TUCSON SUPPLEMENTAL RETIREMENT SYSTEM
BOARD OF TRUSTEES AGENDA

DATE: **Thursday, November 17th, 2016**
TIME: **8:30 a.m.**
PLACE: **Finance Department Conference Room, 5th floor**
City Hall, 255 West Alameda
Tucson, Arizona 85701

A. **Consent Agenda**
1. Approval of October 28th Board Meeting Minutes
2. Retirement ratifications for November 2016
3. October 2016 TSRS expenses and revenue compared to budget
4. TSRS Portfolio Composition, Transactions and Performance Review October 2016 Note 1

B. **Administrative Discussions**
1. TSRS Funding Policy – Addition of Intent & Summary and Glossary
2. Changing the Interest Rate Allocated to Member Account Balances
3. 2017 TSRS Board Meeting Calendar

C. **Plan Administrator's Report**
1. Report on Office Operations and Key Facts & Figures for the Past Month
2. TSRS Operation Highlight – The Retirement Checklist

D. **Investment Activity Report**
1. Callan - Quarterly review of TSRS investment manager performance for September 30, 2016
2. Callan - Fixed income portfolio composition discussion Note 1

E. **Articles for Board Member Education / Discussion**
1. T-Rowe Price – 2016 US Election and the Markets
2. The Bond Buyer – Moody's: States' Adjusted Net Pension Liabilities Soaring
3. Causeway – The 2016 U.S. Election: A Republican Reflation

F. **Call to Audience**

G. **Future Agenda Items**
1. TSRS Board Annual Evaluation of Staff and Consultants
2. RFQ for Actuarial Services

H. **Adjournment**

Note 1: at the time this packet was assembled this item was unavailable but will be provided at the meeting

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: Friday, October 28, 2016
TIME: 8:30 a.m.
PLACE: Arizona Inn – (Safari Room)
2200 East Elm Street, Tucson, AZ

Members Present:	Robert Fleming, Chairman Kevin Larson, City Manager Appointee Betsy Conroy, HR Deputy Director Karen Tenace, Deputy Director of Finance Michael Coffey, Elected Representative Jorge Hernández, Elected Representative John O'Hare, Elected Retiree Representative
Staff Present	Neil Galassi, Pension Administrator Bob Szelewski, Lead Pension Analyst (Departed 1:10 PM) Dawn Davis, Administrative Assistant Ginny Rath Pepper, Administrative Assistant
Guests Present:	Andrew Goldberg, JP Morgan (Departed 9:32 AM) Darren Smith, JP Morgan (Departed 9:32 AM) Lauren Brants, JP Morgan (Departed 9:32 AM) Leslie Thompson, Gabriel Roeder Smith & Associates (Departed 11:31 AM) Catherine Langford, TSRS Legal Counsel (Departed 1:13 PM) Gordon Weightman, Callan Associates John Pirone, Callan Associates Matt Clark, PIMCO (Arrived 12:04 PM) (Departed 2:04 PM) Loren Sageser, PIMCO (Arrived 12:04 PM) (Departed 2:04 PM)
Absent/Excused:	None

Chairman Fleming called the meeting to order at 8:30 AM.

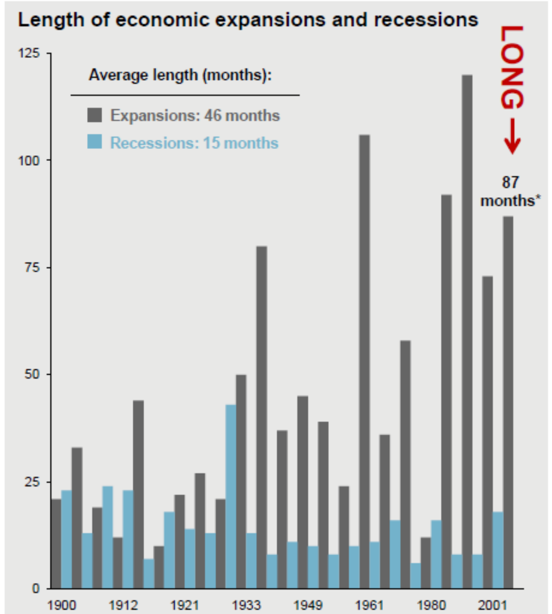
1) Consent Agenda

1. Approval of September 29th, 2016 TSRS Board Meeting Minutes
2. Retirement ratifications for October 2016
3. September 2016 TSRS Budget Vs Actual Expenses
4. TSRS Portfolio Composition, Transactions and Performance Review September 2016

A motion to approve the Consent Agenda was made by Kevin Larson, 2nd by John O'Hare, and passed by a vote of 7-0.

2) Guide to the Markets – Andrew Goldberg, J.P. Morgan Asset Management - Head of the U.S. Market Insights Strategy Team

Andrew Goldberg stated he would be going over the US economy, US equities, fixed income, and risks investors needed to be mindful of. He then discussed the chart below illustrating the historical length of US economic expansions and recessions.

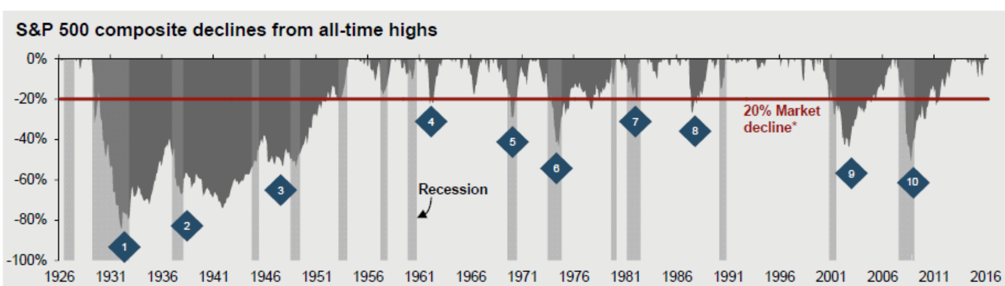


Over time expansions have lasted for longer periods of time. The country is still in the last expansion shown above. It is the 4th longest expansion period in US history, suggesting it is in the end stages, but according to economic indicators it is still decisively mid cycle. The current expansion has been an incredible outlier when considered against past economic expansions, in that growth has been much slower. The slow nature of this recovery might very well mean that it could be the longest expansion period in US history because there have not been any of the imbalances resulting from a fast growing economy; and the normal flags signaling the end of a cycle are not present.

Michael Coffey asked if there was any historical evidence to support the idea that this slow growth could result in the longest expansion period in US history.

Mr. Goldberg answered there was not and directed the board to review the table below.

Bear markets and subsequent bull runs — GTM - U.S. | 16

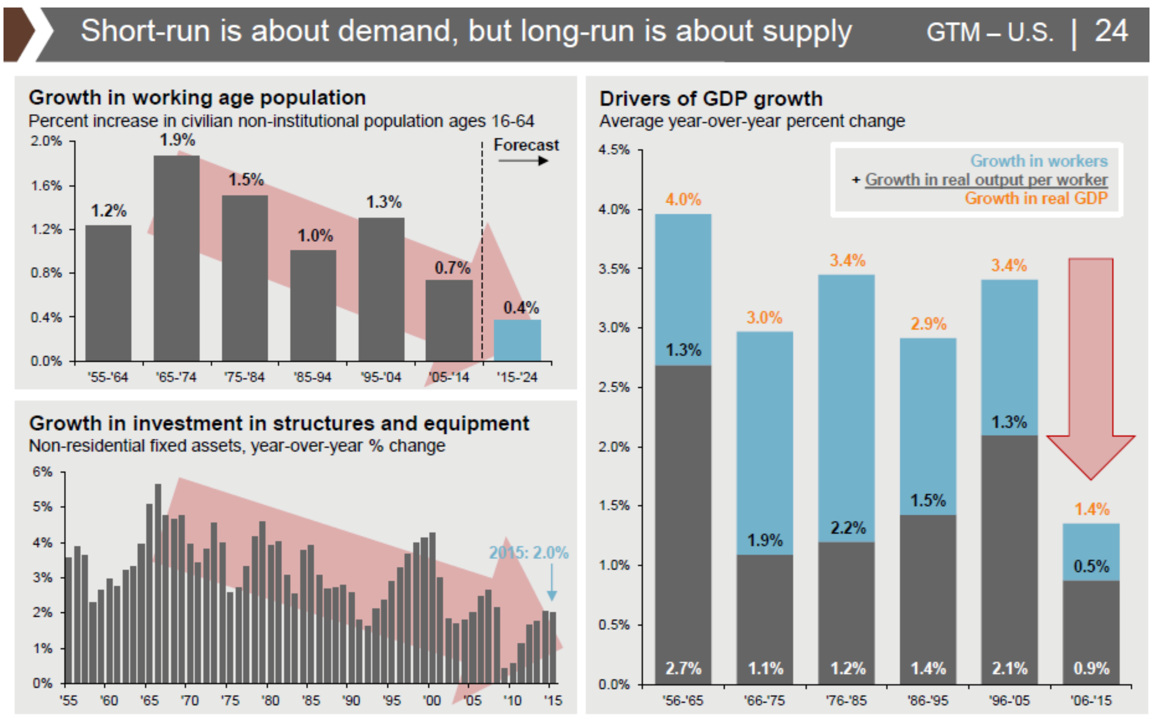


Characteristics of bull and bear markets

Market Corrections	Bear markets: Market peak	Bear markets: Bear return*	Bear markets: Duration (months)*	Macro environment: Recession	Macro environment: Commodity spike	Macro environment: Aggressive Fed	Macro environment: Extreme valuations	Bull markets: Bull begin date	Bull markets: Bull return	Bull markets: Duration (months)
1 Crash of 1929 - Excessive leverage, irrational exuberance	Sep 1929	-86%	33	◆			◆	Jul 1926	152%	38
2 1937 Fed Tightening - Premature policy tightening	Mar 1937	-60%	63	◆		◆		Mar 1935	129%	24
3 Post WWII Crash - Post-war demobilization, recession fears	May 1946	-30%	37	◆			◆	Apr 1942	158%	50
4 Flash Crash of 1962 - Flash crash, Cuban Missile Crisis	Dec 1961	-28%	7				◆	Oct 1960	39%	14
5 Tech Crash of 1970 - Economic overheating, civil unrest	Nov 1968	-36%	18	◆	◆	◆		Oct 1962	103%	74
6 Stagflation - OPEC oil embargo	Jan 1973	-48%	21	◆	◆			May 1970	74%	32
7 Volcker Tightening - Whip Inflation Now	Nov 1980	-27%	21	◆	◆	◆		Mar1978	62%	33
8 1987 Crash - Program trading, overheating markets	Aug 1987	-34%	3				◆	Aug 1982	229%	61
9 Tech Bubble - Extreme valuations, .com boom/bust	Mar 2000	-49%	31	◆			◆	Oct 1990	417%	115
10 Global Financial Crisis - Leverage/housing, Lehman collapse	Oct 2007	-57%	17	◆	◆	◆		Oct 2002	101%	61
Current Cycle								Mar 2009	220%	92
Averages	-	-45%	25					-	153%	54

The chart shows the last 10 bear markets, when the market fell 20% or more. The table underneath, under macro environment, shows the prevailing macro environment factors contributing to that market. Commodity spikes are one of the usual factors, and right now there is the opposite as commodity prices are up about 35% year to date, but still 60% below their peak. Another factor precipitating large down turns has been surges in monetary policy, which is not occurring now. While there is no empirical evidence to suggest that slow growth could last for a longer period of time; past cycles end when a factor goes to excess.

70% of the economy is based on consumption, so discussion always focuses on the consumer and how demand will be effected. However, in the short term, demand drives cycles, and over longer periods it is the supply side of the economy that allows for economic growth to come to fruition or holds it back. The US economy is currently being held back by supply side factors as shown in the charts below.



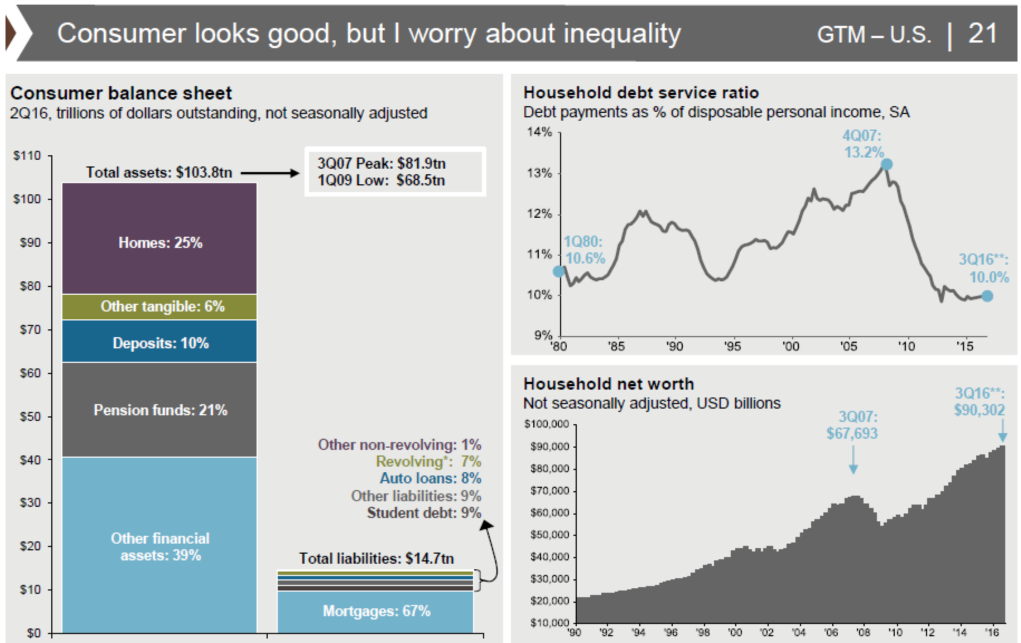
Mr. Weightman pointed out that economic growth was still positive, and 4% growth per year cannot be maintained in perpetuity so it is not necessarily a bad thing that growth has slowed because growth is still positive.

Mr. Goldberg agreed with the point, but added the supply side constraints need to be addressed to increase the rate of economic growth.

Lauren Brants explained this was another reason to have a diversified portfolio that looks for return outside of the US as well.

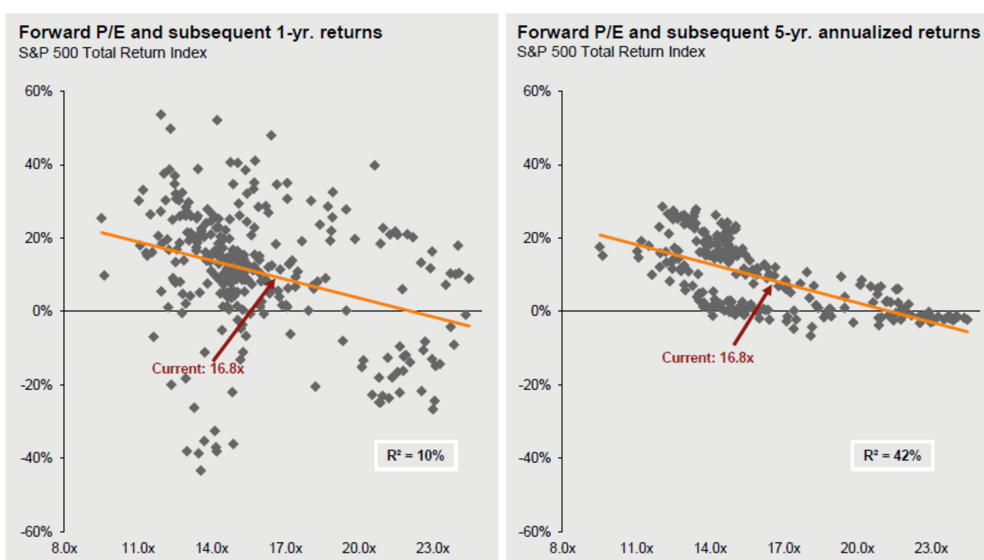
Chairman Fleming asked if they were saying the best way to tackle this issue would be with open borders and a massive public works program.

Mr. Goldberg answered no but the types of jobs that are available require continued education in science related fields, and there are not enough qualified workers in the country to fill those openings. To have a reliable outlook on the US economy you also have to be aware of how the consumer looks.

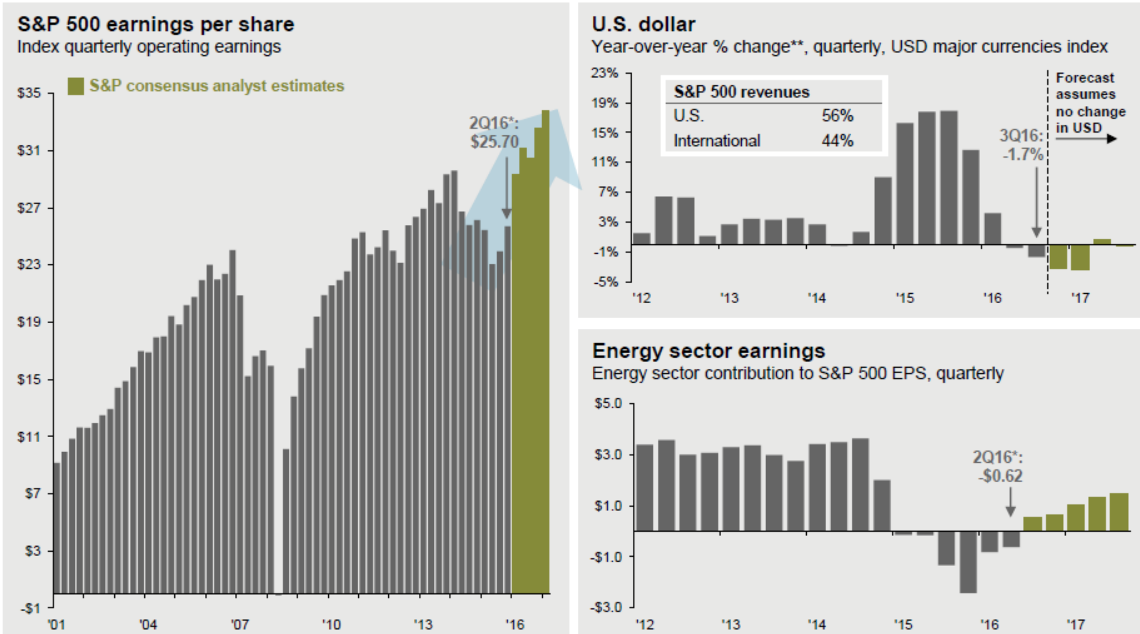


If the Federal Reserve raises rates in December it would put them on pace to have one rate hike per year as opposed to the average of 8 per year. Low interest rates make it too difficult for consumers to get a loan, holding the economy back. The main source of income for consumers is from their job. In retirement it is interest income from their portfolios. As a percentage of total income this quarter, interest income is at the lowest it has been in any quarter since 1968. If a consumer wants to borrow money for 30 years at a fixed rate, and that rate is the lowest rate in recorded history, the consumer will have be risk free. Traditionally interest rate increases are seen to slow the economy down but in this case it would boost the economy by allowing the banks to make loans available to a wider customer base.

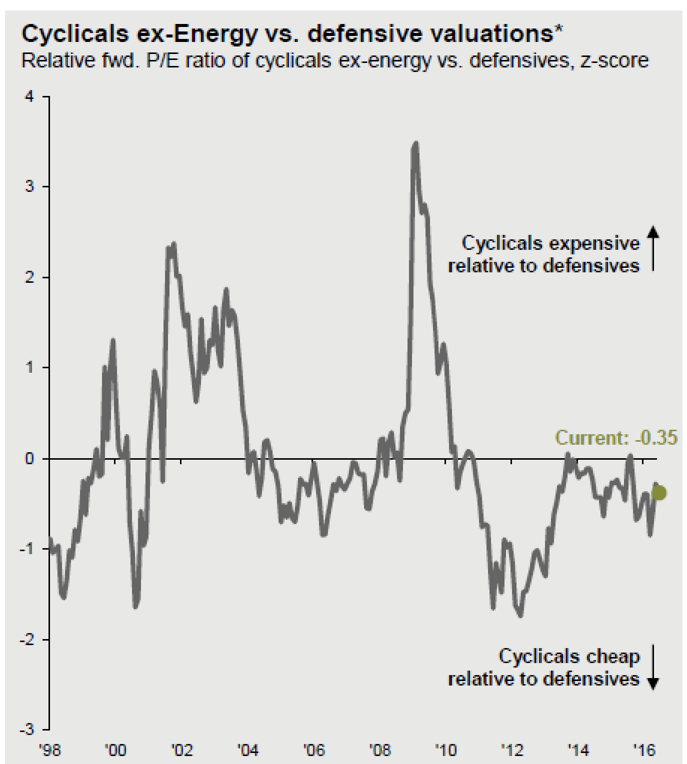
This is an important environment in which to have an active portfolio management approach. The charts below show that the price-earnings ratio, as a valuation measure, is not an accurate indicator of returns.



The message is that investors who bought stocks when they were cheap had returns in double digits over the following 5 years. If they bought stocks when they were expensive returns tended to be very low, possibly negative.



The S&P 500 earnings per share table shows there was a 20% collapse in overall operating earnings per share for the stock market. The two charts to the right of it show what was responsible for that collapse. The Dollar began to surge against other currencies based on announcements from the Federal Reserve and the European Central Bank that they would raise interest rates. Energy contributions to the S&P 500 earnings became negative after the oil market collapse. Analysts forecast returns should continue to improve as energy has rebounded and the dollar has stabilized. When the price of money is distorted for 8 years it leads to a situation where capital moves to places it otherwise might not have, creating possibilities for market bubbles. He then discussed the following chart.



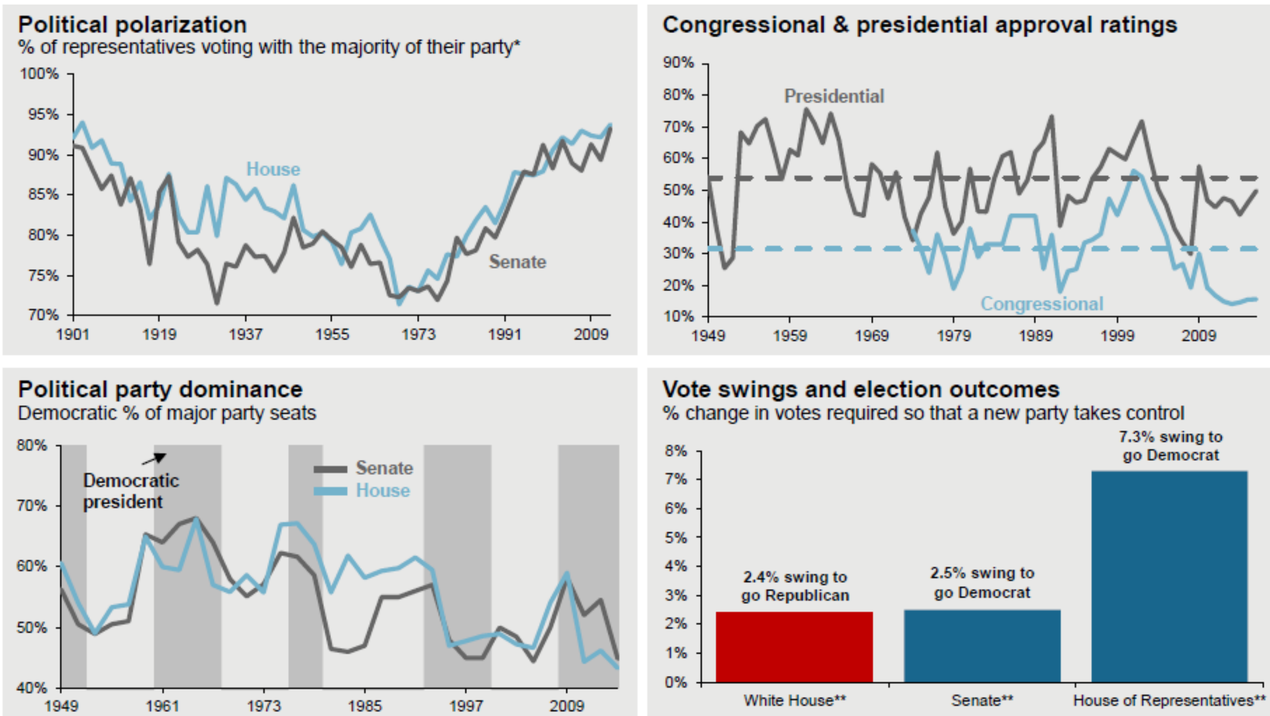
Mr. Weightman stated this seemed like a tough environment for active managers.

Mr. Goldberg responded it had been. The body of academic research and literature available on active vs. passive management is flawed. Active management is viewed as one broad universe, if it viewed just top quartile managers over time, there would be benchmarks for up and down markets, small and large cap, and developed and emerging markets. There is also a growing body of academic research around the validity of benchmarks. When large amounts of investors move into dividend yielding stocks based solely on the distortions listed in the Federal Reserve's meeting minutes that money should not be there. A prudent active manager will see that and will trail as those stocks run and the index goes up as the result of a potential market bubble. It also forces passive managers to buy stocks they do not want in order to make the fund resemble the benchmark. The following chart shows that as the grey line goes down defensive stocks are outperforming, illustrating investors chasing yields as the yield available in the bond market has disappeared.

In the last 8 to 10 weeks bond yields have been on the rise, so defensive stocks are underperforming and cyclical stocks are on the rise. In the 3rd quarter relative to the first 2 quarters, about 40% of active managers outperformed their benchmark, now about 60% of them are outperforming because bad behavior in the benchmark has decreased. From a returns perspective there will be times where an active manager trails and it is because they disagree with the behavior of the index. 71% of all developed market government bonds are yielding less than 1%, and 33% of all developed market government bonds yield less than 0%. As a result, US bond yields are higher than 91% of all listed developed market government bonds around the world. To the rest of the world US bonds are very attractive investments and private foreign money is moving into the US corporate bond and treasury markets.

Jorge Hernández asked if Mr. Goldberg thought the inflow of foreign capital will continue to have an effect on the value of the US Dollar.

Mr. Goldberg answered in the affirmative. There are countervailing forces on the Dollar; the trade deficit has the effect of flooding the world with Dollars, and at the same time foreign entities want to buy US bonds. Then he discussed market risks. Risk number 1 is Dollar and wage growth holding profit margins back. Risk number 2 is China's build-up of an excessive amount of debt, which will not be a problem for a few years. China currently wants to achieve growth at all costs, including the cost of debt. Politics is also a risk. Research shows the market likes certainty, and the status quo is more certain than the alternative(s). Over the last 28 election cycles, in 86% of all elections, the market was up in the 3 months leading into elections where the incumbent party's candidate won and was down in the 3 months leading into elections where the challenging party's candidate won. He also discussed the data shown in the following charts.



Karen Tenace asked for information about the North American Free Trade Agreement (NAFTA) discussions.

Mr. Goldberg explained when the US signs a trade deal congress writes into law many of the key provisions of the deal so that an act of congress would be required to change them, so it would be difficult for a president to disrupt any of the trade deals in place.

3) Actuary Valuation Report for June 30, 2015 – Gabriel Roeder Smith & Assoc., - Leslie Thompson

a. June 30, 2016 TSRS DRAFT valuation report and discussion
b. Recommended Contribution Rates for 2018 Plan Year Beginning July 1, 2017, Ending June 30, 2018
c. Review of TSRS Funding Projections
d. Comparison to other Arizona Plans
e. Risk Sharing Features Including 50/50 split of TSRS
f. Acceptance of 6/30/16 Draft Valuation Report, Adoption of FY18 Contribution Rates
g. Education on Interest Rate Allocated to Member Balances

Leslie Thompson said the 4 year average market value rate of return was 9.8%, and the 4 year average actuarial rate of return was 9.4%, however last year's market value return was only 2.5% and they had assumed a return of 7.25%. The actuarial return was 8%. The unfunded accrued liability decreased from \$314.6M to \$297.8M due to a demographic gain of \$6.5M and an investment gain of \$5.5M.

Michael Coffey requested clarification on the demographic gain.

Ms. Thompson explained the largest part of the demographic gain was due to lower than anticipated wage increases for the year. Normal cost is the cost of benefits accrued over the year; Tier 1-Variable Rate has a normal cost of 13.1%, and the Tier 2-Variable Rate has a normal cost of 9.78%. The aggregate normal cost over the entire plan decreased from 11.57% to 11.40%. Aggregate normal costs can be expected to come down over time as the Old Hire-Fixed Rate members retire from the higher cost tier and new members enter into a lower cost tier. The unfunded accrued liability amortization over 20 years is 18.85%, up from 18.59%, of pay. This is largely because of the 7% reduction in payroll resulting from the retirement incentives. While this makes the amortization look larger as a rate of pay, the dollar payment actually decreased due to favorable experience. In 2015 the plan was projected to reach full funding in 2031, but that moved out to 2035 due to the return on the market value of assets of 2.5% rather than the assumed rate of 7.25%.

John O'Hare asked why they used the actuarial rate instead of the market rate in the projections.

Ms. Thompson answered the market rate is smoothed over the first 5 years and then the actuarial rate of 7.25% is used going forward after those 5 years. In the previous actuarial valuation 7.25% was used for 2016. In 2016 the actual market returns were 2.5% so the projection had to be adjusted to account for the lower return. The projection to reach full funding is highly dependent on market value.

Kevin Larson clarified that if the assumed rate of return of 7.25% had been achieved the unfunded accrued liability would have decreased even more.

Ms. Thompson answered in the affirmative, and discussed the following tables.

TSRS Member and City Rates by year

	2016	2015	2014	2013
Total Normal Cost	11.40%	11.57%	11.71%	12.08%
Total Amortization Payment	18.85%	18.59%	20.52%	20.14%
Administrative Expenses	.68%	0.53%	NA	NA
Total contribution	30.93%	30.69%	32.23%	32.22%
Member aggregate contributions	5.15%	5.17%	5.20%	5.27%
City financed portion	25.78%	25.52%	27.03%	26.95%

Tucson Supplemental Retirement System: Schedule of Funding Progress							
	2016	2015	2014	2013	2012	2011	2010
Actuarial Value of Assets (in thousands)	$732,927	$706,774	$655,998	$600,330	$597,107	$624,665	$641,819
Market Value of Assets (in thousands)	$728,234	$739,794	$735,737	$641,046	$580,383	$599,712	$514,122
Funded Ratio (AVA)	71.11%	69.20%	64.8%	63.3%	63.5%	67.3%	71.0%
Funded Ratio (MVA)	70.65%	72.43%	72.67%	67.6%	61.7%	64.6%	56.8%

When there is a deferred loss in assets and actuarial value is higher than market value there will be a downward tilt in the funded ratio. The difference between the AVA and the MVA tells the actuary which way the plan is leaning and TSRS is leaning toward having upward pressure on the contribution rate because there will be deferred losses coming in. Gains and losses on the accrued liability are measured each year on the change in the accrued liabilities. It is a measure of the expected liabilities using the probabilities for decrement against the actual liabilities. The Board has started to control normal cost through the tiered system. Over the long term, as the population turns over and new hires enter tier 2, the aggregate normal cost will continue to decrease until the tier 2 variable normal cost rate of 9.78% is reached. The number of pay status (retired) members increased from 2,809 to 2,945. As the plan matures and more members become retirees, mortality risk is becoming a larger part of the risk of the plan, requiring an awareness of the plan's mortality assumptions to avoid an unexpected increase in the unfunded liabilities.

Jorge Hernández asked if Ms. Thompson foresaw a time when the ratio of pay status members to active employees could be a cause for concern.

Ms. Thompson answered not as long as the Board continues to work with the City to pay the annual required contribution. The real concern is that as more employees attain pay status and fewer are working and contributing, raising employee contribution rates will not have as much of an effect because a large part of the problem would no longer be making contributions.

Mr. Larson stated the plan collected $41.7M in contributions and paid out $70M in benefits, resulting in a deficit of about $28.0M and that has to come from the investment portfolio. This means the plan needs returns of 4% to break even without decreasing unfunded liabilities.

Catherine Langford reminded the Board that the earnings assumption is net of investment costs but the long term earnings potential rates would include investment expense. This means that the gap between long term returns and the Board's assumptions could become even greater.

Neil Galassi explained investment expenses were around 40 basis points which means in order for the fund to reach the assumed rate of return of 7.25% returns would actually have to be 7.65%.

Ms. Thompson advised that no change was recommended to employee contribution rates. The Board requested a comparison of the TSRS plan against other plans in Arizona and the following tables were discussed.

Plan Name	Valuation Date	Assumed Interest Rate	Wage Growth	Mortality	Funded Ratio Market-Actuarial		Asset Smoothing for rates
Arizona State *Retirement System (ASRS)	June 30, 2015	8.00%	3.00%	Static projected to 2015	78.3%	77.1%	10 year smoothing
PSPRS	June 30, 2015	7.85% (7.5% adopted for 2016)	4.00%	Static projected to 2015	47.9%	49.0%	7 year smoothing
Phoenix	June 30, 2015	7.50%	3.50%	Generational	55.6%	55.4%	4 year smoothing
Tucson	June 30, 2015	7.25%	3.00%	Static projected to 2020	72.43%	69.20%	5 year smoothing
*excluding retiree medical							

Plan Name	Valuation Date	Employee Contributions	Employer Contributions	Amortization policy
Arizona State Retirement System (ASRS)	June 30, 2015	11.34%**	10.78%**	(uses PUC funding method) 30 year closed level dollar amortization
PSPRS	June 30, 2015	11.65%	42.36%*	21 year closed amortization level percent of payroll-when a surplus exists the amortization payment calculation will change to 20 year open. Board allows employers to phase in rate increase over a three year period.
Phoenix T1	June 30, 2015	5.00%	30.60%	G/L 20 years; Assumption change 20 year amortization and phasing in assumption change costs over 4 years
Phoenix T2/3		11.00% (max ee contribution)	30.60%	
Tucson Tier 1	June 30, 2015	5.00%	27.50%	20 year open, level percent of pay. No rate reductions will be recommended by the Board until the plan reaches full funding. The Board employs a rounding policy to the member and employer contribution rates.
Tucson Tier 2		6.60%	27.50%	
Tucson Tier 3		5.00%	27.50%	
*without regard to any employer phase in ** not including the retiree medical				

John O'Hare expressed interest in seeing a model utilizing an expected rate of return of 6.7% as previously recommended by Callan.

Ms. Thompson reminded the Board that while Callan considers 10 years to be long term, the actuarial valuation utilizes a time horizon of 40 or 50 years and includes more of a recovery element than the numbers provided by Callan.

Gordon Weightman reminded the Board that the 6.7% rate of return was a median expectation and there was a range of return around that so it was only one possible outcome and the fund could do better or worse.

Mr. O'Hare requested a market sensitivity test utilizing different discount rate assumptions.

Ms. Thompson stated that information was provided on page 21 of the GASB 67/68 Report (see the table below), but the numbers did not match the valuation report because the net pension liability, which is the same as the unfunded accrued liability, is net of market value.

Sensitivity of Net Pension Liability to the Single Discount Rate Assumption

1% Decrease 6.25%	Current Single Discount Rate Assumption 7.25%	1% Increase 8.25%
$ 407,718,893	$ 302,460,706	$ 212,694,267

Chairman Fleming requested a model of market sensitivity tests of different discount rates for the TSRS plan rate of return.

Ms. Thompson also compared TSRS to Colorado plans of similar size.

Peer Group Member	Plan Type	Normal Retirement Ages	Multiplier	Early Retirement Ages	Early Retirement Reduction	Final Average Compensation	Employee contributions	Interest on employee contributions	Employer contributions	Assumed rate of return	Funded Ratio
Adams County	DB	65; R80 min55	1.75%	55 & 10	4% per year for 3 years; then 5% per year	career average	9.00%	3.00%	7.75% to 9.00%	7.50%	56.2%
Arapahoe County	DB	65;R85 min60	1.85%	55 & 8	6.66% first 5 years then 4.50% thereafter	five year	8.00%	3.00%	8.00%	7.50%	61.7%
City of Aurora "GERP"	DB	67&5; R80 min 50	1.75% plus $176 per month	50 & 10	6% per year early	three year	7.00%	4.00%	7%	7.75%	97.8%
City of Denver "DERP"	DB	R85 min60	1.50%	60&5	6% per year	five year	8.00%	3.00%	11.50%	7.75%	72.2%
El Paso County	DB	R75 with 8 years	2.00%	55 & 8 years	3% per year	three year	8.00%	3.00%	8.00%	8.00%	70.9%
City of Englewood "NERP"	DB	65; R88 min 55	1.50%	55 & 5	3% per year	three year	3.00%	3.50%	20.80%	6.50%	75.7%
City of Longmont	DB	R80 min60	2.20%	60 & 5	6% per year	three year	Legacy-5.7%; new hires 4.7%	3.00%	6.70%	7.50%	92.5%

Mr. Coffey asked for a summary of what the Board was supposed to take away from these comparisons.

Ms. Thompson answered by stating looking at the rates of return which drives liabilities noting TSRS is generally ahead of the curve at an assumed rate of return of 7.25%. When comparing funded ratios. TSRs is stacking up better. The Board should also consider when looking at this table whether TSRS was charging employees a comparable amount, admitting it was not a fair question because TSRS contribution rates are based on normal costs while many of the Colorado plans have statute driven constraints. Comparing the interest on employee contributions; they are lower everywhere else because pensions should be charging a rate that is close to risk free like 2% or 3% as opposed to the TSRS rate of 6%.

Chairman Fleming asked if the TSRS interest on employee contributions had been compared to the other Arizona plans.

Mr. Galassi answered ASRS is at 2%.

Karen Tenace asked if it was likely for employer contributions to go up, if it is not required by statute, as the plan matures.

Ms. Thompson explained that the employer contributions in many of the Colorado plans are mandated by statutes and as a result they are not contributing what they should. For the State of Arizona's Public Safety Personnel Retirement System (PSPRS) members hired after June 30, 2017 members will share 50% of the cost of their tier; TSRS is already doing this and for the new tiers the unfunded accrued liability is very low.

Mr. Galassi advised with the TSRS rounding policy, members in the low cost tiers contribute a little more than 50% of the normal costs which helps bring down the unfunded liabilities.

A motion to accept the valuation report and set the recommended contribution rates for FY18 was made by Karen Tenace, 2nd by Michael Coffey, and passed by a vote of 6 – 1 (John O'Hare dissenting).

Ms. Thompson discussed how a -2.75% return in fiscal year 2017 would affect the plan.

Tucson Supplemental Retirement System
Projected City Contribution Rates Before Roundup and Minimums are Applied
Baseline and Alternate FY 2017 Investment Return Scenarios

Valuation Year June 30,	Contribution Rate FY	City Calculated Rate Before Roundup and Minimum: 7.25% Return in FY 2017 - 2021	City Calculated Rate Before Roundup and Minimum: -2.15% Return in FY 2017, Followed by 7.25% in FY 2018 - 2021
2016	2018	25.65%	25.65%
2017	2019	24.42%	25.25%
2018	2020	23.59%	25.54%
2019	2021	23.55%	26.60%
2020	2022	23.21%	27.34%
2021	2023	22.35%	27.53%

**Calculated contribution rates do not reach their peak under the alternate scenario until the June 30, 2021 valuation due to asset smoothing.*

The rounding policy is allowing the City to build a margin and protection. She also discussed how granting a 2% interest rate on member contributions would affect the plan.

Tucson Supplemental Retirement System
Impact of Reducing interest on member contributions to 2.0% per year

Baseline Valuation Results as of June 30, 2016

Normal Cost by Tier			
Aggregate Total Normal Cost			11.40%
Tier I Normal Cost (Hired between July 1, 2006 and June 30, 2011)			13.10%
Tier II Normal Cost (Hired after June 30, 2011)			9.78%
Member and City Rates by Tier for Fiscal Year Beginning July 1, 2017			
Tier	Member Contribution*	City Contribution*	Total Contribution
Hired Prior to July 1, 2006	5.00%	25.93%	30.93%
Hired between July 1, 2006 and June 30, 2011	6.55%	24.38%	30.93%
Hired after June 30, 2011	4.89%	26.04%	30.93%
Blended Across Tiers	5.15%	25.78%	30.93%

Reduce interest on member contributions to 2.0% per year

Normal Cost by Tier			
Aggregate Total Normal Cost			11.26%
Tier I Normal Cost (Hired between July 1, 2006 and June 30, 2011)			12.94%
Tier II Normal Cost (Hired after June 30, 2011)			9.62%
Member and City Rates by Tier for Fiscal Year Beginning July 1, 2017			
Tier	Member Contribution*	City Contribution*	Total Contribution
Hired Prior to July 1, 2006	5.00%	25.76%	30.76%
Hired between July 1, 2006 and June 30, 2011	6.47%	24.29%	30.76%
Hired after June 30, 2011	4.81%	25.95%	30.76%
Blended Across Tiers	5.12%	25.64%	30.76%

In terms of actuarial funding, decreasing the interest rate accrual on employee contribution balances would not have a great effect on the plan.

Ms. Langford clarified that the 2% interest would not be retroactive.

Ms. Thompson confirmed that it would be the interest rate going forward and would not affect current contribution balances.

Chairman Fleming asked if the tendency of vested members to leave their balances with TSRS for the high interest rate have any effect on the unfunded liabilities.

Ms. Thompson answered people who leave the money are no longer contributing to the system and they are being guaranteed 6% interest in an environment where the fund only earned 2.5%.

Chairman Fleming asked if changing the interest rate from 6% to 2% would cause people to move their balances out of the system, and if so would that help or hurt the fund.

Ms. Thompson answered it was fairly neutral.

Mr. Galassi stated the longer a terminated vested member leaves their contribution balance in the system the more costly it becomes to the plan because of that compounding interest. The retirement office receives calls from financial advisors confirming the 6% rate is guaranteed risk free and they advise their clients accordingly. Part of the reasoning for lowering the interest rate to 2% is to encourage vested members to take a refund of their contribution balance plus the compounded 2% instead of leaving it in the system, accumulating interest and withdrawing it at some point in the future or drawing a benefit when eligibility if attained which increases projected unfunded liability.

Chairman Fleming asked if there was a significant amount of money attributed to terminated vested members being left in the system because of the 6% return.

Ms. Thompson said there was about $22.4M in the unfunded liability attributable to terminated vested members, though their account balances would be lower because annuities are more valuable to many people than the account balances. A 2% interest rate may still be an incentive to leave a contribution balance in TSRS given the current economic climate, and would benefit the fund assuming the investment return on the fund is higher than 2%.

Ms. Tenace stated the 6% interest rate could provide incentive in recruiting new talent, which tends to leave after a few years anyway.

Ms. Langford said the Board could expect some of the funds to leave TSRS if the interest rate were changed to 2% because currently 6% is hard for anyone to beat.

Mr. Galassi stated given the current market environment, this was also a fairly simple and reasonable way to whittle down the costs to the plan moving forward. Although the impact to the unfunded liability is marginal it does provide savings that can be used to reduce the unfunded liability.

The Board decided by consensus to consider the 6% interest on member contributions at a future meeting.

4) **TSRS External Legal Counsel - Catherine Langford**
   a. Intent and Summary for TSRS Funding Policy
   b. Arizona Constitution: Pension Provisions Refresher
   c. Fiduciary Training

Catherine Langford said the Funding Policy Intent and Summary had been added in an attempt to make the Funding Policy easier to understand for members. The point of the summary is to give a broad overview of what the Funding Policy does and the glossary defines some of the actuarial terms used. It is important for the Board to consider whether it is an accurate statement of how they are positioned currently and its goals. The Intent and Summary first describes that the System is working within a legal framework, and where the costs come from. The intent of the Funding Policy is to maintain the system in a healthy funded manner, stabilize the contribution rates, use the appropriate assumptions in the calculations, and to allocate costs in a way that keeps future retirees from funding the retirement of current retirees and legacy members.

Chairman Fleming stated the introduction was an easily understood description, however the definition of open amortization in the glossary was not helpful and suggested an illustration of both open and closed amortization to make it easier to understand.

Karen Tenace thought the actuarially determined contribution (ADC) had replaced the annual required contribution (ARC) in the funding policy.

Ms. Langford explained the intention was that the ADC includes non-required elements like the rounding policy.

Leslie Thompson explained it was a deviation from the GASB standard in which ADC replaced ARC but in the Funding Policy more care was taken to define the terms in a way that is specific to the City of Tucson process.

Ms. Tenace expressed concern over presenting definitions different from those provided in the accounting world, and using terms in the Funding Policy different from those used in the Tucson City Code.

Ms. Langford asked for more input because it is difficult to tie the Funding Policy to the City Code which no longer matches GASB. The ARC is still in the Funding Policy because it matches the City Code, but if that is not important for communication purposes it can be changed.

Chairman Fleming asked if the Funding Policy could be written to communicate what the Board is actually doing and use that to modify the City Code.

Ms. Langford answered yes, that would be easier.

John O’Hare asked if the actuarial smoothing and further explanation of normal cost could be added.

Ms. Tenace asked if in the Intent and summary “It is the goal of the Board to increase the funded status of TSRS on an annual basis” should be changed to “on a long term basis”.

Michael Coffey suggested removing “on an annual basis”.

Gordon Weightman suggested changing it to “to be fully funded”.

Ms. Langford directed the Board to turn to page 2 of the document and asked if “As of December 2014, the Board intends to encourage the City to extinguish the TSRS unfunded liability over a 12 – 15 year time period” should be changed to reflect the time line changes resulting from lower than expected investment returns, or if the Board wanted a more generalized statement without a time frame.

Kevin Larson said the statement was good, that it conveyed the Board was going to try to eliminate the unfunded liability within a reasonable time frame.

Ms. Tenace suggested the verbiage “target window of 12 – 15 years” because the Board needs good metrics with a target, and now that the anticipated window of 19 years falls outside of that target it is a flag for the Board to monitor and adapt the rate of return assumption and things of that nature. The wording needs to reflect that the time frame is a target and that the Board will shoot for but not necessarily reach every year.

Chairman Fleming stated the Board’s intent was to eliminate the unfunded liability between 2026 and 2030.

Ms. Thompson expressed preference for the time frame using the target dates rather than a time period.

The Board requested staff present revised Intent and Summary at a future meeting.

Ms. Langford explained the Funding Policy was built with the ARC as the primary driver, and then expenses and then rounding are added to get the ADC. The Funding Policy started as a way for the Board to recommend something in addition to what is required. Now it is a document that states the Board will continue to recommend the City contribute more than the required ARC. The Governance Policy was included for the Board’s records and reference during fiduciary training, there are no suggested changes.

Ms. Langford began the fiduciary training with a discussion of the Arizona Constitution. TSRS and Board actions are governed by the Tucson City Code, Arizona State law, the Arizona Common Law of Trusts, and the Internal Revenue Code. In a legal dispute the Courts may consider the Uniform Management of Public Employee Retirement Systems Act, ERISA, and the Uniform Prudent Investor Act. The pension protections in the Arizona Constitution come from the contract clause and the pension clause. The pension clause states “Membership in a public retirement system is a contractual relationship that is subject to [the Constitution’s contract clause] and public retirement system benefits shall not be diminished or impaired.” This provision was added when the state systems were overfunded, and was designed to prohibit money being taken out of those systems. Now the systems are underfunded and the provision is preventing all of the systems from making changes to improve the actuarial health. Senate Bill (S.B.) 1614 increased employee contributions and decreased employer contributions in ASRS. The change had no effect on the funded status of ASRS. Court held that S.B. 1614 was an unconstitutional impairment of employee’s contractual rights, with no significant and legitimate corresponding public purpose. S.B. 1609 increased contribution rates and changed the calculation of cost of living increases under PSPRS, CORP, and EORP. The Superior Court, Arizona Court of Appeals, and the Arizona Supreme Court held that retirees were fully vested in the right to continue to receive permanent benefit increases calculated in accordance with the method in place at the time of retirement. The Arizona Supreme Court held that potential diminishment cases must be decided under the pension clause of the Constitution as opposed to the contracts clause and rejected argument that EORP must be funded using actuarial methods and assumptions that are generally accepted actuarial standards. Superior Court held that an increase in employee contributions violated the pension clause of the Arizona Constitution. EORP argued that contributions should be changeable when necessary to preserve actuarial soundness of a system, and that the employee contribution rate is not the protected pension benefit, but rather the cost of the protected pension benefit. The Court disagreed and the case is currently pending with the Arizona Supreme Court.

In summary the pension clause reigns supreme over the contracts clause, which provides a very high level of protection for public pension benefits. Employee contribution rates are protected pension benefits. Cost of living adjustment and the related formulas are protected pension benefits. Funded status arguments regarding the actuarial soundness of a plan are not likely to lead to benefit reductions. Cost related arguments regarding excessive taxpayer burden or extraordinary impact on governmental services are not likely to justify benefit reductions. Flexible language in the governing documents, such as the contribution rate language for the TSRS variable tiers, is likely to be respected by the Courts.

The fiduciary role can be summarized as the obligation to administer the plan and to invest the plan assets in the same way that a prudent person familiar with those matters would. Fiduciaries must act as an experienced or knowledgeable expert might act. A settlor is the person or entity who establishes a trust, like Mayor and Council. A fiduciary is the person or entity who is entrusted with the management of the settlor's trust. Fiduciaries have no control over settlor functions and vice versa. Principal fiduciary duties include duty of prudence and duty to exercise due care, duty of loyalty and duty to act impartially in good faith, and duty to comply with applicable laws. Prudent investments maximize return without incurring undue risk. Administrative prudence includes: annual reviews of funded status and future projections, setting actuarial and valuation factors, ongoing monitoring and adjustment of administrative policies and procedures as circumstances evolve, and documentation of decisions, policies, and procedures. The Board owes duty of loyalty to TSRS members and beneficiaries. Fiduciary loyalty is complete and unwavering, and must overcome all other loyalties owed by the Board member. Some conflicts of interest cannot be eliminated and a Board member may have to abstain from voting and/or recuse themselves from deliberations. The Board is responsible for investments and administration, which is more work than the Board can perform. Proper delegations to the Plan Administrator and Staff must be clear and understood. Work performed under delegation must be supervised, and service providers must be monitored for quality of service and reasonable fees on an ongoing basis. Fiduciary responsibility can be shared but not delegated. Recommended practices for Board members include, familiarity with TSRS Code and Board policies, stay informed about key issues facing public retirement systems, build a peer network that will allow them to draw on the experience and knowledge of others, stay informed of policy changes and industry trends, and ongoing training. Effective plan governance improves plan performance and operations; and poor plan governance will be identified in the event of any legal challenges.

Break for lunch at 12:04 PM

Meeting called to order by Chairman Fleming at 1:16PM

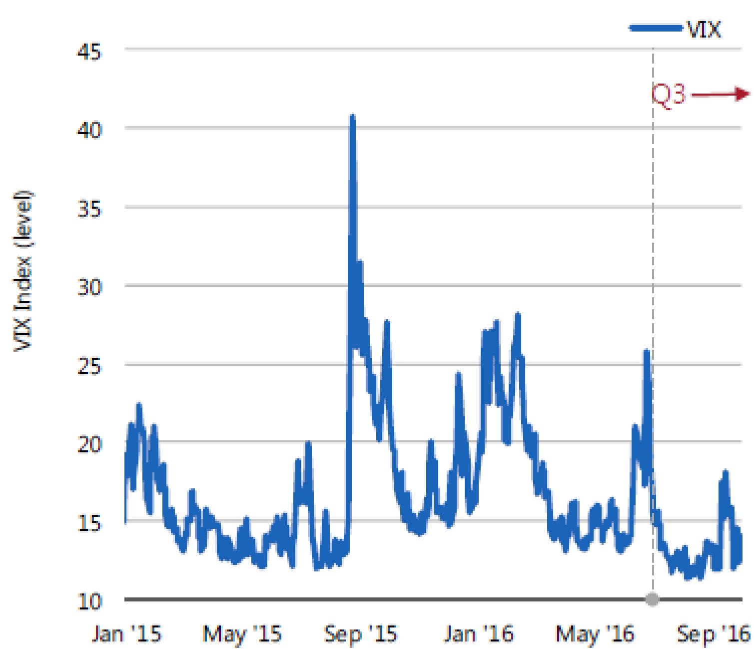
5) **Administrator's Report**
   a) Report on Office Operations and Key Facts and Figures From the Past Month
   b) Operational Highlight – Board Retreat Planning

Neil Galassi explained in the month of September the retirement office reported 8 retirements on the ratification report. Of those 8, 5 were normal retirements, 1 was a beneficiary, and the retirement benefit payment was finalized for 2 August retirees. There were a total of 2,956 pension payments made. Staff processed 12 refunds and rollovers in September with an approximate total of $219,436.20. National Retirement Security Week was October 16th through the 22nd. Events were held with ICMA-RC, the City's Deferred Compensation Plan provider. Staff and ICMA-RC representatives worked together to plan and conduct the events held on October 18, 19, and 20 at various City locations. The events lasted approximately 3 hours and were held at City Hall, the Community Development Campus, and the Hardesty Multi-Service Center. Over those 3 days staff met with more than 60 active employees. TSRS Staff provided benefit estimates and general information on TSRS, and ICMA-RC representatives met with those members to provide information and advice regarding the deferred compensation plans offered to City employees. The GASB 67/68 report was prepared by the GRS actuary and reviewed by TSRS staff. The GASB report is the basis for the TSRS and City of Tucson CAFRs. The portfolio had gains that were primarily resulting from an increase in the valuation of the fund's real estate assets. The main reason for the increase in valuation was a capital call of $6M to the JP Morgan Income and Growth Fund at the beginning of October. To fund the call $2M was taken from the T Rowe Price large cap growth strategy, $3M was taken from the BlackRock large cap value strategy, and $1M was taken from the TSRS liquidity fund.

The Board retreat is of great importance because it provides an opportunity for the Board to receive in-depth education on topics that may lead to important future decisions. Planning the event begins with a review of previous agendas, materials, and minutes from the meetings held since the 2015 retreat to determine prudent topics. There is also a standing item for each retreat, the acceptance of the actuarial valuation report and recommendation of corresponding contributions rates. As a result it is crucial to ensure we provide the actuary with everything necessary to compile the actuary report in a timely manner. Callan was consulted to determine the most appropriate topic for their presentation. At the August 25, 2016 Board meeting Callan recommended Fixed Income would be a prudent topic for the retreat. Because PIMCO holds TSRS investments in both equity and fixed income they could also be utilized to educate the Board on those strategies, and discussions were held over the course of several months leading up to the retreat to determine the nature of their presentation. Outside legal counsel is also consulted on potential educational topics to be addressed at the retreat. The space was reserved more than 4 months prior to the retreat, so the planning occurs over the course of the entire year. After the retreat, based on the Board's acceptance of the recommended contribution rates an action item is prepared for Mayor and Council to adopt them for the following fiscal year. This year staff anticipates the recommended contribution rates will go before Mayor and Council in November.

6) **PIMCO Fund Manager–Matt Clark & Loren Sageser**
   a. PIMCO Update
   b. Economic Outlook
   c. Review of StockPlus Portfolio
   d. Review of Diversified Income Portfolio

Matt Clark introduced himself as the Board's primary contact at PIMCO. PIMCO manages a fixed income strategy in which TSRS has $126M invested, and a stock enhanced passive equity strategy in which TSRS has roughly $29M invested. Most of the presentation will focus on the fixed income strategy. Market volatility remained relatively low after Brexit as illustrated in the following graph.



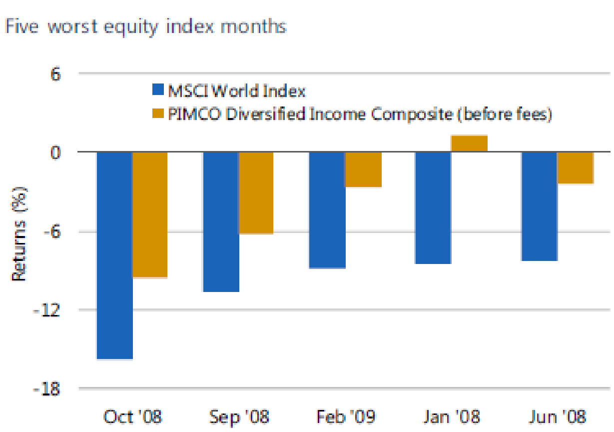
The VIX index measures the volatility implied in equity option prices; in other words it measures the volatility that market participants expect going forward.

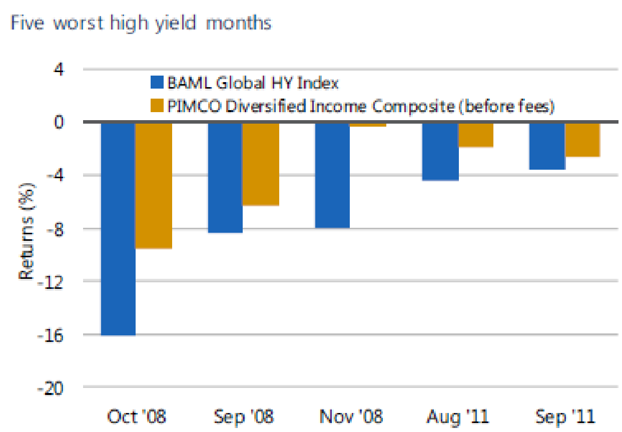
Michael Coffey asked how the VIX index was constructed.

Gordon Weightman answered it was a collection of futures contracts on the S&P 500.

Mr. Clark stated generally when the VIX index is lower, equity markets and credit strategies do better.

Loren Sageser said the diversified income strategy seeks to provide investors with flexible and highly tactical access to the full global opportunity set. It seeks to provide investors with higher returns relative to high grade credit, but with less volatility than a high yield strategy. A diversified, risk-conscious approach targeting volatility levels nearly one-third lower than high yield bonds provides downside protection. It provides active management across corporate, emerging market, real estate, municipal and consumer credit markets, leveraging PIMCO's broad credit resources. It also complements TSRS's passive Barclays Aggregate exposure. When historical default rate years like 2002 and 2009 occurred the strategy typically had a default rate of 2% to 3.5% as compared to the high yield bond market default rate of around 10%. This is less relevant in the current environment where fundamentals are fairly strong and default rates are low. The following tables illustrate how the strategy performs when the markets are down and the strategy is trying to preserve capital.





Neil Galassi asked how PIMCO was managing strategy risk by using derivatives.

Mr. Sageser answered by managing interest rate risk and liquidity in the credit markets.

Mr. Clark clarified PIMCO does not use instruments like these for the sake of using them. They consider the investment decision and the best way to express that decision, sometimes it is in fiscal securities, and sometimes it is liquidity or ease of access to the market. Sometimes it makes the most sense to use the synthetic or derivative instrument, even though derivatives have a patina of risk associated with them because during the financial crisis credit derivative instruments performed better than their fiscal counterparts.

Gordon Weightman stated there is a recovery element to credit defaults so investors typically get some of their money back.

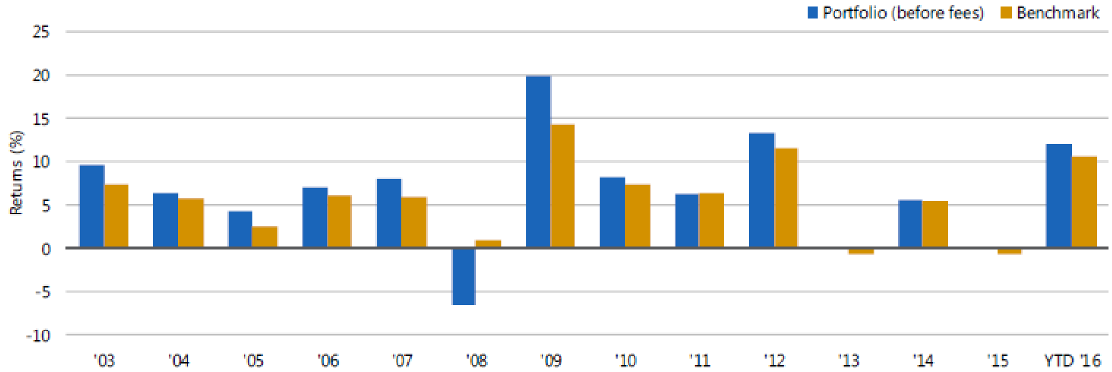
Mr. Sageser agreed, historically on average, after default, high yield companies will pay 50 cents on the dollar in a worst case scenario. The recovery rates offered depend on the type of assets the company has, for example an oil company will pay a higher recovery rate than a telecom company because the oil company has hard assets. He then summarized the team setup and process for the strategy.

Mr. Sageser discussed the information in the following chart and table.

Tucson Supplemental Retirement System

Market value as of Sep '16	$	126,749,571

Performance



	S.I. 30 Jun '02	10 yrs.	5 yrs.	3 yrs.	1 yr.	6 mos.	3 mos.	YTD 30 Sep '16
Before fees (%)	6.8	6.6	6.4	6.2	12.6	8.4	3.6	12.0
After fees (%)	6.3	6.2	5.8	5.7	12.0	8.2	3.4	11.6
Benchmark (%)	6.1	6.2	5.5	5.5	10.3	6.8	2.8	10.6

They try to manage the portfolio so that it will be robust through a variety of different scenarios and credit spreads. There is a high quality tilt in the portfolio currently and it can move towards higher quality as the situation warrants. The portfolio is overweight in higher quality bonds in the investment grade side of the credit markets. It is more focused on financials currently, which is a contrarian view at the moment given the headlines about regulators forcing banks to de-risk. This is not a bad thing for bond holders. High yield has rallied this year, largely due to the energy markets. PIMCO reduced their energy exposure and reallocated into pipeline companies, which have hard assets and are less sensitive to commodity prices, and consumer lenders. The portfolio has been underweight in emerging markets from a risk standpoint. There is a lot of variety in emerging markets but there is also a lot of volatility and that is not the kind of risk they are searching for because they are trying to make credit decisions, not decisions on election outcomes and oil prices. The portfolio is also overweight in the securitized and mortgage backed side because it is a source of diversification and offsets credit spreads. They try to be tactical with the realization that if yields were to move up again in the next six months they would have the flexibility to increase exposures when it makes sense to do so.

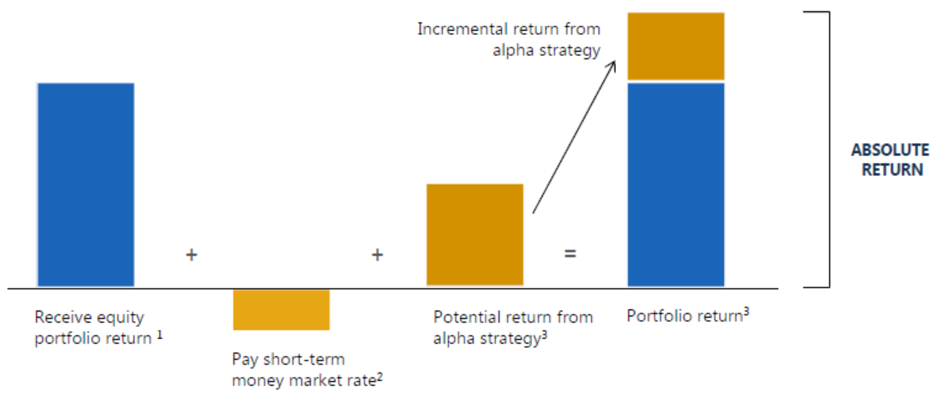
Mr. Clark said this strategy was a nice fit for the Board's fixed income allocation because the TSRS portfolio has a large allocation to passive management with more exposure to traditional treasury securities and investment rate corporate bonds. When blended together they tend to offset each other when the market favors one over the other.

Ms. Tenace said she had read in the Wall Street Journal about oil companies and pending law suits and asked how that has affected the portfolio.

Mr. Sageser explained they hold some energy exposure but it tends to be more focused on infrastructure and to a lesser extent emerging markets. At the end of the day the oil companies do have an asset and when the companies go into default commodity prices tend to recover a little bit. Their strategy is to wait it out for a little bit to see if it stabilizes. A lot of the companies are just not configured for $40 a barrel oil prices.

Mr. Clark discussed the StocksPlus strategy which aims to outperform market by transporting extra return from independent, structurally based sources. They own full equity market exposure through forward instruments, such as futures, and then enhance equity returns with a bond strategy designed to add alpha. The way the strategy is run is illustrated in the following chart.

HYPOTHETICAL EXAMPLE



Mr. Weightman asked about the duration of the fixed income fees.

Mr. Clark answered around 1 year.

Mr. Weightman advised it was important to consider this strategy in terms of risk because there is equity and bonds in one strategy, so they have some diversifying characteristics and it is not just the risk of one and the risk of another as well. The expectation is that there is slightly more risk than in a pure S&P 500 index fund.

Mr. Clark explained the Board should expect, in any given year the returns will deviate between 50 to 150 basis points, and if the markets are really upset it can get wider. He feels 50 to 200 basis points is a good range to expect for passive equity exposure. The bond market has been doing relatively well this year and outperformed the cash market, which is the financing cost. He then discussed the information in the following table.

