versus actual performance for the different asset classes as well as for a set of diversified portfolios are presented for each projection period.

The graphs shown in the analysis plot the distribution of projected returns for the asset classes and the asset mix portfolios across the range from best- to worst-case, with the 50<sup>th</sup> percentile (median) projection representing the expected asset class or asset mix return. Plotted on this range is the actual annualized return for the period, indicated by a white circle. A table of values for the graph is provided for each period.

For the sake of simplicity, we have only included Large and Small/Mid Cap Domestic Equity, International Equity, Domestic Fixed Income, and Cash Equivalents. The actual returns for these asset classes are represented by the market index performance of the S&P 500 Index, Russell 2500 Index, MSCI EAFE Index, Barclays U.S. Aggregate Index, and the 90-Day T-Bill Index. (Note: Callan switched from the LB Government/Corporate Index to the LB Aggregate Bond Index in 1998, from the Callan Small Cap Index to the S&P 1000 Index in 2003, and from the S&P 1000 Index to the Russell 2500 Index in 2004).

Our general observations are:

- Callan's ability to project the return and risk of portfolios with several asset classes is stronger than our ability to project the return and risk of individual asset classes in isolation. Overestimation of one asset class is typically offset by underestimation in another asset class, resulting in reduced forecasting error for projections of the portfolios of these asset classes.
- The long-term projections imply that the asset mix portfolios listed would have the same projected return and risk in any year during the projection period. Realistically, asset class performance expectations change over time. Each year Callan reassesses the expectations for asset class performance. If a particular asset mix was maintained to achieve a specific nominal return target, the asset allocation that would achieve that return target would in fact change from year to year within the projection period. This process of fine-tuning helps a plan to adjust to changing market conditions.
- Actual asset mix returns were greater than Callan's projected returns in the five-year periods starting in 1991 through 1996. Until the period beginning in 1993, our asset mix projections were within one quartile of the actual asset mix returns. However, with the subsequent momentum roar of the S&P 500 index in the mid-late 1990's, when five-year annualized equity returns achieved more than 20%, actual portfolio returns rose to the top quartile of our range of projections for the periods beginning in 1993 through 1996. For the five-year period beginning 1997, actual portfolio returns were back within one quartile of the median projections, but were bottom quartile for the periods beginning in 1998 through 2001 as the S&P 500 stumbled from 2000 to 2002. Actual portfolio returns were back within one quartile of the median projections for the period beginning in 2002, and were within one quartile of the median projections for the more conservative asset mixes and just

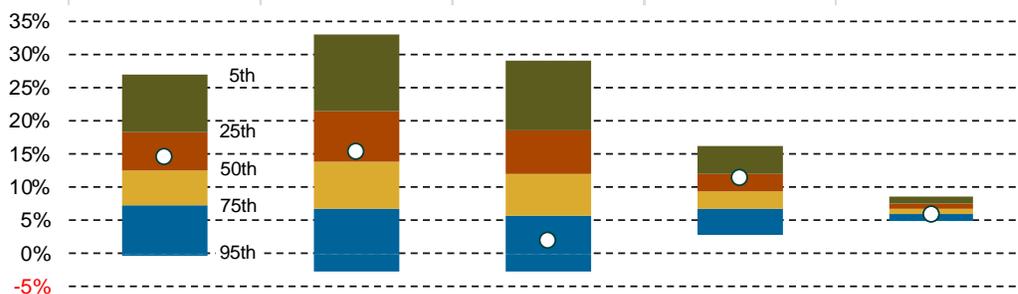
beyond one quartile for the more aggressive mixes during the 2003–2007 period. In the 2004–2008 and 2005–2009 periods, actual portfolio returns were bottom quartile for all asset mixes as the liquidity-driven market meltdown crushed equity markets around the world. Actual portfolio returns climbed back to within one quartile of the median during the 2006–2010 period due to the strong equity market performance of 2009 and 2010, but fell back into the bottom quartile in the 2007–2011 period as equity markets struggled in 2011. Despite double-digit equity returns in 2012, actual portfolio returns remained in the bottom quartile during the 2008–2012 period. Soaring equity markets in 2013 followed by strong U.S. stock and bond performance in 2014 and relatively flat performance in 2015 placed actual portfolio performance within one quartile of the median in the 2009-2015 to 2011-2015 periods.

- The accuracy of our asset class projections for the most recent period (2011–2015) was fairly good with the exception of cash. Most asset class returns fell within one quartile of the median while actual cash returns fell well below the 95<sup>th</sup> percentile projected return as interest rates remained at historic lows over much of the five-year period.
- In comparing projected to actual risk of the various asset mixes, our projections initially were higher than the actual observations but converged towards the observed risk in the period beginning in 1994. Actual risk exceeded the projections during the periods starting in 1997 and 1998, but converged with our projections from the 1999–2003 to 2001–2005 periods. In the periods beginning in 2002 and 2003, our projections were once again higher than the actual observations as volatility levels declined in the mid-2000's. While our projections were still greater than the actual volatility numbers for the 2004–2008 period, the difference narrowed substantially as volatility spiked in 2008. Projected risk numbers for the 2005–2009 period were once again close to the actual numbers due to continued high observed volatility. In the 2006–2010, 2007–2011 and 2008–2012 periods, actual risk increasingly exceeded our projections as equity volatility numbers remained above their long-term averages. In the 2009-2015 period, projected risk numbers were closely aligned with actual results and remained relatively well aligned in in the 2010-2015 and 2011-2015 periods.
- As a result of actual returns exceeding projections, and projected risk exceeding actual risk, actual portfolio efficiency (as measured by the Sharpe Ratio) for the various mixes exceeded projections initially. These differences narrowed sharply in the periods beginning in 1996 and 1997 and completely reversed beginning with the 1998–2002 period. In the periods beginning in 2002 and 2003, actual portfolio efficiency once again exceeded the projections due to robust equity performance coupled with declining volatility levels. In the 2004–2008 and 2005–2009 periods, actual portfolio efficiency fell well below our expectations as asset mixes struggled to generate low single-digit returns. In the periods beginning in 2006, 2007 and 2008, actual portfolio efficiency moved closer to the projected levels as asset mix returns were finally able to outpace those of cash over the five-year periods. In the 2009-2015 to 2011-2015 periods, actual efficiency far exceeded projected levels due to a combination of strong U.S. equity and near zero cash returns over the various periods.

## 1989 Capital Market Projections vs. Actual Market Returns

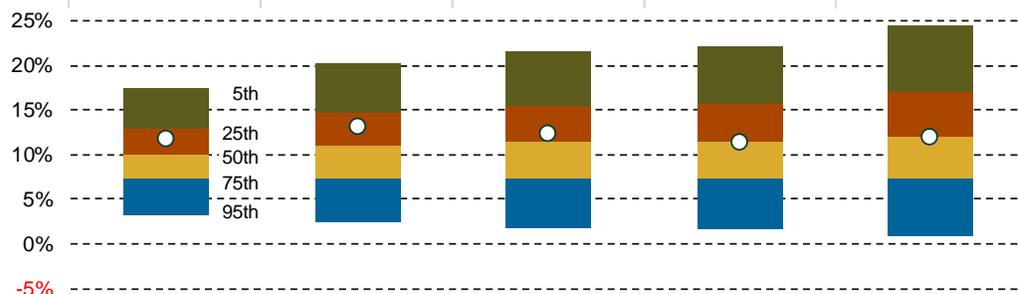
Five-Year Period from 1989 through 1993

### Asset Class Performance



Projections	Large Cap Equity	Small/Mid Cap Equity	International Equity	Domestic Fixed	Cash Equivalent
5th Percentile	26.8%	33.0%	28.9%	16.2%	8.7%
25th Percentile	18.2%	21.3%	18.6%	12.1%	7.6%
<b>50th Percentile</b>	<b>12.6%</b>	<b>13.8%</b>	<b>12.0%</b>	<b>9.4%</b>	<b>6.8%</b>
75th Percentile	7.2%	6.7%	5.7%	6.7%	6.0%
95th Percentile	-0.1%	-2.7%	-2.7%	2.9%	5.0%
<b>Actual Asset Class Return</b>	<b>14.5%</b>	<b>15.3%</b>	<b>2.0%</b>	<b>11.4%</b>	<b>5.8%</b>
Diff Actual from Projection	2.0%	1.5%	-10.0%	2.1%	-1.0%
Benchmark	S&P 500	Callan Small	MSCI EAFE	Lehman G/C	90-Day T-Bill

### Asset Mix Performance



Projections	Mix A	Mix B	Mix C	Mix D	Mix E
5th Percentile	17.4%	20.2%	21.6%	22.1%	24.5%
25th Percentile	13.1%	14.7%	15.5%	15.7%	17.0%
<b>50th Percentile</b>	<b>10.1%</b>	<b>11.0%</b>	<b>11.3%</b>	<b>11.5%</b>	<b>12.1%</b>
75th Percentile	7.3%	7.4%	7.4%	7.4%	7.3%
95th Percentile	3.3%	2.4%	1.9%	1.7%	0.8%
<b>Actual Portfolio Return</b>	<b>11.7%</b>	<b>13.1%</b>	<b>12.4%</b>	<b>11.3%</b>	<b>11.8%</b>
Diff Actual from Projection	1.6%	2.2%	1.0%	-0.1%	-0.2%

Volatility	Mix A	Mix B	Mix C	Mix D	Mix E
Projected Risk	9.6%	12.2%	13.5%	14.0%	16.3%
Actual Risk	6.0%	7.5%	8.9%	9.9%	11.4%

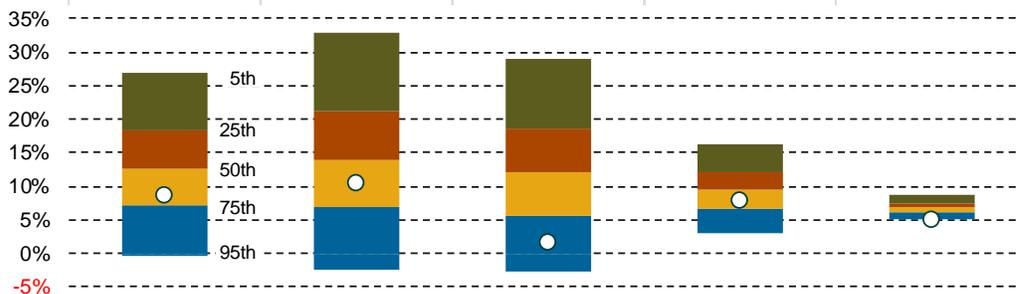
Efficiency	Mix A	Mix B	Mix C	Mix D	Mix E
Projected Sharpe Ratio	0.345	0.341	0.336	0.333	0.322
Actual Sharpe Ratio	0.970	0.972	0.735	0.557	0.526

Portfolio Composition	Mix A	Mix B	Mix C	Mix D	Mix E
Large Cap Equity	40%	50%	40%	35%	40%
Small/Mid Cap Equity	0%	0%	10%	10%	20%
International Equity	0%	0%	10%	20%	20%
Domestic Fixed	40%	50%	40%	35%	20%
Cash Equivalent	20%	0%	0%	0%	0%

## 1990 Capital Market Projections vs. Actual Market Returns

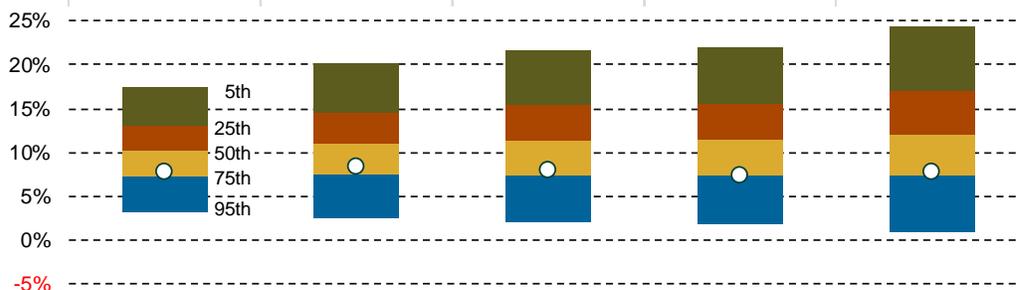
Five-Year Period from 1990 through 1994

### Asset Class Performance



Projections	Large Cap Equity	Small/Mid Cap Equity	International Equity	Domestic Fixed	Cash Equivalent
5th Percentile	26.8%	32.9%	28.9%	16.3%	8.7%
25th Percentile	18.2%	21.3%	18.6%	12.2%	7.6%
<b>50th Percentile</b>	<b>12.6%</b>	<b>13.8%</b>	<b>12.0%</b>	<b>9.4%</b>	<b>6.8%</b>
75th Percentile	7.2%	6.9%	5.7%	6.7%	6.0%
95th Percentile	-0.0%	-2.5%	-2.7%	2.9%	5.0%
<b>Actual Asset Class Return</b>	<b>8.7%</b>	<b>10.5%</b>	<b>1.5%</b>	<b>7.7%</b>	<b>5.0%</b>
Diff Actual from Projection	-3.9%	-3.3%	-10.5%	-1.7%	-1.8%
Benchmark	S&P 500	CAI Small	MSCI EAFE	Lehman G/C	90-Day T-Bill

### Asset Mix Performance



Projections	Mix A	Mix B	Mix C	Mix D	Mix E
5th Percentile	17.4%	20.2%	21.6%	22.0%	24.4%
25th Percentile	13.1%	14.7%	15.5%	15.7%	17.0%
<b>50th Percentile</b>	<b>10.2%</b>	<b>11.0%</b>	<b>11.4%</b>	<b>11.5%</b>	<b>12.1%</b>
75th Percentile	7.3%	7.4%	7.5%	7.4%	7.4%
95th Percentile	3.4%	2.5%	2.0%	1.8%	1.0%
<b>Actual Portfolio Return</b>	<b>7.7%</b>	<b>8.3%</b>	<b>8.0%</b>	<b>7.4%</b>	<b>7.7%</b>
Diff Actual from Projection	-2.5%	-2.7%	-3.4%	-4.1%	-4.4%

Volatility	Mix A	Mix B	Mix C	Mix D	Mix E
Projected Risk	9.5%	12.1%	13.4%	13.9%	16.2%
Actual Risk	6.1%	7.6%	9.0%	9.8%	11.3%

