ND STATE INVESTMENT BOARD MEETING

Friday, May 27, 2016, 8:30 a.m.
Peace Garden Room, State Capitol
600 E Blvd, Bismarck, ND

AGENDA

I. CALL TO ORDER AND ACCEPTANCE OF AGENDA

II. ACCEPTANCE OF MINUTES (April 22, 2016)

III. INVESTMENTS

A. Asset and Investment Performance Overview (Fixed Income Update) - Mr. Hunter (enclosed) (15 min.)
B. J.P. Morgan Capital Markets Update - Mr. Andrew Goldberg & Mr. James Sakelaris (to follow) (45 min.)
C. Callan Associates Performance Review - Mr. Erlendson, Mr. Browning (enclosed) (45 min) **Board Acceptance**
   1. Pension Trust Review Quarter Ending 3-31-16
   2. Insurance Trust Review Quarter Ending 3-31-16
   3. Legacy Trust Review Quarter Ending 3-31-16

========== Break from 10:15 to 10:30 a.m. ==========

D. BND Match Loan CD Program Update - Mr. Hunter (enclosed) (15 min) **Board Acceptance**
E. VW Litigation - Ms. Murtha (to follow) (15 min) **Board Action**
   Executive Session for Attorney Consultation Pursuant to NDCC 44-04-19.2, and 44-04-19.1 (2) and (5).

IV. ADMINISTRATION

A. Audit Committee Report - Ms. Miller Bowley(enclosed) (10 min) **Board Acceptance**
B. Executive Review Committee - Mr. Sandal (enclosed) (10 min) **Board Acceptance**
C. Employee Benefits Programs Committee - Mr. Schulz (enclosed) (5 min)
D. RIO Code of Conduct and Ethics - Mr. Hunter (enclosed) (5 min)

V. OTHER

Next Meetings:
SIB meeting - July 22, 2016, 8:30 a.m. - Bismarck State College
SIB Audit Committee meeting - September 23 , 2016, 1:00 pm - State Capitol, Peace Garden Room

VI. ADJOURNMENT

Any individual requiring an auxiliary aid or service, please contact the Retirement and Investment Office
(701) 328-9885 at least three (3) days prior to the scheduled meeting.

NORTH DAKOTA STATE INVESTMENT BOARD
MINUTES OF THE
APRIL 22, 2016, BOARD MEETING

MEMBERS PRESENT:
Drew Wrigley, Lt. Governor, Chair
Mike Sandal, Vice Chair
Lance Gaebe, Commissioner of Trust Lands
Adam Hamm, Insurance Commissioner
Mike Gessner, TFFR Board
Rob Lech, TFFR Board
Mel Olson, TFFR Board
Kelly Schmidt, State Treasurer (TLCF)
Yvonne Smith, PERS Board
Cindy Ternes, WSI designee
Tom Trenbeath, PERS Board

STAFF PRESENT:
Connie Flanagan, Fiscal & Invt Ops Mgr
Bonnie Heit, Assist to the SIB
David Hunter, ED/CIO
Fay Kopp, Dep ED/CRA
Terra Miller Bowley, Supvr Audit Services
Cody Schmidt, Compliance Officer
Darren Schulz, Dep CIO
Susan Walcker, Invt Acct

GUESTS PRESENT:
Larysa Bemko, Ballie Gifford
Gerard Callahan, Baillie Gifford
Jeff Eisenhofer, Grant & Eisenhofer, P.A. (TLCF)
Levi Erdmann, Dept. of Trust Lands
Wally Fikiri, William Blair
Chris Huckle, Ballie Gifford
Kent McAtamney, William Blair
Jan Murtha, Attorney General's Office
Bryan Reinhardt, PERS
Marc Weinberg, Grant & Eisenhofer, P.A. (TLCF)

CALL TO ORDER:

Lt. Governor Wrigley called the State Investment Board (SIB) meeting to order at 8:30 a.m. on Friday, April 22, 2016, at the State Capitol, Peace Garden Room, Bismarck, ND.

AGENDA:

IT WAS MOVED BY MS. TERNES AND SECONDED BY MR. LECH AND CARRIED ON A VOICE VOTE TO ACCEPT THE REVISED AGENDA FOR THE APRIL 22, 2016, MEETING AS DISTRIBUTED.

AYES: MS. TERNES, MR. OLSON, COMMISSIONER HAMM, COMMISSIONER GAEBE, TREASURER SCHMIDT, MR. TRENBEATH, MR. LECH, MR. SANDAL, MS. SMITH, MR. GESSNER, AND LT. GOVERNOR WRIGLEY
NAYS: NONE
MOTION CARRIED

MINUTES:

IT WAS MOVED BY MR. TRENBEATH AND SECONDED BY MR. GESSNER AND CARRIED ON A VOICE VOTE TO ACCEPT THE MARCH 18, 2016, MINUTES AS DISTRIBUTED.

AYES: COMMISSIONER HAMM, MS. TERNES, MR. OLSON, MR. SANDAL, TREASURER SCHMIDT, MR. GESSNER, MS. SMITH, COMMISSIONER GAEBE, MR. LECH, MR. TRENBEATH, AND LT. GOVERNOR WRIGLEY
NAYS: NONE
MOTION CARRIED

INVESTMENTS:

Annual Board Planning Cycle/Strategic Investment Plan – Mr. Hunter reviewed the SIB's Annual Board Planning Cycle and Strategic Investment Plan. Mr. Hunter requested the SIB accept the revised Biennial Agenda for April to include the annual review of the "Ends" policies and "RIO's Budget Guidelines."

IT WAS MOVED BY MR. LECH AND SECONDED BY MS. TERNES AND CARRIED BY A ROLL CALL VOTE TO ACCEPT THE REVISED BIENNIAL AGENDA.

AYES: MR. LECH, TREASURER SCHMIDT, MR. OLSON, COMMISSIONER GAEBE, MR. TRENBEATH, MR. SANDAL, COMMISSIONER HAMM, MR. GESSNER, MS. SMITH, MS. TERNES, AND LT. GOVERNOR WRIGLEY
NAYS: NONE
MOTION CARRIED

International Equity **-** Mr. Hunter briefed the board on the course of action that took place on the search for a firm to replace the existing Capital Group International Equity strategy within the Pension, Insurance, and Legacy Trusts.

IT WAS MOVED BY MR. SANDAL AND SECONDED BY MR. LECH AND CARRIED BY A VOICE VOTE TO SEQUESTER THE INTERNATIONAL EQUITY SEMI FINALISTS PER NDCC 44.04.19.2 SUBDIVISION 6.

AYES: COMMISSIONER HAMM, MS. TERNES, COMMISSIONER GAEBE, MR. GESSNER, MS. SMITH, MR. TRENBEATH, MR. SANDAL, MR. LECH, MR. OLSON, TREASURER SCHMIDT, AND LT. GOVERNOR WRIGLEY
NAYS: NONE
MOTION CARRIED

The SIB heard presentations from Ballie Gifford followed by William Blair.

The Board recessed at 10:31 a.m. and reconvened at 10:40 a.m.

Discussion took place on the two semi-finalists. RIO personnel, following an international equity search in collaboration with Callan Associates, recommended that the SIB award the mandate to William Blair Asset Management's International Leaders strategy. RIO felt the long history of growth equity investing dating back to the company's formation in 1935, offered a compelling high conviction, high quality international growth strategy that represents an attractive complement to the three Trusts existing global and international equity mandates. RIO also felt that introducing a true growth-oriented strategy to the existing investment programs provides diversification benefits and should be rewarded when quality growth is in favor. RIO's favorable view of the strategy is also attributable to a combination of the depth and experience of the portfolio management team, research, risk management, the firm, and investment process. The

current level of assets under management is reasonable and the firm has a history of closing strategies prior to liquidity and execution becoming problematic. Lastly, RIO felt the firm offered a competitive fee schedule for larger mandates.

IT WAS MOVED BY COMMISSIONER GAEBE AND SECONDED BY COMMISSIONER HAMM AND CARRIED BY A ROLL CALL VOTE TO ACCEPT STAFF RECOMMENDATION AND ALLOCATE $445 MILLION TO WILLIAM BLAIR.

AYES: MR. GESSNER, COMMISSIONER GAEBE, MS. SMITH, TREASURER SCHMIDT, MR. LECH, COMMISSIONER HAMM, MR. OLSON, MR. TRENBEATH, MR. SANDAL, MS. TERNES, AND LT. GOVERNOR WRIGLEY
MOTION CARRIED

Lt. Governor Wrigley left the meeting and Mr. Sandal presided over the remainder of the meeting.

Bank of North Dakota (BND) Match Loan CD Program – Mr. Hunter stated staff is exploring funding alternatives for the BND Match Loan Certificate of Deposit Program given the state budget shortfalls which may require a portion of the Budget Stabilization Fund to help offset possible budget deficits. The BND CD Program accounts for $90 million of the $577 million Budget Stabilization Fund as of February 29, 2016. RIO personnel are considering the Legacy Fund as an alternative. Mr. Hunter stated the funding amount allocated to the BND CD Program would not change only the funding source would permanently change.

GOVERNANCE:

Securities Monitoring and Litigation Policy – Mr. Hunter reviewed the Securities Monitoring and Litigation Policy accepted by the SIB on November 20, 2015. Because there has been an increase in the number of international securities litigation cases in recent years, RIO personnel have been working with The Northern Trust and the Office of the Attorney General, specifically Ms. Murtha, to implement an international securities litigation monitoring program.

Ms. Murtha provided a recap of the SIB's securities litigation reviews and actions. Ms. Murtha also highlighted the 2010 Morrison case and its impact on securities litigation, which lead the SIB to begin the process of implementing a securities litigation-monitoring program.

Executive Session – Ms. Murtha briefed the board on the Volkswagen (VW) litigation and the SIB's potential representation. Ms. Murtha reached out to Grant & Eisenhofer, one of two US law firms, which is representing US investors in Germany. The SIB does not currently have representation for the litigation. Ms. Murtha requested Grant & Eisenhofer brief the SIB on only the facts of the case and to assist with the analysis.

Mr. Marc Weinberg and Mr. Jeff Eisenhofer, Grant & Eisenhofer, briefed the SIB on the facts. Mr. Weinberg stated for approximately eight years, VW has been engaging in systematic fraud, which started with the highest level of management all the way down through the entire company to install "defeat software" in its diesel engines. VW intentionally installed "defeat device" software in its clean diesel engines that were designed to detect and evade emissions tests. The software would detect when the car's emissions were being tested and would switch the car's engine into a cleaner running mode during the test. The controls were then turned off during actual road use, resulting in better fuel economy and performance, but producing greater pollutants. The fraud has significant ramifications worldwide not only on the owners of the vehicles but also on the stock price.

Ms. Murtha requested the SIB enter into Executive Session for attorney consultation regarding the Volkswagen Securities Fraud Litigation pursuant to NDCC 44-04-19.2 and 44-04-19.1(2) and (5).

IT WAS MOVED BY MR. TRENBEATH AND SECONDED BY MR. OLSON AND CARRIED BY A ROLL CALL VOTE TO ENTER INTO EXECUTIVE SESSION FOR ATTORNEY CONSULTATION PURSUANT TO NDCC 44-04-19.2 AND 44-04-19.1(2) AND (5).

AYES: MR. OLSON, MR. GESSNER, MR. SANDAL, MS. SMITH, MR. TRENBEATH, MS. TERNES, COMMISSIONER HAMM, COMMISSIONER GAEBE, MR. LECH, AND TREASURER SCHMIDT
NAYS: NONE

ABSENT: LT. GOVERNOR WRIGLEY

The SIB (Treasurer Schmidt via teleconference) RIO staff, Ms. Murtha, and Mr. Eisenhofer and Mr. Weinberg (via teleconference) were present during Executive Session. The Executive Session began at 11:21 am and concluded at 11:55 am.

The SIB took no action other than to continue to seek guidance from Ms. Murtha.

Client Request – Mr. Hunter stated Dr. Aaron Johnson, Bismarck State College Foundation board member, inquired if the Foundation could become a client of the SIB. Mr. Hunter, on the guidance of Ms. Murtha, informed Dr. Johnson that the University Systems takes the position that the Foundation is a separate private entity and therefore not a governmental unit of the State of North Dakota. North Dakota's legal statute would need to be amended to allow a Foundation to utilize the SIB for investment management services.

ADMINISTRATION:

Executive Review Committee – Mr. Sandal, Chair of the Executive Review Committee, updated the board on the Committee's progress. The Committee met on April 13, 2016, and reviewed the results of the SIB's Ends and Executive Limitation Survey, and Mr. Hunter's self-evaluation. The Committee also reviewed salary information. The Committee is in the process of drafting a final report, which will be provided to the SIB at their May 27, 2016, meeting.

Government Finance Officers Association (GFOA) – Mr. Hunter reported RIO has received the Certificate of Achievement for Excellence in Financial Reporting from GFOA for the 18th consecutive year.

Quarterly Monitoring – Per Governance Policy, Board/Staff Relationship/Monitoring Executive Performance C-4, the following monitoring reports for the quarter ending March 31, 2016, were provided to the SIB for their consideration: Budget/Financial Conditions, Executive Limitations/Staff Relations, Investment Program, and Retirement Program.

An updated Watch List for the same period was also included. RIO personnel requested JP Morgan's Mortgage Backed Securities mandate within the Pension Trust be placed on the Watchlist. This recommendation is the result of recent personnel changes within the firm's mortgage portfolio management team.

IT WAS MOVED BY MR. GESSNER AND SECONDED BY MR. LECH AND CARRIED BY A ROLL CALL VOTE TO ACCEPT THE QUARTERLY MONITORING REPORTS AND TO ACCEPT STAFF RECOMMENDATION TO ADD J.P. MORGAN'S MORTGAGE BACKED SECURITIES MANDATE WITHIN THE PENSION TRUST TO THE WATCHLIST.

AYES: COMMISSIONER GAEBE, TREASURER SCHMIDT, MR. SANDAL, COMMISSIONER HAMM, MR. OLSON, MS. TERNES, MR. GESSNER, MR. TRENBEATH, MR. LECH, AND MS. SMITH
NAYS: NONE
MOTION CARRIED
ABSENT: LT. GOVERNOR WRIGLEY

OTHER:

The next meeting of the SIB is scheduled for May 27, 2016, at 8:30 a.m. in the Peace Garden Room.

The next meeting of the SIB Audit Committee is scheduled for May 19, 2016, at 3:00 p.m. in the Peace Garden Room.

ADJOURNMENT:

With no further business to come before the SIB, Mr. Sandal adjourned the meeting at 12:05 p.m.

_____
Mr. Mike Sandal, Vice Chair
State Investment Board

_____
Bonnie Heit
Assistant to the Board

State Investment Board

Asset and Investment Performance Overview

For the periods ended March 31, 2016

May 20, 2016

Dave Hunter, Executive Director / CIO

Darren Schulz, Deputy Chief Investment Officer

ND Retirement & Investment Office (RIO)

State Investment Board (SIB)

State Investment Board – Client Assets Under Management

Fund Name	Market Values as of 3/31/16 [1]	Market Values as of 3/31/15 [1]
Pension Trust Fund		
Public Employees Retirement System (PERS)	2,421,987,130	2,401,309,136
Teachers' Fund for Retirement (TFFR)	2,057,394,854	2,090,299,471
Job Service of North Dakota Pension	95,573,693	98,026,580
City of Bismarck Employees Pension	81,075,233	81,230,926
City of Grand Forks Employees Pension	54,800,673	56,504,623
City of Bismarck Police Pension	33,434,044	35,631,338
Grand Forks Park District	5,813,061	6,033,693
City of Fargo Employees Pension		1,489
Subtotal Pension Trust Fund	**4,750,078,688**	**4,769,037,256**
Insurance Trust Fund		
Legacy Fund		3,194,769,809
Workforce Safety & Insurance (WSI)	1,801,047,070	1,770,406,238
Budget Stabilization Fund	579,947,916	595,135,717
ND Tobacco Control and Prevention	44,805,976	
PERS Group Insurance Account	38,575,386	41,205,242
City of Fargo FargoDome Permanent Fund	38,079,559	41,752,458
State Fire and Tornado Fund	23,599,019	25,431,804
Petroleum Tank Release Compensation Fund	7,034,692	7,232,124
State Risk Management Fund	6,357,621	6,929,517
State Risk Management Workers Comp Fund	5,853,318	6,290,439
ND Association of Counties (NDACo) Fund	3,967,813	3,562,951
State Bonding Fund	3,238,892	3,339,532
ND Board of Medical Examiners	2,183,569	2,168,964
Insurance Regulatory Trust Fund	1,071,344	658,357
Bismarck Deferred Sick Leave Account	628,166	881,132
Cultural Endowment Fund	378,831	383,865
Subtotal Insurance Trust Fund	**2,556,769,172**	**5,700,148,149**
Legacy Trust Fund		
Legacy Fund	3,673,717,322	
PERS Retiree Insurance Credit Fund	98,401,571	96,499,236
Total Assets Under SIB Management	**11,078,966,753**	**10,565,684,641**

- SIB client assets grew by approximately 4.9% (or $513 million) in the last year with the Legacy Fund creating the largest asset growth of $479 million primarily due to tax collections.
- The Legacy Fund generated a net investment loss of -0.33% for the year ended March 31, 2016. Since inception, the Legacy Fund has generated a net annualized return of 2.5% (over the last 4.5 years) exceeding the performance benchmark of 1.8%.
- The Pension Trust posted a net return of -0.41% (down $20 million) in the last year. During the last 5-years, the Pension Trust generated a net annualized return of 6.27% exceeding the performance benchmark of 5.87%.
- The Insurance Trust generated a net return of +0.79% (up $20 million) in the last year. During the last 5-years, the Insurance Trust generated a net annualized return of 4.8% exceeding the performance benchmark of 3.9%.
- SIB client assets exceeded $11 billion as of March 31, 2016, based on unaudited valuations.

[1] *3/31/16 and 3/31/15 market values are unaudited and subject to change.*

Client Level Return & Risk Summary – March 31, 2016

Overview:

SIB clients should receive investment returns consistent with their investment policies and market variables (pursuant to Section D.3 of the SIB Governance Manual). This "End" is evaluated based on comparison of each client's actual net rate of return, standard deviation and risk adjusted excess return, to the client's policy benchmark over 5 years. Risk metrics (for standard deviation and risk adjusted excess return) are also reported for each SIB client, if applicable, for the 5-years ended March 31, 2016.

Pension Trust:

Every Pension Trust client generated positive Excess Returns for the 5-years ended March 31, 2016, with PERS and TFFR generating a net investment returns of approximately 6.3% (for the 5-years ended 3/31/2016). U.S. Equity and Real Estate were the top two performers posting net annualized returns of 11% and 14%, respectively, for the last 5-years. U.S. Fixed Income also performed well posting a 5% annual return. International Equity and Fixed Income outperformed their respective benchmarks, but generated disappointing absolute (annualized) returns of only 2.4% and 2.1%, respectively, for the 5-years ended March 31, 2016. Private Equity was our worst performing asset class generating a net investment return of less than 1% per annum over the last 5-years. **During the last year, PERS and TFFR outperformed its underlying investment benchmarks by over 0.40% (or 40 bps) although absolute returns have clearly been disappointing at -0.43% and -0.35%, respectively. Risk, as measured by standard deviation, was within approved levels for all Pension Trust clients for the five-years ended March 31, 2016.** Risk Adjusted Excess Returns were positive for six out of seven Pension Trust clients with one exception for the Grand Forks Park District Plan.

Non-Pension Trust Clients:

Every Non-Pension Trust client generated positive Excess Return and Positive Risk Adjusted Excess Return for the 5-years ended March 31, 2016, if applicable, with one exception for the PERS Retiree Health Insurance Credit Fund. The PERS Board has engaged Callan Associates to conduct an asset liability study of PERS Main Plan and the Retiree Health Insurance Credit Fund. RIO will present these findings to the SIB over the next few months. The Legacy Fund has generated a net investment return of 2.5% since inception (4.5 years ago) which has exceeded its underlying performance benchmark of 1.8% (by 70 bps), although absolute returns of -0.33% for the last year have been disappointing (although still exceeding the performance benchmark by 45 bps).

Actual asset allocations are within Target ranges and guidelines as confirmed by Callan Associates as of March 31, 2016.

Note: Current year returns are unaudited and subject to change.

Pension Trust Return & Risk Summary – **March 31, 2016**

Returns and Risk: Every single Pension Trust client portfolio generated positive "Excess Return" for the 1-, 3- and 5-year periods ended March 31, 2016, while adhering to prescribed risk levels (e.g. within 115% of the Policy Benchmark).

	Current FYTD 3/31/2016	1 Yr Ended 3/31/2016	3 Yrs Ended 3/31/2016	5 Yrs Ended 3/31/2016	Risk 5 Yrs Ended 3/31/2016	Risk Adj Excess Return 5 Yrs Ended 3/31/2016
PERS (Main Plan)						
$ 2,421,987,130						
Total Fund Return - Net	**-1.17%**	**-0.43%**	**6.37%**	**6.37%**	7.8%	**0.10%**
Policy Benchmark Return	-1.11%	-0.84%	5.45%	5.95%	7.4%	
Excess Return	**-0.07%**	**0.41%**	**0.91%**	**0.42%**	**105%**	
TFFR						
$ 2,057,394,854						
Total Fund Return - Net	**-1.12%**	**-0.35%**	**6.45%**	**6.27%**	8.2%	**0.39%**
Policy Benchmark Return	-1.08%	-0.83%	5.50%	5.60%	7.9%	
Excess Return	**-0.04%**	**0.48%**	**0.95%**	**0.67%**	**105%**	
CITY OF BISMARCK EMPLOYEES						
$ 81,075,233						
Total Fund Return - Net	**-0.86%**	**-0.29%**	**5.82%**	**6.37%**	6.7%	**0.21%**
Policy Benchmark Return	-0.50%	-0.44%	4.99%	5.86%	6.4%	
Excess Return	**-0.36%**	**0.15%**	**0.83%**	**0.52%**	**105%**	

Note: Current year returns are unaudited and subject to change.

Pension Trust Return & Risk Summary – **March 31, 2016**

	Current FYTD 3/31/2016	1 Yr Ended 3/31/2016	3 Yrs Ended 3/31/2016	5 Yrs Ended 3/31/2016	Risk 5 Yrs Ended 3/31/2016	Risk Adj Excess Return 5 Yrs Ended 3/31/2016
CITY OF BISMARCK POLICE PENSION						
$ 33,434,044						
Total Fund Return - Net	**-1.31%**	**-0.64%**	**5.88%**	**6.42%**	7.3%	**0.25%**
Policy Benchmark Return	-1.05%	-0.91%	5.04%	5.91%	7.0%	
Excess Return	**-0.27%**	**0.27%**	**0.84%**	**0.51%**	**104%**	
JOB SERVICE PENSION PLAN						
$ 95,573,693						
Total Fund Return - Net	**3.11%**	**2.52%**	**6.47%**	**7.01%**	6.0%	**0.75%**
Policy Benchmark Return	0.50%	-0.34%	4.61%	5.64%	5.5%	
Excess Return	**2.61%**	**2.86%**	**1.87%**	**1.37%**	**110%**	
CITY OF GRAND FORKS PENSION						
$ 54,800,673						
Total Fund Return - Net	**-1.44%**	**-1.07%**	**6.24%**	**6.67%**	7.9%	**0.17%**
Policy Benchmark Return	-1.31%	-1.26%	5.51%	6.26%	7.7%	
Excess Return	**-0.13%**	**0.19%**	**0.73%**	**0.41%**	**104%**	
GRAND FORKS PARK DISTRICT PENSION						
$ 5,813,061						
Total Fund Return - Net	**-0.86%**	**-0.87%**	**6.75%**	**6.87%**	8.1%	**-0.14%**
Policy Benchmark Return	-1.09%	-1.34%	5.90%	6.63%	7.6%	
Excess Return	**0.23%**	**0.47%**	**0.85%**	**0.24%**	**106%**	

Risk Adjusted Excess Returns for the 5-years ended Mar. 31, 2016, were positive for all Pension Trust clients with one exception (of -0.14%) for the Grand Forks Park District Plan (which still generated 0.24% of Excess Return over the past five-years).

Risk Adjusted Excess Return measures actual portfolio results versus a benchmark adjusted by its risk relative to a benchmark portfolio. This metric is positive if excess returns are due to "smart" investment decisions or negative if driven by excess risk.

Note: Current year returns are unaudited and subject to change.

Non-Pension Trust Return & Risk Summary – **Mar. 31, 2016**

	Current FYTD 3/31/2016	1 Yr Ended 3/31/2016	3 Yrs Ended 3/31/2016	5 Yrs Ended 3/31/2016	Risk 5 Yrs Ended 3/31/2016	Risk Adj Excess Return 5 Yrs Ended 3/31/2016
WORKFORCE SAFETY & INSURANCE (WSI)						
$ 1,801,047,070						
Total Fund Return - Net	**1.26%**	**0.73%**	**4.91%**	**6.53%**	**3.9%**	**0.54%**
Policy Benchmark Return	1.55%	1.02%	3.95%	5.10%	**3.4%**	
Excess Return	**-0.29%**	**-0.29%**	**0.96%**	**1.44%**		
LEGACY FUND						
$ 3,673,717,322						
Total Fund Return - Net	**-0.55%**	**-0.33%**	**3.01%**	N/A	**N/A**	**N/A**
Policy Benchmark Return	-0.60%	-0.78%	2.48%	N/A	**N/A**	
Excess Return	**0.05%**	**0.45%**	**0.53%**			
BUDGET STABILIZATION FUND						
$ 579,947,916						
Total Fund Return - Net	**1.02%**	**1.37%**	**1.62%**	**1.83%**	**0.71%**	**0.57%**
Policy Benchmark Return	0.98%	1.08%	0.75%	0.59%	**0.44%**	
Excess Return	**0.04%**	**0.29%**	**0.87%**	**1.23%**		
FIRE & TORNADO FUND						
$ 23,599,019						
Total Fund Return - Net	**0.59%**	**-0.02%**	**5.23%**	**6.54%**	**5.3%**	**0.26%**
Policy Benchmark Return	0.77%	-0.04%	4.34%	5.15%	**4.4%**	
Excess Return	**-0.18%**	**0.02%**	**0.89%**	**1.39%**		

Returns and Risk: All but one Non-Pension Trust client generated positive Excess Return and Risk Adjusted Excess Return for the 3- or 5-year periods ended March 31, 2016 (if applicable). This performance was achieved while adhering to reasonable risk levels which were generally within 100 bps of policy levels.