	S.I. 30 Sep '87	10 yrs.	5 yrs.	3 yrs.	1 yr.	9 mos.	6 mos.	3 mos.
Before fees (%)	10.5	9.3	18.8	11.9	16.4	8.6	7.6	4.6
After fees (%)	10.1	8.6	18.3	11.6	16.3	8.5	7.5	4.5
Benchmark (%)	9.2	7.2	16.4	11.2	15.4	7.8	6.4	3.9

PIMCO is not picking stocks, they are just trying to manage a high quality bond portfolio in a way that offsets the costs of replicating the equity market.

Mr. Clark went on to discuss the economic outlook. When looking to the future PIMCO considers 3 things, productivity, politics, and policy. Low productivity has weighed on potential growth, but any recovery could bolster the outlook. Political events could materially affect the global landscape over the next year. Less drag from fiscal policy could ease the burden of monetary policy in boosting growth. Ongoing developments in politics, fiscal and monetary policy, and productivity will be key drivers of the outlook ahead.

7) Education Session - Callan Associates - Gordon Weightman & John Pirone

a) Fixed Income Portfolio Composition
b) Black Swan Events

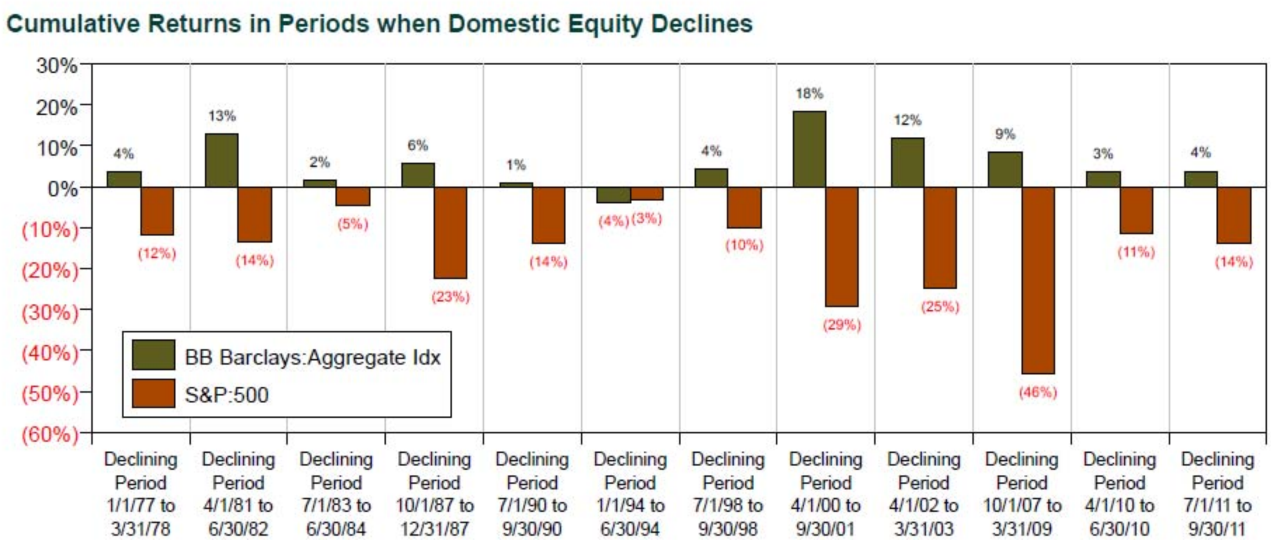
John Pirone said one of the primary risks of a bond portfolio is interest rate sensitivity. Bond prices have an inverse relationship with interest rates. If interest rates rise a bond's price must fall to keep the yield constant. Duration is expressed as a number of years and tells you how much a bond's price will change given a 1% change in interest rates. For example, if interest rates rise 1%, the price of a bond with a duration of 5 years will fall by 5%.

Gordon Weightman explained there is a yield offset. The yield of the index is around 2% so in that situation the bond would be down 3.5%. The one of the concerns now is there is not a lot of yield to offset rising rates.

Mr. Pirone said bond managers seek to add value with 3 basic levels, duration management, sector rotation, and issue selection. PIMCO said they tend not to take a lot of duration bets and they try to add value through other mechanisms, which means sector rotation and issue selection.

Mr. Weightman stated duration has a larger effect on returns and risk than sector rotation and issue selection, so if a manager makes a bad duration decision it will take a lot of good sector rotation and issue selection decisions for a long time to make up for it.

Mr. Pirone explained within a total return strategy the role of fixed income is to serve as a low-risk, diversifying anchor against which an investor takes on riskier investments in assets such as equity as shown in the following chart.



Mr. Weightman discussed that a lot of managers have developed new products to try and achieve the low risk of bonds outside of the bond market, because bonds are so expensive and low yielding right now. Historically bonds are the only way to manage that risk.

Mr. Pirone elaborated that those strategies have been developed within the last 5 to 7 years and have not been tested through a period of significant stress.

Mr. Weightman explained the chart above also speaks to the topic of black swan events. Many have declared October 2007 to March 2009 to be a black swan event for equities. Diversification was key during that period of time, investors who held bonds in a meaningful way were able to offset a lot of the decline. TSRS did that and was only down around 20%.

Neil Galassi said Board members had asked if they needed to develop an action plan for black swan events, and confirmed diversification was leading them where they wanted to be and that a formal action plan for black swan events was not necessary.

Mr. Weightman answered that when the asset liability study was performed the Board advised Callan of their feelings on risk resulting in the current asset allocation with 27% in fixed income. Diversification is really the only defense against a black swan event.

John O'Hare asked about the likelihood of the Board's current asset allocation reaching the expected rate of return of 7.25%.

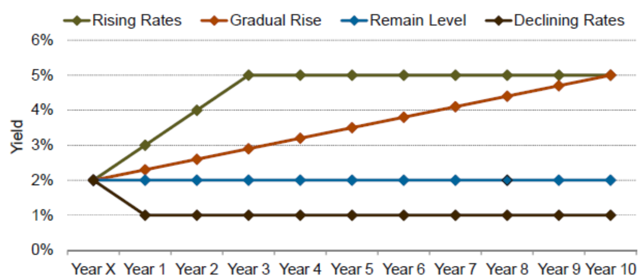
Mr. Weightman answered based on Callan's capital market expectations, which are lower than they have been historically; it is around 40% over a 10 year period.

Mr. O'Hare asked whether the Board should consider alternative investments.

Mr. Weightman stated the problem with alternative investments is the liquidity required by the plan.

Mr. O'Hare asked about the action plan if a return of 7.25% was not reached.

Mr. Weightman answered one of the worst things investors can do is react to short term events. Callan reviews the asset allocation annually, and every 5 years an asset liability study is performed to determine whether the Board needs to consider changing the risk profile. In order to achieve a return of 7.25% in the current market, the asset allocation would have to be 90% equities and Callan would never recommend that for TSRS. The best thing for the pension plan would be a one-time significant rise in interest rates as a prolonged period of low rates is not a good environment for long-term investors.



	1-Year*	3-Year*	10-Year*
Rising Rates	-2.60%	-1.70%	3.00%
Gradually Rise	0.60%	0.90%	1.90%
Remain Level	2.00%	2.00%	2.00%
Declining Rates	6.60%	2.80%	1.50%

Mr. Pirone explained correlation measures the degree to which 2 variables, such as asset classes, move in relation to each other. The best correlation is -1, when the returns of 2 investments move in opposite directions achieving a maximum reduction in volatility. The worst correlation is +1, when the returns are completely synchronized and there is no diversification or volatility reduction. High yield, emerging market debt, and investment grade credit can be highly correlated with stocks. Mortgages and governments have exhibited 0 or negative correlations with equity.

Mr. Weightman explained TSRS was underweight in governments compared to the Barclays Aggregate and is invested in high yield and emerging market debt instead resulting in a riskier portfolio.

Looking at the TSRS bond portfolio, the Board has gotten slightly higher returns with a little less risk. The Board needs to be mindful of whether they want more exposure to risky segments during down periods. The following table shows that diversification limited the Board's losses when the equity market went south in 2008.

Returns
for Calendar Years
10 Years Ended June 30, 2016

	2 Qtrs. 2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
BB Barclays:Aggregate Idx	5.31	0.55	5.97	(2.02)	4.21	7.84	6.54	5.93	5.24	6.97
PIMCO Custom Benchmark	7.65	0.39	6.33	(1.76)	10.97	7.74	10.04	22.78	(5.58)	5.39
EM Debt	12.29	1.82	6.15	(8.32)	18.04	9.20	11.83	25.95	(9.70)	6.45
High Yield	7.72	(1.13)	5.40	4.95	14.31	6.90	13.94	45.93	(17.26)	3.05
Investment Grade Credit	7.54	(0.77)	7.53	(2.01)	9.37	8.35	8.47	16.04	(3.08)	5.11
Mortgages	3.10	1.51	6.08	(1.41)	2.59	6.23	5.37	5.89	8.34	6.90
U.S. Government	5.69	(0.39)	6.14	(2.71)	4.90	6.67	5.02	2.48	8.51	7.96
TSRS Bond Portfolio	6.78	0.46	6.20	(1.85)	8.44	7.79	8.75	16.30	(1.64)	5.98

Mr. Weightman said it would be helpful if the Board would answer the following questions so that Callan had the information when putting together alternative fixed income portfolio structures for consideration. What is the role of fixed income in the TSRS portfolio? How much risk is the Board willing to take in fixed income? Is there a place for active and passive management? Does the Board favor one approach?

Chairman Fleming stated he would be reluctant to seek higher yields in the low return environment, was reluctant to add more risk to the portfolio, and felt skeptical as to whether active managers consistently add value.

Karen Tenace asked about the alternative fixed income portfolio structures Callan would be presenting at a future meeting.

Mr. Pirone explained the different structures would provide differing amounts of risk and the returns they project for them. They may include stress tests.

Ms. Tenace asked if they were asking these questions because they anticipate rates increasing and want to protect against that.

Mr. Pirone answered TSRS has a 27% allocation to fixed income; 17% of that is with PIMCO, half of which is outside the Barclays Aggregate. As a result the plan is not acting like it has a 27% allocation to fixed income, it is performing like it has a 23% allocation, and Callan wants to confirm that the Board feels comfortable with that incremental risk.

8) Administrative Discussions

a) Potential Formation of an Advisory Committee

Chairman Fleming summarized his experience with an Advisory Committee in the past. He did not find the committee to be a useful resource for the Board, there had been issues with filling the positions, and there had been issues with the advisors attending the Board meetings. The addition of Kevin Larson, given his knowledge and experience has been more helpful to the Board than the Advisory Committee was.

John O'Hare disagreed. The Advisory Committee would be a good resource when combined with the consultant, because obtaining another opinion could prove to be advantageous. The committee would also serve as a great resource for new Board members, and would help to prevent loss of knowledge as experienced Board members rotate out or separate from the City. An Advisory Committee would also help to educate the Board so that members could ask more knowledgeable questions when investment managers are present at meetings. While the addition of Kevin Larson to the Board has been very beneficial, previous City Manager appointees have not been as knowledgeable and experienced.

Neil Galassi stated the value expressed by Mr. O'Hare needed to be present because it would be a formal body and as such would require staff time to keep them in compliance with the Arizona Open Meeting Law. The concern here is that staff time is a limited resource.

Kevin Larson suggested the reason the previous committee, as remembered by Chairman Fleming, was so ineffective was because they had no investment in the Board meetings because they were not a part of the decision process.

Michael Coffey stated that the purpose could be served by inviting speakers to educate the Board.

Chairman Fleming, Karen Tenace, Kevin Larson, and Mr. Galassi expressed their support for Mr. Coffey's idea and suggested the types of topics they would like to receive further education on.

Chairman Fleming asked Mr. Galassi to find an appropriate outside speaker from academia or industry to give the idea a try. If the Board has any suggestions on speakers let staff know.

Gordon Weightman suggested leveraging the relationship the Board has with its investment managers, and asking them to speak to the Board on a given topic because they have a vast amount of resources available to them.

9) Articles for Board Member Education / Discussion
   a) J.P. Morgan: An Election of Extremes – But a Government of Moderation
   b) The Wall Street Journal: Is the Bond Market in a Bubble?

10) Call to Audience

11) Future Agenda Items
- *Discussion of 6% interest rate for employee contributions.*
- *Funding Policy Intent and Summary & Glossary*

Adjournment – 3:27PM

Approved:

____________________	________	____________________	________
Robert Fleming Chairman of the Board	Date	Neil S. Galassi Plan Administrator	Date

Service & Disability Retirements, End of Service Entrants for TSRS Board of Trustees Ratification

10/11/16 - 11/10/16 - October 2016

Name of Applicant	Department	Type	Effective Date	Date of Birth	Age	Credited Service	Present Value	Member's Accumulated Contributions	AFC	Option	Pension
Fredrick H Gray Jr.	Parks and Recreation	Normal Retirement	10/4/2016	2/22/1953	63.62	17.5339	519,657.81	252,828.23	10,777.87	Single Life	4,251.99
Doris L Rentschler	Finance	Normal Retirement	10/4/2016	9/17/1965	51.05	32.2095	705,590.43	280,050.46	6,472.27	J&S 100	4,423.55
James R Schnormeier	Parks and Recreation	Normal Retirement	10/15/2016	7/21/1954	62.23	7.4928	142,196.09	61,714.51	6,649.07	J&S 100	1,003.68
**Midge Irwin	Parks and Recreation	Normal Retirement	11/2/2016	7/30/1957	59.26	31.96	**	190,554.11	6,181.07	Single Life	4,444.74
									30,080.28		14,123.96
				Averages	15.74		$ 455,814.78	196,286.83	7,520.07		3,530.99

** Due to the timing of employee leave payout processing, the Retirement Office did not have the related final amounts in time to finalize the benefit payment for the first month of retirement for these employees. In the interest of providing these benefits timely to members, the pension payment presented for ratification is an estimated payment based on all available information. In the next month's meeting the final amounts will be reported on this report to the Board for the effected members

Comparison of Monthly Pension Payments - Beginning of FY 2016 to Current Monthly Pension Payments

	Plan Year beginning 07/01/2015 (*from GRS annual valuation)	Monthly	Annual	October 2016 Pension Payroll		Annualized	Annual change since July 1, 2015	% change
Service Pensions	2,305	5,007,097.17	60,085,166	2,459	5,395,268	64,743,214.08	$ 4,658,048.08	7.75%
Disability Pensions	160	174,259	2,091,109	154	172,172	2,066,066.64	$ (25,042.36)	-1.20%
Survivor Pensions	344	298,979	3,587,750	347	348,096	4,177,157.76	$ 589,407.76	16.43%
	2,809	5,480,335	65,764,025	2,960	5,915,537	70,986,438	$ 5,222,413.48	7.94%
				49	**$ 137,603**			
				(net) change from previous month				

S:\treasdiv\tsrs\retirement\facts&figures\F&F 15-16.xls prior month 2,911 $ 5,777,933.08

City of Tucson
Budget vs Actual Expenses
Through: October, 2017
For Fiscal Year 2017

Parameter Page

Parameters and Prompts

Fiscal Year	2017
Accounting Period	4
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: October, 2017
For Fiscal Year 2017

Department 900 - TUCSON SUPPL RETIREMENT SYSTEM
Fund 072 - TUCSON SUPP RETIREMENT SYSTEM
Unit 9001 - Normal Retiree Benefit

Object	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	5,391,785.83	5,391,785.83	0.00	21,426,662.73	21,426,662.73	68,300,000	46,873,337.27	68.63 %
Total for 100 - PAYROLL CHGS	**0.00**	**5,391,785.83**	**5,391,785.83**	**0.00**	**21,426,662.73**	**21,426,662.73**	**68,300,000**	**46,873,337.27**	**68.63 %**
Total for Unit 9001 - Normal Retiree Benefit	**0.00**	**5,391,785.83**	**5,391,785.83**	**0.00**	**21,426,662.73**	**21,426,662.73**	**68,300,000**	**46,873,337.27**	**68.63 %**

Report ID : FIN-COT-BA-0001
Run Date : 11/09/2016
Run Time : 12:13 PM

City of Tucson
Budget vs Actual Expenses
Through: October, 2017
For Fiscal Year 2017

Department 900 - TUCSON SUPPL RETIREMENT SYSTEM
Fund 072 - TUCSON SUPP RETIREMENT SYSTEM
Unit 9003 - Normal Retiree Beneficiary Benefit

Object	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	319,444.47	319,444.47	0.00	1,246,958.18	1,246,958.18	3,100,000	1,853,041.82	59.78 %
Total for 100 - PAYROLL CHGS	**0.00**	**319,444.47**	**319,444.47**	**0.00**	**1,246,958.18**	**1,246,958.18**	**3,100,000**	**1,853,041.82**	**59.78 %**
Total for Unit 9003 - Normal Retiree Beneficiary Benefi	**0.00**	**319,444.47**	**319,444.47**	**0.00**	**1,246,958.18**	**1,246,958.18**	**3,100,000**	**1,853,041.82**	**59.78 %**

City of Tucson
Budget vs Actual Expenses
Through: October, 2017
For Fiscal Year 2017

Department 900 - TUCSON SUPPL RETIREMENT SYSTEM

Fund 072 - TUCSON SUPP RETIREMENT SYSTEM

Unit 9020 - Disability Retiree Benefit

Object	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	172,665.16	172,665.16	0.00	683,489.63	683,489.63	1,975,000	1,291,510.37	65.39 %
Total for 100 - PAYROLL CHGS	**0.00**	**172,665.16**	**172,665.16**	**0.00**	**683,489.63**	**683,489.63**	**1,975,000**	**1,291,510.37**	**65.39 %**
Total for Unit 9020 - Disability Retiree Benefit	**0.00**	**172,665.16**	**172,665.16**	**0.00**	**683,489.63**	**683,489.63**	**1,975,000**	**1,291,510.37**	**65.39 %**

City of Tucson
Budget vs Actual Expenses
Through: October, 2017
For Fiscal Year 2017

Department 900 - TUCSON SUPPL RETIREMENT SYSTEM
Fund 072 - TUCSON SUPP RETIREMENT SYSTEM
Unit 9021 - Pension Fund Administration

Object	Current Period Encumbrance	Current Period Expenditure	Current Total Obligations	YTD Encumbrance	YTD Expenditure	YTD Total Obligations	Current Budgeted Amount	Unobligated Budget Balance	Percent
101 - SALARIES & WAGES FOR PERMANENT EMPLOYEES	0.00	26,043.20	26,043.20	0.00	74,413.41	74,413.41	230,100	155,686.59	67.66 %
103 - OVERTIME WAGES	0.00	0.00	0.00	0.00	344.22	344.22	0	(344.22)	0.00%
108 - DOWNTOWN ALLOWANCE & DISCOUNTED TRANSIT PASSES	0.00	138.48	138.48	0.00	375.88	375.88	1,200	824.12	68.68 %
113 - TSRS PENSION CONTRIBUTION	0.00	7,343.38	7,343.38	0.00	20,546.56	20,546.56	63,280	42,733.44	67.53 %
114 - FICA (SOCIAL SECURITY)	0.00	2,046.64	2,046.64	0.00	5,760.65	5,760.65	17,600	11,839.35	67.27 %
115 - WORKERS COMPENSATION INSURANCE	0.00	377.95	377.95	0.00	1,024.77	1,024.77	6,440	5,415.23	84.09 %
116 - GROUP PLAN INSURANCE	0.00	1,476.27	1,476.27	0.00	5,148.26	5,148.26	32,760	27,611.74	84.28 %
117 - STATE UNEMPLOYMENT	0.00	34.68	34.68	0.00	95.17	95.17	300	204.83	68.28 %
196 - INTERDEPARTMENTAL LABOR	0.00	0.00	0.00	0.00	0.00	0.00	156,000	156,000.00	100.00 %
Total for 100 - PAYROLL CHGS	**0.00**	**37,460.60**	**37,460.60**	**0.00**	**107,708.92**	**107,708.92**	**507,680**	**399,971.08**	**78.78 %**
202 - TRAVEL	0.00	0.00	0.00	0.00	0.00	0.00	4,000	4,000.00	100.00 %
204 - TRAINING	0.00	0.00	0.00	0.00	315.00	315.00	14,000	13,685.00	97.75 %
205 - PARKING & SHUTTLE SERVICE	0.00	0.00	0.00	0.00	0.00	0.00	220	220.00	100.00 %
212 - CONSULTANTS AND SURVEYS	0.00	2,050.00	2,050.00	0.00	2,050.00	2,050.00	50,000	47,950.00	95.90 %
213 - LEGAL	0.00	5,413.50	5,413.50	0.00	5,413.50	5,413.50	50,000	44,586.50	89.17 %
215 - AUDITING AND BANK SERVICES	(15,000.00)	15,000.00	0.00	7,300.00	17,000.00	24,300.00	25,000	700.00	2.80 %
219 - MISCELLANEOUS PROFESSIONAL SERVICES	0.00	1,121,428.04	1,121,428.04	0.00	936,411.89	936,411.89	4,126,850	3,190,438.11	77.31 %
221 - INSUR-PUBLIC LIABILITY	0.00	432.86	432.86	0.00	1,211.51	1,211.51	32,100	30,888.49	96.23 %

City of Tucson
Budget vs Actual Expenses
Through: October, 2017
For Fiscal Year 2017

Department 900 - TUCSON SUPPL RETIREMENT SYSTEM
Fund 072 - TUCSON SUPP RETIREMENT SYSTEM
Unit 9021 - Pension Fund Administration

Object	Current Period Encumbrance	Current Period Expenditure	Current Total Obligations	YTD Encumbrance	YTD Expenditure	YTD Total Obligations	Current Budgeted Amount	Unobligated Budget Balance	Percent
228 - HAZARDOUS WASTE INSURANCE	0.00	84.03	84.03	0.00	236.31	236.31	0	(236.31)	0.00%
232 - R&M MACHINERY & EQUIPMENT	0.00	0.00	0.00	0.00	0.00	0.00	1,200	1,200.00	100.00 %
235 - MINOR REHAB, REMODEL & ALTER	0.00	293.00	293.00	0.00	407.00	407.00	1,550	1,143.00	73.74 %
245 - TELEPHONE	0.00	0.00	0.00	0.00	420.00	420.00	1,200	780.00	65.00 %
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	2,432.25	2,432.25	0.00	2,432.25	2,432.25	2,560	127.75	4.99 %
284 - MEMBERSHIPS AND SUBSCRIPTIONS	0.00	0.00	0.00	0.00	458.94	458.94	1,500	1,041.06	69.40 %
298 - PLANNED BUILDING MAINTENANCE	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00%
Total for 200 - PROF CHARGES	**(15,000.00)**	**1,147,133.68**	**1,132,133.68**	**7,300.00**	**966,356.40**	**973,656.40**	**4,351,180**	**3,377,523.60**	**77.62 %**
311 - OFFICE SUPPLIES	0.00	318.20	318.20	0.00	1,075.68	1,075.68	9,000	7,924.32	88.05 %
312 - PRINTING,PHOTOGRAPHY,REPRODUCTION	0.00	137.95	137.95	0.00	621.05	621.05	9,000	8,378.95	93.10 %
314 - POSTAGE	0.00	3,063.65	3,063.65	0.00	4,496.72	4,496.72	12,000	7,503.28	62.53 %
317 - COMPUTER SOFTWARE < $100,000	0.00	314.06	314.06	0.00	314.06	314.06	550	235.94	42.90 %
341 - BOOK, PERIODICALS AND RECORDS	0.00	0.00	0.00	0.00	0.00	0.00	250	250.00	100.00 %
345 - FURNISHINGS, EQUIPMENT AND TOOLS < $5,000	0.00	0.00	0.00	0.00	0.00	0.00	4,700	4,700.00	100.00 %
346 - COMPUTER EQUIPMENT < $5,000	0.00	0.00	0.00	0.00	0.00	0.00	650	650.00	100.00 %
Total for 300 - SUPPLIES	**0.00**	**3,833.86**	**3,833.86**	**0.00**	**6,507.51**	**6,507.51**	**36,150**	**29,642.49**	**82.00 %**
455 - COMPUTER EQ >= $5,000	0.00	0.00	0.00	0.00	0.00	0.00	2,700	2,700.00	100.00 %

Report ID : FIN-COT-BA-0001
Run Date : 11/09/2016
Run Time : 12:13 PM

City of Tucson
Budget vs Actual Expenses
Through: October, 2017
For Fiscal Year 2017

Department 900 - TUCSON SUPPL RETIREMENT SYSTEM
Fund 072 - TUCSON SUPP RETIREMENT SYSTEM
Unit 9021 - Pension Fund Administration

Object	Current Period Encumbrance	Current Period Expenditure	Current Total Obligations	YTD Encumbrance	YTD Expenditure	YTD Total Obligations	Current Budgeted Amount	Unobligated Budget Balance	Percent
Total for 400 - CAPITAL OUT	0.00	0.00	0.00	0.00	0.00	0.00	2,700	2,700.00	100.00 %
Total for Unit 9021 - Pension Fund Administration	(15,000.00)	1,188,428.14	1,173,428.14	7,300.00	1,080,572.83	1,087,872.83	4,897,710	3,809,837.17	77.79 %

Report ID : FIN-COT-BA-0001
Run Date : 11/09/2016
Run Time : 12:13 PM

City of Tucson
Budget vs Actual Expenses
Through: October, 2017
For Fiscal Year 2017

Department 900 - TUCSON SUPPL RETIREMENT SYSTEM
Fund 072 - TUCSON SUPP RETIREMENT SYSTEM
Unit 9022 - Disability Retiree Beneficiary Benefit

Object	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	30,418.52	30,418.52	0.00	121,674.08	121,674.08	350,000	228,325.92	65.24 %
Total for 100 - PAYROLL CHGS	**0.00**	**30,418.52**	**30,418.52**	**0.00**	**121,674.08**	**121,674.08**	**350,000**	**228,325.92**	**65.24 %**
Total for Unit 9022 - Disability Retiree Beneficiary Ben	**0.00**	**30,418.52**	**30,418.52**	**0.00**	**121,674.08**	**121,674.08**	**350,000**	**228,325.92**	**65.24 %**

City of Tucson
Budget vs Actual Expenses
Through: October, 2017
For Fiscal Year 2017

Department 900 - TUCSON SUPPL RETIREMENT SYSTEM

Fund 072 - TUCSON SUPP RETIREMENT SYSTEM

Unit 9023 - ACTIVE MEMBER REFUNDS-CONTRBS

Object	Current Period Encumbrance	Current Period Expenditure	Current Total Obligations	YTD Encumbrance	YTD Expenditure	YTD Total Obligations	Current Budgeted Amount	Unobligated Budget Balance	Percent
186 - TSRS REFUNDS	0.00	93,747.69	93,747.69	0.00	736,700.19	736,700.19	2,400,000	1,663,299.81	69.30 %
Total for 100 - PAYROLL CHGS	**0.00**	**93,747.69**	**93,747.69**	**0.00**	**736,700.19**	**736,700.19**	**2,400,000**	**1,663,299.81**	**69.30 %**
Total for Unit 9023 - ACTIVE MEMBER REFUNDS-CON	**0.00**	**93,747.69**	**93,747.69**	**0.00**	**736,700.19**	**736,700.19**	**2,400,000**	**1,663,299.81**	**69.30 %**

City of Tucson
Budget vs Actual Expenses
Through: October, 2017
For Fiscal Year 2017

Department 900 - TUCSON SUPPL RETIREMENT SYSTEM
Fund 072 - TUCSON SUPP RETIREMENT SYSTEM
Unit 9025 - INTEREST ON REFUNDS

Object	Current Period Encumbrance	Current Period Expenditure	Current Total Obligations	YTD Encumbrance	YTD Expenditure	YTD Total Obligations	Current Budgeted Amount	Unobligated Budget Balance	Percent
186 - TSRS REFUNDS	0.00	1,724.65	1,724.65	0.00	6,213.29	6,213.29	50,000	43,786.71	87.57 %
Total for 100 - PAYROLL CHGS	**0.00**	**1,724.65**	**1,724.65**	**0.00**	**6,213.29**	**6,213.29**	**50,000**	**43,786.71**	**87.57 %**
Total for Unit 9025 - INTEREST ON REFUNDS	**0.00**	**1,724.65**	**1,724.65**	**0.00**	**6,213.29**	**6,213.29**	**50,000**	**43,786.71**	**87.57 %**

City of Tucson
Budget vs Actual Expenses
Through: October, 2017
For Fiscal Year 2017

Department 900 - TUCSON SUPPL RETIREMENT SYSTEM
Fund 072 - TUCSON SUPP RETIREMENT SYSTEM
Unit 9026 - DWE SYSTEM BENEFIT PAYMENT

Object	Current Period Encumbrance	Current Period Expenditure	Current Total Obligations	YTD Encumbrance	YTD Expenditure	YTD Total Obligations	Current Budgeted Amount	Unobligated Budget Balance	Percent
186 - TSRS REFUNDS	0.00	0.00	0.00	0.00	0.00	0.00	200,000	200,000.00	100.00 %
Total for 100 - PAYROLL CHGS	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**200,000**	**200,000.00**	**100.00 %**
Total for Unit 9026 - DWE SYSTEM BENEFIT PAYMEN	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**200,000**	**200,000.00**	**100.00 %**
Total for Fund 072 - TUCSON SUPP RETIREMENT SYS	**(15,000.00)**	**7,198,214.46**	**7,183,214.46**	**7,300.00**	**25,302,270.93**	**25,309,570.93**	**81,272,710**	**55,963,139.07**	**68.86 %**
Total for Department 900 - TUCSON SUPPL RETIREME	**(15,000.00)**	**7,198,214.46**	**7,183,214.46**	**7,300.00**	**25,302,270.93**	**25,309,570.93**	**81,272,710**	**55,963,139.07**	**68.86 %**
Grand Totals	**(15,000.00)**	**7,198,214.46**	**7,183,214.46**	**7,300.00**	**25,302,270.93**	**25,309,570.93**	**81,272,710**	**55,963,139.07**	**68.86 %**

Tucson Supplemental Retirement System
Funding Policy

I. Intent and Summary

The Tucson Supplemental Retirement System is a defined benefit pension plan maintained for the benefit of City of Tucson employees. TSRS is governed by provisions of the Tucson City Code, the public pension protections included in the Arizona Constitution, and the Internal Revenue Code. Within that framework, the TSRS Board has adopted a Funding Policy to ensure that TSRS will remain sustainable and to assist in the accumulation of adequate resources to fund the costs of TSRS benefits.

The costs of defined benefit pension benefits generally fall into three categories:

1. The cost of pension benefits earned by employee members each year, referred to as the "normal cost" of benefits;
2. The unfunded liabilities that have accumulated in the retirement program over time, as the retirement program grows and benefit liabilities exceed the assets held in the program; and
3. The administrative costs of operating the retirement program.

These cost elements are funded on an annual basis through a combination of employer contributions, employee contributions and investment returns.

Intent

The intent of the TSRS Funding Policy is to set forth the policies and practices that will be used to determine City and employee member contributions to TSRS each year. Contributions calculated in accordance with the Funding Policy will be designed to achieve full funding of the TSRS benefit liabilities over a prudent time horizon, while balancing the goals of:

- Maintaining retirement benefit security;
- Incorporating experience based actuarial assumptions into all contribution calculations;
- Keeping contribution rates relatively stable on an annual basis; and
- Allocating contribution costs in an equitable manner to mitigate intergenerational transfers of retirement program liabilities.

Summary

It is the goal of the Board to increase the funded status (the ratio of the assets to the accrued liabilities) of TSRS. Under the TSRS Funding Policy, the Actuarially Determined Contributions (as detailed in the annual actuarial valuation report) calculated for the City and the employee members include the payment of:

a. The normal cost of benefits;
b. The annual amortized payment on TSRS' unfunded liabilities, calculated over a 20 year open, level percent of pay amortization policy;
c. The reasonable and appropriate annual administration costs of TSRS; and
d. The additional contribution element attained through the rounding of employee member and City Contribution Rates pursuant to the Board's rounding policy, which is designed to assist with the achievement of the full funding of TSRS over a reasonable timeframe.

II. Funding Policy Goals

The TSRS Funding Policy is designed to provide assurance that the Tucson Supplemental Retirement System ("TSRS") will remain viable and sustainable, and that the cost of the benefits provided by TSRS will be funded in an equitable manner. The TSRS funding policy is based on the following primary principles:

A. The Board intends to encourage the City to extinguish the TSRS unfunded liability within a target timeframe of fiscal year 2025 to 2030. While the Board recognizes that investment markets and returns have a significant impact on the funded status of TSRS and cannot be predicted, the Board intends to use the target timeframe as a tool to measure success in the reduction of the unfunded liability. If and when the TSRS actuarial valuation shows that the unfunded liability will not be extinguished within the target timeframe, the Board will review closely the actuarial assumptions and investment policies to determine if adjustments should be made.

B. The Board will work toward the extinguishment of the unfunded liability by recommending that the City contribution to TSRS exceed the amount that the City is required to appropriate and pay to TSRS pursuant to the Tucson City Code ("TCC"), and the annual City contribution to TSRS be a minimum of 27.5% of payroll.

C. The TSRS Board wishes to demonstrate accountability and transparency by communicating all of the information necessary for assessing the City's progress toward meeting its pension funding objectives.

III. Authority

The Board has been granted the power and authority necessary to effectuate the administration, management and operation of TSRS. TCC §22-44(a). The Board is required to certify to the City Manager the Actuarially Determined Contribution ("ADC"), the Recommended Member Contribution Rate(s) and the Employer Contribution.[1] TCC §22-35(b). The City is required to appropriate and pay over to TSRS 100% of the Employer Contribution (the Required City Contribution), as that term is defined in TCC Section 22-30(t).

IV. Policy:

The Board shall determine the Recommended Member Contribution Rates and the Recommended City Contribution Rates in accordance with all applicable provisions of the TCC and, effective July 1, 2014, the terms of this Funding Policy as set forth below. The Funding Policy takes into account the following three core elements in the calculation of the recommended annual contributions to TSRS: the Actuarially Determined Contribution, administrative expenses and the Board's rounding policy.

[1] The Actuarially Determined Contribution is referred to in the TCC as the "annual required contribution." The Required City Contribution Rate is referred to in the TCC as the "employer contribution" in the TCC.

A. <u>Actuarially Determined Contribution</u>. The ADC is the annual amount necessary to pay the sum of the employer normal cost, the employee segment normal cost amounts and the amortization requirements for the TSRS unfunded accrued liability, determined on a fiscal year basis by the System's actuary in accordance with the following actuarial assumptions:

1. **Actuarial Cost Method**. The actuarial cost method is the individual entry age normal cost method, level percent of pay. This method conforms to the actuarial standards of practice and allocates normal costs over a period beginning no earlier than the date of employment and does not exceed the last assumed retirement age. This cost method fully funds the long-term costs of the promised benefits of the employees' period of active service.

2. **Asset Valuation Method**. To minimize the volatility effect of contribution rates affected by investment gains or losses during the year, the Board has adopted a smoothing process that involves spreading the difference between actual and expected market returns over a five year period to determine the actuarial value of assets.

3. **Amortization Policy**. The Board has adopted a 20 year open, level percent of pay amortization policy. A single unfunded amount is determined with each actuarial valuation, and that amount is then amortized over a 20 year period, assuming that the contribution amounts will remain level as a percent of the total payroll (so the dollar amount of the contribution is assumed to grow each year). The Board's amortization policy was most recently revised effective July 1, 2013.

B. <u>Administrative Expenses</u>. The annual administrative expenses incurred by the System, based on the administrative operating budget approved by the Board in advance of the fiscal year and determined as of the end of the fiscal year, shall be included in the calculation of the Recommended City Contribution Rate in accordance with sound actuarial principles. Administrative expenses paid by the System and included in the calculation of the ADC shall be reasonable and appropriate, and shall include staff salaries and related overhead expenses, actuarial, legal and other professional consulting fees, accounting charges, compliance expenses, and other fees and expenses necessary for the efficient administration of the System. Investment fees and expenses shall not be included in the calculation of the Recommended City Contribution Rate

C. <u>Contribution Rounding Policy</u>. The Board's rounding policy is intended to (1) minimize volatility in the Member Contribution rates and the related impact on the net take home pay of employees, (2) eliminate minor adjustments in contribution rates, and (3) recognize the inherent timing gap between actuarial valuation data and the effective date of new contribution rates.

1. **Recommended Member Contribution Rates:** Recommended Member Contribution Rates for members hired prior to July 1, 2006 (the "Legacy Members"), members hired between July 1, 2006 and June 30, 2011 ("Tier I Members"), and members hired on or after July 1, 2011 ("Tier II Members") shall be determined by the System actuary pursuant to TCC Section 22-34. The Legacy Members contribute 5% of pay, and there are no further adjustments to Legacy Member contribution rates; <u>i.e.</u>, the Required Member Contribution Rate and the Recommended Contribution Rate for the Legacy Members are the same.

The Tier I Members and Tier II Members are referred to collectively as the "Variable Contribution Tier Members," and they make Member Contributions equal to a percentage of the normal cost for their particular Tier. The percentage applicable to the Variable Contribution Tier Members currently is set at 50%, but can be changed by the City in accordance with Section 22-34(b) of the TCC. In no event shall the Variable Contribution Tier Members contribute less than 5% of pay as set forth in TCC §22-34(a) and (b).

The Recommended Member Contribution Rates for Variable Contribution Tier Members are subject to the Board's rounding policy. The normal cost for Tier I Member and for Tier II Members are calculated by the System actuary and then multiplied by the applicable Member Contribution Percentage (currently 50%). The result of that calculation is the Recommended Member Contribution Rate required for the Variable Contribution Tier Members under the TCC.

The Board will then review the Required Member Contribution Rates for the Variable Contribution Tier Members and apply the rounding policy. Pursuant to the rounding policy, the Required Member Contribution Rates for the Variable Contribution Tier Members will be rounded up to the nearest 0.25%. The Recommended Member Contribution Rates for Variable Contribution Tier Members shall never be less than the Required Member Contribution Rate for that member group (for that same fiscal year). The Recommended Member Contribution Rates will be recommended by the Board to the City for the upcoming fiscal year.

Examples:

Year 1:	Required Member Contribution for Tier I Member:	6.67% of pay
	Recommended (Rounded) Member Contribution for Tier I Member Contribution:	6.75% of pay
Year 2:	Required Member Contribution for Tier I Member Contribution Rate:	6.48% of pay
	Recommended (Rounded) Member Contribution for Tier I Member Contribution:	6.50% of pay

2. **Recommended City Contribution Rates**: Pursuant to TCC Section 22-30(t), the City is required to fund the Required City Contribution for a particular fiscal year, which equals the difference between the ADC and the Required Member Contribution rate(s). For purposes of determining the Recommended City Contribution Rate that will be recommended by the Board to the City, the System actuary will be asked to prepare the following calculations:

   Because there are three different Required Member Contribution Rates, the System actuary shall calculate a Required City Contribution Rate for each member group (which is the Required City Contribution Rate for each group) and a blended Required City Contribution Rate for the entire member population. In no event shall the blended

Required City Contribution Rate for the entire member population be less than the Required City Contribution Rate for any member group.

The Board will then review the blended Required City Contribution Rate and set the Recommended City Contribution Rate for the upcoming fiscal year. The Recommended City Contribution Rate will equal the blended Required City Contribution Rate, rounded up to the nearest 0.50. The Recommended City Contribution Rate shall be rounded up to the nearest 0.50 instead of the nearest 0.25 because the Required City Contribution Rates are based on a blend across the three groups of members. The Recommended City Contribution Rate shall never be less than the Required City Contribution rate for any member group for that same fiscal year.

Example:

Required City Contribution Rates for three member groups:		
	Legacy Members:	27.22% of pay
	Tier I Members:	25.55% of pay
	Tier II Members:	27.08% of pay
Actuarially Calculated Blended City Contribution Rate		26.95%
Recommended (Rounded) City Contribution Rate: (Recommended Rate is not set at 27.0% because that would be less than the Required Rate for two of the member groups)		27.50% of pay

3. **Funded Status of TSRS**: It is the goal of the Board to increase the funded status of TSRS. The Board anticipates that Required Member Contribution Rates and the Required City Contribution Rates may decrease from time to time, based on various actuarial factors. The Board will not decrease its Recommended Member Contribution rates or its Recommended City Contribution Rate until such point as TSRS is fully funded. At that time, the unfunded accrued liability will have been extinguished, and the ADC will represent the payment of the normal cost of benefits only. Moreover, the Board shall decrease the Recommended Member Contribution Rates for the Variable Contribution Tier Members only to the extent that the Recommended Member Contribution Rates for Tier I Members and Tier II Members decrease simultaneously, in the same percentage of pay.

Attachments: TSRS Actuarial Assumptions Addendum to TSRS Code Sec. 22-30(d)
Glossary

Tucson Supplemental Retirement System ("TSRS")

Addendum to TSRS Code Sec. 22-30(d)

TSRS Actuarial Assumptions

To determine the value of actuarially equivalent member benefits under TSRS, the following actuarial assumptions shall continue to be applied, effective as of July 1, 2016:

Interest Rate:	**7.25%**
Mortality Table:	**Mortality Table: RP-2000 Combined Mortality Table for males and females projected with Scale BB to 2020**

The foregoing actuarial assumptions are adopted in accordance Tucson Code Chapter 22, Section 22-30(d) and are incorporated into this Addendum as required pursuant to Section 401(a)(25) of the Internal Revenue Code of 1986, as amended.

This Addendum hereby is executed by an authorized representative of the Tucson Supplemental Retirement System Board of Trustees, pursuant to action taken at a duly called meeting of the Board held on the ______ day of ____________________, 2016, at which a quorum was present.

By:___________________________
Name:_________________________
TSRS Board of Trustees

Glossary of Terms and Concepts used in TSRS Funding Policy

Actuarial Cost Method: the method used by the actuary to allocate total benefit costs between employees' past and future service. The actuarial cost method determines the normal cost for a year.

Accrued Liability: the present value of retirement benefits earned by employees for past service.

Actuarial Value of Assets: the value of pension assets for purposes of actuarial valuations and funding calculations, which takes into account certain actuarial assumptions such as smoothing investment returns over a stated period.

Actuarially Determined Contribution: the annual contribution to the plan necessary to pay the normal cost and the annual amortization payment on any unfunded accrued liability, which may be less than the annual contribution recommended by the Board after full application of the Funding Policy.

Amortization: the process of paying off the unfunded accrued liability over time.

Closed Amortization: using a specific number of years to determine annual payments intended to extinguish debt and the number of years remaining in the amortization schedule decline to zero.

Open Amortization: using a period of years that does not change over time to determine annual contributions to pay down the unfunded accrued liability. With each annual calculation, the period of years used to determine the payment is reset to the original period; the number of years in the amortization schedule does not decline to zero.

Example: Assume that $1,000,000 in liability is being amortized over 5 years. Following is a simplified illustration of the difference between Open and Closed Amortization Schedules:

	Closed Amortization			Open Amortization		
	Starting Liability	Amortization Payment	Ending Liability	Starting Liability	Amortization Payment	Ending Liability
Year 1	$1,000,000	$200,000	$800,000	$1,000,000	$200,000	$800,000
Year 2	$800,000	$200,000	$600,000	$800,000	$160,000	$640,000
Year 3	$600,000	$200,000	$400,000	$640,000	$128,000	$512,000
Year 4	$400,000	$200,000	$200,000	$512,000	$102,400	$409,600
Year 5	$200,000	$200,000	$0	$409,600	$81,920	$327,680

Contribution Rate: the amount to be contributed to TSRS annually, expressed as percentage of payroll.

Required City Contribution Rate: the City contribution rate calculated by the actuary in accordance with the applicable provisions of the Tucson City Code.

Recommended City Contribution Rate: the City Contribution rate recommended by the Board after the rounding policy has been applied, which may be more than the required rate.

Required Member Contribution Rate: the Member Contribution rate for a particular group of members (Legacy, Tier I or Tier II Members) calculated by the actuary in accordance with the applicable provisions of the Tucson City Code.

Recommended Member Contribution Rate: the Member Contribution rate recommended by the Board for Tier I Members or Tier II Members after the rounding policy has been applied, which may be more than the required rate.

Entry Age Normal Cost Method: the actuarial cost method which produces the normal cost of an employee's retirement benefits as a level percent of pay, beginning at the employee's age when he or she enters the plan and continuing until the employee reaches retirement age.

Full Funding: occurs when the unfunded accrued liability is $0 and the funded ratio is 100%.

Funded Ratio or Funded Status: the ratio of assets available to pay retirement benefits to accrued liability under the plan (liabilities associated with retirement benefits earned by employees).

Legacy Members: Members hired prior to July 1, 2006 and who's Required and Recommended Member Contribution Rate equals 5% of pay.

Level Percent of Pay: calculating plan contributions as a consistent percentage of annual payroll costs each year and assuming that future contributions will increase by the same rate as payroll increases.

Market Value of Assets: the value of pension assets, determined with reference to the value at which the assets would trade or could be sold on an open market.

Member Contribution Percentage: The percent of the Variable Contribution Tier Members normal cost for which the member is to contribute-effective 6/30/2014 that rate is 50%.

Normal Cost: the annual present value or costs for benefits earned by employees during the year.

Smoothing: an actuarial method of spreading out investment gains and losses over a stated period of time, used to average investment returns over the smoothing period and therefore minimize volatility in the calculation of contributions to the plan.

Example: Assume that an investment achieved the following annual returns, and that the investment returns are smoothed over a 5 year period:

Year	Investment Return (parentheses indicate loss)	Annual Amount Recognized in Actuarial Value of Assets (1/5 per year)
2012	($30,000)	($6,000)
2013	$20,000	$4,000
2014	$50,000	$10,000
2015	($20,000)	($4,000)
2016	($30,000)	($6,000)
Total	($10,000)	($2,000)

In the calculation of the actuarial value of the assets for 2016, the market value of the assets will be reduced by a $2,000 investment loss. Without smoothing the investment returns, the market value of the assets would be reduced by a $30,000 investment loss. When the market value of the assets fluctuates widely as a result of investment returns, the contribution obligation to the pension plan also fluctuates widely. Smoothing the investment returns has the effect of stabilizing contribution rates.

Tier I Members: members hired between July 1, 2006 and June 30, 2011.

Tier II Members: members hired on or after July 1, 2011.

Unfunded Accrued Liability: the difference between the assets and the accrued liability.

Variable Contribution Tier Members: TSRS members who are classified as either Tier I Members or Tier II Members and are required to make Member Contributions which may change over time in accordance with TCC Section 22-34.

CHANGING THE INTEREST RATE ALLOCATED TO MEMBER ACCUMULATED CONTRIBUTION ACCOUNT BALANCES DISCUSSION

Purpose: This is a continuance of the educational topic that was introduced during the retreat to reduce the interest rate allocated to the Member Accumulated Contribution Accounts (MACA) from 6% to 2%. This communication serves to provide the Board with information regarding the change in order to facilitate an informed decision by the Board.

Legal Framework and Key Information:

As employee contributions are collected they are recorded to the specific member making the contribution and tracked in the GRS pension data system. This is allowed for in City Code provision applicable to TSRS which states the following:

Sec 22-44(h). Establishing interest rates and actuarial assumptions; actuarial studies. The board shall establish, from time to time, the interest rate(s) applicable to member accumulated contributions accounts and the assumed earnings rate applicable to end of service program benefits, as well as the applicable crediting methodologies.

City Code further goes on to define the Accumulated Contributions Account as follows:

Sec. 22-30(c). "Accumulated contributions account" means the sum of all member contributions made by the employee, not to include employer contributions, and the interest credited to the member contributions during the period the member contributions are on deposit with the Tucson Supplemental Retirement System.

Prior to 2009 the Board approved interest rate was 7.5%. Currently the Board approved interest rate is 6% interest per annum based on the respective MACA balance. This is allocated to each MACA balance by applying 3% biannually to the accumulated account balances as of the beginning of the respective 6 month period (i.e. interest allocated as of 12/31/2016 will be based off of the MACA balance as of 6/30/2016). The 6% allocation is based solely on the MACA which only consists of employee contributions. We have no provisions for the member to be entitled to any portion of the City's contribution as an element of their account balance as dictated in code provision *22-30(c)* above. Therefore, the City’s contributions are not considered in the interest allocation.

Additionally, the MACA is not an element of the calculation for pension benefits. The formula only considers years of service, average final compensation depending on the tier, and the factor depending on the tier. Given this, a change in the rate does not impair or diminish pension benefits. External Legal Counsel has indicated there appears to be no legal barriers to change the rate. Finally, the ASRS was able to accomplish a reduction in their rate in the past with no legal challenges.

Effect on TSRS

If an employee separates from the City whether vested or not the following code provision initially applies:

Sec. 22-34(g). Non-forfeiture and refund of contributions. It is the right of each member to request a refund of the member’s accumulated contributions, plus interest, upon separation from city service and the right of each beneficiary to be paid the member’s accumulated contributions, plus interest, upon the member’s death before retirement or unused contributions, plus interest, upon the member’s death after retirement, whichever is applicable.

Therefore, per code, if an individual is not vested upon separation they are entitled to their MACA to include interest. Additionally, if the individual is vested (meaning creditable service of 5 years or greater) the member can either wait until retirement eligibility is attained or request a refund.

In both scenarios interest would be computed and allocated from the last posting of interest up to the date the request is processed.

In the first scenario where the terminating member requests a refund, the cost to the plan is the interest allocated up to the point a refund is requested. Although Section *22-41(b)* of the City code does provide for escheatment (in the event a member cannot be located) depending on the size of the account balance, such provisions are not easy to administer. It is most cost effective and advantageous to have employees in this scenario request a refund of funds as soon as possible after separation. A reduction in the interest rate can foster this action.

In the second scenario where the terminated member defers receipt, the cost to the plan is more pronounced. The Plan must hold the MACA for vested individuals who separate until an action occurs on the account. Three actions could occur: The member can request a refund plus interest, the member can wait until eligibility for a monthly benefit is achieved, or the member may pass away upon which case provisions regarding death of a member while eligible for retirement in Code Section *22-40(e)* will apply. This can be costly to the plan if members have the ability to leave their MACA with TSRS and earn interest with no downside exposure. This could be construed as a virtual savings account for those members with protection from financial market risk. It is also interesting to note that the interest rate crediting at banks for such a risk free investment (i.e. savings accounts) is less than 1%. Additionally, providing a benefit upon eligibility or if the member dies before a benefit is requested lead to outflows (costs) to the plan that could be avoided if the member were to remove their monies from the System. Also, the present value of the benefit for these individuals is included in the Actuarial Accrued Liability for valuation purposes; accordingly this has the effect of negatively impacting contribution rates. One final consideration involves a member who separates and utilizes their TSRS account balance to purchase creditable service in another governmental plan. The account balance from TSRS used in the calculation considers allocated interest.

Supporting data has been included with this communication to display the effect on contribution rates as provided by GRS at the retreat. Additionally, we have attached financial data extracted from the pension system to quantify for the Board the amount of interest historically paid at the 6%.

GRS Summary and Conclusions from the data:

The actuary indicated at the most recent Board retreat that the savings due to changing the interest crediting rate would be approximately .17% on the annual actuarially determined contribution. Based on a payroll of $115 million, that would translate into an annual savings of $195,000 per year.

Currently the MACA totals about $135 million dollars. Reducing the interest crediting from 6% to 2% would reduce the interest allocated to this reserve by $5.4 million per year. This is not representative of the annual savings to the plan (since those interest earnings allocated do not leave the plan except under certain circumstances). Therefore, while the actual savings for TSRS may not appear significant, the policy of aligning the risk with the return will create a platform for using the TSRS dollars in a way that is better aligned for the TSRS members and employees and will also, in this time of strained resources, continue to move the plan in a direction of conserving resources in a way the benefits both the beneficiaries of the plan and the taxpayers.

TSRS Staff Comment:

At this time Staff feels a reduction in the MACA from 6% to 2% would be a prudent action. As described above interest is allocated to each MACA regardless of market conditions and provides a risk free investment with a guarantee of the return of principle. Accordingly, if the plan earns less than 6% in investment return we are providing a return to members that is greater than the market return on assets. In the current market environment, investments that are virtually risk free, like a savings account with a bank, are returning less than 1%. Therefore, given the allocation of interest to the MACA is guaranteed, the rate should be more reflective of the market environment for similar risk-profiled investments. Staff feels 2% is reasonable as it is still above what a member could achieve in the market for similar risk, and it is comparable to the rate charged by the largest civil service plan in the State (the ASRS).

POPULATION DATA AND INTEREST RATE EFFECT

Purpose: To present the counts and account balances of all active, vested and terminated not vest memebrs with estimate of interest effect.

Type	Count	Account Balances As of 06/30/2016	Est. Per Annum Interest at 6%	Est. Per Annum Interest at 2%	Difference between 2% and 6%	Average per Member at 6%	Average per Member at 2%
Active	2,493	$ 119,316,146	$ 7,158,969	$ 2,386,323	$ 4,772,646	$ 2,872	$ 957
Terminated Vested	307	15,072,821	904,369	301,456	602,913	2,946	982
Terminated Not Vested	82	746,174	44,770	14,923	29,847	546	182
Totals:	**2,882**	**$ 135,135,141**	**$ 8,108,108**	**$ 2,702,703**	**$ 5,405,405**	**$ 6,364**	**$ 2,121**

*The above data is as of 6/30/2016 in order to be repesentative of the next interest allocation that will be based off the account balances as of that date.

ACTUAL INTEREST ALLOCATED

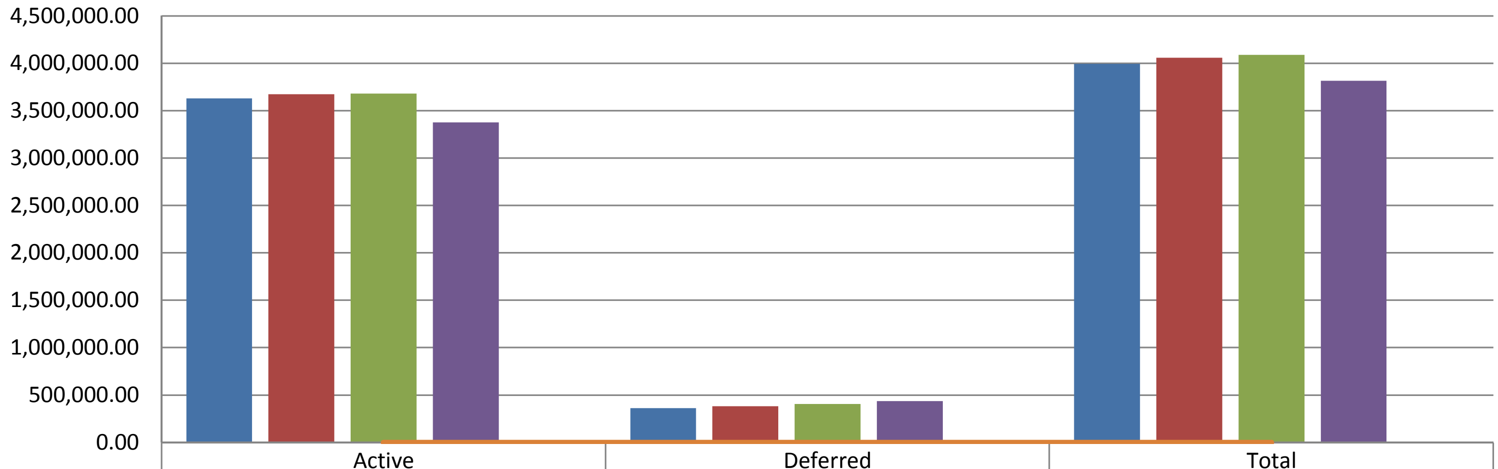
Purpose: To present actual amounts of interest allocated to member accumulated contribution account balances for the past four fiscal years.

Date	Active	Deferred	Total
12/31/14	3,631,843.16	364,607.59	3,996,450.75
06/30/15	3,677,020.12	383,564.68	4,060,584.80
12/31/15	3,683,647.73	407,109.10	4,090,756.83
6/30/16	3,379,951.80	437,296.82	3,817,248.62
TOTAL			15,965,041.00

Total Interest credited to members account from 12/31/2014 through 06/30/2016 = **$ 15,965,041.00**.

Note 1: Active employee interest for 2016 offset by retirement incentive (FY 2016 - 3rd and 4th quarter). All other data did not have any such offsets, and differences in population counts between fiscal years is not significant (<1%)

6 % TSRS Interest



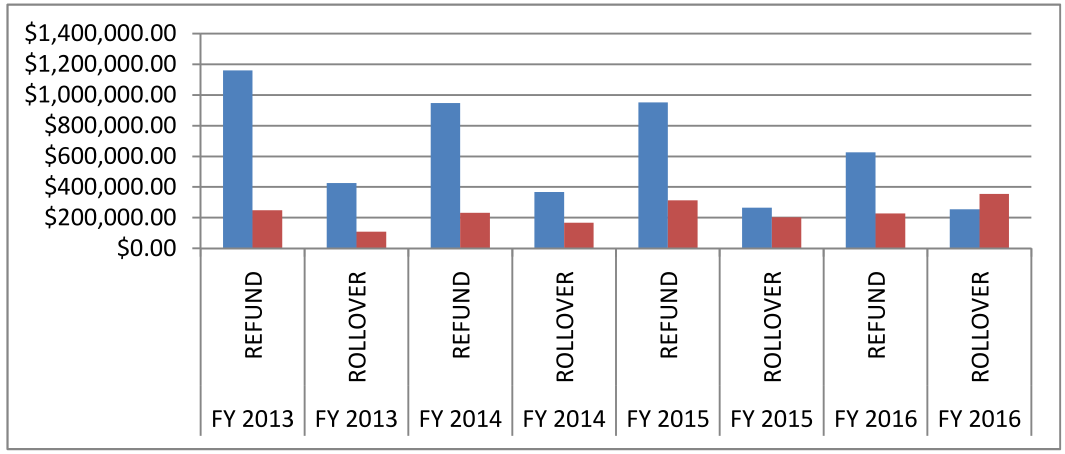
	Active	Deferred	Total
12/31/14	3,631,843.16	364,607.59	3,996,450.75
06/30/15	3,677,020.12	383,564.68	4,060,584.80
12/31/15	3,683,647.73	407,109.10	4,090,756.83
6/30/16	3,379,951.80	437,296.82	3,817,248.62

12/31/14 06/30/15 12/31/15 6/30/16

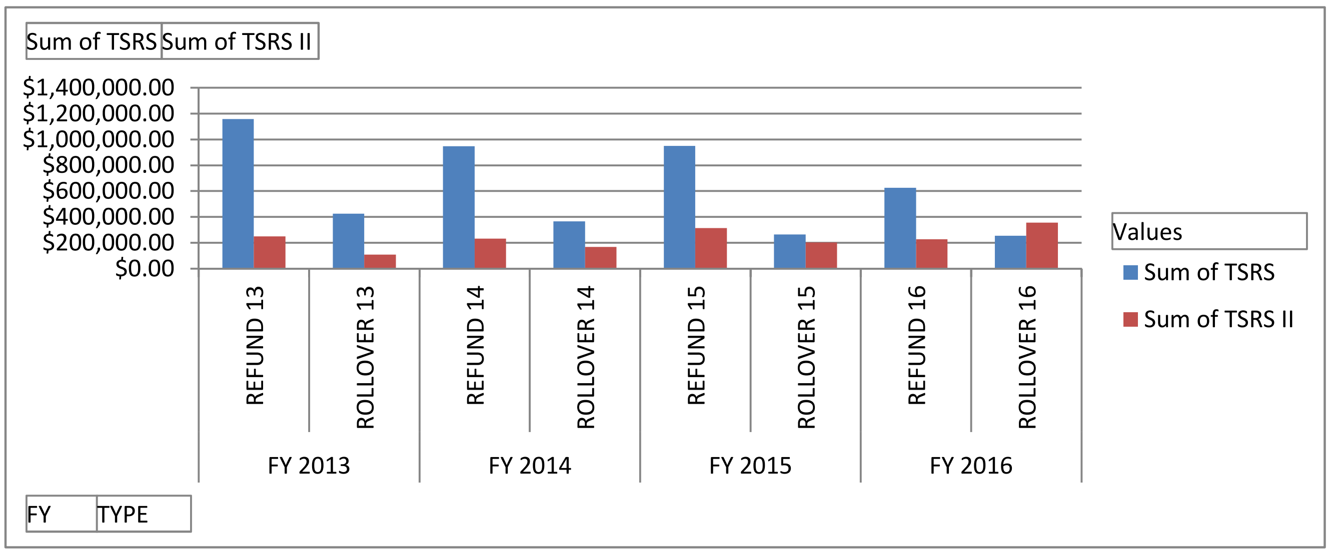
TSRS REFUNDS AND ROLLOVERS FOR THE PAST 4 FISCAL YEARS

Purpose: To present actual refunds and rollover amounts paid over the past 4 fiscal years

FY	TYPE	TSRS	TSRS II
FY 2013	REFUND	$1,158,975.84	$249,194.40
FY 2013	ROLLOVER	$426,577.07	$108,515.01
FY 2014	REFUND	$946,235.10	$233,027.59
FY 2014	ROLLOVER	$367,185.30	$167,112.81
FY 2015	REFUND	$950,729.42	$313,760.08
FY 2015	ROLLOVER	$265,524.30	$202,324.47
FY 2016	REFUND	$626,791.96	$228,740.70
FY 2016	ROLLOVER	$255,668.11	$355,405.41
		$4,997,687.10	$1,858,080.47



Row Labels	Sum of TSRS	Sum of TSRS II
FY 2013	**$1,585,552.91**	**$357,709.41**
REFUND 13	$1,158,975.84	$249,194.40
ROLLOVER 13	$426,577.07	$108,515.01
FY 2014	**$1,313,420.40**	**$400,140.40**
REFUND 14	$946,235.10	$233,027.59
ROLLOVER 14	$367,185.30	$167,112.81
FY 2015	**$1,216,253.72**	**$516,084.55**
REFUND 15	$950,729.42	$313,760.08
ROLLOVER 15	$265,524.30	$202,324.47
FY 2016	**$882,460.07**	**$584,146.11**
REFUND 16	$626,791.96	$228,740.70
ROLLOVER 16	$255,668.11	$355,405.41
Grand Total	**$4,997,687.10**	**$1,858,080.47**



CITY OF TUCSON

City of Tucson
Office of the City Clerk

COPY

PUBLIC NOTICE STATEMENT — 2017

(Statement Due in the City Clerk's Office no later than December 2, 2016)

In compliance with the provisions of the Arizona Open Meeting Law (A.R.S. § 38-431.02), all boards, committees, and commissions are required to file a statement with the City Clerk stating the posting location for all public notices of their meetings. The location identified must be a place to which the public has reasonable access. The location should have normal business hours, should not be geographically isolated, and should be accessible and easy to find.

The attached form identifies two methods for posting. Please return the completed and signed form to the City Clerk, for use in calendar year 2017. The City Clerk will publish a consolidated notice.

Option A: Complete if the public body meets only as required. Indicate if you will be sending the meeting notices and agendas to the City Clerk for posting at City Hall, or if you want to use a different posting location, identify where you will make meeting notices and agendas available to the public.

Option B: Complete if the public body intends to meet on a regularly scheduled day or date during the 2017 calendar year, and at a regular place and time. Indicate if you will be sending the meeting notices and agendas to the City Clerk for posting at City Hall, or if you want to use a different posting location, identify where you will make meeting notices and agendas available to the public.

Please remember that, while state law stipulates **meetings shall not be held without at least twenty-four (24) hours' notice**, Mayor and Council requests that notices be posted a minimum of 5 days prior to the meeting. In order to properly document, process, post and distribute your meeting notices and agendas, the City Clerk's office should receive them a minimum of one week prior to the meeting date.

In accordance with State Open Meeting Law requirements, all meeting notices and agendas must be posted on the City's website, *as well as* at the posting location designated on the Public Notice Statement Form. For online posting, meeting notices and agendas should be emailed as a Word document to BoardsandCommissions@tucsonaz.gov. NOTE: Meeting notices and agendas that are emailed outside of regular business hours will not be posted until after the office reopens for business.

Additionally, if your Board or Commission requires the **use of either the Mayor and Council Chambers or Conference Room** for meetings, please send your reservation request as soon as possible by email to:

CR_CLK_M&C_CHAMBER@tucsonaz.gov, or
CR_CLK_M&C_CONF_ROOM@tucsonaz.gov

There is high demand for these rooms, and use by Mayor and Council takes priority. In the event of a scheduling conflict, you may be required to use an alternate location.

Thank you for your cooperation and assistance in this matter. If you have any questions, please contact Karisa McMillan or Debra Counseller at 791-4213.