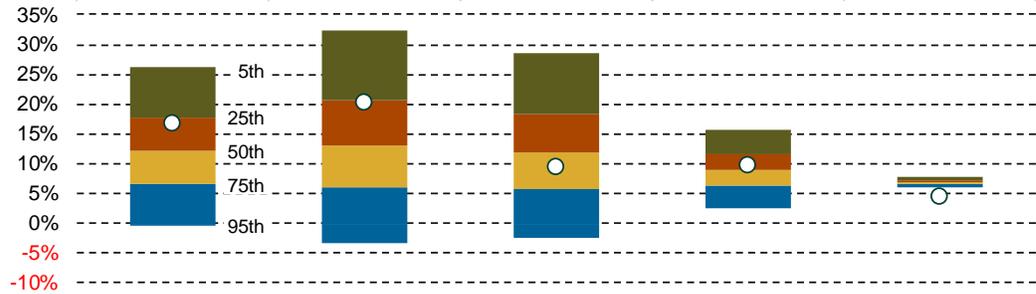
Efficiency	Mix A	Mix B	Mix C	Mix D	Mix E
Projected Sharpe Ratio	0.352	0.347	0.342	0.338	0.327
Actual Sharpe Ratio	0.450	0.443	0.341	0.249	0.244

Portfolio Composition	Mix A	Mix B	Mix C	Mix D	Mix E
Large Cap Equity	40%	50%	40%	35%	40%
Small/Mid Cap Equity	0%	0%	10%	10%	20%
International Equity	0%	0%	10%	20%	20%
Domestic Fixed	40%	50%	40%	35%	20%
Cash Equivalent	20%	0%	0%	0%	0%

## 1991 Capital Market Projections vs. Actual Market Returns

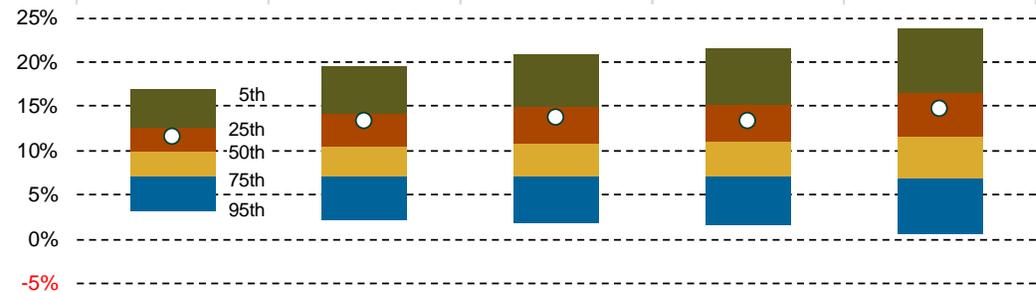
Five-Year Period from 1991 through 1995

### Asset Class Performance



Projections	Large Cap Equity	Small/Mid Cap Equity	International Equity	Domestic Fixed	Cash Equivalent
5th Percentile	26.3%	32.3%	28.4%	15.7%	7.8%
25th Percentile	17.7%	20.6%	18.4%	11.7%	7.3%
<b>50th Percentile</b>	<b>12.1%</b>	<b>13.1%</b>	<b>11.9%</b>	<b>8.9%</b>	<b>6.9%</b>
75th Percentile	6.7%	6.1%	5.8%	6.3%	6.6%
95th Percentile	-0.5%	-3.3%	-2.5%	2.6%	6.1%
<b>Actual Asset Class Return</b>	<b>16.6%</b>	<b>20.3%</b>	<b>9.4%</b>	<b>9.8%</b>	<b>4.5%</b>
Diff Actual from Projection	4.5%	7.2%	-2.5%	0.9%	-2.4%
Benchmark	S&P 500	Callan Small	MSCI EAFE	Lehman G/C	90-Day T-Bill

### Asset Mix Performance



Projections	Mix A	Mix B	Mix C	Mix D	Mix E
5th Percentile	17.0%	19.6%	20.9%	21.4%	23.8%
25th Percentile	12.7%	14.1%	14.9%	15.2%	16.5%
<b>50th Percentile</b>	<b>9.8%</b>	<b>10.5%</b>	<b>10.9%</b>	<b>11.1%</b>	<b>11.6%</b>
75th Percentile	7.0%	7.0%	7.1%	7.1%	7.0%
95th Percentile	3.1%	2.2%	1.7%	1.6%	0.6%
<b>Actual Portfolio Return</b>	<b>11.5%</b>	<b>13.2%</b>	<b>13.6%</b>	<b>13.3%</b>	<b>14.7%</b>
Diff Actual from Projection	1.7%	2.7%	2.7%	2.2%	3.1%

Volatility	Mix A	Mix B	Mix C	Mix D	Mix E
Projected Risk	9.5%	11.9%	13.1%	13.6%	16.0%
Actual Risk	5.3%	6.6%	6.7%	6.7%	7.5%

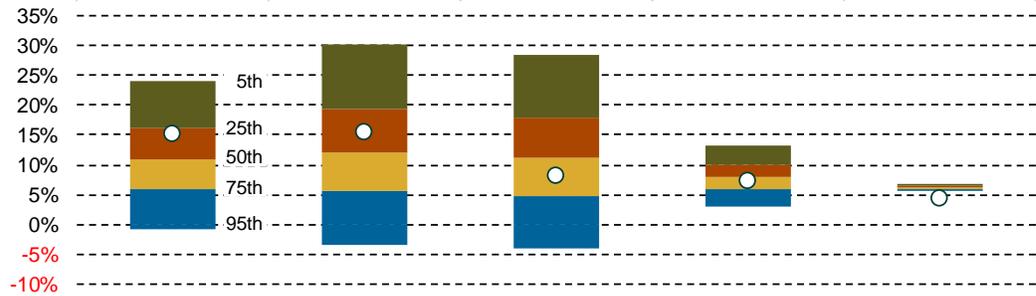
Efficiency	Mix A	Mix B	Mix C	Mix D	Mix E
Projected Sharpe Ratio	0.302	0.300	0.302	0.301	0.293
Actual Sharpe Ratio	1.303	1.322	1.362	1.315	1.356

Portfolio Composition	Mix A	Mix B	Mix C	Mix D	Mix E
Large Cap Equity	40%	50%	40%	35%	40%
Small/Mid Cap Equity	0%	0%	10%	10%	20%
International Equity	0%	0%	10%	20%	20%
Domestic Fixed	40%	50%	40%	35%	20%
Cash Equivalent	20%	0%	0%	0%	0%

## 1992 Capital Market Projections vs. Actual Market Returns

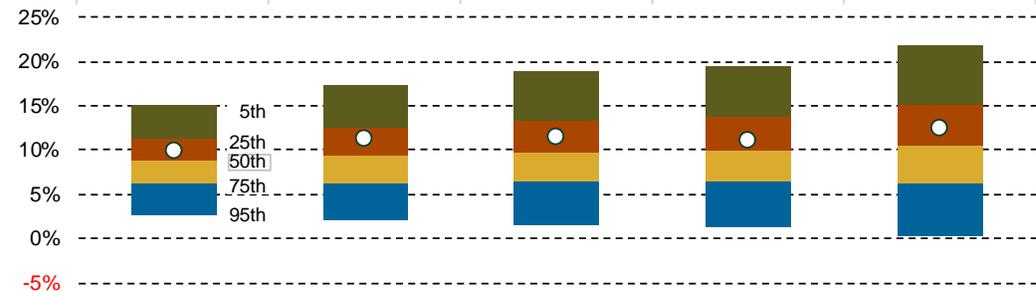
Five-Year Period from 1992 through 1996

### Asset Class Performance



Projections	Large Cap Equity	Small/Mid Cap Equity	International Equity	Domestic Fixed	Cash Equivalent
5th Percentile	24.0%	30.3%	28.5%	13.2%	6.8%
25th Percentile	16.1%	19.3%	18.0%	10.0%	6.4%
<b>50th Percentile</b>	<b>10.9%</b>	<b>12.2%</b>	<b>11.2%</b>	<b>7.9%</b>	<b>6.2%</b>
75th Percentile	5.9%	5.5%	4.7%	5.8%	6.0%
95th Percentile	-0.8%	-3.4%	-3.9%	2.9%	5.6%
<b>Actual Asset Class Return</b>	<b>15.2%</b>	<b>15.5%</b>	<b>8.2%</b>	<b>7.2%</b>	<b>4.4%</b>
Diff Actual from Projection	4.3%	3.3%	-3.0%	-0.7%	-1.8%
Benchmark	S&P 500	Callan Small	MSCI EAFE	Lehman G/C	90-Day T-Bill

### Asset Mix Performance



Projections	Mix A	Mix B	Mix C	Mix D	Mix E
5th Percentile	15.1%	17.3%	18.8%	19.4%	21.8%
25th Percentile	11.3%	12.6%	13.4%	13.8%	15.1%
<b>50th Percentile</b>	<b>8.8%</b>	<b>9.4%</b>	<b>9.9%</b>	<b>10.0%</b>	<b>10.6%</b>
75th Percentile	6.3%	6.3%	6.4%	6.4%	6.3%
95th Percentile	2.8%	2.0%	1.6%	1.4%	0.4%
<b>Actual Portfolio Return</b>	<b>9.8%</b>	<b>11.2%</b>	<b>11.4%</b>	<b>11.1%</b>	<b>12.4%</b>
Diff Actual from Projection	1.1%	1.8%	1.5%	1.1%	1.8%

Volatility	Mix A	Mix B	Mix C	Mix D	Mix E
Projected Risk	8.4%	10.5%	11.8%	12.3%	14.7%
Actual Risk	4.7%	5.8%	5.4%	5.3%	5.6%

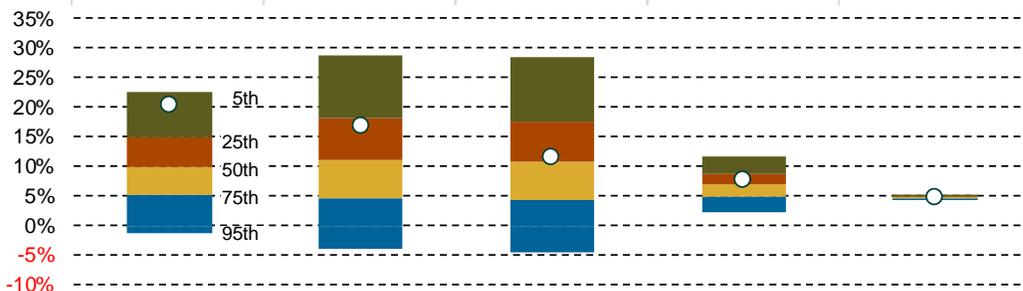
Efficiency	Mix A	Mix B	Mix C	Mix D	Mix E
Projected Sharpe Ratio	0.306	0.306	0.311	0.312	0.300
Actual Sharpe Ratio	1.167	1.180	1.288	1.264	1.433

Portfolio Composition	Mix A	Mix B	Mix C	Mix D	Mix E
Large Cap Equity	40%	50%	40%	35%	40%
Small/Mid Cap Equity	0%	0%	10%	10%	20%
International Equity	0%	0%	10%	20%	20%
Domestic Fixed	40%	50%	40%	35%	20%
Cash Equivalent	20%	0%	0%	0%	0%

## 1993 Capital Market Projections vs. Actual Market Returns

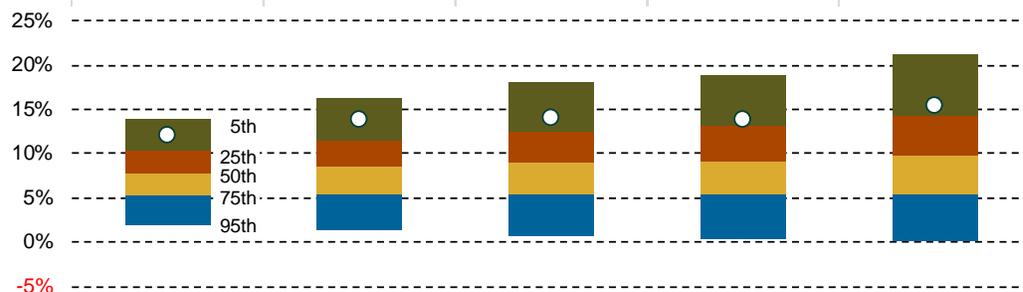
Five-Year Period from 1993 through 1997

### Asset Class Performance



Projections	Large Cap Equity	Small/Mid Cap Equity	International Equity	Domestic Fixed	Cash Equivalent
5th Percentile	22.7%	28.8%	28.4%	11.7%	5.2%
25th Percentile	15.0%	18.1%	17.7%	8.8%	4.9%
<b>50th Percentile</b>	<b>10.0%</b>	<b>11.2%</b>	<b>10.7%</b>	<b>6.9%</b>	<b>4.8%</b>
75th Percentile	5.2%	4.7%	4.2%	4.9%	4.6%
95th Percentile	-1.4%	-4.0%	-4.4%	2.3%	4.3%
<b>Actual Asset Class Return</b>	<b>20.3%</b>	<b>16.8%</b>	<b>11.4%</b>	<b>7.6%</b>	<b>4.7%</b>
Diff Actual from Projection	10.3%	5.6%	0.6%	0.8%	-0.0%
Benchmark	S&P 500	Callan Small	MSCI EAFE	Lehman G/C	90-Day T-Bill

### Asset Mix Performance



Projections	Mix A	Mix B	Mix C	Mix D	Mix E
5th Percentile	13.9%	16.2%	17.9%	18.8%	21.1%
25th Percentile	10.2%	11.6%	12.5%	13.0%	14.3%
<b>50th Percentile</b>	<b>7.7%</b>	<b>8.4%</b>	<b>8.9%</b>	<b>9.2%</b>	<b>9.8%</b>
75th Percentile	5.2%	5.4%	5.4%	5.5%	5.4%
95th Percentile	1.8%	1.1%	0.6%	0.3%	-0.5%
<b>Actual Portfolio Return</b>	<b>12.0%</b>	<b>13.9%</b>	<b>14.0%</b>	<b>13.8%</b>	<b>15.3%</b>
Diff Actual from Projection	4.3%	5.4%	5.0%	4.6%	5.6%

Volatility	Mix A	Mix B	Mix C	Mix D	Mix E
Projected Risk	8.2%	10.3%	11.9%	12.6%	14.9%
Actual Risk	5.2%	6.5%	6.4%	6.3%	7.2%

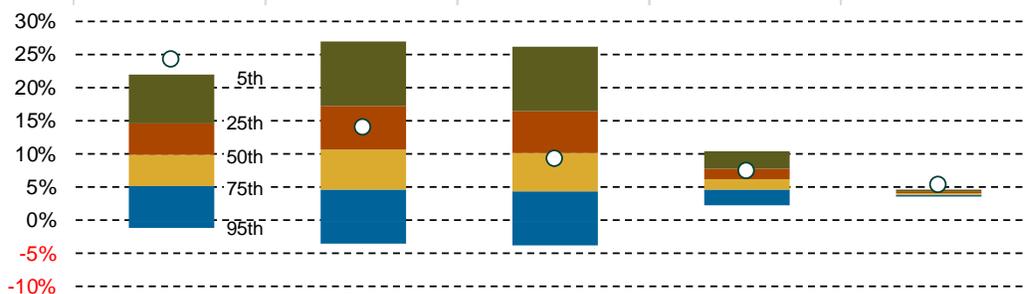
Efficiency	Mix A	Mix B	Mix C	Mix D	Mix E
Projected Sharpe Ratio	0.357	0.356	0.353	0.350	0.336
Actual Sharpe Ratio	1.399	1.416	1.439	1.438	1.483