Risk Adjusted Excess Return measures a portfolio's excess return adjusted by its risk relative to a benchmark portfolio. This metric is positive if returns are due to "smart" investment decisions or negative if driven by excess risk.

Note: Current year returns are unaudited and subject to change.

Non-Pension Trust Return & Risk Summary – **Mar. 31, 2016**

	Current FYTD 3/31/2016	1 Yr Ended 3/31/2016	3 Yrs Ended 3/31/2016	5 Yrs Ended 3/31/2016	Risk 5 Yrs Ended 3/31/2016	Risk Adj Excess Return 5 Yrs Ended 3/31/2016
STATE BONDING FUND						
$ 3,238,892						
Total Fund Return - Net	**1.68%**	**0.78%**	**1.87%**	**3.32%**	**1.8%**	**0.93%**
Policy Benchmark Return	2.08%	1.13%	1.41%	2.11%	**1.7%**	
Excess Return	**-0.40%**	**-0.35%**	**0.46%**	**1.22%**		
INSURANCE REGULATORY TRUST FUND (IRTF)						
$ 1,071,344						
Total Fund Return - Net	**0.12%**	**-0.40%**	**3.89%**	**4.74%**	**4.5%**	**0.20%**
Policy Benchmark Return	0.16%	-0.31%	3.32%	3.85%	**3.8%**	
Excess Return	**-0.04%**	**-0.09%**	**0.57%**	**0.89%**		
PETROLEUM TANK RELEASE COMPENSATION FUND						
$ 7,034,692						
Total Fund Return - Net	**1.53%**	**0.72%**	**1.70%**	**2.99%**	**1.6%**	**0.87%**
Policy Benchmark Return	1.90%	1.05%	1.29%	1.92%	**1.5%**	
Excess Return	**-0.37%**	**-0.33%**	**0.42%**	**1.07%**		
STATE RISK MANAGEMENT FUND						
$ 6,357,621						
Total Fund Return - Net	**1.64%**	**0.66%**	**5.77%**	**7.35%**	**4.8%**	**0.14%**
Policy Benchmark Return	1.91%	0.86%	4.85%	5.78%	**3.8%**	
Excess Return	**-0.27%**	**-0.20%**	**0.91%**	**1.57%**		

SIB Client Commentary:

The State Bonding Fund, Insurance Regulatory Trust Fund, Petroleum Tank Release Compensation Fund, and State Risk Management Fund have all posted positive Risk Adjusted Excess Returns for the 5-years ended March 31, 2016, including Excess Returns of 0.89% or more.

Note: Current year returns are unaudited and subject to change.

Non-Pension Trust Return & Risk Summary – **Mar. 31, 2016**

	Current FYTD 3/31/2016	1 Yr Ended 3/31/2016	3 Yrs Ended 3/31/2016	5 Yrs Ended 3/31/2016	Risk 5 Yrs Ended 3/31/2016	Risk Adj Excess Return 5 Yrs Ended 3/31/2016
STATE RISK MANAGEMENT WORKERS COMP FUND						
$ 5,853,318						
Total Fund Return - Net	**1.39%**	**0.51%**	**6.42%**	**7.84%**	**5.7%**	**0.22%**
Policy Benchmark Return	1.58%	0.64%	5.47%	6.34%	**4.7%**	
Excess Return	**-0.19%**	**-0.13%**	**0.95%**	**1.50%**		
ND ASSOCIATION OF COUNTIES FUND (NDACo)						
$ 3,967,813						
Total Fund Return - Net	**0.72%**	**0.07%**	**4.69%**	**5.33%**	**5.5%**	**0.40%**
Policy Benchmark Return	0.94%	0.10%	3.86%	4.02%	**4.6%**	
Excess Return	**-0.22%**	**-0.03%**	**0.83%**	**1.31%**		
CITY OF BISMARCK DEFERRED SICK LEAVE ACCOUNT						
$ 628,166						
Total Fund Return - Net	**0.97%**	**0.20%**	**5.00%**	**6.57%**	**4.8%**	**0.18%**
Policy Benchmark Return	1.23%	0.24%	4.07%	4.99%	**3.8%**	
Excess Return	**-0.26%**	**-0.05%**	**0.94%**	**1.58%**		
FARGODOME PERMANENT FUND						
$ 38,079,559						
Total Fund Return - Net	**-0.64%**	**-0.92%**	**6.09%**	**7.10%**	**7.6%**	**0.46%**
Policy Benchmark Return	-0.76%	-1.18%	5.09%	5.94%	**6.8%**	
Excess Return	**0.13%**	**0.26%**	**1.00%**	**1.16%**		

SIB Client Commentary:

The State Risk Management Workers Compensation Fund, North Dakota Association of Counties, City of Bismarck Deferred Sick Leave Account and FargoDome Permanent Fund have all posted positive Risk Adjusted Excess Returns for the 5-years ended March 31, 2016, including Excess Returns of 1.16% or more.

Note: Current year returns are unaudited and subject to change.

Non-Pension Trust Return & Risk Summary – **Mar. 31, 2016**

	Current FYTD 3/31/2016	1 Yr Ended 3/31/2016	3 Yrs Ended 3/31/2016	5 Yrs Ended 3/31/2016	Risk 5 Yrs Ended 3/31/2016	Risk Adj Excess Return 5 Yrs Ended 3/31/2016
CULTURAL ENDOWMENT FUND						
$ 378,831						
Total Fund Return - Net	**0.04%**	**0.06%**	**7.58%**	**8.51%**	**8.0%**	**0.44%**
Policy Benchmark Return	0.06%	-0.24%	6.56%	7.17%	**7.2%**	
Excess Return	**-0.02%**	**0.31%**	**1.02%**	**1.33%**		
BOARD OF MEDICAL EXAMINERS						
$ 2,183,569						
Total Fund Return - Net	**0.47%**	**0.78%**				
Policy Benchmark Return	0.37%	0.41%				
Excess Return	**0.09%**	**0.37%**				
PERS RETIREE HEALTH						
$ 98,401,571						
Total Fund Return - Net	**-1.42%**	**-1.88%**	**5.80%**	**6.65%**	**8.6%**	**-0.87%**
Policy Benchmark Return	-0.37%	-0.85%	6.35%	6.92%	**7.8%**	
Excess Return	**-1.05%**	**-1.02%**	**-0.55%**	**-0.27%**		
PERS GROUP INSURANCE						
$ 38,575,386						
Total Fund Return - Net	**0.87%**	**0.87%**	**0.32%**	**0.30%**	**0.42%**	**0.02%**
Policy Benchmark Return	0.12%	0.12%	0.07%	0.08%	**0.03%**	
Excess Return	**0.75%**	**0.74%**	**0.25%**	**0.22%**		
TOBACCO CONTROL AND PREVENTION						
$ 44,805,976						
Total Fund Return - Net	**0.79%**					
Policy Benchmark Return	0.82%					
Excess Return	**-0.02%**					

SIB Client Specific Commentary:

The Cultural Endowment Fund has generated strong risk adjusted returns over the last 5-years.

The Board of Medical Examiners became an SIB client two years ago.

PERS Retiree Health has posted disappointing results over the last 5-years. SEI manages these investments and we are currently re-examining SEI's benchmarks and risk and return profile.

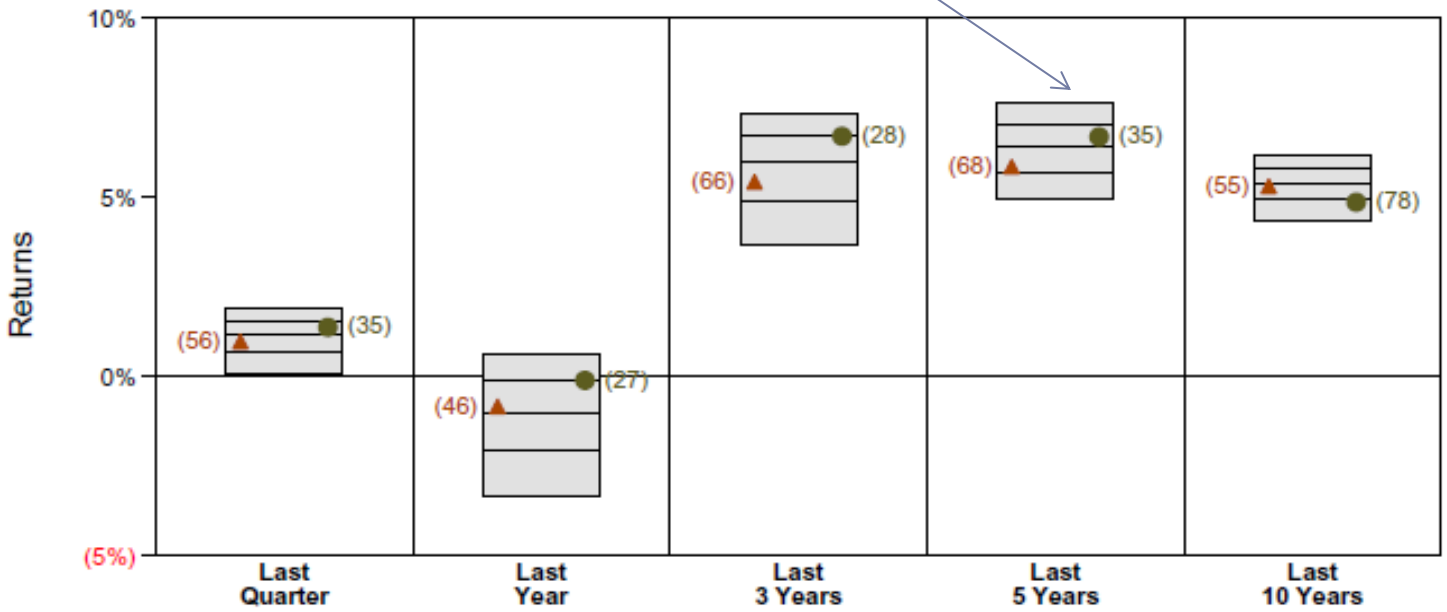
RIO implemented a new asset allocation policy for PERS Group Insurance in late-2105 to enhance returns and lower fees.

The Tobacco Control and Prevention Trust became an SIB client on Sep. 30, 2015. Prior to becoming an SIB client, they were earning less than 0.20% p.a.

Note: Current year returns are unaudited and subject to change.

The Pension Trust was ranked in the 35th percentile for the 5-years ended March 31, 2016, based on Callan's "Public Fund Sponsor Database".

Public Fund Sponsor Database



	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
10th Percentile	1.91	0.61	7.33	7.65	6.17
25th Percentile	1.54	(0.08)	6.76	7.01	5.82
Median	1.17	(1.03)	6.02	6.41	5.39
75th Percentile	0.67	(2.05)	4.92	5.69	4.96
90th Percentile	0.10	(3.35)	3.69	4.94	4.34
Total Fund ●	1.38	(0.10)	6.71	6.70	4.87
Policy Target ▲	0.98	(0.83)	5.44	5.87	5.32

* Current Quarter Target = 16.5% Russell 1000 Index, 16.0% MSCI World, 12.3% Barclays Aggregate Index, 11.2% MSCI EAFE, 9.9% NCREIF Total Index, 5.0% CPI-W, 5.0% NDSIB PEN - Private Equity, 5.0% Barclays HY Corp 2% Issue, 5.0% Barclays Global Agg ex-US, 5.0% NCREIF Timberland Index, 4.9% Russell 2000 Index, 3.2% MSCI EM and 1.0% 3-month Treasury Bill.

Note: The above chart is prepared on an standard or unadjusted basis.

Investment Work Plan (Informational Update) – May 20, 2016

Pension Trust:

1. Conduct annual investment performance and policy statement reviews for all Pension Trust clients;
2. Assist TFFR and PERS boards and professionals conduct their asset liability studies this year including any proposed investment policy statement changes and/or asset allocation revisions;
3. **Continue to review our overall fixed income allocation including our international debt, unconstrained bond and mortgage backed securities mandates in light of the long-anticipated raising interest rate environment;**
4. Complete board approved equity manager transitions (e.g. U.S. Small Cap, Private and International) while considering the merits of reverse inquiries relating to non-strategic, private strategies and implementing board approved litigation monitoring policies; and
5. Implement de-risking strategies as approved by the SIB and SIB client boards (e.g. Job Service).

Legacy and Insurance Trusts:

1. Conduct annual investment performance and policy statement reviews (WSI, Legacy & Budget Stabilization have been scheduled);
2. **Assist the SIB and Legacy and Budget Stabilization Advisory Board prepare for potential liquidity needs within the Budget Stabilization Fund while continuing a review of our fixed income strategies in light of the long-anticipated raising interest rate environment; and**
3. Complete board approved equity while considering the merits of reverse inquiries relating to non-strategic, private strategies and implementing SIB approved litigation monitoring policy.

Strategic Investment Plan:

1. Remain steadfast in our commitment to continuing education (e.g. investment conferences and capital market updates) while raising awareness of other governance models (e.g. governance retreat in July of 2016);
2. Enhance transparency and understanding of our core goals and beliefs by easing public website access (by 12/31/15) while promoting the benefits of active management ($200 million in the last 5 years);
3. Heighten employee engagement by promoting an open and collaborative work environment while improving compensation levels particularly for RIO team members with more than 15-to-25 years of service;
4. Strengthen professional relationships with existing SIB clients, local organizations and legislative leaders;
5. Prudently enhance risk management systems using proven institutional grade risk management tools (i.e. a robust risk management framework provides a foundation to understand downside risks and the ability to withstand market corrections); and
6. Expand the efficient use of technology within RIO to enhance overall effectiveness while becoming fully staffed within our IT team.

Callan

May 27, 2016

North Dakota State Investment Board

Performance Evaluation as of March 31, 2016

Paul Erlendson
Senior Vice President

Alex Browning
Vice President

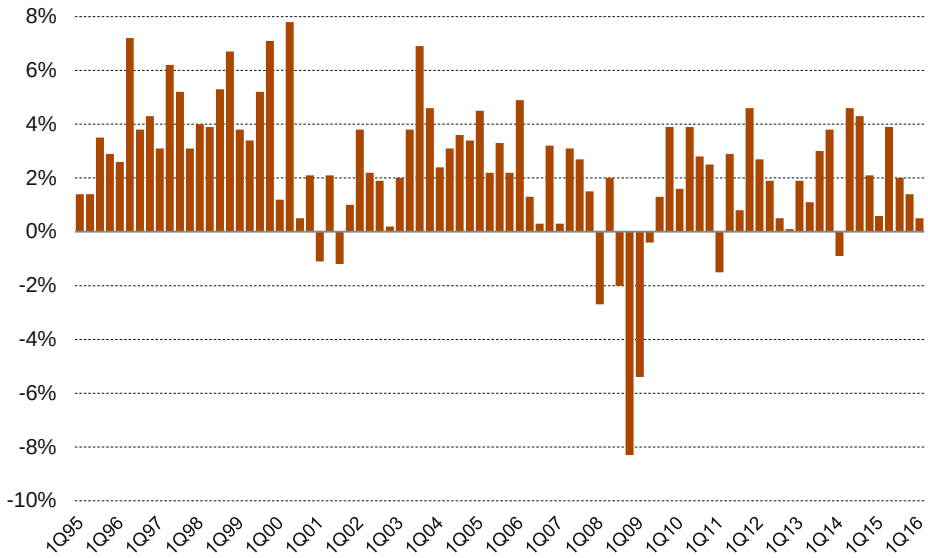
Agenda

- Review economic and market environment for periods ended March 31, 2016
- Pension Trust Quarterly Review
  - Results and Observations
- Insurance Trust Quarterly Review
  - Results and Observations

U.S. Economy

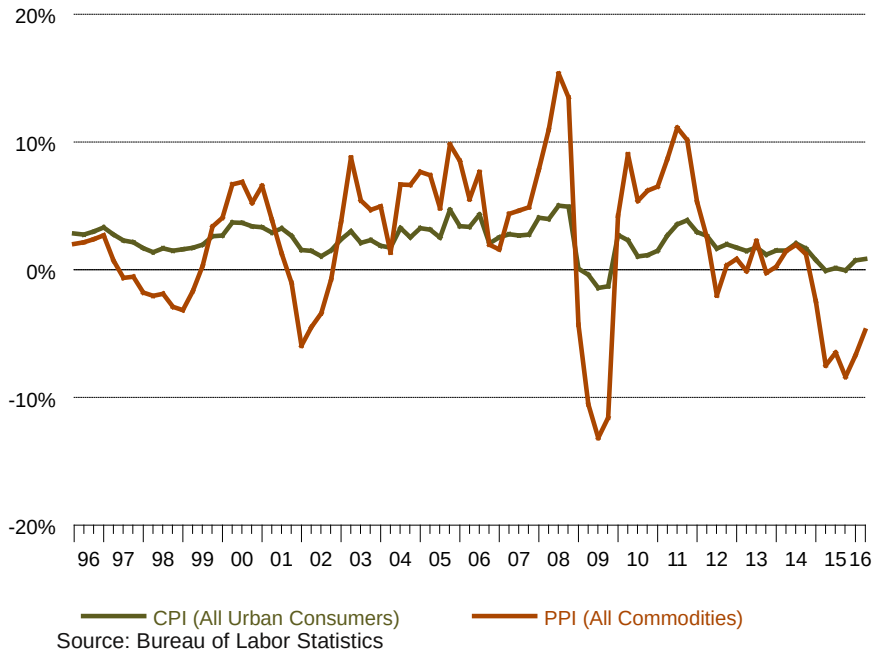
Periods Ending March 31, 2016

Quarterly Real GDP Growth (20 Years)*



Source: Bureau of Economic Analysis

Inflation Year-Over-Year

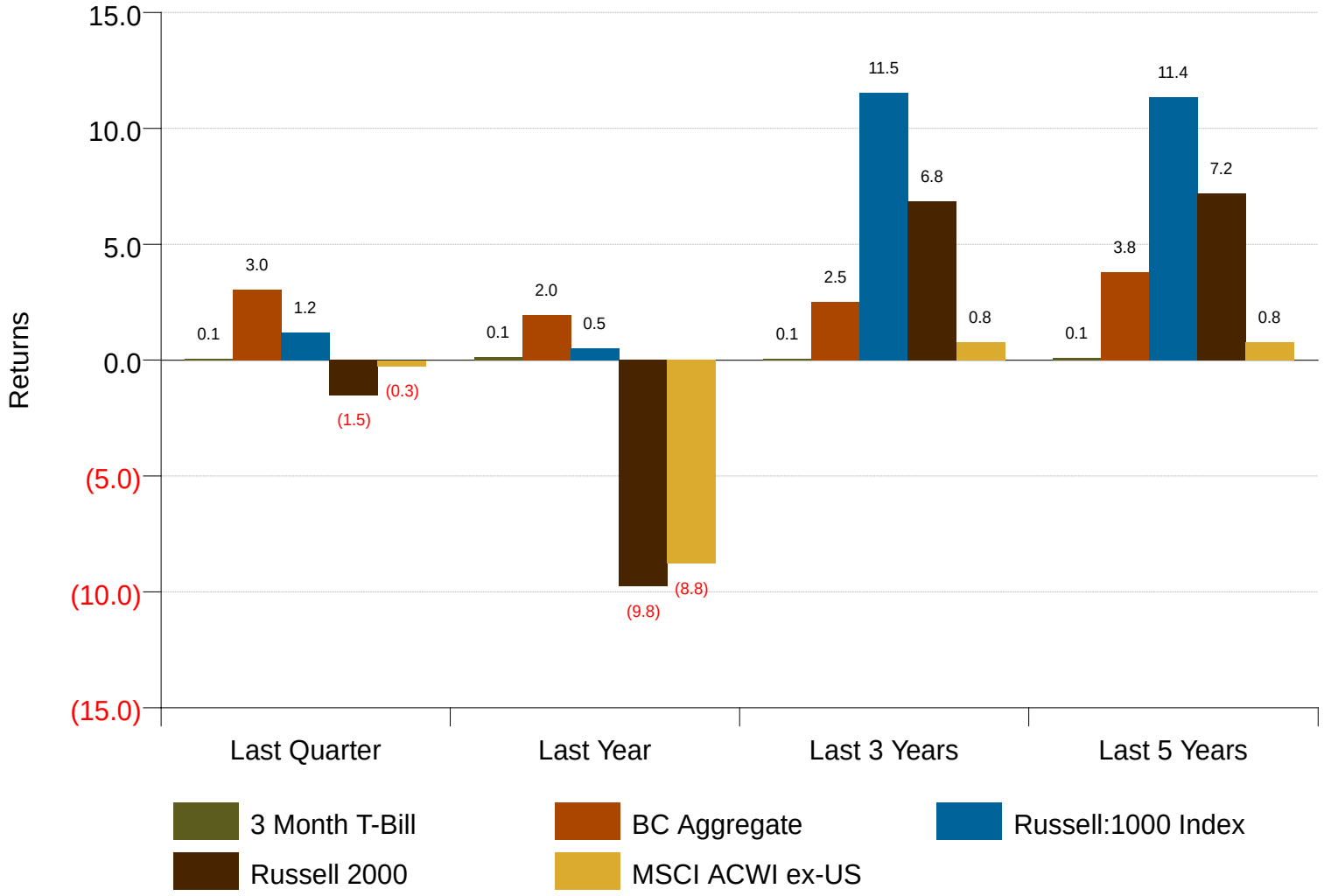


Source: Bureau of Labor Statistics

- Initial estimate of first quarter GDP came out at 0.5%, down from a fourth quarter reading of 1.4%.
- March headline inflation rose 0.9% over the trailing twelve months. Core CPI Increased 2.2%.
- March unemployment was 5.0% (up 0.1% from February) on a tick up in the labor force participation rate.
- The Fed maintained the fed funds target rate of 0.25% - 0.50 and reduced their year-end target rate from 1.4% to 0.9%.

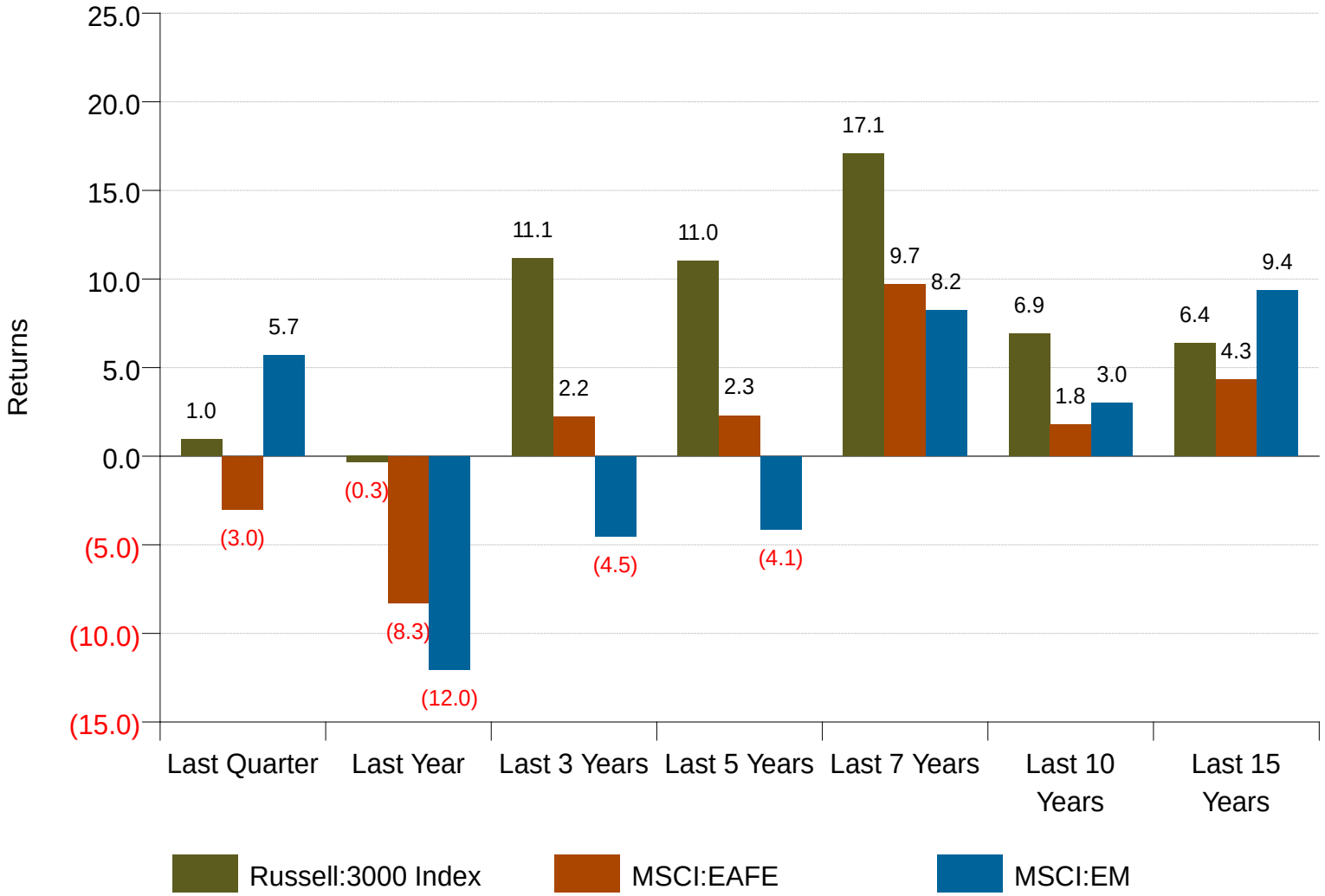
Asset Class Performance

Returns for 1 Quarter Ended March 31, 2016



Domestic, Developed, and Emerging Stock Returns

Returns for Various Periods Current Quarter Ending March 31, 2016



Returns for the MSCI: EAFE and MSCI:EM are reported "with net dividends," which means returns are computed with dividends reinvested after the deduction of withholding taxes, using a tax rate applicable to non-resident institutional investors who do not benefit from double taxation treaties.