Sincerely,

Deborah Rainone

Roger W. Randolph
for City Clerk

Attachment: Public Notice Statement Form - 2017

P.O. Box 27210 • Tucson, AZ 85726-7210
(520) 791-4213 • FAX (520) 791-4017 • TTY (520) 791-2639
cityclerk@tucsonaz.gov • www.cityoftucson.org

COPY

PUBLIC NOTICE STATEMENT FORM – 2017

PLEASE COMPLETE AND RETURN TO THE CITY CLERK'S OFFICE BY DECEMBER 2, 2016

BCC Name: Tucson Supplemental Retirement System Board of Trustees (TSRS)

In order to comply with the public notice provisions of the Arizona Open Meeting Laws (Arizona Revised Statutes, § 38-431.02), each public body must provide public notice of meetings. Please indicate the method that your group will use. Complete the information, date and sign, and return this form to the City Clerk's Office.

☐ **OPTION A** Complete this section if the public body meets only as required.

Indicate if you are requesting that the City Clerk post meeting notices and agendas in the designated locations at City Hall. Meeting notices and agendas should be emailed to BoardsandCommissions@tucsonaz.gov a minimum of 5 days prior to each meeting in order to ensure proper posting. **OR**, indicate a different location where you will make meeting notices and agendas available to the public (*see Note at bottom of page*).

☐ Meeting Notices & Agendas will be provided to the City Clerk no less than 5 days prior to all meetings, for posting at City Hall.

OR

☐ Meeting Notices & Agendas will be available to the public, at the following posting location, no less than 24 hours before each meeting: ______________

(*See Note at bottom of page*)

Signature of Chairperson: ______________________ Date: ______________

☐ **OPTION B** Complete this section if the public body has specific meeting dates, times and locations, and indicate below (or, you may attach a schedule for the year). Any changes to the schedule will be reported to the City Clerk.

Days/Dates: ______________________ Time: ______________

Location: ______________________

Indicate if you are requesting that the City Clerk post meeting notices and agendas in the designated locations at City Hall. Meeting notices and agendas should be emailed to BoardsandCommissions@tucsonaz.gov a minimum of 5 days prior to each meeting in order to ensure proper posting. **OR**, indicate a different location where you will make meeting notices and agendas available to the public (*see Note at bottom of page*).

☐ Meeting Notices & Agendas will be provided to the City Clerk no less than 5 days prior to all meetings, for posting at City Hall.

OR

☐ Meeting Notices & Agendas will be available to the public, at the following posting location, no less than 24 hours before each meeting: ______________

COPY

(*See Note at bottom of page*)

Signature of Chairperson: ______________________ Date: ______________

---

* ***Note***: All meeting notices and agendas must be posted on the City's website, as well as at the designated posting location. For online posting, meeting notices and agendas should be emailed as a Word document to BoardsandCommissions@tucsonaz.gov.

CITY OF TUCSON FOUNDED 1775

DRAFT

MEMORANDUM

DATE: August 11, 2016

TO: TSRS Board of Trustees

FROM: Neil Galassi
Pension Administrator

SUBJECT: **2017** TSRS Board Meeting Schedule

All scheduled meetings are generally planned to be held at 8:30 a.m. on the last Thursday of each month (except where **indicated**) in the 5th floor Finance conference room located on the West side of City Hall. However, both the schedule and the location of these meetings are subject to change as conditions dictate, so please carefully check each month's agenda for possible time, date or location changes.

2017 Dates	Time	Location
January 26th	8:30am	**City Hall, 5th Floor West Fin Conference Rm**
February 23th	8:30am	**City Hall, 5th Floor West Fin Conference Rm**
March 30th	8:30am	**City Hall, 5th Floor West Fin Conference Rm**
April 27th	8:30am	**City Hall, 5th Floor West Fin Conference Rm**
May 25th	8:30am	**City Hall, 5th Floor West Fin Conference Rm**
June 29th	8:30am	**City Hall, 5th Floor West Fin Conference Rm**
July 27th	8:30am	**City Hall, 5th Floor West Fin Conference Rm**
August 31st	8:30am	**City Hall, 5th Floor West Fin Conference Rm**
September 28th	8:30am	**City Hall, 5th Floor West Fin Conference Rm**
October 27th (Friday)	8:00am	**Arizona Inn, 2200 East Elm St, Tucson, AZ**
November 16th (3rd Thurs.)	8:30am	**City Hall, 5th Floor West Fin Conference Rm**
December 21st (3rd Thurs.)	8:30am	**City Hall, 5th Floor West Fin Conference Rm**

City of Tucson

Tucson Supplemental
Retirement System

RETIREMENT CHECKLIST

BEFORE RETIREMENT

1. Notify your department/supervisor that your **last day of work** will be: __________
2. Provide the Retirement Office with your email address to set up ESS account.
3. Make appointment with Benefits Office to discuss City insurance. 791-4597.
4. Confirm whether your department will schedule your exit interview. If not, schedule one with HR.
5. Consult the appropriate financial or tax planner and/or estate lawyer, etc., if required.

ON YOUR LAST DAY

1. Exit Interview begins in your department – You will be provided with an Employee Separation Clearance form during your departmental exit interview.
2. Exit Interview progresses to Human Resources, 3rd floor, City Hall, 791-4241. Bring the Employee Separation Clearance form with you.
3. Exit Interview progresses to Retirement, 5th floor, City Hall, 791-4598
4. Exit Interview progresses to Payroll, 8th floor, City Hall, 791-4557. You will be given information about when your final paychecks will be ready.

AFTER RETIREMENT

1. Direct deposits are credited the **last business day of the month**. Pension statements for monthly direct deposits will be mailed quarterly – March, June, September, and December.
2. Paycheck stubs can be downloaded and printed at www.tucsonaz.gov/employee-self-service.
3. Your first paycheck will be dated __________ and will be prorated to reflect your retirement date.
4. Notify the retirement office at 791-4598 of any change of address, contact information, or direct deposit information.
5. Provide the retirement office with copies of relevant powers of attorney.

______________________________ ____________
Member's Signature Date

Callan

September 30, 2016

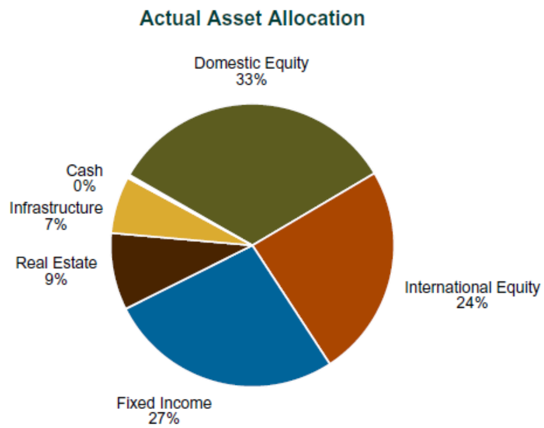
Tucson Supplemental Retirement System

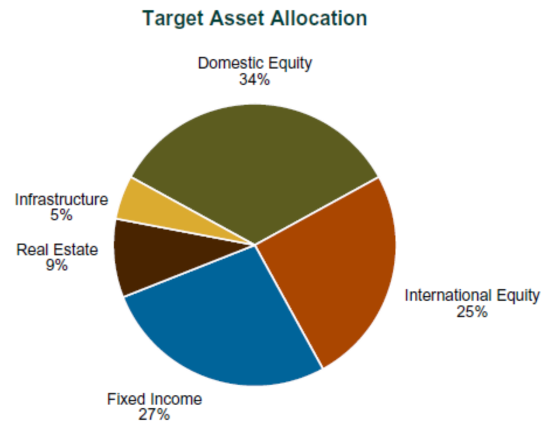
Investment Measurement Service Quarterly Review

Tucson Supplemental Retirement System

Executive Summary for Period Ending September 30, 2016

Asset Allocation





Total Fund Performance

Returns for Periods Ended September 30, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 years
Total Fund Gross	4.16%	12.32%	7.97%	11.92%	6.30%
Total Fund Net	4.04%	11.83%	7.49%	11.38%	5.77%
Total Fund Benchmark*	3.65%	10.62%	7.11%	10.55%	5.97%

Fiscal Year Returns

	2017	2016	2015	2014	2013
Total Fund Gross	4.16%	2.33%	4.63%	19.64%	14.84%
Total Fund Net	4.04%	1.89%	4.17%	19.11%	14.21%
Total Fund Benchmark*	3.65%	1.82%	4.34%	16.97%	12.87%

* Current Quarter Target = 27.0% Barclays Aggregate Index, 26.0% S&P 500 Index, 25.0% MSCI ACWI ex US IMI, 9.0% NFI-ODCE Value Weight Gr, 8.0% Russell 2500 Index and 5.0% CPI-W+4.0%.

Recent Developments

- American Century non-U.S. small cap was funded during the second quarter of 2016; the third calendar quarter of 2016 marks the first full quarter of performance for TSRS. Pages 62 and 63, link TSRS's actual return to the product's composite return history to show a longer track record that includes risk and risk adjusted returns.

Organizational Announcements

NA

Active Manager Performance

Fund	Peer Group Ranking Last Year	Last 3 Years	Last 5 Years
PIMCO Stocks Plus	9	21	3
T. Rowe Price Large Cap Growth	68	39	[8]
Champlain Mid Cap	1	5	22
FIAM Small Cap	62	21	10
Causeway International Opportunities**	79	81	33
Aberdeen EAFE Plus	14	96	[98]
American Century Int'l Small Cap	[74]	[57]	[22]
PIMCO Fixed Income	1	3	4
JP Morgan Strategic Property Fund	51	41	26
JP Morgan Income and Growth Fund	66	65	40

** Brackets indicate actual performance linked with manager composite*
*** Transitioned from International Value to International Opportunities, in May 2016*

— The relative performance of Aberdeen EAFE Plus had started to improve over the past few quarters before falling behind its benchmark again in the third quarter. Aberdeen EAFE Plus ranked 92nd percentile in its peer group over the last three months, but still places 14th in its peer group during the last one year period as of 9/30/16. Despite trailing the benchmark in the quarter by 2.6%, Aberdeen exceeded the benchmark by 3.7% (12.9% versus 9.3% for the benchmark) for the trailing 12-months. Aberdeen tries to invest in high quality businesses with strong fundamentals at reasonable prices. The portfolio management team has maintained their high conviction stance in a number of positions. Novartis and Roche, each 3.8% holdings of the 50 stock portfolio, struggled along with the overall Health Care sector as concerns about drug pricing and the impending U.S. election created negative sentiment and depressed prices. The portfolio management team believes the underlying fundamentals for both of these positions are still extremely strong. Stock selection within the Financials and Telecom sectors were also a headwind to performance. Aberdeen maintains that they will seek to own companies with strong competitive advantages, diversified revenue streams, and robust financing structures.

Gordon Weightman, CFA
Vice President

Paul Erlendson
Senior Vice President

Table of Contents
September 30, 2016

Callan

Third Quarter 2016

October Surprise

ECONOMY

2 PAGE

Real GDP grew a surprisingly strong 2.9% in the third quarter, the best rate in two years. But the days of consumers driving the expansion are likely behind us, although investments in nonresidential construction rose after earlier weakness.

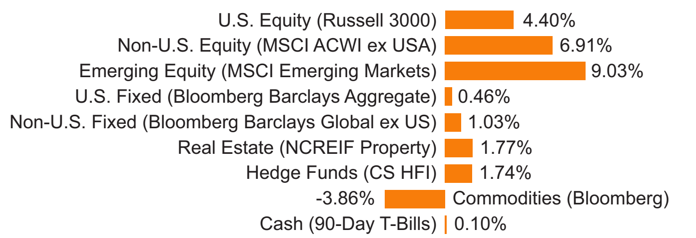
With a Little Help From My Friends

FUND SPONSOR

4 PAGE

The second quarter's worst performer, endowments and foundations, beat other fund types in the third quarter with a 3.69% gain. Last quarter's champs, corporate funds, finished last. Surprisingly, small funds beat large and medium funds.

Broad Market Quarterly Returns



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

Sell in May? No Way!

U.S. EQUITY

6 PAGE

The **S&P 500 Index** hit a new high and rose every month during the third quarter, ending up 3.85%. Small capitalization companies outperformed large cap (**Russell 2000 Index** +9.05% vs. **Russell 1000 Index** +4.03%), while growth outpaced value in all capitalizations.

Calm After the Storm

NON-U.S. EQUITY

9 PAGE

Global stock markets hit highs as anxieties about the Brexit vote dwindled; even eurozone markets did well as it became clear that the U.K.'s decision to leave the European Union would not be catastrophic. Consistent with investors' risk-on mentality, emerging markets outpaced their developed peers.

Hut, Hut ... Hike!

U.S. FIXED INCOME

12 PAGE

The yield on the benchmark 10-year Treasury note hit a record low of 1.37% in July, but ended the third quarter slightly higher. High yield corporates were the strongest performer, while Treasuries ended the quarter in the red. Investment-grade corporate bond issuance set a record.

Globe-Trotting for Yield

NON-U.S. FIXED INCOME

15 PAGE

Sovereign bond markets strengthened during the third quarter, with emerging market bonds outmuscling the developed markets as investors sought yield. Major currencies were mixed as the British pound suffered following the Brexit. And there is now over $12 trillion of negative-yielding debt globally.

Returns Take a Summer Vacation

REAL ESTATE

17 PAGE

Both the **NCREIF Property Index** (+1.77%) and the **NCREIF Open End Diversified Core Equity Index** (+1.83%) turned in their worst performances since the first quarter of 2010. Global REITs did better than U.S. REITs; worries over a Fed rate hike appeared to be stronger than the post-Brexit fallout.

Sticker Shock

PRIVATE EQUITY

19 PAGE

Markets maintained healthy liquidity in the third quarter. Private equity fundraising fell, but year-to-date numbers are very close to last year's. The number of new buyout investments increased slightly, but venture capital investments fell. And the IPO window for buyouts and VC remained open, if just a crack.

Can't Stop the Feeling

HEDGE FUNDS

20 PAGE

Hedge funds showed modest returns during the quarter, with emerging markets the best-performing strategy. Choppy markets caught managed-futures funds a bit flat-footed. In Callan's database, the median *Callan Long/Short Equity FOF* (+4.26%) outpaced the *Callan Absolute Return FOF* (+2.10%).

DC Participants Seek Cover

DEFINED CONTRIBUTION

21 PAGE

DC plan balances increased 1.67% in the second quarter, according to the Callan DC Index™. Although the Index rose 1.90%, target date funds outpaced it, gaining 2.02%. Unusually, money flowed out of DC plans, by 23 basis points, rather than into them as typically happens.

Knowledge. Experience. Integrity.

October Surprise

ECONOMY | Jay Kloepfer

Real gross domestic product (GDP) grew 2.9% in the third quarter, much stronger than expected, providing a pleasant surprise in a year filled with unpleasant ones. Third-quarter growth was by far the strongest this year and the best quarterly rate in two years. Personal consumption has been driving growth in the U.S. for the past several years, but while consumption accounted for half of the growth in the third quarter, its influence weakened.

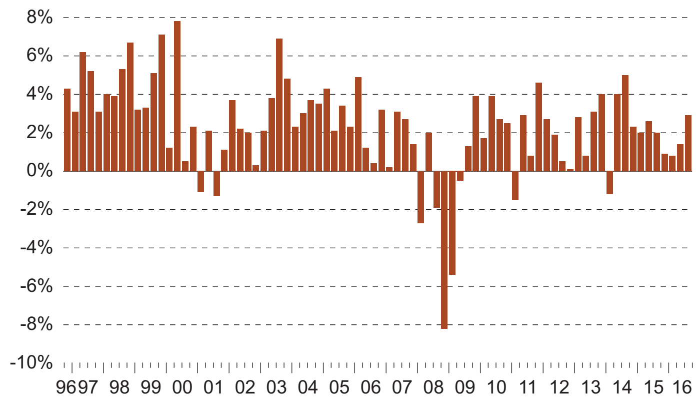
Other third-quarter surprises included: a reversal in nonresidential fixed investment; continued growth in software and information processing; an uptick in federal government spending; strength in exports; and a return to inventory investment. Drags came from a decline in residential investment and weakness in state and local government spending, along with an increase in imports, which are a negative in the calculation of GDP.

Political and economic shocks—China's industrial recession, Brexit, the U.S. election—have increased uncertainty and hampered global growth, making many businesses increasingly risk averse. Add the uncertainty stemming from the global monetary policy experiment still underway—not the least of which involves the guessing game regarding the Fed's interest rate policy—and expectations for U.S. growth soured as the year unfolded.

Real GDP came in very weak in the first quarter and disappointed again in the second, coinciding with the Brexit vote in late June when the U.K. chose to leave the European Union. Consensus expectations for the third quarter had GDP growth falling below 2%, even dipping to 1.5% as recently as September. However, the job market remained sound, consumer sentiment stayed buoyant, and the anticipated turnarounds in inventory and nonresidential fixed investment actually materialized.

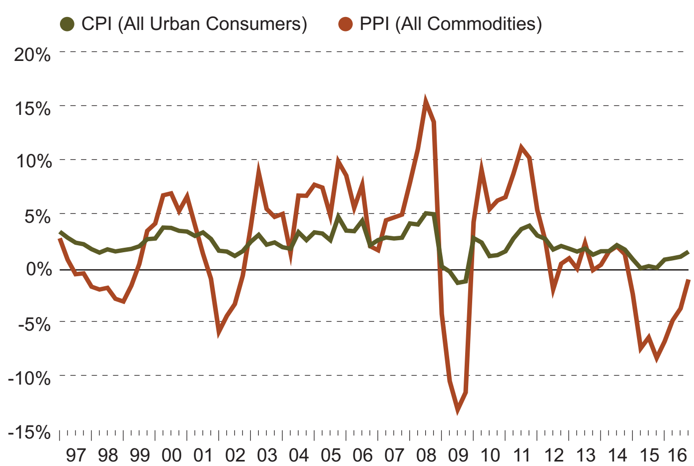
The days of consumer spending driving this expansion are likely behind us. Consumption slowed from a robust 4.3% gain in the second quarter to 2.1% in the third; this will likely be the norm going forward. Consumers enjoyed a real shot in the arm from strong job gains for several years and a "dividend" from

Quarterly Real GDP Growth (20 Years)



Source: Bureau of Economic Analysis

Inflation Year-Over-Year



Source: Bureau of Labor Statistics

low commodity prices. The U.S. economy created an average of 178,000 jobs per month through the first three quarters of 2016. While solid, this is a deceleration from the 211,000 rate in the first nine months of 2015. Although support from the job market and commodity prices is waning, households are still benefiting from increases in real wages, disposable incomes, and asset values.

Highly anticipated reversals in inventory and nonresidential fixed investing provided meaningful gains to the economy in the third quarter. The U.S. has suffered through an extended inventory correction, causing an outsized impact on overall growth: inventory contraction cut 1.2% from GDP growth in the second quarter, the fifth straight quarterly hit. Inventory investment turned the corner, adding 0.6% to third-quarter GDP. After a six-quarter collapse, investment in mining and petroleum structures began to revive in the third quarter, and the drilling rig count bounced up from an all-time low in the second quarter. This investment in the energy sector, along with gains in other types of structures, pushed nonresidential fixed investment up 3.1%.

Similar gains eluded residential construction, however, where demand appears robust, but supply and financing constraints are hampering the recovery. Real residential investment had been making progress for five years, but fell 7.7% in the second quarter and 6.2% in the third. Demand for housing appears to be solid, but sales of both existing and new homes fell during the third quarter. Potential homebuyers are still hampered by restricted access to mortgage financing, and homebuilders increasingly report challenges to hiring craft labor for projects.

The Fed refrained from raising interest rates over the summer, concerned about economic uncertainty and negative sentiment in the capital markets. The markets now expect the Fed to raise the short-term federal funds rate 25 basis points in December, and perhaps twice more in 2017, but these are fewer increases than previously predicted. In addition, the long-term equilibrium federal funds rate target has been cut from 3% to 2.6%.

Are central banks around the globe running out of ammunition? Rather than a dearth of ammunition, it seems the effectiveness of monetary policy is diminishing and with it the credibility of central banks. After the Great Recession, central bankers showed a remarkable willingness to try unorthodox policies, including quantitative easing (QE) and negative interest rates. But persistent banking problems (particularly in Europe and Japan) have made QE less effective, as central bank funds are used to rebuild bank balance sheets rather than for lending. In addition, tight fiscal policies have offset potential gains from monetary stimulus. And all regions have seen a drop in productivity growth, reducing the effectiveness of monetary or fiscal stimulation.

The Long-Term View

Index	2016 3rd Qtr	Periods ended Dec. 31, 2015 Year	5 Yrs	10 Yrs	25 Yrs
U.S. Equity					
Russell 3000	4.40	0.48	12.18	7.35	10.03
S&P 500	3.85	1.38	12.57	7.31	9.82
Russell 2000	9.05	-4.41	9.19	6.80	10.50
Non-U.S. Equity					
MSCI EAFE	6.43	-0.81	3.60	3.03	5.40
MSCI Emerging Markets	9.03	-14.92	-4.80	3.61	–
S&P ex-U.S. Small Cap	7.98	5.92	5.51	5.33	6.80
Fixed Income					
Bloomberg Barclays Agg	0.46	0.55	3.25	4.51	6.15
90-Day T-Bill	0.10	0.05	0.07	1.24	2.93
Bloomberg Barclays Long G/C	1.24	-3.30	6.98	6.45	8.08
Citi Non-U.S. Government	0.59	-5.54	-1.30	3.05	5.37
Real Estate					
NCREIF Property	1.77	13.33	12.18	7.76	8.05
FTSE NAREIT Equity	-1.43	3.20	11.96	7.41	12.13
Alternatives					
CS Hedge Fund	1.74	-0.71	3.55	4.97	–
Cambridge PE*	–	8.50	12.41	11.50	15.59
Bloomberg Commodity	-3.86	-24.66	-13.47	-6.43	–
Gold Spot Price	-0.27	-10.46	-5.70	7.41	4.02
Inflation – CPI-U	0.17	0.73	1.53	1.86	2.30

*Private equity data is time-weighted return for period. Most recent quarterly data not available.
Sources: Bloomberg Barclays, Bloomberg, Citigroup, Credit Suisse, FTSE, MSCI, NCREIF, Russell Investment Group, Standard & Poor's, Thomson/Cambridge, Bureau of Economic Analysis.

Recent Quarterly Economic Indicators

	3Q16	2Q16	1Q16	4Q15	3Q15	2Q15	1Q15	4Q14
Employment Cost–Total Compensation Growth	2.3%	2.3%	1.9%	2.0%	2.0%	2.0%	2.6%	2.2%
Nonfarm Business–Productivity Growth	0.6%*	-0.6%	-0.6%	-1.7%	2.0%	3.1%	-0.8%	-1.7%
GDP Growth	2.9%	1.4%	0.8%	0.9%	2.0%	2.6%	2.0%	2.3%
Manufacturing Capacity Utilization	75.0%	74.9%	75.3%	75.4%	75.6%	75.5%	75.5%	76.0%
Consumer Sentiment Index (1966=100)	90.3	92.4	91.5	91.3	90.8	94.2	95.5	89.8

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

With a Little Help From My Friends

FUND SPONSOR | Kitty Lin

In a sharp shift from last quarter, endowments and foundations turned around and performed better than all other institutional fund types, with a median +3.69% return. Corporate funds, last quarter's best performer, brought up the rear at +3.28%. The median return for all fund types was +3.44%, according to Callan's database.

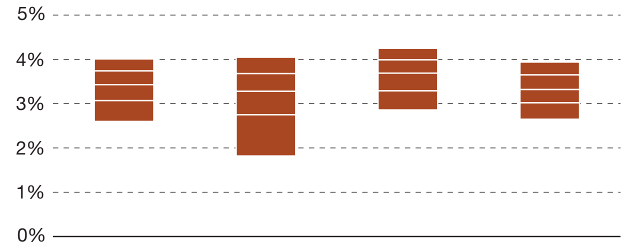
Interestingly, the rankings shifted slightly when looking at the top 10% of returns. Endowments and foundations still topped the list (+4.25%), but Taft-Hartley funds ranked last (+3.94%). Still, corporate funds and Taft-Hartley funds have done best over longer time periods. Corporates are on top over the last 15 years (+6.89% annualized) while Taft-Hartley funds edged them out over the last five years (+9.84%).

The outperformance from endowments/foundations stemmed from their "friends" in the stock market: non-U.S equities. The **MSCI ACWI ex-USA Index** gained 6.91% in the third quarter, compared to +4.03% for the **Russell 1000 Index**. That came despite the shock of the U.K.'s Brexit vote to leave the European Union.

The underperformance from corporate funds stemmed from higher allocations to U.S. fixed income; in fact, both U.S. and non-U.S. fixed income markets continued to show lackluster performance (**Bloomberg Barclays Aggregate Index**: +0.46%, **Citi Non-U.S. World Government Bond Index**: +0.59%). The decision of central banks in Europe and Japan not to cut rates and the upcoming U.S. election may have contributed to the disappointing returns for both in the quarter. As fixed income markets look less attractive these days, corporate funds increased their allocation of cash compared to the previous quarter.

By size, returns varied much less. Both large (more than $1 billion in assets) and medium funds ($100 million to $1 billion) gained 3.43%, but surprisingly small funds (less than $100 million) outpaced both, at +3.47%. Over the long haul large funds were the champs, +7.05% over 15 years versus +6.58% for medium funds and +6.35% for small funds.

Callan Fund Sponsor Returns for the Quarter



	Public Database	Corporate Database	Endow/Fndn Database	Taft-Hartley Database
10th Percentile	4.01	4.05	4.25	3.94
25th Percentile	3.74	3.68	3.99	3.65
Median	3.43	3.28	3.69	3.32
75th Percentile	3.07	2.75	3.29	3.02
90th Percentile	2.60	1.82	2.86	2.65

Source: Callan

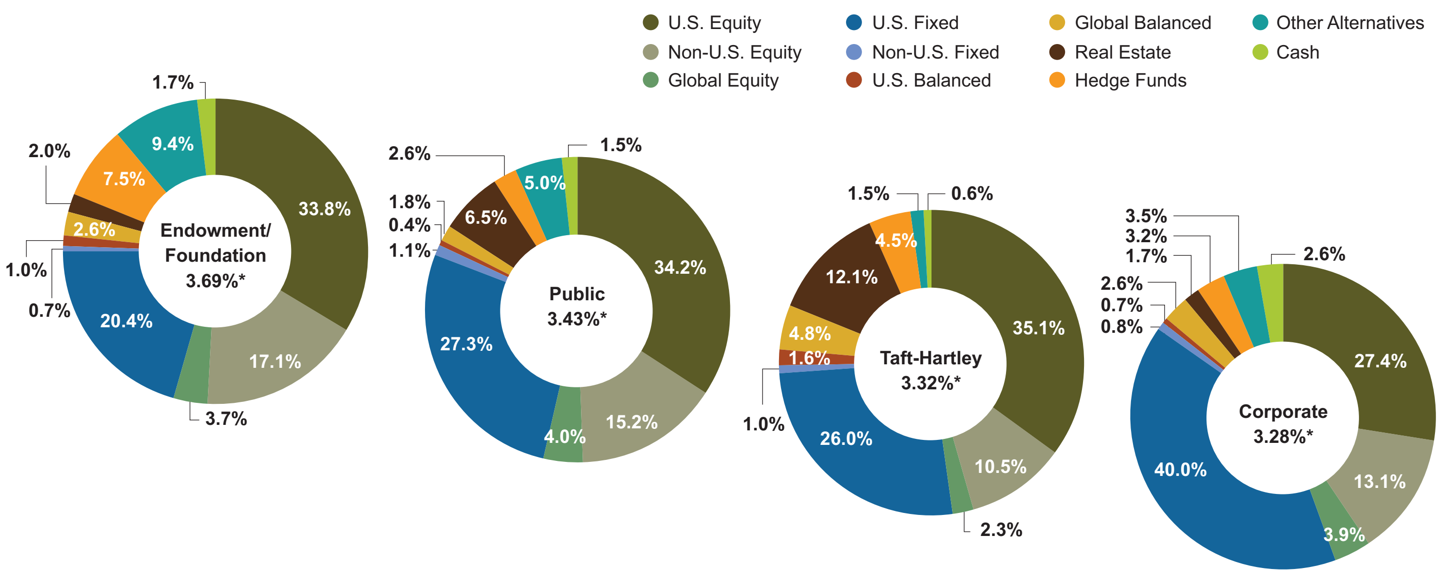
Callan Database Median Returns* for Periods ended September 30, 2016

Fund Sponsor	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Public Funds	**3.43**	**6.65**	**9.63**	**6.12**	**9.30**	**5.66**	**6.72**
Corporate Funds	**3.28**	**7.64**	**10.22**	**6.29**	**9.22**	**5.91**	**6.89**
Endowments/Foundations	**3.69**	**6.13**	**8.81**	**4.99**	**8.52**	**5.39**	**6.54**
Taft-Hartley	**3.32**	**6.49**	**9.45**	**6.74**	**9.84**	**5.58**	**6.26**

*Returns less than one year are not annualized.

Source: Callan. Callan's database includes the following groups: public defined benefit, corporate defined benefit, endowments/foundations, and Taft-Hartley plans. Approximately 10% to 15% of the database constituents are Callan's clients. All database group returns presented gross of fees. Past performance is no guarantee of future results. Reference to or inclusion in this report of any product, service, or entity should not be construed as a recommendation, approval, affiliation, or endorsement of such product, service, or entity by Callan.

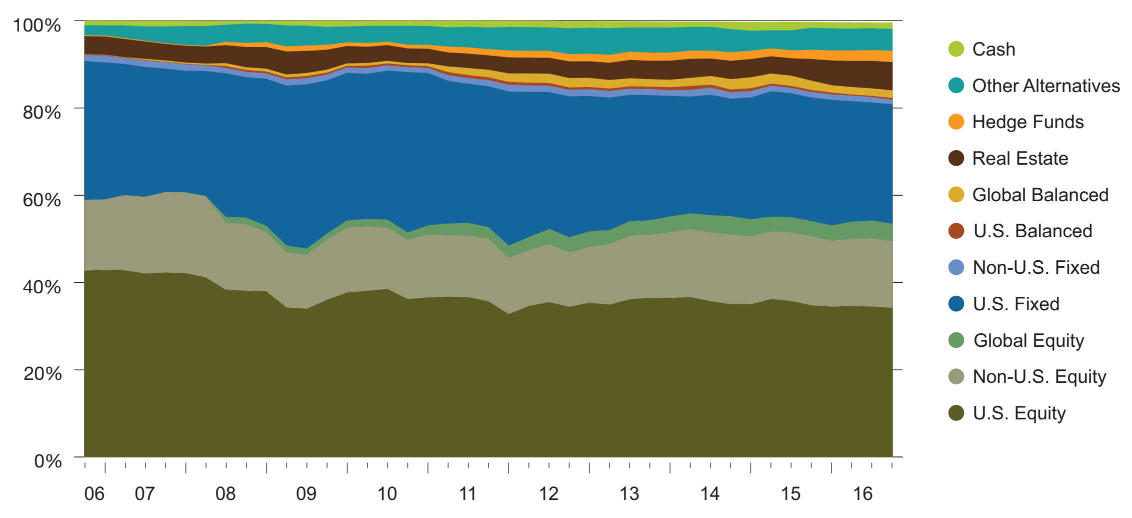
Callan Fund Sponsor Average Asset Allocation



*Latest median quarter return.
Note: charts may not sum to 100% due to rounding.
Source: Callan

Callan Public Fund Database Average Asset Allocation

(10 Years)



Source: Callan. Callan's database includes the following groups: public defined benefit, corporate defined benefit, endowments/foundations, and Taft-Hartley plans. Approximately 10% to 15% of the database constituents are Callan's clients. All database group returns presented gross of fees. Past performance is no guarantee of future results. Reference to or inclusion in this report of any product, service, or entity should not be construed as a recommendation, approval, affiliation, or endorsement of such product, service, or entity by Callan.

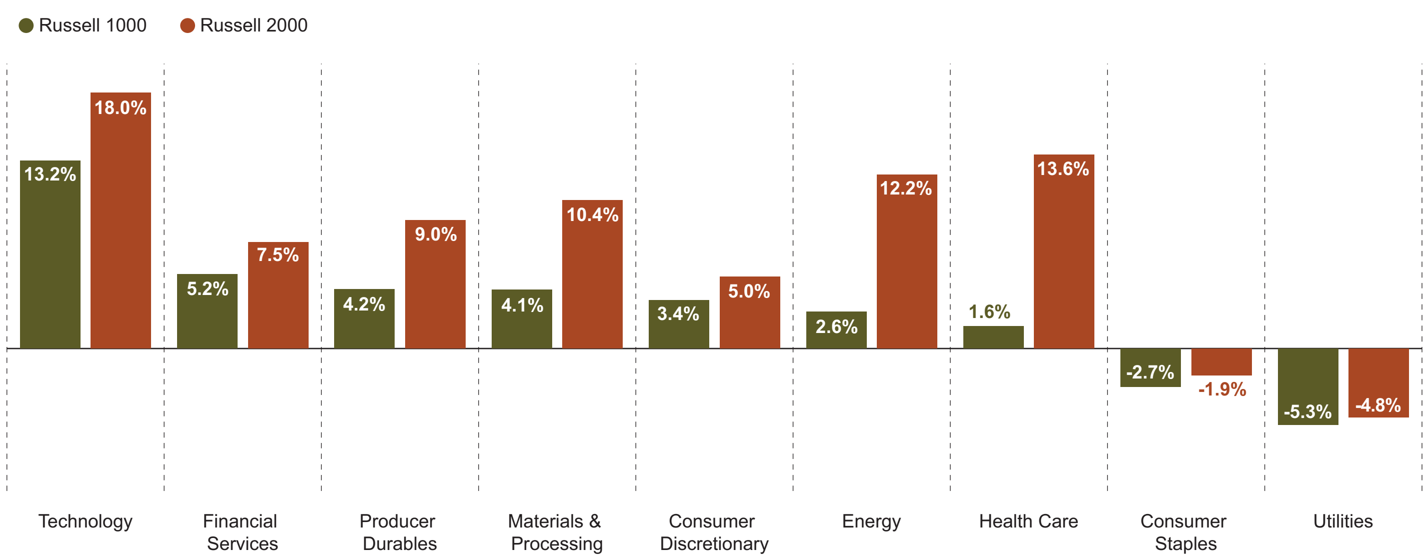
Sell in May? No Way!

U.S. EQUITY | Mark Wood, CFA

The **S&P 500 Index** climbed to its all-time high of 2,193 on August 15 and finished the quarter up 3.85%, ending in positive territory for the fourth quarter in a row. The early days of the quarter were characterized by a strong rebound in equity markets following the late June vote in the U.K. to leave the European Union (Brexit). Market volatility (as measured by VIX) spiked in the immediate aftermath but retreated just as quickly as investors absorbed the shock. The swift pivot, coupled with optimism over U.S. economic prospects and easing fears on China, led to a risk-on environment. July produced the strongest returns of the quarter across market capitalizations; August and September traded in a narrow (but ultimately positive) range as markets anticipated the Fed's interest rate decision in mid-September, which was to forego a rate hike. Foreign developed market indices outperformed the S&P 500 and, consistent with the quarter's risk-on theme, emerging markets were the top performers.

Size was the single biggest determinant of performance. Smaller companies did better—micro, small, and mid-capitalization companies outpaced large-cap stocks (**Russell Microcap Index**: +11.25%, **Russell 2000 Index**: +9.05%, **Russell Midcap Index**: +4.52%, and **Russell 1000 Index**: +4.03%). Additionally, after two strong quarters value underperformed growth in all capitalizations (**Russell 2000 Value Index**: +8.87% and **Russell 2000 Growth Index**: +9.22%). The dispersion in style returns was narrow across market capitalizations, with the widest (110 bps) in large cap (**Russell 1000 Growth** minus **Russell 1000 Value**). Defensive and high-dividend yield exposures sold off during the third quarter but have performed well year-to-date due to the increased global economic uncertainty earlier in 2016.

Economic Sector Quarterly Performance



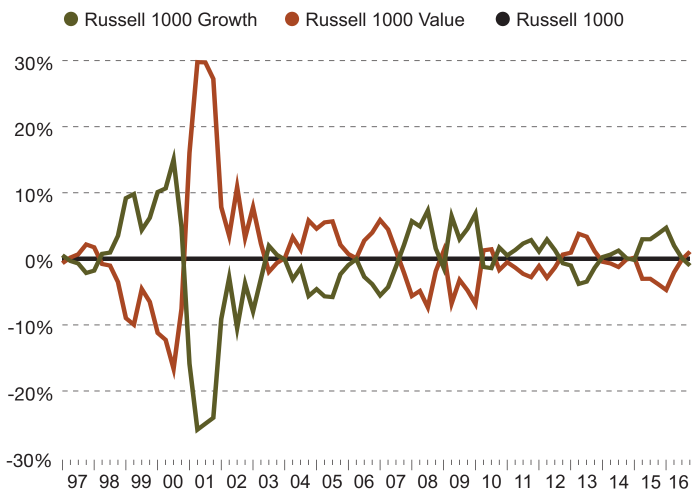
Source: Russell Investment Group

Note: As of the fourth quarter of 2015, the Capital Market 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 11 sectors.

Sector performance reflected the shift in risk attitudes. Among the worst-performing sectors in the S&P 500 during the quarter were Utilities (-0.7%), Consumer Staples (-0.7%), and Telecom (+1.0%)—all sectors associated with lower volatility and higher dividend yields. After a strong performance in the second quarter, Energy retreated, posting a 1.9% loss for the quarter. The more growth-oriented, risk-on sectors, Technology (+7.9%) and Health Care (+4.9%), were the top performers. In a new development, REITs and other listed real estate companies were extracted from the Financials sector and elevated to a new Real Estate sector in the Global Industry Classification Standard (GICS). The new sector, representing 3.1% of the S&P 500, had a tough start, finishing down 2.1%.

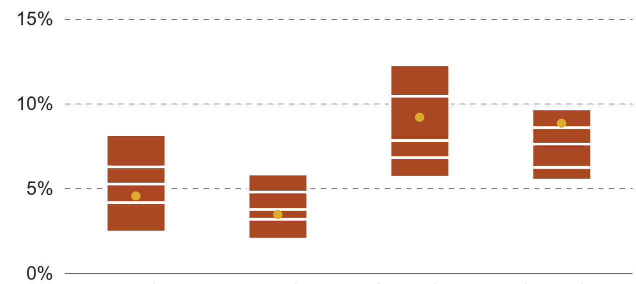
The U.S. equity market continued to rise, even as investor sentiment wavered between positive and negative over the course of the quarter. Active managers continue to find it a difficult environment to outperform as macro factors dominated price activity and performance in equity markets.

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



Source: Russell Investment Group

Callan Style Group Quarterly Returns



	Large Cap Growth Style	Large Cap Value Style	Small Cap Growth Style	Small Cap Value Style
10th Percentile	8.20	5.87	12.32	9.71
25th Percentile	6.29	4.81	10.46	8.60
Median	5.28	3.78	7.85	7.64
75th Percentile	4.18	3.20	6.83	6.26
90th Percentile	2.45	2.03	5.69	5.52
	R1000 Growth	**R1000 Value**	**R2000 Growth**	**R2000 Value**
Benchmark ●	4.58	3.48	9.22	8.87

Sources: Callan, Russell Investment Group

U.S. Equity Index Characteristics as of September 30, 2016

	S&P 500	Rus 3000	Rus 1000	Rus Midcap	Rus 2500	Rus 2000
Number of Issues	507	2,955	994	794	2,459	1,961
Wtd Avg Mkt Cap ($bn)	134.8	112.6	121.7	12.6	4.0	1.8
Price/Book Ratio	2.7	2.6	2.7	2.4	2.1	2.0
Forward P/E Ratio	16.9	17.4	17.2	18.9	19.2	19.8
Dividend Yield	2.1%	2.0%	2.0%	1.7%	1.6%	1.5%
5-Yr Earnings (forecasted)	12.5%	12.5%	12.5%	11.2%	12.0%	13.5%

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

Callan Style Median and Index Returns* for Periods ended September 30, 2016

Large Cap Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Large Cap Core Style	**4.55**	**5.71**	**12.77**	**10.64**	**16.13**	**7.39**	**7.80**
Russell 3000	4.40	8.18	14.96	10.44	16.36	7.37	7.61
Russell 1000	4.03	7.92	14.93	10.78	16.41	7.40	7.48
S&P 500	3.85	7.84	15.43	11.16	16.37	7.24	7.15
Large Cap Growth Style	**5.28**	**3.69**	**11.27**	**10.85**	**16.24**	**8.94**	**7.55**
Russell 1000 Growth	4.58	6.00	13.76	11.83	16.60	8.85	7.35
Large Cap Value Style	**3.78**	**7.61**	**13.71**	**8.99**	**15.88**	**6.54**	**8.08**
Russell 1000 Value	3.48	10.00	16.20	9.70	16.15	5.85	7.46
Mid Cap Equity	**Quarter**	**YTD**	**Year**	**3 Years**	**5 Years**	**10 Years**	**15 Years**
Mid Cap Core Style	**4.98**	**7.80**	**11.05**	**9.88**	**16.81**	**8.65**	**10.96**
Russell Midcap	4.52	10.26	14.25	9.70	16.67	8.32	10.44
Mid Cap Growth Style	**4.05**	**4.30**	**6.98**	**6.98**	**14.55**	**8.62**	**9.53**
Russell Midcap Growth	4.59	6.84	11.24	8.90	15.85	8.51	9.66
Mid Cap Value Style	**4.82**	**9.73**	**13.35**	**9.30**	**16.62**	**8.48**	**10.99**
Russell Midcap Value	4.45	13.72	17.26	10.49	17.38	7.89	10.72
Small Cap Equity	**Quarter**	**YTD**	**Year**	**3 Years**	**5 Years**	**10 Years**	**15 Years**
Small Cap Core Style	**7.62**	**10.07**	**14.32**	**8.51**	**17.63**	**8.55**	**11.31**
Russell 2000	9.05	11.46	15.47	6.71	15.82	7.07	9.26
Small Cap Growth Style	**7.85**	**6.52**	**8.73**	**5.47**	**15.82**	**9.13**	**9.81**
Russell 2000 Growth	9.22	7.48	12.12	6.58	16.15	8.29	8.90
Small Cap Value Style	**7.64**	**12.74**	**15.90**	**7.92**	**17.11**	**8.05**	**11.63**
Russell 2000 Value	8.87	15.49	18.81	6.77	15.45	5.78	9.38
Smid Cap Equity	**Quarter**	**YTD**	**Year**	**3 Years**	**5 Years**	**10 Years**	**15 Years**
Smid Cap Core Style	**6.32**	**9.21**	**12.42**	**7.64**	**16.34**	**9.96**	**–**
Russell 2500	6.56	10.80	14.44	7.77	16.30	7.95	10.07
Smid Cap Growth Style	**6.03**	**4.73**	**8.39**	**6.01**	**15.25**	**9.23**	**9.85**
Russell 2500 Growth	6.98	6.95	11.02	7.43	16.20	8.82	9.52
Smid Cap Value Style	**6.39**	**12.17**	**14.71**	**7.37**	**16.23**	**8.56**	**11.41**
Russell 2500 Value	6.18	14.51	17.68	8.05	16.29	6.92	10.17
Russell 3000 Sectors	**Quarter**	**YTD**	**Year**	**3 Years**	**5 Years**	**10 Years**	**15 Years**
Consumer Discretionary	3.50	4.52	8.99	9.57	19.01	10.11	–
Consumer Staples	-2.67	7.48	15.77	13.92	15.95	11.57	–
Energy	2.87	17.69	16.60	-4.26	4.72	3.84	–
Financial Services	5.44	4.35	10.18	9.69	17.97	0.87	–
Health Care	2.40	0.92	9.82	14.21	20.52	10.82	–
Materials & Processing	4.98	16.18	25.84	7.17	14.12	6.94	–
Producer Durables	4.61	10.99	18.76	9.54	17.48	7.29	–
Technology	13.49	13.07	22.76	16.28	17.08	10.27	–
Utilities	-5.31	17.12	21.88	11.87	12.44	7.07	–

*Returns less than one year are not annualized.
Sources: Callan, Russell Investment Group, Standard & Poor's.

Calm After the Storm

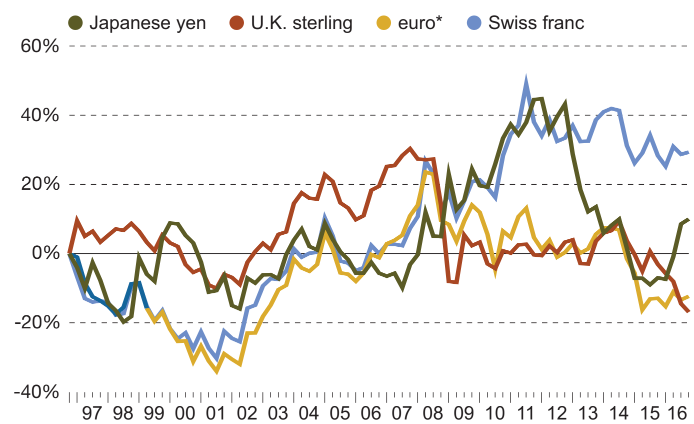
NON-U.S. EQUITY | Irina Sushch

Following two highly volatile quarters, the third quarter of 2016 bucked the trend—volatility was exceptionally low as investors appeared complacent about continued accommodative central bank policies and steady, albeit slow, economic growth. A risk-on rally led to stock market highs as anxieties about the U.K.'s Brexit vote to exit the European Union dwindled.

In this environment, the **MSCI ACWI ex USA Index** rose 6.91%. In contrast to the previous quarter, economically sensitive sectors fared best, particularly Information Technology (+15.50%) and Materials (+12.56%). Health Care was the only sector in the red (-1.96%), although its defensive counterparts, Utilities (+0.20%) and Telecommunications (+0.43%), faltered as well. Consistent with the quarter's risk-on theme, emerging markets (**MSCI Emerging Markets Index**: +9.03%) outpaced their developed peers (**MSCI World ex USA Index**: +6.29%), even excluding Canada (**MSCI EAFE Index**: +6.43%). The **MSCI ACWI ex USA Value Index** (+7.79%) overcame the **MSCI ACWI ex USA Growth Index** (+6.06%) for the first time since the second quarter of 2014. Small-cap stocks shot up into the black (**MSCI ACWI ex USA Small Cap Index**: +7.91%), finishing near the top among major non-U.S. indices.

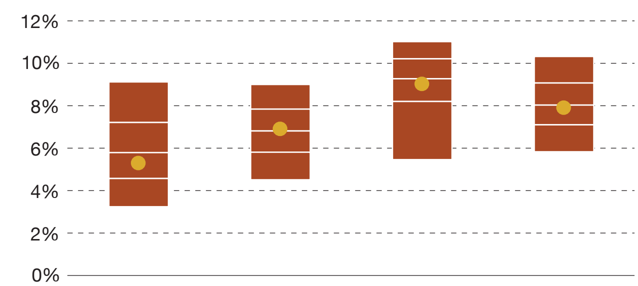
Equity markets across Europe crashed following the unexpected vote for Brexit but regained ground quickly as it became clear that the aftermath of the referendum was not immediately catastrophic. British Prime Minister David Cameron resigned and was replaced by Theresa May, who pledged that the U.K. would go through with exiting the European Union, but not hastily. The Bank of England sprang into action to support the economy, and the European Central Bank offered reassurance that it too would work to bolster growth. The **MSCI Europe Index** climbed 5.40%, with the strong performers including Austria (+16.66%), Germany (+10.01%), Spain (+9.32%), the Netherlands (+9.11%), and even the U.K. (+3.98%). Their vigor was attributed to better-than-expected earnings from Information Technology giants, improving commodity prices, rallying financial stocks, and a swell of M&A activity. European

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



* German mark returns before 1Q99
Source: MSCI

Callan Style Group Quarterly Returns



	Global Eq Style	Non-U.S. Eq Style	Emg Mkt Style	Non-U.S. SC Style
10th Percentile	9.08	8.96	10.98	10.28
25th Percentile	7.17	7.80	10.17	9.03
Median	5.75	6.77	9.23	7.99
75th Percentile	4.53	5.77	8.16	7.06
90th Percentile	3.20	4.47	5.42	5.79
	MSCI ACWI	MSCI ACWI ex USA	MSCI Emg Mkts	MSCI ACWI ex USA SC
Benchmark ●	5.30	6.91	9.03	7.91

Sources: Callan, MSCI

Health Care stocks stumbled (-3.09%) due to intensified global scrutiny during the U.S. election; Denmark, where a large health care company makes up approximately 20% of the country's index, was particularly hard hit, dropping 6.27%.

Southeast Asia and the Pacific enjoyed a buoyant quarter as well; the **MSCI Pacific Index** was up 8.46%. Japanese equities rallied during the quarter, ascending 8.60% due to new central bank policies and a fresh stimulus package. Additionally, Consumer Discretionary, IT, and Materials stocks surged due to strong earnings growth in several gaming and automobile companies. Australia (+7.91%) and New Zealand (+12.44%) also performed well as megabanks and commodities gained ground.

Emerging markets shot up in the accommodative macroeconomic environment (MSCI Emerging Markets Index: +9.03%). The top sector was IT, surging 16.08%. The stocks of smartphone manufacturers and technology component suppliers soared, boosting the Asian markets, including Taiwan (+11.70%) and South Korea (+10.98%). China was one of the biggest beneficiaries (+13.92%), thanks to its burgeoning internet giants. Latin America was relatively sluggish this quarter (+5.37%) but was propped up by Brazil, which shot up another 11.31%, skyrocketing 62.90% year-to-date. Hopes for economic change run high under Michel Temer, who replaced the impeached Dilma Rousseff as president. Russia (+8.43%) did not miss out on the rally. However, the Philippines, Turkey, and Malaysia were all in the red as political turmoil continued to afflict the countries (-5.33%, -5.26%, and -1.52%, respectively). Mexico also dwindled 2.24% as the peso fell 5% against the dollar.

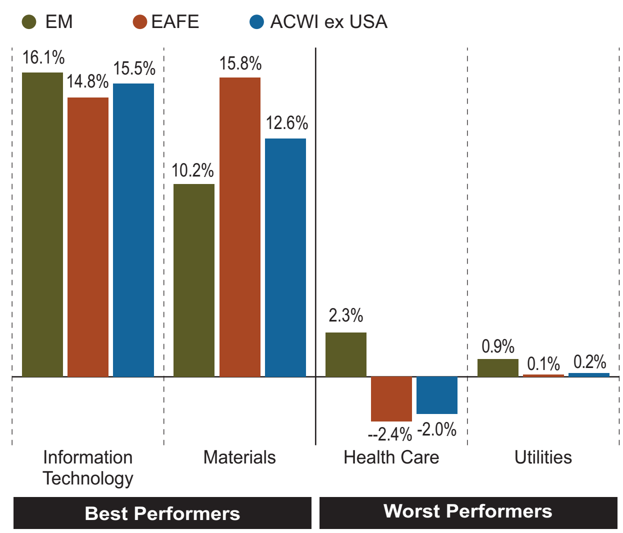
Quarterly Returns for Non-U.S. Developed Countries

Country	Equity Index (US$)	Equity Index (Local Currency)	Local Currency	Weight*
Australia	7.91%	5.00%	2.77%	5.13%
Austria	16.66%	15.32%	1.16%	0.13%
Belgium	5.00%	3.80%	1.16%	0.96%
Canada	4.85%	6.10%	-1.18%	6.72%
Denmark	-6.27%	-7.26%	1.07%	1.23%
Finland	7.42%	6.19%	1.16%	0.70%
France	6.36%	5.14%	1.16%	6.81%
Germany	10.01%	8.75%	1.16%	6.31%
Hong Kong	11.92%	11.89%	0.03%	2.45%
Ireland	7.42%	6.20%	1.16%	0.33%
Israel	-1.97%	-3.96%	2.64%	0.50%
Italy	2.21%	1.04%	1.16%	1.33%
Japan	8.60%	7.20%	1.31%	16.70%
Netherlands	9.11%	7.96%	1.16%	2.35%
New Zealand	12.44%	10.12%	2.11%	0.14%
Norway	6.28%	1.51%	4.70%	0.45%
Portugal	6.28%	5.07%	1.16%	0.10%
Singapore	-0.15%	1.13%	-1.29%	0.89%
Spain	9.32%	8.07%	1.16%	2.13%
Sweden	7.48%	8.68%	-1.11%	1.97%
Switzerland	2.62%	2.12%	0.50%	6.29%
U.K.	3.98%	7.00%	-2.83%	13.23%

*Weight in the MSCI ACWI ex USA Index

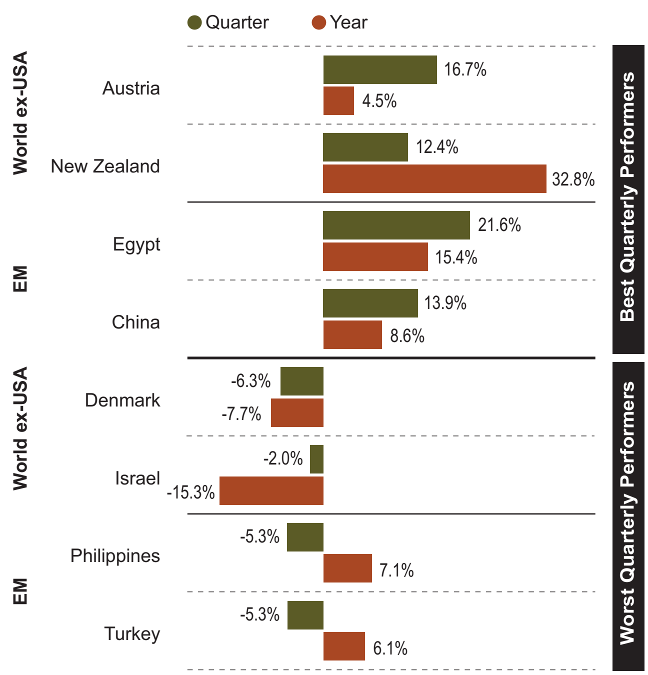
Sources: MSCI, Russell Investment Group, Standard & Poor's.

Quarterly Returns: Strong and Struggling Sectors



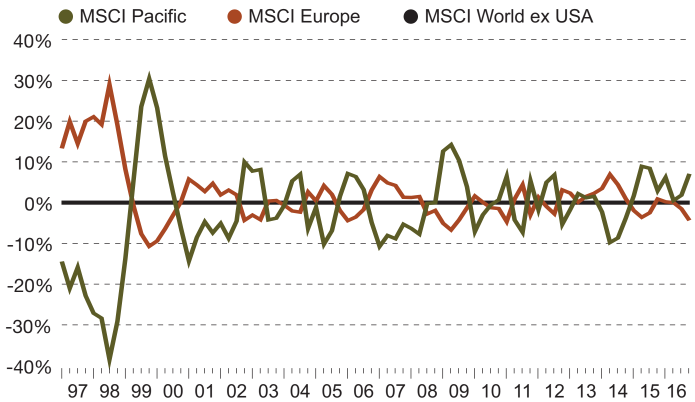
Source: MSCI

Quarterly and Annual Country Performance Snapshot



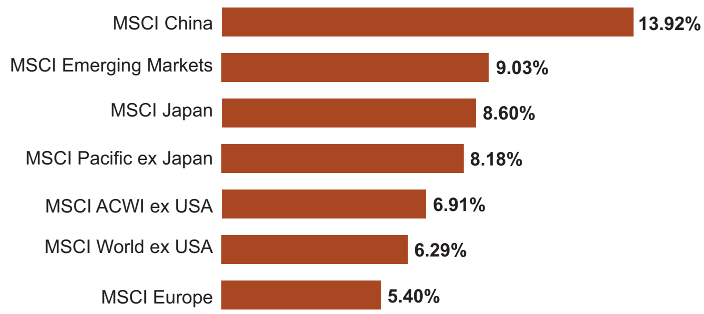
Source: MSCI

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



Source: MSCI

Regional Quarterly Performance (U.S. Dollar)



Source: MSCI

Callan Style Median and Index Returns* for Periods ended September 30, 2016

Global Equity	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Global Equity Style	**5.75**	**5.48**	**11.23**	**6.25**	**12.38**	**5.57**	**7.80**
MSCI World	4.87	5.55	11.36	5.85	11.63	4.47	6.29
MSCI ACWI	5.30	6.60	11.96	5.17	10.63	4.34	6.47
Non-U.S. Equity	**Quarter**	**YTD**	**Year**	**3 Years**	**5 Years**	**10 Years**	**15 Years**
Non-U.S. Style	**6.77**	**3.14**	**7.94**	**2.16**	**8.75**	**3.20**	**7.81**
MSCI World ex USA	6.29	3.12	7.16	0.33	6.89	1.88	5.96
MSCI ACWI ex USA	6.91	5.82	9.26	0.18	6.04	2.16	6.56
Regional Equity	**Quarter**	**YTD**	**Year**	**3 Years**	**5 Years**	**10 Years**	**15 Years**
MSCI China	13.92	8.58	12.95	3.90	8.24	7.78	13.08
MSCI Europe ex UK	6.03	-0.36	2.90	0.01	8.17	1.53	6.02
MSCI Japan	8.60	2.54	12.13	3.33	7.36	1.05	4.27
MSCI Japan (local)	7.20	-13.68	-5.19	4.42	13.38	-0.49	3.15
MSCI Pacific	8.46	5.26	14.74	2.31	7.31	2.50	6.08
MSCI Pacific (local)	6.97	-7.17	0.77	4.39	11.86	0.99	4.47
MSCI Pacific ex Japan	8.18	10.86	20.05	0.42	7.07	5.85	10.99
MSCI Pacific ex Japan (local)	6.52	7.03	13.34	4.95	10.29	5.31	8.55
MSCI United Kingdom	3.98	0.80	1.53	-1.80	5.99	1.40	5.02
MSCI United Kingdom (local)	7.00	14.37	18.39	5.68	9.91	5.15	5.89
Emerging/Frontier Markets	**Quarter**	**YTD**	**Year**	**3 Years**	**5 Years**	**10 Years**	**15 Years**
Emerging Market Style	**9.23**	**16.44**	**18.41**	**0.81**	**4.83**	**5.23**	**12.93**
MSCI Emerging Markets	9.03	16.02	16.78	-0.56	3.03	3.94	11.55
MSCI Emerging Markets (local)	7.59	11.30	12.96	4.33	6.95	5.94	11.97
MSCI Frontier Markets	2.65	2.16	0.91	-0.17	4.64	-0.26	–
Global/Non-U.S. Small Cap Equity	**Quarter**	**YTD**	**Year**	**3 Years**	**5 Years**	**10 Years**	**15 Years**
Non-U.S. Small Cap Style	**7.99**	**4.51**	**11.38**	**6.12**	**12.77**	**6.33**	**12.20**
MSCI World Small Cap	7.24	9.70	14.34	6.18	13.38	6.30	10.31
MSCI ACWI Small Cap	7.28	9.66	14.21	5.67	12.47	6.59	10.52
MSCI World ex USA Small Cap	8.00	7.26	13.50	4.15	9.72	4.11	9.97
MSCI ACWI ex USA Small Cap	7.91	7.70	13.38	3.52	8.60	4.58	10.47

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

Hut, Hut ... Hike!

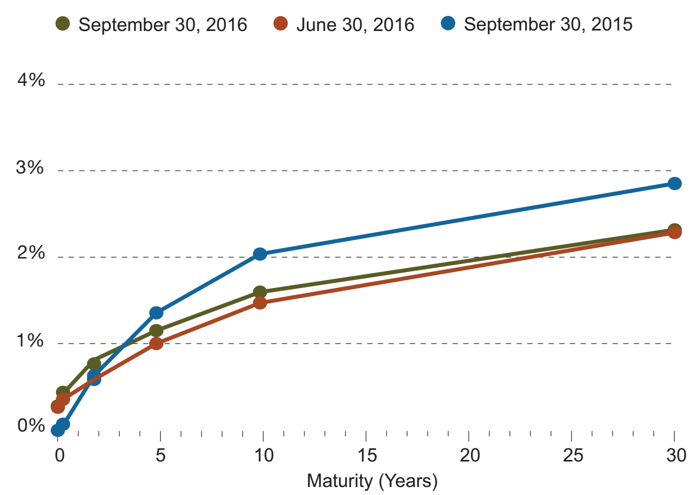
U.S. FIXED INCOME | Rufash Lama

For the quarter, the **Bloomberg Barclays High Yield Index** grew 5.55% while the **Bloomberg Barclays U.S. Aggregate Index** managed to rise a mere 0.46%.

Driven by Brexit-induced concerns, the yield on the benchmark 10-year Treasury note hit a record low of 1.37% in July; however, it rose for the remainder of the quarter and closed at 1.60%. While the Fed left the federal funds rate unchanged in the third quarter, its announcement was noteworthy because of the high level of disagreement; the three dissenting votes were the most since December 2014. Based on federal funds futures contracts, traders are betting there is a 78% chance of a rate hike at the next meeting in December after the Fed's decision to hold rates steady again in November.

Yields varied across the maturity spectrum during the quarter: While Treasury rates rose along the entire yield curve in August, the curve steepened in September as the 2-year fell by 4 basis points to 0.76% and the 30-year rose by 8 basis points to end at 2.32%. Intermediate Treasuries (-0.26%) outperformed long Treasuries (-0.36%) during the quarter.

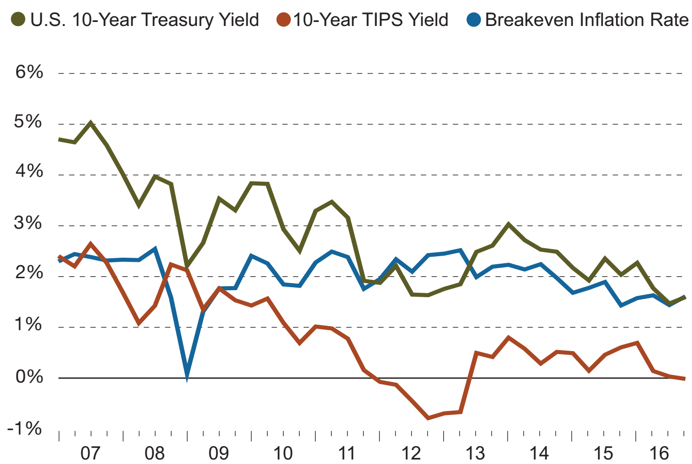
U.S. Treasury Yield Curves



Source: Bloomberg

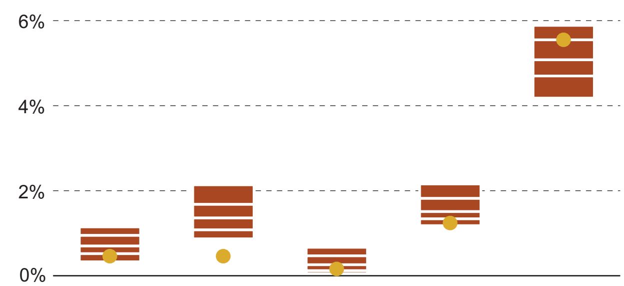
Credit spreads tightened during the quarter and yields inched toward historic lows. Their +5.55% return made high-yield corporates the strongest performer during the quarter. Despite record issuances in August, the credit sector gained 1.23% for the quarter and outperformed MBS (+0.60%) and CMBS (+0.59%). Industrials beat Utilities and Financials on a

Historical 10-Year Yields



Source: Bloomberg

Callan Style Group Quarterly Returns



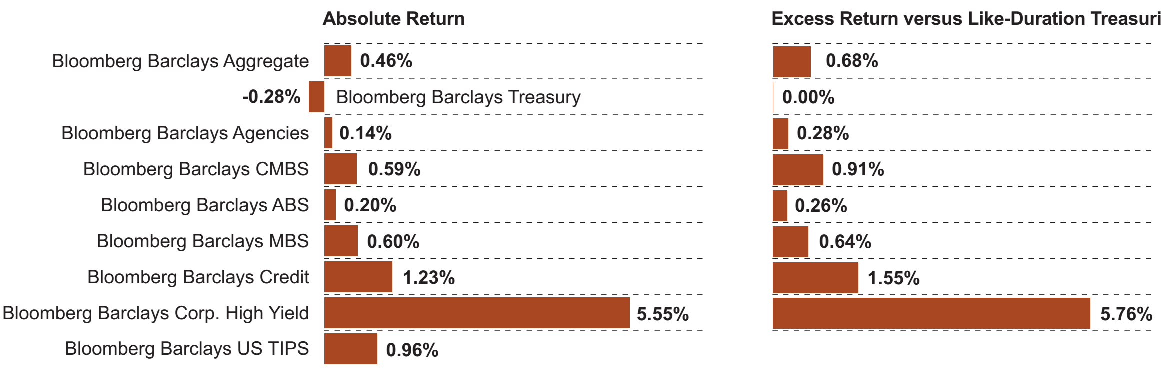
	Core Bond Style	Core Plus Style	Interm Style	Ext Maturity G/C Style	High Yld Style
10th Percentile	1.15	2.14	0.67	2.16	5.89
25th Percentile	0.95	1.68	0.47	1.82	5.55
Median	0.70	1.36	0.26	1.51	5.08
75th Percentile	0.52	1.08	0.12	1.34	4.70
90th Percentile	0.33	0.87	0.05	1.18	4.18
	Bloomberg Barclays Agg	Bloomberg Barclays Agg	Bloomberg Barclays Interm Agg	Bloomberg Barclays Long G/C	Bloomberg Barclays High Yld
Benchmark ●	0.46	0.46	0.16	1.24	5.55

Source: Bloomberg Barclays, Callan

duration-adjusted basis. Further, on a duration-adjusted basis, credit securities outperformed Treasuries by 155 basis points. Treasuries ended the quarter in the red (-0.28%).