Portfolio Composition	Mix A	Mix B	Mix C	Mix D	Mix E
Large Cap Equity	40%	50%	40%	35%	40%
Small/Mid Cap Equity	0%	0%	10%	10%	20%
International Equity	0%	0%	10%	20%	20%
Domestic Fixed	40%	50%	40%	35%	20%
Cash Equivalent	20%	0%	0%	0%	0%

## 1994 Capital Market Projections vs. Actual Market Returns

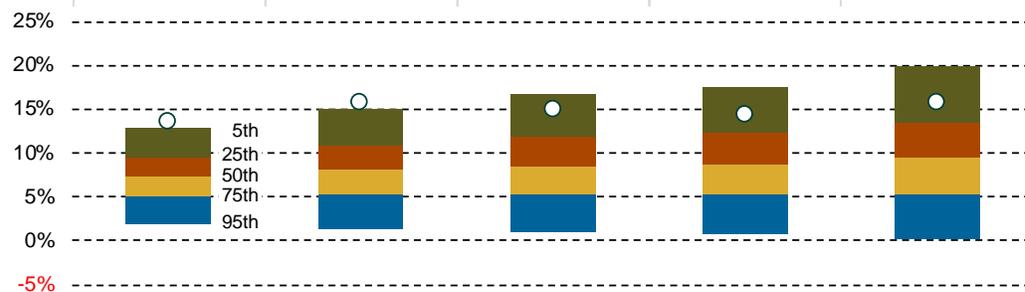
Five-Year Period from 1994 through 1998

### Asset Class Performance



Projections	Large Cap Equity	Small/Mid Cap Equity	International Equity	Domestic Fixed	Cash Equivalent
5th Percentile	21.8%	27.0%	26.1%	10.4%	4.7%
25th Percentile	14.5%	17.1%	16.5%	7.9%	4.3%
<b>50th Percentile</b>	<b>9.7%</b>	<b>10.7%</b>	<b>10.2%</b>	<b>6.2%</b>	<b>4.1%</b>
75th Percentile	5.2%	4.7%	4.3%	4.5%	3.9%
95th Percentile	-1.1%	-3.4%	-3.7%	2.2%	3.5%
<b>Actual Asset Class Return</b>	<b>24.1%</b>	<b>14.0%</b>	<b>9.2%</b>	<b>7.3%</b>	<b>5.2%</b>
Diff Actual from Projection	14.3%	3.2%	-1.0%	1.1%	1.1%
Benchmark	S&P 500	Callan Small	MSCI EAFE	Lehman G/C	90-Day T-Bill

### Asset Mix Performance



Projections	Mix A	Mix B	Mix C	Mix D	Mix E
5th Percentile	12.8%	15.0%	16.6%	17.3%	19.7%
25th Percentile	9.5%	10.8%	11.7%	12.2%	13.5%
<b>50th Percentile</b>	<b>7.2%</b>	<b>8.0%</b>	<b>8.5%</b>	<b>8.7%</b>	<b>9.3%</b>
75th Percentile	5.0%	5.2%	5.3%	5.3%	5.4%
95th Percentile	1.9%	1.4%	0.9%	0.7%	-0.1%
<b>Actual Portfolio Return</b>	<b>13.6%</b>	<b>15.7%</b>	<b>15.0%</b>	<b>14.4%</b>	<b>15.8%</b>
Diff Actual from Projection	6.4%	7.7%	6.5%	5.7%	6.5%

Volatility	Mix A	Mix B	Mix C	Mix D	Mix E
Projected Risk	7.5%	9.3%	10.7%	11.4%	13.6%
Actual Risk	6.3%	7.8%	8.9%	9.4%	11.6%

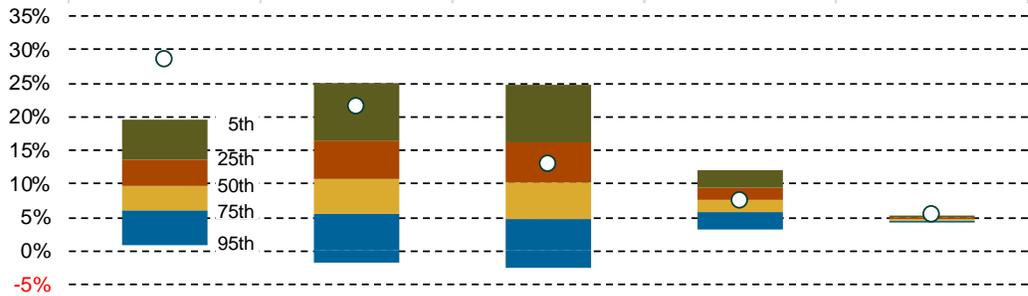
Efficiency	Mix A	Mix B	Mix C	Mix D	Mix E
Projected Sharpe Ratio	0.416	0.417	0.409	0.403	0.385
Actual Sharpe Ratio	1.335	1.342	1.102	0.983	0.923

Portfolio Composition	Mix A	Mix B	Mix C	Mix D	Mix E
Large Cap Equity	40%	50%	40%	35%	40%
Small/Mid Cap Equity	0%	0%	10%	10%	20%
International Equity	0%	0%	10%	20%	20%
Domestic Fixed	40%	50%	40%	35%	20%
Cash Equivalent	20%	0%	0%	0%	0%

## 1995 Capital Market Projections vs. Actual Market Returns

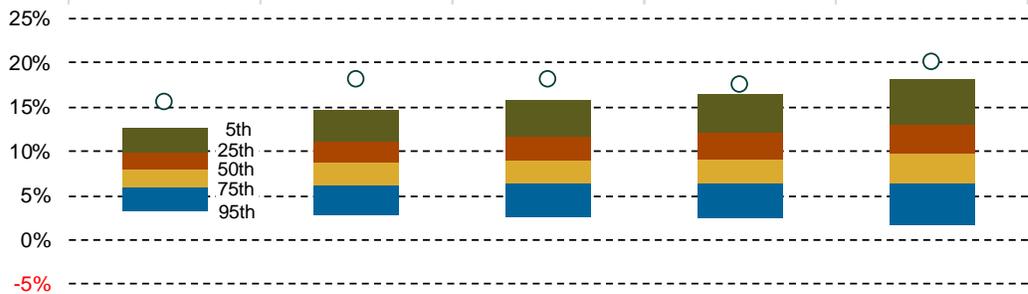
Five-Year Period from 1995 through 1999

### Asset Class Performance



Projections	Large Cap Equity	Small/Mid Cap Equity	International Equity	Domestic Fixed	Cash Equivalent
5th Percentile	19.5%	25.0%	24.9%	12.0%	5.4%
25th Percentile	13.7%	16.4%	16.1%	9.3%	5.0%
<b>50th Percentile</b>	<b>9.8%</b>	<b>10.8%</b>	<b>10.3%</b>	<b>7.5%</b>	<b>4.8%</b>
75th Percentile	6.1%	5.5%	4.8%	5.7%	4.6%
95th Percentile	0.9%	-1.8%	-2.6%	3.2%	4.2%
<b>Actual Asset Class Return</b>	<b>28.6%</b>	<b>21.5%</b>	<b>12.8%</b>	<b>7.6%</b>	<b>5.3%</b>
Diff Actual from Projection	18.8%	10.7%	2.5%	0.1%	0.5%
Benchmark	S&P 500	Callan Small	MSCI EAFE	Lehman G/C	90-Day T-Bill

### Asset Mix Performance



Projections	Mix A	Mix B	Mix C	Mix D	Mix E
5th Percentile	12.7%	14.7%	15.9%	16.5%	18.2%
25th Percentile	9.8%	11.1%	11.8%	12.1%	13.1%
<b>50th Percentile</b>	<b>7.9%</b>	<b>8.7%</b>	<b>9.0%</b>	<b>9.2%</b>	<b>9.6%</b>
75th Percentile	5.9%	6.2%	6.3%	6.3%	6.3%
95th Percentile	3.2%	2.9%	2.6%	2.4%	1.7%
<b>Actual Portfolio Return</b>	<b>15.4%</b>	<b>18.0%</b>	<b>18.0%</b>	<b>17.5%</b>	<b>20.0%</b>
Diff Actual from Projection	7.6%	9.4%	9.0%	8.3%	10.3%

Volatility	Mix A	Mix B	Mix C	Mix D	Mix E
Projected Risk	6.5%	8.1%	9.1%	9.7%	11.3%
Actual Risk	6.0%	7.4%	8.9%	9.6%	12.2%

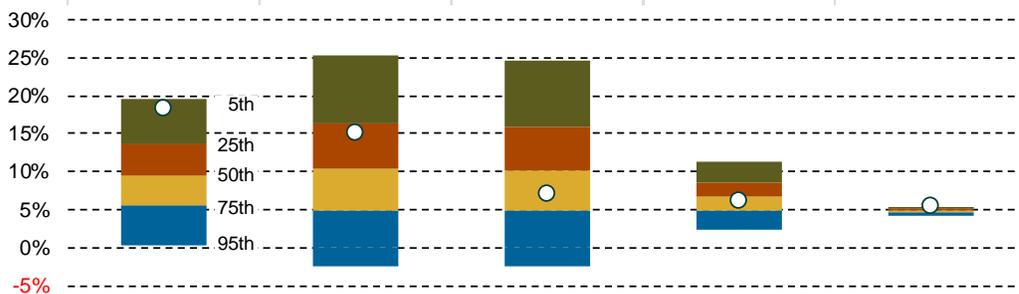
Efficiency	Mix A	Mix B	Mix C	Mix D	Mix E
Projected Sharpe Ratio	0.476	0.476	0.466	0.455	0.429
Actual Sharpe Ratio	1.707	1.715	1.427	1.278	1.202

Portfolio Composition	Mix A	Mix B	Mix C	Mix D	Mix E
Large Cap Equity	40%	50%	40%	35%	40%
Small/Mid Cap Equity	0%	0%	10%	10%	20%
International Equity	0%	0%	10%	20%	20%
Domestic Fixed	40%	50%	40%	35%	20%
Cash Equivalent	20%	0%	0%	0%	0%

## 1996 Capital Market Projections vs. Actual Market Returns

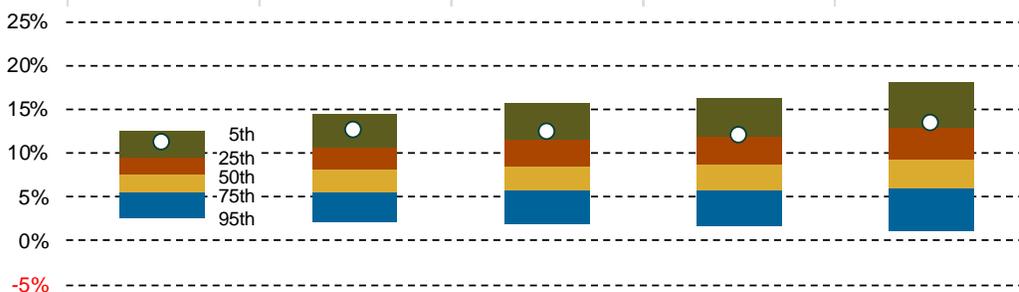
Five-Year Period from 1996 through 2000

### Asset Class Performance



Projections	Large Cap Equity	Small/Mid Cap Equity	International Equity	Domestic Fixed	Cash Equivalent
5th Percentile	19.6%	25.2%	24.5%	11.3%	5.4%
25th Percentile	13.5%	16.3%	15.9%	8.6%	5.0%
<b>50th Percentile</b>	<b>9.5%</b>	<b>10.5%</b>	<b>10.2%</b>	<b>6.8%</b>	<b>4.8%</b>
75th Percentile	5.6%	5.0%	4.8%	5.0%	4.6%
95th Percentile	0.2%	-2.5%	-2.5%	2.5%	4.2%
<b>Actual Asset Class Return</b>	<b>18.3%</b>	<b>15.2%</b>	<b>7.1%</b>	<b>6.2%</b>	<b>5.4%</b>
Diff Actual from Projection	8.8%	4.7%	-3.1%	-0.6%	0.6%
Benchmark	S&P 500	Callan Small	MSCI EAFE	Lehman G/C	90-Day T-Bill

### Asset Mix Performance



Projections	Mix A	Mix B	Mix C	Mix D	Mix E
5th Percentile	12.5%	14.5%	15.7%	16.3%	18.1%
25th Percentile	9.5%	10.7%	11.5%	11.8%	12.8%
<b>50th Percentile</b>	<b>7.5%</b>	<b>8.2%</b>	<b>8.6%</b>	<b>8.8%</b>	<b>9.3%</b>
75th Percentile	5.5%	5.6%	5.8%	5.8%	5.9%
95th Percentile	2.6%	2.1%	1.9%	1.7%	1.1%
<b>Actual Portfolio Return</b>	<b>11.1%</b>	<b>12.6%</b>	<b>12.4%</b>	<b>11.9%</b>	<b>13.4%</b>
Diff Actual from Projection	3.7%	4.4%	3.8%	3.1%	4.1%

Volatility	Mix A	Mix B	Mix C	Mix D	Mix E
Projected Risk	6.7%	8.4%	9.4%	10.0%	11.6%
Actual Risk	6.1%	7.7%	9.4%	10.2%	13.1%

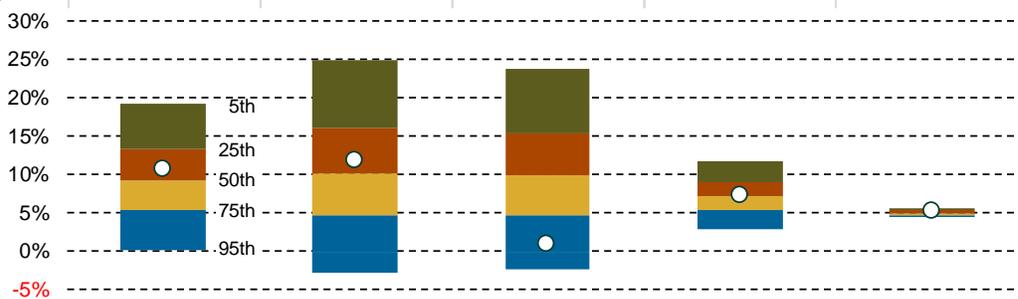
Efficiency	Mix A	Mix B	Mix C	Mix D	Mix E
Projected Sharpe Ratio	0.397	0.397	0.403	0.401	0.387
Actual Sharpe Ratio	0.938	0.931	0.748	0.641	0.610