Global Equity Sector Performance

Quarter Ending March 31, 2016

	Auto/Dur/Services	Banks	Cons. Staples	Div Financials	Energy	Health Care	Industrials	Insurance	Materials	Media	Retailing	Software	Tech Hardware	Telecom	Utilities	Country
Canada	n/a	12.2%	14.2%	8.9%	16.4%	-74.0%	10.6%	4.7%	29.2%	9.7%	22.8%	9.9%	-11.8%	17.8%	18.3%	10.6%
USA	1.8%	-13.2%	4.8%	-1.7%	2.7%	-6.5%	4.2%	-1.4%	2.7%	2.8%	-1.0%	0.8%	3.6%	14.0%	14.5%	0.4%
Belgium	n/a	-17.5%	1.2%	-3.5%	n/a	-15.3%	n/a	-14.5%	2.2%	n/a	n/a	n/a	n/a	5.0%	n/a	-2.5%
Finland	-1.7%	n/a	n/a	n/a	9.8%	-4.7%	8.5%	-6.8%	-2.6%	n/a	n/a	n/a	-16.9%	3.0%	0.3%	-5.8%
France	3.9%	-13.6%	3.3%	7.3%	2.3%	-4.5%	3.5%	-12.0%	4.1%	2.7%	n/a	-0.4%	-5.8%	4.9%	-8.7%	-0.1%
Germany	-7.7%	-16.3%	-0.8%	-9.9%	n/a	-4.8%	7.3%	-5.0%	-0.7%	-0.7%	n/a	0.8%	n/a	-0.6%	-0.2%	-2.8%
Italy	-30.8%	-28.3%	n/a	-23.4%	-1.7%	n/a	0.0%	-18.1%	n/a	n/a	n/a	n/a	n/a	-15.3%	9.0%	-11.7%
Netherlands	n/a	n/a	4.0%	n/a	15.7%	n/a	3.7%	-5.0%	2.7%	12.3%	n/a	n/a	n/a	10.6%	n/a	3.2%
Norway	n/a	-4.6%	14.4%	n/a	12.7%	n/a	n/a	6.3%	-3.9%	n/a	n/a	n/a	n/a	-3.4%	n/a	1.4%
Spain	n/a	-10.0%	-12.0%	n/a	2.8%	-3.7%	0.7%	-13.8%	n/a	n/a	-2.1%	-2.8%	n/a	1.0%	-1.8%	-4.5%
Sweden	8.8%	-8.3%	2.4%	-5.2%	16.6%	-12.6%	5.3%	n/a	-5.5%	n/a	-6.8%	n/a	3.1%	0.4%	n/a	-1.1%
Switzerland	-6.4%	n/a	0.4%	-18.8%	n/a	-11.9%	7.4%	-6.5%	4.6%	n/a	n/a	n/a	n/a	8.6%	n/a	-6.3%
UK	-4.0%	-20.9%	4.4%	-7.5%	4.2%	-9.7%	-0.8%	-11.3%	14.9%	-1.2%	-13.7%	-5.9%	n/a	-5.6%	0.1%	-3.6%
Australia	1.9%	-7.0%	2.8%	5.3%	2.5%	2.9%	11.1%	4.9%	7.9%	3.7%	18.9%	-11.0%	n/a	4.5%	7.0%	0.8%
Hong Kong	11.2%	-4.3%	n/a	-2.9%	n/a	n/a	-4.8%	-5.8%	n/a	n/a	n/a	n/a	n/a	8.8%	4.5%	-1.1%
Japan	-10.3%	-24.7%	0.8%	0.1%	-10.4%	-2.4%	-4.2%	-17.5%	-10.5%	-6.9%	-5.3%	-3.1%	-9.4%	1.9%	-5.4%	-7.3%
Singapore	14.2%	1.3%	22.4%	6.0%	n/a	n/a	1.6%	n/a	n/a	7.0%	21.0%	n/a	n/a	8.6%	n/a	4.8%
China	-9.4%	-7.4%	-7.7%	-9.5%	6.7%	-6.6%	-7.1%	-16.5%	7.3%	n/a	-12.7%	0.5%	-9.1%	0.6%	-3.6%	-4.8%
India	-3.7%	-11.2%	-1.6%	-5.2%	-0.5%	-8.6%	-2.7%	n/a	8.3%	-11.6%	n/a	5.1%	n/a	-9.5%	-8.1%	-2.9%
Korea	3.7%	3.8%	-3.4%	0.4%	30.5%	17.2%	3.6%	2.8%	16.5%	-17.3%	0.5%	-6.1%	6.0%	2.1%	22.2%	4.8%
Taiwan	0.8%	5.2%	7.9%	-3.4%	19.8%	n/a	1.9%	-11.9%	13.4%	n/a	-4.9%	n/a	8.9%	10.1%	n/a	7.7%
Brazil	25.5%	42.1%	17.7%	n/a	36.0%	25.2%	4.6%	n/a	9.6%	n/a	24.2%	n/a	n/a	38.0%	33.0%	27.4%
Mexico	n/a	5.2%	5.0%	5.2%	n/a	n/a	9.2%	n/a	22.0%	1.6%	-2.0%	n/a	n/a	11.7%	n/a	8.3%
Russia	n/a	14.5%	-0.7%	n/a	18.5%	n/a	n/a	n/a	12.6%	n/a	n/a	n/a	n/a	19.2%	13.1%	15.7%
South Africa	28.7%	17.3%	15.9%	14.4%	12.5%	14.0%	20.7%	14.3%	49.1%	2.4%	4.9%	n/a	n/a	7.2%	n/a	13.0%
Global Sector	-1.8%	-8.9%	4.2%	-1.7%	5.1%	-7.3%	2.9%	-5.1%	5.2%	2.4%	-1.6%	0.6%	2.4%	6.2%	8.0%	-0.3%

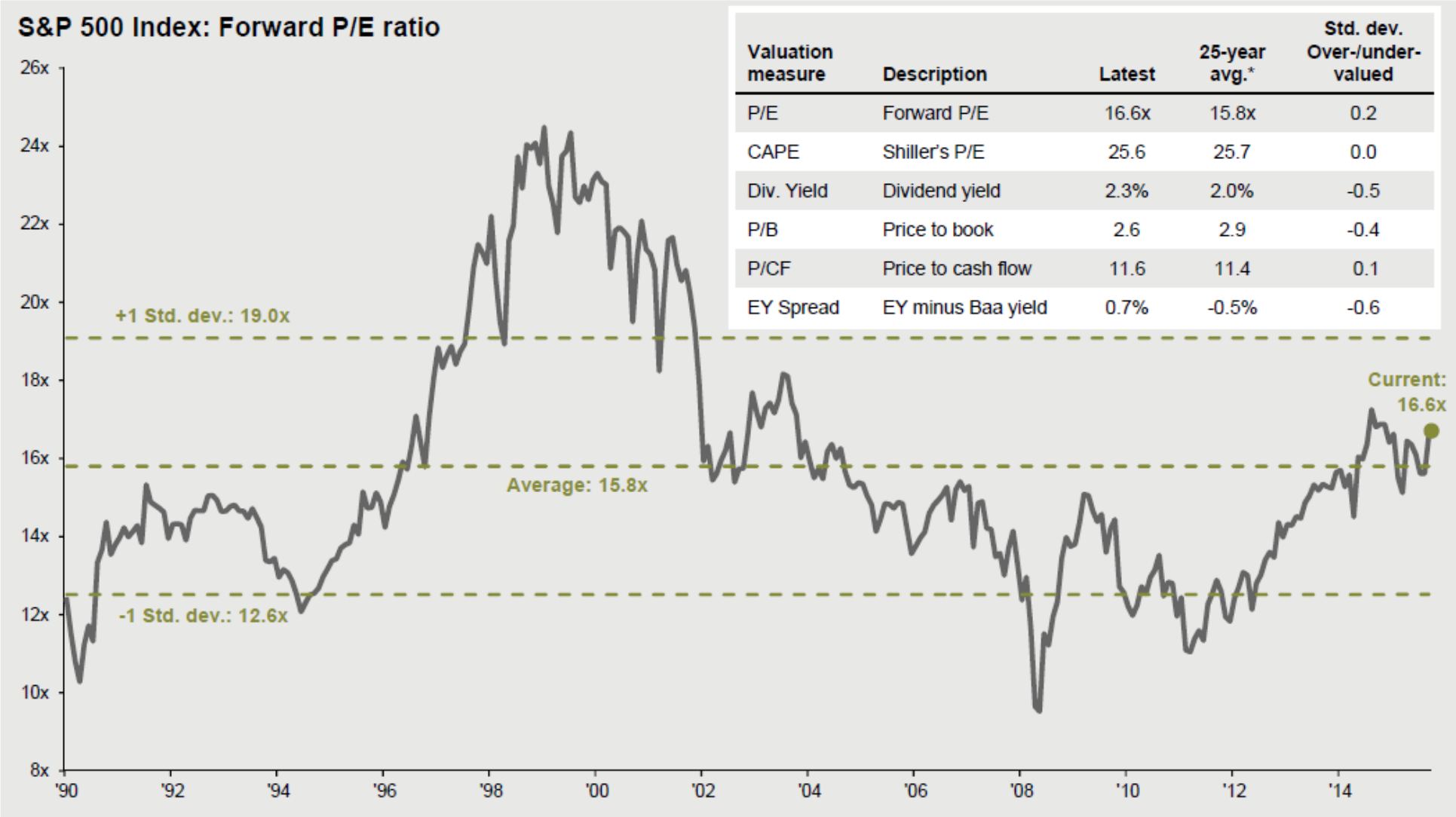
Key :

= underperform MSCI AC World by 7% or more

= outperform MSCI AC World by 7% or more

Source: Bank of America, “Global Performance Monitor: Tactical and Cyclical,” 1 April 2016.

US Equity Valuation Metrics

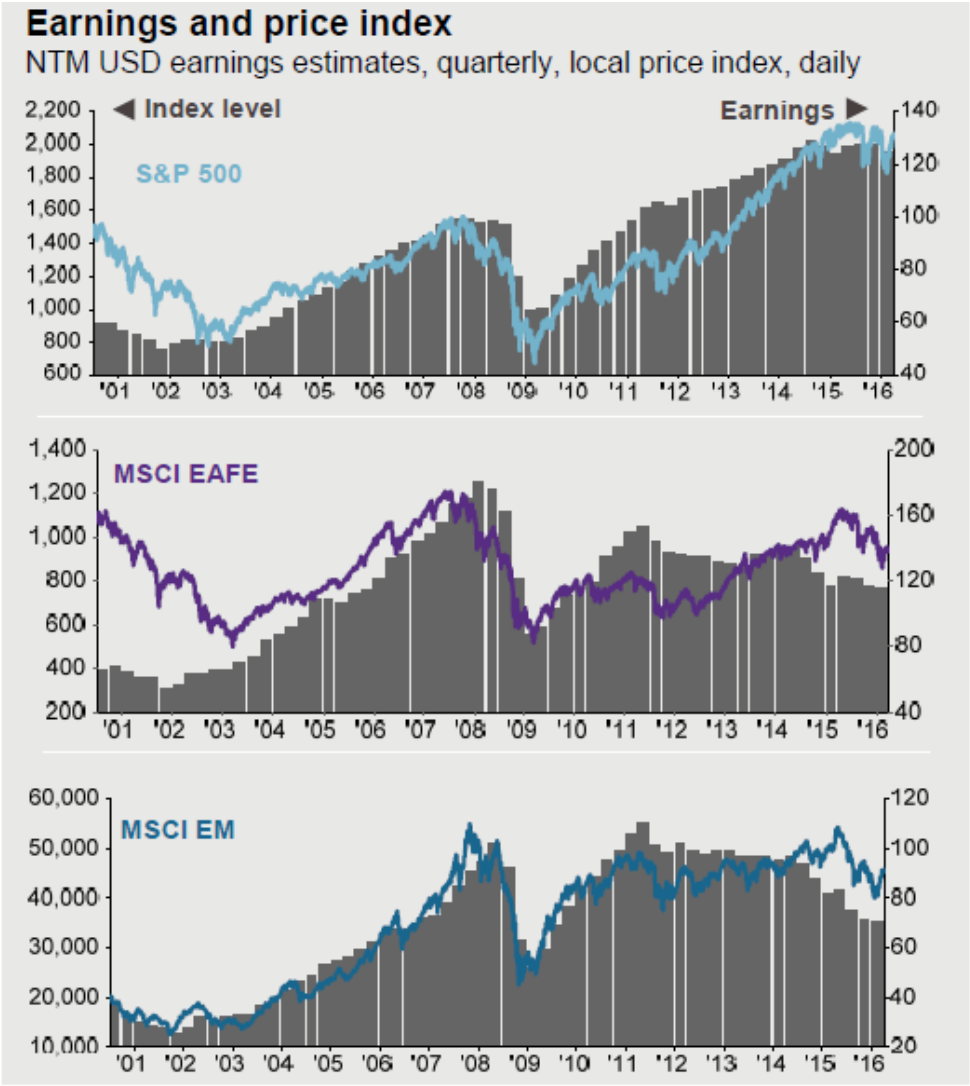


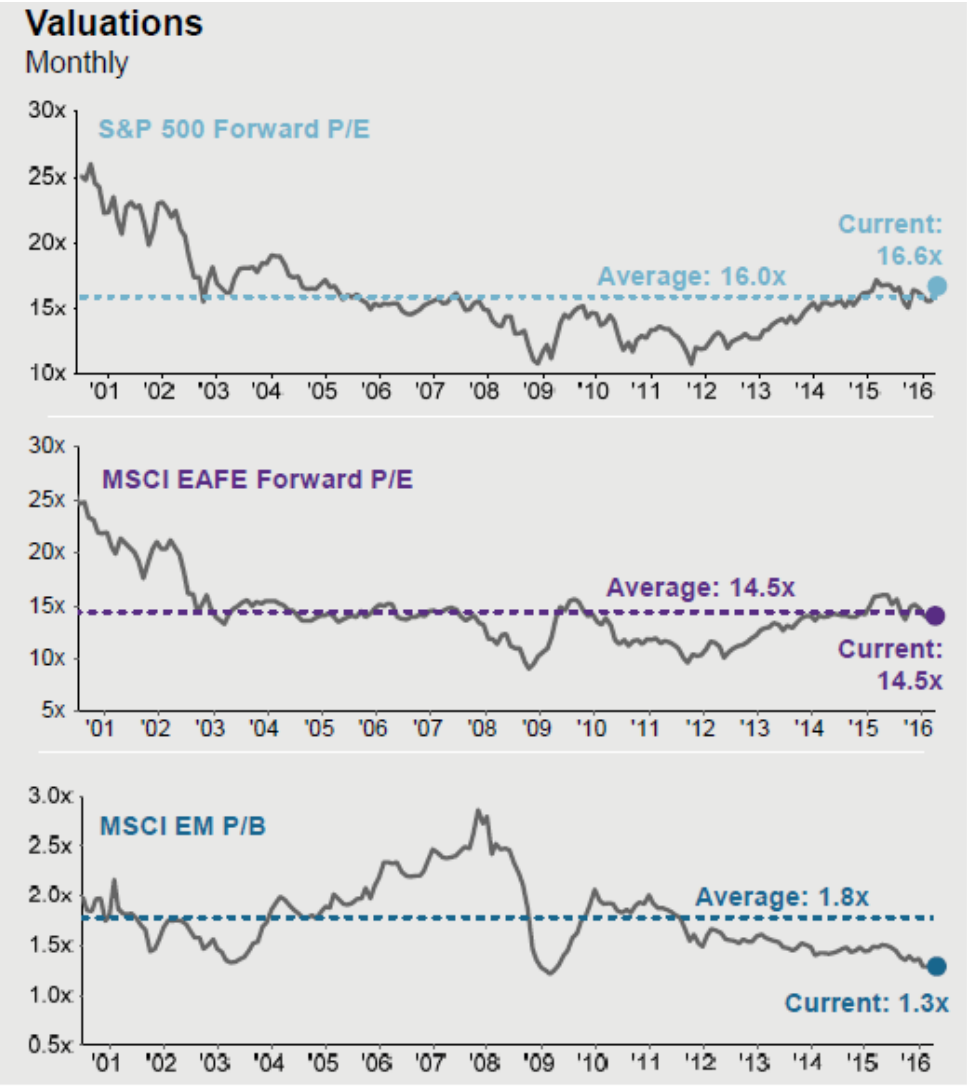
Valuation measure	Description	Latest	25-year avg.*	Std. dev. Over-/under-valued
P/E	Forward P/E	16.6x	15.8x	0.2
CAPE	Shiller's P/E	25.6	25.7	0.0
Div. Yield	Dividend yield	2.3%	2.0%	-0.5
P/B	Price to book	2.6	2.9	-0.4
P/CF	Price to cash flow	11.6	11.4	0.1
EY Spread	EY minus Baa yield	0.7%	-0.5%	-0.6

Source: FactSet, FRB, Robert Shiller, Standard & Poor's, J.P. Morgan Asset Management.

Source: JP Morgan Asset Management

International Equity Valuations





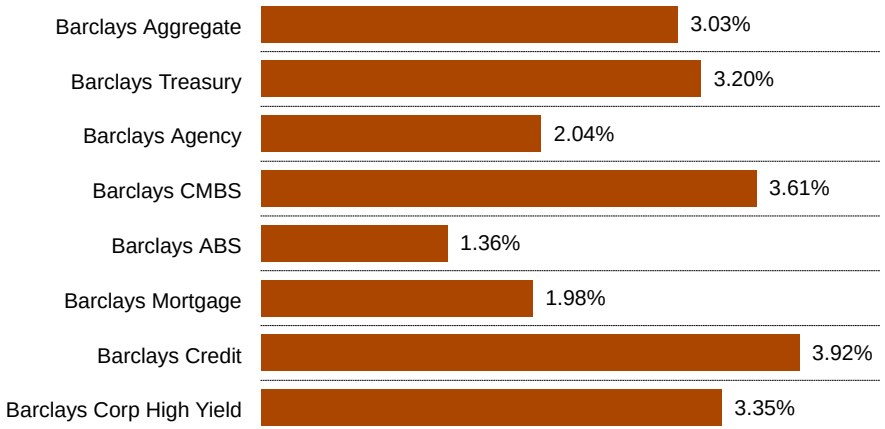
Sources: Compustat, FactSet, MSCI, Standard & Poor's, J.P. Morgan Asset Management.

Source: JP Morgan Asset Management

Total Rates of Return by Bond Sector

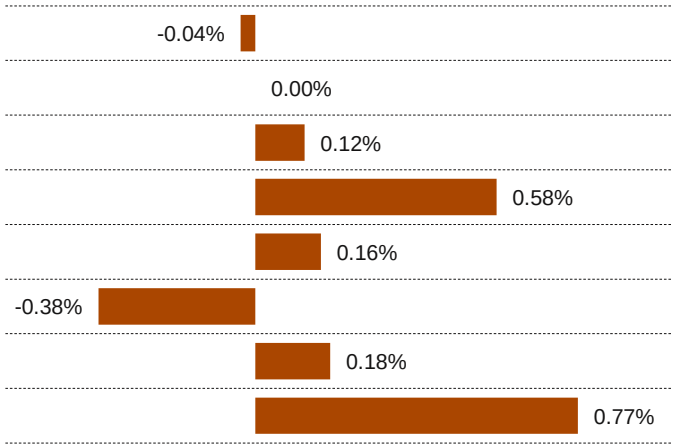
Periods Ending March 31, 2016

Absolute Returns for Quarter ended March 31, 2016

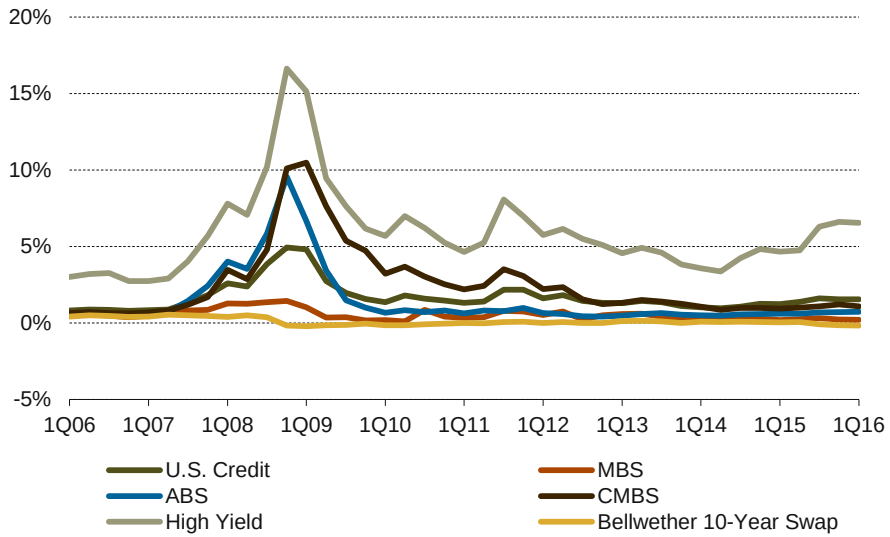


Source: Barclays

Excess Return versus Like-Duration Treasuries



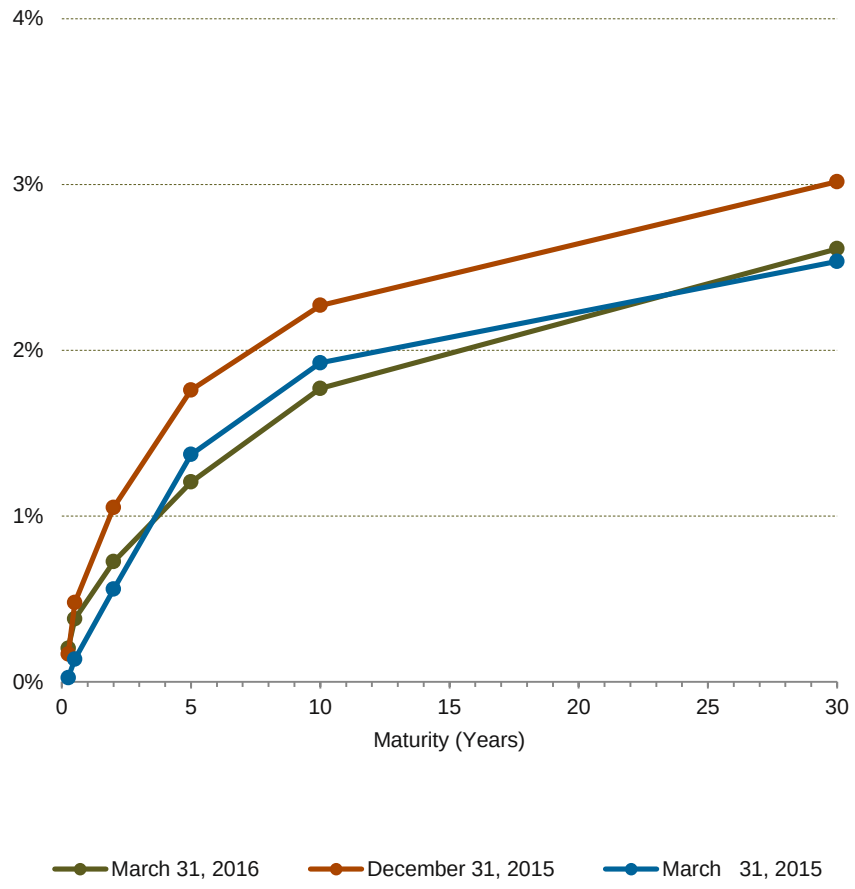
Effective Yield Over Treasuries



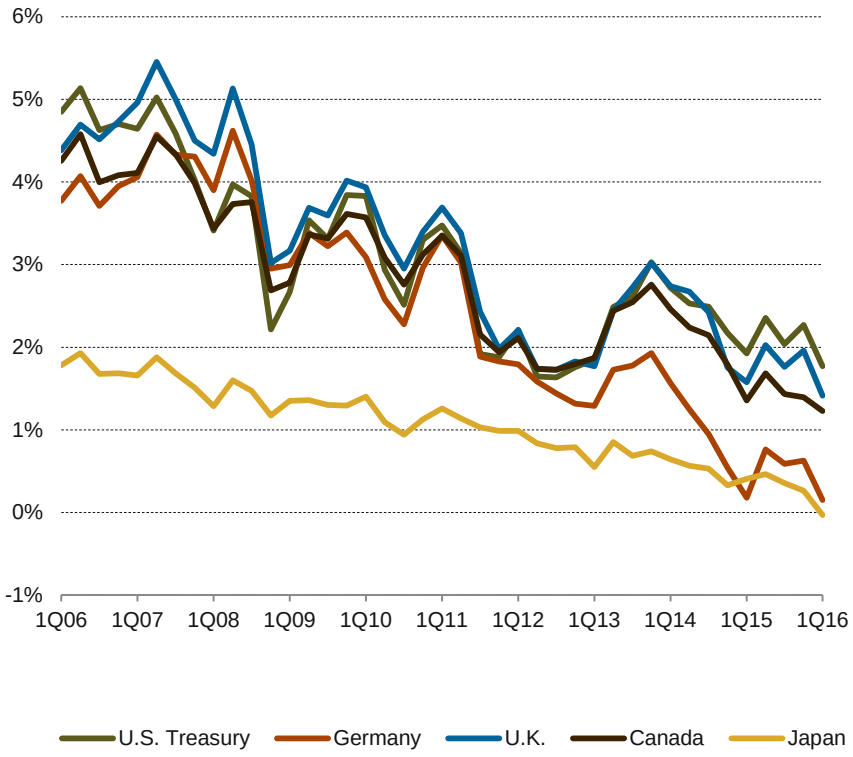
US Treasury Yield Curve and Global Gov't Yields