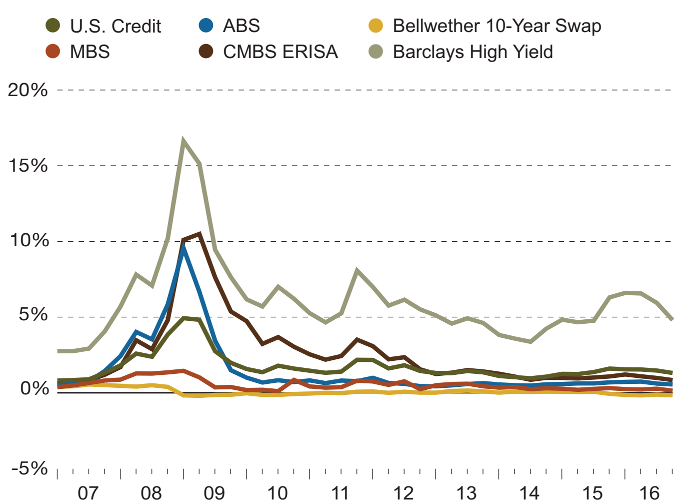
Investment-grade corporate issuance totaled $340 billion for the quarter, setting a record. By the end of September, year-to-date corporate investment-grade bond issuance was 8% ahead of last year's pace. And the record supplies were met with strong demand as investors snapped up bonds. CMBS and municipal markets also demonstrated robust supply. And despite low yields and heavy issuance of CMBS securities in September, they outperformed Treasuries by 91 bps.

Fixed Income Index Quarterly Returns



Source: Bloomberg Barclays

Effective Yield Over Treasuries



Source: Bloomberg Barclays

U.S. Fixed Income Index Characteristics as of Sept. 30, 2016

Bloomberg Barclays Indices	Yield to Worst	Mod Adj Duration	Avg Maturity
Bloomberg Barclays Aggregate	1.96	5.51	7.82
Bloomberg Barclays Universal	2.39	5.39	7.68
Bloomberg Barclays Gov/Credit	1.92	6.72	8.99
1-3 Year	1.04	1.91	1.98
Intermediate	1.51	4.09	4.44
Long-Term	3.32	15.57	24.32
Bloomberg Barclays Long Credit	4.04	14.04	23.92
Bloomberg Barclays Corp High Yield	6.17	4.05	6.33
Bloomberg Barclays TIPS	1.62	6.59	8.61
Bloomberg Barclays Muni Bond 1-5 Year	1.15	2.72	3.22
Bloomberg Barclays Muni 1-10 Year	1.38	4.02	5.88
Bloomberg Barclays Municipal	1.82	5.52	13.08

Source: Bloomberg Barclays

U.S. FIXED INCOME (Continued)

Callan Style Median and Index Returns* for Periods ended September 30, 2016

Broad Fixed Income	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Core Bond Style	**0.70**	**6.15**	**5.65**	**4.36**	**3.73**	**5.31**	**5.25**
Core Bond Plus Style	**1.36**	**7.16**	**6.55**	**4.61**	**4.55**	**5.77**	**5.91**
Bloomberg Barclays Aggregate	0.46	5.80	5.19	4.03	3.08	4.79	4.80
Bloomberg Barclays Universal	0.96	6.69	6.11	4.27	3.62	5.00	5.12
Long-Term	**Quarter**	**YTD**	**Year**	**3 Years**	**5 Years**	**10 Years**	**15 Years**
Extended Maturity Credit Style	**2.50**	**17.00**	**16.11**	**10.05**	**7.94**	**8.07**	**–**
Bloomberg Barclays Long Credit	2.26	16.50	15.73	9.53	7.05	7.63	7.74
Extended Maturity Gov/Credit Style	**1.51**	**16.12**	**15.14**	**10.30**	**6.96**	**8.38**	**8.01**
Bloomberg Barclays Long Gov/Credit	1.24	15.74	14.66	10.08	6.32	7.84	7.61
Intermediate-Term	**Quarter**	**YTD**	**Year**	**3 Years**	**5 Years**	**10 Years**	**15 Years**
Intermediate Style	**0.26**	**4.31**	**3.83**	**3.05**	**2.85**	**4.62**	**4.62**
Bloomberg Barclays Interm Gov/Credit	0.16	4.24	3.52	2.80	2.45	4.17	4.22
Short-Term	**Quarter**	**YTD**	**Year**	**3 Years**	**5 Years**	**10 Years**	**15 Years**
Defensive Style	**0.15**	**1.94**	**1.72**	**1.47**	**1.48**	**2.89**	**3.01**
Bloomberg Barclays Gov/Credit 1-3 Yr	0.02	1.68	1.31	1.09	1.05	2.59	2.80
Bank Loans	**Quarter**	**YTD**	**Year**	**3 Years**	**5 Years**	**10 Years**	**15 Years**
Bank Loan Style	**2.86**	**7.43**	**5.70**	**3.78**	**5.55**	**4.91**	**5.03**
Credit Suisse Leveraged Loans	3.10	7.46	5.35	3.60	5.30	4.24	4.79
High Yield	**Quarter**	**YTD**	**Year**	**3 Years**	**5 Years**	**10 Years**	**15 Years**
High Yield Style	**5.08**	**12.70**	**10.86**	**5.20**	**8.28**	**7.64**	**8.61**
Bloomberg Barclays Corp High Yield	5.55	15.11	12.73	5.28	8.34	7.71	8.63
Unconstrained	**Quarter**	**YTD**	**Year**	**3 Years**	**5 Years**	**10 Years**	**15 Years**
Unconstrained Fixed Style	**2.21**	**3.95**	**4.56**	**2.36**	**3.87**	**4.60**	**6.44**
90 Day T-Bill + 3%	0.84	2.48	3.27	3.12	3.11	3.92	4.38
Stable Value	**Quarter**	**YTD**	**Year**	**3 Years**	**5 Years**	**10 Years**	**15 Years**
Stable Value Style	**0.48**	**1.42**	**1.88**	**1.76**	**1.94**	**2.85**	**3.58**
iMoneyNet Mutual Fund Avg	0.03	0.08	0.09	0.04	0.03	0.82	–
TIPS	**Quarter**	**YTD**	**Year**	**3 Years**	**5 Years**	**10 Years**	**15 Years**
Inflation-Linked Style	**1.00**	**7.28**	**6.62**	**2.40**	**1.96**	**4.58**	**5.50**
Bloomberg Barclays TIPS	0.96	7.27	6.58	2.40	1.93	4.48	5.39
Municipal	**Quarter**	**YTD**	**Year**	**3 Years**	**5 Years**	**10 Years**	**15 Years**
Short Municipal Style	**-0.04**	**0.75**	**0.82**	**0.83**	**0.94**	**1.81**	**1.96**
Bloomberg Barclays Municipal 1-5 Yr	-0.16	1.38	1.59	1.74	1.67	3.07	3.09
Intermediate Municipal Style	**-0.26**	**3.28**	**4.64**	**4.13**	**3.52**	**3.91**	**4.00**
Bloomberg Barclays Municipal 1-10 Yr	-0.11	2.58	3.40	3.34	2.95	4.04	4.02
Long Municipal Style	**-0.21**	**4.14**	**5.83**	**5.74**	**4.95**	**5.03**	**5.19**
Bloomberg Barclays Municipal	-0.30	4.01	5.58	5.54	4.48	4.75	4.89

*Returns for less than one year are not annualized.

Sources: Bloomberg Barclays, Callan, Citigroup, Merrill Lynch

Globe-Trotting for Yield

NON-U.S. FIXED INCOME | Kyle Fekete

In an extraordinary effort to stimulate economic growth and inflation, the Bank of Japan introduced a 0% yield-target for 10-year bonds, aiming to exceed its 2% inflation objective. The central bank also intends to maintain its negative short rate stance in an effort to steepen the yield curve and thus help increase profitability for banks. The bank's governor termed the new policy a "reinforcement" of its quantitative easing (QE) program. Central banks have typically targeted short-term rates in QE programs, focusing on maturities of less than a year. Yield on Japan's 10-year government bond settled at -0.09% at the end of the quarter.

Overall, the European sovereign bond market was flat as the European Central Bank left interest rates unchanged. The **Bloomberg Barclays Global Aggregate Index** rose 0.82% (+0.53% hedged). The ECB committed to a monthly QE program of buying €80 billion in government bonds, asset-backed securities, and corporate debt through March 2017; however, President Mario Draghi announced a review of the program to ensure investable assets would not dry up. Yield on the German 10-year bund notched up a basis point to -0.12%. There is now over $12 trillion of negative-yielding debt globally, with Japan accounting for nearly half and Western Europe—namely France, Germany, and the Netherlands—the other half. Investors' sustained hunt for yield was evident in European bond pricing as periphery government Treasuries tended to decline more than their core eurozone counterparts. The Spanish and Italian 10-year yields declined 28 bps and 7 bps to 0.88% and 1.91%, respectively. The euro increased 1.16% against the U.S. dollar.

Despite the economic and political uncertainty the Brexit vote left in its wake, when U.K. voters chose to leave the European Union and the British pound plummeted 2.83%, data released showed no immediate negative effect on confidence or productivity. Yield on the 10-year gilt fell 12 bps to +0.75%.

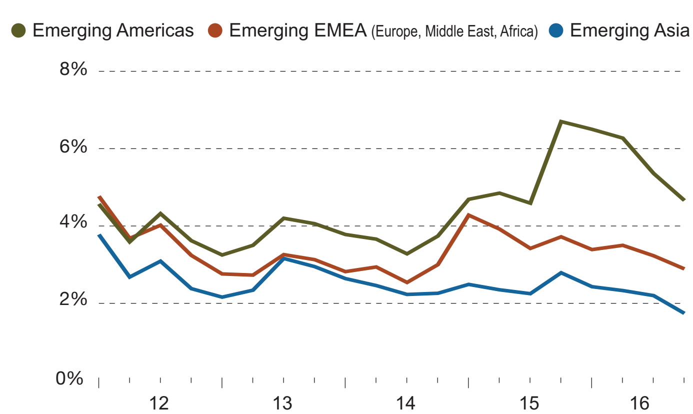
The developing markets advanced for the fourth straight quarter in spite of multiple political headwinds, including the

Quarterly Returns for Non-U.S. Government Indices

Country	Country Debt ($)	Country Debt	Local Currency	Weight*
Australia	3.60%	0.80%	2.77%	2.29%
Austria	1.81%	0.65%	1.16%	1.74%
Belgium	1.48%	0.32%	1.16%	2.93%
Canada	-0.67%	0.52%	-1.18%	2.32%
Denmark	0.96%	-0.10%	1.07%	0.82%
Finland	1.67%	0.51%	1.16%	0.67%
France	1.37%	0.21%	1.16%	11.72%
Germany	0.98%	-0.18%	1.16%	8.60%
Ireland	2.28%	1.11%	1.16%	0.95%
Italy	2.31%	1.14%	1.16%	11.07%
Japan	-0.92%	-2.19%	1.31%	34.89%
Malaysia	-0.66%	1.90%	-2.51%	0.53%
Mexico	-4.22%	0.47%	-4.67%	0.98%
Netherlands	1.29%	0.13%	1.16%	2.70%
Norway	3.53%	-1.12%	4.70%	0.30%
Poland	3.81%	0.30%	3.50%	0.71%
Singapore	0.22%	1.52%	-1.29%	0.45%
South Africa	10.29%	3.56%	6.50%	0.55%
Spain	3.39%	2.21%	1.16%	6.45%
Sweden	-0.63%	0.48%	-1.11%	0.52%
Switzerland	-0.08%	-0.57%	0.50%	0.27%
U.K.	-0.37%	2.52%	-2.83%	8.54%

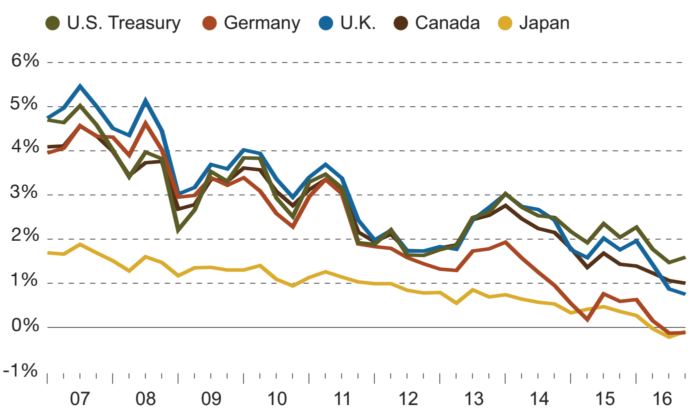
*Weight in the Citi Non-U.S. World Government Bond Index.
Source: Citigroup

Emerging Spreads Over Developed (By Region)

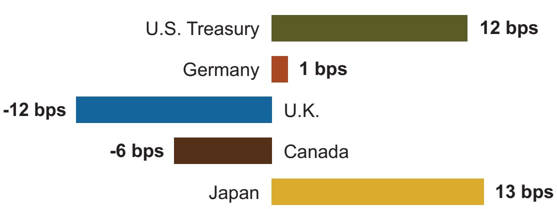


Source: Bloomberg Barclays

10-Year Global Government Bond Yields



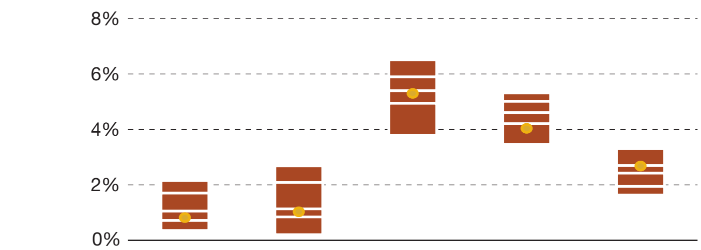
Change in 10-Year Yields from 2Q16 to 3Q16



Source: Bloomberg

impeachment of Brazil's president and the failed Turkish coup. The hard currency **J.P. Morgan EMBI Global Index** climbed 4.04%. Local currency debt, as measured by the **J.P. Morgan GBI-EM Global Diversified Index**, ticked up 2.68%.

Callan Style Group Quarterly Returns



	Global Fixed Style	Non-U.S. Fixed Style	Global High Yld Style	Em Debt Style (US$)	Em Debt Style (local)
10th Percentile	2.18	2.71	6.54	5.34	3.33
25th Percentile	1.73	2.11	5.92	5.04	2.72
Median	1.08	1.16	5.42	4.63	2.45
75th Percentile	0.74	0.87	4.97	4.23	1.97
90th Percentile	0.38	0.23	3.81	3.48	1.66
	Barclays Gl Agg	**Barclays Gl Agg ex US**	**Barclays High Yld**	**JPM EMBI Gl Div**	**JPM GBI-EM Gl Div**
Benchmark ●	0.82	1.03	5.3	4.04	2.68

Sources: Bloomberg Barclays, Callan, JPMorgan Chase

Callan Style Median and Index Returns* for Periods ended September 30, 2016

Global Fixed Income	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Global Fixed Income Style	**1.08**	**9.70**	**8.88**	**2.39**	**2.15**	**4.91**	**6.14**
Bloomberg Barclays Global Aggregate	0.82	9.85	8.83	2.13	1.74	4.26	5.13
Global Fixed Income Style (hedged)	**1.05**	**6.96**	**7.26**	**5.52**	**4.95**	**5.44**	**5.64**
Bloomberg Barclays Global Aggregate (hedged)	0.53	6.44	6.54	5.05	4.26	4.73	4.73
High Yield	**Quarter**	**YTD**	**Year**	**3 Years**	**5 Years**	**10 Years**	**15 Years**
Global High Yield Style	**5.42**	**13.65**	**12.46**	**3.91**	**7.61**	**7.03**	**9.74**
Bloomberg Barclays Global High Yield	5.30	14.49	13.51	4.97	8.56	7.87	9.43
Non-U.S. Fixed Income	**Quarter**	**YTD**	**Year**	**3 Years**	**5 Years**	**10 Years**	**15 Years**
Non-U.S. Fixed Income Style	**1.16**	**12.95**	**11.41**	**1.52**	**2.01**	**4.48**	**6.26**
Bloomberg Barclays Global Aggregate ex US	1.03	13.09	11.67	0.75	0.70	3.82	5.41
Emerging Markets Fixed Income	**Quarter**	**YTD**	**Year**	**3 Years**	**5 Years**	**10 Years**	**15 Years**
Emerging Debt Style (US$)	**4.63**	**16.27**	**18.15**	**7.02**	**7.81**	**8.13**	**11.06**
JPM EMBI Global Diversified	4.04	14.77	16.20	8.20	7.76	7.73	9.57
Emerging Debt Style (local)	**2.45**	**16.95**	**16.83**	**-2.14**	**0.22**	**5.21**	**7.25**
JPM GBI-EM Global Diversified	2.68	17.07	17.06	-2.58	0.06	5.52	–
Emerging Debt Blend Style	**3.59**	**15.14**	**16.15**	**2.13**	**3.94**	**8.07**	**12.69**
JPM EMBI Gl Div/JPM GBI-EM Gl Div	3.36	16.11	16.83	2.81	3.95	6.72	–
Emerging Debt Corporate Style	**3.59**	**12.81**	**13.05**	**6.55**	**8.08**	**–**	**–**
JPM CEMBI	3.25	12.57	13.34	6.38	7.31	7.16	–

*Returns less than one year are not annualized.
Sources: Bloomberg Barclays, Callan, JPMorgan

Returns Take a Summer Vacation

REAL ESTATE | Kevin Nagy

The **NCREIF Property Index*** gained 1.77% during the second quarter (1.16% from income and 0.60% from appreciation), its worst performance since the first quarter of 2010. In addition, appreciation fell for the sixth consecutive quarter.

In a repeat of the second quarter, Industrial (+2.89%) and Retail (+1.98%) topped property sector performance, and Office (+1.26%) and Hotels (+1.35%) were the worst performers again. The West region led the way (+2.19%) while the Midwest (+1.46%) was the weakest. Transaction volume was $9.6 billion, a 7% increase over the previous quarter and a 20% increase over the same period in 2015. Appraisal capitalization rates fell to 4.48%, an all-time low. The spread between appraisal capitalization rates and transaction capitalization rates widened to 180 basis points, the largest since the third quarter of 2009.

Occupancy rates continued to climb, setting a new 15-year high at 93.22%. Retail and Apartment occupancy rates fell slightly; Industrial and Office rates increased. Apartments were the only property type to experience a drop year-to-date.

The preliminary return for the **NCREIF Open End Diversified Core Equity Index*** was 1.83%; 0.90% of that was income and 0.94% from appreciation. This surpassed last quarter as the lowest since the first quarter of 2010. Income returns stayed in line with past quarters, but appreciation reached its lowest level since the first quarter of 2010. Low long-term interest rates have been a strong tailwind for U.S. real estate performance in recent quarters, but expectations of a Fed rate increase have sucked the wind from its sails.

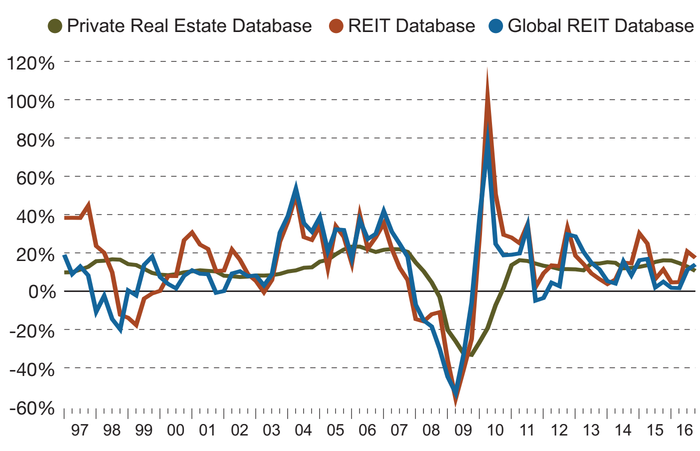
Global real estate investment trusts (REITs), tracked by the **FTSE EPRA/NAREIT Developed REIT Index** (USD), outperformed their U.S. counterparts and posted a 1.46% return. U.S. REITs, as measured by the **FTSE NAREIT Equity REITs Index**, lost 1.43% for the quarter.

*Index subreturns are calculated separately from index return and may not total.

In the U.S., REITs started the quarter strong, riding the post-Brexit bounce that followed the U.K.'s surprise vote to leave the European Union. The gains would not last, however, as mixed economic data fueled concerns of a Federal Reserve rate increase. Timber (+7.72%), Industrial (+6.67%), and Office (+3.24%) were the strongest-performing sectors for the quarter. Specialty (-9.93%), Data Centers (-9.02%), and Retail (-2.62%) were some of the laggards. Self-storage (-12.20%) struggled for the second straight quarter and was the worst performing sector. Investors appeared to be shifting money into more economically sensitive U.S. stocks, which generally performed well on the back of modest long-term yield increases. Anticipation of a Fed rate hike also prompted some investors to sell out of crowded defensive positions such as REITs into more cyclical stocks. As of September 30, U.S. REITs were trading at a 12.3% premium to net asset value, more than a 500 basis point increase over the previous quarter.

As the dust settles from the initial shock of Brexit, the impact on U.K. real estate is beginning to be apparent. Transaction evidence shows City of London and West End offices were the most affected due to uncertainty about the city's future as a financial hub. Industrial assets were the least affected. Outside of the U.K., the Nordic countries were the strongest performers.

Rolling One-Year Returns

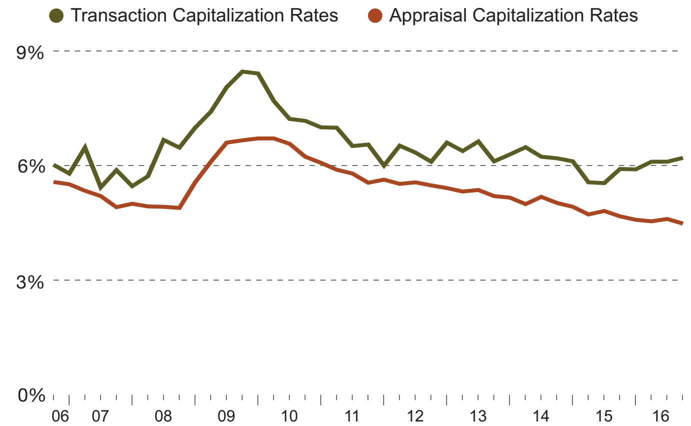


Source: Callan

Signs that the economies of Norway and Finland may finally be on the cusp of growth have led to record levels of investment and increases in property value. France also performed well as the economy recovered from a sluggish second quarter and employment growth propelled office returns upward.

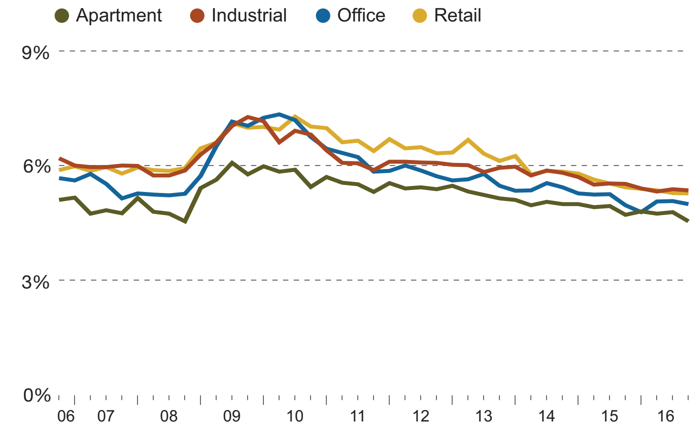
Collateralized mortgage-backed securities (CMBS) issuance for the quarter was $19.5 billion, a huge jump from the $12.1 billion in the second quarter. While issuance was up quarter-over-quarter, it was still down compared to the third quarter of 2015 ($25.3 billion).

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 September 30, 2016

Private Real Estate	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Real Estate Database (net of fees)	**1.62**	**5.85**	**9.34**	**11.64**	**11.74**	**4.58**	**7.33**
NCREIF Property	1.77	6.13	9.22	11.31	11.18	7.22	8.93
NFI-ODCE (value wtd. net)	1.83	5.80	9.08	11.42	11.34	5.05	7.03
Public Real Estate	**Quarter**	**YTD**	**Year**	**3 years**	**5 Years**	**10 Years**	**15 Years**
REIT Database	**-1.15**	**9.61**	**17.67**	**14.49**	**16.28**	**7.05**	**12.57**
FTSE NAREIT Equity	-1.43	11.75	19.86	14.22	15.91	6.35	11.38
Global Public Real Estate	**Quarter**	**YTD**	**Year**	**3 years**	**5 Years**	**10 Years**	**15 Years**
Global REIT Database	**1.36**	**9.06**	**13.66**	**9.14**	**13.77**	**4.73**	**10.87**
FTSE EPRA/NAREIT Developed REIT	1.46	10.97	15.85	8.60	13.17	4.16	10.67
Global ex U.S. Public Real Estate	**Quarter**	**YTD**	**Year**	**3 years**	**5 Years**	**10 Years**	**15 Years**
Global ex-U.S. REIT Database	**4.51**	**7.75**	**8.49**	**2.98**	**11.00**	**2.41**	**–**
EPRA/NAREIT Dev REITs ex-U.S.	4.28	10.44	11.66	3.21	10.42	2.57	10.59

*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.

Sticker Shock

PRIVATE EQUITY | Gary Robertson

Third-quarter fundraising commitments totaled $38.6 billion with 143 new partnerships formed, Private Equity Analyst reported. The number of new funds dropped by 27% from 196 in the second quarter, and dollar volume plummeted 62% from $102.2 billion. But this year is tracking closely to 2015, trailing by only $3 billion (1%) in commitments and 41 (6%) in new partnerships.

The investment pace by funds into companies maintained momentum, according to Buyouts newsletter, totaling 385 transactions, up 8% from 356 in the second quarter but down 5% from 406 a year ago. The announced aggregate dollar volume was $39 billion, up 4% from $37.6 billion in the second quarter and up significantly from the $11.6 billion a year ago. Just eight deals with announced values of $1 billion or more closed in the quarter, but that was up from six in the second quarter.

New investments in venture capital companies totaled 1,796 rounds and $15 billion of announced volume, according to the National Venture Capital Association. The number of rounds decreased 11% from 2,026 in the second quarter, and the dollar volume dropped 32% from $22.1 billion.

Regarding exits, Buyouts reports there were 142 private M&A exits of buyout-backed companies, with 38 deals disclosing values totaling $27.5 billion. The M&A exits count was up 20% from 118 in the second quarter, and the announced value increased 12% from $24.6 billion. There were two buyout-backed IPOs floating an aggregate $551.6 million, down from three floating $1.6 billion in the second quarter.

Funds Closed January 1 to September 30, 2016

Strategy	No. of Funds	Amt ($mm)	Percent
Venture Capital	274	32,312	17%
Buyouts	171	122,487	63%
Subordinated Debt	11	3,220	2%
Distressed Debt	17	17,250	9%
Secondary and Other	15	12,284	6%
Fund-of-funds	28	6,451	3%
Totals	**516**	**194,004**	**100%**

Source: Private Equity Analyst

Venture-backed M&A exits totaled 192 transactions, with a disclosed dollar volume of $13.4 billion. The number of private sale exits increased 19% from 161 in the second quarter, but the announced dollar volume declined 17% from the second quarter's $16.1 billion. There were 14 VC-backed IPOs in the third quarter with a combined float of $1 billion. For comparison, the second quarter of 2016 had 13 IPOs and total issuance of $876.1 million.

Private Equity Performance Database (%) (Pooled Horizon IRRs through March 31, 2016*)

Strategy	3 Months	Year	3 Years	5 Years	10 Years	15 Years	20 Years
All Venture	-2.4	6.6	20.6	15.0	10.4	5.3	23.2
Growth Equity	-0.1	6.0	12.7	10.5	11.1	10.3	13.9
All Buyouts	2.1	9.7	12.8	11.5	10.9	12.3	12.7
Mezzanine	3.0	8.0	9.3	10.2	9.6	8.5	9.4
Distressed	0.6	0.4	7.8	8.3	9.3	10.6	10.6
All Private Equity	**0.8**	**7.5**	**13.3**	**11.5**	**10.6**	**10.2**	**13.5**
S&P 500	1.4	1.8	11.8	11.6	7.0	6.0	8.0
Russell 3000	1.0	-0.3	11.2	11.0	6.9	6.4	8.0

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.

Can't Stop the Feeling

HEDGE FUNDS | Jim McKee

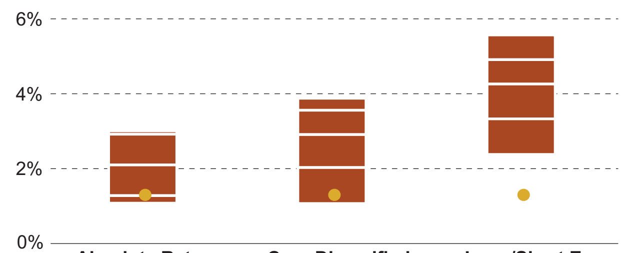
Despite the somber mood spurred by the Brexit vote closing out the prior quarter, capital markets got back on the dance floor in the third quarter. Central bankers let it be known that their music of easy money policies would not stop. **MSCI Emerging Markets** (+9.03%) led the beat upward, but the **S&P 500** (+3.85%) hit another record high. Higher income continued to be alluring as the **Bloomberg Barclays Corporate High Yield Index** jumped 5.55%.

Highlighting raw hedge fund performance without implementation costs, the **Credit Suisse Hedge Fund Index** (CS HFI) rose 1.74% in the third quarter. As a benchmark of actual hedge fund portfolios, the median manager in the **Callan Hedge Fund-of-Funds Database** advanced 2.92%, net of all fees.

Within CS HFI, the best-performing strategy last quarter was *Emerging Markets* (+4.20%), supported by strong debt and equity markets amid growing economies. Tightening credit spreads and improving fundamentals supported *Convertible Arb* (+3.83%), *Event-Driven Multi-Strategy* (+3.06%), and *Distressed* (+2.75%). Aided by strong equity tailwinds, *Long/Short Equity* gained 1.88%. Choppy markets caught the trend-following crowds of *Managed Futures* (-3.23%) a bit flat-footed.

Within Callan's Hedge Fund-of-Funds Database, the median *Callan Long/Short Equity FOF* (+4.26%) outpaced the *Callan Absolute Return FOF* (+2.10%). With diversifying exposures to both non-directional and directional styles, the *Core Diversified FOF* gained 2.91%.

Callan Style Group Quarterly Returns



	Absolute Return FOF Style	Core Diversified FOF Style	Long/Short Eq FOF Style
10th Percentile	3.01	3.88	5.57
25th Percentile	2.92	3.56	4.91
Median	2.10	2.91	4.26
75th Percentile	1.28	2.03	3.33
90th Percentile	1.08	1.07	2.38
T-Bills + 5% ●	1.32	1.32	1.32

Sources: Callan, Merrill Lynch

Callan Database Median and Index Returns* for Periods ended September 30, 2016

	Quarter	YTD	Year	3 Years	5 Years	10 Years	15 Years
Hedge Fund-of-Funds Database	**2.92**	**0.19**	**0.55**	**2.64**	**5.03**	**3.70**	**4.84**
CS Hedge Fund Index	1.74	0.09	-0.03	2.53	4.25	4.21	5.81
CS Equity Market Neutral	1.59	-1.98	-2.02	1.17	2.12	-2.45	0.75
CS Convertible Arbitrage	3.83	6.16	5.54	2.14	4.01	3.98	4.55
CS Fixed Income Arbitrage	2.61	2.39	2.42	2.88	4.59	3.50	4.23
CS Multi-Strategy	2.55	3.21	3.74	5.86	7.33	5.66	6.79
CS Distressed	2.75	2.71	0.91	1.59	5.43	4.20	7.02
CS Risk Arbitrage	2.30	5.08	5.93	1.71	2.61	3.59	3.71
CS Event-Driven Multi-Strategy	3.06	-0.51	-3.04	-0.56	3.71	4.11	6.13
CS Long/Short Equity	1.88	-3.23	-1.70	3.99	6.56	4.76	6.12
CS Dedicated Short Bias	-12.06	-18.35	-21.86	-8.80	-15.43	-10.95	-9.05
CS Global Macro	0.58	-0.97	-0.36	1.68	2.34	5.75	7.98
CS Managed Futures	-3.23	-1.26	-2.30	6.80	0.98	4.09	4.93
CS Emerging Markets	4.20	4.74	7.67	3.48	4.99	4.62	8.76

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

DC Participants Seek Cover

DEFINED CONTRIBUTION | Tom Szkwarla

DC plan balances increased a solid 1.67% in the second quarter, according to the Callan DC Index™. But participants sought cover, shifting money from equities into fixed income and stable value. This is atypical behavior. Generally, DC plan participants tend to follow the market, heading to equities when the stock market rises.

Turnover—or net transfer activity levels—has also been below average this year, coming in at 0.55% in the second quarter and 0.45% in the first. Historical turnover since inception is 0.65% for the Index.

Although the Index rose smartly for the quarter—gaining 1.90%—target date funds still managed to marginally outpace the typical DC investor, gaining 2.02%. Since inception, the DC Index has trailed the Age 45 Target Date Fund by 70 basis points annually, averaging a 5.15% annual return.

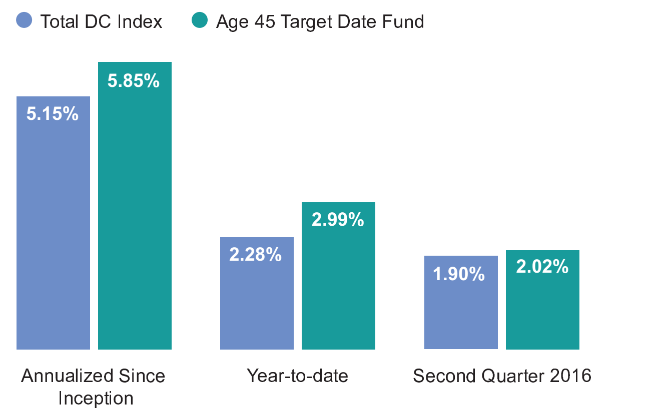
Money flowed out of DC plans during the quarter to the tune of 23 basis points. Historically, inflows (participant and plan sponsor contributions) have accounted for approximately 30% of total growth in plan balances (2.24% annualized). Altogether, participant balances have increased 7.39% annually since inception of the Index.

The DC Index's allocation to target date funds continued to increase in the quarter, reaching 26.9% of total DC assets. Meanwhile, U.S. large cap equity dropped to its lowest allocation since the fourth quarter of 2011.

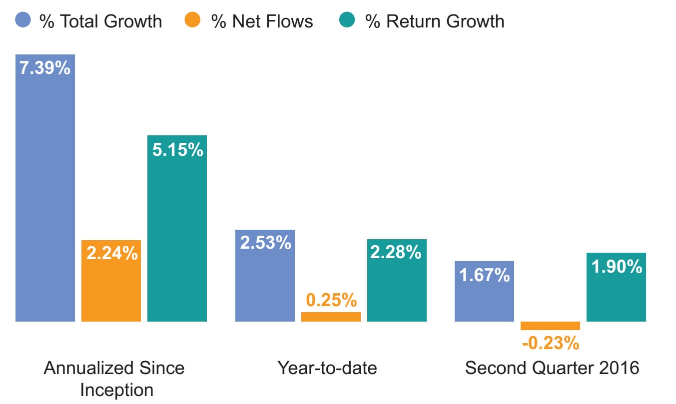
Target date funds are the fifth most prevalent asset class in DC plans (89% offer them), and when offered attract the lion's share of assets, at 31% on average.

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 (Second Quarter 2016)
(Top Two and Bottom Two Asset Gatherers)

Asset Class	Flows as % of Total Net Flows
Target Date Funds	47.68%
U.S. Fixed	22.94%
Company Stock	-22.66%
U.S. Large Cap	-39.59%
Total Turnover**	**0.55%**

Source: Callan DC Index
Data provided here is the most recent available at time of publication.

* DC Index inception date is January 2006.

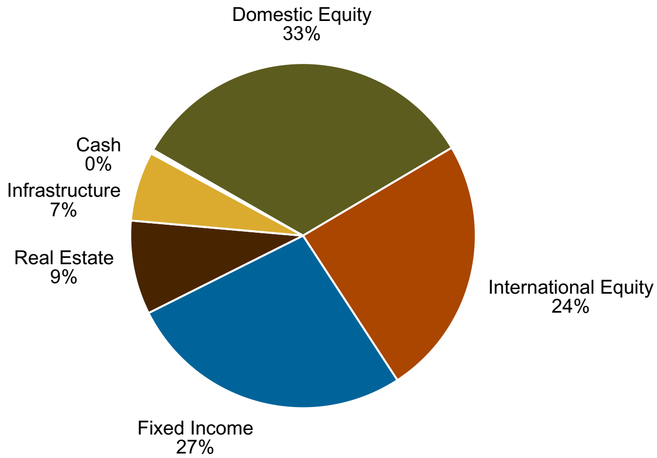
** Total Index "turnover" measures the percentage of total invested assets (transfers only, excluding contributions and withdrawals) that moved between asset classes.

Total Fund

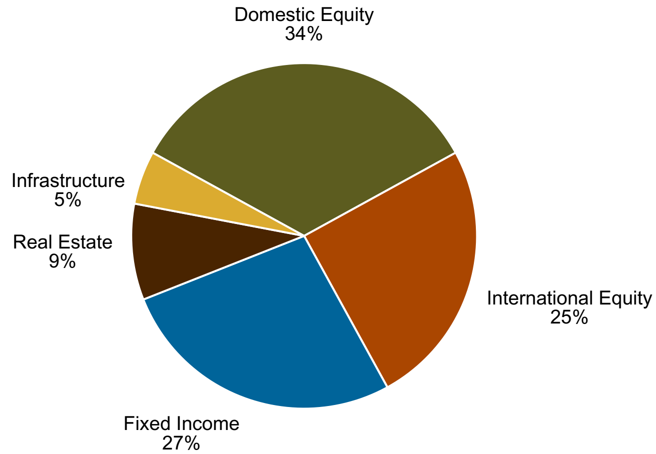
Actual vs Target Asset Allocation
As of September 30, 2016

The top left chart shows the Fund's asset allocation as of September 30, 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 CAI Public Fund Sponsor Database.

Actual Asset Allocation

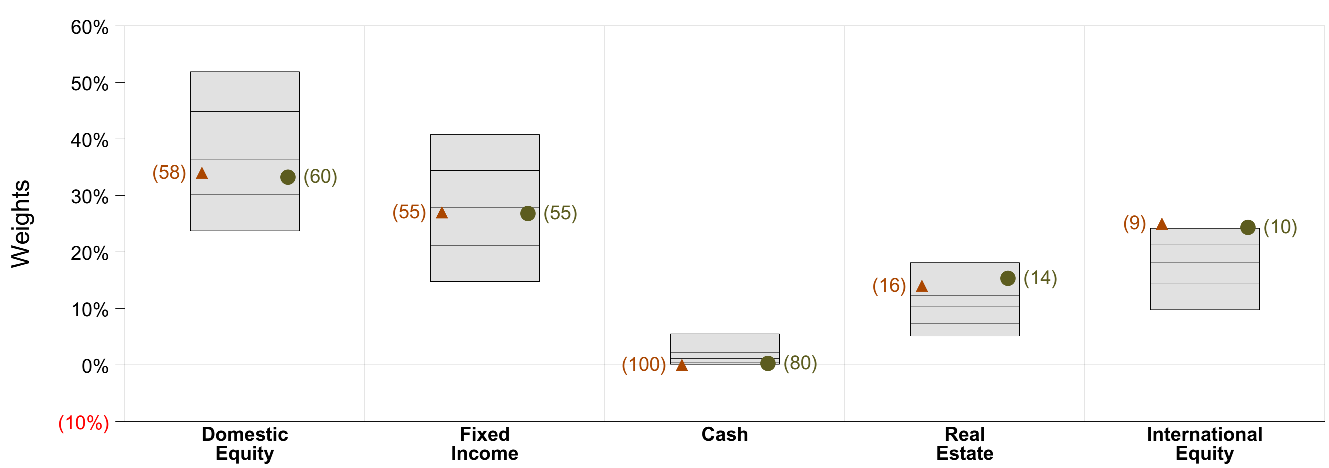


Target Asset Allocation



Asset Class	$000s Actual	Weight Actual	Target	Percent Difference	$000s Difference
Domestic Equity	246,504	33.2%	34.0%	(0.8%)	(5,667)
International Equity	180,596	24.3%	25.0%	(0.7%)	(4,824)
Fixed Income	198,810	26.8%	27.0%	(0.2%)	(1,444)
Real Estate	65,459	8.8%	9.0%	(0.2%)	(1,293)
Infrastructure	48,271	6.5%	5.0%	1.5%	11,186
Cash	2,042	0.3%	0.0%	0.3%	2,042
Total	741,681	100.0%	100.0%		

Asset Class Weights vs CAI Public Fund Sponsor Database



	Domestic Equity	Fixed Income	Cash	Real Estate	International Equity
10th Percentile	51.88	40.76	5.49	18.09	24.20
25th Percentile	44.86	34.42	2.17	12.25	21.24
Median	36.30	27.91	1.13	10.28	18.19
75th Percentile	30.21	21.18	0.38	7.29	14.34
90th Percentile	23.73	14.78	0.14	5.13	9.76
Fund ●	33.24	26.81	0.28	15.33	24.35
Target ▲	34.00	27.00	0.00	14.00	25.00
% Group Invested	98.90%	97.25%	69.78%	60.99%	97.25%

* Current Quarter Target = 27.0% BB Barclays Aggregate Idx, 26.0% S&P 500 Index, 25.0% MSCI ACWI ex US IMI, 9.0% NFI-ODCE Value Weight Gr, 8.0% Russell 2500 Index 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 September 30, 2016, with the distribution as of June 30, 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

	September 30, 2016				June 30, 2016	
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
Domestic Equity	**$246,504,152**	**33.24%**	**$(11,232,726)**	**$12,927,875**	**$244,809,003**	**33.83%**
Large Cap Equity	**$185,394,130**	**25.00%**	**$(9,587,532)**	**$9,188,319**	**$185,793,344**	**25.67%**
Transition Account [1]	10,607	0.00%	0	7	10,600	0.00%
Alliance S&P Index	55,628,493	7.50%	(2,010,809)	2,117,079	55,522,224	7.67%
PIMCO StocksPLUS	28,965,131	3.91%	(1,500,000)	1,303,559	29,161,572	4.03%
BlackRock Russell 1000 Value	48,854,965	6.59%	(4,005,857)	1,766,517	51,094,305	7.06%
T. Rowe Price Large Cap Growth	51,934,933	7.00%	(2,070,866)	4,001,156	50,004,643	6.91%
Small/Mid Cap Equity	**$61,110,022**	**8.24%**	**$(1,645,194)**	**$3,739,557**	**$59,015,659**	**8.15%**
Champlain Mid Cap	31,190,246	4.21%	(72,544)	1,620,307	29,642,483	4.10%
Pyramis Small Cap	29,919,775	4.03%	(1,572,650)	2,119,249	29,373,176	4.06%
International Equity	**$180,596,008**	**24.35%**	**$(235,104)**	**$10,063,835**	**$170,767,277**	**23.59%**
Causeway International Opportunities (3)	72,545,485	9.78%	(89,540)	4,564,693	68,070,332	9.41%
Aberdeen EAFE Plus	72,989,875	9.84%	(145,564)	3,010,304	70,125,135	9.69%
American Century Non-US SC [2]	35,060,647	4.73%	0	2,488,838	32,571,810	4.50%
Fixed Income	**$198,810,185**	**26.81%**	**$(169,338)**	**$4,628,875**	**$194,350,648**	**26.85%**
BlackRock U.S. Debt Fund	72,335,139	9.75%	(9,476)	346,037	71,998,579	9.95%
PIMCO Fixed Income	126,475,046	17.05%	(159,862)	4,282,838	122,352,070	16.91%
Real Estate	**$65,458,626**	**8.83%**	**$(171,017)**	**$1,276,793**	**$64,352,850**	**8.89%**
JP Morgan Strategic Property Fund	47,353,163	6.38%	(114,263)	957,378	46,510,048	6.43%
JP Morgan Income and Growth Fund	18,105,463	2.44%	(56,754)	319,415	17,842,802	2.47%
Infrastructure	**$48,270,522**	**6.51%**	**$(216,220)**	**$1,074,636**	**$47,412,106**	**6.55%**
Macquarie European Infrastructure	21,924,377	2.96%	(179,324)	430,051	21,673,650	2.99%
SteelRiver Infrastructure	26,346,145	3.55%	(36,896)	644,585	25,738,456	3.56%
Cash Composite	**$2,041,598**	**0.28%**	**$(16,243)**	**$1,363**	**$2,056,478**	**0.28%**
Cash	2,041,598	0.28%	(16,243)	1,363	2,056,478	0.28%
Total Plan	**$741,681,091**	**100.0%**	**$(12,040,649)**	**$29,973,377**	**$723,748,362**	**100.0%**

[1] The Domestic Equity transition account was funded for the May 2016 plan rebalancing.

[2] American Century was funded May 2016.

Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended September 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 September 30, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Gross of Fees					
Domestic Equity	**5.32%**	**14.84%**	**10.92%**	**17.57%**	**7.40%**
Total Domestic Equity Target (1)	4.45%	15.23%	10.44%	16.39%	7.43%
Large Cap Equity	**4.98%**	**14.30%**	**10.92%**	**17.15%**	**6.79%**
S&P 500 Index	3.85%	15.43%	11.16%	16.37%	7.24%
Alliance S&P Index	3.82%	15.26%	11.12%	16.32%	7.28%
PIMCO StocksPLUS	4.48%	16.30%	11.56%	18.51%	9.14%
S&P 500 Index	3.85%	15.43%	11.16%	16.37%	7.24%
BlackRock Russell 1000 Value Index	3.50%	16.01%	9.75%	16.20%	5.99%
Russell 1000 Value Index	3.48%	16.20%	9.70%	16.15%	5.85%
T. Rowe Price Large Cap Growth	8.06%	10.45%	11.40%	18.33%	10.13%
Russell 1000 Growth Index	4.58%	13.76%	11.83%	16.60%	8.85%
Small/Mid Cap Equity U.S. Equity	**6.38%**	**16.73%**	**10.87%**	**18.92%**	**9.58%**
Russell 2500 Index	6.56%	14.44%	7.77%	16.30%	7.95%
Champlain Mid Cap	5.47%	21.81%	12.23%	17.87%	11.57%
Russell MidCap Index	4.52%	14.25%	9.70%	16.67%	8.32%
Pyramis Small Cap	7.27%	11.51%	9.36%	19.89%	10.45%
Russell 2000 Index	9.05%	15.47%	6.71%	15.82%	7.07%
International Equity	**5.89%**	**9.18%**	**(0.16%)**	**7.31%**	**2.11%**
MSCI ACWI x US (Net)	6.91%	9.26%	0.18%	6.04%	2.16%
Causeway International Opportunities (3)	6.71%	5.12%	0.36%	9.54%	3.76%
Causeway Linked Index (3)	6.91%	7.88%	0.90%	7.66%	1.95%
Aberdeen EAFE Plus	4.29%	12.92%	(1.48%)	5.07%	3.73%
MSCI ACWI x US (Net)	6.91%	9.26%	0.18%	6.04%	2.16%
American Century Non-US SC (4)	7.64%	-	-	-	-
MSCI ACWI ex US Small Cap	7.91%	13.38%	3.52%	8.60%	4.58%
Fixed Income	**2.38%**	**9.81%**	**5.32%**	**5.04%**	**5.92%**
BB Barclays Aggregate Index	0.46%	5.19%	4.03%	3.08%	4.79%
BlackRock U.S. Debt Fund	0.48%	5.29%	4.17%	3.22%	4.92%
BB Barclays Aggregate Index	0.46%	5.19%	4.03%	3.08%	4.79%
PIMCO Fixed Income	3.50%	12.61%	6.01%	6.20%	6.64%
Custom Index (2)	2.33%	10.38%	5.91%	5.50%	6.20%

(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.
(3) Causeway International Value transitioned to International Opportunities in May 2016; as such, the index has been changed accordingly from EAFE to ACWI ex-US (Net Div).
(4) American Century Non-US SC was funded during second quarter 2016.

Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended September 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 September 30, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Gross of Fees					
Real Estate	**1.99%**	**9.17%**	**11.86%**	**12.87%**	**5.58%**
NFI-ODCE Value Weight Gr	2.07%	10.08%	12.45%	12.40%	6.02%
JP Morgan Strategic Property Fund	2.06%	9.67%	12.09%	12.67%	6.72%
NFI-ODCE Value Weight Gr	2.07%	10.08%	12.45%	12.40%	6.02%
JP Morgan Income and Growth Fund	1.78%	7.90%	11.80%	14.99%	3.91%
NFI-ODCE Value Weight Gr	2.07%	10.08%	12.45%	12.40%	6.02%
Infrastructure	**2.28%**	**13.99%**	**8.17%**	**7.41%**	**-**
CPI + 4%	1.07%	5.22%	4.71%	5.04%	5.73%
Macquarie European Infrastructure	2.00%	6.84%	2.00%	6.79%	-
SteelRiver Infrastructure	2.51%	20.70%	15.43%	7.77%	-
CPI + 4%	1.07%	5.22%	4.71%	5.04%	5.73%
Cash Composite	**0.07%**	**0.19%**	**0.06%**	**0.05%**	**1.06%**
Total Fund	**4.16%**	**12.32%**	**7.97%**	**11.92%**	**6.30%**
Total Fund Benchmark*	3.64%	10.61%	7.11%	10.55%	5.97%

* Current Quarter Target = 27.0% BB Barclays Aggregate Idx, 26.0% S&P 500 Index, 25.0% MSCI ACWI ex US IMI, 9.0% NFI-ODCE Value Weight Gr, 8.0% Russell 2500 Index 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 September 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.

	6/2016-9/2016	FY 2016	FY 2015	FY 2014	FY 2013
Gross of Fees					
Domestic Equity	**5.32%**	**1.24%**	**9.01%**	**26.67%**	**23.35%**
Total Domestic Equity Target (1)	4.45%	2.28%	7.15%	24.84%	21.70%
Large Cap Equity	**4.98%**	**1.60%**	**7.96%**	**27.15%**	**22.41%**
S&P 500 Index	3.85%	3.99%	7.42%	24.61%	20.60%
Alliance S&P Index	3.82%	3.97%	7.43%	24.50%	20.51%
PIMCO StocksPLUS	4.48%	2.68%	7.57%	27.61%	24.51%
S&P 500 Index	3.85%	3.99%	7.42%	24.61%	20.60%
BlackRock Russell 1000 Value Index	3.50%	2.75%	4.34%	23.88%	25.36%
Russell 1000 Value Index	3.48%	2.86%	4.13%	23.81%	25.32%
T. Rowe Price Large Cap Growth	8.06%	(2.64%)	12.35%	32.80%	20.37%
Russell 1000 Growth Index	4.58%	3.02%	10.56%	26.92%	17.07%
Small/Mid Cap Equity U.S. Equity	**6.38%**	**0.17%**	**12.68%**	**24.97%**	**26.35%**
Russell 2500 Index	6.56%	(3.67%)	5.92%	25.58%	25.61%
Champlain Mid Cap	5.47%	4.64%	10.27%	26.20%	22.88%
Russell MidCap Index	4.52%	0.56%	6.63%	26.85%	25.41%
Pyramis Small Cap	7.27%	(4.41%)	15.07%	23.59%	29.74%
Russell 2000 Index	9.05%	(6.73%)	6.49%	23.64%	24.21%
International Equity	**5.89%**	**(9.40%)**	**(5.79%)**	**21.26%**	**17.18%**
MSCI ACWI x US (Net)	6.91%	(10.24%)	(5.26%)	21.75%	13.63%
Causeway International Opportunities (3)	6.71%	(11.66%)	(2.38%)	23.76%	22.07%
Causeway Linked Index (3)	6.91%	(9.42%)	(4.22%)	23.57%	18.62%
Aberdeen EAFE Plus	4.29%	(7.60%)	(10.16%)	18.20%	11.69%
MSCI ACWI x US (Net)	6.91%	(10.24%)	(5.26%)	21.75%	13.63%
American Century Non-US SC	7.64%	-	-	-	-
MSCI ACWI ex US Small Cap	7.91%	(5.46%)	(3.07%)	26.09%	15.94%
Fixed Income	**2.38%**	**6.39%**	**0.78%**	**7.64%**	**1.84%**
BB Barclays Aggregate Index	0.46%	6.00%	1.86%	4.37%	(0.69%)
BlackRock U.S. Debt Fund	0.48%	6.13%	1.99%	4.49%	(0.48%)
BB Barclays Aggregate Index	0.46%	6.00%	1.86%	4.37%	(0.69%)
PIMCO Fixed Income	3.50%	6.55%	0.05%	9.60%	3.27%
Custom Index (2)	2.33%	7.28%	0.75%	8.48%	2.41%

(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.
(3) Causeway International Value transitioned to International Opportunities in May 2016; as such, the index has been changed accordingly from EAFE to ACWI ex-US (Net Div).

Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended September 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.

	6/2016-9/2016	FY 2016	FY 2015	FY 2014	FY 2013
Gross of Fees					
Real Estate	**1.99%**	**10.80%**	**13.92%**	**13.27%**	**16.00%**
NFI-ODCE Value Weight Gr	2.07%	11.82%	14.43%	12.75%	12.17%
JP Morgan Strategic Property Fund	2.06%	11.10%	13.37%	14.08%	14.08%
NFI-ODCE Value Weight Gr	2.07%	11.82%	14.43%	12.75%	12.17%
JP Morgan Income and Growth Fund	1.78%	10.06%	16.19%	11.66%	25.49%
NFI-ODCE Value Weight Gr	2.07%	11.82%	14.43%	12.75%	12.17%
Infrastructure	**2.28%**	**12.61%**	**(2.75%)**	**16.31%**	**3.27%**
CPI + 4%	1.07%	4.64%	3.62%	6.05%	5.76%
Macquarie European Infrastructure	2.00%	6.82%	(9.64%)	14.63%	13.28%
SteelRiver Infrastructure	2.51%	17.75%	5.97%	18.46%	(7.19%)
CPI + 4%	1.07%	4.64%	3.62%	6.05%	5.76%
Cash Composite	**0.07%**	**0.12%**	**0.00%**	**0.00%**	**0.05%**
Total Fund	**4.16%**	**2.33%**	**4.63%**	**19.64%**	**14.84%**
Total Fund Benchmark*	3.64%	1.82%	4.34%	16.97%	12.87%

* Current Quarter Target = 27.0% BB Barclays Aggregate Idx, 26.0% S&P 500 Index, 25.0% MSCI ACWI ex US IMI, 9.0% NFI-ODCE Value Weight Gr, 8.0% Russell 2500 Index 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 September 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 September 30, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Net of Fees					
Domestic Equity	**5.23%**	**14.48%**	**10.59%**	**17.19%**	**7.01%**
Total Domestic Equity Target (1)	4.45%	15.23%	10.44%	16.39%	7.43%
Large Cap Equity	**4.93%**	**14.12%**	**10.76%**	**16.95%**	**6.53%**
S&P 500 Index	3.85%	15.43%	11.16%	16.37%	7.24%
Alliance S&P Index	3.81%	15.22%	11.08%	16.28%	7.23%
PIMCO StocksPLUS	4.48%	16.30%	11.56%	18.33%	9.02%
S&P 500 Index	3.85%	15.43%	11.16%	16.37%	7.24%
BlackRock Russell 1000 Value Index	3.50%	15.99%	9.71%	16.17%	5.98%
Russell 1000 Value Index	3.48%	16.20%	9.70%	16.15%	5.85%
T. Rowe Price Large Cap Growth	7.90%	9.87%	10.89%	17.77%	9.59%
Russell 1000 Growth Index	4.58%	13.76%	11.83%	16.60%	8.85%
Small/Mid Cap Equity U.S. Equity	**6.14%**	**15.79%**	**10.00%**	**17.99%**	**8.73%**
Russell 2500 Index	6.56%	14.44%	7.77%	16.30%	7.95%
Champlain Mid Cap	5.22%	20.76%	11.28%	16.88%	10.63%
Russell MidCap Index	4.52%	14.25%	9.70%	16.67%	8.32%
Pyramis Small Cap	7.04%	10.67%	8.55%	19.01%	9.64%
Russell 2000 Index	9.05%	15.47%	6.71%	15.82%	7.07%
International Equity	**5.85%**	**8.56%**	**(0.82%)**	**6.57%**	**1.35%**
MSCI ACWI x US (Net)	6.91%	9.26%	0.18%	6.04%	2.16%
Causeway International Opportunities (3)	6.59%	4.48%	(0.27%)	8.85%	3.08%
Causeway Linked Index (3)	6.91%	7.88%	0.90%	7.66%	1.95%
Aberdeen EAFE Plus	4.29%	12.28%	(2.20%)	4.29%	2.93%
MSCI ACWI x US (Net)	6.91%	9.26%	0.18%	6.04%	2.16%
American Century Non-US SC	7.64%	-	-	-	-
MSCI ACWI ex US Small Cap	7.91%	13.38%	3.52%	8.60%	4.58%
Fixed Income	**2.31%**	**9.47%**	**4.99%**	**4.71%**	**5.63%**
BB Barclays Aggregate Index	0.46%	5.19%	4.03%	3.08%	4.79%
BlackRock U.S. Debt Fund	0.48%	5.26%	4.14%	3.19%	4.91%
BB Barclays Aggregate Index	0.46%	5.19%	4.03%	3.08%	4.79%
PIMCO Fixed Income	3.38%	12.07%	5.50%	5.70%	6.21%
Custom Index (2)	2.33%	10.38%	5.91%	5.50%	6.20%

(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.
(3) Causeway International Value transitioned to International Opportunities in May 2016; as such, the index has been changed accordingly from EAFE to ACWI ex-US (Net Div).

Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended September 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 September 30, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Net of Fees					
Real Estate	**1.72%**	**8.02%**	**10.67%**	**11.64%**	**4.36%**
NFI-ODCE Equal Weight Net	1.96%	9.69%	11.64%	11.41%	4.86%
JP Morgan Strategic Property Fund	1.81%	8.60%	11.00%	11.57%	5.67%
NFI-ODCE Equal Weight Net	1.96%	9.69%	11.64%	11.41%	4.86%
JP Morgan Income and Growth Fund	1.47%	6.55%	10.29%	13.40%	2.29%
NFI-ODCE Equal Weight Net	1.96%	9.69%	11.64%	11.41%	4.86%
Infrastructure	**1.83%**	**13.17%**	**7.17%**	**6.13%**	**-**
CPI + 4%	1.07%	5.22%	4.71%	5.04%	5.73%
Macquarie European Infrastructure	1.20%	6.00%	1.19%	5.68%	-
SteelRiver Infrastructure	2.36%	19.90%	14.16%	6.26%	-
CPI + 4%	1.07%	5.22%	4.71%	5.04%	5.73%
Cash Composite	**0.07%**	**0.19%**	**0.06%**	**0.05%**	**1.06%**
Total Fund	**4.04%**	**11.83%**	**7.49%**	**11.38%**	**5.77%**
Total Fund Benchmark*	3.64%	10.61%	7.11%	10.55%	5.97%

* Current Quarter Target = 27.0% BB Barclays Aggregate Idx, 26.0% S&P 500 Index, 25.0% MSCI ACWI ex US IMI, 9.0% NFI-ODCE Value Weight Gr, 8.0% Russell 2500 Index 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 September 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.

	6/2016-9/2016	FY 2016	FY 2015	FY 2014	FY 2013
Net of Fees					
Domestic Equity	**5.23%**	**0.94%**	**8.72%**	**26.30%**	**22.90%**
Total Domestic Equity Target (1)	4.45%	2.28%	7.15%	24.84%	21.70%
Large Cap Equity	**4.93%**	**1.44%**	**7.83%**	**26.95%**	**22.21%**
S&P 500 Index	3.85%	3.99%	7.42%	24.61%	20.60%
Alliance S&P Index	3.81%	3.93%	7.40%	24.45%	20.46%
PIMCO StocksPLUS	4.48%	2.68%	7.57%	27.61%	23.83%
S&P 500 Index	3.85%	3.99%	7.42%	24.61%	20.60%
BlackRock Russell 1000 Value Index	3.50%	2.71%	4.30%	23.83%	25.35%
Russell 1000 Value Index	3.48%	2.86%	4.13%	23.81%	25.32%
T. Rowe Price Large Cap Growth	7.90%	(3.13%)	11.93%	32.16%	19.79%
Russell 1000 Growth Index	4.58%	3.02%	10.56%	26.92%	17.07%
Small/Mid Cap Equity U.S. Equity	**6.14%**	**(0.61%)**	**11.80%**	**24.00%**	**25.36%**
Russell 2500 Index	6.56%	(3.67%)	5.92%	25.58%	25.61%
Champlain Mid Cap	5.22%	3.76%	9.33%	25.16%	21.86%
Russell MidCap Index	4.52%	0.56%	6.63%	26.85%	25.41%
Pyramis Small Cap	7.04%	(5.10%)	14.24%	22.70%	28.79%
Russell 2000 Index	9.05%	(6.73%)	6.49%	23.64%	24.21%
International Equity	**5.85%**	**(10.04%)**	**(6.46%)**	**20.41%**	**16.34%**
MSCI ACWI x US (Net)	6.91%	(10.24%)	(5.26%)	21.75%	13.63%
Causeway International Opportunities (3)	6.59%	(12.24%)	(3.01%)	22.98%	21.27%
Causeway Linked Index (3)	6.91%	(9.42%)	(4.22%)	23.57%	18.62%
Aberdeen EAFE Plus	4.29%	(8.32%)	(10.90%)	17.28%	10.80%
MSCI ACWI x US (Net)	6.91%	(10.24%)	(5.26%)	21.75%	13.63%
American Century Non-US SC	7.64%	-	-	-	-
MSCI ACWI ex US Small Cap	7.91%	(5.46%)	(3.07%)	26.09%	15.94%
Fixed Income	**2.31%**	**6.06%**	**0.46%**	**7.30%**	**1.51%**
BB Barclays Aggregate Index	0.46%	6.00%	1.86%	4.37%	(0.69%)
BlackRock U.S. Debt Fund	0.48%	6.09%	1.97%	4.43%	(0.49%)
BB Barclays Aggregate Index	0.46%	6.00%	1.86%	4.37%	(0.69%)
PIMCO Fixed Income	3.38%	6.04%	(0.43%)	9.07%	2.77%
Custom Index (2)	2.33%	7.28%	0.75%	8.48%	2.41%

(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.
(3) Causeway International Value transitioned to International Opportunities in May 2016; as such, the index has been changed accordingly from EAFE to ACWI ex-US (Net Div).

Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended September 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.