Portfolio Composition	Mix A	Mix B	Mix C	Mix D	Mix E
Large Cap Equity	40%	50%	40%	35%	40%
Small/Mid Cap Equity	0%	0%	10%	10%	20%
International Equity	0%	0%	10%	20%	20%
Domestic Fixed	40%	50%	40%	35%	20%
Cash Equivalent	20%	0%	0%	0%	0%

## 1997 Capital Market Projections vs. Actual Market Returns

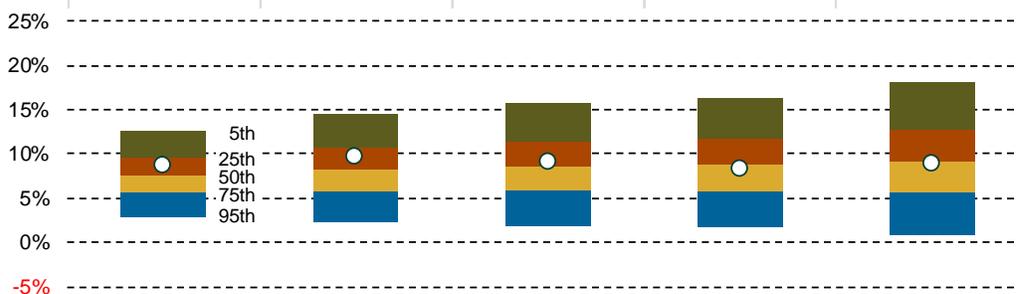
Five-Year Period from 1997 through 2001

### Asset Class Performance



Projections	Large Cap Equity	Small/Mid Cap Equity	International Equity	Domestic Fixed	Cash Equivalent
5th Percentile	19.3%	24.8%	23.8%	11.7%	5.6%
25th Percentile	13.3%	16.0%	15.4%	9.0%	5.2%
<b>50th Percentile</b>	<b>9.3%</b>	<b>10.2%</b>	<b>9.9%</b>	<b>7.2%</b>	<b>5.0%</b>
75th Percentile	5.5%	4.7%	4.7%	5.4%	4.8%
95th Percentile	0.2%	-2.7%	-2.4%	2.9%	4.4%
<b>Actual Asset Class Return</b>	<b>10.7%</b>	<b>11.8%</b>	<b>0.9%</b>	<b>7.4%</b>	<b>5.2%</b>
Diff Actual from Projection	1.4%	1.6%	-9.0%	0.2%	0.2%
Benchmark	S&P 500	Callan Small	MSCI EAFE	Lehman G/C	90-Day T-Bill

### Asset Mix Performance



Projections	Mix A	Mix B	Mix C	Mix D	Mix E
5th Percentile	12.6%	14.5%	15.7%	16.3%	18.1%
25th Percentile	9.6%	10.8%	11.5%	11.8%	12.7%
<b>50th Percentile</b>	<b>7.6%</b>	<b>8.2%</b>	<b>8.6%</b>	<b>8.8%</b>	<b>9.2%</b>
75th Percentile	5.6%	5.8%	5.8%	5.8%	5.7%
95th Percentile	2.8%	2.3%	2.0%	1.7%	1.0%
<b>Actual Portfolio Return</b>	<b>8.8%</b>	<b>9.6%</b>	<b>9.2%</b>	<b>8.3%</b>	<b>8.8%</b>
Diff Actual from Projection	1.2%	1.4%	0.6%	-0.4%	-0.3%

Volatility	Mix A	Mix B	Mix C	Mix D	Mix E
Projected Risk	6.7%	8.3%	9.4%	9.9%	11.7%
Actual Risk	7.2%	9.0%	11.3%	12.3%	15.9%

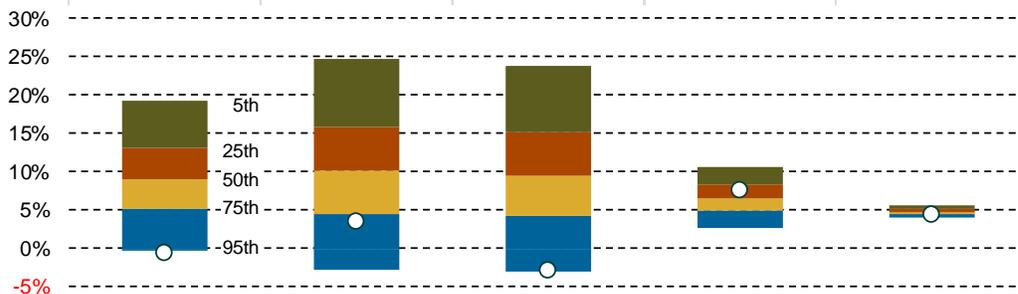
Efficiency	Mix A	Mix B	Mix C	Mix D	Mix E
Projected Sharpe Ratio	0.390	0.390	0.385	0.380	0.357
Actual Sharpe Ratio	0.499	0.490	0.352	0.255	0.229

Portfolio Composition	Mix A	Mix B	Mix C	Mix D	Mix E
Large Cap Equity	40%	50%	40%	35%	40%
Small/Mid Cap Equity	0%	0%	10%	10%	20%
International Equity	0%	0%	10%	20%	20%
Domestic Fixed	40%	50%	40%	35%	20%
Cash Equivalent	20%	0%	0%	0%	0%

## 1998 Capital Market Projections vs. Actual Market Returns

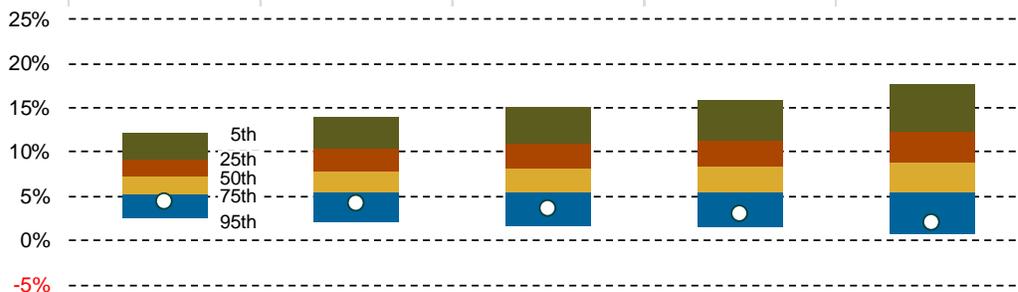
Five-Year Period from 1998 through 2002

### Asset Class Performance



Projections	Large Cap Equity	Small/Mid Cap Equity	International Equity	Domestic Fixed	Cash Equivalent
5th Percentile	19.2%	24.7%	23.8%	10.7%	5.5%
25th Percentile	13.1%	15.9%	15.2%	8.3%	5.1%
<b>50th Percentile</b>	<b>9.1%</b>	<b>10.1%</b>	<b>9.6%</b>	<b>6.6%</b>	<b>4.8%</b>
75th Percentile	5.2%	4.6%	4.3%	5.0%	4.5%
95th Percentile	-0.2%	-2.8%	-3.0%	2.6%	4.1%
<b>Actual Asset Class Return</b>	<b>-0.6%</b>	<b>3.4%</b>	<b>-2.9%</b>	<b>7.5%</b>	<b>4.5%</b>
Diff Actual from Projection	-9.7%	-6.7%	-12.5%	0.9%	-0.3%
Benchmark	S&P 500	Callan Small	MSCI EAFE	Lehman Agg	90-Day T-Bill

### Asset Mix Performance



Projections	Mix A	Mix B	Mix C	Mix D	Mix E
5th Percentile	12.1%	14.0%	15.2%	15.8%	17.6%
25th Percentile	9.2%	10.3%	11.0%	11.4%	12.4%
<b>50th Percentile</b>	<b>7.2%</b>	<b>7.9%</b>	<b>8.2%</b>	<b>8.4%</b>	<b>8.9%</b>
75th Percentile	5.3%	5.4%	5.5%	5.5%	5.5%
95th Percentile	2.6%	2.1%	1.7%	1.5%	0.8%
<b>Actual Portfolio Return</b>	<b>4.3%</b>	<b>4.2%</b>	<b>3.6%</b>	<b>2.9%</b>	<b>2.0%</b>
Diff Actual from Projection	-2.9%	-3.7%	-4.7%	-5.5%	-6.9%

Volatility	Mix A	Mix B	Mix C	Mix D	Mix E
Projected Risk	6.5%	8.1%	9.2%	9.8%	11.5%
Actual Risk	7.6%	9.5%	11.9%	13.0%	17.0%

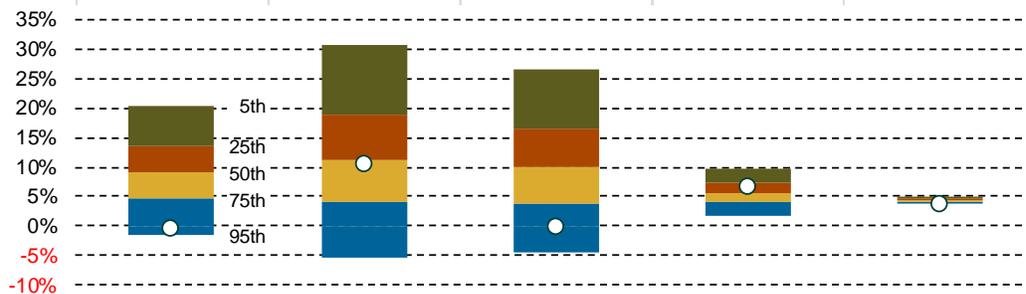
Efficiency	Mix A	Mix B	Mix C	Mix D	Mix E
Projected Sharpe Ratio	0.375	0.376	0.376	0.372	0.356
Actual Sharpe Ratio	-0.025	-0.034	-0.076	-0.121	-0.148

Portfolio Composition	Mix A	Mix B	Mix C	Mix D	Mix E
Large Cap Equity	40%	50%	40%	35%	40%
Small/Mid Cap Equity	0%	0%	10%	10%	20%
International Equity	0%	0%	10%	20%	20%
Domestic Fixed	40%	50%	40%	35%	20%
Cash Equivalent	20%	0%	0%	0%	0%

## 1999 Capital Market Projections vs. Actual Market Returns

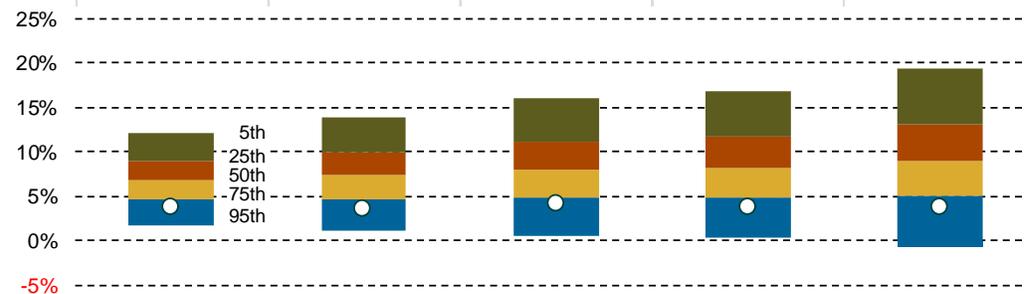
Five-Year Period from 1999 through 2003

### Asset Class Performance



Projections	Large Cap Equity	Small/Mid Cap Equity	International Equity	Domestic Fixed	Cash Equivalent
5th Percentile	20.4%	30.7%	26.5%	9.6%	4.9%
25th Percentile	13.6%	18.8%	16.5%	7.2%	4.6%
<b>50th Percentile</b>	<b>9.0%</b>	<b>11.2%</b>	<b>10.0%</b>	<b>5.6%</b>	<b>4.4%</b>
75th Percentile	4.6%	4.1%	3.9%	4.0%	4.2%
95th Percentile	-1.4%	-5.4%	-4.4%	1.8%	3.9%
<b>Actual Asset Class Return</b>	<b>-0.6%</b>	<b>10.6%</b>	<b>-0.1%</b>	<b>6.6%</b>	<b>3.7%</b>
Diff Actual from Projection	-9.6%	-0.6%	-10.1%	1.0%	-0.7%
Benchmark	S&P 500	Callan Small	MSCI EAFE	Lehman Agg	90-Day T-Bill

### Asset Mix Performance



Projections	Mix A	Mix B	Mix C	Mix D	Mix E
5th Percentile	12.0%	13.9%	15.9%	16.8%	19.4%
25th Percentile	8.9%	10.0%	11.2%	11.7%	13.1%
<b>50th Percentile</b>	<b>6.7%</b>	<b>7.3%</b>	<b>8.0%</b>	<b>8.2%</b>	<b>9.0%</b>
75th Percentile	4.6%	4.7%	4.9%	4.9%	4.9%
95th Percentile	1.7%	1.1%	0.6%	0.3%	-0.6%
<b>Actual Portfolio Return</b>	<b>3.7%</b>	<b>3.6%</b>	<b>4.1%</b>	<b>3.8%</b>	<b>3.7%</b>
Diff Actual from Projection	-3.0%	-3.7%	-3.8%	-4.4%	-5.3%

Volatility	Mix A	Mix B	Mix C	Mix D	Mix E
Projected Risk	7.0%	8.8%	10.5%	11.3%	13.7%
Actual Risk	6.9%	8.7%	11.3%	12.3%	16.1%

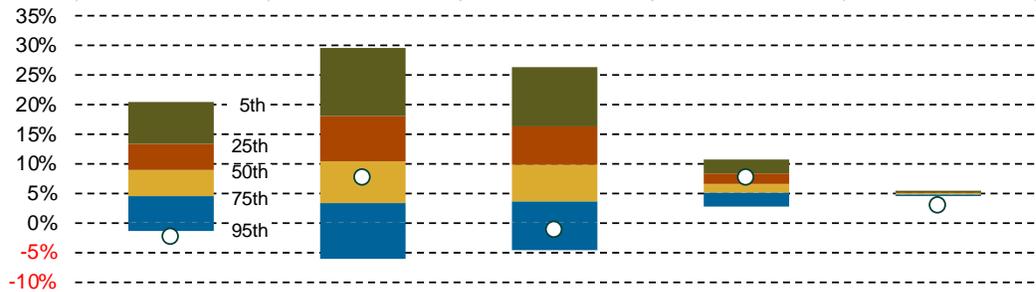
Efficiency	Mix A	Mix B	Mix C	Mix D	Mix E
Projected Sharpe Ratio	0.330	0.330	0.339	0.340	0.332
Actual Sharpe Ratio	0.004	-0.005	0.041	0.012	0.003