As of March 31, 2016

U.S. Treasury Yield Curves

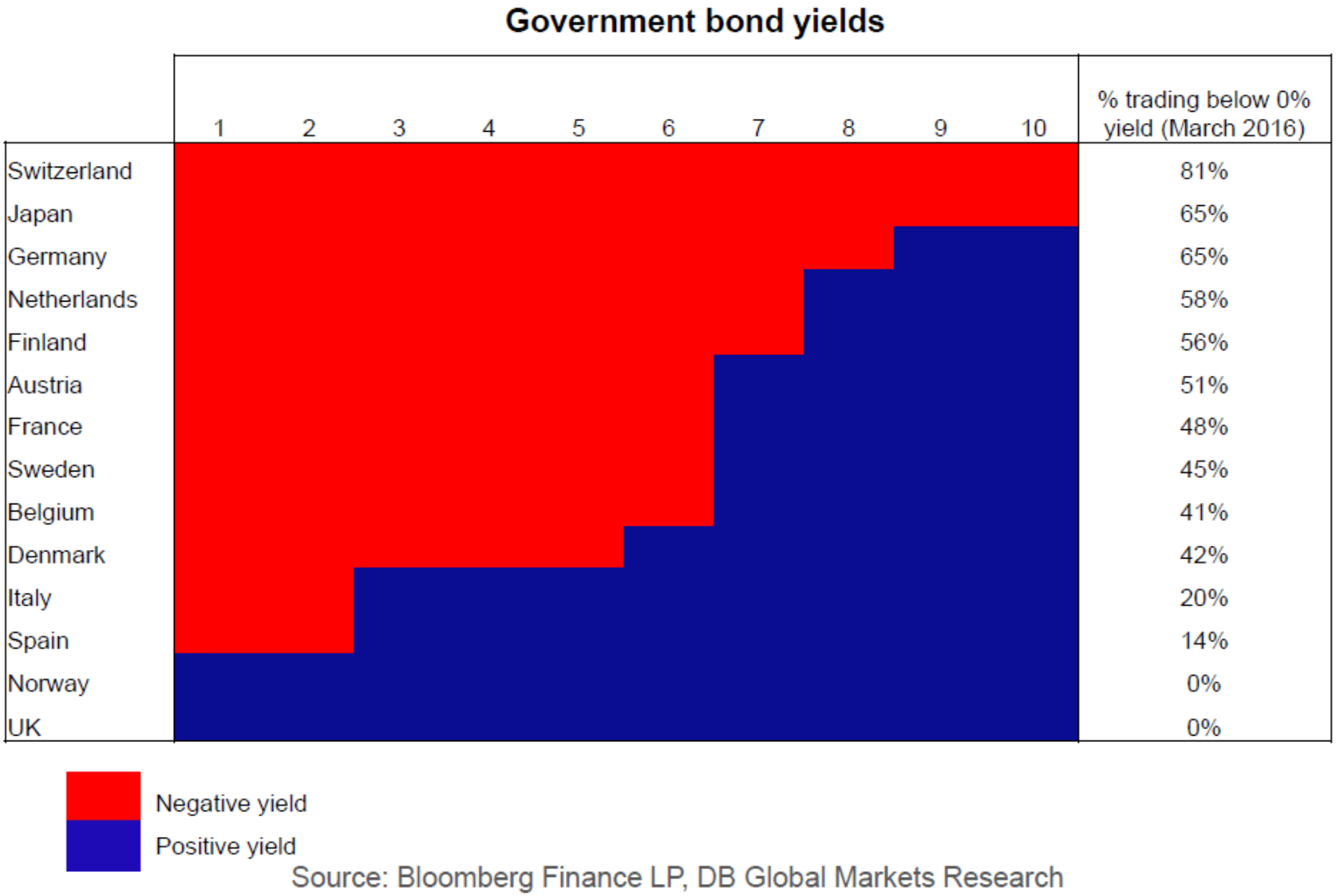


10-Year Global Government Bond Yields



Source: U.S. Department of the Treasury

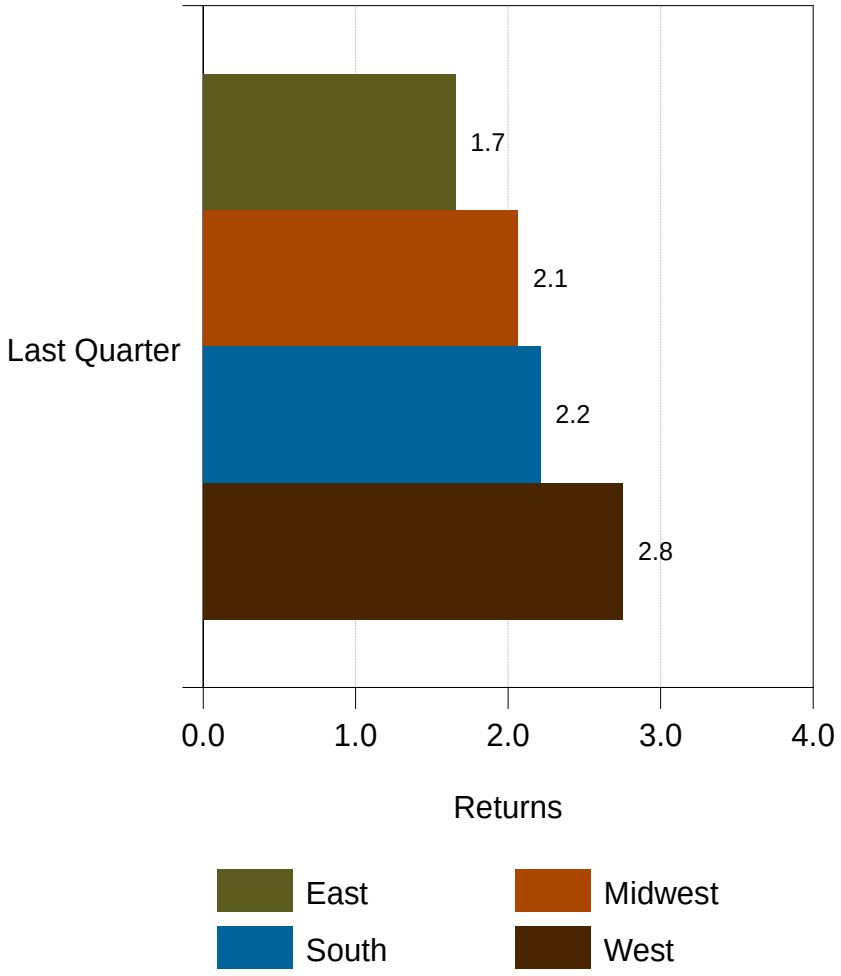
Negative Interest Rates



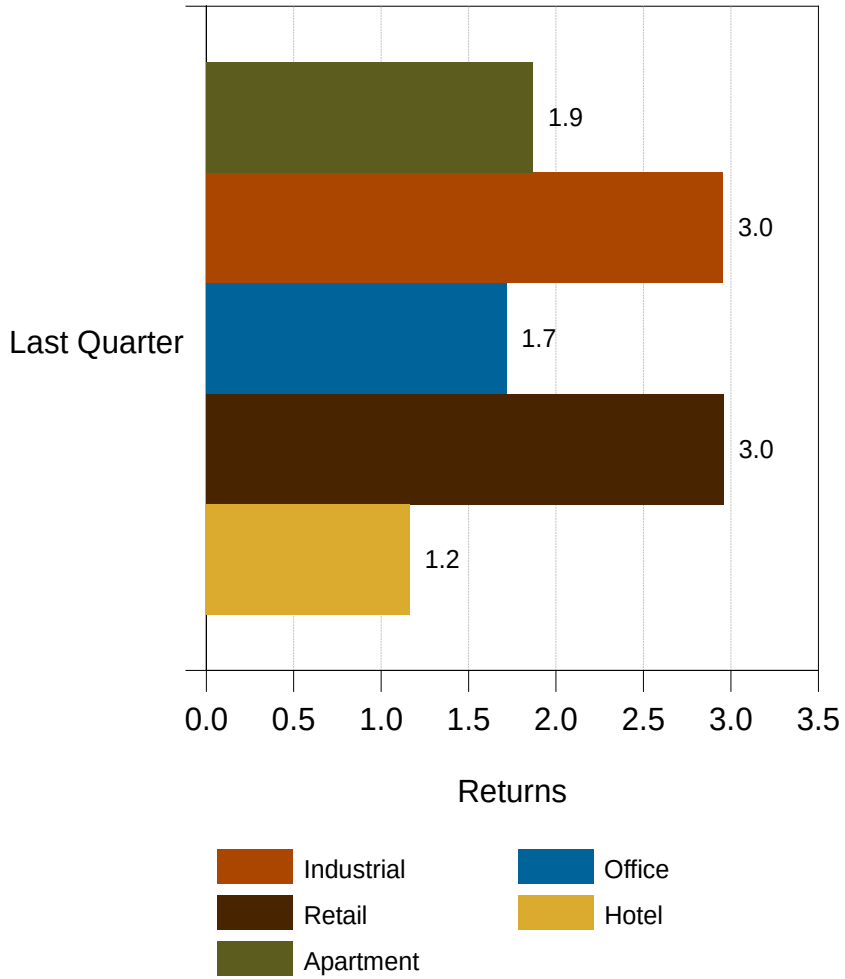
Source: Deutsche Bank

Real Estate

NCREIF Regional Returns
for Quarter Ending March 31, 2016

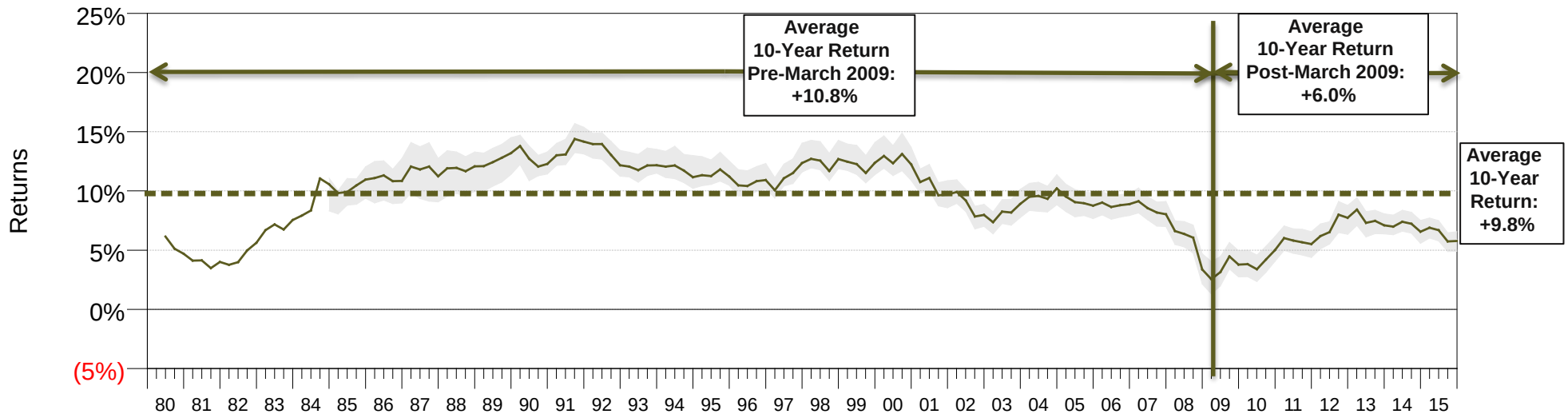


NCREIF Property Type Returns
for Quarter Ending March 31, 2016

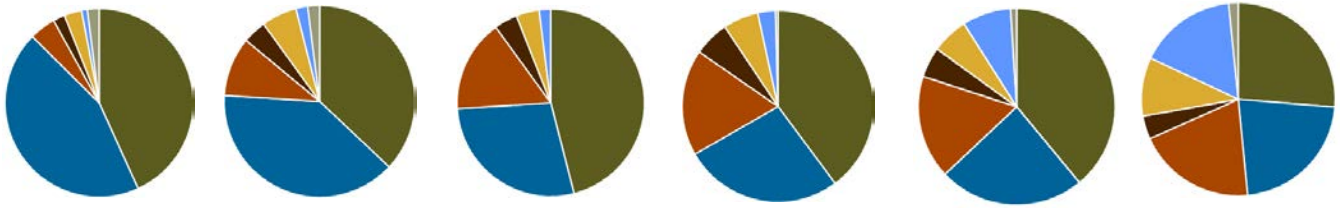


Historical Large Public Fund Asset Allocation and Returns

CAI Large Public Fund Database: Rolling 10 Year Returns



10 Year Return	10.9%	12.3%	11.3%	12.6%	8.8%	5.0%	5.9%



ASSET CLASS	1985	1990	1995	2000	2005	2010	2015
Domestic Equity	N/A	43%	37%	46%	40%	39%	26%
Domestic Fixed Income		44%	39%	28%	27%	24%	22%
Non-U.S. Equity		5%	10%	16%	18%	17%	20%
Non-U.S. Fixed Income		2%	4%	4%	6%	5%	4%
Real Estate		3%	6%	4%	6%	6%	10%
Other Alternatives		1%	2%	2%	3%	8%	16%
Cash Equivalents		2%	2%			1%	2%

Source: Callan Associates Inc.
Allocations are as of December 31 of the applicable year.
Large Public Funds have at least $1B in AUM.

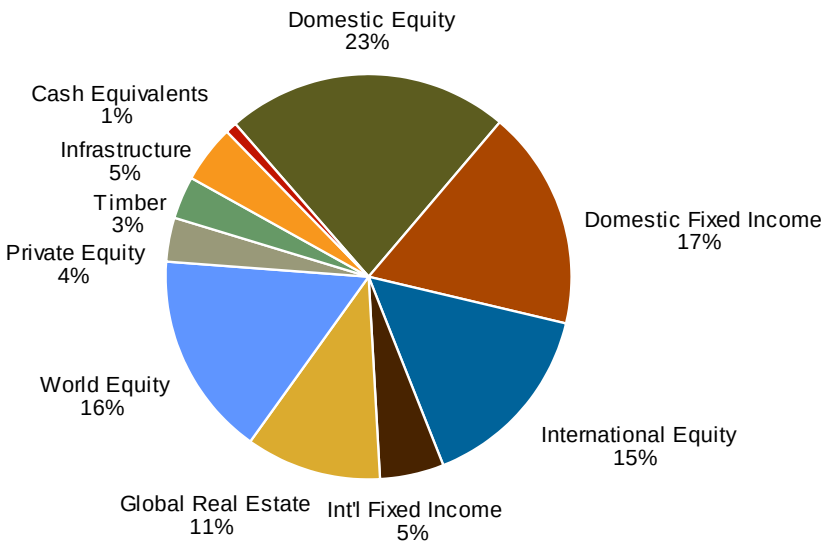
Consolidated Pension Trusts Quarterly Review

- Public Employees Retirement System
- Teachers' Fund for Retirement

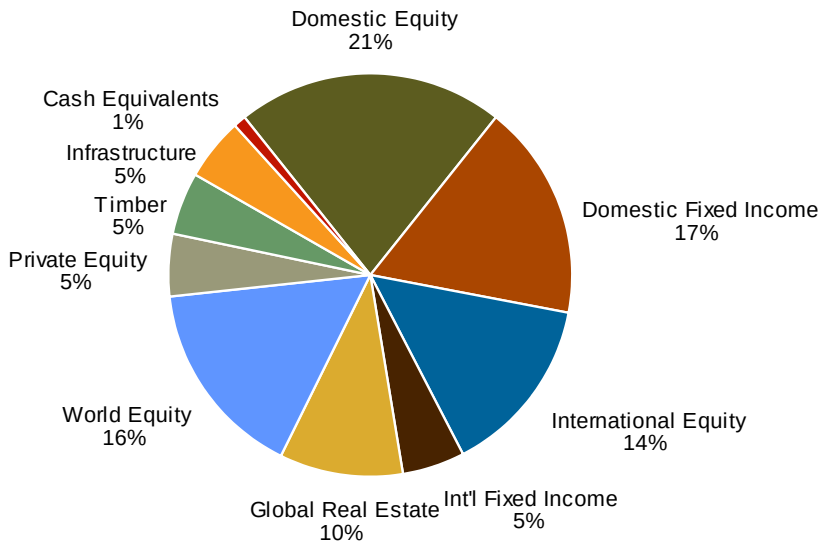
Consolidated Pension Trust Allocation

As of March 31, 2016

Actual Asset Allocation



Target Asset Allocation

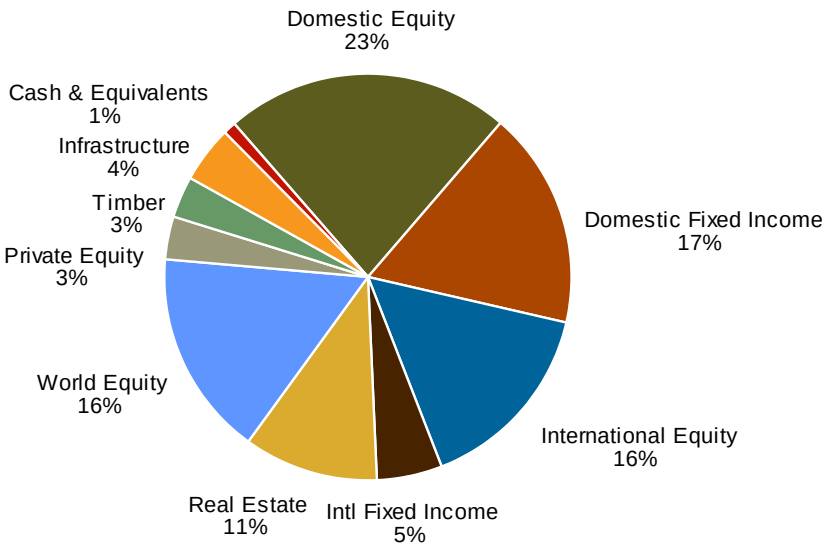


Asset Class	$000s Actual	Weight Actual	Target	Percent Difference	$000s Difference
Domestic Equity	1,053,891	22.6%	21.4%	1.2%	57,491
Domestic Fixed Income	813,405	17.5%	17.3%	0.2%	7,904
International Equity	711,253	15.3%	14.4%	0.9%	40,778
Int'l Fixed Income	238,540	5.1%	5.0%	0.1%	5,736
Global Real Estate	502,278	10.8%	9.9%	0.9%	41,326
World Equity	759,328	16.3%	16.0%	0.3%	14,356
Private Equity	163,010	3.5%	5.0%	(1.5%)	(69,794)
Timber	156,098	3.4%	5.0%	(1.6%)	(76,706)
Infrastructure	215,022	4.6%	5.0%	(0.4%)	(17,782)
Cash Equivalents	43,251	0.9%	1.0%	(0.1%)	(3,310)
Total	4,656,075	100.0%	100.0%		

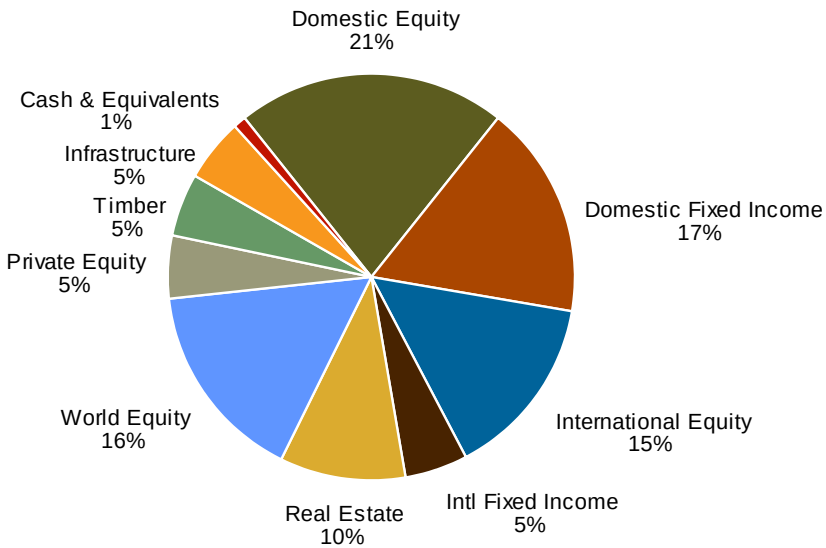
PERS Allocation

As of March 31, 2016

Actual Asset Allocation



Target Asset Allocation

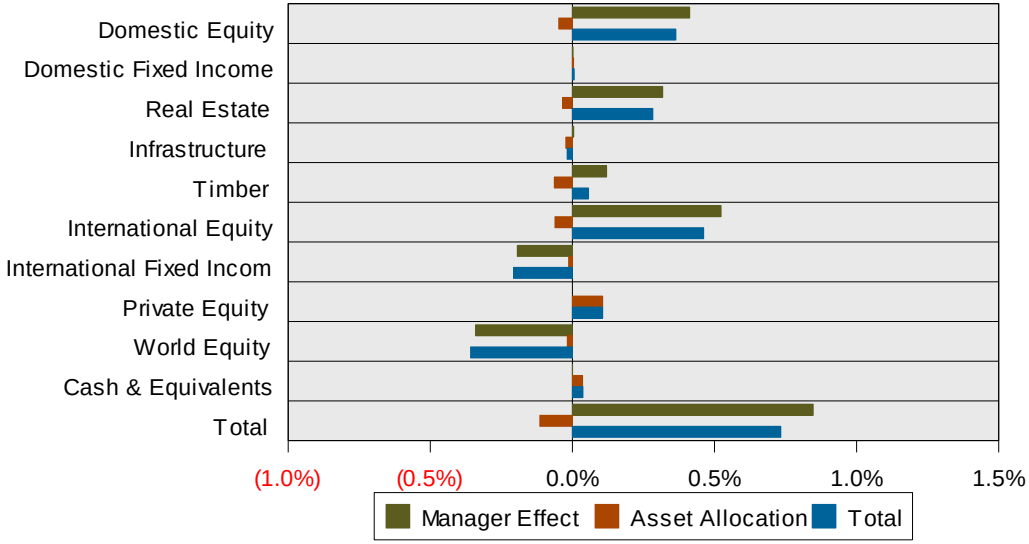


Asset Class	$000s Actual	Weight Actual	Target	Percent Difference	$000s Difference
Domestic Equity	549,965	22.7%	21.4%	1.3%	31,660
Domestic Fixed Income	420,156	17.3%	17.0%	0.3%	8,419
International Equity	375,521	15.5%	14.6%	0.9%	21,911
Intl Fixed Income	125,433	5.2%	5.0%	0.2%	4,334
Real Estate	259,649	10.7%	10.0%	0.7%	17,450
World Equity	398,052	16.4%	16.0%	0.4%	10,534
Private Equity	81,780	3.4%	5.0%	(1.6%)	(39,320)
Timber	78,848	3.3%	5.0%	(1.7%)	(42,251)
Infrastructure	108,778	4.5%	5.0%	(0.5%)	(12,322)
Cash & Equivalents	23,805	1.0%	1.0%	0.0%	(414)
Total	2,421,987	100.0%	100.0%		

PERS Performance and Attribution

As of March 31, 2016

One Year Relative Attribution Effects



1 Year Ended 3/31/16	
Gross:	-0.12%
Net:	-0.43%
Target:	-0.85%
Net Added:	0.42%

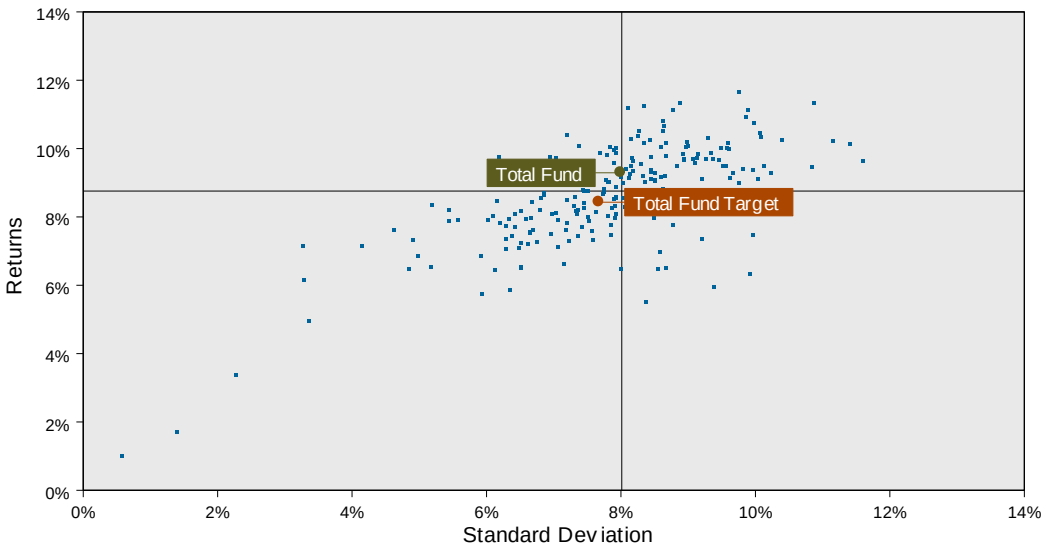
One Year Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	23%	21%	0.02%	(1.83%)	0.41%	(0.05%)	0.36%
Domestic Fixed Income	18%	17%	0.38%	0.33%	0.00%	0.00%	0.01%
Real Estate	10%	10%	15.41%	11.84%	0.32%	(0.03%)	0.28%
Infrastructure	5%	5%	0.55%	0.50%	0.00%	(0.02%)	(0.02%)
Timber	4%	5%	6.65%	2.90%	0.12%	(0.06%)	0.06%
International Equity	15%	15%	(5.74%)	(9.05%)	0.52%	(0.06%)	0.46%
International Fixed Incom	5%	5%	2.64%	6.69%	(0.19%)	(0.01%)	(0.21%)
Private Equity	4%	5%	(9.27%)	(9.27%)	0.00%	0.11%	0.11%
World Equity	16%	16%	(5.56%)	(3.45%)	(0.34%)	(0.02%)	(0.36%)
Cash & Equivalents	1%	1%	0.19%	0.12%	0.00%	0.04%	0.04%
Total			**(0.12%) =**	**(0.85%) +**	**0.85% +**	**(0.11%)**	**0.73%**