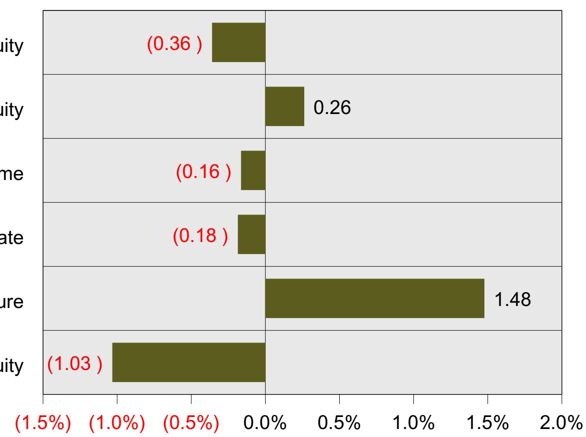
	6/2016-9/2016	FY 2016	FY 2015	FY 2014	FY 2013
Net of Fees					
Real Estate	**1.72%**	**9.64%**	**12.74%**	**12.03%**	**14.67%**
NFI-ODCE Equal Weight Net	1.96%	11.24%	13.64%	11.37%	10.80%
JP Morgan Strategic Property Fund	1.81%	10.02%	12.28%	12.98%	12.95%
NFI-ODCE Equal Weight Net	1.96%	11.24%	13.64%	11.37%	10.80%
JP Morgan Income and Growth Fund	1.47%	8.69%	14.74%	9.93%	23.54%
NFI-ODCE Equal Weight Net	1.96%	11.24%	13.64%	11.37%	10.80%
Infrastructure	**1.83%**	**12.30%**	**(3.82%)**	**15.32%**	**1.39%**
CPI + 4%	1.07%	4.64%	3.62%	6.05%	5.76%
Macquarie European Infrastructure	1.20%	6.82%	(10.56%)	14.11%	11.61%
SteelRiver Infrastructure	2.36%	17.13%	4.67%	16.80%	(9.28%)
CPI + 4%	1.07%	4.64%	3.62%	6.05%	5.76%
Cash Composite	**0.07%**	**0.12%**	**(0.00%)**	**0.00%**	**0.05%**
Total Fund	**4.04%**	**1.89%**	**4.17%**	**19.11%**	**14.21%**
Total Fund Benchmark*	3.64%	1.82%	4.34%	16.97%	12.87%

* Current Quarter Target = 27.0% BB Barclays Aggregate Idx, 26.0% S&P 500 Index, 25.0% MSCI ACWI ex US IMI, 9.0% NFI-ODCE Value Weight Gr, 8.0% Russell 2500 Index and 5.0% CPI-W+4.0%.

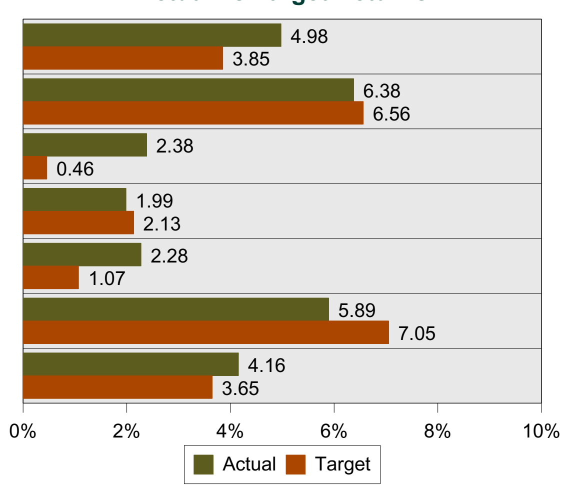
Quarterly Style Attribution - September 30, 2016

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.

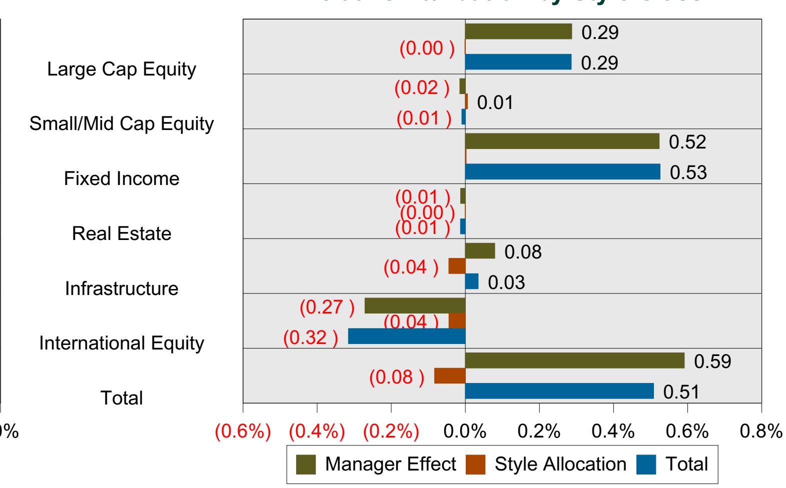
Style Class Under or Overweighting



Actual vs Target Returns



Relative Attribution by Style Class



Relative Attribution Effects for Quarter ended September 30, 2016

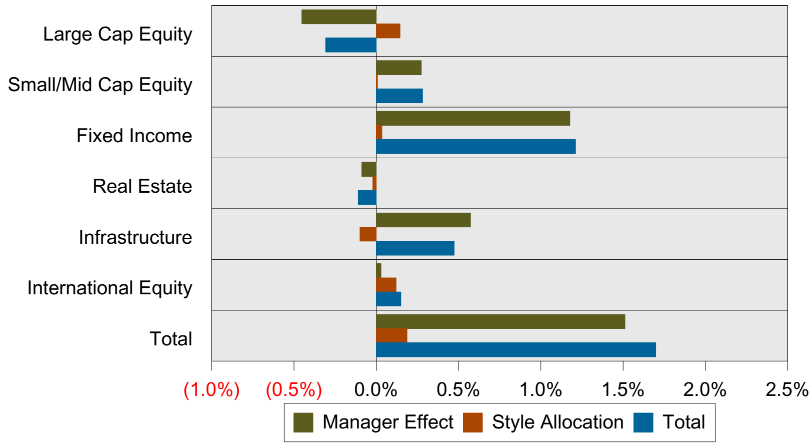
Style Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Style Allocation	Total Relative Return
Large Cap Equity	26%	26%	4.98%	3.85%	0.29%	(0.00%)	0.29%
Small/Mid Cap Equity	8%	8%	6.38%	6.56%	(0.02%)	0.01%	(0.01%)
Fixed Income	27%	27%	2.38%	0.46%	0.52%	0.00%	0.53%
Real Estate	9%	9%	1.99%	2.13%	(0.01%)	(0.00%)	(0.01%)
Infrastructure	6%	5%	2.28%	1.07%	0.08%	(0.04%)	0.03%
International Equity	24%	25%	5.89%	7.05%	(0.27%)	(0.04%)	(0.32%)
Total			**4.16% =**	**3.65% +**	**0.59% +**	**(0.08%)**	**0.51%**

* Current Quarter Target = 27.0% BB Barclays Aggregate Idx, 26.0% S&P 500 Index, 25.0% MSCI ACWI ex US IMI, 9.0% NFI-ODCE Value Weight Gr, 8.0% Russell 2500 Index and 5.0% CPI-W+4.0%.

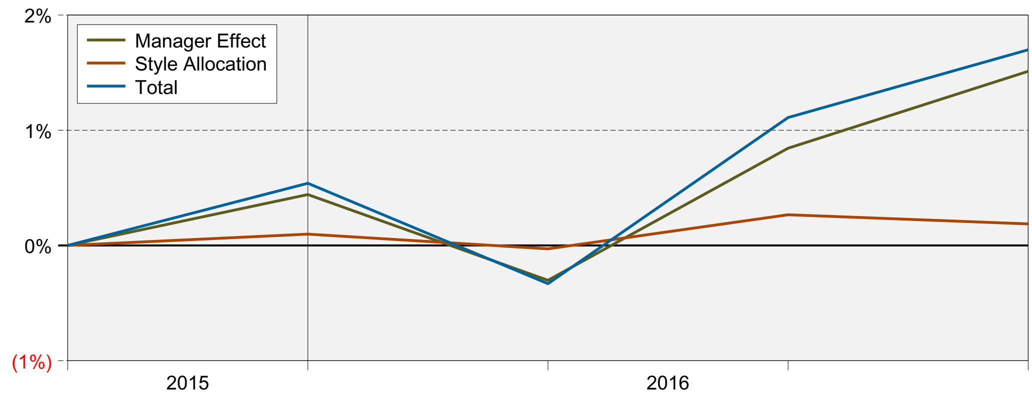
Cumulative Style Relative Attribution - September 30, 2016

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

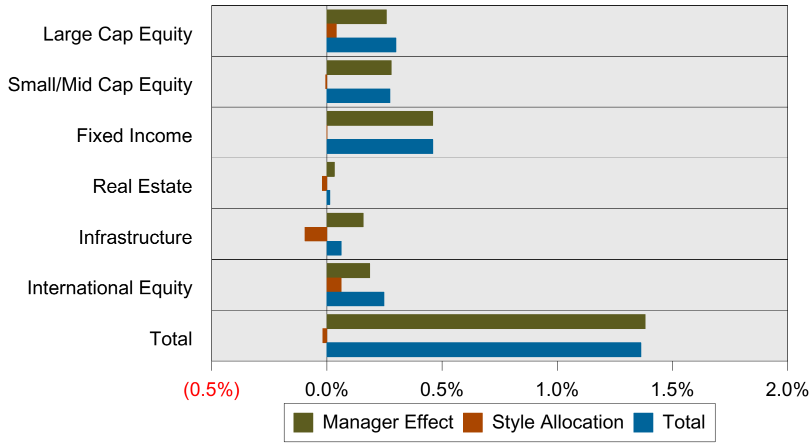
Style Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Style Allocation	Total Relative Return
Large Cap Equity	33%	32%	14.30%	15.43%	(0.45%)	0.14%	(0.31%)
Small/Mid Cap Equity	10%	9%	16.73%	14.44%	0.27%	0.01%	0.28%
Fixed Income	25%	26%	9.81%	5.19%	1.18%	0.03%	1.21%
Real Estate	9%	8%	9.17%	10.15%	(0.09%)	(0.02%)	(0.11%)
Infrastructure	6%	5%	13.99%	5.22%	0.57%	(0.10%)	0.47%
International Equity	17%	19%	9.18%	9.34%	0.03%	0.12%	0.15%
Total			**12.32% =**	**10.62% +**	**1.51% +**	**0.19%**	**1.70%**

* Current Quarter Target = 27.0% BB Barclays Aggregate Idx, 26.0% S&P 500 Index, 25.0% MSCI ACWI ex US IMI, 9.0% NFI-ODCE Value Weight Gr, 8.0% Russell 2500 Index and 5.0% CPI-W+4.0%.

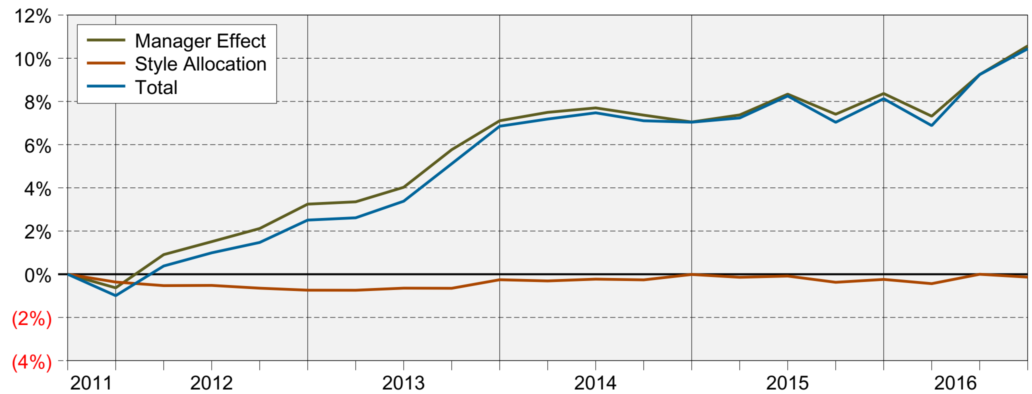
Cumulative Style Relative Attribution - September 30, 2016

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

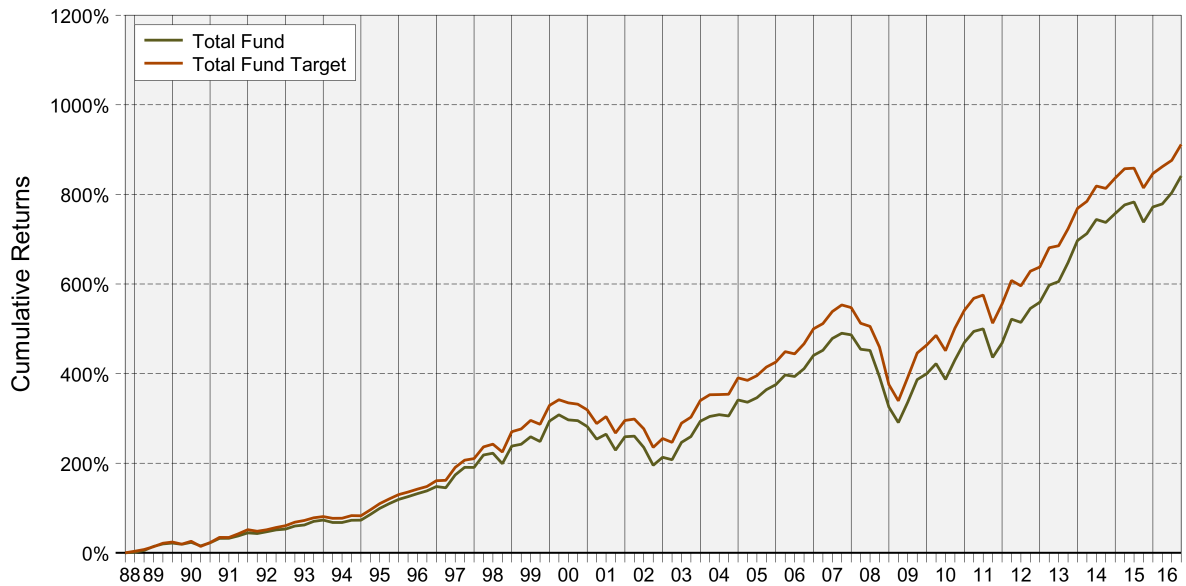
Style Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Style Allocation	Total Relative Return
Large Cap Equity	37%	35%	17.15%	16.37%	0.26%	0.04%	0.30%
Small/Mid Cap Equity	11%	10%	18.92%	16.30%	0.28%	(0.01%)	0.27%
Fixed Income	24%	26%	5.04%	3.30%	0.46%	0.00%	0.46%
Real Estate	8%	8%	12.87%	12.42%	0.03%	(0.02%)	0.01%
Infrastructure	6%	5%	7.41%	5.04%	0.16%	(0.10%)	0.06%
International Equity	14%	16%	7.31%	6.06%	0.19%	0.06%	0.25%
Total			**11.92% =**	**10.55% +**	**1.38% +**	**(0.02%)**	**1.36%**

* Current Quarter Target = 27.0% BB Barclays Aggregate Idx, 26.0% S&P 500 Index, 25.0% MSCI ACWI ex US IMI, 9.0% NFI-ODCE Value Weight Gr, 8.0% Russell 2500 Index and 5.0% CPI-W+4.0%.

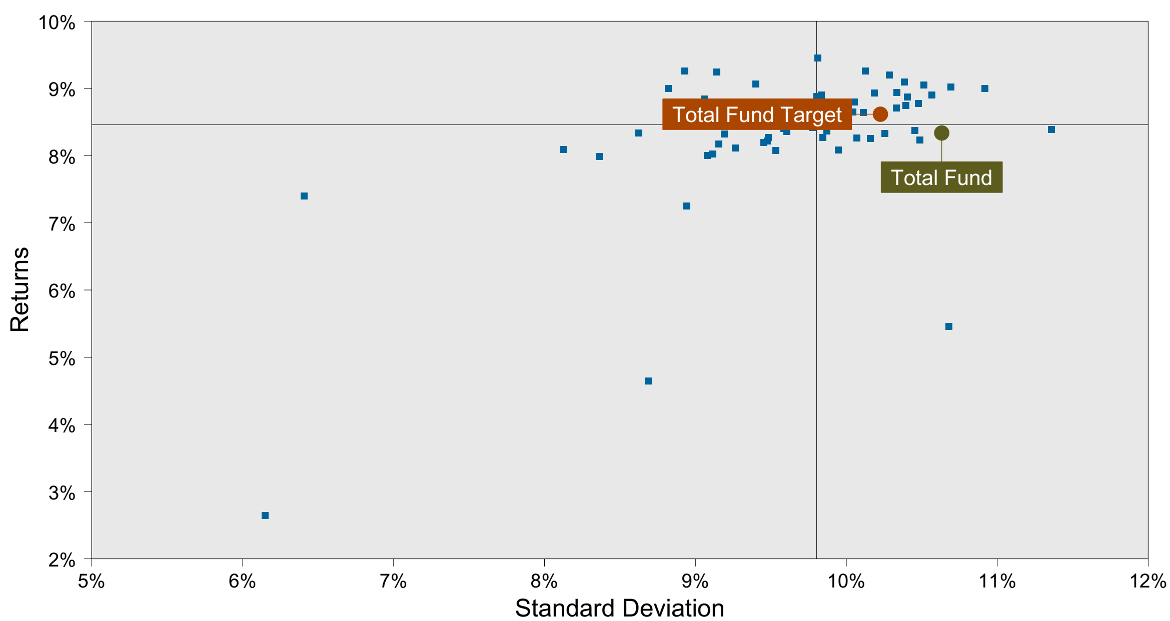
Cumulative Performance Relative to Target

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 CAI Public Fund Sponsor Database.

Cumulative Returns Actual vs Target



Twenty-Eight Year Annualized Risk vs Return



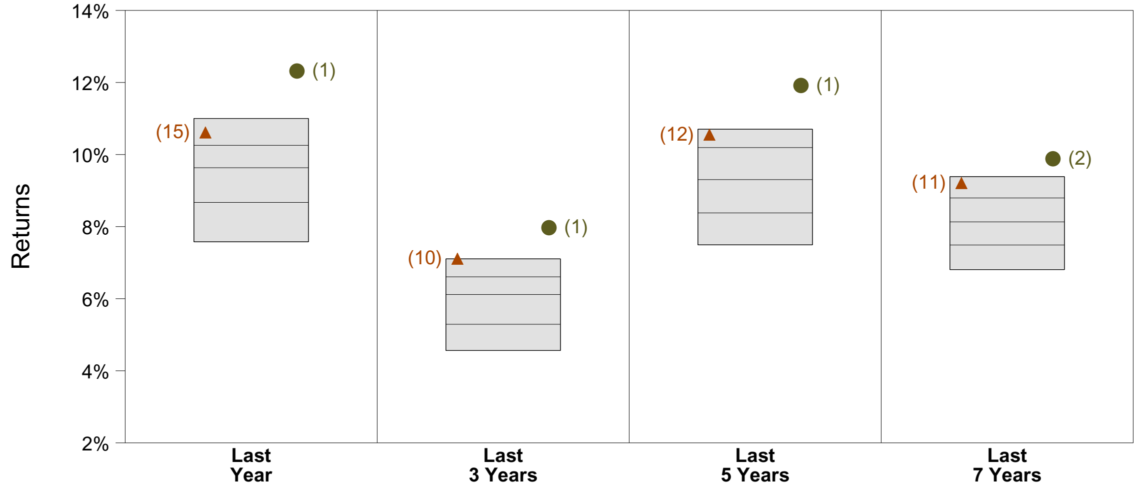
Squares represent membership of the CAI Public Fund Sponsor Database

* Current Quarter Target = 27.0% BB Barclays Aggregate Idx, 26.0% S&P 500 Index, 25.0% MSCI ACWI ex US IMI, 9.0% NFI-ODCE Value Weight Gr, 8.0% Russell 2500 Index and 5.0% CPI-W+4.0%.

Total Fund Ranking

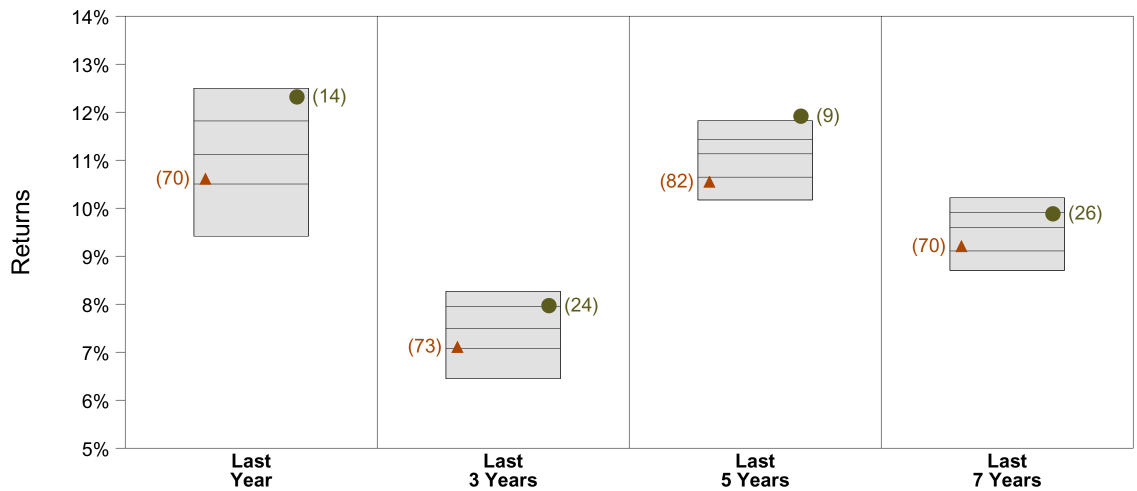
The first two charts show the ranking of the Total Fund's performance relative to that of the CAI Public Fund Sponsor Database for periods ended September 30, 2016. The first chart is a standard unadjusted ranking. In the second chart each fund in the database is adjusted to have the same historical asset allocation as that of the Total Fund.

CAI Public Fund Sponsor Database



	Last Year	Last 3 Years	Last 5 Years	Last 7 Years
10th Percentile	11.00	7.11	10.70	9.39
25th Percentile	10.26	6.61	10.19	8.80
Median	9.63	6.12	9.30	8.13
75th Percentile	8.67	5.29	8.38	7.49
90th Percentile	7.58	4.56	7.49	6.81
Total Fund ●	12.32	7.97	11.92	9.88
Policy Target ▲	10.61	7.11	10.55	9.21

Asset Allocation Adjusted Ranking



	Last Year	Last 3 Years	Last 5 Years	Last 7 Years
10th Percentile	12.50	8.27	11.82	10.22
25th Percentile	11.82	7.95	11.43	9.91
Median	11.12	7.49	11.13	9.60
75th Percentile	10.50	7.08	10.65	9.11
90th Percentile	9.42	6.45	10.17	8.70
Total Fund ●	12.32	7.97	11.92	9.88
Policy Target ▲	10.61	7.11	10.55	9.21

* Current Quarter Target = 27.0% BB Barclays Aggregate Idx, 26.0% S&P 500 Index, 25.0% MSCI ACWI ex US IMI, 9.0% NFI-ODCE Value Weight Gr, 8.0% Russell 2500 Index and 5.0% CPI-W+4.0%.

Total Fund
Period Ended September 30, 2016

Investment Philosophy

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

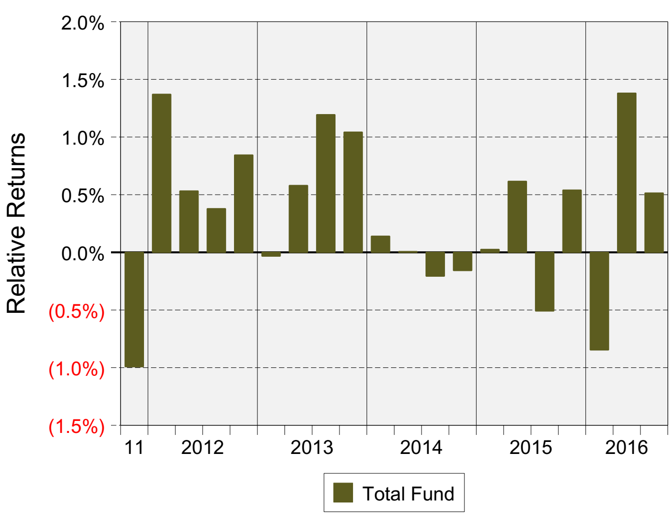
Quarterly Summary and Highlights

- Total Fund's portfolio posted a 4.16% return for the quarter placing it in the 8 percentile of the CAI Public Fund Sponsor Database group for the quarter and in the 1 percentile for the last year.
- Total Fund's portfolio outperformed the Total Fund Benchmark by 0.51% for the quarter and outperformed the Total Fund Benchmark for the year by 1.71%.

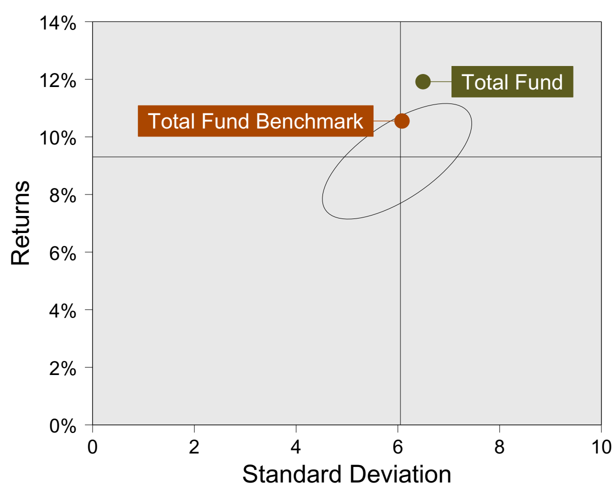
Performance vs CAI Public Fund Sponsor Database (Gross)

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years	Last 28 Years
10th Percentile	4.01	11.00	7.11	10.70	6.51	9.10
25th Percentile	3.74	10.26	6.61	10.19	6.05	8.90
Median	3.43	9.63	6.12	9.30	5.66	8.46
75th Percentile	3.07	8.67	5.29	8.38	5.29	8.21
90th Percentile	2.60	7.58	4.56	7.49	4.73	7.93
Total Fund ●	4.16	12.32	7.97	11.92	6.30	8.34
Total Fund Benchmark ▲	3.64	10.61	7.11	10.55	5.97	8.62

Relative Return vs Total Fund Benchmark



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



Domestic Equity
Period Ended September 30, 2016

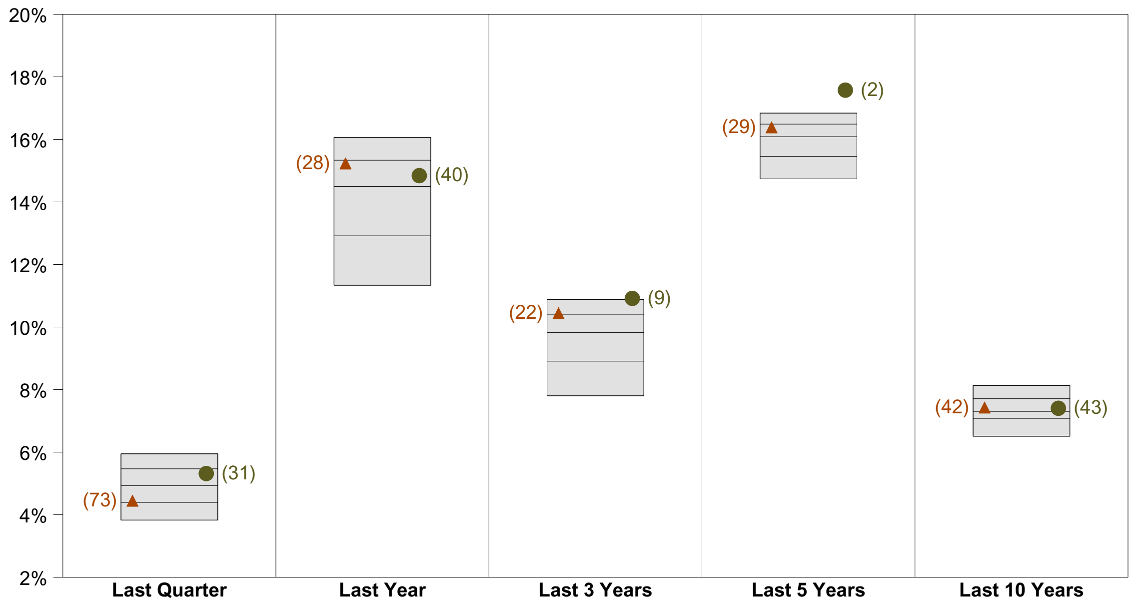
Investment Philosophy

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

Quarterly Summary and Highlights

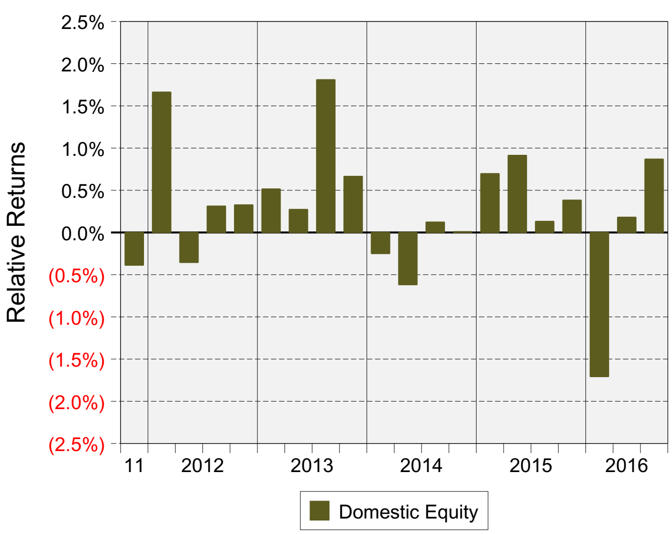
- Domestic Equity's portfolio posted a 5.32% return for the quarter placing it in the 31 percentile of the Pub Pln- Domestic Equity group for the quarter and in the 40 percentile for the last year.
- Domestic Equity's portfolio outperformed the Total Domestic Equity Target by 0.87% for the quarter and underperformed the Total Domestic Equity Target for the year by 0.39%.

Performance vs Pub Pln- Domestic Equity (Gross)

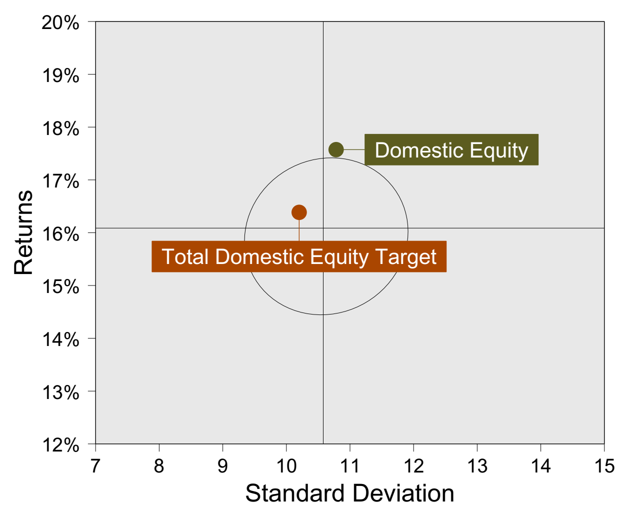


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
10th Percentile	5.95	16.06	10.88	16.84	8.13
25th Percentile	5.47	15.33	10.39	16.49	7.71
Median	4.93	14.50	9.83	16.09	7.30
75th Percentile	4.39	12.92	8.91	15.45	7.08
90th Percentile	3.83	11.34	7.80	14.74	6.51
Domestic Equity ●	5.32	14.84	10.92	17.57	7.40
Total Domestic Equity Target ▲	4.45	15.23	10.44	16.39	7.43

Relative Returns vs Total Domestic Equity Target



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

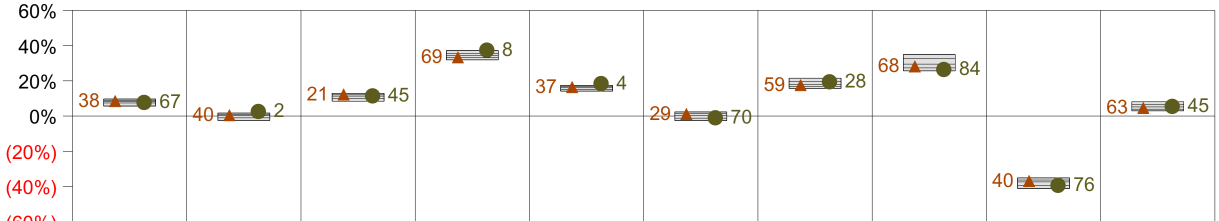


Domestic Equity
Return Analysis Summary

Return Analysis

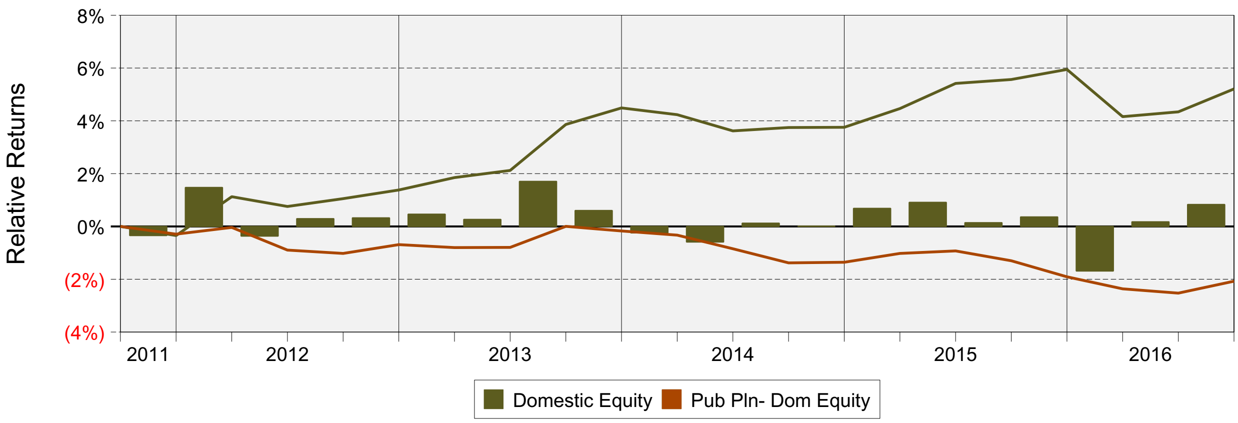
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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)

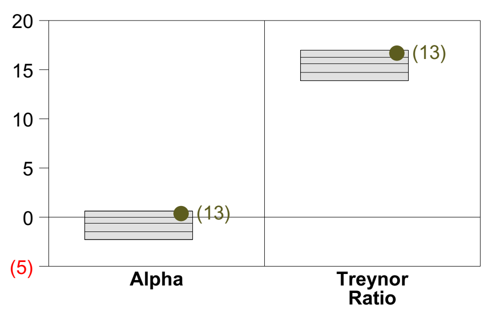


	12/15- 9/16	2015	2014	2013	2012	2011	2010	2009	2008	2007
10th Percentile	9.67	1.70	12.91	37.22	17.42	2.34	21.49	34.93	(35.14)	8.11
25th Percentile	8.96	0.89	12.06	35.51	16.80	1.36	19.60	32.55	(36.36)	6.44
Median	8.19	0.17	11.33	34.39	16.07	0.33	17.92	29.51	(37.42)	5.18
75th Percentile	7.43	(1.03)	10.05	33.14	15.14	(1.19)	16.90	27.35	(39.33)	3.89
90th Percentile	5.68	(2.49)	8.41	31.92	14.16	(2.61)	15.71	25.69	(41.20)	2.96
Domestic Equity ●	7.73	2.59	11.46	37.46	18.44	(0.99)	19.45	26.46	(39.36)	5.48
Total Domestic Equity Target ▲	8.49	0.47	12.25	33.37	16.43	1.16	17.56	28.20	(36.92)	4.60

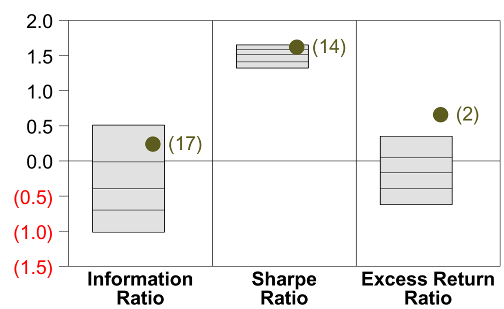
Cumulative and Quarterly Relative Return vs Total Domestic Equity Target



Risk Adjusted Return Measures vs Total Domestic Equity Target
Rankings Against Pub Pln- Domestic Equity (Gross)
Five Years Ended September 30, 2016



	Alpha	Treynor Ratio
10th Percentile	0.62	16.98
25th Percentile	(0.02)	16.26
Median	(0.62)	15.61
75th Percentile	(1.48)	14.72
90th Percentile	(2.28)	13.88
Domestic Equity ●	0.36	16.68



	Information Ratio	Sharpe Ratio	Excess Return Ratio
10th Percentile	0.51	1.65	0.35
25th Percentile	(0.01)	1.58	0.05
Median	(0.40)	1.52	(0.17)
75th Percentile	(0.70)	1.41	(0.39)
90th Percentile	(1.01)	1.32	(0.62)
Domestic Equity ●	0.24	1.62	0.66

Alliance S&P Index
Period Ended September 30, 2016

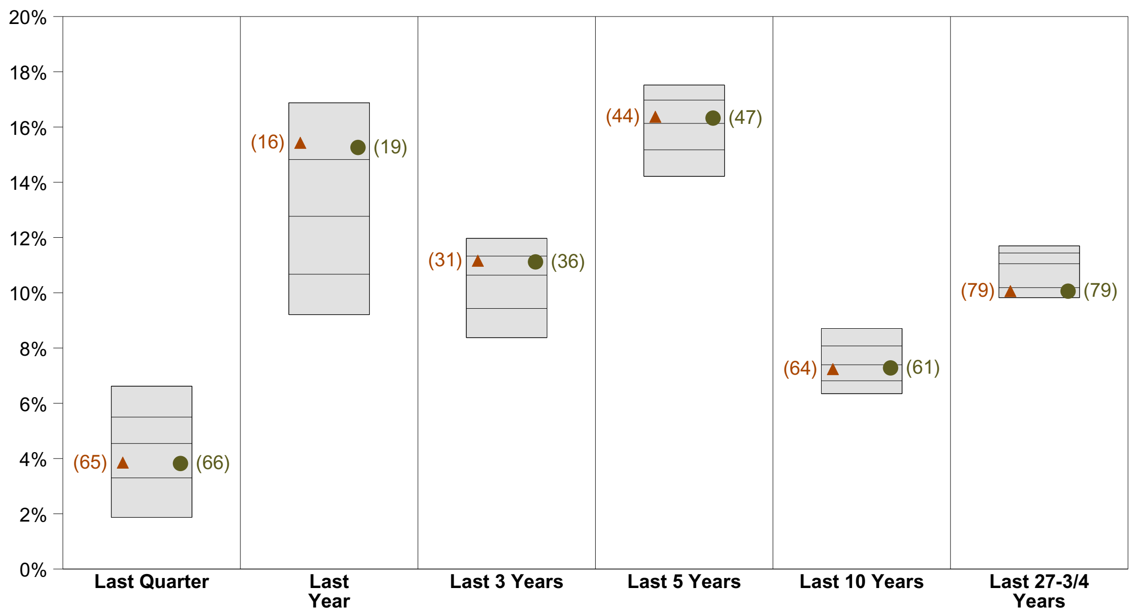
Investment Philosophy

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

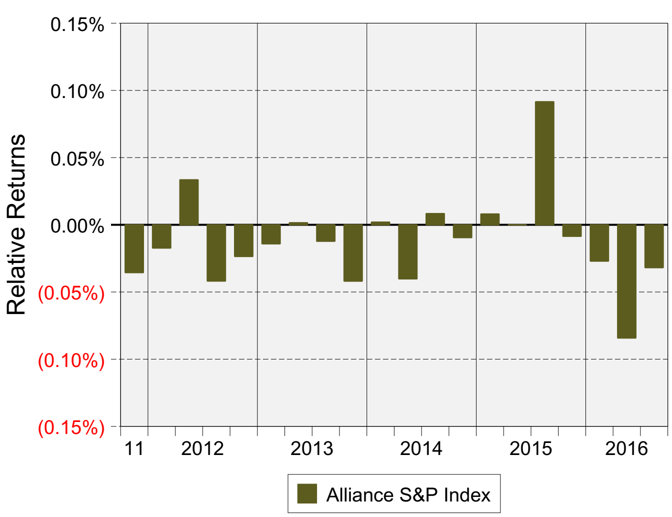
- Alliance S&P Index's portfolio posted a 3.82% return for the quarter placing it in the 66 percentile of the CAI Large Cap Core group for the quarter and in the 19 percentile for the last year.
- Alliance S&P Index's portfolio underperformed the S&P 500 Index by 0.03% for the quarter and underperformed the S&P 500 Index for the year by 0.17%.

Performance vs CAI Large Cap Core (Gross)

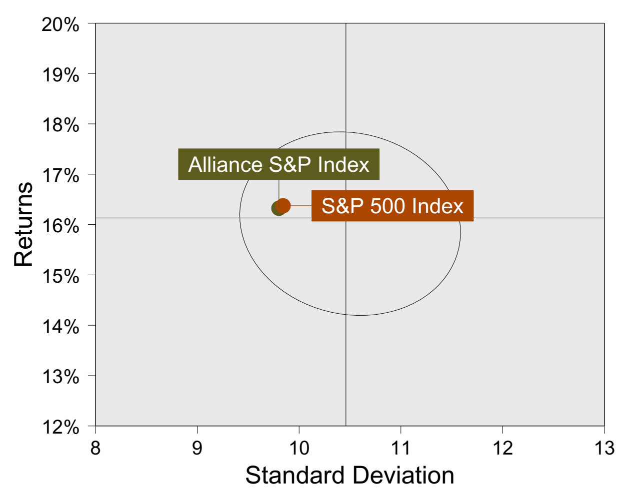


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years	Last 27-3/4 Years
10th Percentile	6.62	16.88	11.97	17.52	8.71	11.70
25th Percentile	5.50	14.82	11.33	16.98	8.08	11.44
Median	4.55	12.77	10.64	16.13	7.39	11.05
75th Percentile	3.30	10.67	9.43	15.17	6.82	10.19
90th Percentile	1.87	9.21	8.38	14.21	6.35	9.82
Alliance S&P Index ●	3.82	15.26	11.12	16.32	7.28	10.06
S&P 500 Index ▲	3.85	15.43	11.16	16.37	7.24	10.06

Relative Return vs S&P 500 Index



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

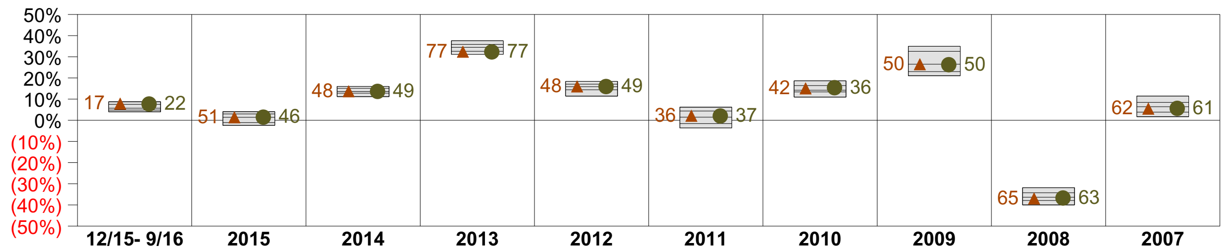


Alliance S&P Index
Return Analysis Summary

Return Analysis

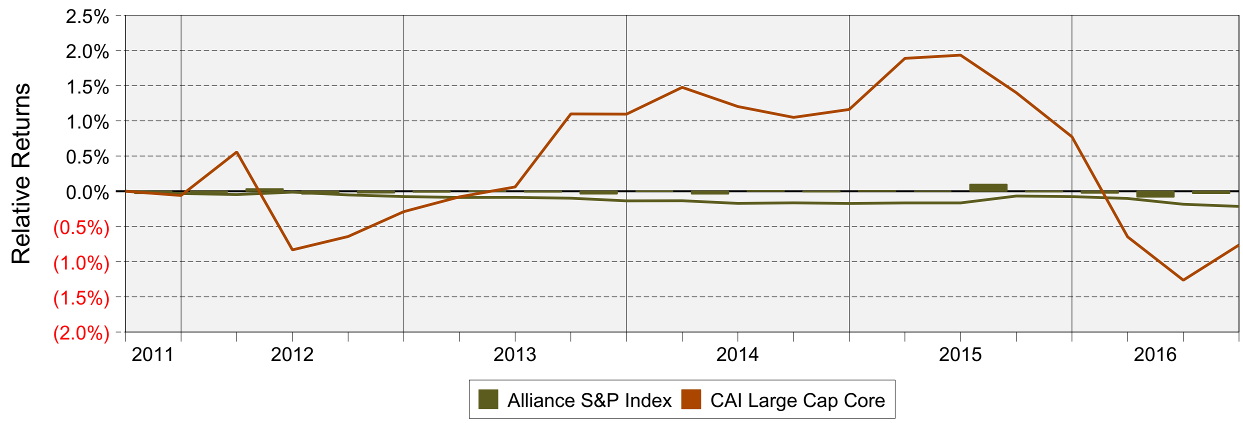
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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 (Gross)

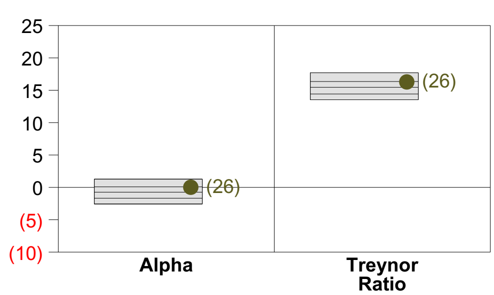


	12/15- 9/16	2015	2014	2013	2012	2011	2010	2009	2008	2007
10th Percentile	8.77	4.08	16.01	37.59	18.39	6.19	18.65	34.96	(31.85)	11.45
25th Percentile	7.52	2.99	15.13	35.87	17.06	4.37	16.40	32.58	(34.26)	8.46
Median	5.71	1.41	13.63	34.49	15.89	1.46	14.21	26.51	(36.36)	6.42
75th Percentile	4.81	(1.10)	12.82	32.62	14.42	(1.56)	13.41	23.00	(37.90)	3.83
90th Percentile	3.99	(2.41)	11.17	31.15	11.41	(3.63)	10.96	21.05	(40.00)	1.70
Alliance S&P Index ●	7.69	1.48	13.65	32.31	15.95	2.03	15.41	26.26	(36.73)	5.63
S&P 500 Index ▲	7.84	1.38	13.69	32.39	16.00	2.11	15.06	26.47	(37.00)	5.49

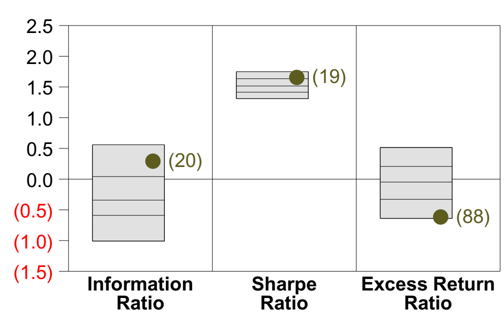
Cumulative and Quarterly Relative Return vs S&P 500 Index



Risk Adjusted Return Measures vs S&P 500 Index
Rankings Against CAI Large Cap Core (Gross)
Five Years Ended September 30, 2016



	Alpha	Treynor Ratio
10th Percentile	1.28	17.70
25th Percentile	0.08	16.35
Median	(0.74)	15.46
75th Percentile	(1.67)	14.43
90th Percentile	(2.57)	13.54
Alliance S&P Index ●	0.02	16.29



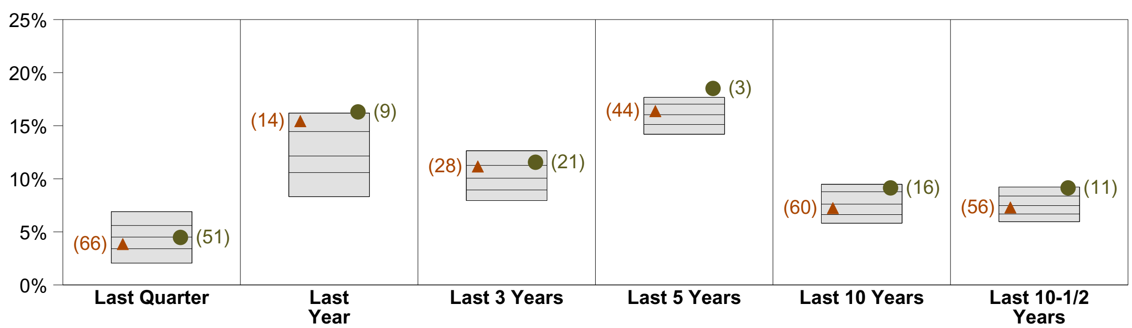
	Information Ratio	Sharpe Ratio	Excess Return Ratio
10th Percentile	0.56	1.75	0.51
25th Percentile	0.04	1.63	0.21
Median	(0.34)	1.52	(0.05)
75th Percentile	(0.59)	1.42	(0.33)
90th Percentile	(1.01)	1.31	(0.64)
Alliance S&P Index ●	0.29	1.65	(0.62)

PIMCO StocksPLUS
Period Ended September 30, 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.

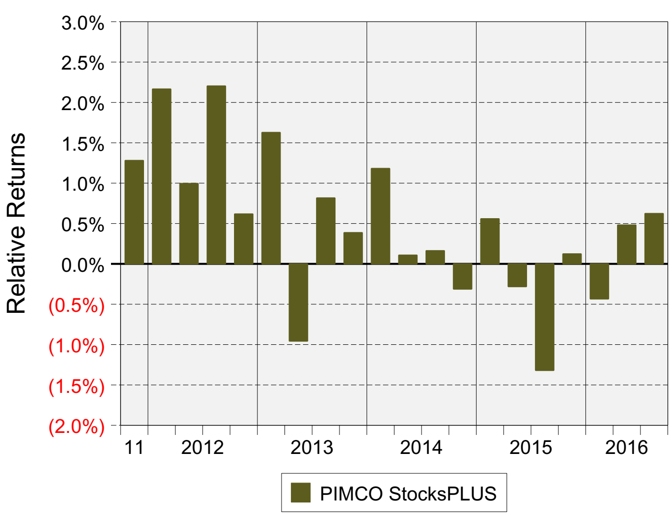
Quarterly Summary and Highlights
- PIMCO StocksPLUS's portfolio posted a 4.48% return for the quarter placing it in the 51 percentile of the CAI Large Capitalization group for the quarter and in the 9 percentile for the last year.
- PIMCO StocksPLUS's portfolio outperformed the S&P 500 Index by 0.62% for the quarter and outperformed the S&P 500 Index for the year by 0.87%.

Performance vs CAI Large Capitalization (Gross)

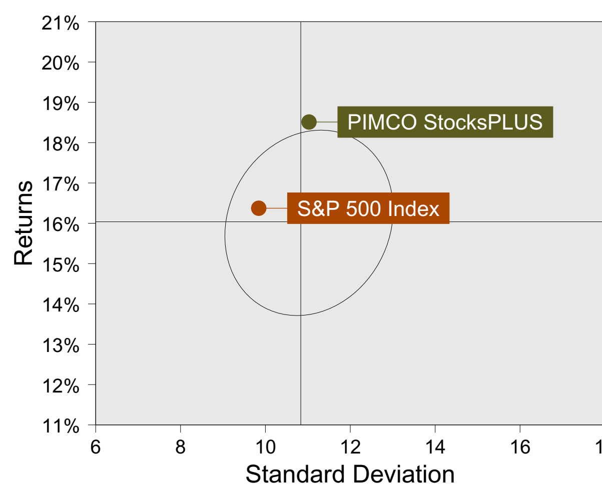


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years	Last 10-1/2 Years
10th Percentile	6.90	16.19	12.64	17.67	9.48	9.22
25th Percentile	5.60	14.45	11.26	17.03	8.78	8.38
Median	4.51	12.15	10.05	16.04	7.61	7.47
75th Percentile	3.41	10.59	8.95	15.12	6.63	6.68
90th Percentile	2.05	8.32	7.95	14.19	5.81	5.96
PIMCO StocksPLUS ●	4.48	16.30	11.56	18.51	9.14	9.14
S&P 500 Index ▲	3.85	15.43	11.16	16.37	7.24	7.30

Relative Return vs S&P 500 Index



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

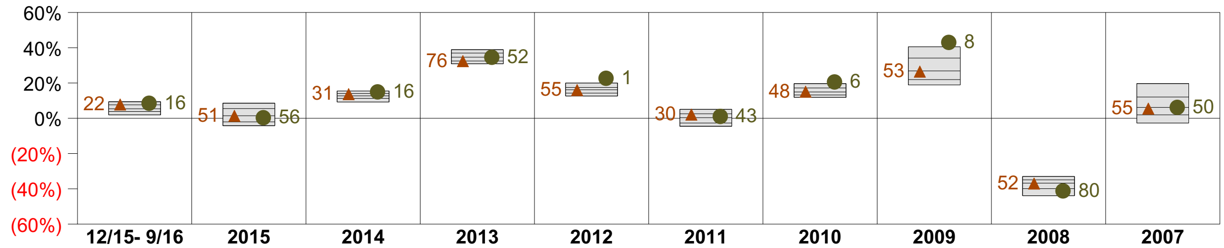


PIMCO StocksPLUS
Return Analysis Summary

Return Analysis

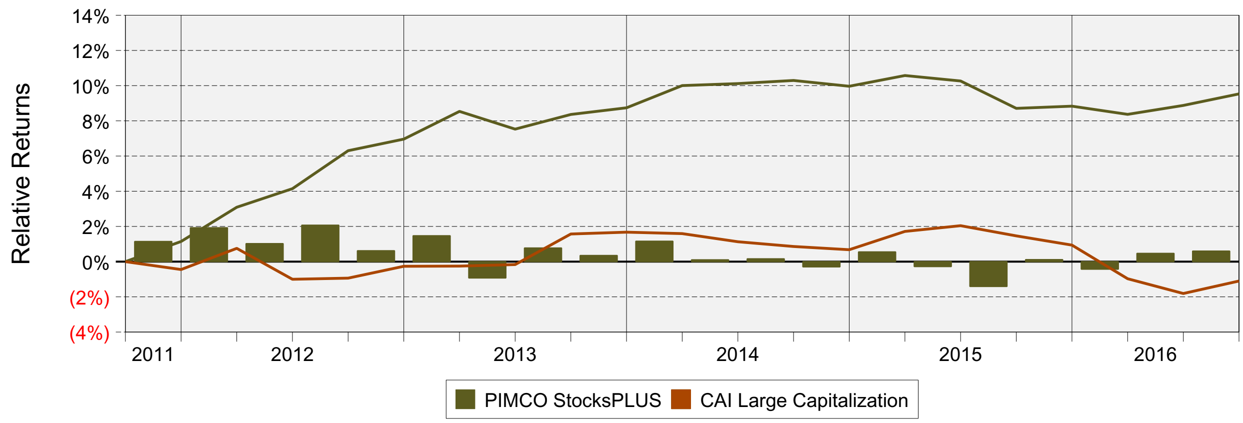
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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 (Gross)

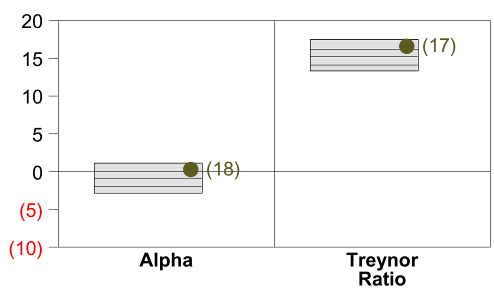


	12/15- 9/16	2015	2014	2013	2012	2011	2010	2009	2008	2007
10th Percentile	9.39	8.57	15.48	38.91	20.00	5.06	19.66	40.53	(33.00)	19.67
25th Percentile	7.64	5.50	14.07	36.97	17.49	2.56	17.19	34.14	(34.91)	12.04
Median	5.39	1.43	12.72	34.64	16.19	0.34	14.91	26.85	(36.77)	6.17
75th Percentile	3.85	(2.03)	11.27	32.47	14.26	(2.70)	13.21	21.94	(39.91)	1.96
90th Percentile	1.91	(4.20)	9.23	30.90	12.63	(4.54)	11.84	18.92	(43.92)	(2.70)
PIMCO StocksPLUS ●	8.53	0.34	14.97	34.59	22.68	1.07	20.60	43.04	(41.18)	6.19
S&P 500 Index ▲	7.84	1.38	13.69	32.39	16.00	2.11	15.06	26.47	(37.00)	5.49

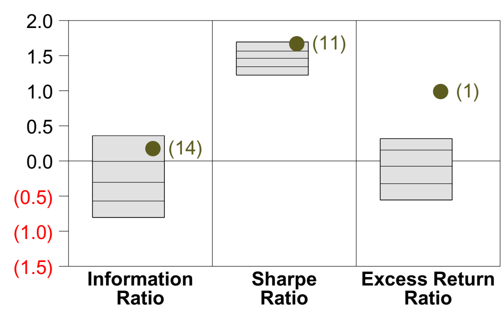
Cumulative and Quarterly Relative Return vs S&P 500 Index



Risk Adjusted Return Measures vs S&P 500 Index
Rankings Against CAI Large Capitalization (Gross)
Five Years Ended September 30, 2016



	Alpha	Treynor Ratio
10th Percentile	1.12	17.50
25th Percentile	(0.02)	16.20
Median	(0.95)	15.21
75th Percentile	(1.95)	14.11
90th Percentile	(2.86)	13.33
PIMCO StocksPLUS ●	0.27	16.59



	Information Ratio	Sharpe Ratio	Excess Return Ratio
10th Percentile	0.36	1.70	0.32
25th Percentile	(0.01)	1.56	0.16
Median	(0.30)	1.46	(0.07)
75th Percentile	(0.57)	1.34	(0.32)
90th Percentile	(0.80)	1.22	(0.56)
PIMCO StocksPLUS ●	0.18	1.67	0.99

BlackRock Russell 1000 Value
Period Ended September 30, 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.

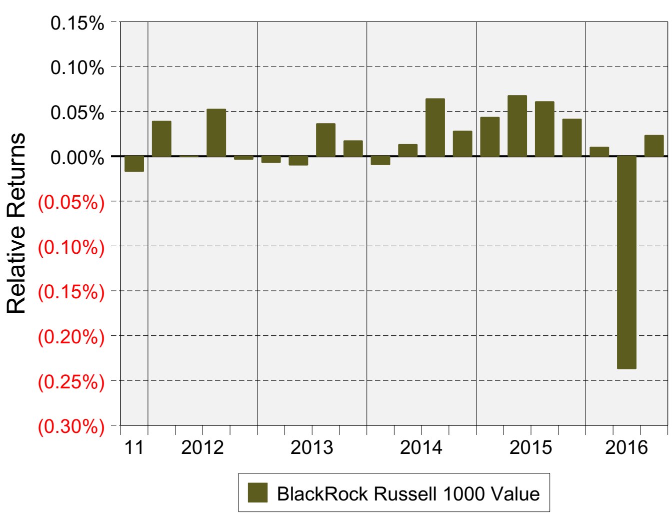
Quarterly Summary and Highlights

- BlackRock Russell 1000 Value's portfolio posted a 3.50% return for the quarter placing it in the 63 percentile of the CAI Large Cap Value group for the quarter and in the 17 percentile for the last year.
- BlackRock Russell 1000 Value's portfolio outperformed the Russell 1000 Value Index by 0.02% for the quarter and underperformed the Russell 1000 Value Index for the year by 0.18%.

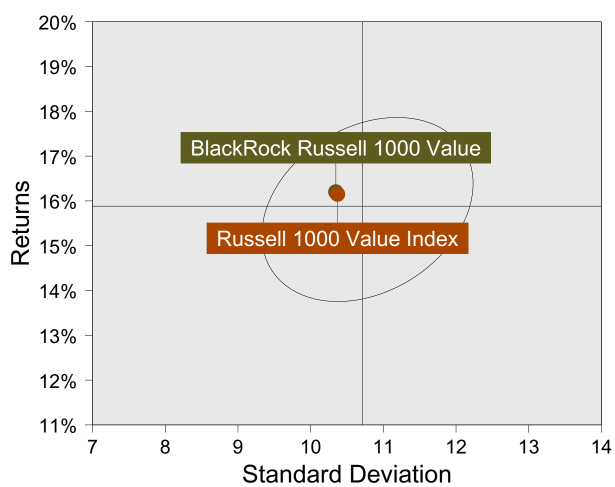
Performance vs CAI Large Cap Value (Gross)

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years	Last 15-1/4 Years
10th Percentile	5.87	17.73	10.91	17.50	8.04	8.26
25th Percentile	4.81	15.12	9.91	16.63	7.29	7.76
Median	3.78	13.71	8.99	15.88	6.63	7.22
75th Percentile	3.20	10.83	8.10	15.14	5.80	6.63
90th Percentile	2.03	9.91	7.08	14.05	4.74	5.98
BlackRock Russell 1000 Value ●	3.50	16.01	9.75	16.20	5.99	6.61
Russell 1000 Value Index ▲	3.48	16.20	9.70	16.15	5.85	6.52

Relative Return vs Russell 1000 Value Index



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

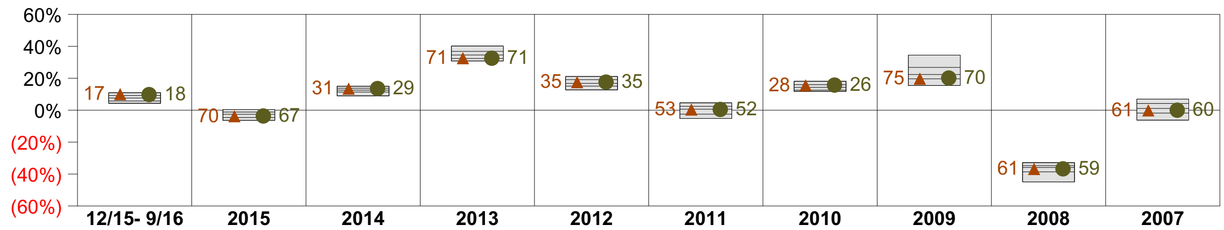


BlackRock Russell 1000 Value
Return Analysis Summary

Return Analysis

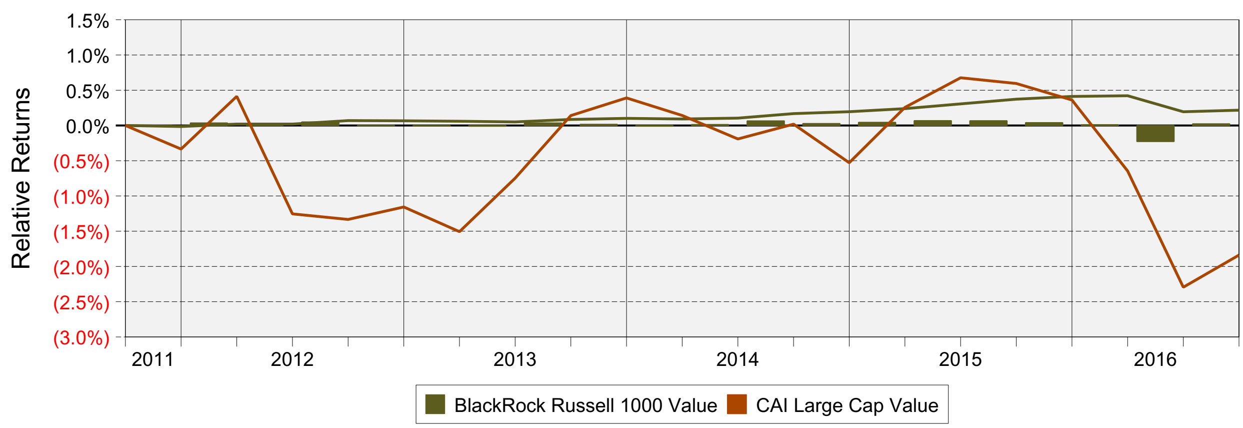
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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 (Gross)

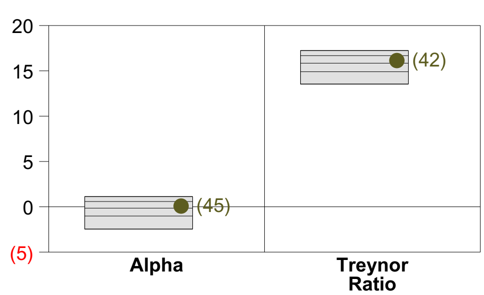


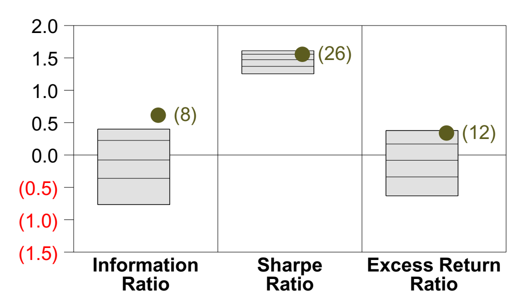
	12/15- 9/16	2015	2014	2013	2012	2011	2010	2009	2008	2007
10th Percentile	10.96	0.42	15.03	40.19	21.13	4.62	18.13	34.50	(32.84)	6.97
25th Percentile	9.18	(1.15)	13.73	36.85	19.12	2.42	16.01	26.82	(34.74)	4.19
Median	7.61	(2.56)	12.54	34.59	16.78	0.61	14.27	22.37	(35.88)	1.12
75th Percentile	5.79	(4.58)	11.36	32.38	15.08	(2.48)	12.55	19.65	(38.61)	(1.81)
90th Percentile	4.30	(6.38)	8.98	30.80	12.71	(5.19)	11.75	15.46	(44.92)	(6.22)
BlackRock Russell 1000 Value ●	9.78	(3.62)	13.56	32.57	17.60	0.49	15.73	20.15	(36.74)	(0.00)
Russell 1000 Value Index ▲	10.00	(3.83)	13.45	32.53	17.51	0.39	15.51	19.69	(36.85)	(0.17)

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 (Gross)
Five Years Ended September 30, 2016





	Alpha	Treynor Ratio
10th Percentile	1.13	17.24
25th Percentile	0.58	16.68
Median	(0.15)	15.84
75th Percentile	(1.02)	14.90
90th Percentile	(2.46)	13.54
BlackRock Russell 1000 Value ●	0.08	16.14

	Information Ratio	Sharpe Ratio	Excess Return Ratio
10th Percentile	0.40	1.61	0.38
25th Percentile	0.23	1.56	0.17
Median	(0.08)	1.47	(0.08)
75th Percentile	(0.36)	1.37	(0.34)
90th Percentile	(0.77)	1.25	(0.63)
BlackRock Russell 1000 Value ●	0.62	1.56	0.34

T. Rowe Price Large Cap Growth
Period Ended September 30, 2016

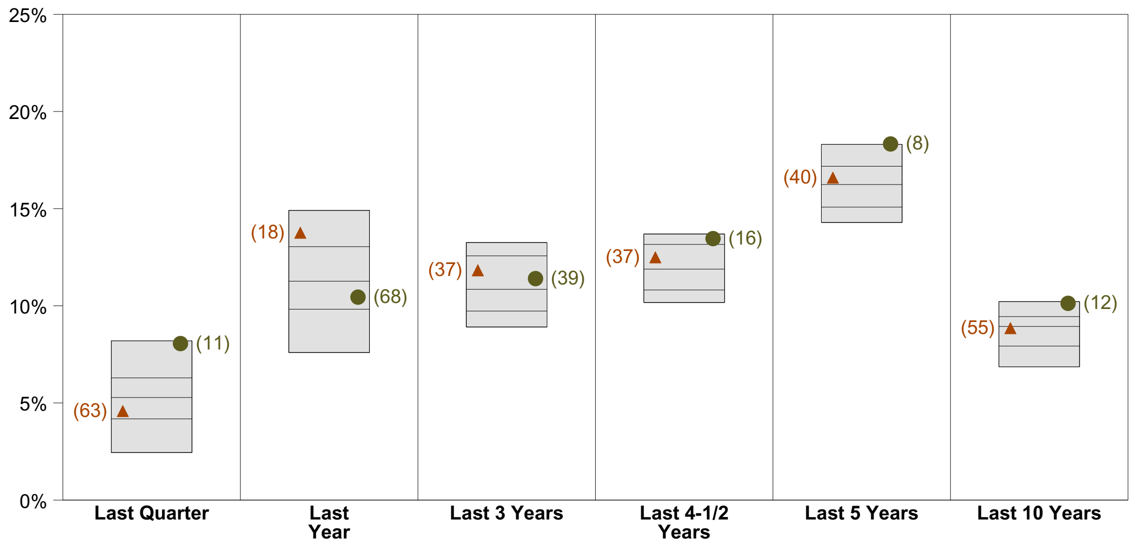
Investment Philosophy

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

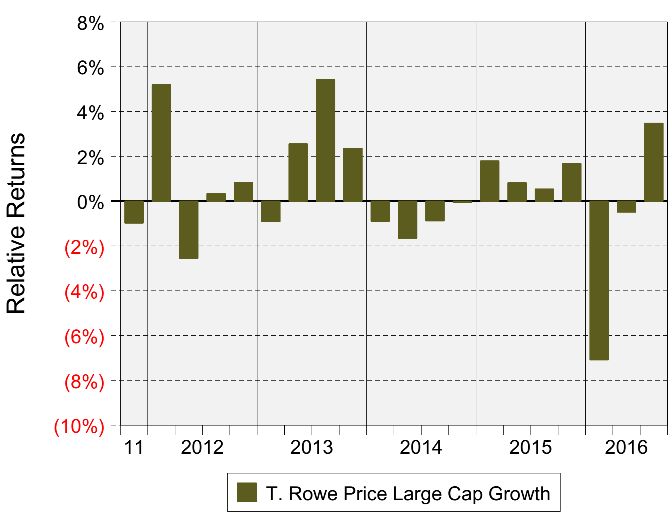
- T. Rowe Price Large Cap Growth's portfolio posted a 8.06% return for the quarter placing it in the 11 percentile of the CAI Large Cap Growth group for the quarter and in the 68 percentile for the last year.
- T. Rowe Price Large Cap Growth's portfolio outperformed the Russell 1000 Growth Index by 3.47% for the quarter and underperformed the Russell 1000 Growth Index for the year by 3.31%.