Portfolio Composition	Mix A	Mix B	Mix C	Mix D	Mix E
Large Cap Equity	40%	50%	40%	35%	40%
Small/Mid Cap Equity	0%	0%	10%	10%	20%
International Equity	0%	0%	10%	20%	20%
Domestic Fixed	40%	50%	40%	35%	20%
Cash Equivalent	20%	0%	0%	0%	0%

## 2000 Capital Market Projections vs. Actual Market Returns

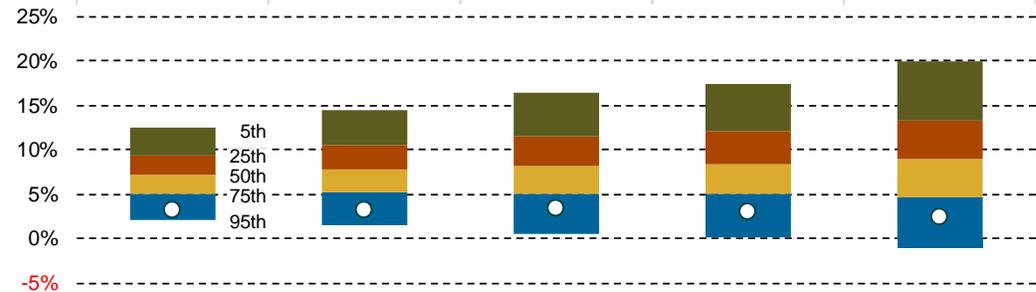
Five-Year Period from 2000 through 2004

### Asset Class Performance



Projections	Large Cap Equity	Small/Mid Cap Equity	International Equity	Domestic Fixed	Cash Equivalent
5th Percentile	20.3%	29.6%	26.3%	10.8%	5.5%
25th Percentile	13.5%	17.9%	16.2%	8.4%	5.2%
<b>50th Percentile</b>	<b>8.9%</b>	<b>10.4%</b>	<b>9.8%</b>	<b>6.7%</b>	<b>5.0%</b>
75th Percentile	4.5%	3.4%	3.6%	5.1%	4.8%
95th Percentile	-1.5%	-6.0%	-4.6%	2.7%	4.5%
<b>Actual Asset Class Return</b>	<b>-2.3%</b>	<b>7.7%</b>	<b>-1.1%</b>	<b>7.7%</b>	<b>3.0%</b>
Diff Actual from Projection	-11.2%	-2.7%	-10.9%	1.0%	-2.0%
Benchmark	S&P 500	Callan Small	MSCI EAFE	Lehman Agg	90-Day T-Bill

### Asset Mix Performance



Projections	Mix A	Mix B	Mix C	Mix D	Mix E
5th Percentile	12.6%	14.5%	16.5%	17.4%	20.0%
25th Percentile	9.4%	10.5%	11.6%	12.0%	13.3%
<b>50th Percentile</b>	<b>7.2%</b>	<b>7.8%</b>	<b>8.3%</b>	<b>8.5%</b>	<b>8.9%</b>
75th Percentile	5.1%	5.2%	5.0%	5.0%	4.7%
95th Percentile	2.1%	1.5%	0.6%	0.2%	-1.1%
<b>Actual Portfolio Return</b>	<b>3.2%</b>	<b>3.2%</b>	<b>3.4%</b>	<b>3.0%</b>	<b>2.3%</b>
Diff Actual from Projection	-4.1%	-4.6%	-4.9%	-5.5%	-6.6%

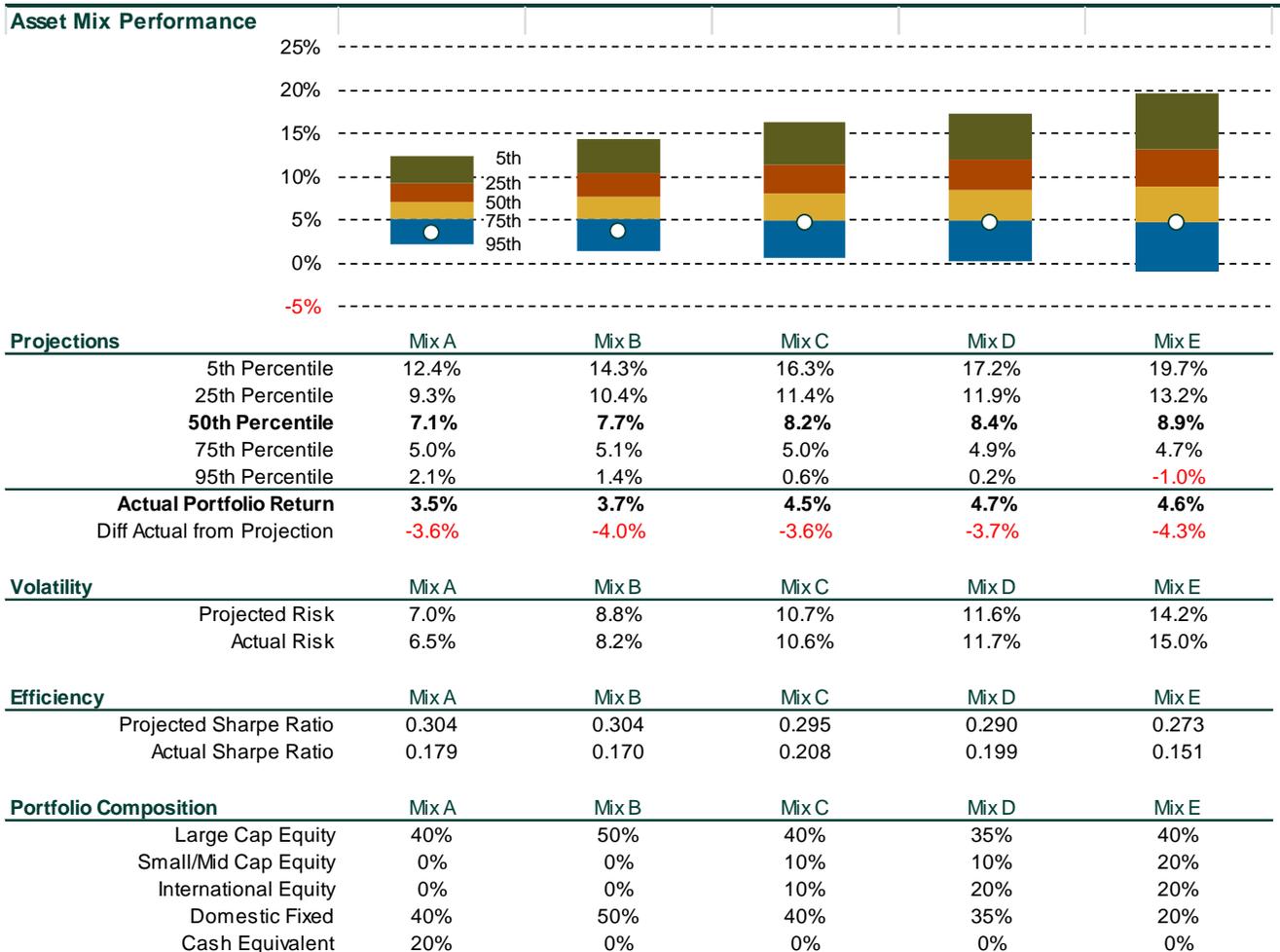
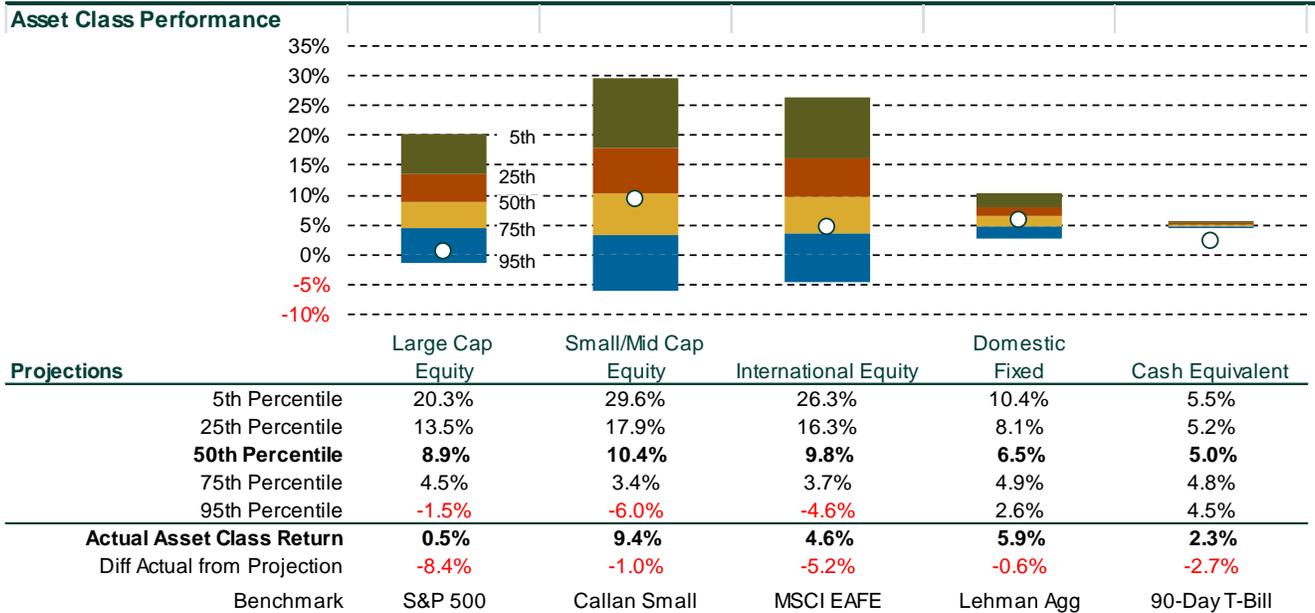
Volatility	Mix A	Mix B	Mix C	Mix D	Mix E
Projected Risk	7.1%	8.9%	10.9%	11.8%	14.5%
Actual Risk	6.5%	8.2%	10.6%	11.8%	15.2%

Efficiency	Mix A	Mix B	Mix C	Mix D	Mix E
Projected Sharpe Ratio	0.315	0.315	0.299	0.292	0.272
Actual Sharpe Ratio	0.036	0.027	0.038	0.002	-0.040

Portfolio Composition	Mix A	Mix B	Mix C	Mix D	Mix E
Large Cap Equity	40%	50%	40%	35%	40%
Small/Mid Cap Equity	0%	0%	10%	10%	20%
International Equity	0%	0%	10%	20%	20%
Domestic Fixed	40%	50%	40%	35%	20%
Cash Equivalent	20%	0%	0%	0%	0%

## 2001 Capital Market Projections vs. Actual Market Returns

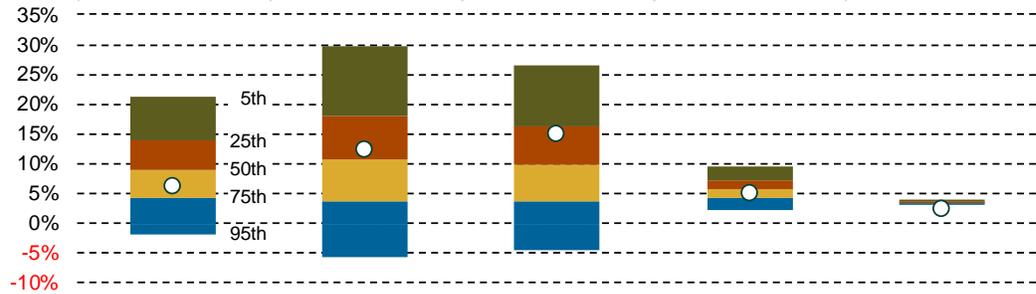
Five-Year Period from 2001 through 2005



## 2002 Capital Market Projections vs. Actual Market Returns

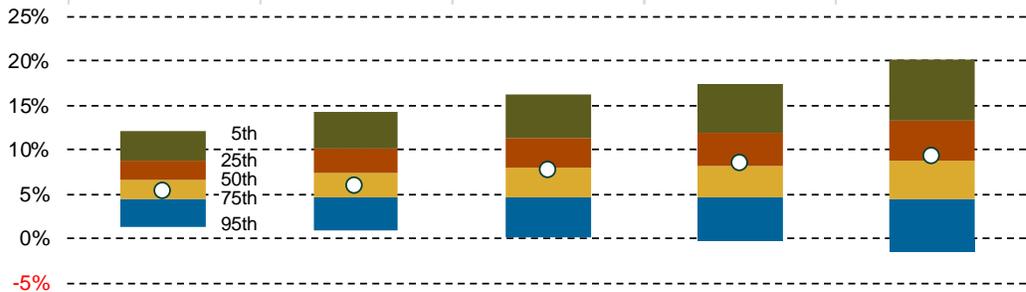
Five-Year Period from 2002 through 2006

### Asset Class Performance



Projections	Large Cap Equity	Small/Mid Cap Equity	International Equity	Domestic Fixed	Cash Equivalent
5th Percentile	21.2%	29.8%	26.4%	9.5%	4.0%
25th Percentile	13.9%	18.1%	16.4%	7.3%	3.7%
<b>50th Percentile</b>	<b>9.0%</b>	<b>10.6%</b>	<b>9.9%</b>	<b>5.8%</b>	<b>3.5%</b>
75th Percentile	4.4%	3.6%	3.8%	4.3%	3.3%
95th Percentile	-2.0%	-5.8%	-4.5%	2.1%	3.0%
<b>Actual Asset Class Return</b>	<b>6.2%</b>	<b>12.3%</b>	<b>15.0%</b>	<b>5.1%</b>	<b>2.4%</b>
Diff Actual from Projection	-2.8%	1.7%	5.1%	-0.7%	-1.1%
Benchmark	S&P 500	Callan Small	MSCI EAFE	Lehman Agg	90-Day T-Bill

### Asset Mix Performance



Projections	Mix A	Mix B	Mix C	Mix D	Mix E
5th Percentile	12.1%	14.2%	16.3%	17.3%	20.1%
25th Percentile	8.8%	10.1%	11.3%	11.9%	13.3%
<b>50th Percentile</b>	<b>6.6%</b>	<b>7.4%</b>	<b>8.0%</b>	<b>8.2%</b>	<b>8.9%</b>
75th Percentile	4.4%	4.7%	4.7%	4.7%	4.5%
95th Percentile	1.4%	0.9%	0.2%	-0.2%	-1.4%
<b>Actual Portfolio Return</b>	<b>5.3%</b>	<b>6.0%</b>	<b>7.6%</b>	<b>8.5%</b>	<b>9.2%</b>
Diff Actual from Projection	-1.3%	-1.4%	-0.3%	0.3%	0.4%

Volatility	Mix A	Mix B	Mix C	Mix D	Mix E
Projected Risk	7.3%	9.1%	11.1%	12.0%	14.8%
Actual Risk	5.8%	7.2%	9.1%	10.1%	12.7%