PERS Performance and Attribution

As of March 31, 2016

Five and Three-Quarter Year Annualized Risk vs Return



Squares represent membership of the Public Fund Sponsor Database

5.75 Years Ended 3/31/16	
Gross:	9.29%
Net:	8.94%
Target:	8.43%
Net Added:	0.51%

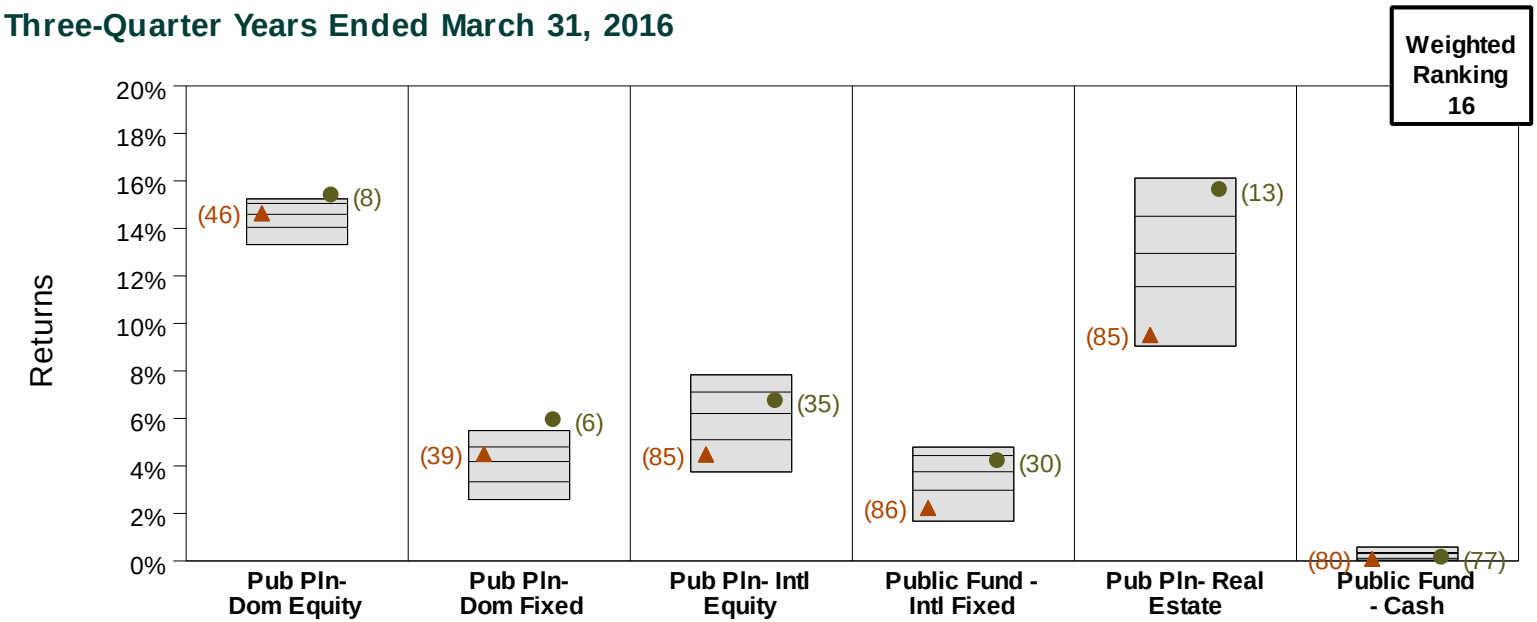
Five and Three-Quarter Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	28%	27%	15.35%	14.64%	0.10%	0.10%	0.21%
Domestic Fixed Income	20%	20%	5.90%	4.51%	0.23%	(0.04%)	0.18%
Real Estate	9%	9%	15.59%	12.54%	0.23%	0.01%	0.24%
Timber	4%	4%	-	-	(0.23%)	(0.06%)	(0.29%)
Infrastructure	3%	4%	-	-	0.15%	0.08%	0.23%
Interntional Equity	16%	16%	6.70%	4.49%	0.33%	(0.07%)	0.27%
International Fixed Incom	5%	5%	4.16%	2.23%	0.10%	(0.01%)	0.09%
Private Equity	5%	5%	2.86%	2.86%	0.00%	(0.03%)	(0.03%)
World Equity	10%	10%	-	-	0.01%	(0.04%)	(0.04%)
Cash & Equivalents	1%	1%	0.11%	0.09%	0.00%	(0.01%)	(0.01%)
Total			**9.29%**	**= 8.43%**	**+ 0.92%**	**+ (0.07%)**	**0.86%**

Asset class composite results

PERS' results vs other Public Funds

Total Asset Class Performance
Five and Three-Quarter Years Ended March 31, 2016



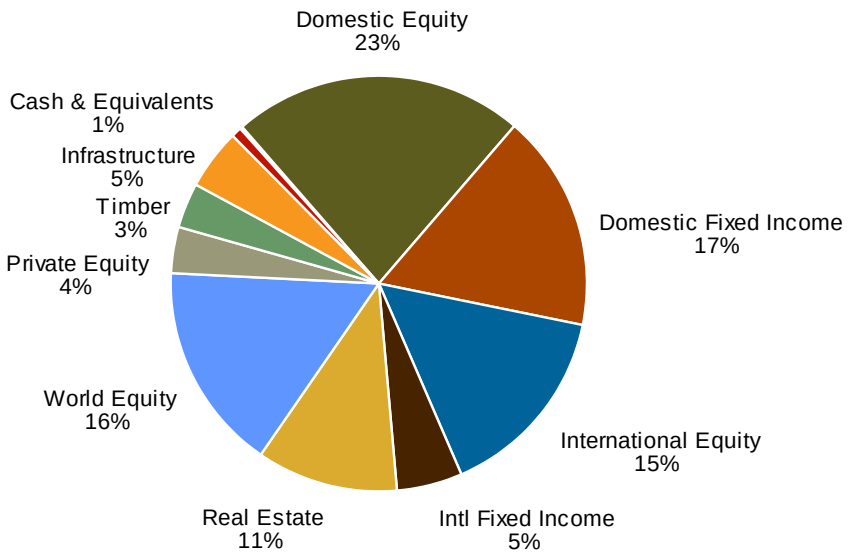
	Pub Pln- Dom Equity	Pub Pln- Dom Fixed	Pub Pln- Intl Equity	Public Fund - Intl Fixed	Pub Pln- Real Estate	Public Fund - Cash
10th Percentile	15.25	5.49	7.84	4.80	16.12	0.59
25th Percentile	15.05	4.80	7.11	4.44	14.52	0.36
Median	14.59	4.19	6.21	3.76	12.95	0.31
75th Percentile	14.04	3.33	5.10	2.98	11.55	0.11
90th Percentile	13.32	2.59	3.75	1.68	9.05	0.03
Asset Class Composite ●	15.35	5.90	6.70	4.16	15.59	0.11
Composite Benchmark ▲	14.64	4.51	4.49	2.23	9.52	0.09

- Public market asset classes are all above their respective medians except cash
- U.S. equity, fixed income, and real estate returns in top quartile

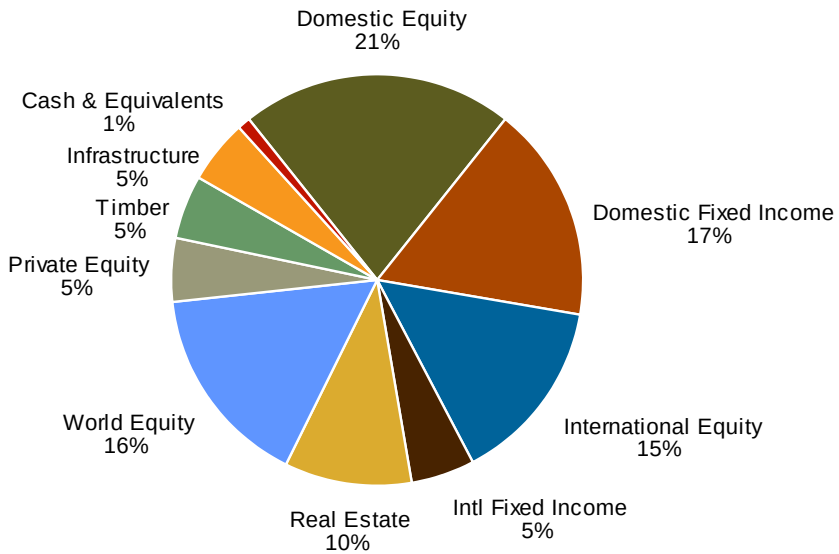
TFFR Allocation

As of March 31, 2016

Actual Asset Allocation



Target Asset Allocation

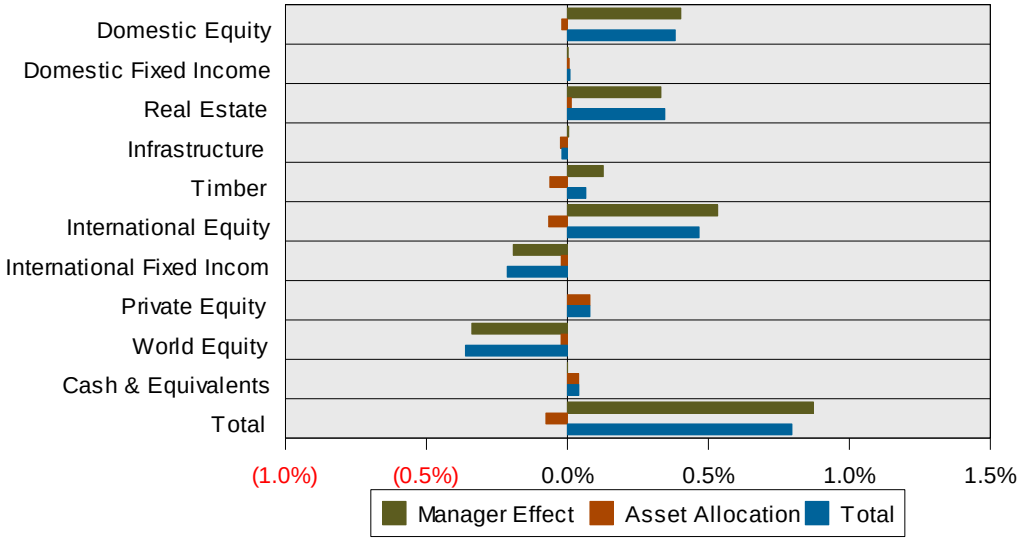


Asset Class	$000s Actual	Weight Actual	Target	Percent Difference	$000s Difference
Domestic Equity	467,358	22.7%	21.4%	1.3%	27,076
Domestic Fixed Income	348,194	16.9%	17.0%	(0.1%)	(1,564)
International Equity	315,365	15.3%	14.6%	0.7%	14,985
Intl Fixed Income	105,630	5.1%	5.0%	0.1%	2,760
Real Estate	227,060	11.0%	10.0%	1.0%	21,321
World Equity	333,046	16.2%	16.0%	0.2%	3,862
Private Equity	75,064	3.6%	5.0%	(1.4%)	(27,805)
Timber	71,518	3.5%	5.0%	(1.5%)	(31,352)
Infrastructure	97,394	4.7%	5.0%	(0.3%)	(5,476)
Cash & Equivalents	16,767	0.8%	1.0%	(0.2%)	(3,807)
Total	2,057,395	100.0%	100.0%		

TFFR Performance and Attribution

As of March 31, 2016

One Year Relative Attribution Effects



1 Year Ended 3/31/16	
Gross:	-0.03%
Net:	-0.35%
Target:	-0.83%
Net Added:	0.48%

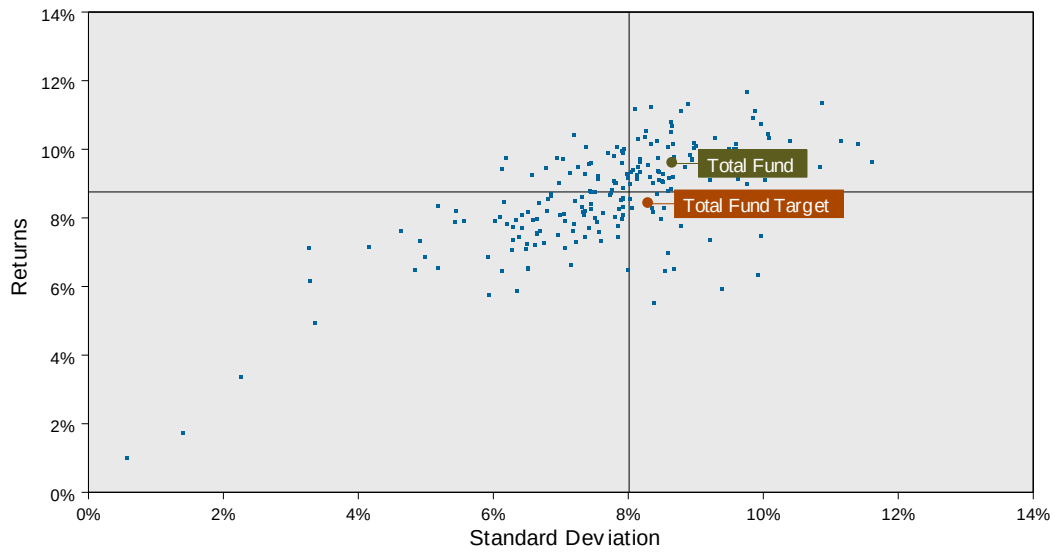
One Year Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	22%	21%	0.01%	(1.83%)	0.40%	(0.02%)	0.38%
Domestic Fixed Income	18%	17%	0.37%	0.33%	0.00%	0.01%	0.01%
Real Estate	11%	10%	15.42%	11.84%	0.33%	0.01%	0.35%
Infrastructure	5%	5%	0.55%	0.50%	0.01%	(0.02%)	(0.02%)
Timber	4%	5%	6.65%	2.90%	0.13%	(0.06%)	0.07%
International Equity	15%	15%	(5.51%)	(8.89%)	0.53%	(0.07%)	0.47%
International Fixed Incom	5%	5%	2.64%	6.69%	(0.19%)	(0.02%)	(0.21%)
Private Equity	4%	5%	(9.27%)	(9.27%)	0.00%	0.08%	0.08%
World Equity	16%	16%	(5.56%)	(3.45%)	(0.34%)	(0.02%)	(0.36%)
Cash & Equivalents	1%	1%	0.19%	0.12%	0.00%	0.04%	0.04%
Total			**(0.03%) =**	**(0.83%) +**	**0.87% +**	**(0.08%)**	**0.80%**

TFFR Performance and Attribution

As of March 31, 2016

Five and Three-Quarter Year Annualized Risk vs Return



Squares represent membership of the Public Fund Sponsor Database

5.75 Years Ended 3/31/16	
Gross:	9.59%
Net:	9.23%
Target:	8.41%
Net Added:	0.82%

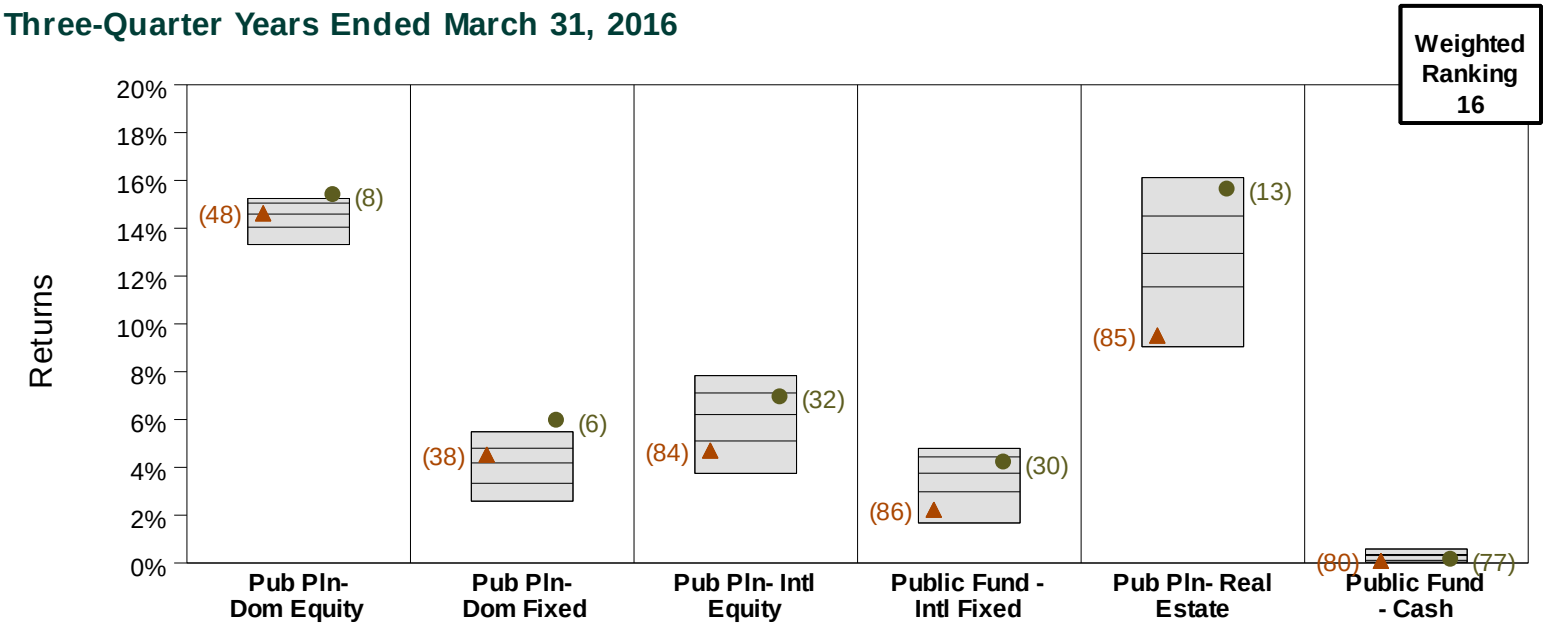
Five and Three-Quarter Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	27%	27%	15.36%	14.63%	0.12%	0.09%	0.21%
Domestic Fixed Income	18%	17%	5.92%	4.54%	0.23%	(0.02%)	0.22%
Real Estate	10%	10%	15.59%	12.54%	0.28%	0.03%	0.31%
Timber	4%	4%	-	-	(0.22%)	(0.01%)	(0.23%)
Infrastructure	3%	4%	-	-	0.16%	0.11%	0.26%
International Equity	18%	17%	6.90%	4.71%	0.41%	(0.03%)	0.38%
International Fixed Incom	5%	5%	4.17%	2.23%	0.10%	(0.01%)	0.09%
Private Equity	5%	5%	2.88%	2.88%	0.00%	(0.03%)	(0.03%)
World Equity	10%	10%	-	-	0.01%	(0.04%)	(0.04%)
Cash & Equivalents	1%	1%	0.11%	0.09%	0.00%	(0.01%)	(0.01%)
Total			**9.59%** =	**8.41%** +	**1.09%** +	**0.09%**	**1.18%**

Asset Class Composite Results

TFFR's asset class results vs other Public Pension Funds

Total Asset Class Performance
Five and Three-Quarter Years Ended March 31, 2016



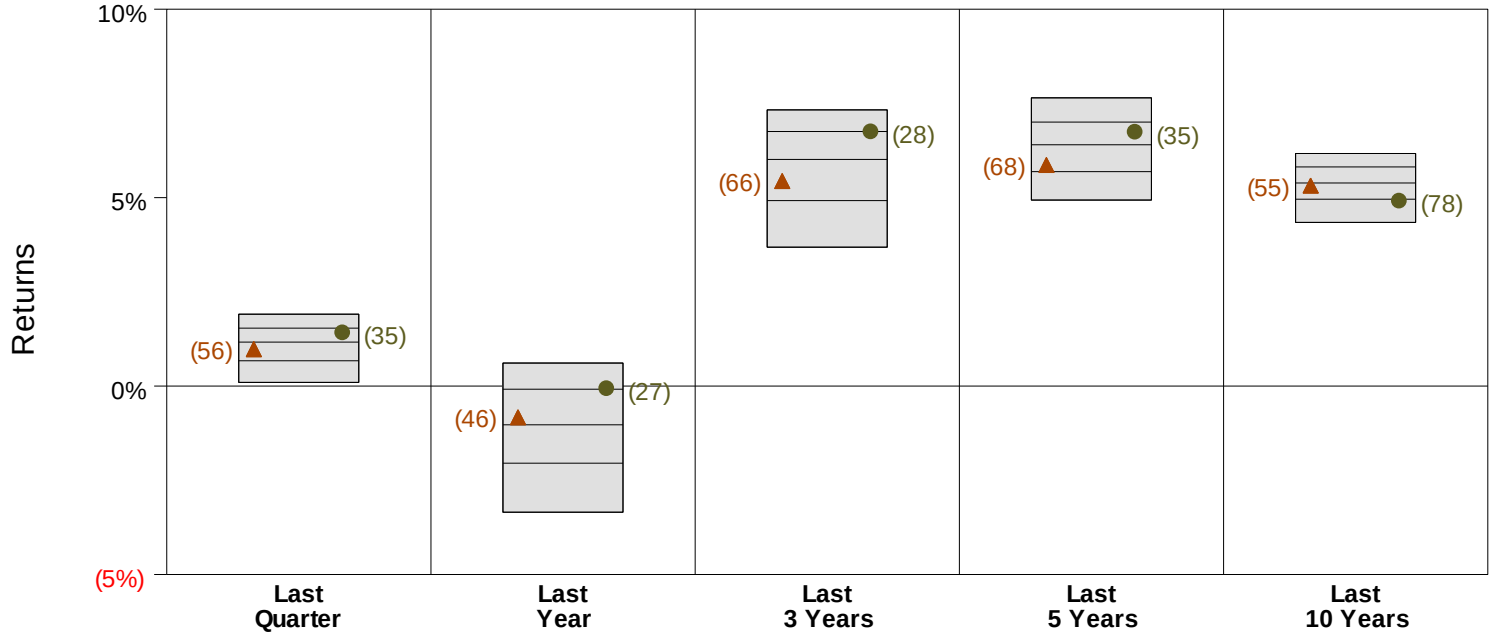
	Pub Pln- Dom Equity	Pub Pln- Dom Fixed	Pub Pln- Intl Equity	Public Fund - Intl Fixed	Pub Pln- Real Estate	Public Fund - Cash
10th Percentile	15.25	5.49	7.84	4.80	16.12	0.59
25th Percentile	15.05	4.80	7.11	4.44	14.52	0.36
Median	14.59	4.19	6.21	3.76	12.95	0.31
75th Percentile	14.04	3.33	5.10	2.98	11.55	0.11
90th Percentile	13.32	2.59	3.75	1.68	9.05	0.03
Asset Class Composite ●	15.36	5.92	6.90	4.17	15.59	0.11
Composite Benchmark ▲	14.63	4.54	4.71	2.23	9.52	0.09

- Public market asset classes are all above their respective medians except cash
- U.S. equity, fixed income, and real estate returns in top quartile

Consolidated Pension Trust: Total Fund versus Peer Group

As of March 31, 2016

Public Fund Sponsor Database



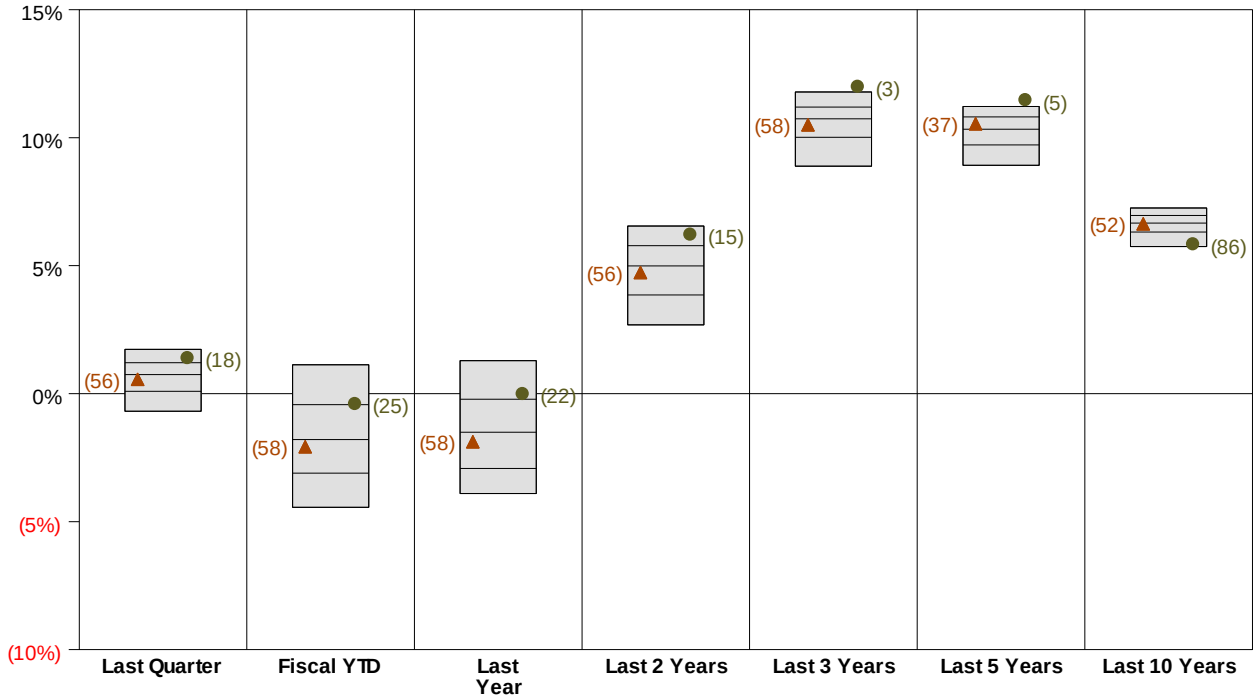
	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
10th Percentile	1.91	0.61	7.33	7.65	6.17
25th Percentile	1.54	(0.08)	6.76	7.01	5.82
Median	1.17	(1.03)	6.02	6.41	5.39
75th Percentile	0.67	(2.05)	4.92	5.69	4.96
90th Percentile	0.10	(3.35)	3.69	4.94	4.34
Total Fund ●	1.38	(0.10)	6.71	6.70	4.87
Policy Target ▲	0.98	(0.83)	5.44	5.87	5.32

- Above median and beating the target for the last 5 years!