Performance vs CAI Large Cap Growth (Gross)

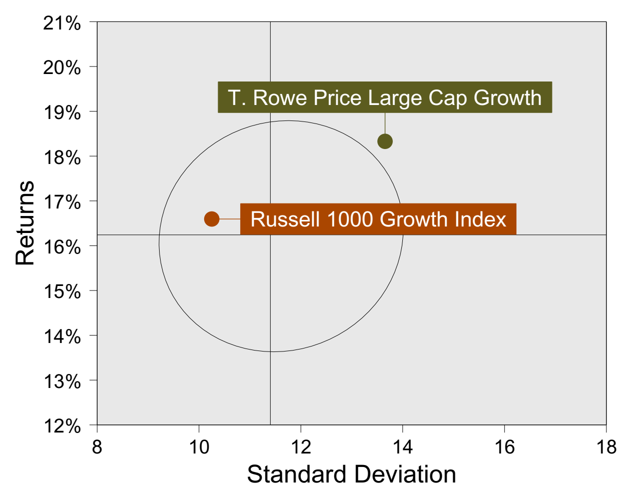


	Last Quarter	Last Year	Last 3 Years	Last 4-1/2 Years	Last 5 Years	Last 10 Years
10th Percentile	8.20	14.91	13.26	13.70	18.31	10.21
25th Percentile	6.29	13.04	12.57	13.16	17.18	9.44
Median	5.28	11.27	10.85	11.89	16.24	8.94
75th Percentile	4.18	9.82	9.73	10.81	15.08	7.93
90th Percentile	2.45	7.60	8.91	10.17	14.29	6.86
T. Rowe Price Large Cap Growth ●	8.06	10.45	11.40	13.46	18.33	10.13
Russell 1000 Growth Index ▲	4.58	13.76	11.83	12.50	16.60	8.85

Relative Return vs Russell 1000 Growth Index



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

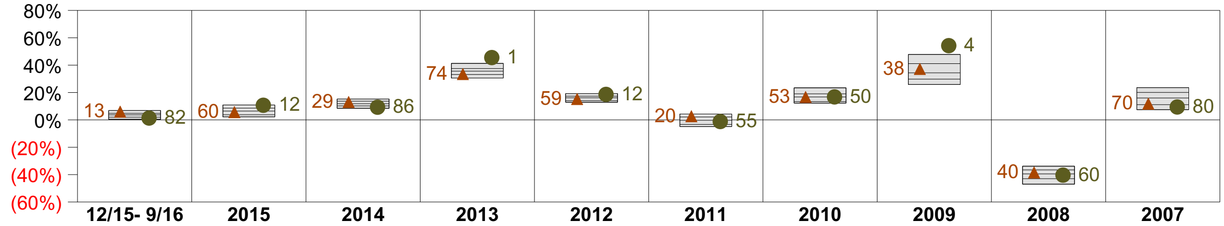


T. Rowe Price Large Cap Growth
Return Analysis Summary

Return Analysis

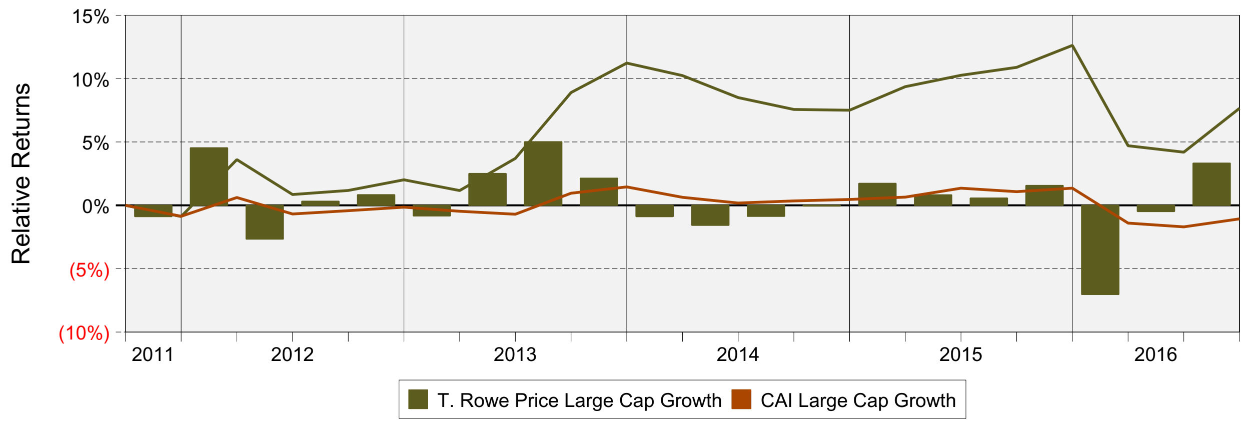
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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 (Gross)

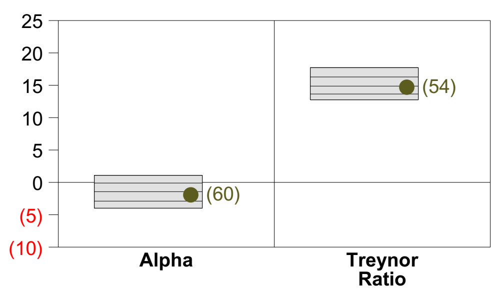


	12/15- 9/16	2015	2014	2013	2012	2011	2010	2009	2008	2007
10th Percentile	6.88	10.89	15.27	41.28	19.23	4.31	23.44	47.80	(33.82)	23.57
25th Percentile	4.80	8.58	13.65	37.52	17.30	2.12	19.04	41.11	(36.57)	20.07
Median	3.69	6.43	11.83	35.60	16.14	(0.28)	16.77	34.39	(39.49)	16.01
75th Percentile	1.96	3.77	10.23	33.15	14.05	(3.30)	13.37	29.79	(42.96)	11.13
90th Percentile	0.42	2.18	8.44	30.57	12.87	(4.87)	12.24	25.86	(46.98)	7.46
T. Rowe Price Large Cap Growth ●	1.33	10.69	9.27	45.54	18.63	(1.19)	16.79	54.25	(40.39)	9.42
Russell 1000 Growth Index ▲	6.00	5.67	13.05	33.48	15.26	2.64	16.71	37.21	(38.44)	11.81

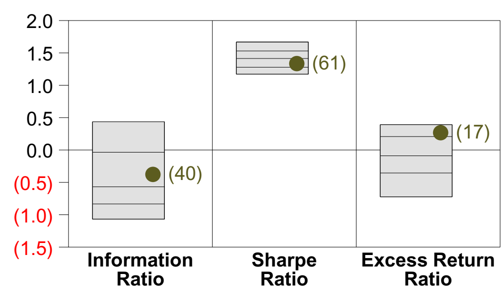
Cumulative and Quarterly Relative Return vs Russell 1000 Growth Index



Risk Adjusted Return Measures vs Russell 1000 Growth Index
Rankings Against CAI Large Cap Growth (Gross)
Five Years Ended September 30, 2016



	Alpha	Treynor Ratio
10th Percentile	1.09	17.73
25th Percentile	(0.11)	16.28
Median	(1.43)	14.87
75th Percentile	(2.90)	13.65
90th Percentile	(3.99)	12.75
T. Rowe Price Large Cap Growth ●	(1.93)	14.70



	Information Ratio	Sharpe Ratio	Excess Return Ratio
10th Percentile	0.44	1.67	0.39
25th Percentile	(0.03)	1.53	0.21
Median	(0.57)	1.41	(0.09)
75th Percentile	(0.83)	1.28	(0.36)
90th Percentile	(1.07)	1.17	(0.72)
T. Rowe Price Large Cap Growth ●	(0.38)	1.33	0.27

Champlain Mid Cap
Period Ended September 30, 2016

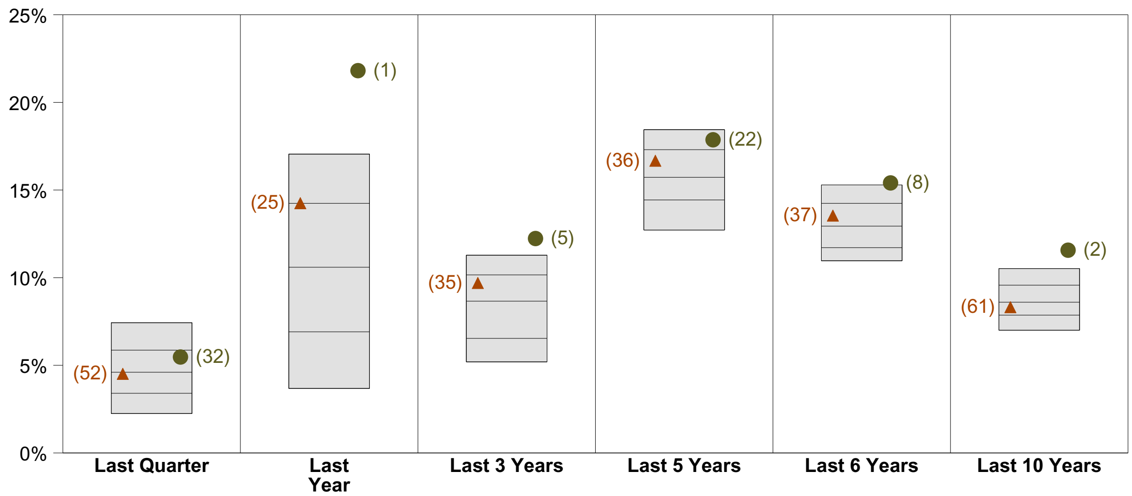
Investment Philosophy

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

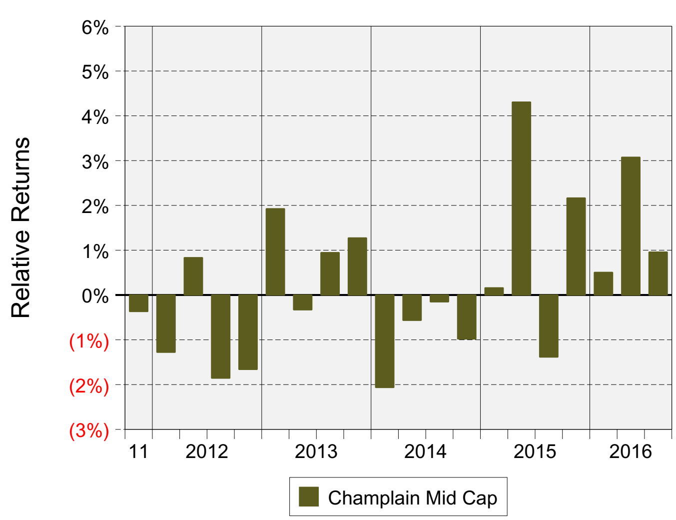
- Champlain Mid Cap's portfolio posted a 5.47% return for the quarter placing it in the 32 percentile of the CAI Mid Capitalization group for the quarter and in the 1 percentile for the last year.
- Champlain Mid Cap's portfolio outperformed the Russell MidCap Index by 0.96% for the quarter and outperformed the Russell MidCap Index for the year by 7.56%.

Performance vs CAI Mid Capitalization (Gross)

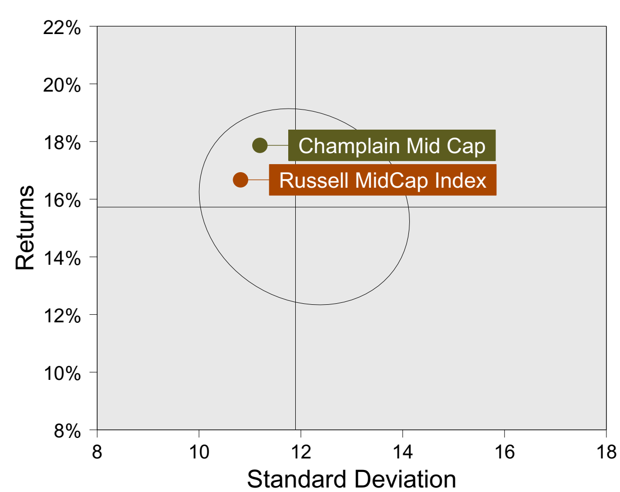


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 6 Years	Last 10 Years
10th Percentile	7.43	17.05	11.28	18.45	15.29	10.52
25th Percentile	5.87	14.24	10.16	17.30	14.24	9.57
Median	4.61	10.59	8.66	15.73	12.94	8.60
75th Percentile	3.40	6.91	6.54	14.43	11.71	7.86
90th Percentile	2.25	3.68	5.20	12.72	10.96	7.00
Champlain Mid Cap ●	5.47	21.81	12.23	17.87	15.41	11.57
Russell MidCap Index ▲	4.52	14.25	9.70	16.67	13.54	8.32

Relative Return vs Russell MidCap Index



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

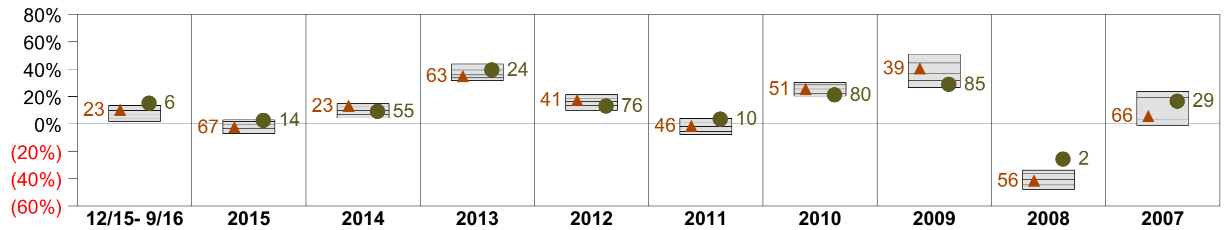


Champlain Mid Cap
Return Analysis Summary

Return Analysis

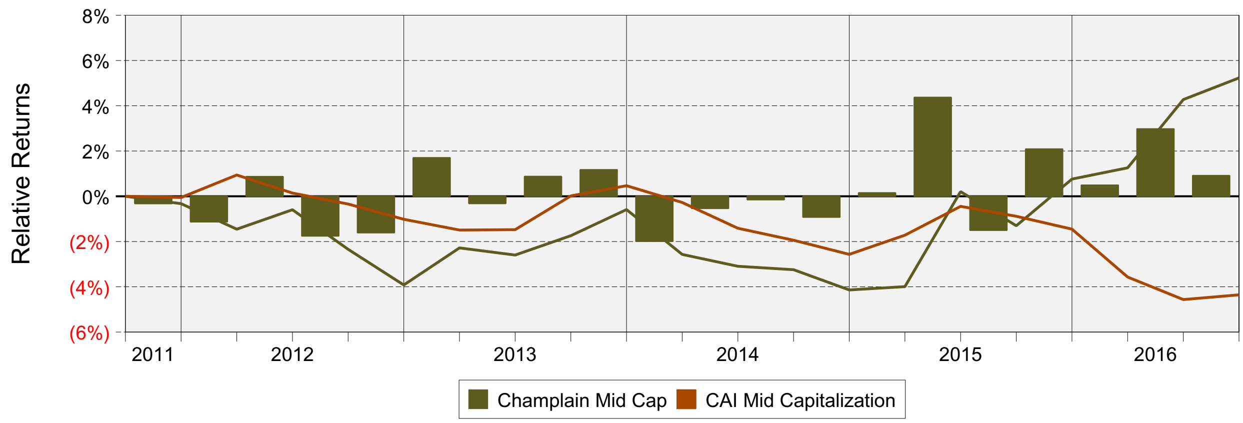
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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 (Gross)

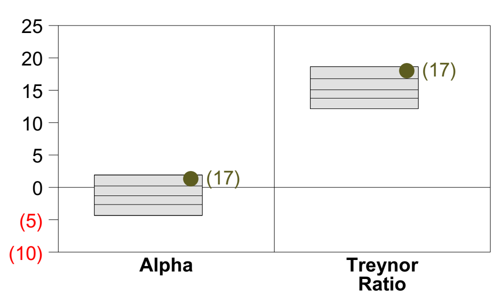


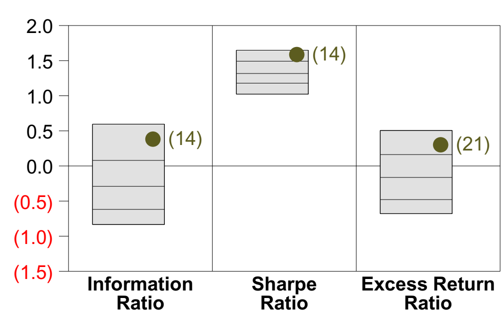
	12/15- 9/16	2015	2014	2013	2012	2011	2010	2009	2008	2007
10th Percentile	13.46	2.92	14.77	43.76	21.34	3.90	30.19	50.98	(33.80)	23.76
25th Percentile	9.81	1.80	13.03	39.39	18.82	0.68	28.53	44.55	(36.42)	19.41
Median	6.51	(0.69)	9.88	35.84	16.26	(1.92)	25.49	36.99	(40.60)	10.13
75th Percentile	4.26	(3.22)	6.71	33.70	13.33	(5.57)	22.01	31.76	(44.60)	3.52
90th Percentile	1.91	(7.11)	4.30	31.61	9.94	(7.82)	20.32	26.52	(47.94)	(0.99)
Champlain Mid Cap ●	15.15	2.55	9.17	39.44	13.05	3.53	21.21	28.91	(25.71)	16.57
Russell MidCap Index ▲	10.26	(2.44)	13.22	34.76	17.28	(1.55)	25.48	40.48	(41.46)	5.60

Cumulative and Quarterly Relative Return vs Russell MidCap Index



Risk Adjusted Return Measures vs Russell MidCap Index
Rankings Against CAI Mid Capitalization (Gross)
Five Years Ended September 30, 2016





	Alpha	Treynor Ratio
10th Percentile	1.91	18.64
25th Percentile	0.22	16.78
Median	(1.29)	15.07
75th Percentile	(2.66)	13.77
90th Percentile	(4.34)	12.15
Champlain Mid Cap ●	1.33	18.02

	Information Ratio	Sharpe Ratio	Excess Return Ratio
10th Percentile	0.60	1.65	0.51
25th Percentile	0.08	1.49	0.16
Median	(0.29)	1.32	(0.16)
75th Percentile	(0.62)	1.18	(0.48)
90th Percentile	(0.83)	1.02	(0.68)
Champlain Mid Cap ●	0.38	1.59	0.30

Pyramis Small Cap
Period Ended September 30, 2016

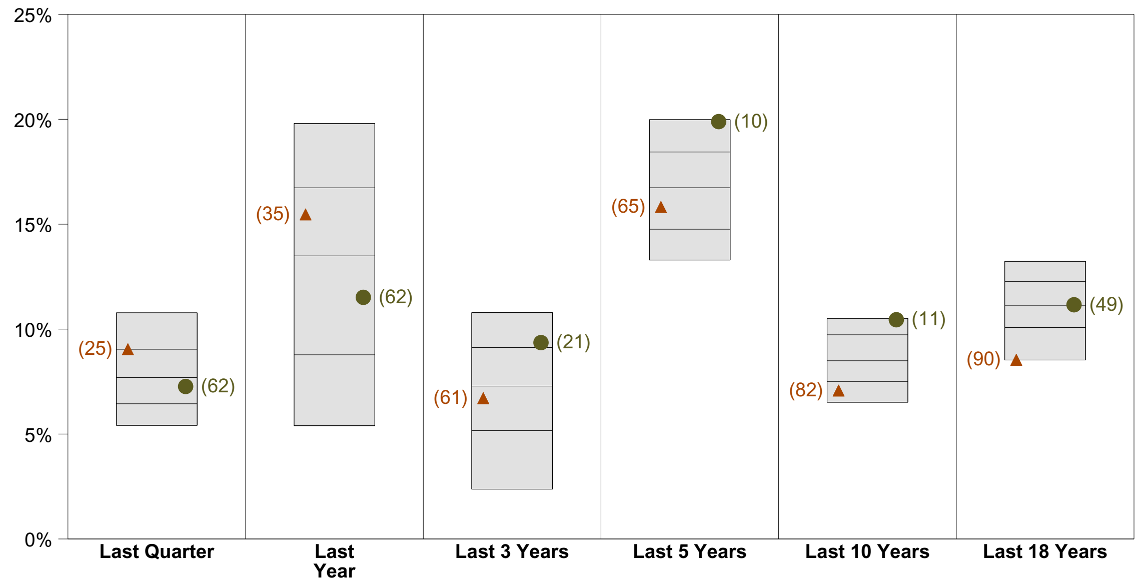
Investment Philosophy

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

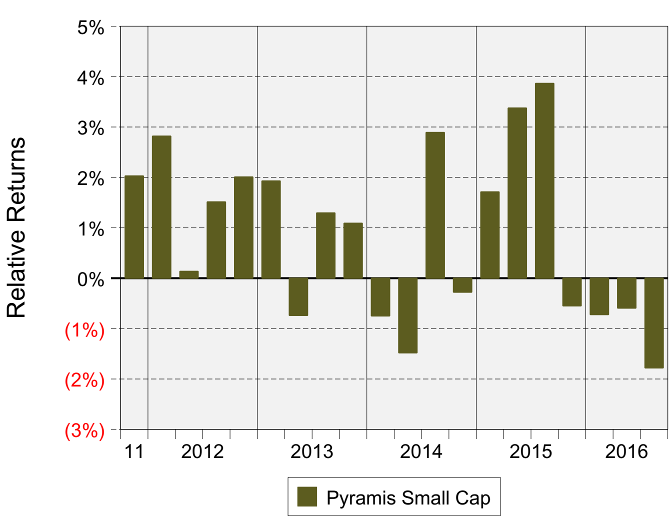
- Pyramis Small Cap's portfolio posted a 7.27% return for the quarter placing it in the 62 percentile of the CAI Small Capitalization group for the quarter and in the 62 percentile for the last year.
- Pyramis Small Cap's portfolio underperformed the Russell 2000 Index by 1.78% for the quarter and underperformed the Russell 2000 Index for the year by 3.95%.

Performance vs CAI Small Capitalization (Gross)

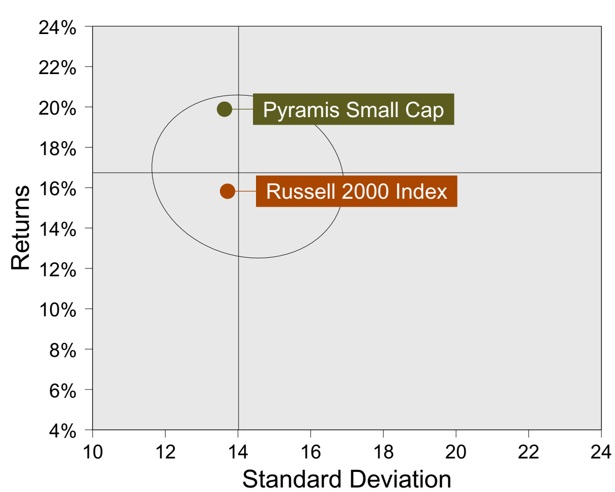


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years	Last 18 Years
10th Percentile	10.78	19.80	10.79	19.98	10.51	13.23
25th Percentile	9.04	16.74	9.12	18.44	9.73	12.27
Median	7.69	13.49	7.28	16.74	8.49	11.14
75th Percentile	6.44	8.78	5.16	14.76	7.51	10.08
90th Percentile	5.41	5.40	2.37	13.29	6.51	8.53
Pyramis Small Cap ●	7.27	11.51	9.36	19.89	10.45	11.16
Russell 2000 Index ▲	9.05	15.47	6.71	15.82	7.07	8.54

Relative Return vs Russell 2000 Index



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

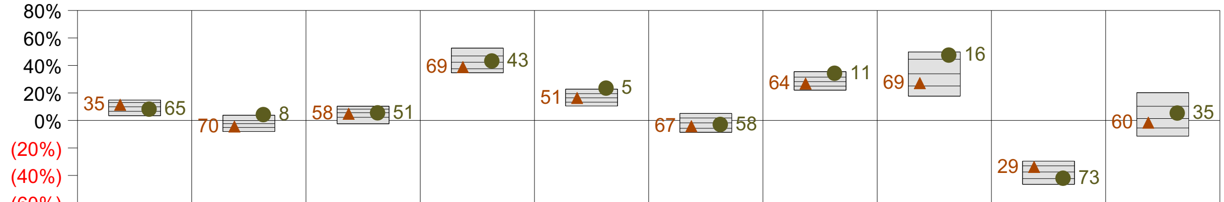


Pyramis Small Cap
Return Analysis Summary

Return Analysis

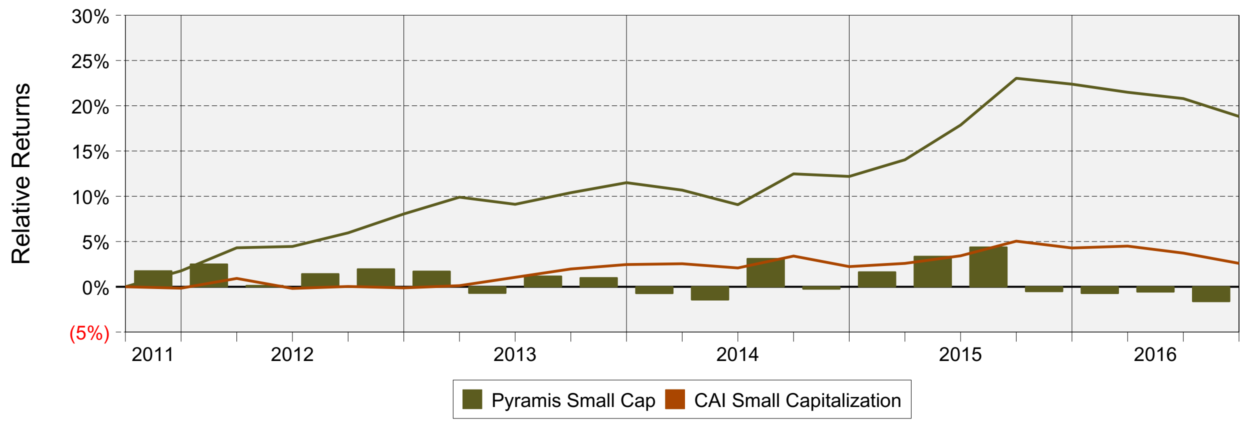
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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 (Gross)

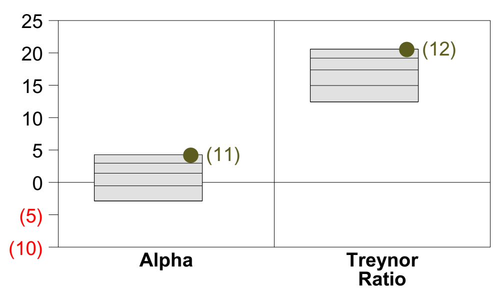


	12/15- 9/16	2015	2014	2013	2012	2011	2010	2009	2008	2007
10th Percentile	14.86	3.80	10.36	52.61	22.77	5.11	35.51	49.83	(29.60)	20.21
25th Percentile	13.00	(0.08)	8.22	46.90	19.49	1.82	31.51	44.51	(33.01)	10.32
Median	9.94	(2.32)	5.65	42.33	16.47	(1.75)	28.25	33.93	(37.46)	1.39
75th Percentile	6.63	(5.10)	2.28	37.61	13.28	(5.70)	24.96	25.06	(42.30)	(5.47)
90th Percentile	3.45	(8.08)	(2.43)	34.67	10.51	(8.62)	22.04	17.68	(46.47)	(11.41)
Pyramis Small Cap ●	8.22	4.27	5.54	43.26	23.54	(2.91)	34.34	47.54	(42.02)	5.40
Russell 2000 Index ▲	11.46	(4.41)	4.89	38.82	16.35	(4.18)	26.85	27.17	(33.79)	(1.57)

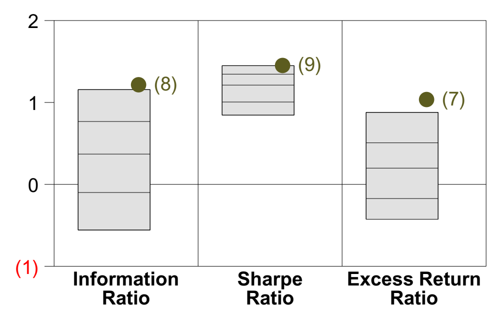
Cumulative and Quarterly Relative Return vs Russell 2000 Index



Risk Adjusted Return Measures vs Russell 2000 Index
Rankings Against CAI Small Capitalization (Gross)
Five Years Ended September 30, 2016



	Alpha	Treynor Ratio
10th Percentile	4.27	20.58
25th Percentile	2.96	19.19
Median	1.41	17.38
75th Percentile	(0.53)	14.96
90th Percentile	(2.87)	12.43
Pyramis Small Cap ●	4.19	20.53



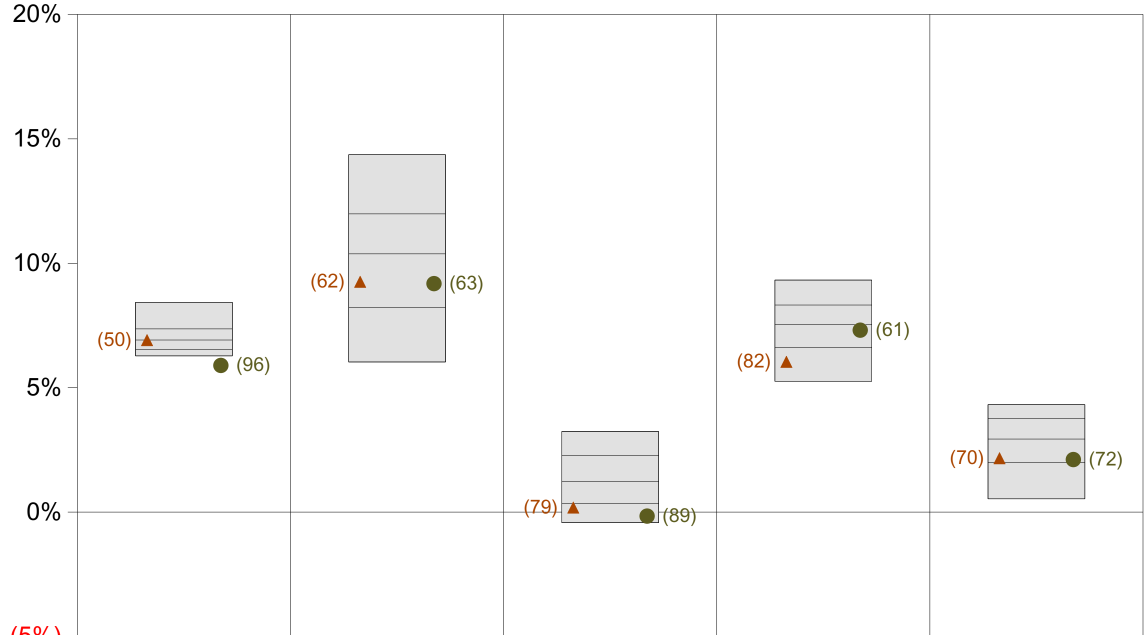
	Information Ratio	Sharpe Ratio	Excess Return Ratio
10th Percentile	1.16	1.45	0.88
25th Percentile	0.77	1.35	0.51
Median	0.37	1.21	0.20
75th Percentile	(0.10)	1.01	(0.17)
90th Percentile	(0.56)	0.85	(0.43)
Pyramis Small Cap ●	1.22	1.45	1.04

International Equity
Period Ended September 30, 2016

Quarterly Summary and Highlights

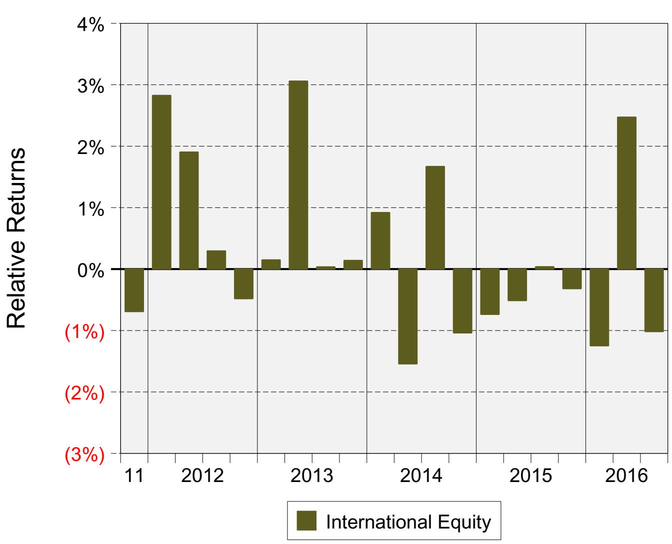
- International Equity's portfolio posted a 5.89% return for the quarter placing it in the 96 percentile of the Pub Pln- International Equity group for the quarter and in the 63 percentile for the last year.
- International Equity's portfolio underperformed the MSCI ACWI ex US by 1.02% for the quarter and underperformed the MSCI ACWI ex US for the year by 0.07%.

Performance vs Pub Pln- International Equity (Gross)

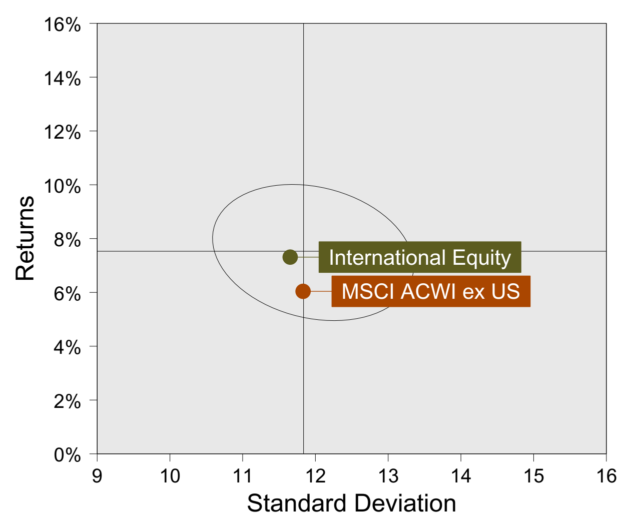


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
10th Percentile	8.43	14.37	3.24	9.33	4.32
25th Percentile	7.36	11.98	2.27	8.32	3.77
Median	6.92	10.38	1.23	7.53	2.94
75th Percentile	6.53	8.22	0.34	6.61	1.99
90th Percentile	6.28	6.03	(0.42)	5.26	0.53
International Equity ●	5.89	9.18	(0.16)	7.31	2.11
MSCI ACWI ex US ▲	6.91	9.26	0.18	6.04	2.16

Relative Return vs MSCI ACWI ex US



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

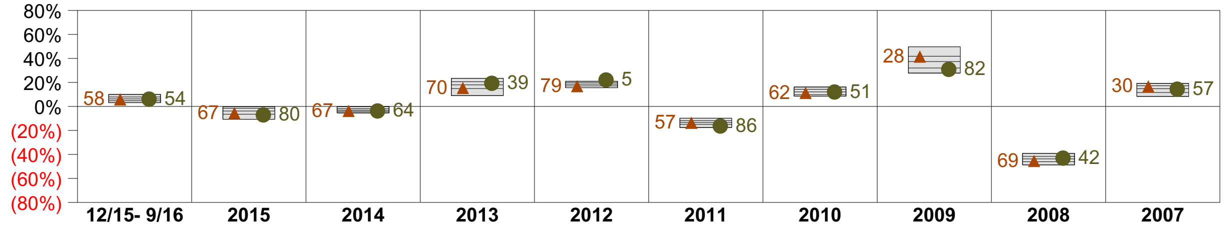


International Equity
Return Analysis Summary

Return Analysis

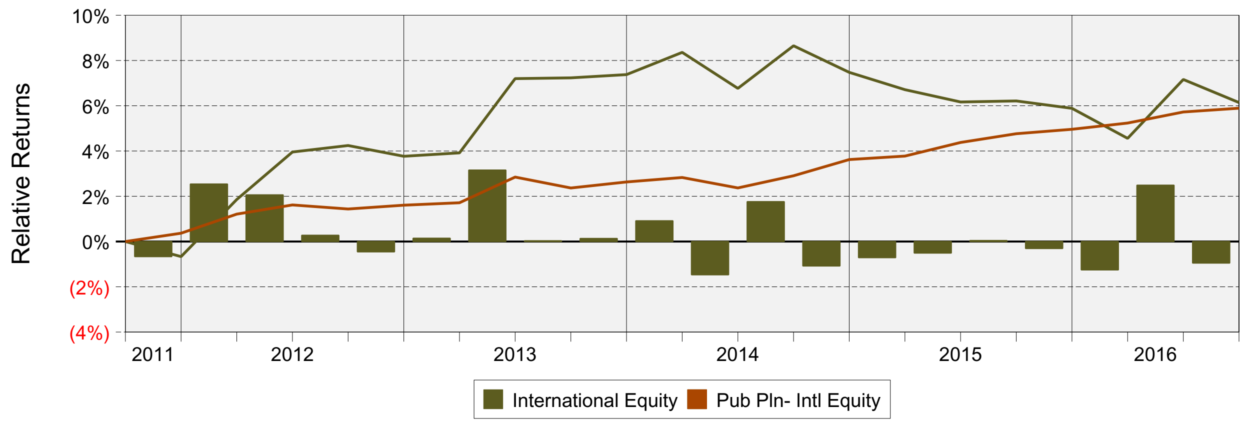
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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)

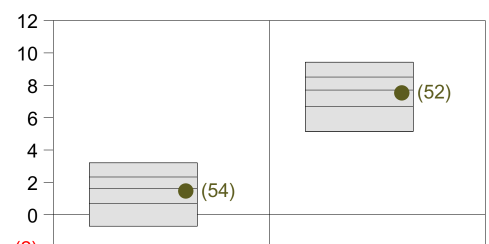


	12/15- 9/16	2015	2014	2013	2012	2011	2010	2009	2008	2007
10th Percentile	10.02	(0.23)	(0.11)	23.42	21.01	(9.81)	16.23	49.71	(39.12)	19.21
25th Percentile	7.91	(1.49)	(1.90)	20.60	20.09	(11.83)	14.28	41.83	(41.67)	17.23
Median	6.26	(3.79)	(3.21)	17.98	18.60	(13.40)	12.11	37.39	(43.71)	14.82
75th Percentile	4.74	(6.47)	(4.32)	14.89	17.09	(15.01)	9.72	32.05	(46.07)	11.63
90th Percentile	3.14	(10.71)	(5.43)	9.01	15.56	(17.58)	8.52	27.81	(48.72)	8.35
International Equity ●	6.08	(7.06)	(3.78)	19.30	22.05	(16.34)	12.02	30.89	(43.07)	14.37
MSCI ACWI ex US ▲	5.82	(5.66)	(3.87)	15.29	16.83	(13.71)	11.15	41.45	(45.53)	16.65

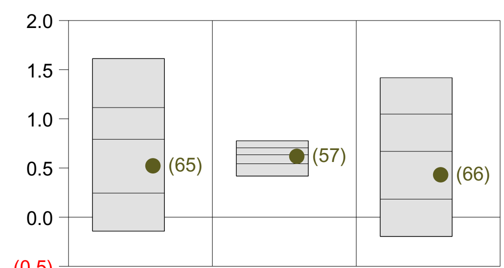
Cumulative and Quarterly Relative Return vs MSCI ACWI ex US



Risk Adjusted Return Measures vs MSCI ACWI ex US
Rankings Against Pub Pln- International Equity (Gross)
Five Years Ended September 30, 2016



	Alpha	Treynor Ratio
10th Percentile	3.21	9.43
25th Percentile	2.33	8.51
Median	1.63	7.70
75th Percentile	0.69	6.70
90th Percentile	(0.71)	5.15
International Equity ●	1.47	7.53



	Information Ratio	Sharpe Ratio	Excess Return Ratio
10th Percentile	1.61	0.78	1.42
25th Percentile	1.11	0.70	1.05
Median	0.79	0.63	0.67
75th Percentile	0.24	0.54	0.18
90th Percentile	(0.14)	0.42	(0.20)
International Equity ●	0.52	0.62	0.43

Causeway International Opportunities
Period Ended September 30, 2016

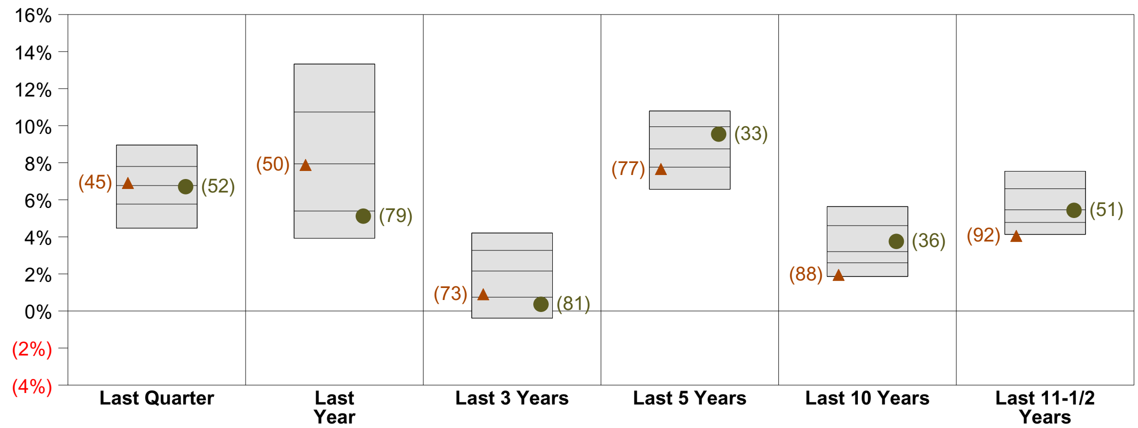
Investment Philosophy

Causeway's strategy consists of a three step process: 1) The International Value piece (developed markets only) utilizes bottom-up selection of undervalued stocks as well as the compounding of dividend returns; 2) The Emerging Markets portion implements through the use of proprietary quantitative models that are a combination of bottom-up and top-down factors; 3) The team also utilizes quantitative allocation models to tactically allocate (within specified ranges) between Emerging Markets and Developed Markets based on their relative attractiveness. The product was funded during the first quarter of 2005. In May 2016 the strategy transitioned from International Value to International Opportunities. As such, the index has been updated accordingly from EAFE to ACWI ex-US (Net Div).

Quarterly Summary and Highlights

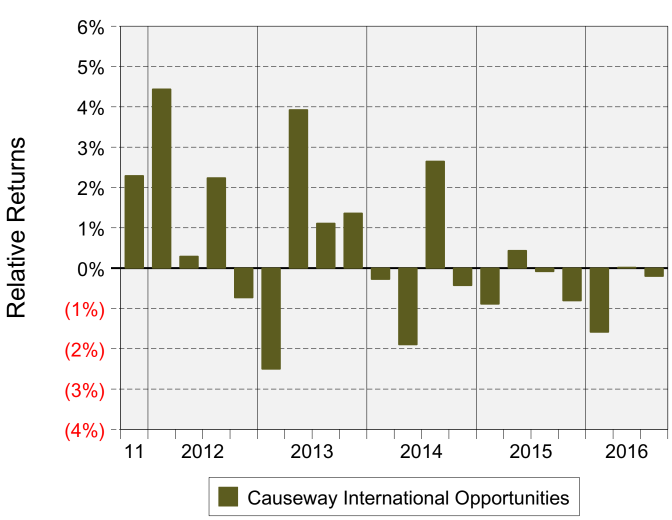
- Causeway International Opportunities's portfolio posted a 6.71% return for the quarter placing it in the 52 percentile of the CAI Non-U.S. Equity Style group for the quarter and in the 79 percentile for the last year.
- Causeway International Opportunities's portfolio underperformed the Causeway Linked Index by 0.20% for the quarter and underperformed the Causeway Linked Index for the year by 2.76%.

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

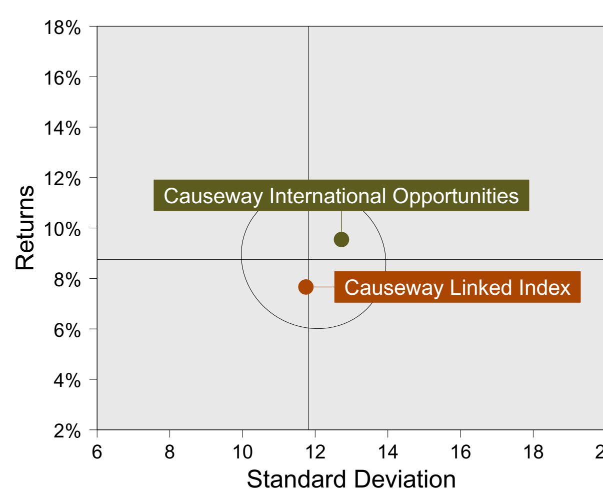


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years	Last 11-1/2 Years
10th Percentile	8.96	13.33	4.21	10.80	5.64	7.54
25th Percentile	7.80	10.74	3.27	9.94	4.61	6.60
Median	6.77	7.94	2.16	8.75	3.20	5.46
75th Percentile	5.77	5.40	0.74	7.76	2.60	4.78
90th Percentile	4.47	3.92	(0.39)	6.57	1.86	4.13
Causeway International Opportunities ●	6.71	5.12	0.36	9.54	3.76	5.43
Causeway Linked Index ▲	6.91	7.88	0.90	7.66	1.95	4.05

Relative Return vs Causeway Linked Index



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

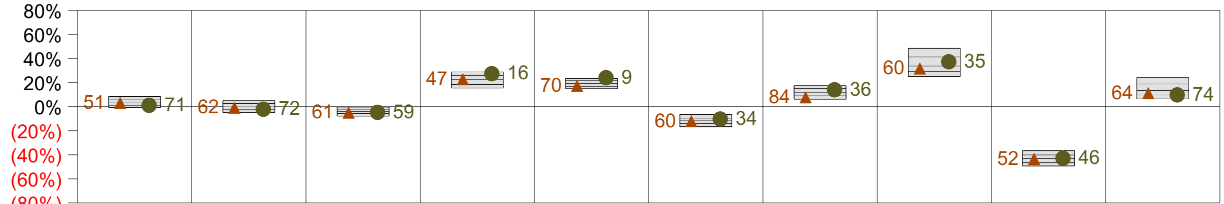


Causeway International Opportunities
Return Analysis Summary

Return Analysis

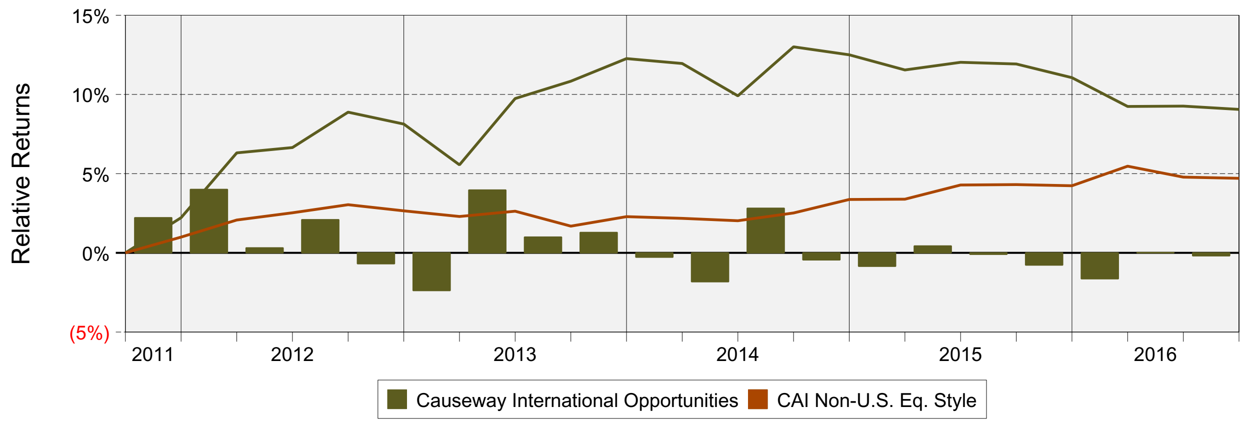
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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)

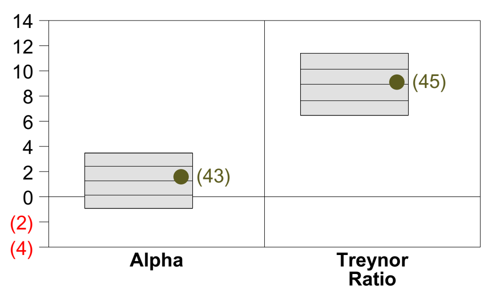


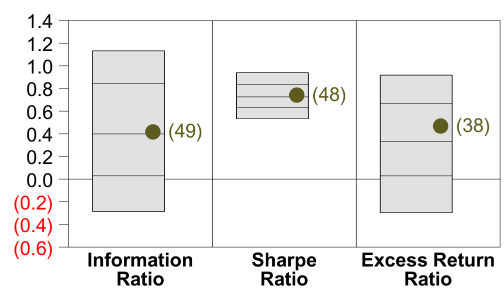
	12/15- 9/16	2015	2014	2013	2012	2011	2010	2009	2008	2007
10th Percentile	8.43	4.92	(0.30)	28.92	23.51	(6.44)	17.43	48.53	(36.56)	24.12
25th Percentile	5.67	2.71	(2.06)	26.07	21.64	(9.49)	15.06	41.35	(40.10)	18.89
Median	3.14	0.48	(3.88)	22.49	19.25	(11.24)	11.62	33.82	(43.20)	13.55
75th Percentile	0.80	(2.53)	(5.71)	18.50	16.97	(13.94)	9.02	29.20	(46.54)	9.73
90th Percentile	(0.55)	(4.70)	(7.81)	15.53	14.91	(16.62)	6.27	25.12	(49.29)	6.45
Causeway International Opportunities ●	1.17	(2.09)	(4.70)	27.47	24.10	(10.24)	14.06	37.35	(42.83)	9.82
Causeway Linked Index ▲	3.03	(0.81)	(4.90)	22.78	17.32	(12.14)	7.75	31.78	(43.38)	11.17

Cumulative and Quarterly Relative Return vs Causeway Linked Index



Risk Adjusted Return Measures vs Causeway Linked Index
Rankings Against CAI Non-U.S. Equity Style (Gross)
Five Years Ended September 30, 2016





	Alpha	Treynor Ratio
10th Percentile	3.47	11.40
25th Percentile	2.42	10.13
Median	1.26	8.94
75th Percentile	0.13	7.63
90th Percentile	(0.92)	6.47
Causeway International Opportunities ●	1.59	9.11

	Information Ratio	Sharpe Ratio	Excess Return Ratio
10th Percentile	1.13	0.94	0.92
25th Percentile	0.85	0.84	0.67
Median	0.40	0.73	0.33
75th Percentile	0.03	0.63	0.03
90th Percentile	(0.29)	0.53	(0.30)
Causeway International Opportunities ●	0.42	0.74	0.47

Aberdeen EAFE Plus
Period Ended September 30, 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

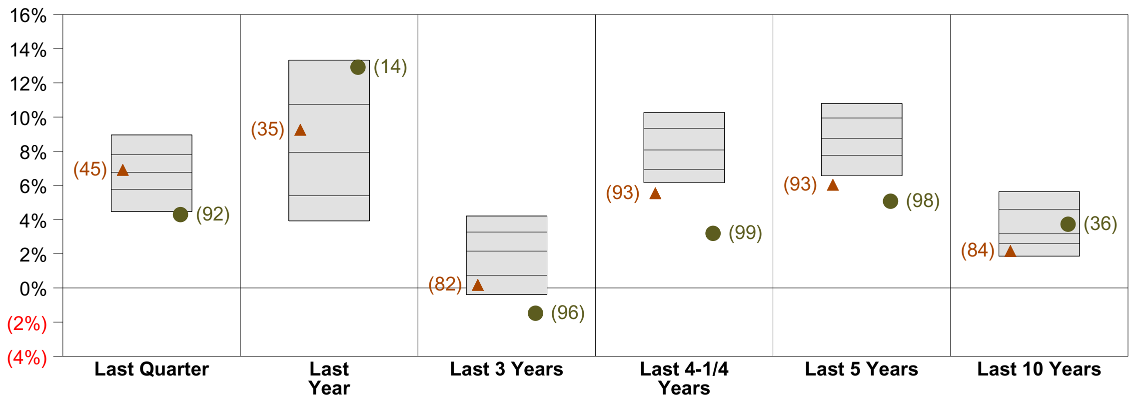
- Aberdeen EAFE Plus's portfolio posted a 4.29% return for the quarter placing it in the 92 percentile of the CAI Non-U.S. Equity Style group for the quarter and in the 14 percentile for the last year.
- Aberdeen EAFE Plus's portfolio underperformed the MSCI ACWI ex US by 2.62% for the quarter and outperformed the MSCI ACWI ex US for the year by 3.66%.

Quarterly Asset Growth

Beginning Market Value	$70,125,135
Net New Investment	$-145,564
Investment Gains/(Losses)	$3,010,304
Ending Market Value	$72,989,875

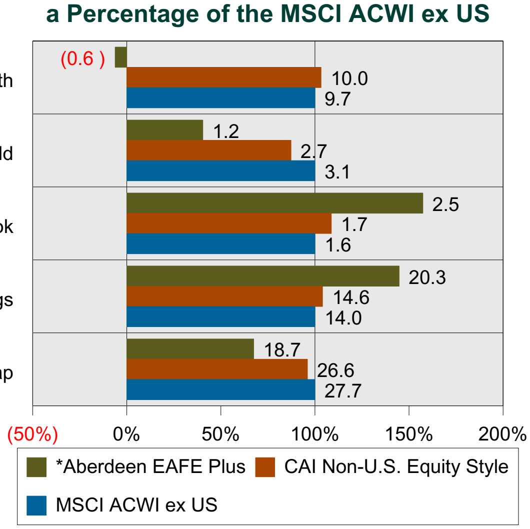
Percent Cash: 0.0%

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

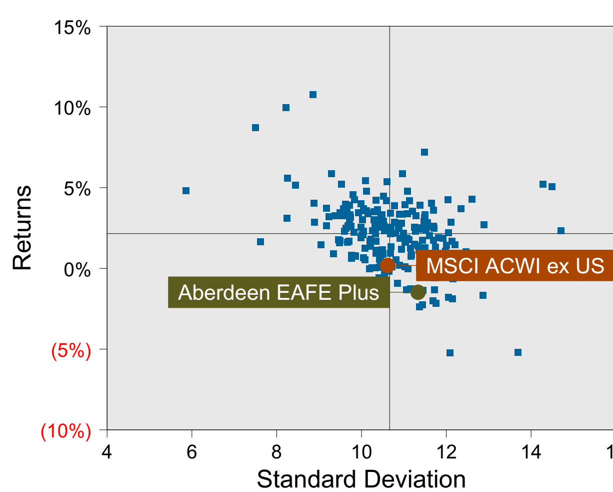


	Last Quarter	Last Year	Last 3 Years	Last 4-1/4 Years	Last 5 Years	Last 10 Years
10th Percentile	8.96	13.33	4.21	10.27	10.80	5.64
25th Percentile	7.80	10.74	3.27	9.34	9.94	4.61
Median	6.77	7.94	2.16	8.07	8.75	3.20
75th Percentile	5.77	5.40	0.74	6.93	7.76	2.60
90th Percentile	4.47	3.92	(0.39)	6.16	6.57	1.86
Aberdeen EAFE Plus ●	4.29	12.92	(1.48)	3.19	5.07	3.73
MSCI ACWI ex US ▲	6.91	9.26	0.18	5.55	6.04	2.16

Portfolio Characteristics as a Percentage of the MSCI ACWI ex US



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



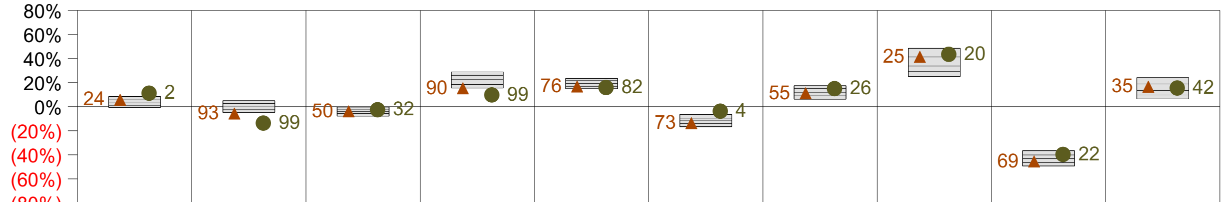
*9/30/16 portfolio characteristics generated using most recently available holdings (6/30/16) modified based on a "buy-and-hold" assumption (repriced and adjusted for corporate actions). Analysis is then done using current market and company financial data.

Aberdeen EAFE Plus
Return Analysis Summary

Return Analysis

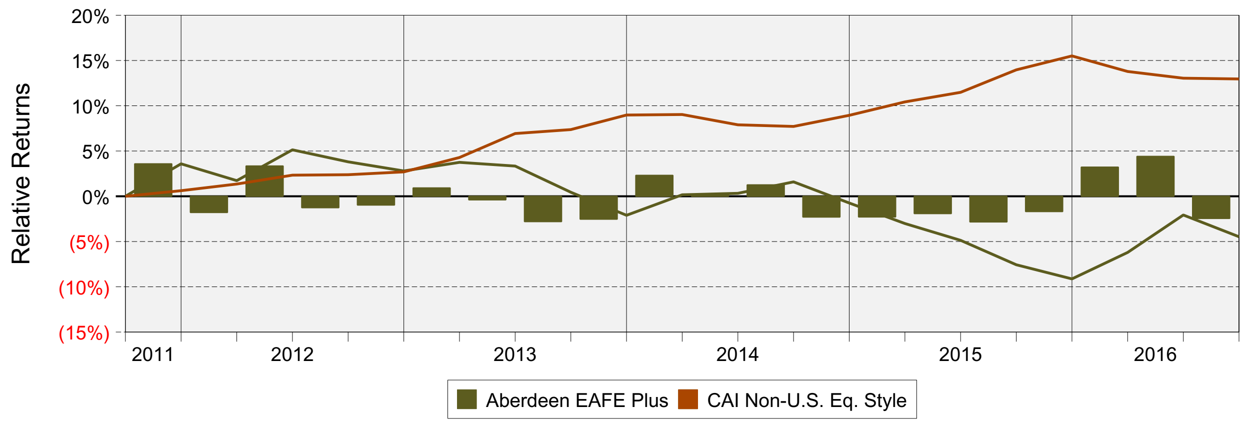
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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)

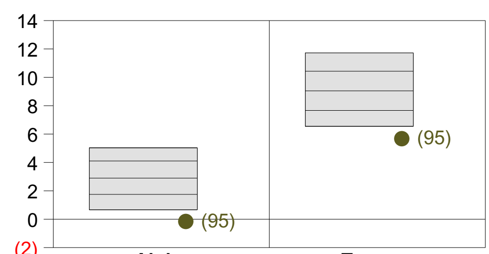


	12/15- 9/16	2015	2014	2013	2012	2011	2010	2009	2008	2007
10th Percentile	8.43	4.92	(0.30)	28.92	23.51	(6.44)	17.43	48.53	(36.56)	24.12
25th Percentile	5.67	2.71	(2.06)	26.07	21.64	(9.49)	15.06	41.35	(40.10)	18.89
Median	3.14	0.48	(3.88)	22.49	19.25	(11.24)	11.62	33.82	(43.20)	13.55
75th Percentile	0.80	(2.53)	(5.71)	18.50	16.97	(13.94)	9.02	29.20	(46.54)	9.73
90th Percentile	(0.55)	(4.70)	(7.81)	15.53	14.91	(16.62)	6.27	25.12	(49.29)	6.45
Aberdeen EAFE Plus ●	11.25	(13.63)	(2.53)	9.79	15.94	(3.72)	15.02	43.55	(39.68)	15.54
MSCI ACWI ex US ▲	5.82	(5.66)	(3.87)	15.29	16.83	(13.71)	11.15	41.45	(45.53)	16.65

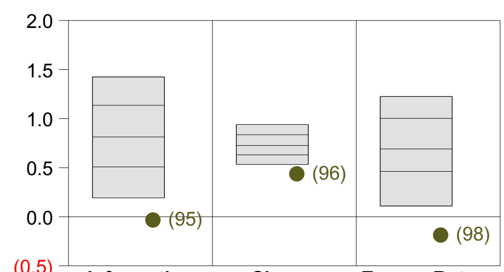
Cumulative and Quarterly Relative Return vs MSCI ACWI ex US



Risk Adjusted Return Measures vs MSCI ACWI ex US
Rankings Against CAI Non-U.S. Equity Style (Gross)
Five Years Ended September 30, 2016



	Alpha	Treynor Ratio
10th Percentile	5.03	11.72
25th Percentile	4.11	10.43
Median	2.90	9.05
75th Percentile	1.75	7.66
90th Percentile	0.67	6.55
Aberdeen EAFE Plus ●	(0.16)	5.68



	Information Ratio	Sharpe Ratio	Excess Return Ratio
10th Percentile	1.42	0.94	1.23
25th Percentile	1.14	0.84	1.00
Median	0.81	0.73	0.69
75th Percentile	0.51	0.63	0.46
90th Percentile	0.19	0.53	0.11
Aberdeen EAFE Plus ●	(0.03)	0.44	(0.19)

American Century Non-US SC
Period Ended September 30, 2016

Investment Philosophy

American Century   s philosophy of growth investing is centered on the belief that accelerating growth in earnings and revenues, rather than the absolute level of growth, is more highly correlated to stock price performance. This philosophy often directs analysts to research different companies than other growth managers, as they do not require an absolute threshold of earnings or revenue growth. This philosophy allows American Century to take advantage of both the normal price appreciation that results from a company's earnings growth, and the markets re-rating of a company's price-to-earnings multiple. The goal is to construct a portfolio of international stocks that are experiencing accelerating growth that are believed to be sustainable over time. The product was funded during the second quarter of 2016. Prior performance represents that of the composite for supplementary purposes.