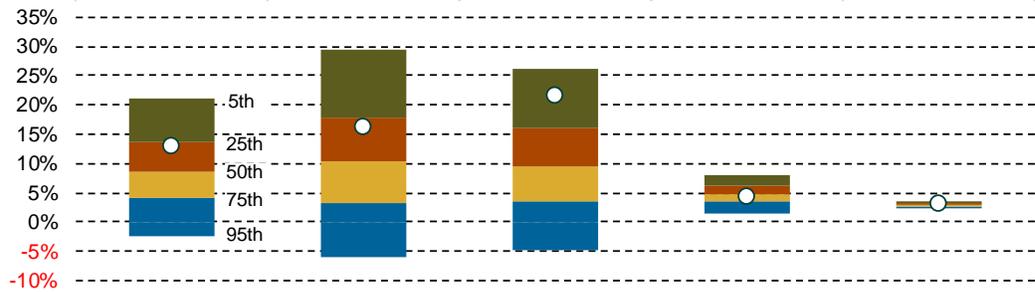
Efficiency	Mix A	Mix B	Mix C	Mix D	Mix E
Projected Sharpe Ratio	0.427	0.427	0.402	0.391	0.362
Actual Sharpe Ratio	0.499	0.494	0.571	0.608	0.536

Portfolio Composition	Mix A	Mix B	Mix C	Mix D	Mix E
Large Cap Equity	40%	50%	40%	35%	40%
Small/Mid Cap Equity	0%	0%	10%	10%	20%
International Equity	0%	0%	10%	20%	20%
Domestic Fixed	40%	50%	40%	35%	20%
Cash Equivalent	20%	0%	0%	0%	0%

## 2003 Capital Market Projections vs. Actual Market Returns

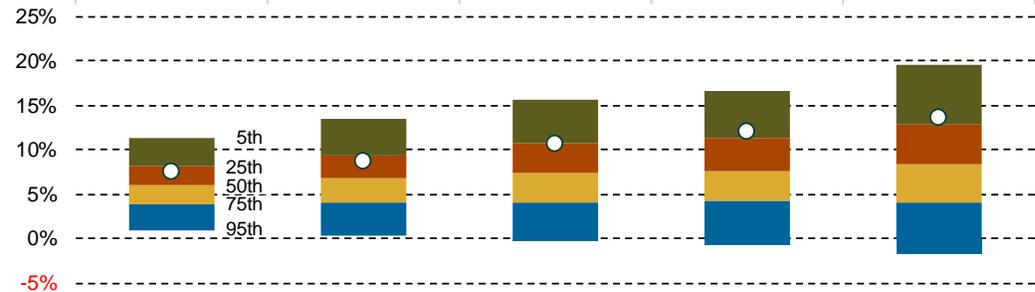
Five-Year Period from 2003 through 2007

### Asset Class Performance



Projections	Large Cap Equity	Small/Mid Cap Equity	International Equity	Domestic Fixed	Cash Equivalent
5th Percentile	21.1%	29.5%	26.1%	8.1%	3.5%
25th Percentile	13.6%	17.8%	16.1%	6.1%	3.2%
<b>50th Percentile</b>	<b>8.7%</b>	<b>10.3%</b>	<b>9.6%</b>	<b>4.8%</b>	<b>3.0%</b>
75th Percentile	4.0%	3.3%	3.5%	3.4%	2.8%
95th Percentile	-2.4%	-6.1%	-4.8%	1.5%	2.5%
<b>Actual Asset Class Return</b>	<b>12.8%</b>	<b>16.1%</b>	<b>21.6%</b>	<b>4.4%</b>	<b>3.1%</b>
Diff Actual from Projection	4.1%	5.8%	12.0%	-0.3%	0.1%
Benchmark	S&P 500	S&P 1000	MSCI EAFE	Lehman Agg	90-Day T-Bill

### Asset Mix Performance



Projections	Mix A	Mix B	Mix C	Mix D	Mix E
5th Percentile	11.4%	13.5%	15.6%	16.6%	19.5%
25th Percentile	8.2%	9.5%	10.7%	11.3%	12.8%
<b>50th Percentile</b>	<b>6.0%</b>	<b>6.7%</b>	<b>7.4%</b>	<b>7.7%</b>	<b>8.4%</b>
75th Percentile	3.8%	4.1%	4.2%	4.2%	4.2%
95th Percentile	0.8%	0.4%	-0.3%	-0.6%	-1.7%
<b>Actual Portfolio Return</b>	<b>7.6%</b>	<b>8.7%</b>	<b>10.7%</b>	<b>12.0%</b>	<b>13.6%</b>
Diff Actual from Projection	1.6%	2.0%	3.4%	4.4%	5.2%

Volatility	Mix A	Mix B	Mix C	Mix D	Mix E
Projected Risk	7.2%	9.0%	10.9%	11.8%	14.6%
Actual Risk	4.2%	5.2%	6.5%	7.3%	8.9%

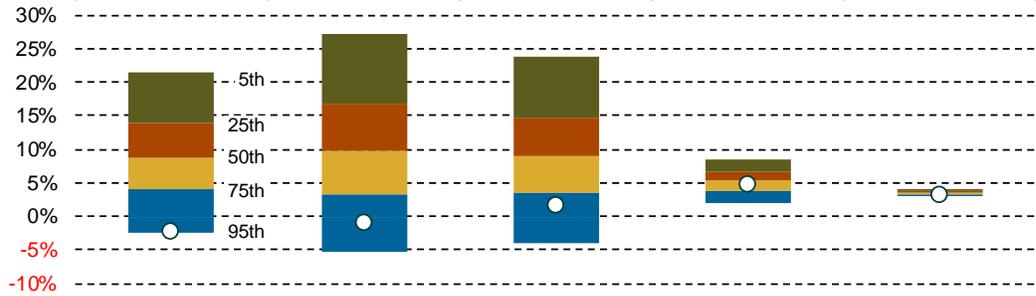
Efficiency	Mix A	Mix B	Mix C	Mix D	Mix E
Projected Sharpe Ratio	0.415	0.415	0.401	0.393	0.371
Actual Sharpe Ratio	1.083	1.081	1.185	1.232	1.182

Portfolio Composition	Mix A	Mix B	Mix C	Mix D	Mix E
Large Cap Equity	40%	50%	40%	35%	40%
Small/Mid Cap Equity	0%	0%	10%	10%	20%
International Equity	0%	0%	10%	20%	20%
Domestic Fixed	40%	50%	40%	35%	20%
Cash Equivalent	20%	0%	0%	0%	0%

## 2004 Capital Market Projections vs. Actual Market Returns

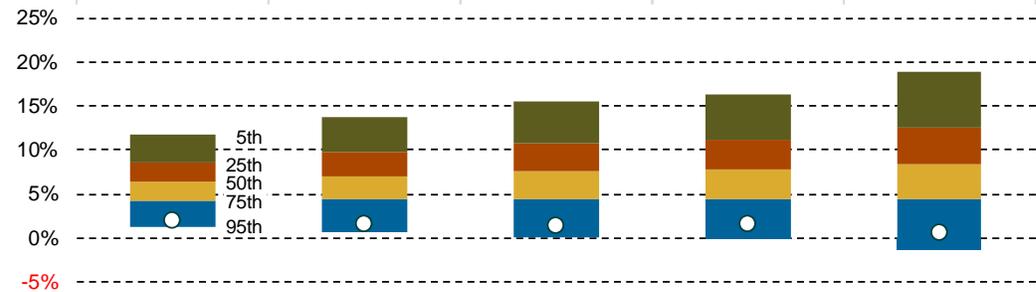
Five-Year Period from 2004 through 2008

### Asset Class Performance



Projections	Large Cap Equity	Small/Mid Cap Equity	International Equity	Domestic Fixed	Cash Equivalent
5th Percentile	21.4%	27.3%	23.7%	8.6%	4.1%
25th Percentile	13.8%	16.7%	14.8%	6.6%	3.7%
<b>50th Percentile</b>	<b>8.9%</b>	<b>9.9%</b>	<b>9.0%</b>	<b>5.3%</b>	<b>3.5%</b>
75th Percentile	4.1%	3.4%	3.5%	3.9%	3.3%
95th Percentile	-2.4%	-5.2%	-4.0%	2.0%	2.9%
<b>Actual Asset Class Return</b>	<b>-2.2%</b>	<b>-1.0%</b>	<b>1.7%</b>	<b>4.7%</b>	<b>3.3%</b>
Diff Actual from Projection	-11.0%	-10.8%	-7.3%	-0.6%	-0.2%
Benchmark	S&P 500	Russ 2500	MSCI EAFE	Lehman Agg	90-Day T-Bill

### Asset Mix Performance



Projections	Mix A	Mix B	Mix C	Mix D	Mix E
5th Percentile	11.7%	13.8%	15.5%	16.2%	18.9%
25th Percentile	8.5%	9.8%	10.7%	11.1%	12.6%
<b>50th Percentile</b>	<b>6.3%</b>	<b>7.1%</b>	<b>7.5%</b>	<b>7.7%</b>	<b>8.4%</b>
75th Percentile	4.2%	4.4%	4.4%	4.4%	4.3%
95th Percentile	1.2%	0.7%	0.1%	-0.2%	-1.2%
<b>Actual Portfolio Return</b>	<b>1.9%</b>	<b>1.5%</b>	<b>1.4%</b>	<b>1.5%</b>	<b>0.5%</b>
Diff Actual from Projection	-4.4%	-5.5%	-6.1%	-6.2%	-7.9%

Volatility	Mix A	Mix B	Mix C	Mix D	Mix E
Projected Risk	7.2%	8.9%	10.5%	11.2%	13.8%
Actual Risk	5.4%	6.6%	8.5%	9.6%	12.0%

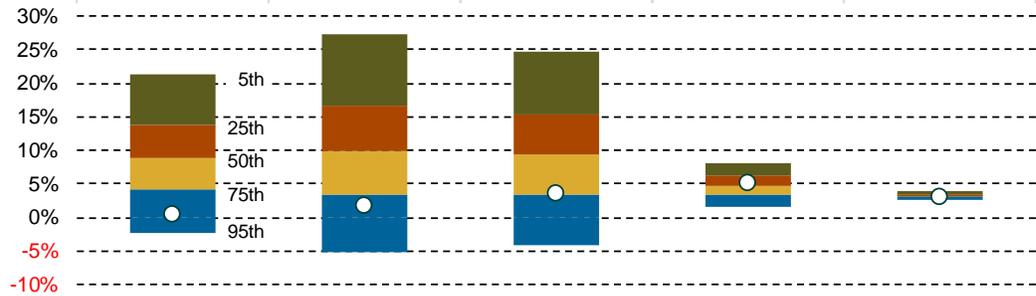
Efficiency	Mix A	Mix B	Mix C	Mix D	Mix E
Projected Sharpe Ratio	0.509	0.486	0.459	0.448	0.409
Actual Sharpe Ratio	-0.254	-0.263	-0.216	-0.186	-0.230

Portfolio Composition	Mix A	Mix B	Mix C	Mix D	Mix E
Large Cap Equity	40%	50%	40%	35%	40%
Small/Mid Cap Equity	0%	0%	10%	10%	20%
International Equity	0%	0%	10%	20%	20%
Domestic Fixed	40%	50%	40%	35%	20%
Cash Equivalent	20%	0%	0%	0%	0%

## 2005 Capital Market Projections vs. Actual Market Returns

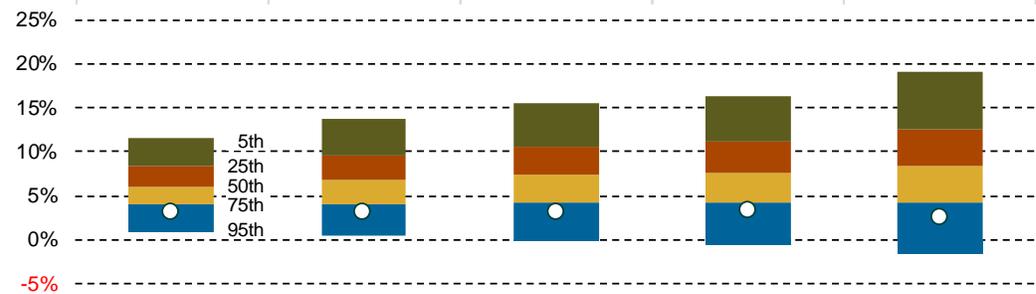
Five-Year Period from 2005 through 2009

### Asset Class Performance



Projections	Large Cap Equity	Small/Mid Cap Equity	International Equity	Domestic Fixed	Cash Equivalent
5th Percentile	21.4%	27.3%	24.7%	8.1%	3.8%
25th Percentile	13.8%	16.7%	15.3%	6.1%	3.5%
<b>50th Percentile</b>	<b>8.9%</b>	<b>9.9%</b>	<b>9.3%</b>	<b>4.8%</b>	<b>3.3%</b>
75th Percentile	4.1%	3.4%	3.5%	3.4%	3.0%
95th Percentile	-2.4%	-5.2%	-4.3%	1.5%	2.7%
<b>Actual Asset Class Return</b>	<b>0.4%</b>	<b>1.6%</b>	<b>3.5%</b>	<b>5.0%</b>	<b>3.0%</b>
Diff Actual from Projection	-8.4%	-8.3%	-5.7%	0.2%	-0.2%
Benchmark	S&P 500	Russ 2500	MSCI EAFE	Lehman Agg	90-Day T-Bill

### Asset Mix Performance



Projections	Mix A	Mix B	Mix C	Mix D	Mix E
5th Percentile	11.5%	13.6%	15.5%	16.3%	19.0%
25th Percentile	8.3%	9.6%	10.6%	11.1%	12.6%
<b>50th Percentile</b>	<b>6.1%</b>	<b>6.8%</b>	<b>7.4%</b>	<b>7.6%</b>	<b>8.3%</b>
75th Percentile	3.9%	4.1%	4.2%	4.2%	4.2%
95th Percentile	0.9%	0.4%	-0.2%	-0.5%	-1.4%
<b>Actual Portfolio Return</b>	<b>3.1%</b>	<b>3.1%</b>	<b>3.2%</b>	<b>3.3%</b>	<b>2.6%</b>
Diff Actual from Projection	-2.9%	-3.7%	-4.2%	-4.3%	-5.7%

Volatility	Mix A	Mix B	Mix C	Mix D	Mix E
Projected Risk	7.3%	9.1%	10.7%	11.5%	14.1%
Actual Risk	7.1%	8.9%	11.3%	12.6%	15.5%