Consolidated Pension Trust: U.S. Equity

As of March 31, 2016

Performance vs Pub Pln- Domestic Equity (Gross)



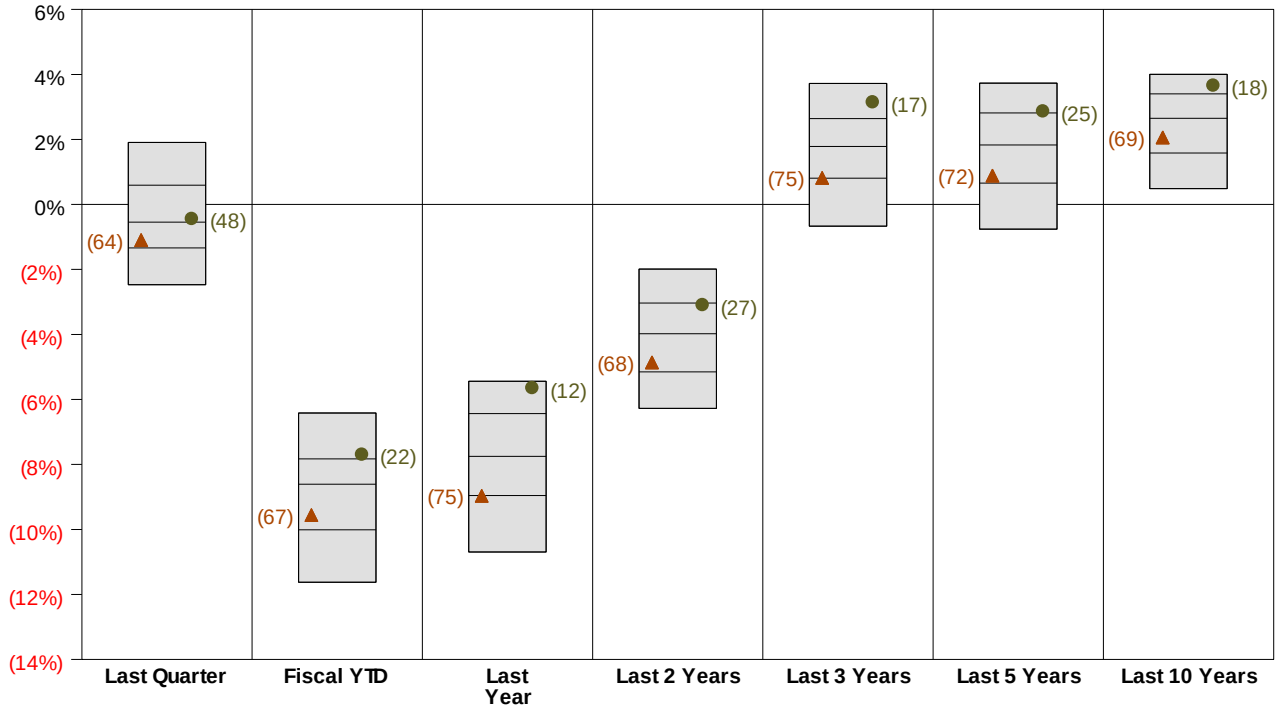
	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 10 Years
10th Percentile	1.73	1.13	1.29	6.55	11.79	11.22	7.25
25th Percentile	1.21	(0.43)	(0.22)	5.78	11.20	10.81	6.96
Median	0.75	(1.79)	(1.51)	4.99	10.74	10.33	6.66
75th Percentile	0.09	(3.10)	(2.92)	3.86	10.02	9.72	6.32
90th Percentile	(0.69)	(4.44)	(3.90)	2.69	8.89	8.92	5.75
Domestic Equity ●	1.35	(0.44)	(0.05)	6.18	11.95	11.43	5.80
Domestic Equity Target ▲	0.56	(2.07)	(1.88)	4.73	10.50	10.55	6.64

- Consistently above median and beating the benchmark for the last 5 years!

Consolidated Pension Trust: International Equity

As of March 31, 2016

Performance vs Pub Pln- International Equity (Gross)



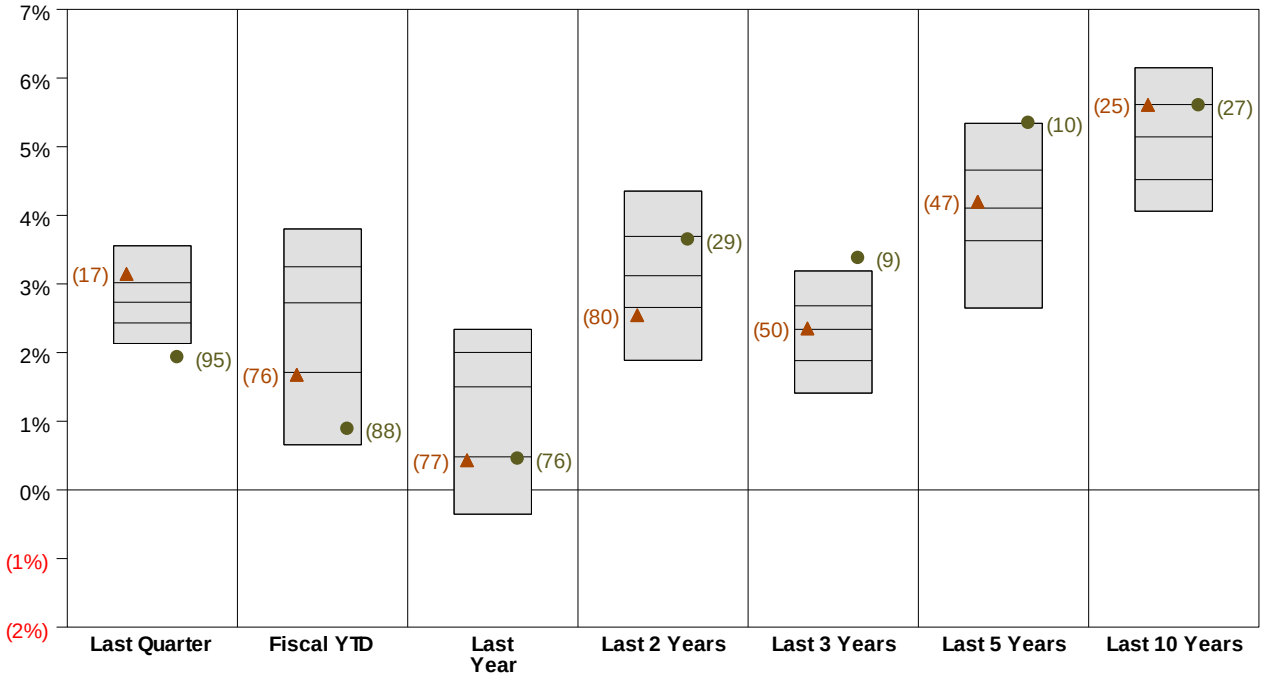
	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 10 Years
10th Percentile	1.91	(6.42)	(5.44)	(1.99)	3.72	3.73	4.00
25th Percentile	0.59	(7.83)	(6.44)	(3.04)	2.64	2.82	3.40
Median	(0.55)	(8.61)	(7.75)	(3.98)	1.78	1.83	2.65
75th Percentile	(1.34)	(10.01)	(8.96)	(5.15)	0.81	0.66	1.58
90th Percentile	(2.47)	(11.62)	(10.69)	(6.27)	(0.67)	(0.76)	0.49
International Equity ●	(0.48)	(7.72)	(5.68)	(3.12)	3.12	2.83	3.63
International Equity Target ▲	(1.10)	(9.56)	(8.96)	(4.86)	0.82	0.89	2.06

- The Pension Trust's International Equity pool's returns consistently outperform index and median peer returns.

Consolidated Pension Trust: U.S. Fixed Income

As of March 31, 2016

Performance vs Pub Pln- Domestic Fixed (Gross)



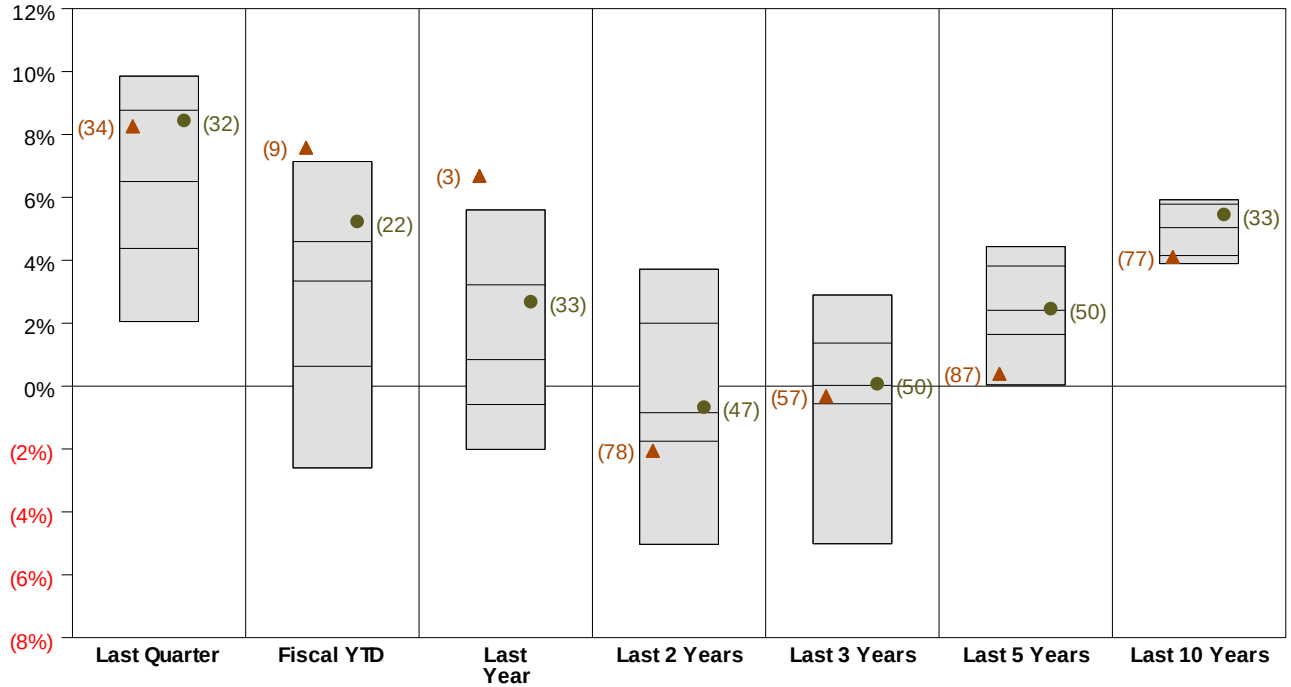
	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 10 Years
10th Percentile	3.56	3.80	2.34	4.35	3.19	5.34	6.15
25th Percentile	3.02	3.25	2.00	3.69	2.68	4.66	5.61
Median	2.73	2.73	1.50	3.12	2.34	4.11	5.14
75th Percentile	2.43	1.71	0.48	2.66	1.88	3.63	4.52
90th Percentile	2.13	0.66	(0.35)	1.89	1.41	2.65	4.06
Domestic Fixed Income ●	1.92	0.87	0.44	3.63	3.37	5.33	5.59
Domestic Fixed Income Target ▲	3.15	1.68	0.43	2.54	2.35	4.20	5.61

- Pension Trust's fixed income program has outperformed its peers and the benchmark for the two, three, and five year time frames!

Consolidated Pension Trust: International Fixed Income

As of March 31, 2016

Performance vs Public Fund - International Fixed (Gross)



	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 10 Years
10th Percentile	9.86	7.14	5.60	3.72	2.90	4.44	5.93
25th Percentile	8.77	4.60	3.22	2.00	1.37	3.81	5.79
Median	6.50	3.34	0.84	(0.85)	0.02	2.41	5.03
75th Percentile	4.38	0.63	(0.59)	(1.75)	(0.56)	1.64	4.15
90th Percentile	2.05	(2.60)	(2.01)	(5.03)	(5.01)	0.04	3.89
International Fixed Income ●	8.40	5.18	2.64	(0.72)	0.02	2.41	5.40
International Fixed Income Target ▲	8.26	7.58	6.69	(2.05)	(0.32)	0.39	4.11

- The International Fixed Income allocation outperforms its index for the current quarter, two, three, five, and ten year time frames.

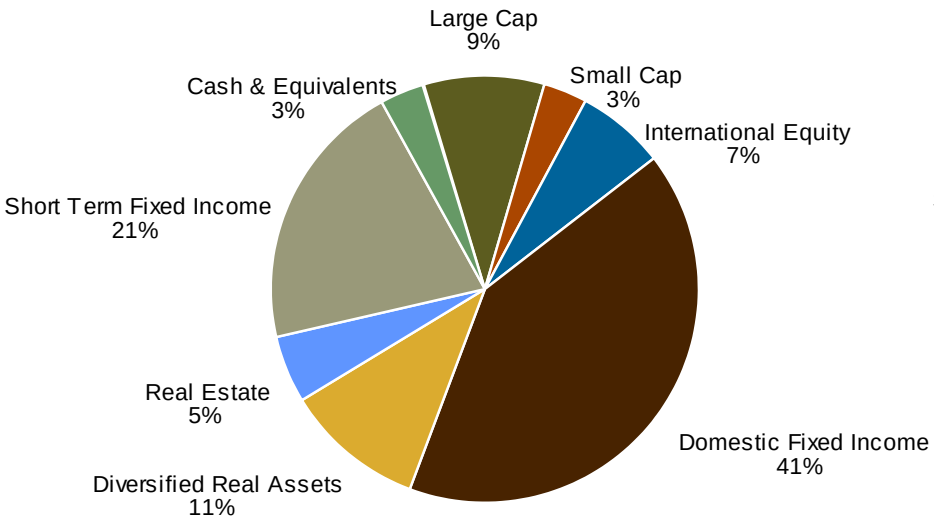
Consolidated Insurance Trust Quarterly Review

- Workforce Safety & Insurance
- Legacy Fund
- Budget Stabilization Fund

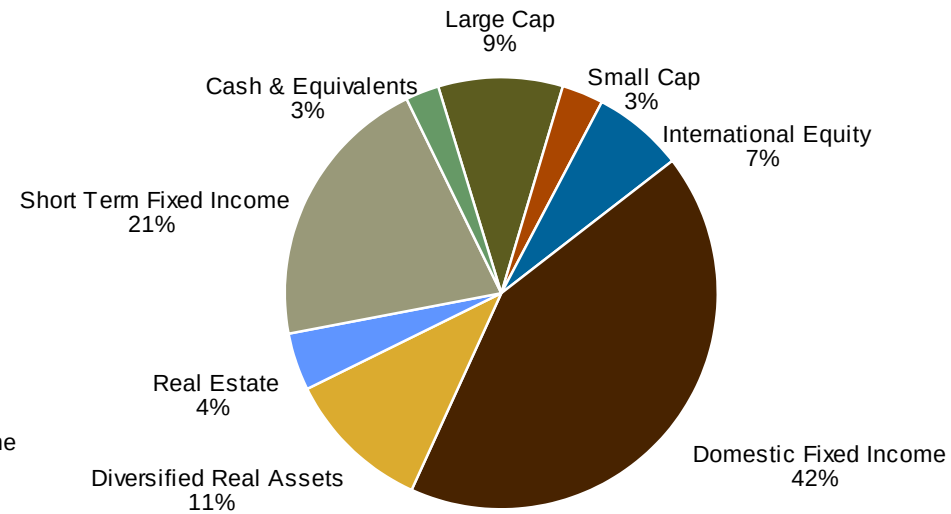
Consolidated Insurance Trust Allocation

As of March 31, 2016

Actual Asset Allocation



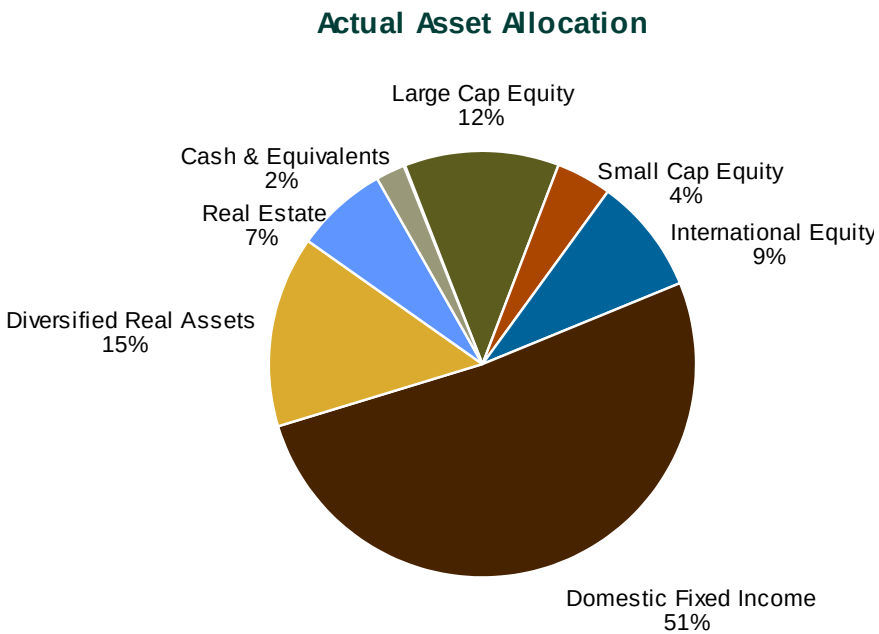
Target Asset Allocation

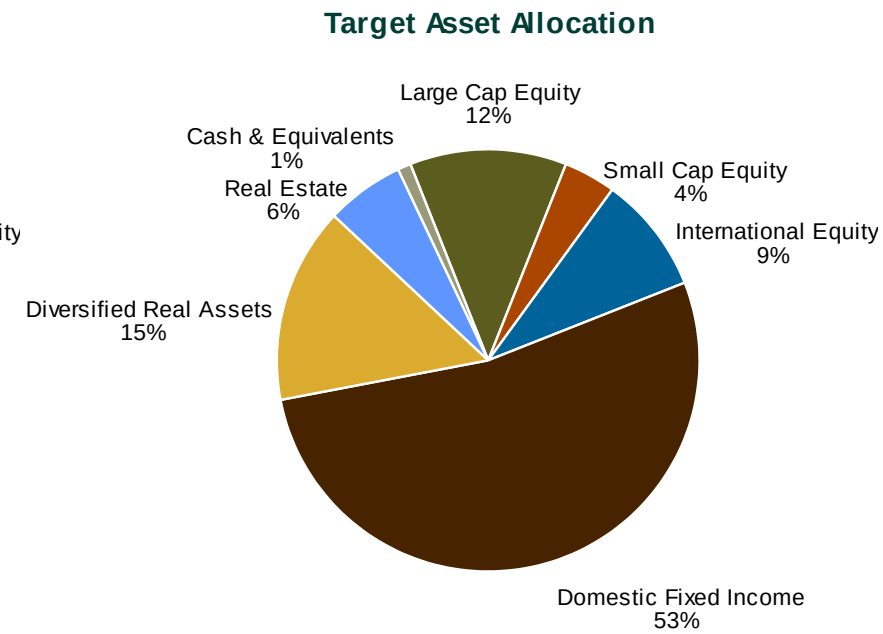


Asset Class	$000s Actual	Weight Actual	Target	Percent Difference	$000s Difference
Large Cap	228,253	9.1%	9.3%	(0.2%)	(4,791)
Small Cap	83,626	3.3%	3.1%	0.2%	5,944
International Equity	168,135	6.7%	6.8%	(0.1%)	(2,262)
Domestic Fixed Income	1,033,487	41.2%	42.3%	(1.1%)	(26,485)
Diversified Real Assets	265,564	10.6%	10.9%	(0.3%)	(7,573)
Real Estate	126,803	5.1%	4.3%	0.8%	19,052
Short Term Fixed Income	517,412	20.6%	20.8%	(0.2%)	(3,803)
Cash & Equivalents	82,564	3.3%	2.5%	0.8%	19,918
Total	2,505,844	100.0%	100.0%		

WSI Allocation

As of March 31, 2016



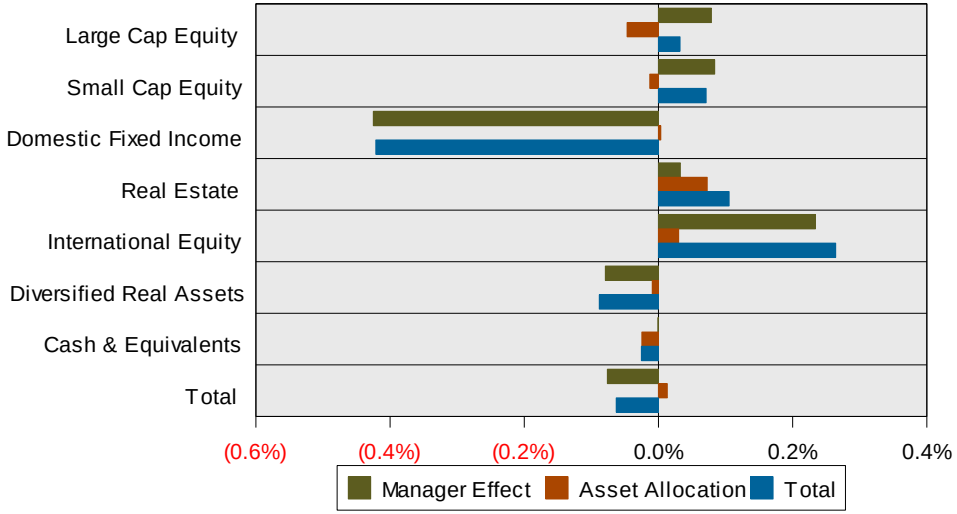


Asset Class	$000s Actual	Weight Actual	Target	Percent Difference	$000s Difference
Large Cap Equity	210,858	11.7%	12.0%	(0.3%)	(5,267)
Small Cap Equity	76,172	4.2%	4.0%	0.2%	4,130
International Equity	159,288	8.8%	9.0%	(0.2%)	(2,807)
Domestic Fixed Income	927,265	51.5%	53.0%	(1.5%)	(27,290)
Diversified Real Assets	261,743	14.5%	15.0%	(0.5%)	(8,414)
Real Estate	126,739	7.0%	6.0%	1.0%	18,677
Cash & Equivalents	38,981	2.2%	1.0%	1.2%	20,971
Total	1,801,047	100.0%	100.0%		

WSI Performance and Attribution

As of March 31, 2016

One Year Relative Attribution Effects



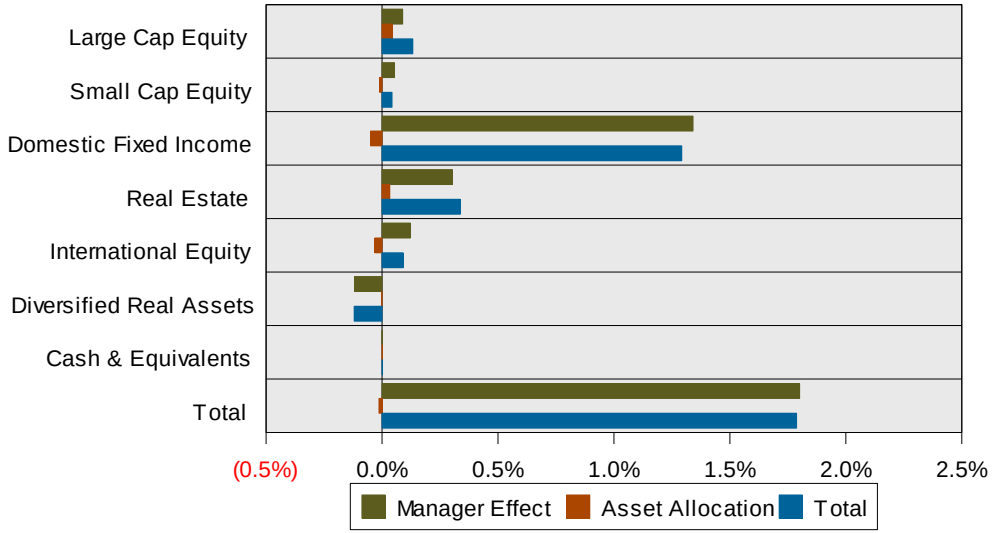
One Year Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap Equity	12%	12%	1.20%	0.50%	0.08%	(0.05%)	0.03%
Small Cap Equity	4%	4%	(7.78%)	(9.76%)	0.08%	(0.01%)	0.07%
Domestic Fixed Income	53%	53%	1.20%	1.96%	(0.42%)	0.00%	(0.42%)
Real Estate	7%	6%	12.40%	11.84%	0.03%	0.07%	0.11%
International Equity	9%	9%	(5.71%)	(8.27%)	0.23%	0.03%	0.26%
Diversified Real Assets	15%	15%	0.69%	1.34%	(0.08%)	(0.01%)	(0.09%)
Cash & Equivalents	1%	1%	0.06%	0.12%	(0.00%)	(0.02%)	(0.03%)
Total			**0.95%** =	**1.02%** +	**(0.08%)** +	**0.01%**	**(0.06%)**

WSI Performance and Attribution

As of March 31, 2016

Five and Three-Quarter Year Annualized Relative Attribution Effects



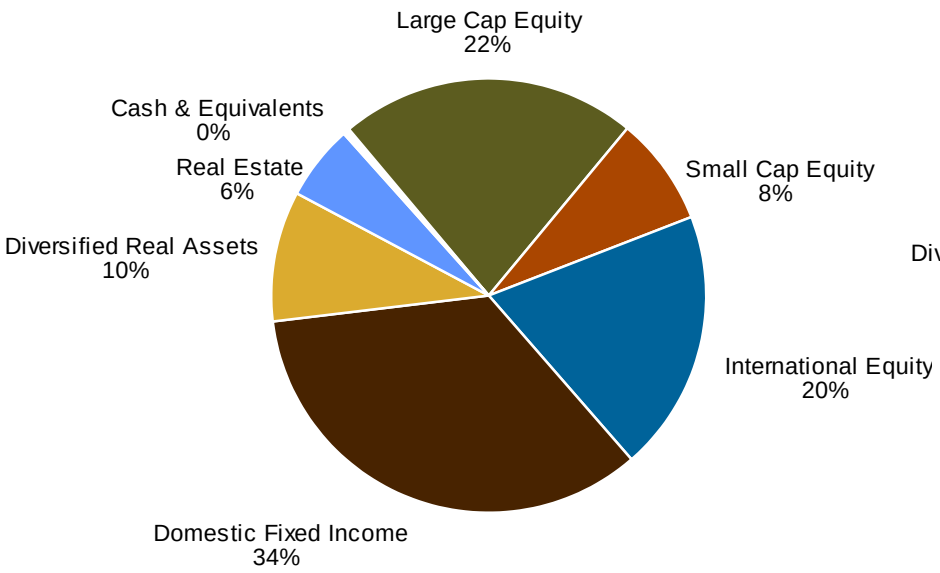
Five and Three-Quarter Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap Equity	11%	10%	16.06%	15.20%	0.09%	0.04%	0.13%
Small Cap Equity	4%	3%	14.17%	12.59%	0.05%	(0.01%)	0.04%
Domestic Fixed Income	52%	52%	6.14%	3.56%	1.34%	(0.05%)	1.29%
Real Estate	6%	6%	17.79%	12.54%	0.30%	0.03%	0.34%
International Equity	7%	8%	7.13%	5.53%	0.12%	(0.03%)	0.09%
Diversified Real Assets	19%	20%	4.43%	5.05%	(0.12%)	(0.00%)	(0.12%)
Cash & Equivalents	1%	1%	0.16%	0.09%	0.00%	0.00%	0.00%
Total			**7.87%** =	**6.08%** +	**1.80%** +	**(0.01%)**	**1.79%**