Quarterly Summary and Highlights

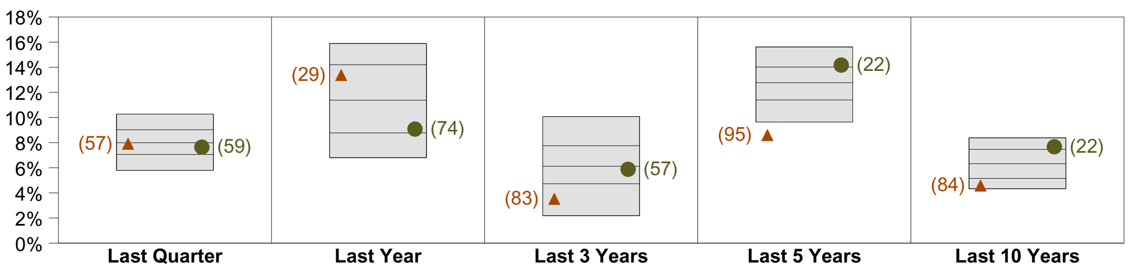
- American Century Non-US SC's portfolio posted a 7.64% return for the quarter placing it in the 59 percentile of the CAI International Small Cap group for the quarter and in the 74 percentile for the last year.
- American Century Non-US SC's portfolio underperformed the MSCI ACWI ex US Small Cap by 0.27% for the quarter and underperformed the MSCI ACWI ex US Small Cap for the year by 4.30%.

Quarterly Asset Growth

Beginning Market Value	$32,571,810
Net New Investment	$0
Investment Gains/(Losses)	$2,488,838
Ending Market Value	$35,060,647

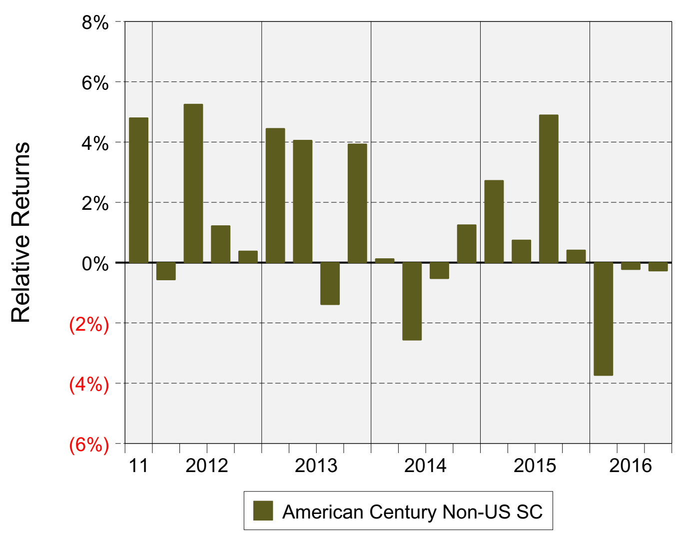
Percent Cash: (0.0)%

Performance vs CAI International Small Cap (Gross)

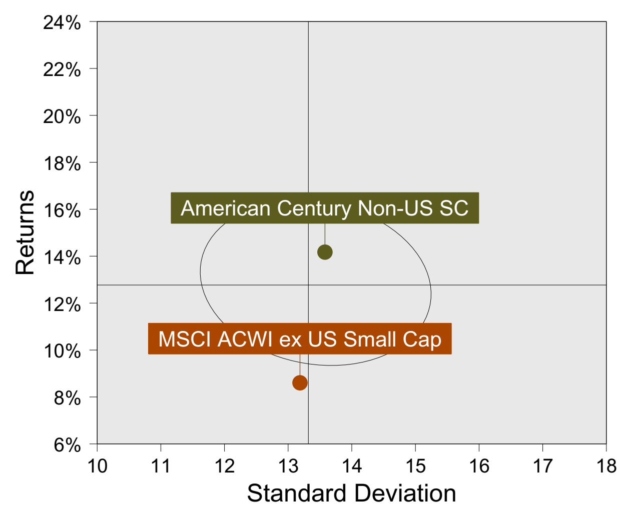


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
10th Percentile	10.28	15.89	10.08	15.62	8.38
25th Percentile	9.03	14.20	7.76	14.02	7.46
Median	7.99	11.38	6.12	12.77	6.33
75th Percentile	7.06	8.78	4.73	11.40	5.15
90th Percentile	5.79	6.80	2.18	9.64	4.33
American Century Non-US SC ●	7.64	9.08	5.88	14.17	7.67
MSCI ACWI ex US Small Cap ▲	7.91	13.38	3.52	8.60	4.58

Relative Returns vs MSCI ACWI ex US Small Cap



CAI International Small Cap (Gross) Annualized Five Year Risk vs Return

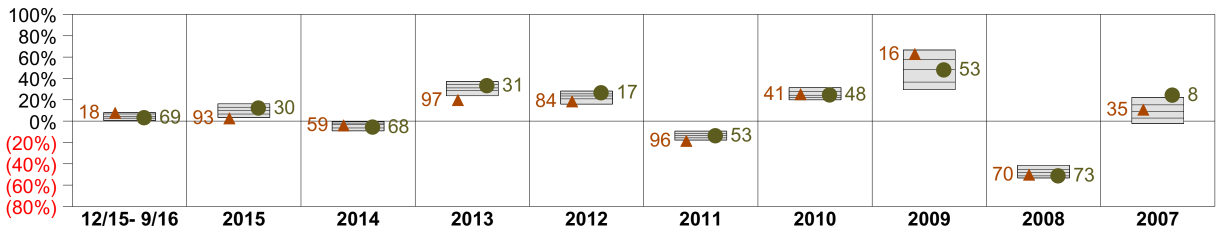


American Century Non-US SC
Return Analysis Summary

Return Analysis

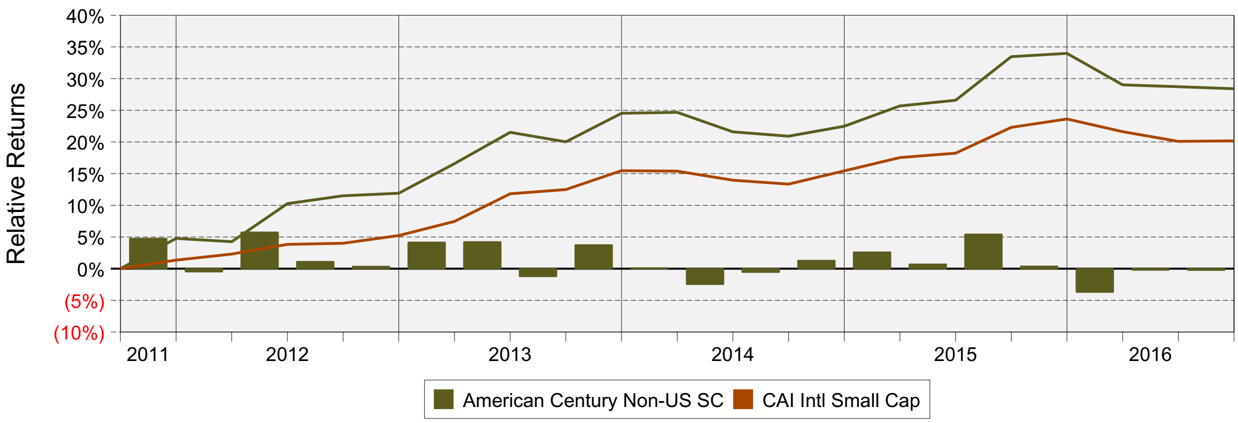
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate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

Performance vs CAI International Small Cap (Gross)

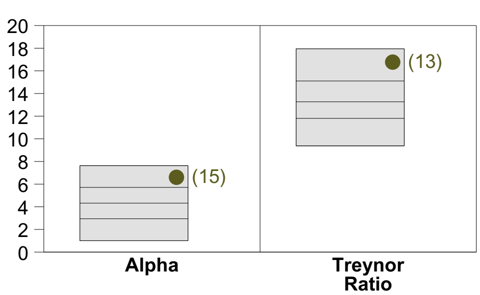


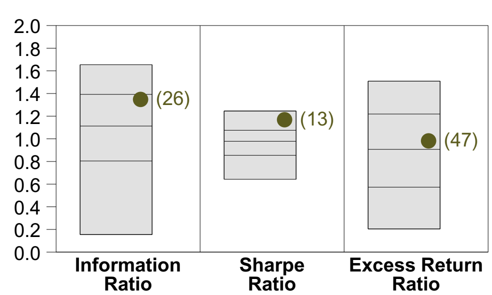
	12/15- 9/16	2015	2014	2013	2012	2011	2010	2009	2008	2007
10th Percentile	8.00	16.23	(0.43)	37.17	28.18	(9.37)	31.37	66.66	(41.39)	22.21
25th Percentile	6.68	13.03	(1.85)	34.19	25.53	(11.52)	27.96	57.95	(45.38)	15.23
Median	4.51	10.05	(3.42)	31.13	23.55	(13.64)	24.28	48.29	(48.22)	8.87
75th Percentile	2.77	6.62	(6.43)	28.47	20.84	(15.72)	22.33	36.58	(51.35)	2.84
90th Percentile	0.52	3.40	(9.15)	23.74	15.91	(17.79)	19.96	29.42	(53.33)	(2.30)
American Century Non-US SC ●	3.21	12.24	(5.61)	33.23	26.58	(13.72)	24.55	48.01	(51.31)	24.35
MSCI ACWI ex US Small Cap ▲	7.70	2.60	(4.03)	19.73	18.52	(18.50)	25.20	62.91	(50.23)	10.74

Cumulative and Quarterly Relative Return vs MSCI ACWI ex US Small Cap



Risk Adjusted Return Measures vs MSCI ACWI ex US Small Cap
Rankings Against CAI International Small Cap (Gross)
Five Years Ended September 30, 2016





	Alpha	Treynor Ratio
10th Percentile	7.63	17.95
25th Percentile	5.71	15.11
Median	4.32	13.27
75th Percentile	2.94	11.80
90th Percentile	1.01	9.38
American Century Non-US SC ●	6.60	16.77

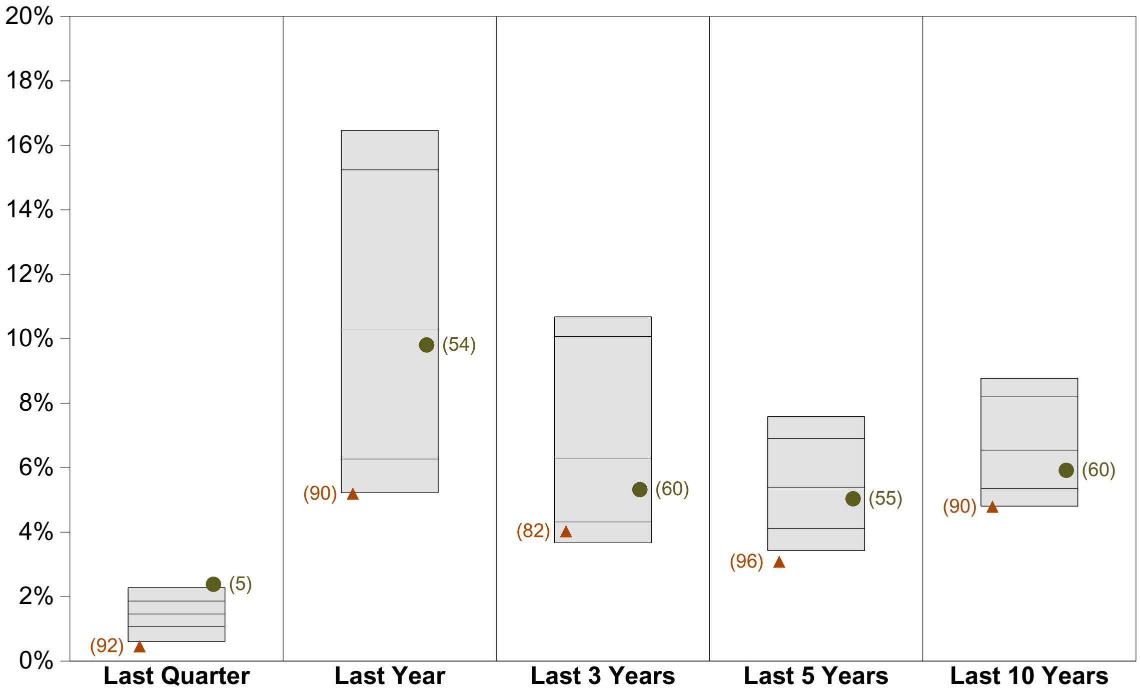
	Information Ratio	Sharpe Ratio	Excess Return Ratio
10th Percentile	1.65	1.25	1.51
25th Percentile	1.39	1.08	1.22
Median	1.11	0.98	0.91
75th Percentile	0.80	0.85	0.57
90th Percentile	0.16	0.64	0.20
American Century Non-US SC ●	1.35	1.17	0.98

Fixed Income
Period Ended September 30, 2016

Quarterly Summary and Highlights

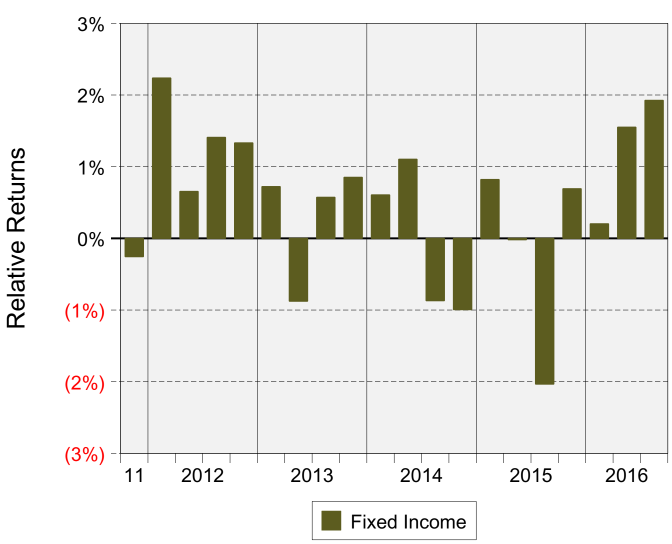
- Fixed Income's portfolio posted a 2.38% return for the quarter placing it in the 5 percentile of the Corp Pln- Domestic Fixed group for the quarter and in the 54 percentile for the last year.
- Fixed Income's portfolio outperformed the BB Barclays Aggregate Index by 1.92% for the quarter and outperformed the BB Barclays Aggregate Index for the year by 4.61%.

Performance vs Corp Pln- Domestic Fixed (Gross)

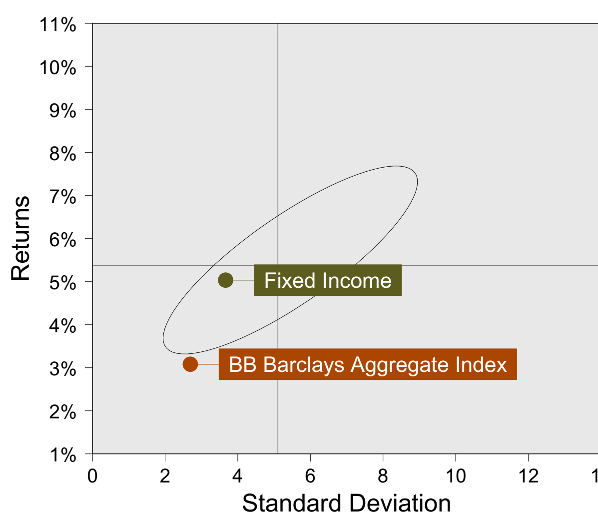


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
10th Percentile	2.28	16.46	10.68	7.58	8.77
25th Percentile	1.86	15.24	10.07	6.91	8.20
Median	1.46	10.30	6.27	5.38	6.54
75th Percentile	1.08	6.27	4.32	4.12	5.36
90th Percentile	0.60	5.22	3.67	3.43	4.81
Fixed Income ●	2.38	9.81	5.32	5.04	5.92
BB Barclays Aggregate Index ▲	0.46	5.19	4.03	3.08	4.79

Relative Returns vs BB Barclays Aggregate Index



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

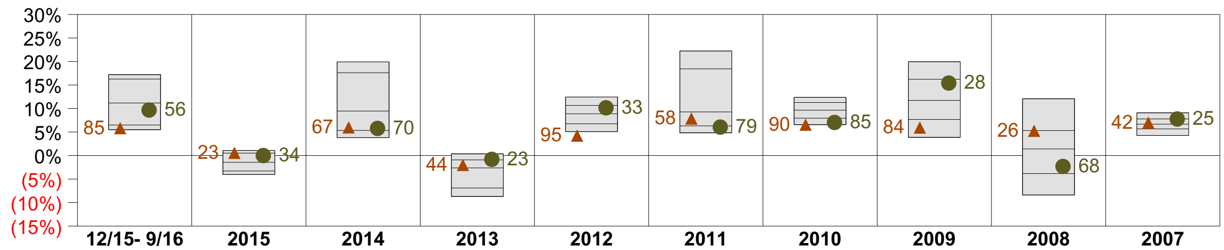


Fixed Income
Return Analysis Summary

Return Analysis

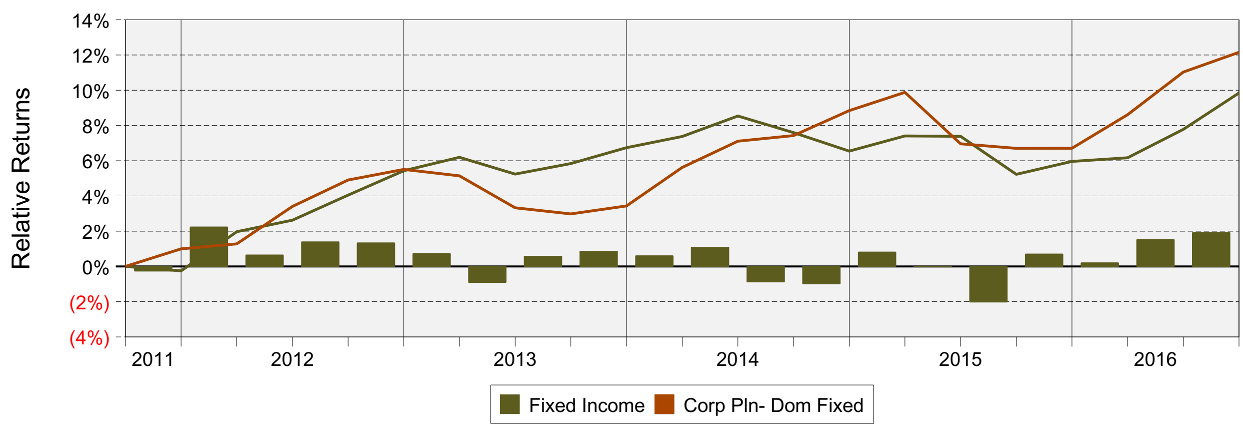
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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)

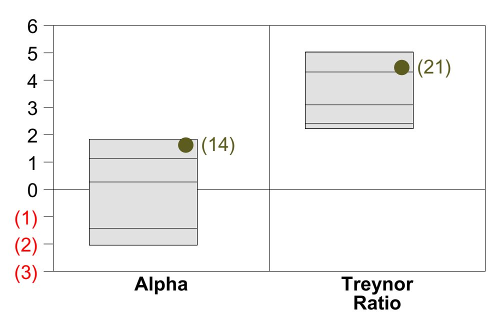


	12/15- 9/16	2015	2014	2013	2012	2011	2010	2009	2008	2007
10th Percentile	17.22	1.07	19.91	0.36	12.45	22.24	12.37	19.95	12.07	9.08
25th Percentile	16.26	0.51	17.60	(0.92)	10.66	18.44	11.28	16.22	5.31	7.79
Median	11.17	(1.44)	9.46	(2.63)	8.89	9.28	9.64	11.72	1.41	6.67
75th Percentile	6.49	(3.27)	5.35	(6.90)	6.76	6.31	7.94	7.67	(3.84)	5.68
90th Percentile	5.50	(4.03)	3.82	(8.70)	5.09	4.83	6.57	3.87	(8.39)	4.27
Fixed Income ●	9.67	(0.00)	5.77	(0.81)	10.15	6.05	7.04	15.41	(2.32)	7.77
BB Barclays Aggregate Index ▲	5.80	0.55	5.97	(2.02)	4.21	7.84	6.54	5.93	5.24	6.97

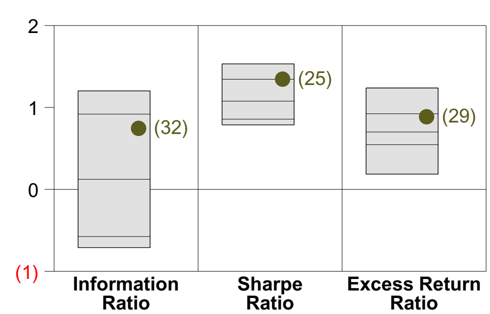
Cumulative and Quarterly Relative Return vs BB Barclays Aggregate Index



Risk Adjusted Return Measures vs BB Barclays Aggregate Index
Rankings Against Corp Pln- Domestic Fixed (Gross)
Five Years Ended September 30, 2016



	Alpha	Treynor Ratio
10th Percentile	1.84	5.03
25th Percentile	1.13	4.30
Median	0.27	3.10
75th Percentile	(1.42)	2.42
90th Percentile	(2.04)	2.22
Fixed Income ●	1.62	4.46



	Information Ratio	Sharpe Ratio	Excess Return Ratio
10th Percentile	1.20	1.53	1.24
25th Percentile	0.92	1.34	0.92
Median	0.12	1.08	0.70
75th Percentile	(0.58)	0.86	0.55
90th Percentile	(0.71)	0.79	0.19
Fixed Income ●	0.74	1.35	0.89

BlackRock U.S. Debt Fund
Period Ended September 30, 2016

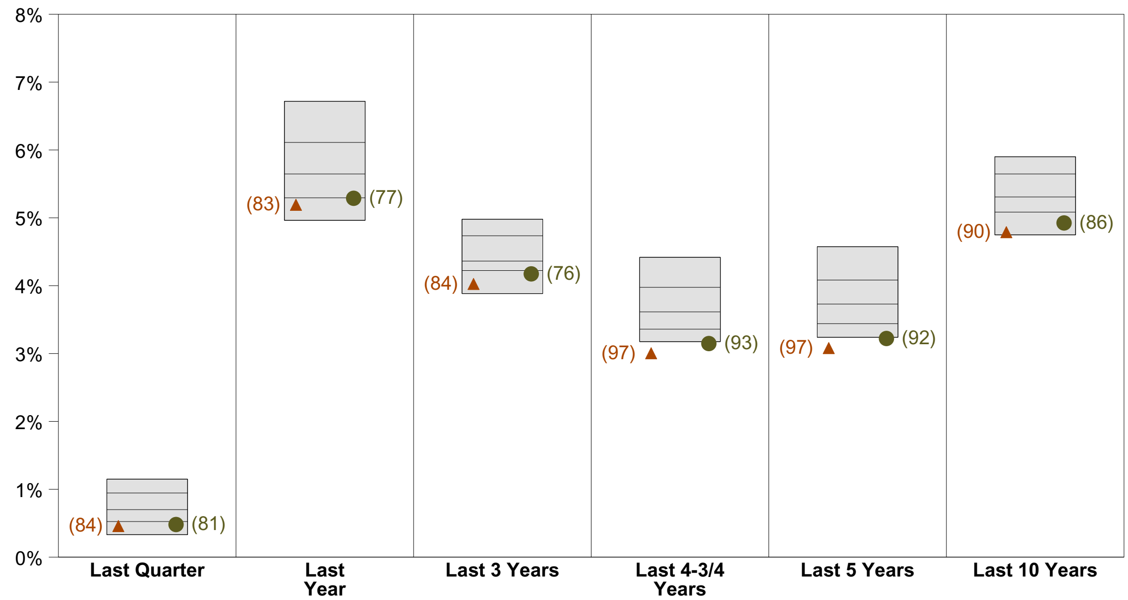
Investment Philosophy

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

Quarterly Summary and Highlights

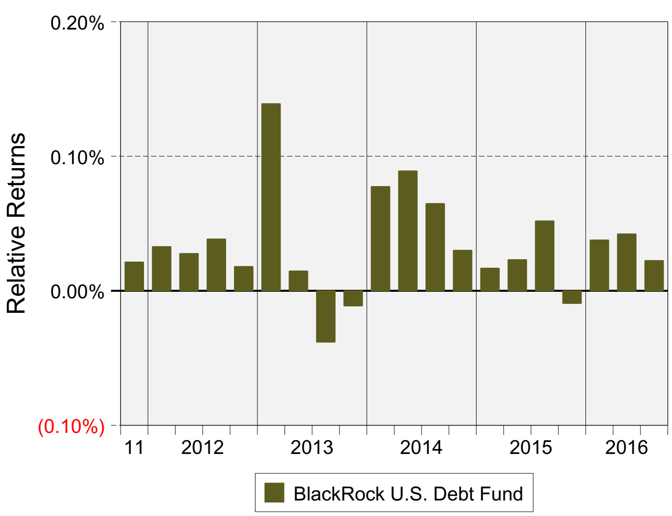
- BlackRock U.S. Debt Fund's portfolio posted a 0.48% return for the quarter placing it in the 81 percentile of the CAI Core Bond Fixed Income group for the quarter and in the 77 percentile for the last year.
- BlackRock U.S. Debt Fund's portfolio outperformed the BB Barclays Aggregate Idx by 0.02% for the quarter and outperformed the BB Barclays Aggregate Idx for the year by 0.10%.

Performance vs CAI Core Bond Fixed Income (Gross)

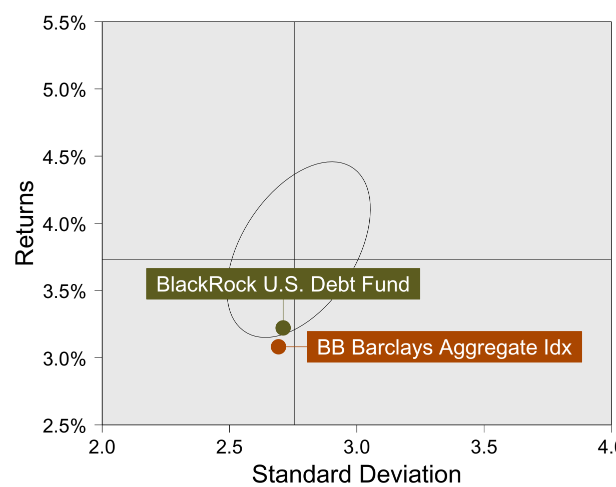


	Last Quarter	Last Year	Last 3 Years	Last 4-3/4 Years	Last 5 Years	Last 10 Years
10th Percentile	1.15	6.72	4.98	4.42	4.57	5.90
25th Percentile	0.94	6.11	4.74	3.98	4.08	5.65
Median	0.70	5.65	4.36	3.61	3.73	5.31
75th Percentile	0.52	5.29	4.22	3.36	3.44	5.08
90th Percentile	0.33	4.96	3.88	3.18	3.24	4.75
BlackRock U.S. Debt Fund ●	0.48	5.29	4.17	3.15	3.22	4.92
BB Barclays Aggregate Idx ▲	0.46	5.19	4.03	3.00	3.08	4.79

Relative Return vs BB Barclays Aggregate Idx



CAI Core Bond Fixed Income (Gross)
Annualized Five Year Risk vs Return

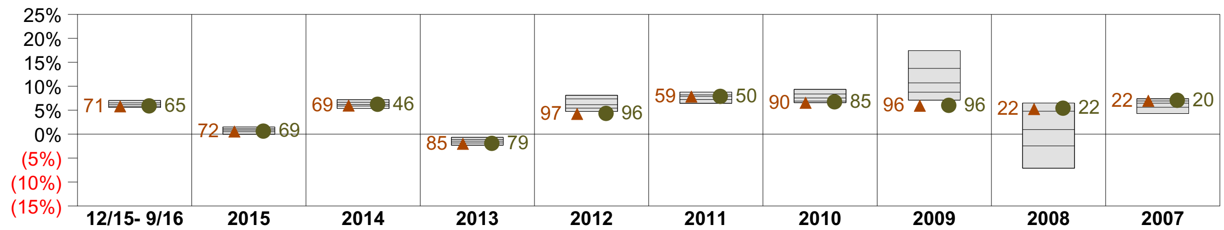


BlackRock U.S. Debt Fund
Return Analysis Summary

Return Analysis

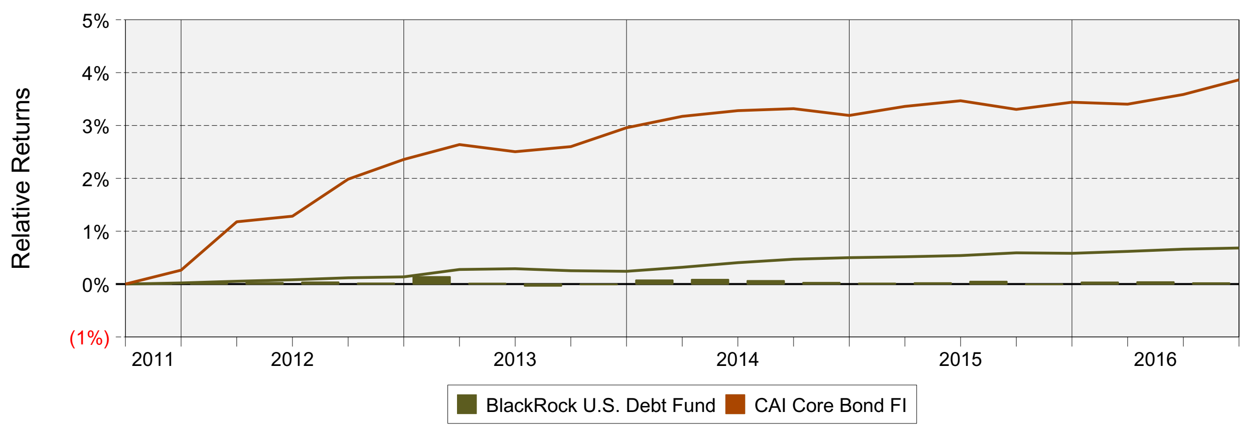
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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 Income (Gross)

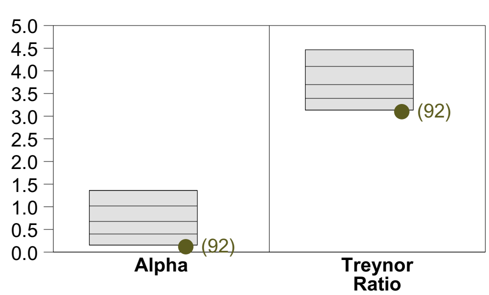


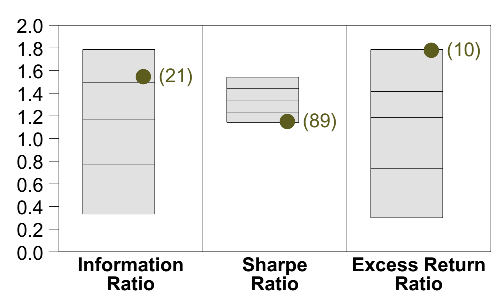
	12/15- 9/16	2015	2014	2013	2012	2011	2010	2009	2008	2007
10th Percentile	7.04	1.51	7.21	(0.66)	8.11	8.78	9.35	17.43	6.50	7.39
25th Percentile	6.54	1.13	6.64	(1.10)	7.37	8.21	8.39	13.73	4.78	6.93
Median	6.15	0.84	6.19	(1.46)	6.15	7.89	7.56	10.71	0.96	6.46
75th Percentile	5.76	0.52	5.88	(1.84)	5.43	7.22	6.89	8.76	(2.45)	5.61
90th Percentile	5.56	(0.03)	5.35	(2.32)	4.74	6.43	6.57	7.10	(7.12)	4.30
BlackRock U.S. Debt Fund ●	5.90	0.63	6.24	(1.92)	4.34	7.89	6.75	6.02	5.42	7.07
BB Barclays Aggregate Idx ▲	5.80	0.55	5.97	(2.02)	4.21	7.84	6.54	5.93	5.24	6.97

Cumulative and Quarterly Relative Return vs BB Barclays Aggregate Idx



Risk Adjusted Return Measures vs BB Barclays Aggregate Idx
Rankings Against CAI Core Bond Fixed Income (Gross)
Five Years Ended September 30, 2016





	Alpha	Treynor Ratio
10th Percentile	1.36	4.47
25th Percentile	1.02	4.10
Median	0.68	3.70
75th Percentile	0.40	3.39
90th Percentile	0.15	3.13
BlackRock U.S. Debt Fund ●	0.12	3.10

	Information Ratio	Sharpe Ratio	Excess Return Ratio
10th Percentile	1.79	1.54	1.79
25th Percentile	1.50	1.44	1.42
Median	1.17	1.34	1.19
75th Percentile	0.77	1.23	0.73
90th Percentile	0.33	1.14	0.30
BlackRock U.S. Debt Fund ●	1.55	1.15	1.78

PIMCO Fixed Income
Period Ended September 30, 2016

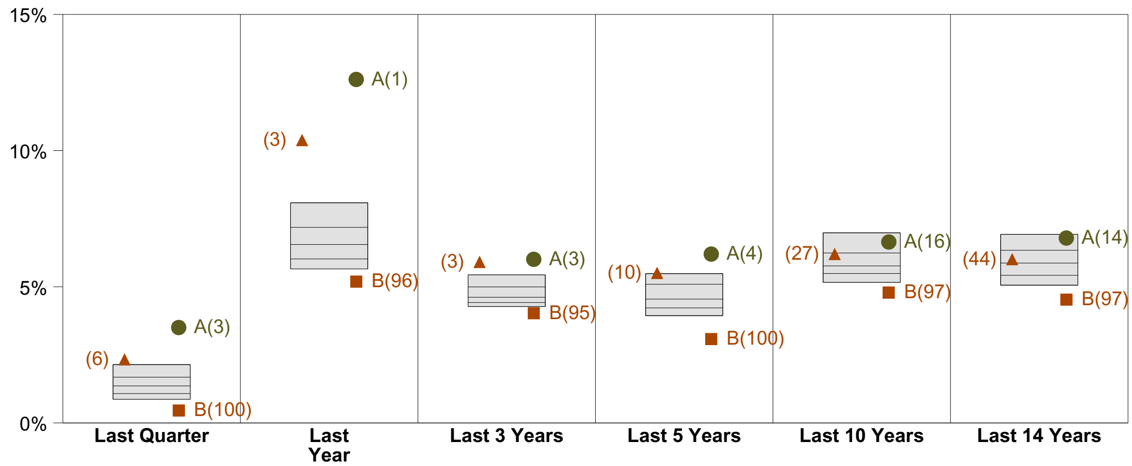
Investment Philosophy

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

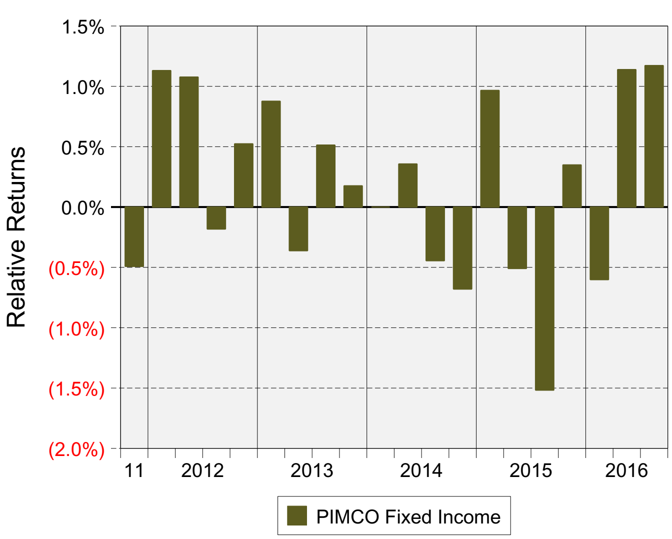
- PIMCO Fixed Income's portfolio posted a 3.50% return for the quarter placing it in the 3 percentile of the CAI Core Plus Fixed Income group for the quarter and in the 1 percentile for the last year.
- PIMCO Fixed Income's portfolio outperformed the Custom Index by 1.17% for the quarter and outperformed the Custom Index for the year by 2.23%.

Performance vs CAI Core Plus Fixed Income (Gross)

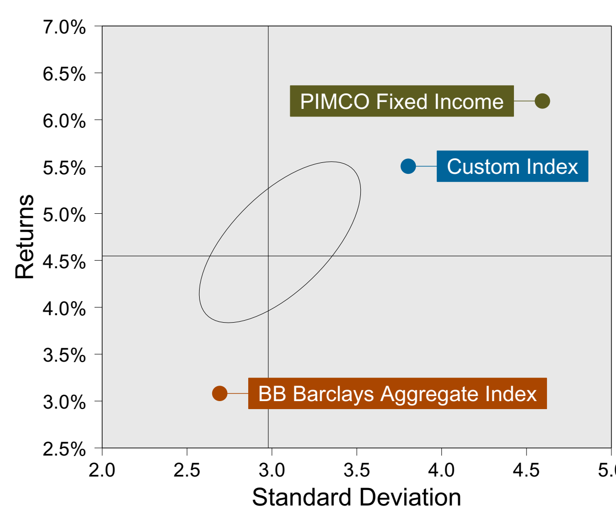


		Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years	Last 14 Years
10th Percentile		2.14	8.08	5.44	5.48	6.98	6.92
25th Percentile		1.68	7.18	4.99	5.09	6.24	6.34
Median		1.36	6.55	4.61	4.55	5.77	5.87
75th Percentile		1.08	6.02	4.42	4.22	5.49	5.42
90th Percentile		0.87	5.65	4.28	3.94	5.16	5.06
PIMCO Fixed Income	● A	3.50	12.61	6.01	6.20	6.64	6.79
BB Barclays Aggregate Index	■ B	0.46	5.19	4.03	3.08	4.79	4.53
Custom Index	▲	2.33	10.38	5.91	5.50	6.20	6.01

Relative Return vs Custom Index



CAI Core Plus Fixed Income (Gross) Annualized Five Year Risk vs Return

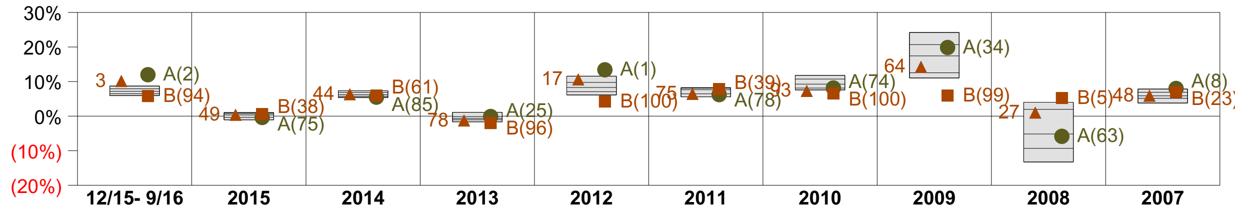


PIMCO Fixed Income
Return Analysis Summary

Return Analysis

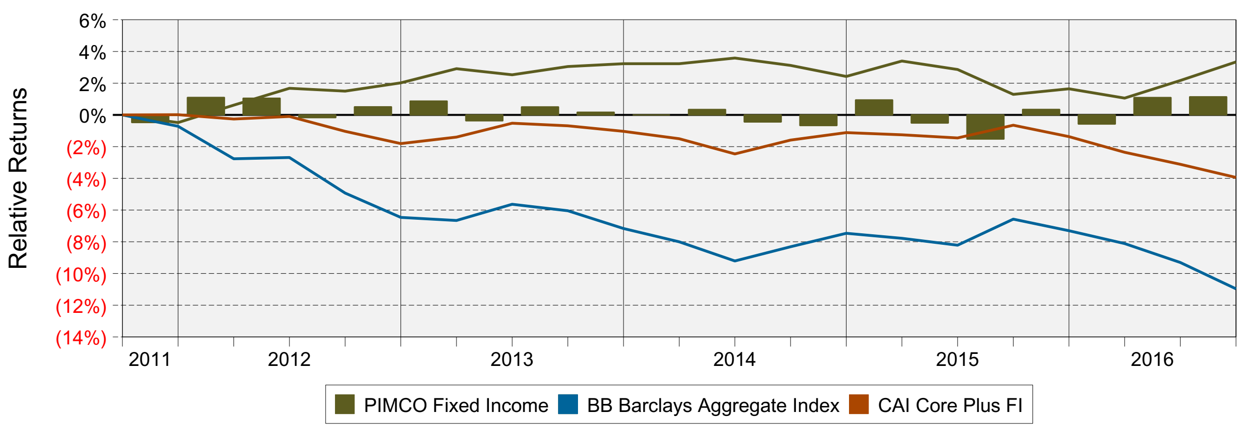
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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 Plus Fixed Income (Gross)

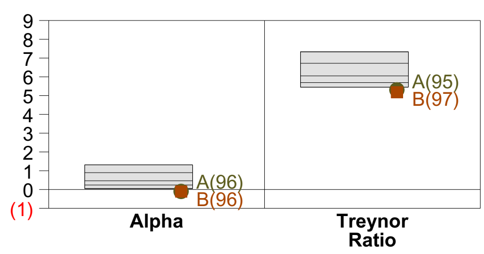


	12/15- 9/16	2015	2014	2013	2012	2011	2010	2009	2008	2007
10th Percentile	8.70	1.04	7.34	1.10	11.56	8.23	11.79	24.21	4.01	7.84
25th Percentile	7.91	0.76	6.88	(0.13)	9.75	8.08	10.72	20.69	1.96	6.91
Median	7.16	0.34	6.18	(0.68)	8.29	7.63	9.26	17.42	(5.17)	5.87
75th Percentile	6.47	(0.36)	5.69	(1.07)	7.08	6.45	8.11	12.53	(9.33)	5.14
90th Percentile	5.93	(1.08)	5.36	(1.66)	6.13	5.59	7.58	11.04	(13.26)	3.79
PIMCO Fixed Income ● A	11.98	(0.39)	5.48	(0.12)	13.40	6.22	8.14	19.85	(5.85)	8.00
BB Barclays Aggregate Index ■ B	5.80	0.55	5.97	(2.02)	4.21	7.84	6.54	5.93	5.24	6.97
Custom Index ▲	10.15	0.37	6.31	(1.28)	10.62	6.42	7.28	14.24	1.00	5.89

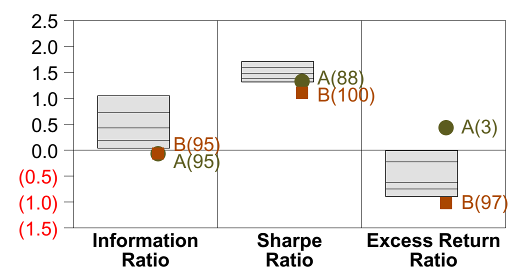
Cumulative and Quarterly Relative Return vs Custom Index



Risk Adjusted Return Measures vs Custom Index
Rankings Against CAI Core Plus Fixed Income (Gross)
Five Years Ended September 30, 2016



	Alpha	Treynor Ratio
10th Percentile	1.31	7.33
25th Percentile	0.90	6.72
Median	0.47	6.05
75th Percentile	0.24	5.69
90th Percentile	0.05	5.45
PIMCO Fixed Income ● A	(0.10)	5.31
BB Barclays Aggregate Index ■ B	(0.10)	5.18



	Information Ratio	Sharpe Ratio	Excess Return Ratio
10th Percentile	1.05	1.71	(0.01)
25th Percentile	0.72	1.60	(0.23)
Median	0.43	1.48	(0.62)
75th Percentile	0.19	1.38	(0.75)
90th Percentile	0.04	1.32	(0.90)
PIMCO Fixed Income ● A	(0.07)	1.33	0.43
BB Barclays Aggregate Index ■ B	(0.06)	1.11	(1.02)

Real Estate

Real Estate
Period Ended September 30, 2016

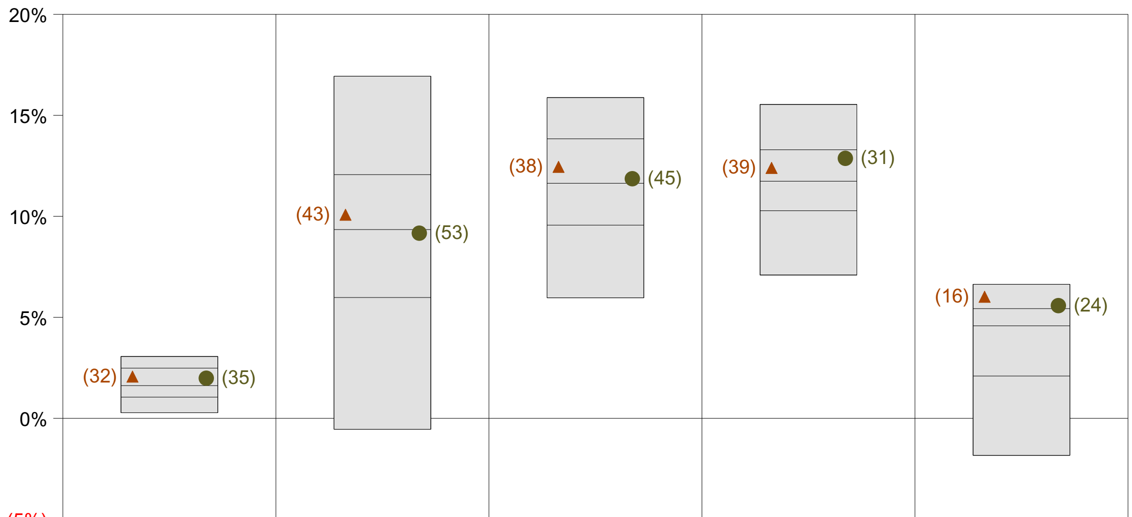
Investment Philosophy

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

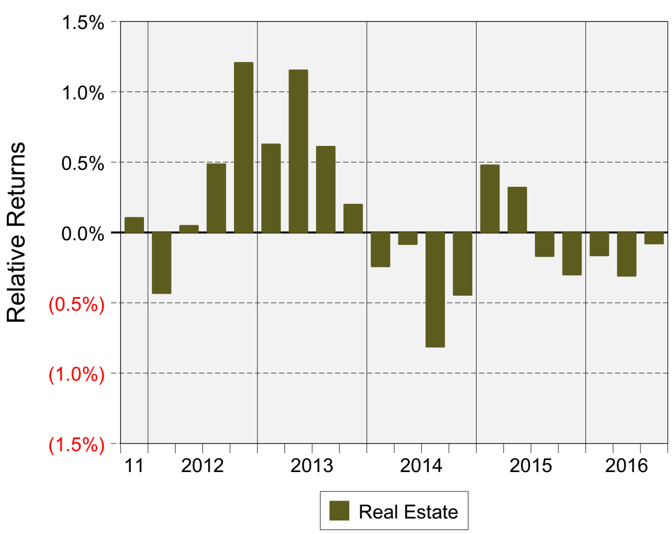
- Real Estate’s portfolio posted a 1.99% return for the quarter placing it in the 35 percentile of the CAI Total Real Estate Database group for the quarter and in the 53 percentile for the last year.
- Real Estate’s portfolio underperformed the NFI-ODCE Value Weight Gr by 0.08% for the quarter and underperformed the NFI-ODCE Value Weight Gr for the year by 0.91%.

Performance vs CAI Total Real Estate Database (Net)

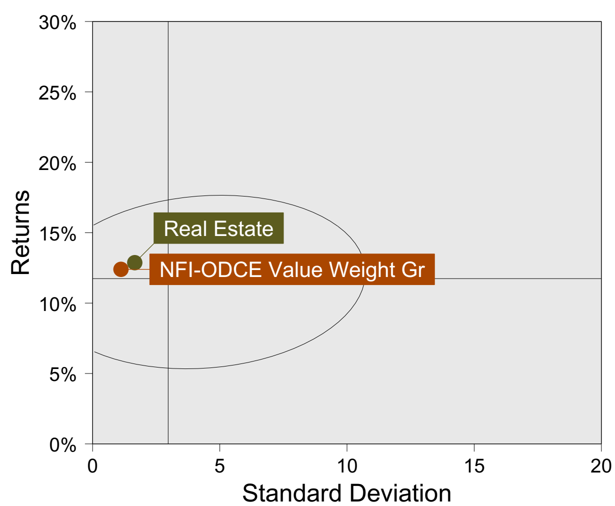


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
10th Percentile	3.06	16.94	15.88	15.54	6.63
25th Percentile	2.48	12.06	13.84	13.29	5.43
Median	1.62	9.34	11.64	11.74	4.58
75th Percentile	1.05	5.98	9.56	10.28	2.09
90th Percentile	0.28	(0.54)	5.97	7.09	(1.83)
Real Estate ●	1.99	9.17	11.86	12.87	5.58
NFI-ODCE Value Weight Gr ▲	2.07	10.08	12.45	12.40	6.02

Relative Return vs NFI-ODCE Value Weight Gr



CAI Total Real Estate Database (Net) Annualized Five Year Risk vs Return

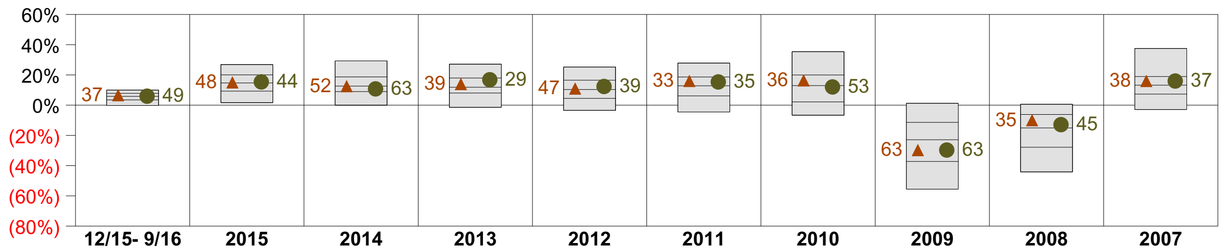


Real Estate
Return Analysis Summary

Return Analysis

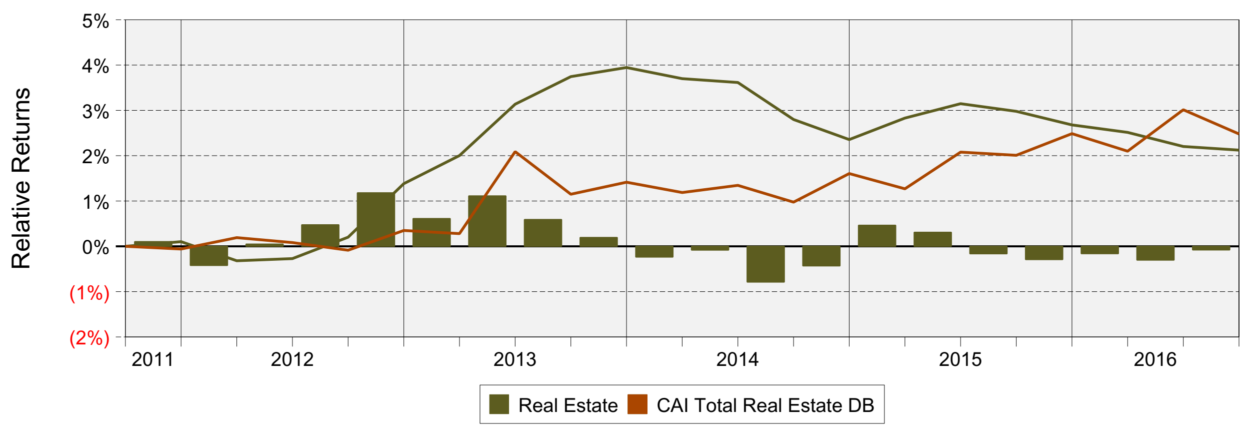
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate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

Performance vs CAI Total Real Estate Database (Net)

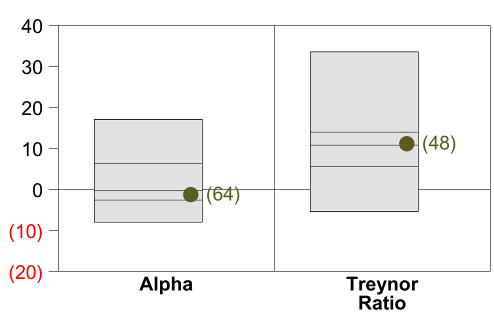


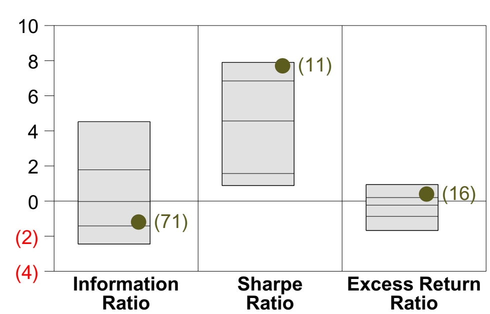
	12/15- 9/16	2015	2014	2013	2012	2011	2010	2009	2008	2007
10th Percentile	10.00	26.88	29.30	27.12	25.26	27.87	35.38	1.22	0.59	37.51
25th Percentile	7.83	20.05	18.70	17.94	16.52	18.63	19.97	(11.38)	(6.17)	18.95
Median	5.85	14.70	12.61	11.87	10.35	12.82	12.95	(22.89)	(15.06)	13.23
75th Percentile	3.48	9.28	8.99	8.04	4.50	6.13	2.17	(37.24)	(27.83)	7.32
90th Percentile	(0.20)	1.63	0.01	(1.44)	(3.45)	(4.52)	(6.64)	(55.57)	(44.17)	(2.89)
Real Estate ●	5.94	15.38	10.78	16.82	12.36	15.36	12.05	(29.69)	(12.89)	15.97
NFI-ODCE Value Weight Gross ▲	6.52	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 Total Real Estate Database (Net)
Five Years Ended September 30, 2016





	Alpha	Treynor Ratio
10th Percentile	17.07	33.57
25th Percentile	6.30	13.98
Median	(0.22)	10.81
75th Percentile	(2.61)	5.57
90th Percentile	(8.01)	(5.40)
Real Estate ●	(1.28)	11.14

	Information Ratio	Sharpe Ratio	Excess Return Ratio
10th Percentile	4.52	7.90	0.94
25th Percentile	1.78	6.84	0.20
Median	(0.02)	4.56	(0.23)
75th Percentile	(1.42)	1.57	(0.87)
90th Percentile	(2.45)	0.88	(1.68)
Real Estate ●	(1.19)	7.70	0.40

JP Morgan Strategic Property Fund
Period Ended September 30, 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

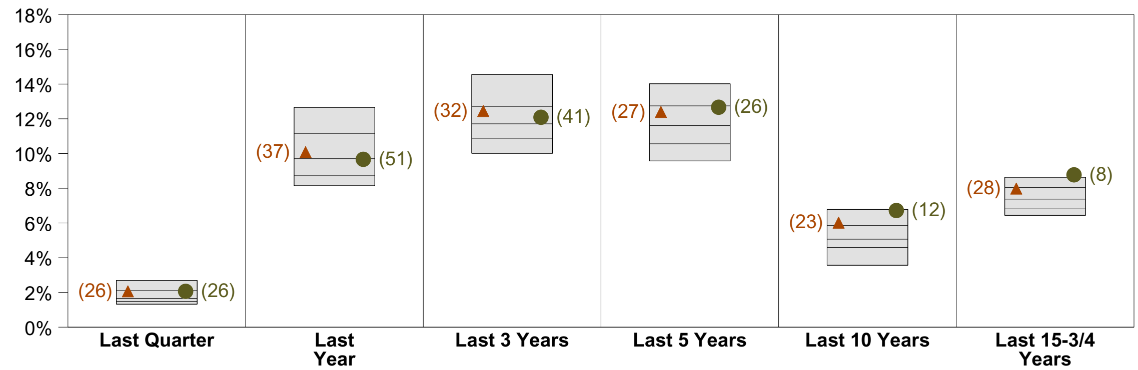
- JP Morgan Strategic Property Fund's portfolio posted a 2.06% return for the quarter placing it in the 26 percentile of the CAI Open End Core Commingled Real Estate group for the quarter and in the 51 percentile for the last year.
- JP Morgan Strategic Property Fund's portfolio underperformed the NFI-ODCE Value Weight Gross by 0.00% for the quarter and underperformed the NFI-ODCE Value Weight Gross for the year by 0.42%.

Quarterly Asset Growth

Beginning Market Value	$46,510,048
Net New Investment	$-114,263
Investment Gains/(Losses)	$957,378
Ending Market Value	$47,353,163

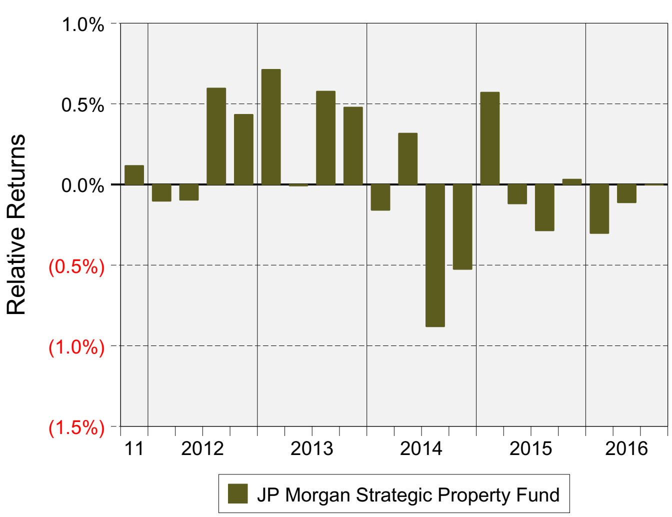
Percent Cash: 0.0%

Performance vs CAI Open End Core Commingled Real Estate (Net)

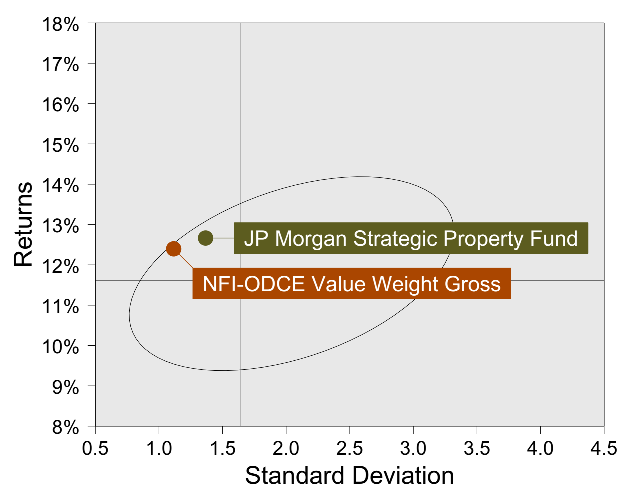


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years	Last 15-3/4 Years
10th Percentile	2.69	12.66	14.55	14.02	6.78	8.63
25th Percentile	2.11	11.16	12.71	12.75	5.85	8.05
Median	1.66	9.70	11.71	11.61	5.07	7.37
75th Percentile	1.49	8.72	10.88	10.56	4.59	6.81
90th Percentile	1.32	8.14	10.01	9.57	3.57	6.44
JP Morgan Strategic Property Fund ●	2.06	9.67	12.09	12.67	6.72	8.77
NFI-ODCE Value Weight Gross ▲	2.07	10.08	12.45	12.40	6.02	7.98

Relative Returns vs NFI-ODCE Value Weight Gross



CAI Open End Core Commingled Real Estate (Net) Annualized Five Year Risk vs Return

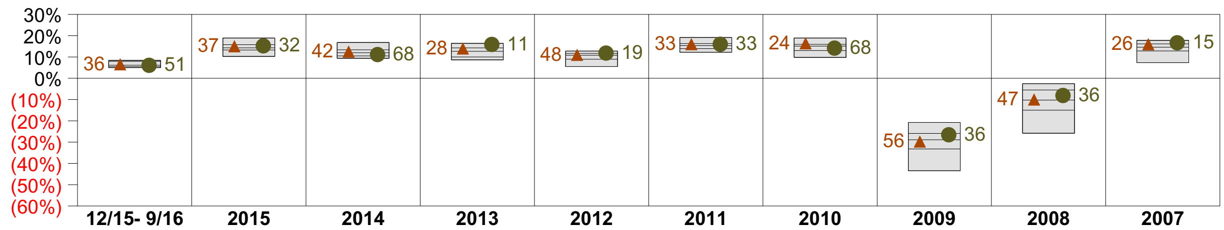


JP Morgan Strategic Property Fund
Return Analysis Summary

Return Analysis

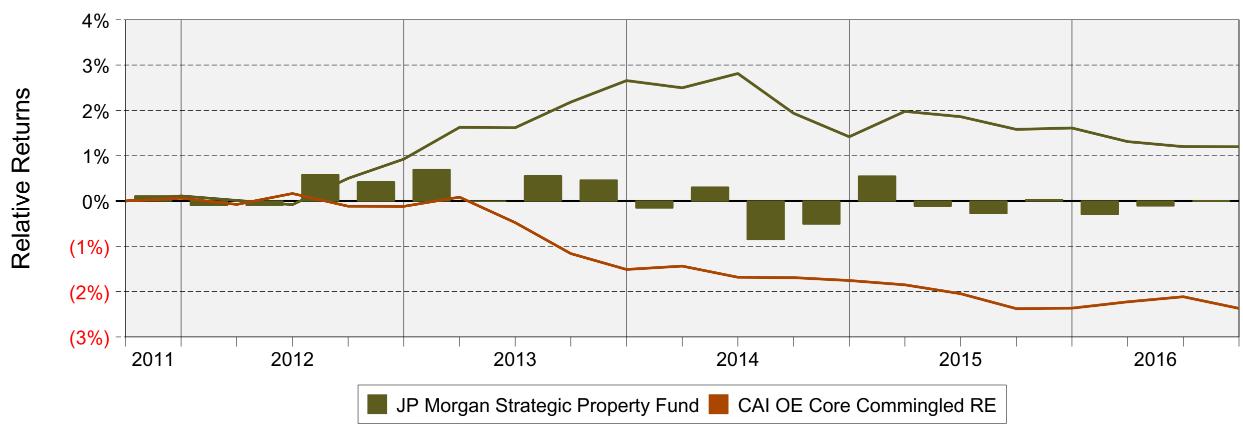
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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 Core Commingled Real Estate (Net)

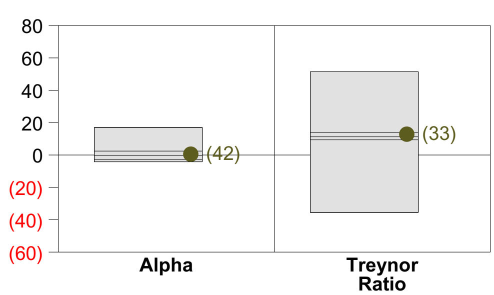


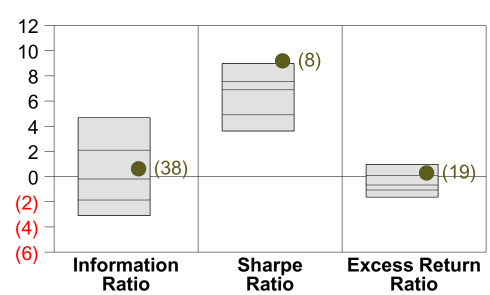
	12/15- 9/16	2015	2014	2013	2012	2011	2010	2009	2008	2007
10th Percentile	8.40	18.90	16.81	16.41	12.79	19.15	18.90	(20.77)	(2.54)	17.80
25th Percentile	7.94	15.77	13.36	14.28	11.67	16.29	15.94	(25.92)	(5.51)	16.15
Median	6.12	14.30	11.99	12.66	10.80	15.33	15.09	(28.89)	(10.25)	14.59
75th Percentile	5.43	13.27	10.52	10.02	8.95	13.91	13.02	(33.22)	(14.99)	12.84
90th Percentile	4.99	10.26	9.38	8.65	5.49	12.22	9.80	(43.44)	(25.83)	7.34
JP Morgan Strategic Property Fund ●	6.09	15.24	11.14	15.90	11.84	15.99	14.16	(26.53)	(8.09)	16.67
NFI-ODCE Value Weight Gross ▲	6.52	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 Core Commingled Real Estate (Net)
Five Years Ended September 30, 2016





	Alpha	Treynor Ratio
10th Percentile	17.01	51.45
25th Percentile	2.41	13.82
Median	(0.22)	11.25
75th Percentile	(2.76)	9.39
90th Percentile	(4.19)	(35.49)
JP Morgan Strategic Property Fund ●	0.53	12.87

	Information Ratio	Sharpe Ratio	Excess Return Ratio
10th Percentile	4.68	8.98	0.97
25th Percentile	2.10	7.56	0.10
Median	(0.19)	6.89	(0.67)
75th Percentile	(1.86)	4.91	(1.07)
90th Percentile	(3.10)	3.62	(1.63)
JP Morgan Strategic Property Fund ●	0.62	9.19	0.29

JP Morgan Income and Growth Fund
Period Ended September 30, 2016

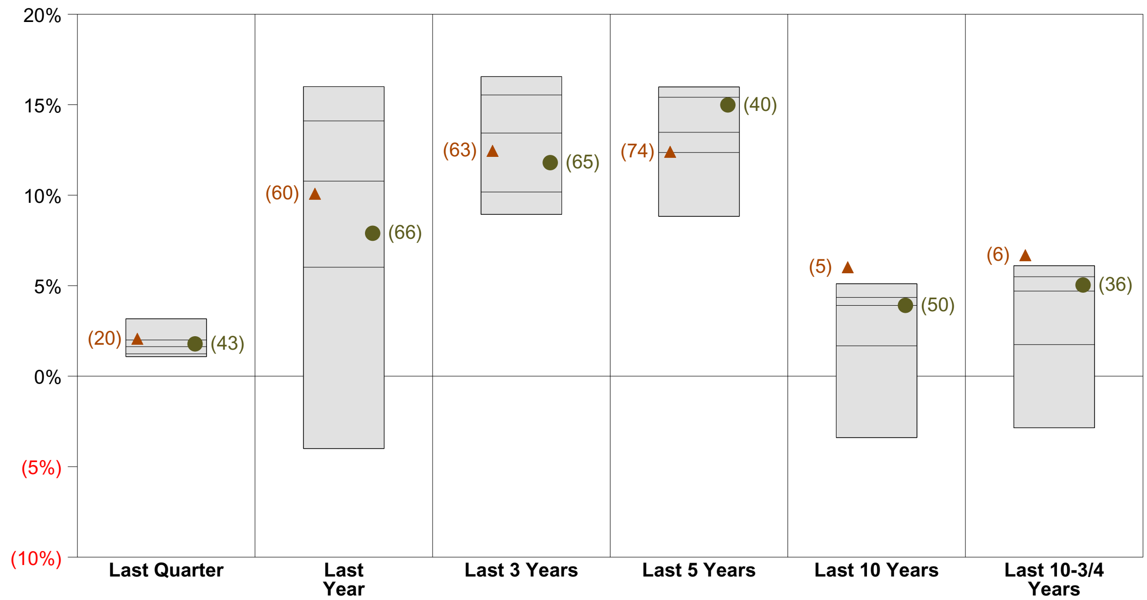
Investment Philosophy

The product was funded in the fourth quarter of 2005.