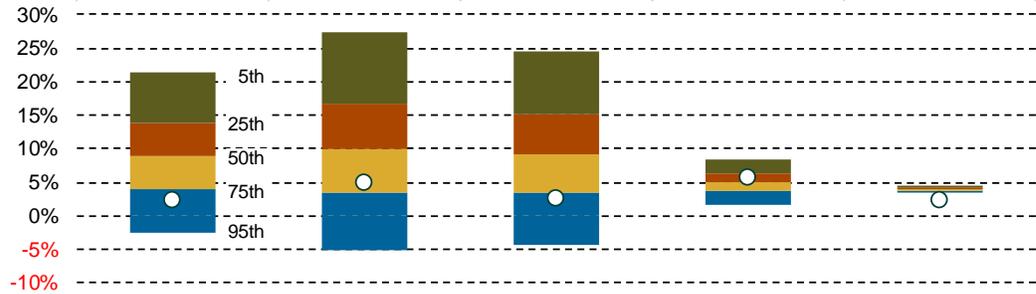
Efficiency	Mix A	Mix B	Mix C	Mix D	Mix E
Projected Sharpe Ratio	0.391	0.391	0.383	0.378	0.360
Actual Sharpe Ratio	0.018	0.009	0.013	0.020	-0.028

Portfolio Composition	Mix A	Mix B	Mix C	Mix D	Mix E
Large Cap Equity	40%	50%	40%	35%	40%
Small/Mid Cap Equity	0%	0%	10%	10%	20%
International Equity	0%	0%	10%	20%	20%
Domestic Fixed	40%	50%	40%	35%	20%
Cash Equivalent	20%	0%	0%	0%	0%

## 2006 Capital Market Projections vs. Actual Market Returns

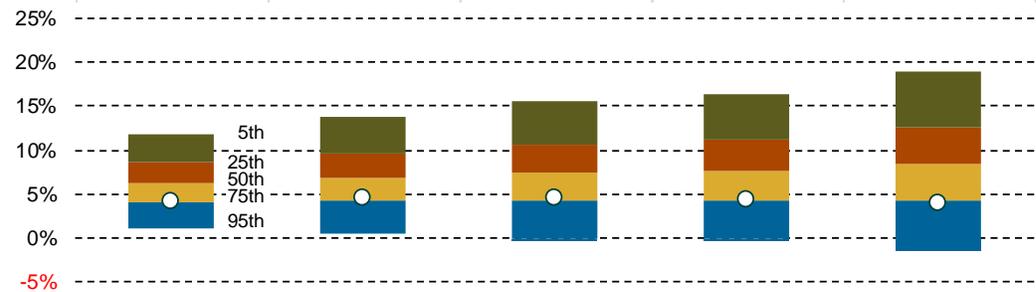
Five-Year Period from 2006 through 2010

### Asset Class Performance



Projections	Large Cap Equity	Small/Mid Cap Equity	International Equity	Domestic Fixed	Cash Equivalent
5th Percentile	21.4%	27.3%	24.6%	8.4%	4.6%
25th Percentile	13.8%	16.7%	15.3%	6.4%	4.2%
<b>50th Percentile</b>	<b>8.9%</b>	<b>9.9%</b>	<b>9.2%</b>	<b>5.0%</b>	<b>4.0%</b>
75th Percentile	4.1%	3.4%	3.4%	3.7%	3.8%
95th Percentile	-2.4%	-5.2%	-4.3%	1.7%	3.4%
<b>Actual Asset Class Return</b>	<b>2.3%</b>	<b>4.9%</b>	<b>2.5%</b>	<b>5.8%</b>	<b>2.4%</b>
Diff Actual from Projection	-6.6%	-5.0%	-6.7%	0.8%	-1.6%
Benchmark	S&P 500	Russ 2500	MSCI EAFE	Lehman Agg	90-Day T-Bill

### Asset Mix Performance



Projections	Mix A	Mix B	Mix C	Mix D	Mix E
5th Percentile	11.8%	13.8%	15.5%	16.4%	19.0%
25th Percentile	8.5%	9.7%	10.7%	11.2%	12.6%
<b>50th Percentile</b>	<b>6.3%</b>	<b>6.9%</b>	<b>7.4%</b>	<b>7.7%</b>	<b>8.4%</b>
75th Percentile	4.2%	4.2%	4.3%	4.3%	4.3%
95th Percentile	1.2%	0.5%	-0.1%	-0.4%	-1.4%
<b>Actual Portfolio Return</b>	<b>4.2%</b>	<b>4.6%</b>	<b>4.6%</b>	<b>4.5%</b>	<b>4.0%</b>
Diff Actual from Projection	-2.1%	-2.3%	-2.9%	-3.2%	-4.3%

Volatility	Mix A	Mix B	Mix C	Mix D	Mix E
Projected Risk	7.3%	9.1%	10.7%	11.5%	14.0%
Actual Risk	7.8%	9.7%	12.3%	13.8%	17.0%

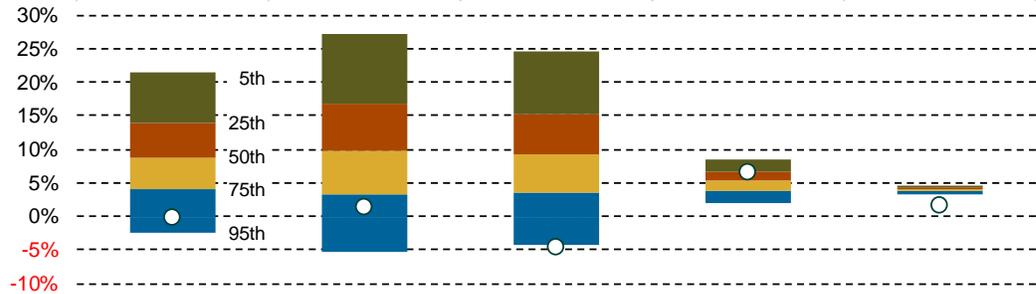
Efficiency	Mix A	Mix B	Mix C	Mix D	Mix E
Projected Sharpe Ratio	0.323	0.322	0.322	0.320	0.310
Actual Sharpe Ratio	0.231	0.222	0.176	0.147	0.095

Portfolio Composition	Mix A	Mix B	Mix C	Mix D	Mix E
Large Cap Equity	40%	50%	40%	35%	40%
Small/Mid Cap Equity	0%	0%	10%	10%	20%
International Equity	0%	0%	10%	20%	20%
Domestic Fixed	40%	50%	40%	35%	20%
Cash Equivalent	20%	0%	0%	0%	0%

## 2007 Capital Market Projections vs. Actual Market Returns

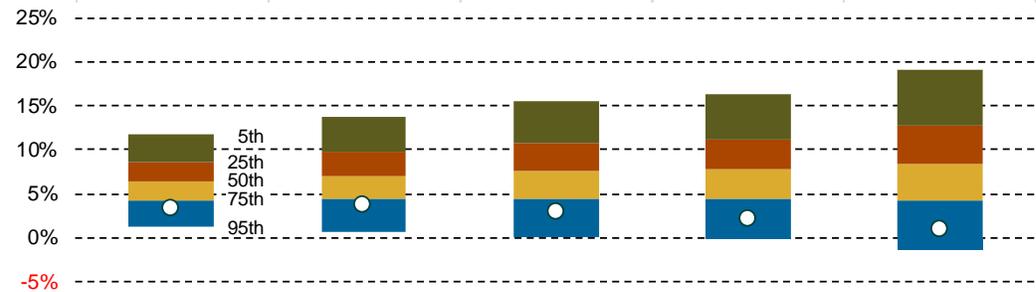
Five-Year Period from 2007 through 2011

### Asset Class Performance



Projections	Large Cap Equity	Small/Mid Cap Equity	International Equity	Domestic Fixed	Cash Equivalent
5th Percentile	21.4%	27.3%	24.6%	8.6%	4.6%
25th Percentile	13.8%	16.7%	15.3%	6.6%	4.2%
<b>50th Percentile</b>	<b>8.9%</b>	<b>9.9%</b>	<b>9.2%</b>	<b>5.3%</b>	<b>4.0%</b>
75th Percentile	4.1%	3.4%	3.4%	3.9%	3.8%
95th Percentile	-2.4%	-5.2%	-4.3%	2.0%	3.4%
<b>Actual Asset Class Return</b>	<b>-0.2%</b>	<b>1.2%</b>	<b>-4.7%</b>	<b>6.5%</b>	<b>1.5%</b>
Diff Actual from Projection	-9.1%	-8.6%	-13.9%	1.3%	-2.5%
Benchmark	S&P 500	Russ 2500	MSCI EAFE	Lehman Agg	90-Day T-Bill

### Asset Mix Performance



Projections	Mix A	Mix B	Mix C	Mix D	Mix E
5th Percentile	11.8%	13.8%	15.6%	16.4%	19.0%
25th Percentile	8.6%	9.8%	10.8%	11.2%	12.6%
<b>50th Percentile</b>	<b>6.4%</b>	<b>7.1%</b>	<b>7.5%</b>	<b>7.8%</b>	<b>8.4%</b>
75th Percentile	4.3%	4.4%	4.4%	4.4%	4.3%
95th Percentile	1.3%	0.7%	0.1%	-0.2%	-1.3%
<b>Actual Portfolio Return</b>	<b>3.4%</b>	<b>3.7%</b>	<b>2.8%</b>	<b>2.0%</b>	<b>1.0%</b>
Diff Actual from Projection	-3.1%	-3.3%	-4.7%	-5.7%	-7.4%

Volatility	Mix A	Mix B	Mix C	Mix D	Mix E
Projected Risk	7.2%	8.9%	10.6%	11.4%	14.0%
Actual Risk	8.1%	10.2%	13.1%	14.5%	18.2%

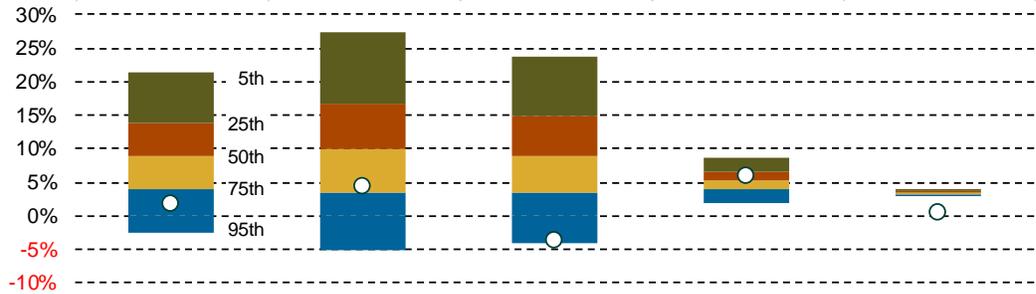
Efficiency	Mix A	Mix B	Mix C	Mix D	Mix E
Projected Sharpe Ratio	0.341	0.341	0.335	0.331	0.315
Actual Sharpe Ratio	0.231	0.220	0.104	0.039	-0.025

Portfolio Composition	Mix A	Mix B	Mix C	Mix D	Mix E
Large Cap Equity	40%	50%	40%	35%	40%
Small/Mid Cap Equity	0%	0%	10%	10%	20%
International Equity	0%	0%	10%	20%	20%
Domestic Fixed	40%	50%	40%	35%	20%
Cash Equivalent	20%	0%	0%	0%	0%

## 2008 Capital Market Projections vs. Actual Market Returns

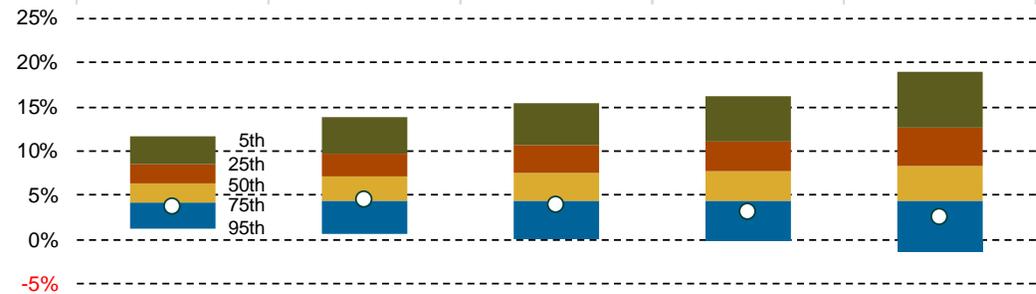
Five-Year Period from 2008 through 2012

### Asset Class Performance



Projections	Large Cap Equity	Small/Mid Cap Equity	International Equity	Domestic Fixed	Cash Equivalent
5th Percentile	21.4%	27.3%	23.7%	8.6%	4.1%
25th Percentile	13.8%	16.7%	14.8%	6.6%	3.7%
<b>50th Percentile</b>	<b>8.9%</b>	<b>9.9%</b>	<b>9.0%</b>	<b>5.3%</b>	<b>3.5%</b>
75th Percentile	4.1%	3.4%	3.5%	3.9%	3.3%
95th Percentile	-2.4%	-5.2%	-4.0%	2.0%	2.9%
<b>Actual Asset Class Return</b>	<b>1.7%</b>	<b>4.3%</b>	<b>-3.7%</b>	<b>5.9%</b>	<b>0.5%</b>
Diff Actual from Projection	-7.2%	-5.5%	-12.7%	0.7%	-3.0%
Benchmark	S&P 500	Russ 2500	MSCI EAFE	Lehman Agg	90-Day T-Bill

### Asset Mix Performance



Projections	Mix A	Mix B	Mix C	Mix D	Mix E
5th Percentile	11.7%	13.8%	15.5%	16.2%	18.9%
25th Percentile	8.5%	9.8%	10.7%	11.1%	12.6%
<b>50th Percentile</b>	<b>6.3%</b>	<b>7.1%</b>	<b>7.5%</b>	<b>7.7%</b>	<b>8.4%</b>
75th Percentile	4.2%	4.4%	4.4%	4.4%	4.3%
95th Percentile	1.2%	0.7%	0.1%	-0.2%	-1.2%
<b>Actual Portfolio Return</b>	<b>3.8%</b>	<b>4.5%</b>	<b>3.9%</b>	<b>3.1%</b>	<b>2.6%</b>
Diff Actual from Projection	-2.6%	-2.6%	-3.7%	-4.6%	-5.8%

Volatility	Mix A	Mix B	Mix C	Mix D	Mix E
Projected Risk	7.2%	8.9%	10.5%	11.2%	13.8%
Actual Risk	8.4%	10.5%	13.5%	15.0%	18.7%