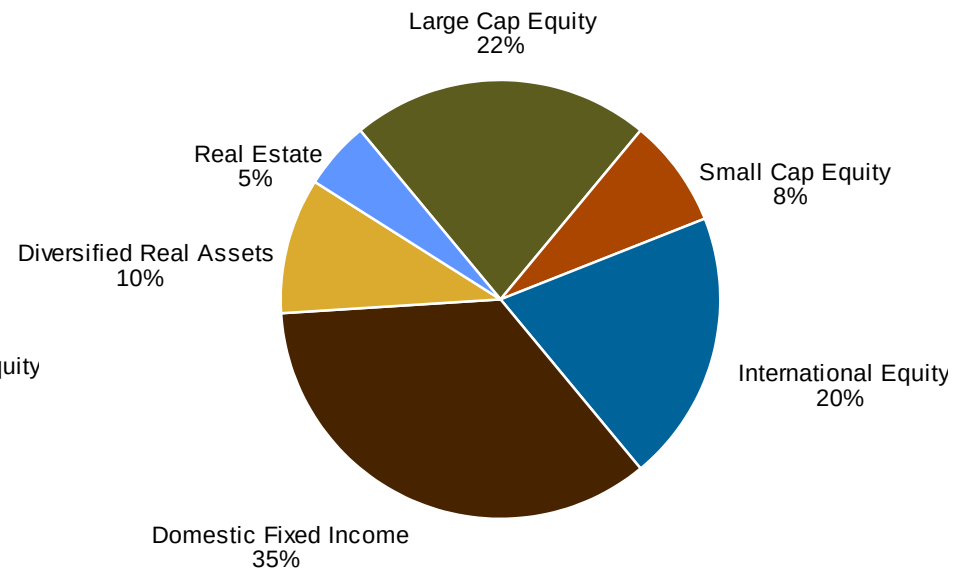
Legacy Fund Allocation

As of March 31, 2016

Actual Asset Allocation



Target Asset Allocation

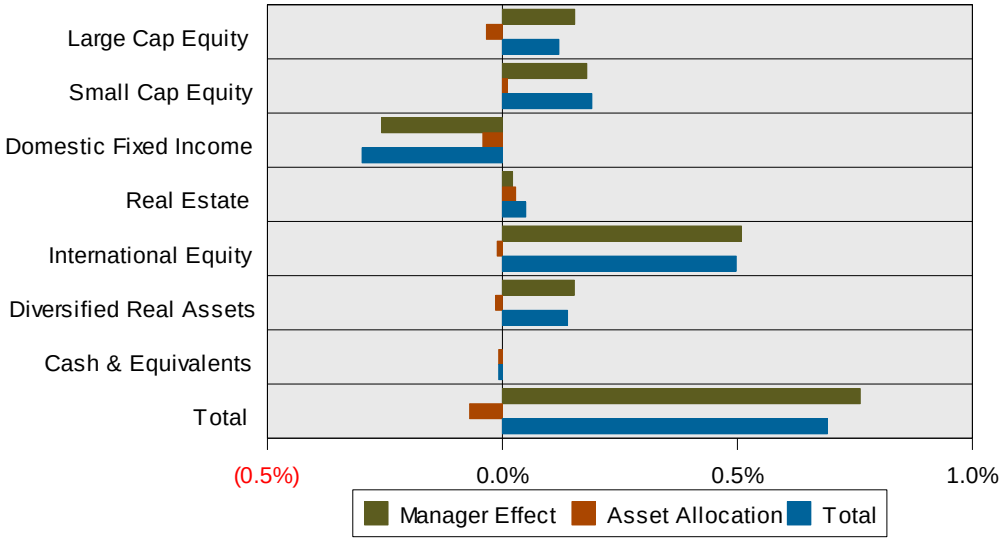


Asset Class	$000s Actual	Weight Actual	Target	Percent Difference	$000s Difference
Large Cap Equity	813,339	22.1%	22.0%	0.1%	5,121
Small Cap Equity	298,351	8.1%	8.0%	0.1%	4,454
International Equity	718,092	19.5%	20.0%	(0.5%)	(16,652)
Domestic Fixed Income	1,266,162	34.5%	35.0%	(0.5%)	(19,639)
Diversified Real Assets	355,004	9.7%	10.0%	(0.3%)	(12,368)
Real Estate	207,321	5.6%	5.0%	0.6%	23,635
Cash & Equivalents	15,449	0.4%	0.0%	0.4%	15,449
Total	3,673,717	100.0%	100.0%		

Legacy Fund Performance and Attribution

As of March 31, 2016

One Year Relative Attribution Effects



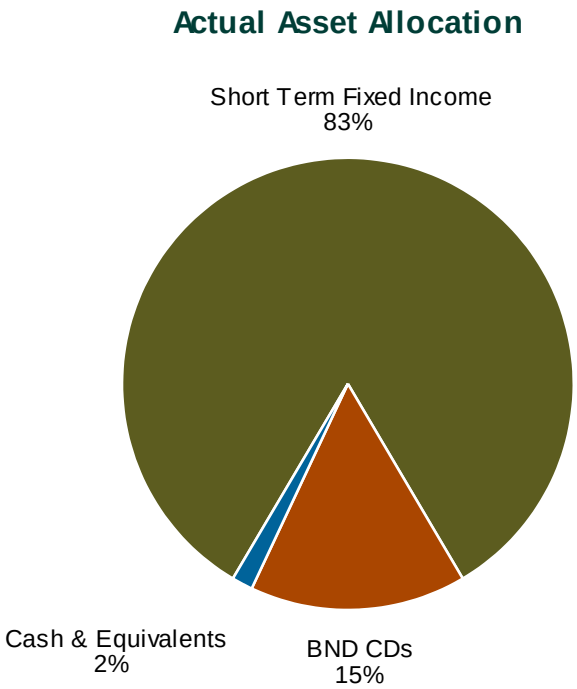
1 Year Ended 3/31/16	
Gross:	-0.09%
Net:	-0.33%
Target:	-0.79%
Net Added:	0.46%

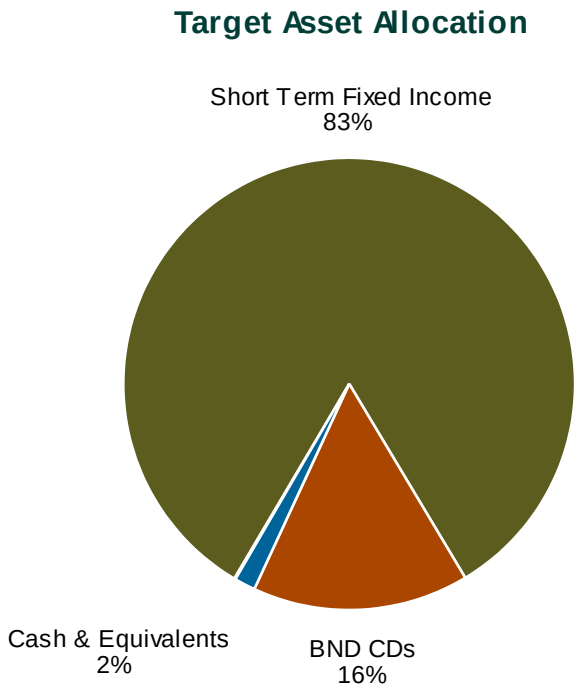
One Year Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap Equity	22%	22%	1.24%	0.50%	0.15%	(0.03%)	0.12%
Small Cap Equity	8%	8%	(7.54%)	(9.76%)	0.18%	0.01%	0.19%
Domestic Fixed Income	35%	35%	1.28%	1.96%	(0.26%)	(0.04%)	(0.30%)
Real Estate	5%	5%	12.40%	11.84%	0.02%	0.03%	0.05%
International Equity	20%	20%	(5.80%)	(8.27%)	0.51%	(0.01%)	0.50%
Diversified Real Assets	10%	10%	2.38%	0.79%	0.15%	(0.01%)	0.14%
Cash & Equivalents	0%	0%	0.06%	0.06%	0.00%	(0.01%)	(0.01%)
Total			**(0.09%) =**	**(0.79%) +**	**0.76% +**	**(0.07%)**	**0.69%**

Budget Stabilization Fund Allocation

As of March 31, 2016



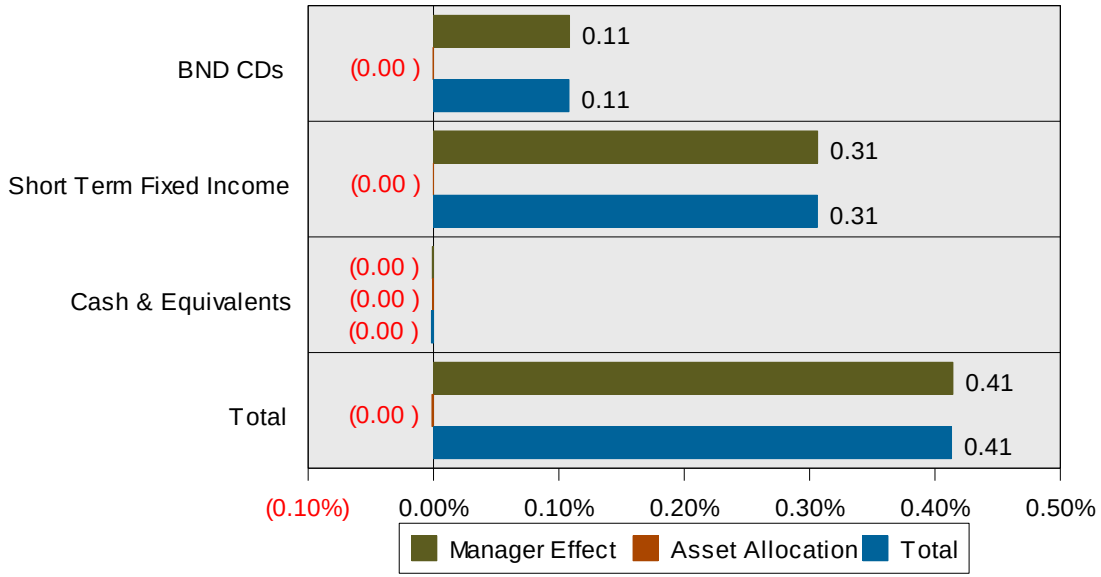


Asset Class	$000s Actual	Weight Actual	Target	Percent Difference	$000s Difference
Short Term Fixed Income	481,120	83.0%	83.0%	0.0%	168
BND CDs	89,814	15.5%	15.5%	0.0%	(230)
Cash & Equivalents	8,875	1.5%	1.5%	0.0%	62
Total	579,810	100.0%	100.0%		

Budget Stabilization Fund Overview

As of March 31, 2016

One Year Relative Attribution Effects



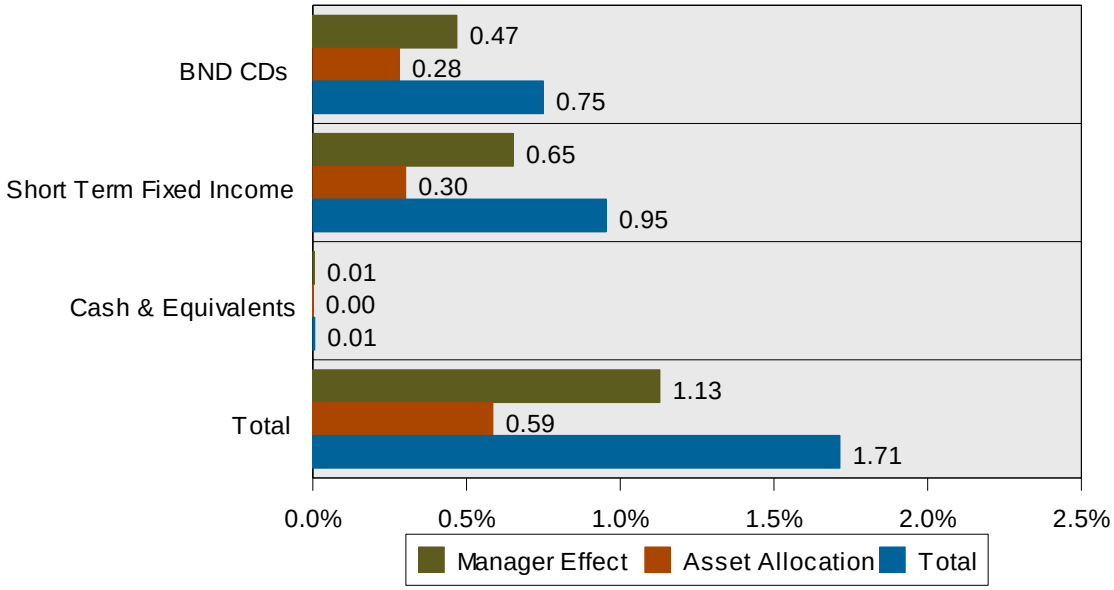
One Year Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
BND CDs	16%	16%	2.63%	1.97%	0.11%	(0.00%)	0.11%
Short Term Fixed Income	82%	82%	1.30%	0.93%	0.31%	(0.00%)	0.31%
Cash & Equivalents	2%	2%	0.06%	0.12%	(0.00%)	(0.00%)	(0.00%)
Total			**1.49%**	**= 1.08%**	**+ 0.41%**	**+ (0.00%)**	**0.41%**

Budget Stabilization Fund Overview

As of March 31, 2016

Five and Three-Quarter Year Annualized Relative Attribution Effects



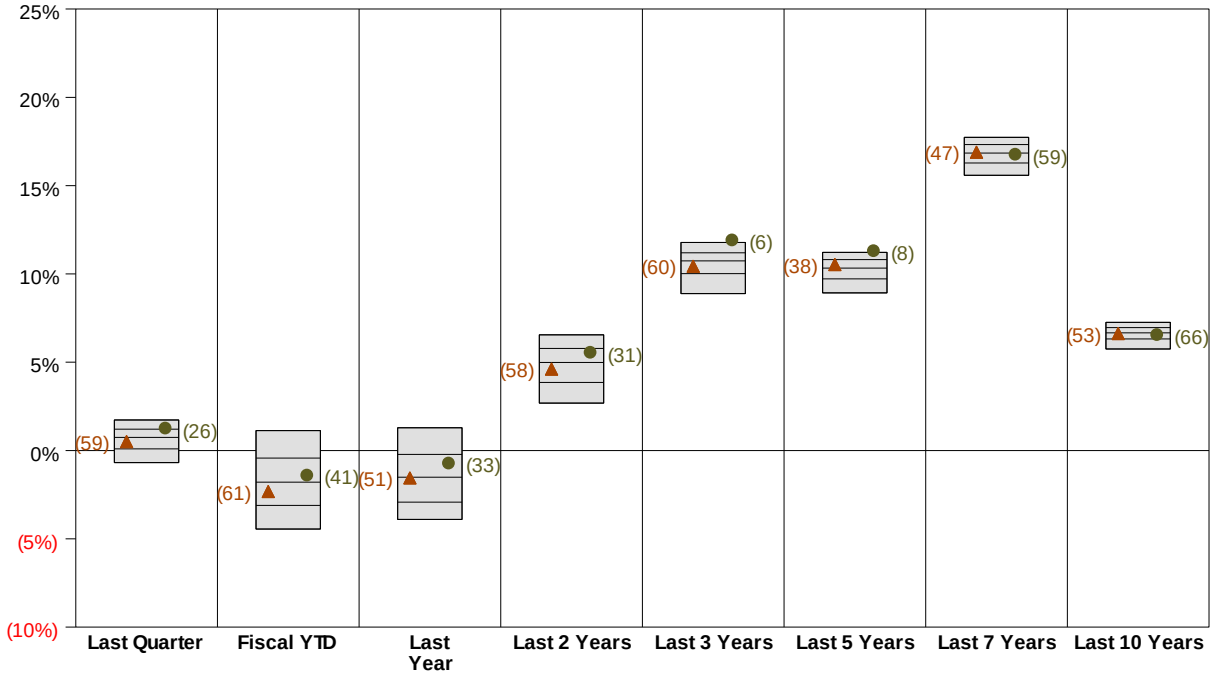
Five and Three-Quarter Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
BND CDs	23%	16%	3.46%	1.33%	0.47%	0.28%	0.75%
Short Term Fixed Income	73%	61%	1.95%	1.09%	0.65%	0.30%	0.95%
Cash & Equivalents	4%	23%	0.16%	0.09%	0.01%	0.00%	0.01%
Total			**2.25%**	**= 0.53%**	**+ 1.13%**	**+ 0.59%**	**1.71%**

Consolidated Insurance Trust: Domestic Equity

As of March 31, 2016

Performance vs Pub Pln- Domestic Equity (Gross)



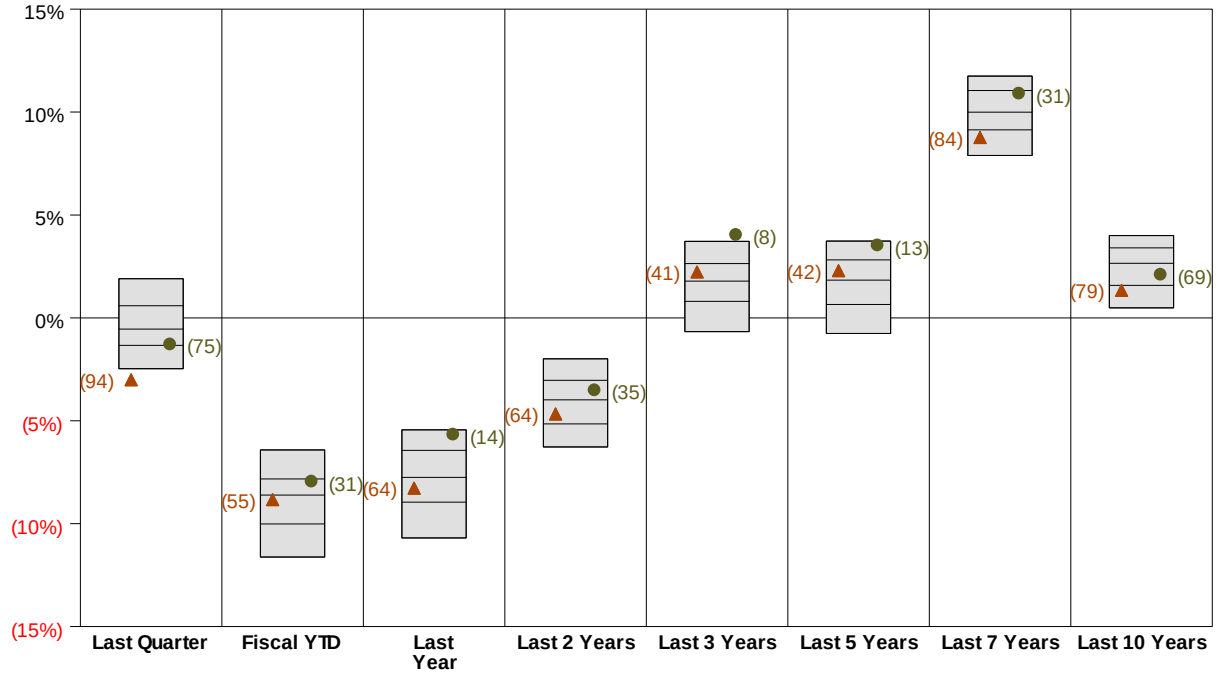
	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years
10th Percentile	1.73	1.13	1.29	6.55	11.79	11.22	17.74	7.25
25th Percentile	1.21	(0.43)	(0.22)	5.78	11.20	10.81	17.32	6.96
Median	0.75	(1.79)	(1.51)	4.99	10.74	10.33	16.84	6.66
75th Percentile	0.09	(3.10)	(2.92)	3.86	10.02	9.72	16.28	6.32
90th Percentile	(0.69)	(4.44)	(3.90)	2.69	8.89	8.92	15.59	5.75
Domestic Equity ●	1.19	(1.46)	(0.78)	5.49	11.84	11.24	16.71	6.48
Domestic Equity Target ▲	0.51	(2.32)	(1.55)	4.62	10.44	10.53	16.90	6.63

- Since the 2008 financial crisis, the Insurance Trust's domestic equity pool has done well.
- The fund has outperformed the benchmark and placed above median for the last quarter one, two, three, and five year time frames.

Consolidated Insurance Trust: International Equity

As of March 31, 2016

Performance vs Pub Pln- International Equity (Gross)



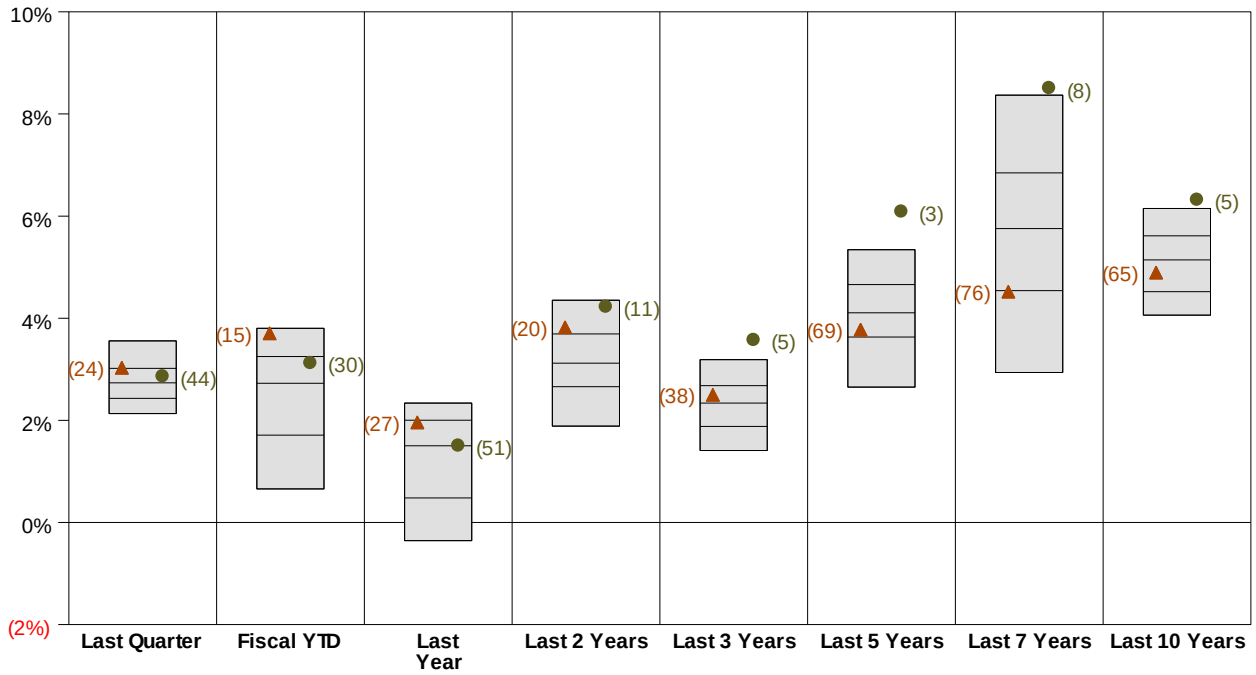
	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years
10th Percentile	1.91	(6.42)	(5.44)	(1.99)	3.72	3.73	11.75	4.00
25th Percentile	0.59	(7.83)	(6.44)	(3.04)	2.64	2.82	11.05	3.40
Median	(0.55)	(8.61)	(7.75)	(3.98)	1.78	1.83	10.00	2.65
75th Percentile	(1.34)	(10.01)	(8.96)	(5.15)	0.81	0.66	9.14	1.58
90th Percentile	(2.47)	(11.62)	(10.69)	(6.27)	(0.67)	(0.76)	7.89	0.49
International Equity ●	(1.33)	(7.99)	(5.72)	(3.56)	3.99	3.48	10.86	2.05
International Equity Target ▲	(3.01)	(8.83)	(8.27)	(4.67)	2.23	2.29	8.77	1.34

- The International Equity program has beaten the benchmark for all time frames.

Consolidated Insurance Trust: Domestic Fixed Income

As of March 31, 2016

Performance vs Pub Pln- Domestic Fixed (Gross)



	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years
10th Percentile	3.56	3.80	2.34	4.35	3.19	5.34	8.37	6.15
25th Percentile	3.02	3.25	2.00	3.69	2.68	4.66	6.85	5.61
Median	2.73	2.73	1.50	3.12	2.34	4.11	5.75	5.14
75th Percentile	2.43	1.71	0.48	2.66	1.88	3.63	4.54	4.52
90th Percentile	2.13	0.66	(0.35)	1.89	1.41	2.65	2.94	4.06
Domestic Fixed Income ●	2.84	3.10	1.48	4.21	3.56	6.07	8.49	6.30
Domestic Fixed Inc. Target ▲	3.03	3.71	1.96	3.82	2.50	3.78	4.52	4.90

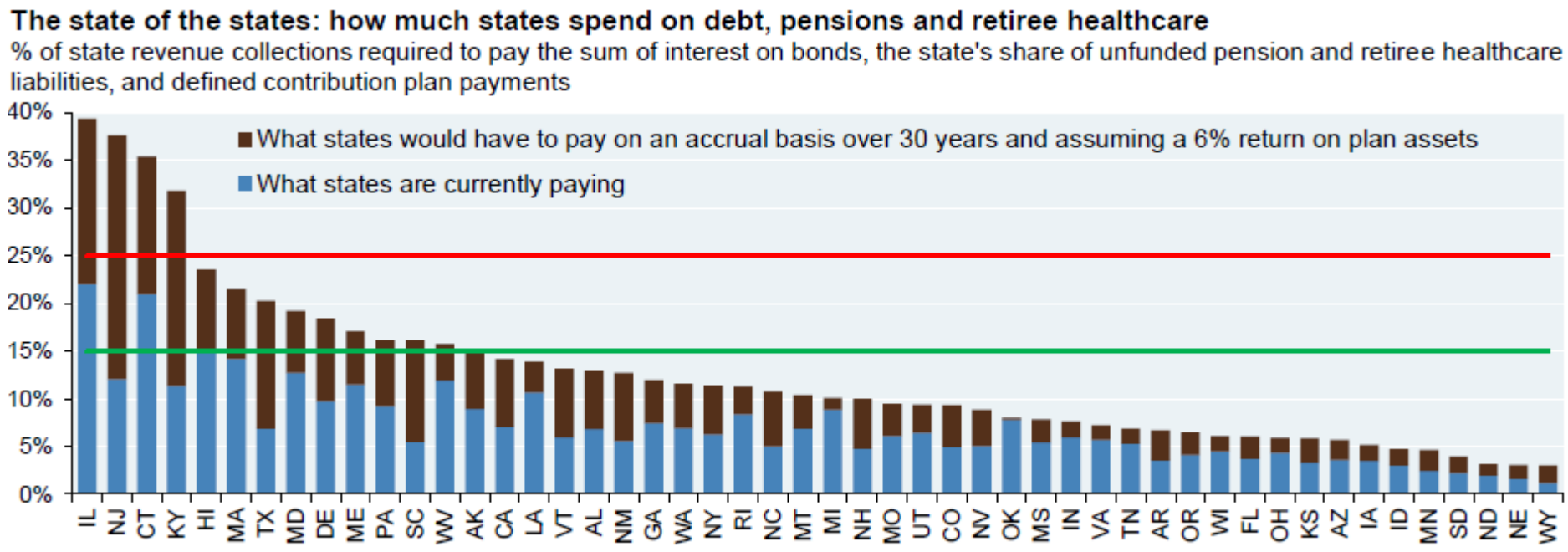
- Fixed Income has been an exceptionally well-performing asset in the Insurance Trust, especially over the last two, three, five, seven, and ten year time frames.