Quarterly Summary and Highlights

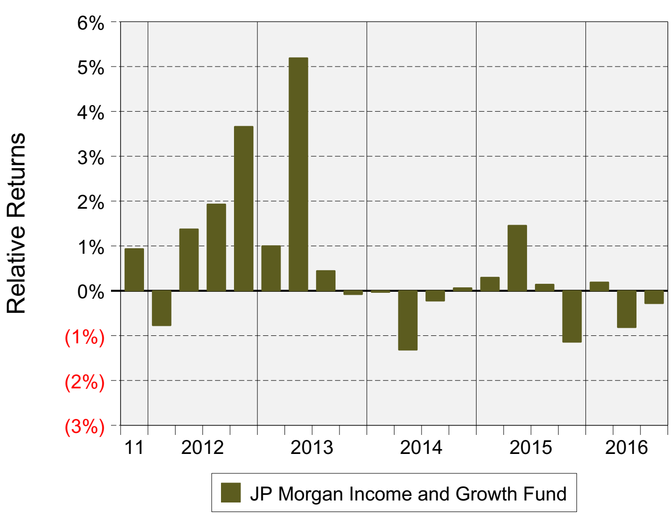
- JP Morgan Income and Growth Fund's portfolio posted a 1.78% return for the quarter placing it in the 43 percentile of the CAI Real Estate Val Added Open End Fds group for the quarter and in the 66 percentile for the last year.
- JP Morgan Income and Growth Fund's portfolio underperformed the NFI-ODCE Value Weight Gross by 0.28% for the quarter and underperformed the NFI-ODCE Value Weight Gross for the year by 2.18%.

Performance vs CAI Real Estate Val Added Open End Fds (Net)

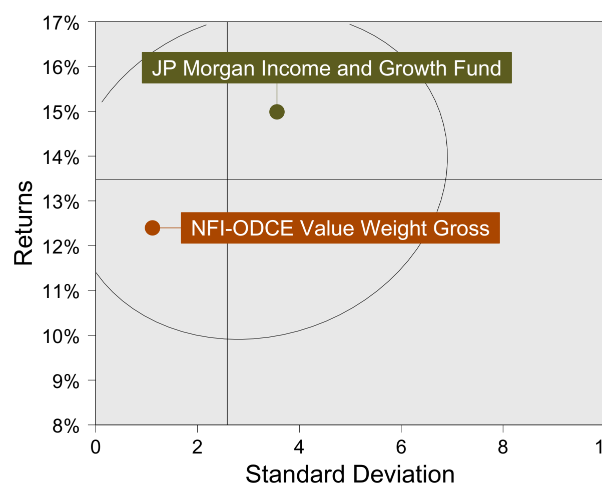


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years	Last 10-3/4 Years
10th Percentile	3.17	16.00	16.55	15.98	5.11	6.10
25th Percentile	2.00	14.10	15.54	15.41	4.35	5.49
Median	1.63	10.78	13.44	13.48	3.91	4.70
75th Percentile	1.24	6.02	10.18	12.36	1.68	1.74
90th Percentile	1.08	(4.00)	8.94	8.83	(3.40)	(2.85)
JP Morgan Income and Growth Fund ●	1.78	7.90	11.80	14.99	3.91	5.04
NFI-ODCE Value Weight Gross ▲	2.07	10.08	12.45	12.40	6.02	6.68

Relative Returns vs NFI-ODCE Value Weight Gross



CAI Real Estate Val Added Open End Fds (Net) Annualized Five Year Risk vs Return

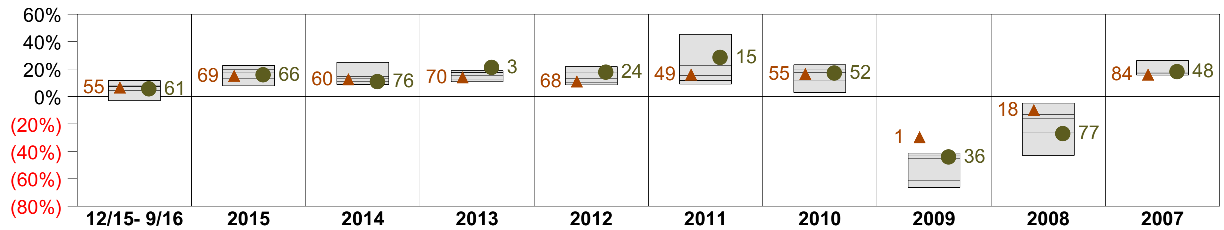


JPM Income and Growth Fund
Return Analysis Summary

Return Analysis

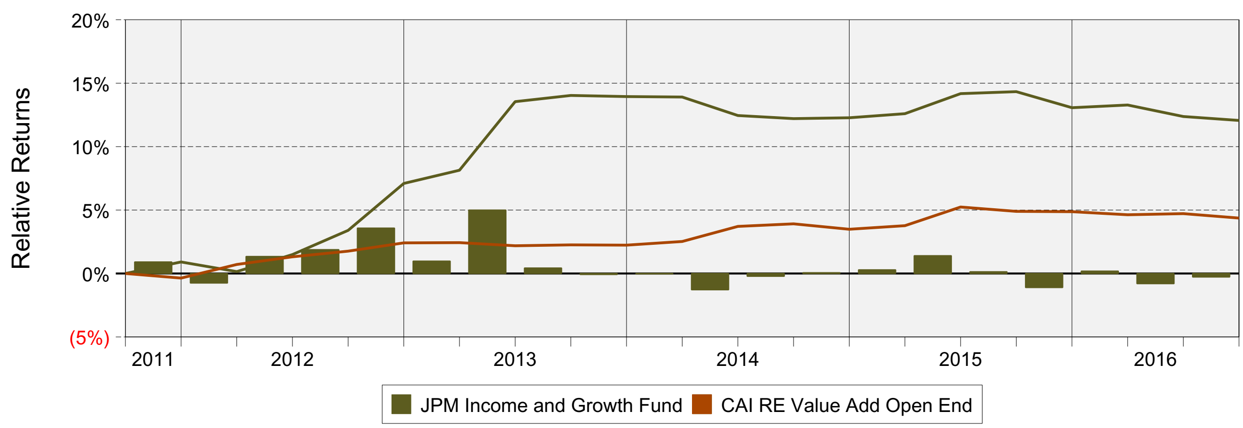
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate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

Performance vs CAI Real Estate Val Added Open End Fds (Net)

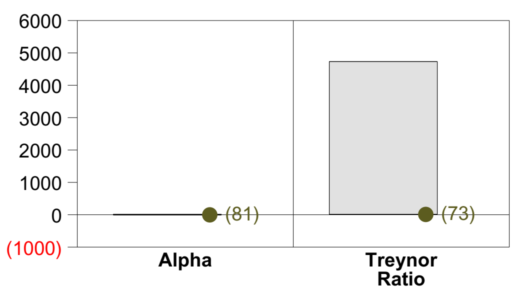


	12/15- 9/16	2015	2014	2013	2012	2011	2010	2009	2008	2007
10th Percentile	11.63	22.58	24.91	18.81	21.75	45.34	23.11	(41.24)	(4.81)	26.17
25th Percentile	8.30	19.83	14.68	17.45	17.17	22.42	20.00	(42.72)	(13.03)	25.97
Median	7.23	17.79	13.32	15.13	13.28	15.42	17.62	(45.40)	(16.25)	17.80
75th Percentile	4.49	12.91	11.07	12.70	10.39	11.66	11.32	(61.06)	(25.95)	16.47
90th Percentile	(3.10)	7.73	8.77	10.70	8.43	9.06	2.94	(66.35)	(42.95)	15.61
JPM Income and Growth Fund ●	5.57	15.83	10.85	21.23	17.74	28.52	17.11	(44.09)	(27.07)	18.11
NFI-ODCE Value Weight Gross ▲	6.52	15.02	12.50	13.94	10.94	15.99	16.36	(29.76)	(10.01)	15.97

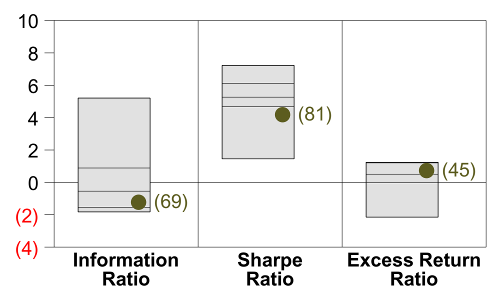
Cumulative and Quarterly Relative Return vs NFI-ODCE Value Weight Gross



Risk Adjusted Return Measures vs NFI-ODCE Value Weight Gross
Rankings Against CAI Real Estate Val Added Open End Fds (Net)
Five Years Ended September 30, 2016



	Alpha	Treynor Ratio
10th Percentile	15.61	4731.93
25th Percentile	2.27	16.01
Median	(0.74)	11.56
75th Percentile	(3.48)	9.50
90th Percentile	(6.47)	7.97
JPM Income and Growth Fund ●	(3.91)	9.65



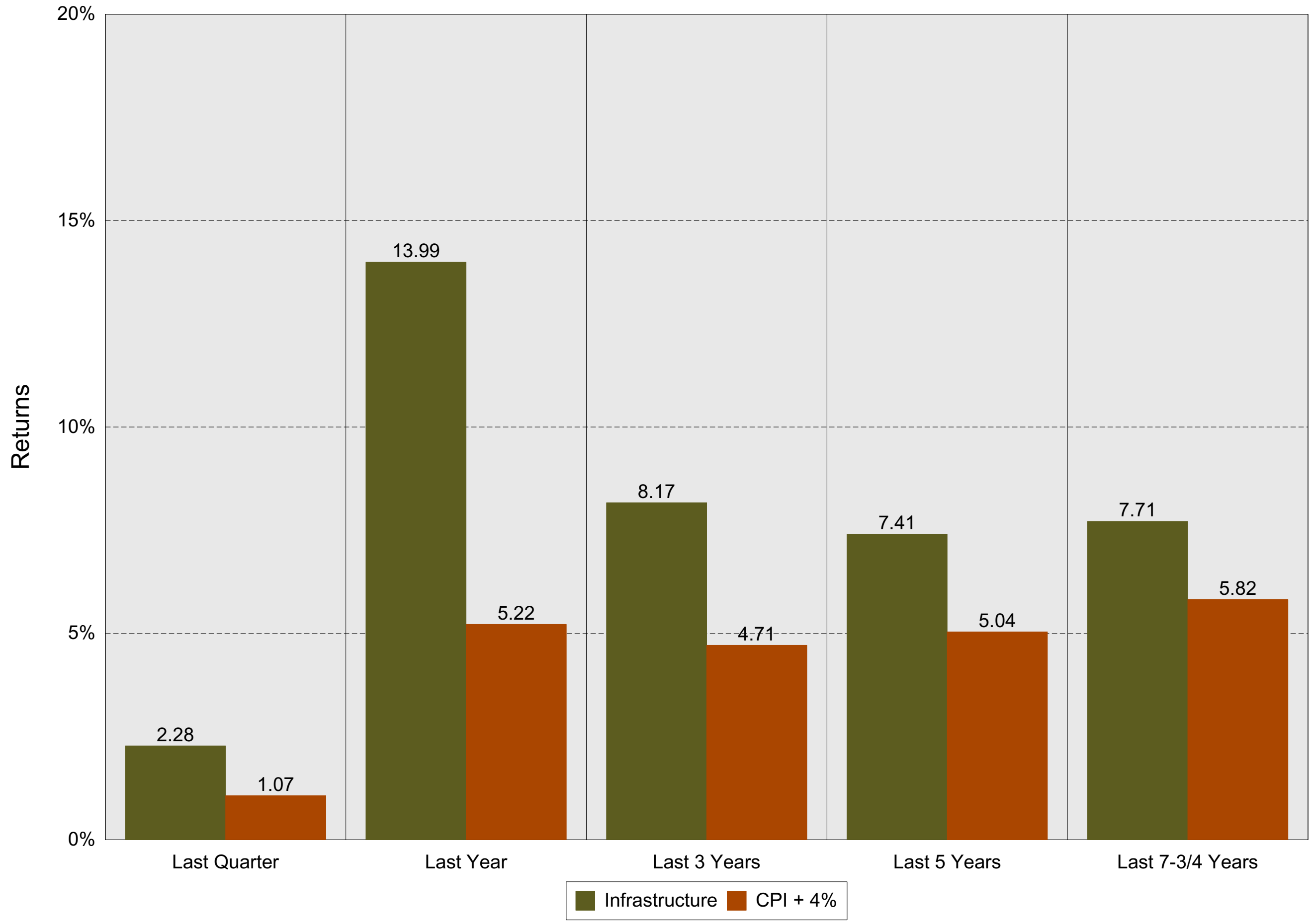
	Information Ratio	Sharpe Ratio	Excess Return Ratio
10th Percentile	5.21	7.23	1.25
25th Percentile	0.89	6.12	1.20
Median	(0.54)	5.27	0.50
75th Percentile	(1.54)	4.68	(0.02)
90th Percentile	(1.82)	1.45	(2.15)
JPM Income and Growth Fund ●	(1.23)	4.18	0.73

Infrastructure

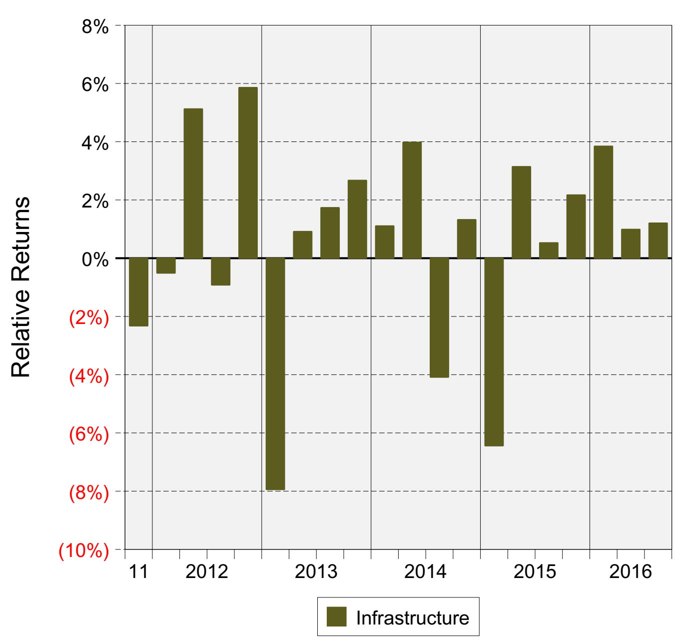
Infrastructure
Period Ended September 30, 2016

Quarterly Summary and Highlights

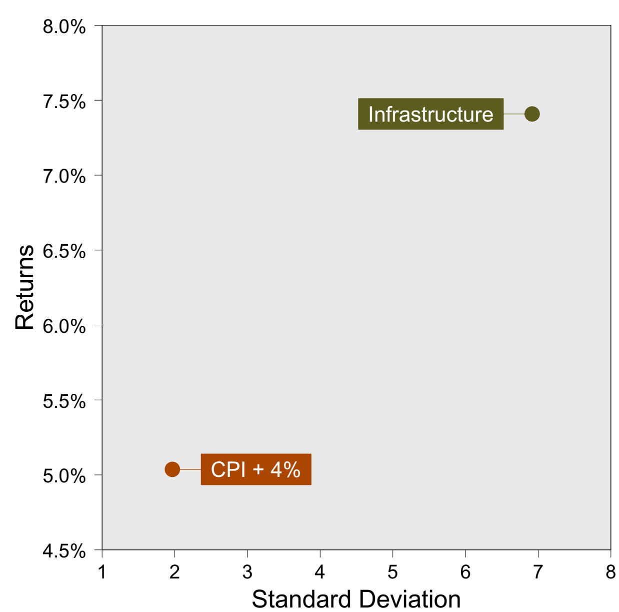
- Infrastructure's portfolio outperformed the CPI + 4% by 1.21% for the quarter and outperformed the CPI + 4% for the year by 8.77%.



Relative Return vs CPI + 4%



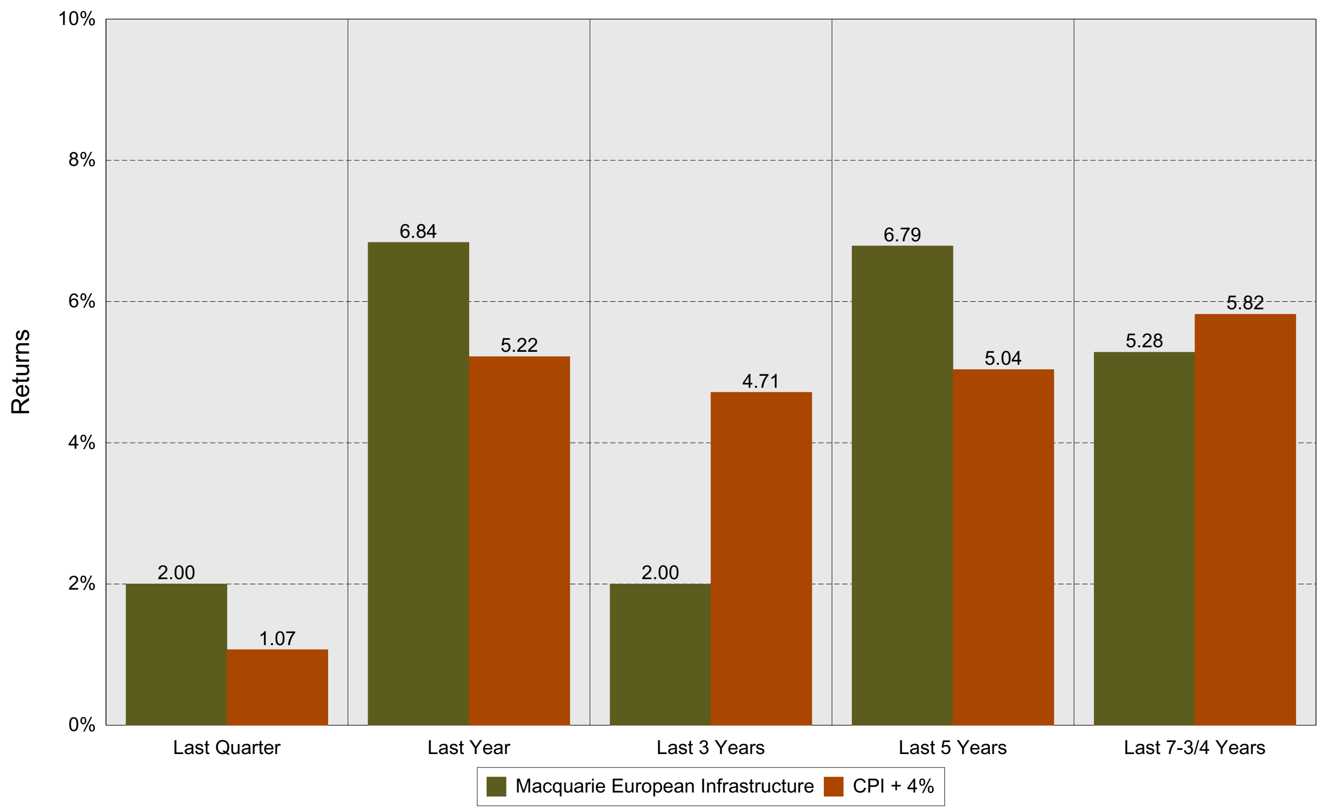
Annualized Five Year Risk vs Return



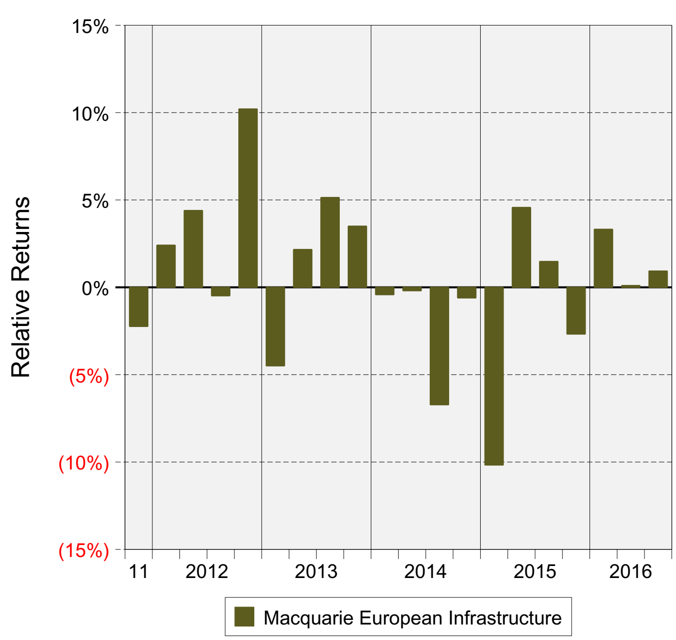
Macquarie European Infrastructure
Period Ended September 30, 2016

Investment Philosophy
The product was funded in the fourth quarter of 2008.

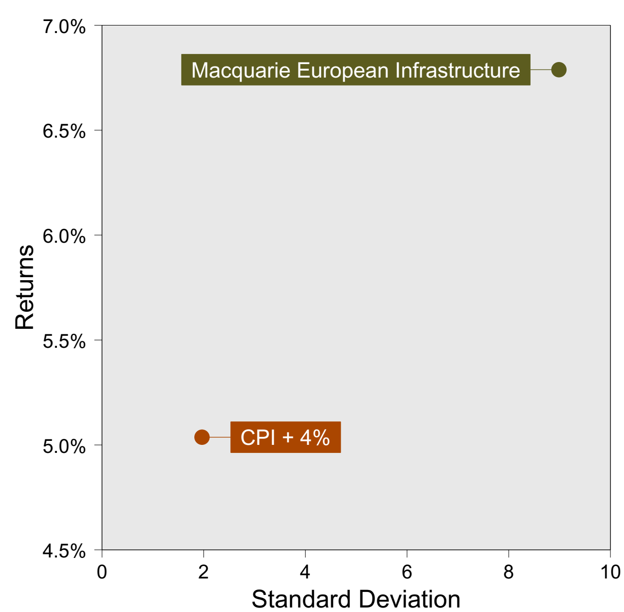
Quarterly Summary and Highlights
- Macquarie European Infrastructure's portfolio outperformed the CPI + 4% by 0.93% for the quarter and outperformed the CPI + 4% for the year by 1.62%.



Relative Return vs CPI + 4%



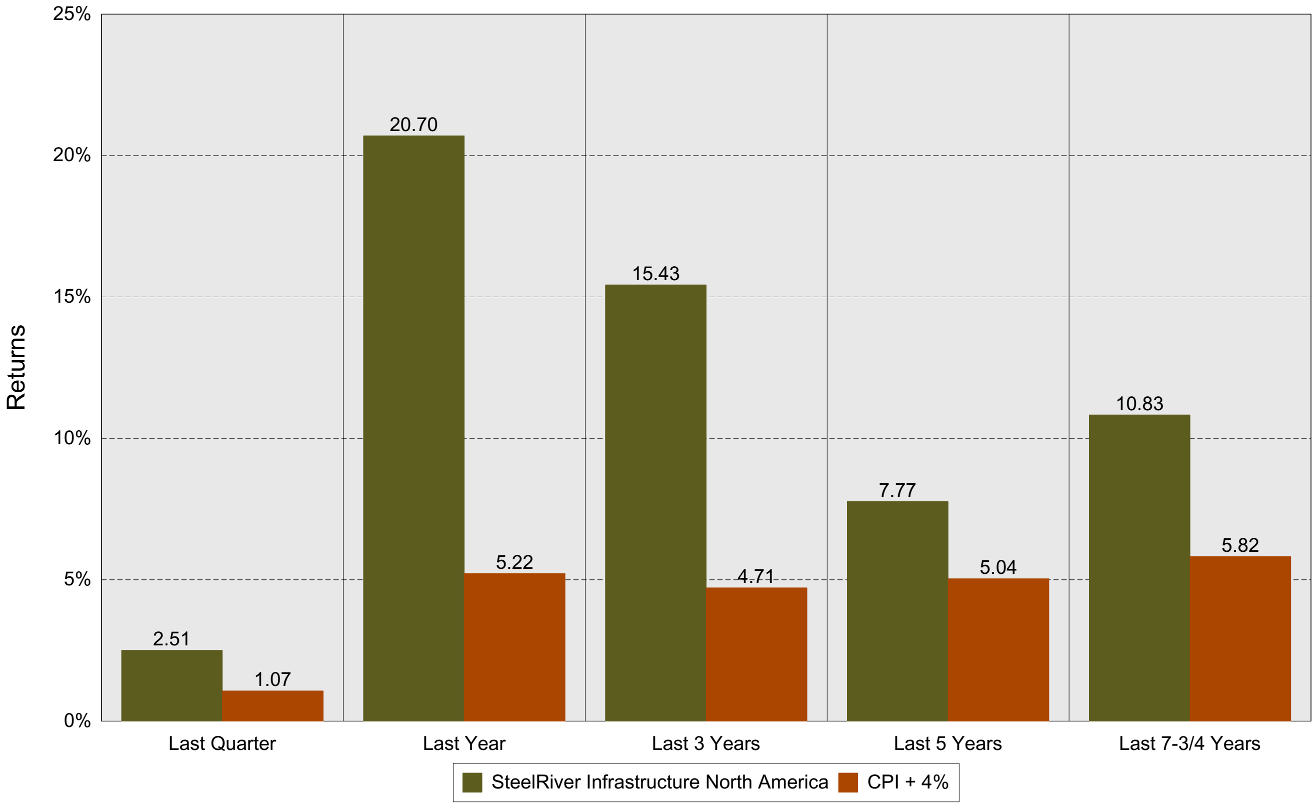
Annualized Five Year Risk vs Return



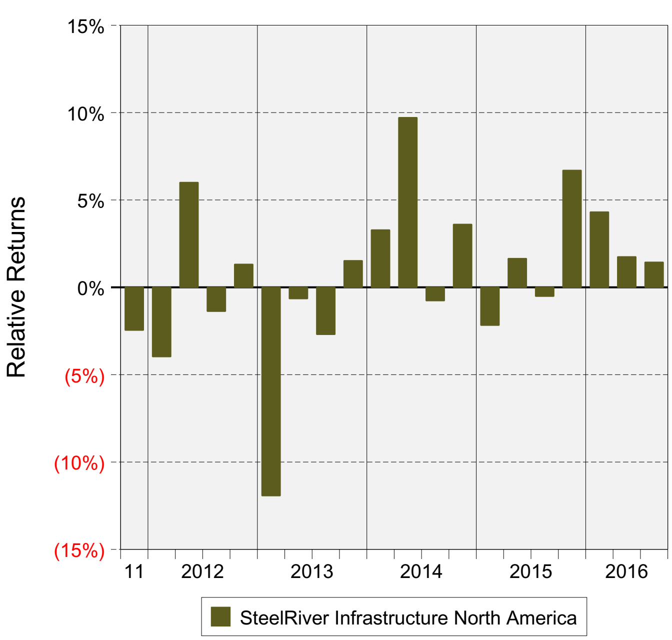
SteelRiver Infrastructure North America
Period Ended September 30, 2016

Investment Philosophy
The product was funded in the fourth quarter of 2008.

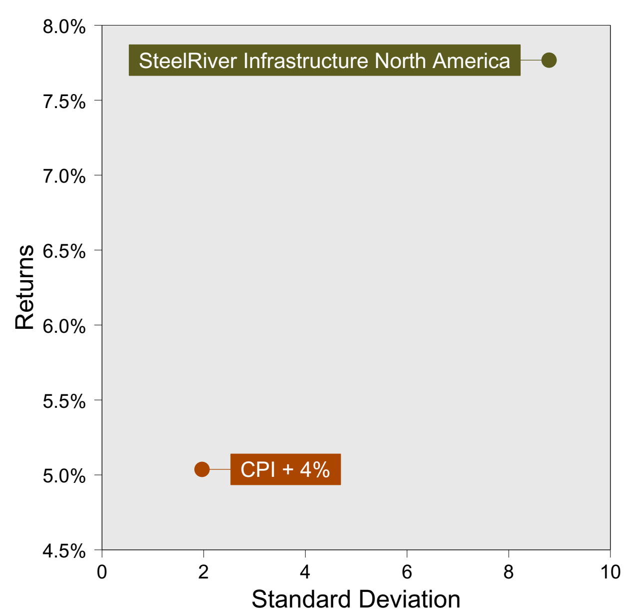
Quarterly Summary and Highlights
- SteelRiver Infrastructure North America's portfolio outperformed the CPI + 4% by 1.44% for the quarter and outperformed the CPI + 4% for the year by 15.48%.



Relative Return vs CPI + 4%



Annualized Five Year Risk vs Return



Callan

CALLAN INSTITUTE

3rd Quarter 2016

Education

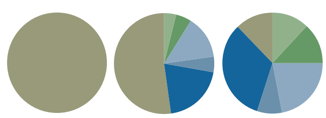
Research and Educational Programs

The Callan 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 to see all of our publications, or for more information contact Anna West at 415.974.5060 / institute@callan.com.

New Research from Callan's Experts

Built to Last: Strategic Guidance for Effective Investment Committees | Callan offers our high-level strategic advice for investment committees, touching on membership, investment policy statements, review processes, and fiduciary training and ongoing education.

10 Tips From Successful Investment Committees | Callan Chairman and CEO Ron Peyton and Consultant Brady O'Connell, CFA, CAIA, offer 10 tips based on their work with successful investment committees.

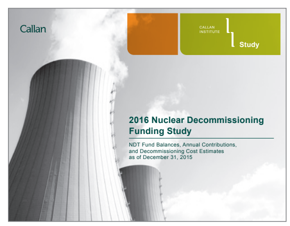


Risky Business | Callan research that found investors over the last 20 years have had to take on three times as much risk to earn the same return electrified the institutional investing community. We interviewed Jay Kloepfer and Julia Moriarty, CFA, about how the research was done and its implications.

Managing DC Plan Investments: A Fiduciary Handbook Lori Lucas, CFA, covers responsibilities for DC plan fiduciaries, including investment structure, investment policy statements, QDIA oversight, and manager performance.

Ethics 101 for Investment Professionals | Callan Chairman and CEO Ron Peyton outlines his thoughts on how to create, instill, and maintain ethical standards for investment professionals. His advice: the right culture creates the best environment to maintain these standards. Firms should develop ethical guidelines that are based on principles, not rules, since the former offer better guidance for employees across the organization.

2016 Nuclear Decommissioning Funding Study | A report



by Julia Moriarty, CFA, covers 27 investor-owned and 27 public power utilities with an ownership interest in the 99 operating nuclear reactors (and 10 of the non-operating reactors) in the U.S.

How Green Is Your Bond? | Callan Analyst Rufash Lama tackles the area of green bonds, which are fixed income instruments issued specifically to support or finance environmental initiatives.

Periodicals

Real Assets Reporter, Summer/Fall 2016 | This edition explores if the boom in commercial real estate may be ending.

Private Markets Trends, Summer 2016 | Author Gary Robertson discusses the recent surge in private equity fundraising, an indication that some investors are establishing a defensive hedge as the five-year bull market pulls in its horns.

DC Observer, 2nd Quarter 2016 | Callan's Defined Contribution Practice Team outlines a framework to evaluate DC transaction fees. We explain how common they are, what they typically cost, and how they are generally paid.

Hedge Fund Monitor, 2nd Quarter 2016 | Jim McKee, director of Callan's Hedge Fund Research group, discusses the appeal of momentum-based investing strategies in the current climate of considerable economic uncertainty.

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/

Mark your calendars 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 Gerraty: 415.274.3093 / gerraty@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, April 18-19, 2017
San Francisco, July 25-26, 2017
Chicago, October 24-25, 2017

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

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
3,500	Total attendees of the "Callan College" since 1994	1980	Year the Callan 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

Callan

Quarterly List as of September 30, 2016

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
1607 Capital Partners, LLC
Aberdeen Asset Management PLC
Acadian Asset Management LLC
ACR – Alpine Capital Research
AEGON USA Investment Management
AEW Capital Management
Affiliated Managers Group, Inc.
AllianceBernstein
Allianz Global Investors
Allianz Life Insurance Company of North America
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
ASB Capital Management Inc.
Ativo Capital Management
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

Manager Name
Brandes Investment Partners, L.P.
Brandywine Global Investment Management, LLC
Brown Brothers Harriman & Company
Brown Investment Advisory & Trust Company
Cambiar Investors, LLC
Capital Group
CastleArk Management, LLC
Causeway Capital Management
Chartwell Investment Partners
ClearBridge Investments, LLC
Cohen & Steers Capital Management, Inc.
Columbia Threadneedle Investments
Columbia Wanger Asset Management
Columbus Circle Investors
Conestoga Capital Advisors
Corbin Capital Partners, L.P.
Cornerstone Capital Management
Cramer Rosenthal McGlynn, LLC
Credit Suisse Asset Management
Crestline Investors, Inc.
D.E. 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 Wealth Management Division
Fisher Investments

Manager Name
Fort Washington Investment Advisors, Inc.
Franklin Templeton Institutional
Fred Alger Management, Inc.
Fuller & Thaler Asset Management, Inc.
GAM (USA) Inc.
GE Asset Management
GMO
Goldman Sachs Asset Management
Grand-Jean Capital Management
Guggenheim Investments
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
Impax Asset Management Limited
Income Research + Management, Inc.
Insight Investment Management Limited
Institutional Capital LLC
INTECH Investment Management, LLC
Invesco
Investec Asset Management
Investment Counselors of Maryland, LLC
Janus Capital Management, LLC
Jarislowsky Fraser Global Investment Management
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.
McDonnell Investment Management, LLC
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 Investment Management (fka Newton Capital Management)
Nikko Asset Management Co., Ltd.
Northern Trust Asset Management
Nuveen Investments, Inc.
OFI Global Asset Management
Old Mutual Asset Management
Opus Capital Management Inc.

Manager Name
O'Shaughnessy Asset Management, LLC
Pacific Alternative Asset Management Co.
Pacific Current Group
Pacific Investment Management Company
Parametric Portfolio Associates
P/E Investments
Peregrine Capital Management, Inc.
PGIM
PineBridge Investments
Pinnacle Asset Management L.P.
Pioneer Investments
PNC Capital Advisors, LLC
Principal Global Investors
Private Advisors, LLC
Putnam Investments, LLC
QMA (Quantitative Management Associates)
RBC Global Asset Management
Regions Financial Corporation
RidgeWorth Capital Management, Inc.
Riverbridge Partners LLC
Rockefeller & Co., Inc.
Rothschild Asset Management, Inc.
Russell Investments
Santander Global Facilities
Schroder Investment Management North America Inc.
Scout Investments
SEI Investments
Shenkman Capital Management, Inc.
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 Financial
Voya Investment Management (fka ING)
Waddell & Reed Asset Management Group
WCM Investment Management
Wasatch Advisors, Inc.
WEDGE Capital Management
Wellington Management Company, LLP
Wells Capital Management
Western Asset Management Company
William Blair & Company

T. Rowe Price®
INVEST WITH CONFIDENCE

PRICE POINT
November 2016

Timely intelligence and analysis for our clients.

2016 U.S. Election and the Markets

UNCERTAIN INVESTMENT OUTLOOK COMES WITH PRESIDENT-ELECT TRUMP

KEY POINTS

- With the surprising election of Donald J. Trump as president, T. Rowe Price investment managers are braced for an uncertain investment environment.
- During his campaign, Mr. Trump offered sweeping proposals that would represent significant changes in U.S. fiscal, trade, immigration, and tax policies.
- The firm's experts say that his plans are unlikely to stimulate jobs and economic growth while reducing deficit spending as promised.
- They see the next president as a wild card that may initially create investor fears and a downturn in global markets.
- In the long term, however, investors may settle into managing the shock given the U.S. system of checks and balances.

With the surprising election of Donald J. Trump as the 45th president of the United States, T. Rowe Price investment managers are braced for a highly uncertain investment environment.

During his campaign for the presidency, Mr. Trump offered sweeping proposals that would represent abrupt, significant changes in U.S. fiscal, trade, immigration, and tax policies. If carried out, they could have a potentially strong impact on U.S. and international economies and investments in a wide range of global equity and fixed income sectors.

Several major caveats are important. Mr. Trump has no track record governing. His campaign proposals at times seemed vague and inconsistent, even contradictory. Moreover, there historically have been big gaps between presidents' campaign promises and ultimate actions. Finally and most importantly, investment returns can be affected by many other factors: central banks' actions, commodity price movements, and corporate fundamentals, among them.

The unpredictability of the impending Trump presidency likely creates investor apprehensions that could negatively impact global financial markets, T. Rowe Price economists and investment professionals say.

CAMPAIGN PROMISES

That said, President-elect Trump has proposed big individual and corporate tax cuts without sufficient offsets from greater revenue—resulting in projections of large deficits that, he predicts, will be made up by faster economic growth.

He has proposed a sharp pivot toward protectionism, by renegotiating the North American Free Trade Agreement (NAFTA), not signing the Trans-Pacific Partnership, declaring China a currency manipulator, and even possibly withdrawing from the World Trade Organization. He also has vowed to curtail immigration to the United States and deport millions of illegal immigrants.

Altogether, Mr. Trump has claimed, these and his other proposals would create 25 million new jobs over the next decade, reduce the annual federal deficit, and raise the U.S. gross domestic product annual growth rate to 3.5% from around 2.0% currently.

However, the consensus among T. Rowe Price economic and investment experts is that the very opposite outcomes may occur if the new president is able to carry out these campaign proposals.

Mr. Trump's plans could drive up annual U.S. budget deficits and its long-term debt and significantly diminish international trade, with negative economic effects here and abroad. They also could slow U.S. job growth, lower the U.S. economic growth rate, and put upward pressure on U.S. interest rates. Ultimately, they threaten to undermine global faith in the independence of the Federal Reserve and the geopolitical standing of the United States.

The unpredictability of the impending Trump presidency likely creates investor apprehensions that could negatively impact global financial markets, T. Rowe Price economists and investment professionals say. "Overall, financial markets may not react well to the outcome of this election," says Alan Levenson, T. Rowe Price chief U.S. economist. "The risk to U.S. growth in the near term is to the downside."

Adds Jeff Rottinghaus, manager of the U.S. Large-Cap Core Equity Strategy: "Markets could go down materially because Trump is such a wild card."

In the short term, says Andrew McCormick, head of the U.S. taxable bond team, the election outcome is a big, surprising event that the bond market had not fully priced in. "Initially," he says, "U.S. interest rates may go lower as investors flee riskier assets, and credit spreads (the yield premium of lower-rated bonds over Treasuries) may widen."

Mr. Trump's election comes at a critical time when U.S. fiscal policies have become more important as the Fed moves away from easing, European banks remain very fragile, and some nations are jockeying for geopolitical positioning versus the United States, says Quentin Fitzsimmons, a T. Rowe Price global bond manager. "Now the world's only superpower is seeing a big change," he says. "That's very concerning, and it could raise volatility."

“The institutional checks and balances on the U.S. president—the president is not all powerful—may mean that global investors ultimately decide to keep their heads down, not overreact, and just try to ride out the next four years.”

—Quentin Fitzsimmons, T. Rowe Price global bond manager

While cautioning against making too much of any parallel to the United Kingdom’s anti-globalization vote last summer to leave the European Union, Mr. Fitzsimmons notes that “the initial reaction to Brexit was extremely bumpy, but then things calmed down, at least for a while. Similarly, with a Trump presidency, it may be that investors are headed for a prolonged period of shock management.

“The institutional checks and balances on the U.S. president—the president is not all powerful—may mean that global investors ultimately decide to keep their heads down, not overreact, and just try to ride out the next four years,” he says.

PROTECTIONISM

The longer-term risk with Mr. Trump’s election, Mr. Fitzsimmons says, is that “apprehension over his protectionist agenda could lead to reduced global growth expectations—because the United States could end up with an adverse mix of slower growth and marginally higher inflation.”

Mr. Levenson says he’s particularly concerned about the president-elect’s protectionism because Mr. Trump has fairly extensive unilateral executive authority to take action against trade partners.

“Trump’s trade threats—to Mexico and China—may be no more than opening ploys to secure concessions,” Mr. Levenson says. “But the risks of miscalculation are high and could lead to very damaging trade wars—which could have a negative impact across the U.S. economy, not just those areas directly linked to international trade. I am not aware of any country in history that ever isolated its way to prosperity.”

Demanding renegotiation of NAFTA, Mr. Levenson adds, “would be particularly damaging—for a president to take such unusual actions with countries [Mexico and Canada] that on the whole are good neighbors with whom we have good relations.”

Also potentially negative for the U.S. economy is Mr. Trump’s promised immigration crackdown, Mr. Levenson says, noting that economic growth comes from productivity growth and growth in the labor force. “If we slow immigration of working-age adults, there’s not enough growth in the rest of the U.S. workforce or the overall productivity rate to grow the economy very fast. Most of our net population growth comes from immigration,” he says.

Some of Mr. Trump’s campaign proposals—particularly corporate tax cuts, looser regulations, and increased federal outlays for defense and infrastructure—“could be positive, a marginal fiscal stimulus for the U.S. economy in the short term,” Mr. Levenson says. “But that could lead to bigger deficits than otherwise and potentially higher interest rates in the absence of economic strength.”

IMPLICATIONS FOR EQUITIES

While Mr. Trump’s election likely could create periods of market volatility, some T. Rowe Price managers say his plans could be relatively favorable for stocks in certain highly regulated sectors, such as health care, energy, financials, and industrials. Here’s a brief summary:

Health care: Given the sector’s concerns about drug pricing and regulatory pressures if Hillary Clinton had been elected, Mr. Trump’s vow to repeal the Affordable Care Act (ACA) could end up being “modestly positive” for health care stocks, says Ziad Bakri, manager of the Health Sciences Strategy.

While the president-elect has talked about allowing importation of foreign-sourced drugs and permitting Medicare to negotiate drug prices, “his election overall is perceived as good for drug stocks,” he says, adding that some of these companies also would benefit from a foreign profits repatriation deal.

More emphasis on free-market health plans under Mr. Trump likely could aid managed care firms, which have been losing money under the ACA, but could hurt hospitals, which have benefited from greater usage by previously uninsured ACA patients.

Energy: Mr. Trump has promised an “energy revolution.” And his anti-regulation stance, his vow to expand energy production including revitalizing the coal industry, and his opposition to the Paris climate agreement and other steps to limit climate change all could be favorable for the energy sector, managers say.

“In a vacuum, more energy production is a good thing—more jobs, cheaper oil, cheaper gas,” Mr. Rottinghaus says. “Less regulation could help energy investments because it could lower companies’ costs to pull resources out of the ground.”

Financials: If the market initially sells off with Mr. Trump’s election, financial services stocks are unlikely to rise but the sector may do relatively better than others, says Gabriel Solomon, manager of the Financial Services Strategy.

In the intermediate term, the president-elect’s vow to repeal Dodd-Frank regulations might be positive for some financials if enough safeguards remain in place to manage systemic risks, Mr. Solomon says. “But a blanket repeal of Dodd-Frank would not be positive because some of the regulations are good for managing the risks that led to the 2008–2009 financial crisis,” he says.

Mr. Trump’s promise to then reinstate Glass-Steagall legislation also might be positive for some of the big banks that would have to break up ties between their retail and investment banking functions. “If you take some banks apart, the sum of the parts may be worth more than the current whole,” Mr. Solomon says.

But long term, he says, Mr. Trump’s “deficit spending proposals, in the absence of economic growth, could lead to higher interest rates and inflation that could create structural problems similar to the 1970s, which would not be good for financials.”

Industrials: Peter Bates, manager of the Global Industrials Strategy, says two of Mr. Trump’s plans—lowering corporate taxes and loosening federal regulations—could bring back some U.S. manufacturing and jobs. Renegotiating NAFTA and erecting trade barriers—short of triggering destructive trade wars—would be less significant for U.S. manufacturers, he says.

“Industrials are focused on building products the world will consume as cheaply as possible,” Mr. Bates says. “Companies have made significant investments in Mexico. With higher tariffs, more stuff may be made in America on the margin, but companies are not going to shift away suddenly from Mexico. Their higher costs from any tariffs would just get passed on as inflation to consumers. What happens in the long term for industrials depends on relative cost structures, and that’s not just tariffs and taxes.”

Also, campaign promises to raise defense and infrastructure spending are “unlikely to drive a material impact” on the outlook for industrials because the additional spending could be merely incremental to what already is budgeted, Mr. Bates says.

Technology: Mr. Trump’s stated immigration and trade policies generally would hurt the U.S. technology sector, says Josh Spencer, manager of the Global Technology Equity Strategy. Technology is one of the most globally competitive U.S. sectors and relies on an influx of highly skilled talent from around the world and global supply and distribution chains.

Lower taxes, particularly on repatriated overseas profits, would be a positive for global technology firms that have billions of dollars parked abroad. “But if you believe what Trump has said, his election overall may not be a good scenario for the tech sector,” Mr. Spencer says.

Nonetheless, three inexorable trends essentially determine the future of technology stocks, he says: the growth of cloud computing, disruption of traditional industries due to the Internet’s increasing pervasiveness, and technologies pushing into new end markets, such as self-driving cars. “Trump’s election does not change these trends,” Mr. Spencer says.

> “The Fed’s credibility is going to be under pressure, and that’s an international story, not just a national story.”
>
> —Quentin Fitzsimmons, T. Rowe Price global bond manager.

FIXED INCOME

While U.S. short-term rates may go lower initially as investors flock to the relative safe haven of U.S. Treasuries, Mr. McCormick says, “There could be pressure for rates to go higher as investors digest the deficit spending pushed by Mr. Trump.”

“You can expect to see more volatility in bonds, but the market is likely to react in an up-and-down, saw-tooth pattern. If U.S. rates go higher, overseas buying could come in and limit rate rises,” he says.

Mr. Fitzsimmons agrees, adding: “Bond markets globally are likely to see upward pressure on yields over the long term, with a steepening of the yield curve. U.S. protectionism would be very disruptive to investment flows and planning.

“We also should take into account potential risks to emerging markets and how they will behave, starting with Mexico, because of the impact of his macro policies on inflation, trade, capital flows, general confidence, and a slower growth trajectory,” he says.

Greater market and geopolitical volatility could induce central banks, including the Federal Reserve, to at least temporarily stall on their path toward tightening, Mr. Fitzsimmons says. “When faced with volatility,” he says, “central banks tend to kick the ball further into the long grass—so they may end and maybe deepen their easing cycles.”

The pressure would be particularly great for Fed Chair Janet Yellen, whom Mr. Trump has already threatened to replace. “The Fed’s credibility is going to be under pressure,” he says, “and that’s an international story, not just a national story.”

INVEST WITH CONFIDENCE®

T. Rowe Price focuses on delivering investment management excellence that investors can rely on—now and over the long term.

To learn more, please visit troweprice.com.

FYI
Grant

THE BOND BUYER
Tuesday, October 11, 2016 | as of 10:38 AM ET

Budget & Finance

Moody's: States' Adjusted Net Pension Liabilities Soaring

By Evan Fallor
October 7, 2016

WASHINGTON – The adjusted net pension liabilities of states totaled $1.25 trillion, or 119% of their revenue, in fiscal 2015 and were expected to grow by $50 billion at the beginning of this fiscal year, according to a report by Moody's Investors Service.

In "Medians – Low Returns, Weak Contributions Drive Growth of State Pension Liabilities," released Friday by Moody's, analysts attributed the increase in part to two factors. Pension contributions fell short in half of the states and the median return for pension plans plummeted to well below the average assumed investment return.

X "Rising pension liabilities loom as a growing problem for many U.S. state governments as a result of states' insufficient contributions to pension plans, underperformance of invested assets and low interest rates among other factors," the credit analysts said in the report.

Moody's expected states' adjusted net pension liabilities (ANPL) to grow "dramatically" to $1.75 trillion by the beginning of fiscal 2017, on Oct. 1, because of projected weak investment returns in fiscal 2016 as well as interest rate hikes. The $1.25 trillion figure represents a significant increase from the under $1 trillion in total pension liabilities five years ago, the rating agency said.

The public pension funds' median return was 3.2% for the period ending June 2015 and 0.52% for the period ending June 2016, which Moody's said was "far below" the median target return of 7.5%.

"The median return for public pension plans in FY 2016 was 0.52% compared to an average assumed investment return of 7.5%," said Moody's vice president and senior credit officer Marcia Van Wagner, an author of the report. "We project that aggregate state ANPL will grow to $1.75 trillion in FY 2017 audits."

The fiscal 2015 numbers are the first to be based on compliance with the Government Accounting Standards Board's (GASB) Statement No. 68, the rules issued in June 2012 to because of the GASB standards.

Because of the adoption of GASB 68, most state pension data is reported with a six-to-twelve month lag and reflects data for 2014, according to Moody's analysts. Only 20 of 222 pension plans reported liabilities based on 2015 measurement dates.

The report also introduced a new "Tread Water" benchmark, which measures whether pension liabilities rose, fell or stayed the same -- "treaded water" -- during a fiscal year. The benchmark is based on whether each state's annual pension contribution covered both its service costs plus interest on the existing pension liability and whether states' annual pension contributions are enough to keep their unfunded net liability from growing.

The report's authors said that states were "evenly divided" between falling short and exceeding the benchmark in fiscal 2015.

Several states, including Kentucky, New Jersey, Illinois and Texas, were "notably" below the treading water mark in fiscal 2015, according to the report. For Kentucky to "tread water," it would have had to contribute an additional 7.5% of revenue to its pension plans, while Illinois would have had to contribute 6.8% of its revenue.

States with large contribution shortfalls will face increasing difficulties, the report warned.

"The difficulty such states have in adequately funding pensions is likely to worsen as contribution shortfalls exacerbate the impacts unfavorable market and demographic pressures," the analysts said.

South Dakota, Michigan, North Carolina and Utah exceeded their tread water contributions, but Moody's noted that many of the states exceeding this mark have ANPL percentages below the national median of 85%.

States with the highest pension burdens, the three-year average adjusted net pension liability as a percentage of state government revenue, remained consistent with previous years, the report found. Illinois, at 280%, had the highest pension burden in fiscal 2015, followed by Connecticut at 209%, Alaska at 179%, Kentucky at 162% and New Jersey at 157%.

arrav(0) { }

Causeway

NOVEMBER 2016

The 2016 US Election: A Republican Reflation

Causeway Research Commentary
November 9, 2016

The US Presidential election result is not Brexit 2.0

Donald Trump's surprise win in the US presidential election has drawn parallels with the unexpected June 23 "Brexit" result in the United Kingdom. Yes, both votes represent a rejection of the status quo and a rejection of policies by disaffected parts of the electorate, but the comparisons end there. In Britain, the conservative party has, over the years, been ambivalent at best toward the European Ideal, and successfully mobilized a vote in favor of withdrawal. Mr. Trump's election by voters demanding change in Washington DC may upend several of the economic and political policies that the Republican Party has pursued since the end of the Second World War.

Many of the sound bites uttered in the heat of this election battle contrast with mainstream Republican orthodoxy. Despite the stability that results from control of all three branches of government, the overseas markets' initial reactions reflected this apparent conflict, as well as uncertainty for how US economic policy may be conducted. European markets, after an initial sharp sell-off, stabilized and—taking a cue from early strength on Wall Street—rallied into the close. We anticipate developed Asian markets may follow suit, but further developments could change that. We have already witnessed significant swings in foreign exchange markets, particularly the Mexican peso, and weakness in emerging markets adversely affected by Mr. Trump's anti-trade rhetoric.

Both the US and European equity markets have quickly identified the early winners and losers from a Trump presidency. Thus far, markets have favored companies expected to benefit from the economic themes Trump espoused during the election campaign, including investment in infrastructure and revitalization of American-sourced materials and manufacturing. Companies shunned by the markets included those reliant on commerce with Mexico and those likely to suffer from a dismantling of the Affordable Care Act ("ACA"). Even though the S&P 500 Index closed up slightly above 1% today, we observed a wide 35% difference between the best performing and worst performing stocks in the S&P 500 Index.

Cluster 1: Financials (Positive) and Materials (Neutral)

We currently expect that the impact of a Trump presidency, and Republicans controlling the US Senate and House of Representatives, should invigorate the US economy, especially if the US corporate tax rate becomes more globally competitive. Assuming the Trump campaign represents the presidential agenda, we expect that there may be both tax cuts and fiscal stimulus in the US, a net positive for the domestic financial sector. However, trade barriers may dampen economic vitality (in the US and abroad), adding inflationary pressures as consumer choice could decline and the prices of goods could rise. We expect the US Federal Reserve ("Fed") to remain independent, and yet still dovish in the next year as the direction of the US economy remains uncertain. Most global sovereign bond yields have risen significantly in the wake of the US Presidential election, with the US 10-year Treasury note yielding over 2%. After rising about 50 basis points in the past three months,

PORTFOLIO MANAGER SPOTLIGHT

Fusing two investment disciplines

Joe Gubler on the interplay of fundamental and quantitative research

CAUSEWAY RESEARCH

Cross-trained sector specialists

Learn more about how our research team is organized.

OUR RESEARCH STRUCTURE

the 10-Year Note rose 18 basis points in this first trading day after the election result.

Although the Trump campaign promised US $500 billion of infrastructure spending (over an unspecified time frame), the new president may encounter some resistance in a Republican Congress, with its historical penchant for fiscal austerity. We remain cautious on metals stocks, as their valuations do not offset the risk that the imbalances in the Chinese economy may offset US infrastructure-related demand for cement, steel, etc.

In the financials sector, well-capitalized banks engaged in self-help to restructure and improve returns on capital remain our primary focus. A steeper global yield curve removes some of the revenue pressure on banks and will likely shorten the waiting period for greater capital returned to shareholders. We believe life insurers should also be net beneficiaries of the post-Trump environment, as gradually higher bond yields should bolster returns. As for financial regulation, we do not currently expect a dismantling of Dodd-Frank, especially in the wake of the Wells Fargo scandal. However, more stringent banking reforms may founder with waning political support for these restrictive measures.

Without greater clarification on the actual Trump agenda, we have not immediately changed our price targets. However, we remain optimistic that our financials and materials holdings will continue to deliver satisfactory results in the quarters ahead.

Cluster 2: Technology and Telecommunications – (Neutral)

The single greatest driver of US technology earnings improvements and possible valuation multiple upgrades would result from a reduction in US corporate tax rates. The mooted Trump 15% corporate tax rate could be the catalyst for the repatriation of approximately $2.5 trillion by US companies, according to estimates from Capital Economics. US technology companies often have large amounts of cash earned and held abroad. The repatriation of that cash under a fairly sanguine tax treatment could lead to substantially increased dividend and share buybacks, value added merger and acquisition activity, or even debt reduction.

For our Asian mobile telephone stocks, we currently do not believe that this political development in the US will have a significant impact on earnings. For many of these holdings, data usage and pricing trends remain paramount, as populations become increasingly dependent on mobile telephony and their related applications. These Asian telephony giants are, in our view, well positioned for increased domestic wealth and rising intensity of data usage.

Cluster 3: Energy and Utilities – (Positive Oil & Gas, Neutral/Negative Utilities)

We believe US shale oil & gas producers should get more federal government support for their activities, with less threat of regulation. We remain bullish on the crude oil price, and believe the supply constraints can put the market in equilibrium by early 2018. We are watching for critical technological breakthroughs in solar power and power storage to make a greater impact on the energy sector than a shift in US political sentiment.

We expect regulated utility stocks to underperform in a rising bond yield environment. We continue to be confident in a select few European utilities trading at sizable discounts to fair value while engaged in major operational improvement.

Cluster 4: Industrials (Positive)

The potential for lower US corporate taxes, infrastructure spending – in both the US and in the UK - and rising bond yields should continue to provide an impetus for the market rotation from defensives to cyclical stocks. We are optimistic about well-managed companies that are global leaders in the industrial equipment, power, automation, transportation, and defense industries, as well as construction-related stocks.

Despite the Trump campaign rhetoric, we do not expect a dismantling of trade relations with China, nor with Canada and Mexico. The embedded and highly complex nature of supply chains does not allow for a rapid shift to domestic US manufacturing. In the US, such a shift would require an unlikely level of federal and state government subsidization. While the UK government has effectively agreed to pay a Japanese automaker to expand operations in Great Britain, the scale of US offshoring makes such an arrangement fiscally cost prohibitive.

Cluster 5: Consumer (Neutral)

With a broad-based income tax cut, and possibly lower health insurance premiums, the US consumer may have a greater propensity to spend in the next few years. From a value perspective, we remain confident that our consumer holdings will benefit from a positive wealth effect in areas such as apparel and tourism. We are avoiding the most expensive stocks known for their high dividend payouts, and assuming these high-dividend payers have limited growth prospects. A rising bond yield environment has already sparked a global market rotation from these expensive sectors, such as consumer staples, into more economically sensitive areas of the markets. We are interested in maintaining portfolio weights in some of the best-managed consumer staples companies, but only if they are engaged in operational restructuring and cost cutting plans that will add demonstrably to cash flow and to dividend growth.

Cluster 6: Healthcare (Positive)

Following the election, the valuation discount on pharmaceutical companies has narrowed, as a Clinton presidency threatened drug pricing. Some valuation discount remains, however, and Mr. Trump has endorsed US drug re-importation and direct negotiation with Medicare, but we currently do not expect these areas to become major goals of the new administration. US pharmacy benefit manager consolidation has already put pressure on drug pricing, and this may obviate the need for further regulation.

As for Obamacare, Mr. Trump has stated his intention to repeal the ACA. Even a weakening of the ACA could benefit well-diversified managed care companies in the US. We have no direct exposure to those "expensive" Medicaid-oriented managed care companies, and their lack of diversification may finally become a serious liability under a Trump administration.

For the highly cash generative healthcare companies, especially pharmaceutical and biotechnology firms, the ability to repatriate cash in a lower tax regime could prove especially beneficial.

Emerging Markets

The Trump presidential victory is likely to have a negative impact on emerging markets currencies and trade, though uncertainty will prevail until actual policies are clarified. Regardless of whether the Fed will raise rates in December, the US dollar will likely strengthen against many emerging markets currencies. The Mexican peso has been an early victim of the Trump victory, declining roughly 8% compared to the US dollar in this first day after the election, due to expected restrictions on immigration and challenges to the North American Free Trade Agreement ("NAFTA"). The Turkish lira and South African rand are also down approximately 2% because these countries are more dependent on external financing. These types of currency moves in emerging markets will likely impact monetary policy and may prevent certain central banks from easing. Policymakers in Mexico and countries with high current-account deficits may respond to currency weakness with interest rate hikes.

From a trade perspective, global trade may face more constraints in the years ahead under a Trump administration. The Trans-Pacific Partnership ("TPP"), which would have linked nearly 40% of the global economy including much of Asia-Pacific, has diminished prospects. The disposal or renegotiation of trade deals such as TPP and NAFTA would disproportionally hurt those economies with a significant dependence on exports such as Taiwan, India, South Korea, and Mexico. We expect more domestically focused economies, such as China, Thailand, and Indonesia, to be less affected. Certain geographies, most notably Russia, may be positively impacted by terms of trade if Mr. Trump takes a softer stance on existing sanctions.

We believe the Causeway Emerging Markets portfolio remains well balanced to manage the incremental market volatility. We remain underweight South Africa, slightly underweight Mexico, and overweight Russia and Thailand compared to those countries' weights in the MSCI Emerging Markets Index. We do have exposure to some of the more export-driven Asian geographies such as Taiwan and South Korea, however we believe that the cheap valuations and positive macroeconomic backdrops in these countries should offset the potential negative impact on trade. Additionally, given our quantitative approach to stock selection, we can react efficiently to changing investment opportunities going forward.

Portfolio Management

Thus far, our clients with exposure to developed market pharmaceuticals and industrials have benefitted from rallies in these industry groups. We expect markets to over-react in the short term to both positive and negative implications of the election outcome, which will present opportunities for our disciplined investment approach. As was the case after Brexit, we are monitoring portfolios across all of our equity strategies, both for opportunities to buy stocks that have become undervalued and to sell those that have become overvalued in the rush to predict winners and losers from the election result.

This market commentary expresses Causeway's views as of November 9, 2016 and should not be relied on as research or investment advice regarding any investment. These views and any portfolio holdings and characteristics are subject to change, and there is no guarantee that any forecasts made will come to pass. Forecasts are subject to numerous assumptions, risks and uncertainties, which change over time, and Causeway undertakes no duty to update any such forecasts. Information and data presented has been developed internally and/or obtained from sources believed to be reliable; however, Causeway does not guarantee the accuracy, adequacy or completeness of such information.
MSCI has not approved, reviewed or produced this report, makes no express or implied warranties or representations and is not liable whatsoever for any data in the report. You may not redistribute the MSCI data or use it as a basis for other indices or investment products.