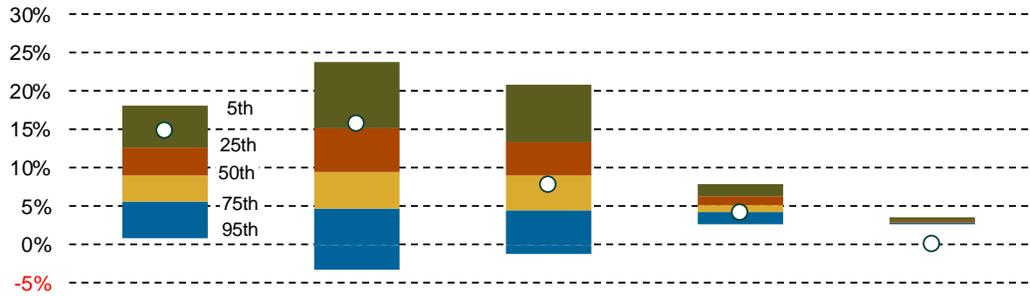
Efficiency	Mix A	Mix B	Mix C	Mix D	Mix E
Projected Sharpe Ratio	0.397	0.397	0.383	0.376	0.352
Actual Sharpe Ratio	0.387	0.375	0.248	0.173	0.109

Portfolio Composition	Mix A	Mix B	Mix C	Mix D	Mix E
Large Cap Equity	40%	50%	40%	35%	40%
Small/Mid Cap Equity	0%	0%	10%	10%	20%
International Equity	0%	0%	10%	20%	20%
Domestic Fixed	40%	50%	40%	35%	20%
Cash Equivalent	20%	0%	0%	0%	0%

## 2009 Capital Market Projections vs. Actual Market Returns

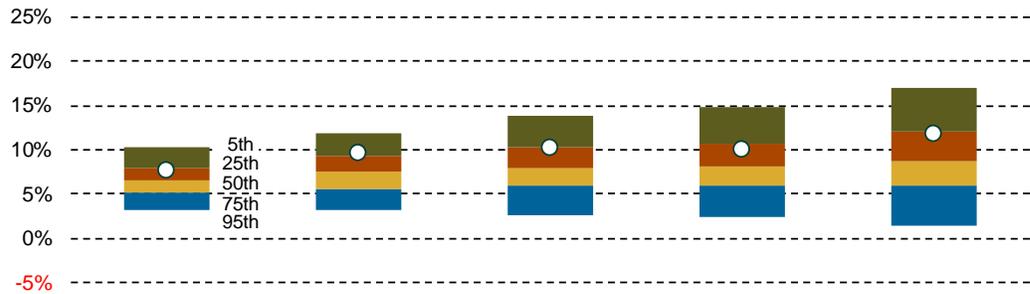
Seven-Year Period from 2009 through 2015 (Incomplete Projection Period)

### Asset Class Performance



Projections	Large Cap Equity	Small/Mid Cap Equity	International Equity	Domestic Fixed	Cash Equivalent
5th Percentile	18.1%	23.9%	20.8%	7.9%	3.5%
25th Percentile	12.7%	15.3%	13.4%	6.3%	3.2%
<b>50th Percentile</b>	<b>9.1%</b>	<b>9.5%</b>	<b>9.1%</b>	<b>5.2%</b>	<b>3.0%</b>
75th Percentile	5.6%	4.7%	4.5%	4.2%	2.9%
95th Percentile	0.9%	-3.1%	-1.2%	2.7%	2.6%
<b>Actual Asset Class Return</b>	<b>14.8%</b>	<b>15.8%</b>	<b>7.8%</b>	<b>4.1%</b>	<b>0.1%</b>
Diff Actual from Projection		6.2%	-1.3%	-1.1%	-2.9%
Benchmark	S&P 500	Russ 2500	MSCI EAFE	BC Agg	90-Day T-Bill

### Asset Mix Performance



Projections	Mix A	Mix B	Mix C	Mix D	Mix E
5th Percentile	10.3%	11.9%	13.7%	14.8%	17.0%
25th Percentile	8.0%	9.2%	10.3%	10.7%	12.0%
<b>50th Percentile</b>	<b>6.7%</b>	<b>7.5%</b>	<b>8.0%</b>	<b>8.2%</b>	<b>8.6%</b>
75th Percentile	5.2%	5.6%	5.9%	6.0%	6.1%
95th Percentile	3.2%	3.2%	2.6%	2.5%	1.4%
<b>Actual Portfolio Return</b>	<b>7.7%</b>	<b>9.6%</b>	<b>10.2%</b>	<b>10.0%</b>	<b>11.7%</b>
Diff Actual from Projection	1.1%	2.2%	2.2%	1.9%	3.1%

### Volatility

	Mix A	Mix B	Mix C	Mix D	Mix E
Projected Risk	6.7%	8.4%	10.1%	10.9%	13.5%
Actual Risk	6.1%	7.6%	9.8%	10.9%	13.6%

### Efficiency

	Mix A	Mix B	Mix C	Mix D	Mix E
Projected Sharpe Ratio	0.538	0.530	0.502	0.489	0.441
Actual Sharpe Ratio	1.313	1.314	1.033	0.892	0.811

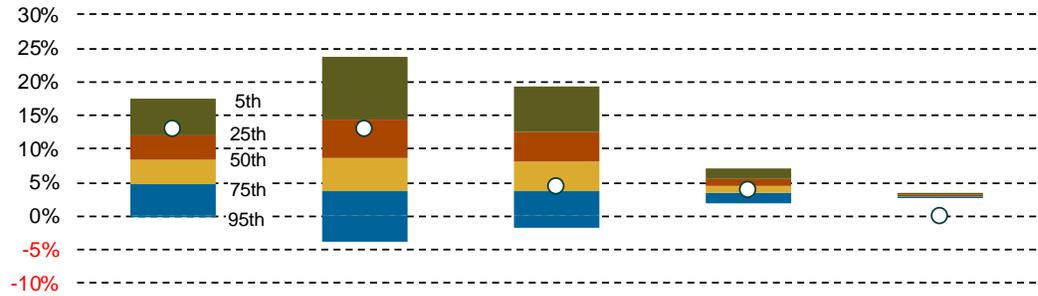
### Portfolio Composition

	Mix A	Mix B	Mix C	Mix D	Mix E
Large Cap Equity	40%	50%	40%	35%	40%
Small/Mid Cap Equity	0%	0%	10%	10%	20%
International Equity	0%	0%	10%	20%	20%
Domestic Fixed	40%	50%	40%	35%	20%
Cash Equivalent	20%	0%	0%	0%	0%

## 2010 Capital Market Projections vs. Actual Market Returns

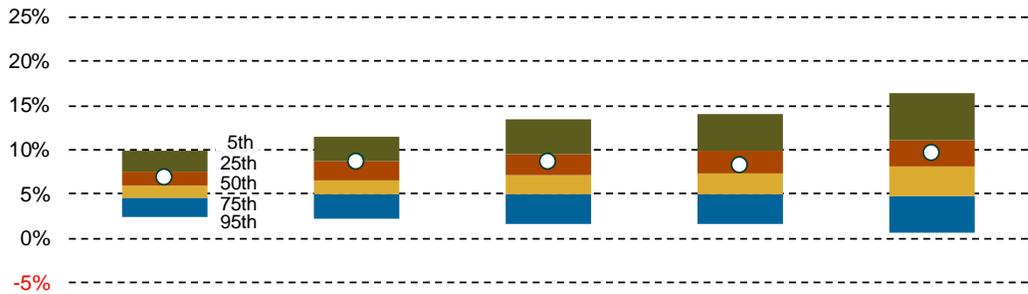
Six-Year Period from 2010 through 2015 (Incomplete Projection Period)

### Asset Class Performance



Projections	Large Cap Equity	Small/Mid Cap Equity	International Equity	Domestic Fixed	Cash Equivalent
5th Percentile	17.5%	23.7%	19.2%	7.1%	3.4%
25th Percentile	12.0%	14.4%	12.7%	5.5%	3.2%
<b>50th Percentile</b>	<b>8.3%</b>	<b>8.7%</b>	<b>8.2%</b>	<b>4.5%</b>	<b>3.0%</b>
75th Percentile	4.7%	3.8%	3.7%	3.4%	2.9%
95th Percentile	-0.3%	-3.8%	-1.8%	2.0%	2.6%
<b>Actual Asset Class Return</b>	<b>13.0%</b>	<b>12.9%</b>	<b>4.3%</b>	<b>3.8%</b>	<b>0.1%</b>
Diff Actual from Projection	4.6%	4.2%	-3.9%	-0.7%	-3.0%
Benchmark	S&P 500	Russ 2500	MSCI EAFE	BC Agg	90-Day T-Bill

### Asset Mix Performance

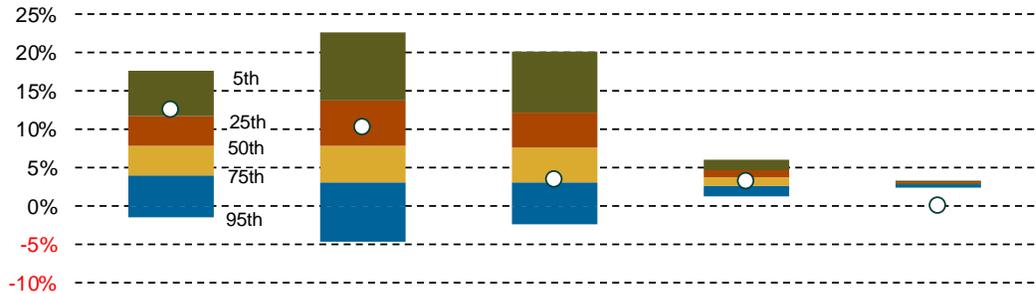


Projections	Mix A	Mix B	Mix C	Mix D	Mix E
5th Percentile	9.8%	11.5%	13.4%	14.1%	16.4%
25th Percentile	7.6%	8.6%	9.6%	10.0%	11.0%
<b>50th Percentile</b>	<b>5.9%</b>	<b>6.5%</b>	<b>7.2%</b>	<b>7.4%</b>	<b>8.1%</b>
75th Percentile	4.6%	4.9%	5.0%	5.0%	4.9%
95th Percentile	2.4%	2.2%	1.7%	1.7%	0.7%
<b>Actual Portfolio Return</b>	<b>6.8%</b>	<b>8.6%</b>	<b>8.7%</b>	<b>8.3%</b>	<b>9.6%</b>
Diff Actual from Projection	1.0%	2.0%	1.5%	0.9%	1.5%
<b>Volatility</b>					
Projected Risk	6.9%	8.6%	10.5%	11.2%	14.0%
Actual Risk	5.2%	6.5%	8.3%	9.2%	11.7%
<b>Efficiency</b>					
Projected Sharpe Ratio	0.438	0.430	0.411	0.403	0.368
Actual Sharpe Ratio	1.313	1.314	1.033	0.892	0.811
<b>Portfolio Composition</b>					
Large Cap Equity	40%	50%	40%	35%	40%
Small/Mid Cap Equity	0%	0%	10%	10%	20%
International Equity	0%	0%	10%	20%	20%
Domestic Fixed	40%	50%	40%	35%	20%
Cash Equivalent	20%	0%	0%	0%	0%

## 2011 Capital Market Projections vs. Actual Market Returns

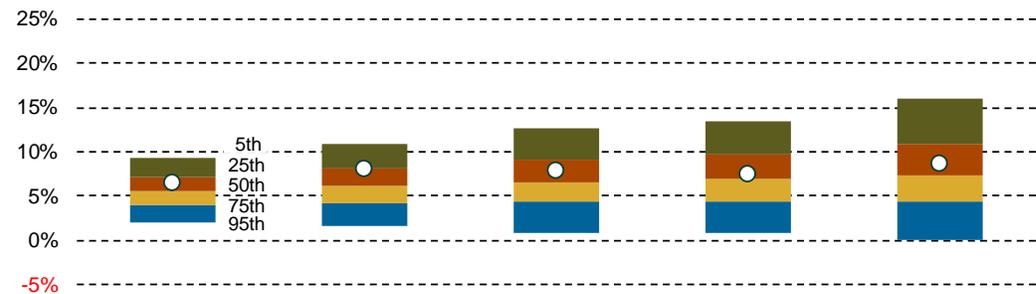
Five-Year Period from 2011 through 2015 (Incomplete Projection Period)

### Asset Class Performance



Projections	Large Cap Equity	Small/Mid Cap Equity	International Equity	Domestic Fixed	Cash Equivalent
5th Percentile	17.8%	22.8%	20.3%	6.2%	3.5%
25th Percentile	11.8%	13.8%	12.3%	4.8%	3.2%
<b>50th Percentile</b>	<b>7.9%</b>	<b>8.0%</b>	<b>7.7%</b>	<b>3.8%</b>	<b>3.0%</b>
75th Percentile	4.0%	3.1%	3.2%	2.8%	2.8%
95th Percentile	-1.4%	-4.5%	-2.3%	1.4%	2.6%
<b>Actual Asset Class Return</b>	<b>12.6%</b>	<b>10.3%</b>	<b>3.6%</b>	<b>3.2%</b>	<b>0.1%</b>
Diff Actual from Projection	4.7%	2.3%	-4.1%	-0.5%	-3.0%
Benchmark	S&P 500	Russ 2500	MSCI EAFE	BC Agg	90-Day T-Bill

### Asset Mix Performance



Projections	Mix A	Mix B	Mix C	Mix D	Mix E
5th Percentile	9.3%	10.9%	12.7%	13.5%	16.1%
25th Percentile	7.1%	8.1%	9.2%	9.6%	10.8%
<b>50th Percentile</b>	<b>5.6%</b>	<b>6.2%</b>	<b>6.6%</b>	<b>6.9%</b>	<b>7.3%</b>
75th Percentile	4.0%	4.2%	4.4%	4.5%	4.3%
95th Percentile	2.0%	1.6%	1.0%	0.8%	-0.4%
<b>Actual Portfolio Return</b>	<b>6.4%</b>	<b>8.0%</b>	<b>7.9%</b>	<b>7.5%</b>	<b>8.6%</b>
Diff Actual from Projection	0.8%	1.8%	1.3%	0.6%	1.3%

### Volatility

	Mix A	Mix B	Mix C	Mix D	Mix E
Projected Risk	7.2%	9.0%	10.9%	11.7%	14.7%
Actual Risk	4.7%	5.9%	7.6%	8.4%	10.8%

### Efficiency

	Mix A	Mix B	Mix C	Mix D	Mix E
Projected Sharpe Ratio	0.364	0.355	0.344	0.339	0.312
Actual Sharpe Ratio	1.336	1.337	1.023	0.882	0.790

### Portfolio Composition

	Mix A	Mix B	Mix C	Mix D	Mix E
Large Cap Equity	40%	50%	40%	35%	40%
Small/Mid Cap Equity	0%	0%	10%	10%	20%
International Equity	0%	0%	10%	20%	20%
Domestic Fixed	40%	50%	40%	35%	20%
Cash Equivalent	20%	0%	0%	0%	0%