Watchlist Managers

As of March 31, 2016

- **PIMCO MBS**: Net performance has trailed the index in the QTD, one, and three year periods. Relative to the peer universe, the manager has been solidly in the fourth quartile for the two, three, and four year time frames.
- **PIMCO Unconstrained**: Net performance has trailed the index in the QTD, one, and three year periods. Relative to the peer universe, the manager has been solidly in the fourth quartile.
- **UBS Global Fixed Income**: Net performance has trailed the blended index in the QTD, YTD, three, five, and 10 year periods. Relative to the peer universe, the manager has been solidly in the fourth quartile with the exception of the last quarter, fiscal year to date, and last year time frames.
- **Capital Group International Equity**: William Blair has been hired as the replacement manager. The transition is underway and being handled by Northern Trust. William Blair should receive the assets within the first few days of June.
- **JP Morgan MBS**: added to watchlist for personnel changes.

Another View of States' Finances



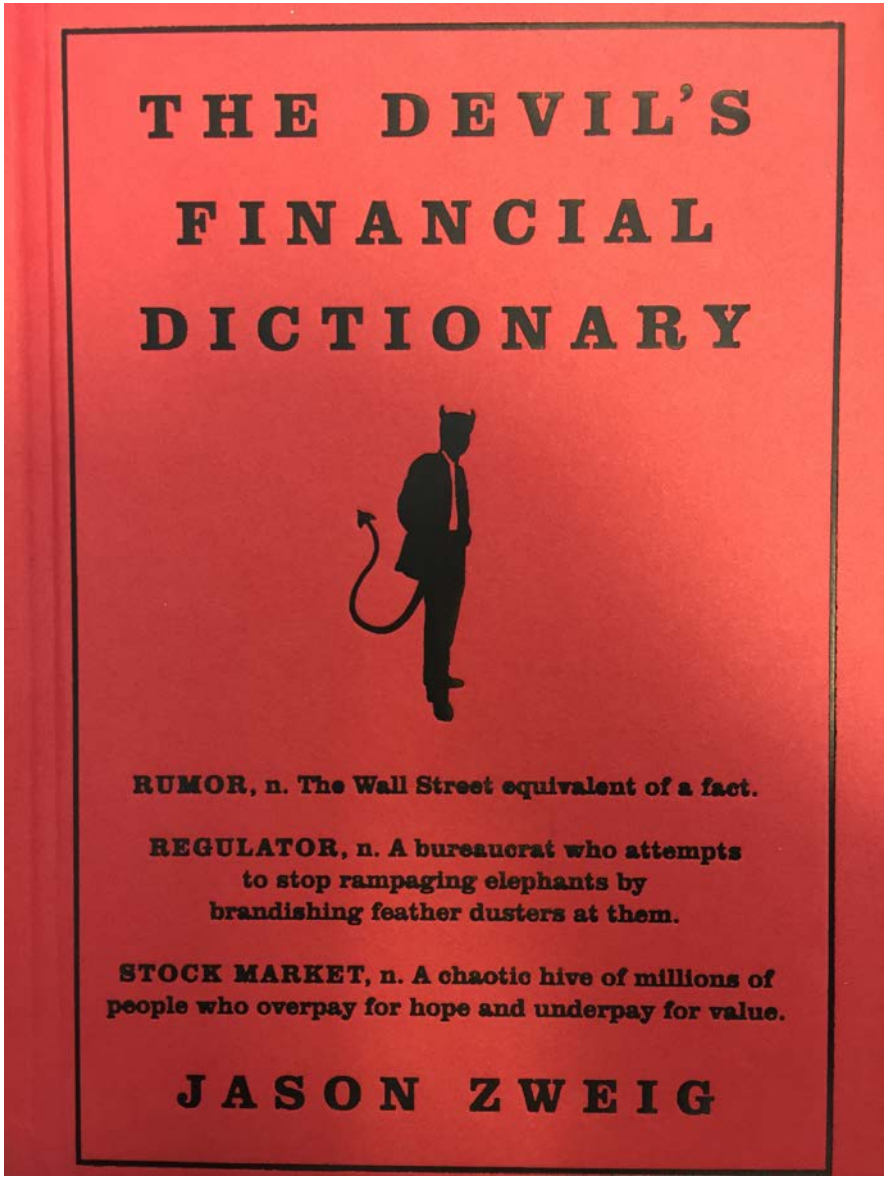
Sources: JPMorgan Asset Management;, report date May 19, 2016; state/pension plan Comprehensive Annual Financial Reports, Census, Loop Capital Markets. FY 2015.

- Bars that appear above the **red line** indicate a level at which states face critical challenges in meeting an ability to service their debt and post-retirement benefit obligations.
- Bars that appear below the **green line** identify states that one might view not requiring "a disproportionate share of revenues to service their debts."
- Note that North Dakota's burden is relatively lower than nearly all other states (third from right).

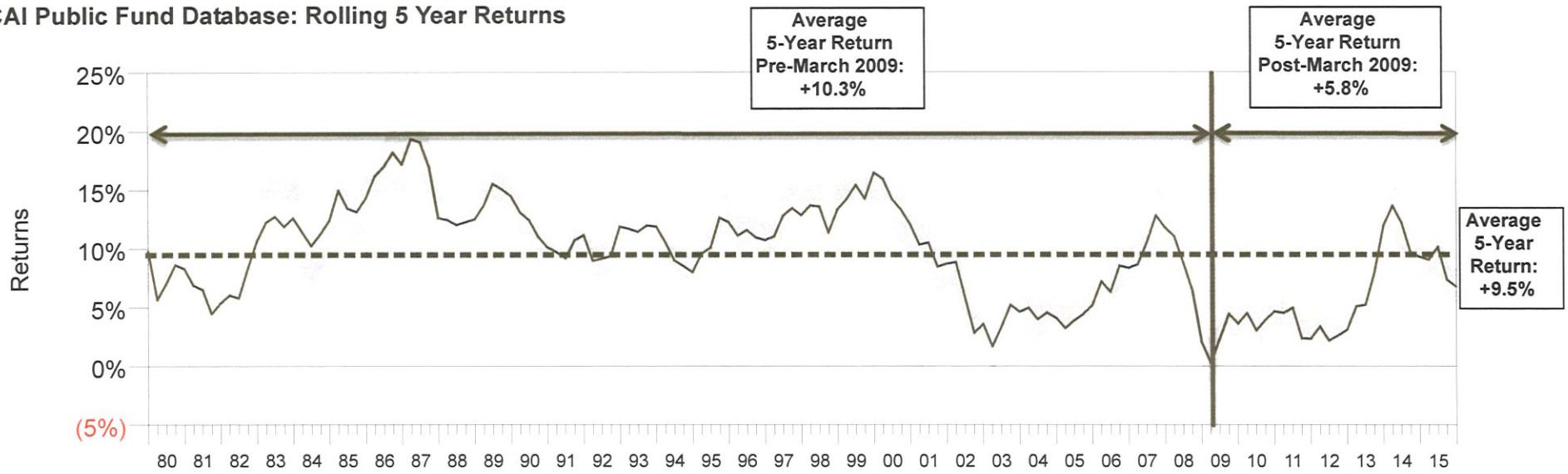
Potential addition to your bookshelf investments section

A useful, tongue-in-cheek reference guide

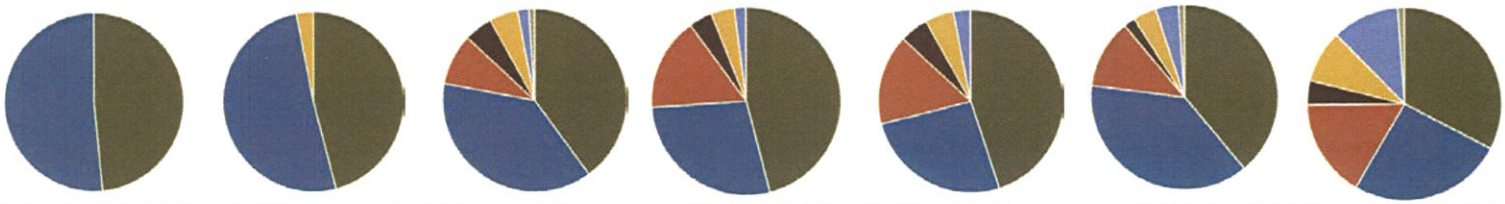
- Jason Zweig is currently a Wall Street Journal columnist and author.
- Has written for various prestigious magazines including Time, Money and Forbes.
- Reviews:
  - "An indispensable survival guide to the hostile wilderness of today's financial markets, . . . cuts through the fads and fakery of Wall Street . . ."
  - ". . distills the complexities, absurdities, and pomposities of Wall Street into plain truths and aphorisms anyone can understand."
- Zweig, J. (2015). *The Devil's Financial Dictionary*. New York, NY: PublicAffairs.
- Sample of contents available on-line at: http://www.jasonzweig.com/dictionary



Historical Public Fund Asset Allocation and Returns



5 Year Return	13.9%	10.1%	12.6%	12.3%	5.4%	4.7%	6.9%

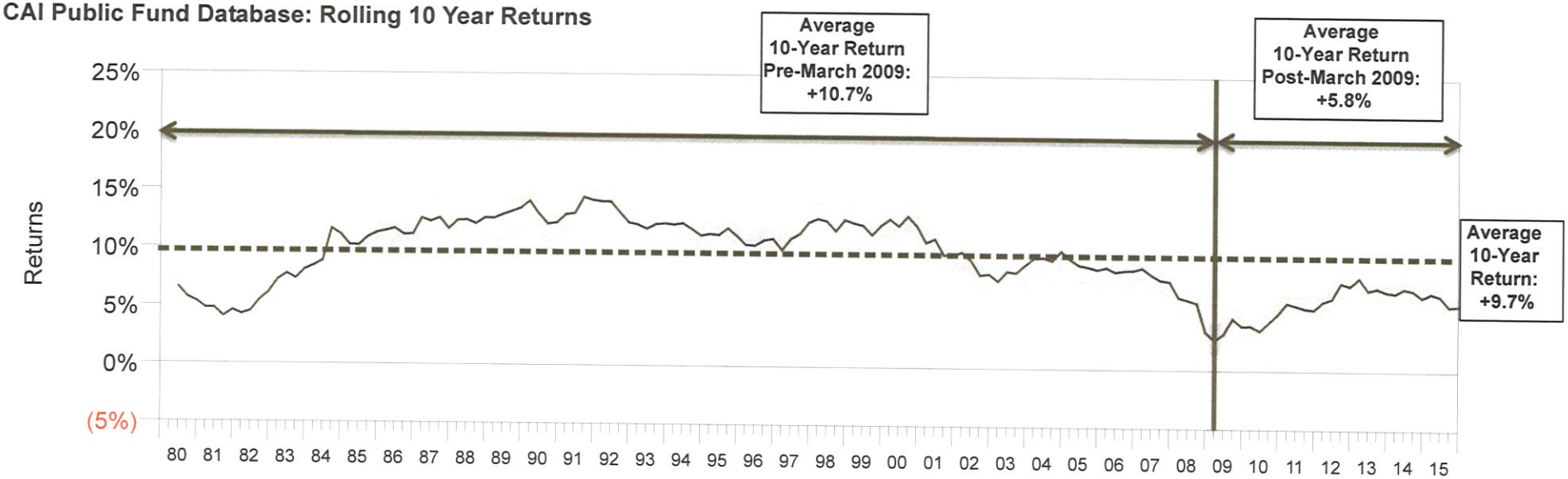


ASSET CLASS	1985	1990	1995	2000	2005	2010	2015
Domestic Equity	49%	46%	40%	46%	45%	39%	33%
Domestic Fixed Income	52%	51%	38%	28%	26%	30%	26%
Non-U.S. Equity			9%	16%	16%	15%	16%
Non-U.S. Fixed Income			5%	4%	5%	4%	4%
Real Estate		3%	5%	4%	5%	4%	9%
Other Alternatives			2%	2%	3%	7%	11%
Cash Equivalents			1%			1%	1%

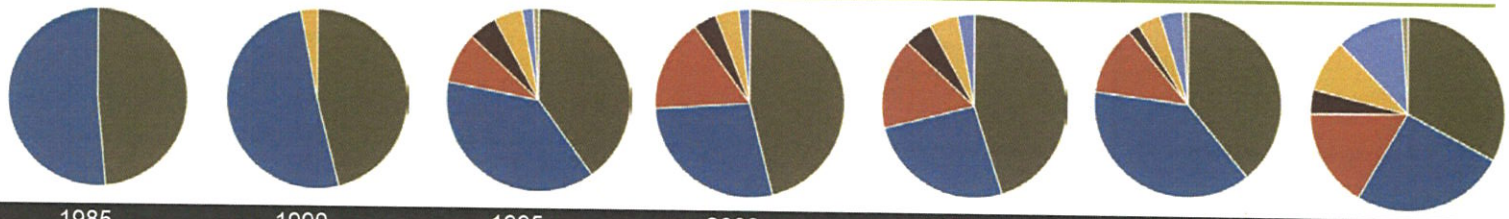
Allocations are as of December 31 of the applicable year.

Historical Public Fund Asset Allocation and Returns

CAI Public Fund Database: Rolling 10 Year Returns



	1985	1990	1995	2000	2005	2010	2015
10 Year Return	10.7%	12.0%	11.3%	12.3%	8.7%	5.0%	5.7%

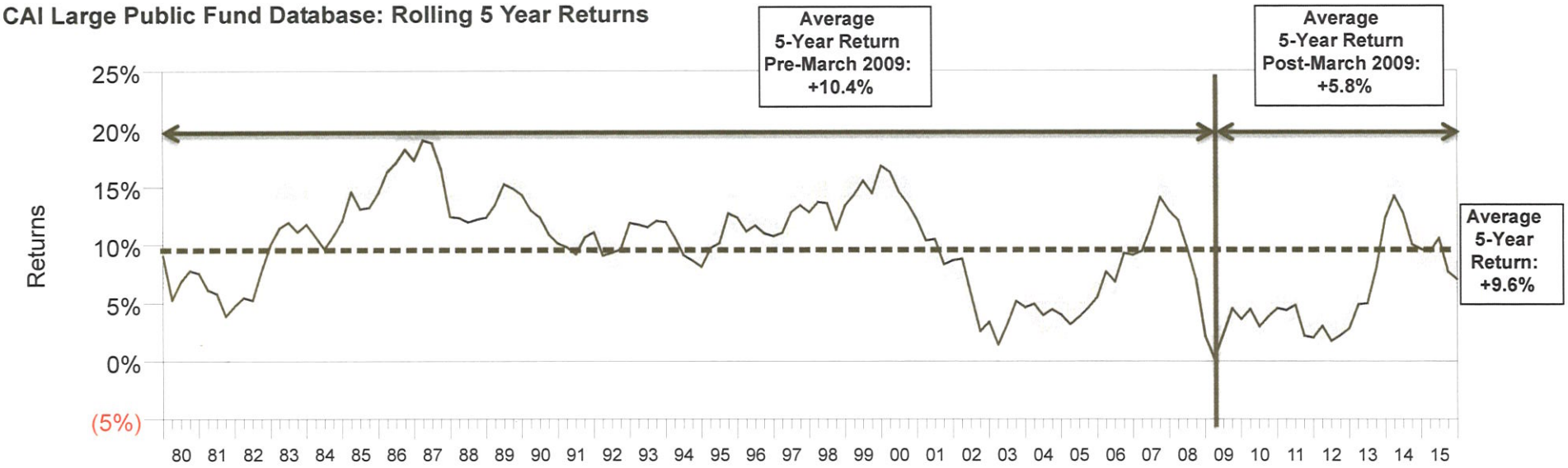


ASSET CLASS	1985	1990	1995	2000	2005	2010	2015
Domestic Equity	49%	46%	40%	46%	45%	39%	33%
Domestic Fixed Income	52%	51%	38%	28%	26%	30%	26%
Non-U.S. Equity			9%	16%	16%	15%	16%
Non-U.S. Fixed Income			5%	4%	5%	4%	4%
Real Estate		3%	5%	4%	5%	4%	9%
Other Alternatives			2%	2%	3%	7%	11%
Cash Equivalents			1%			1%	1%

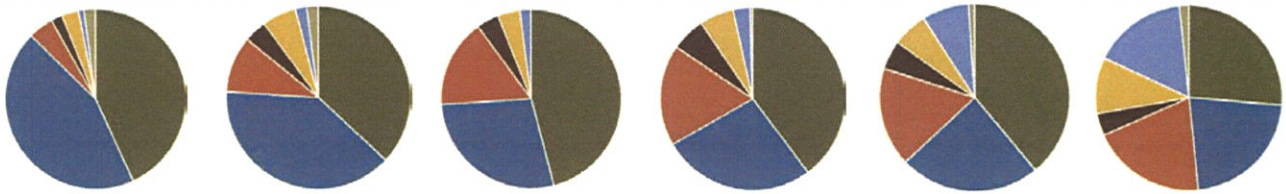
Allocations are as of December 31 of the applicable year.

Historical Large Public Fund Asset Allocation and Returns

CAI Large Public Fund Database: Rolling 5 Year Returns



5 Year Return	14.8%	10.1%	12.5%	12.4%	5.5%	4.5%	7.2%



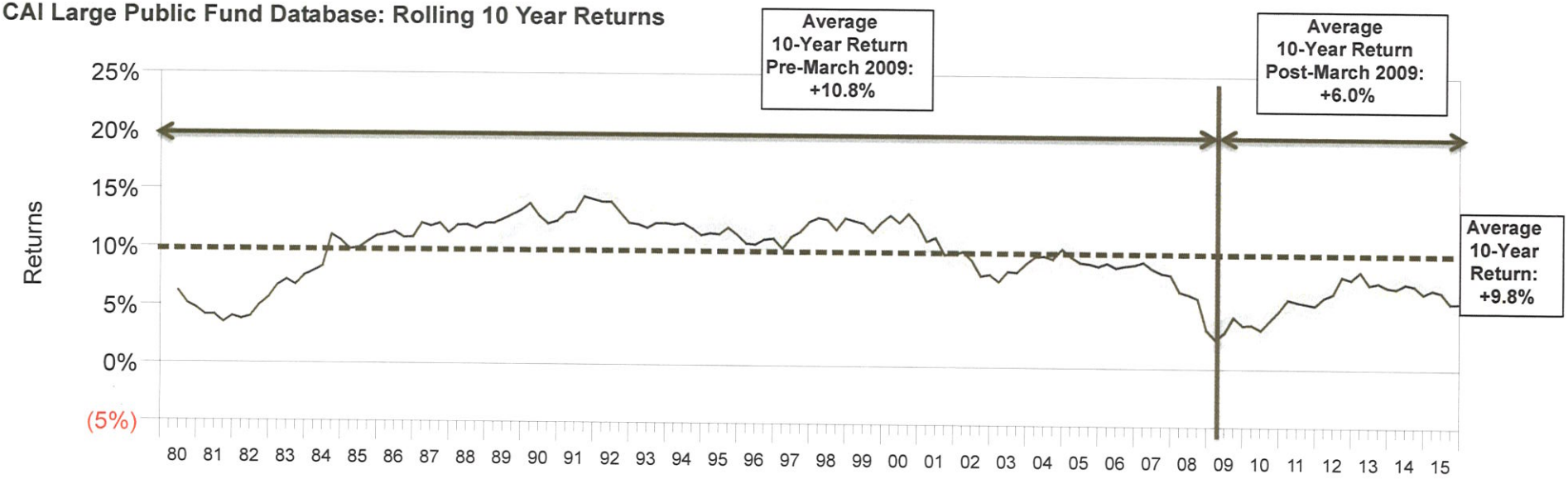
ASSET CLASS	1985	1990	1995	2000	2005	2010	2015
Domestic Equity	N/A	43%	37%	46%	40%	39%	26%
Domestic Fixed Income		44%	39%	28%	27%	24%	22%
Non-U.S. Equity		5%	10%	16%	18%	17%	20%
Non-U.S. Fixed Income		2%	4%	4%	6%	5%	4%
Real Estate		3%	6%	4%	6%	6%	10%
Other Alternatives		1%	2%	2%	3%	8%	16%
Cash Equivalents		2%	2%			1%	2%

Allocations are as of December 31 of the applicable year.

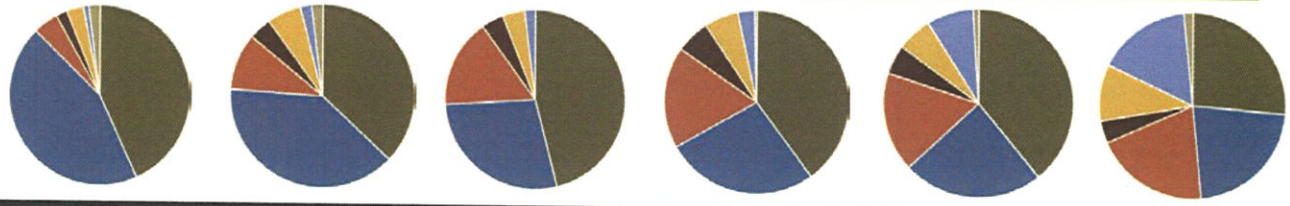
Large Public Funds have at least $1B in AUM.

Historical Large Public Fund Asset Allocation and Returns

CAI Large Public Fund Database: Rolling 10 Year Returns



	1985	1990	1995	2000	2005	2010	2015
10 Year Return	10.9%	12.3%	11.3%	12.6%	8.8%	5.0%	5.9%



ASSET CLASS	1985	1990	1995	2000	2005	2010	2015
Domestic Equity	N/A	43%	37%	46%	40%	39%	26%
Domestic Fixed Income		44%	39%	28%	27%	24%	22%
Non-U.S. Equity		5%	10%	16%	18%	17%	20%
Non-U.S. Fixed Income		2%	4%	4%	6%	5%	4%
Real Estate		3%	6%	4%	6%	6%	10%
Other Alternatives		1%	2%	2%	3%	8%	16%
Cash Equivalents		2%	2%			1%	2%

Allocations are as of December 31 of the applicable year.

Large Public Funds have at least $1B in AUM.

Callan

March 31, 2016

North Dakota State Investment Board Pension Funds

Investment Measurement Service Quarterly Review

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

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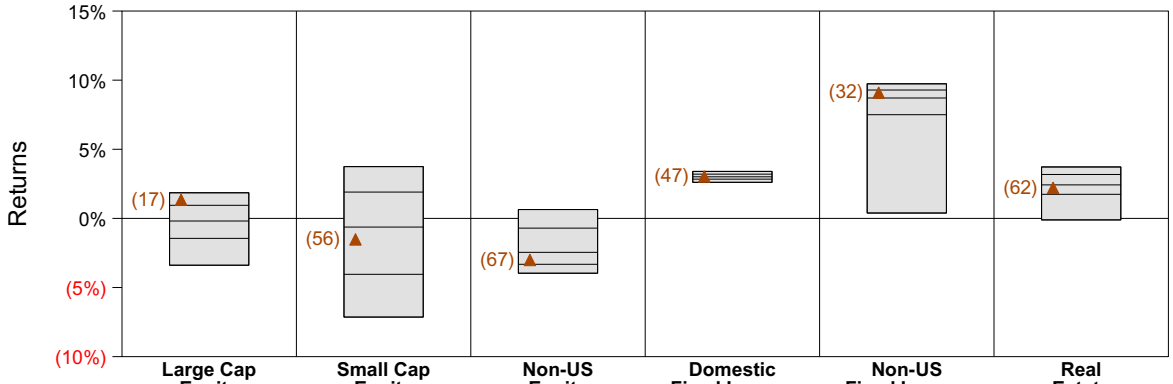
Market Overview
Active Management vs Index Returns

Market Overview

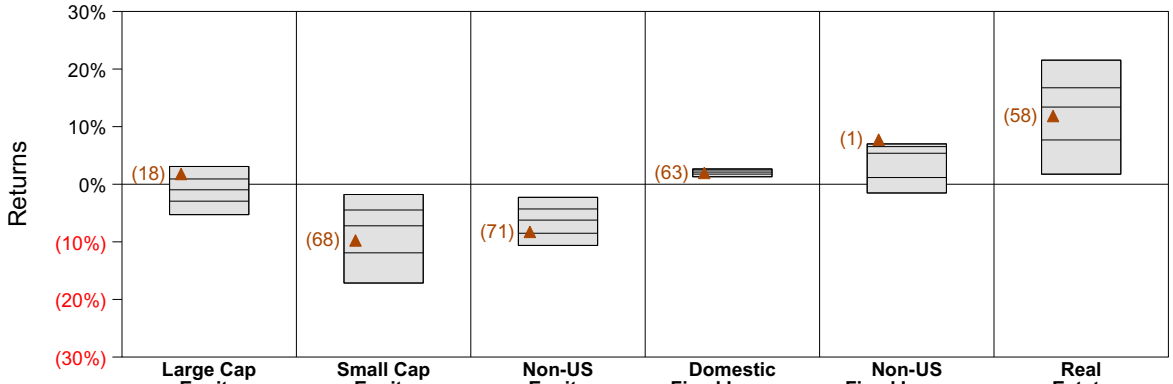
The charts below illustrate the range of returns across managers in Callan's Separate Account database over the most recent one quarter and one year time periods. The database is broken down by asset class to illustrate the difference in returns across those asset classes. An appropriate index is also shown for each asset class for comparison purposes. As an example, the first bar in the upper chart illustrates the range of returns for domestic equity managers over the last quarter. The triangle represents the S&P 500 return. The number next to the triangle represents the ranking of the S&P 500 in the Large Cap Equity manager database.

Range of Separate Account Manager Returns by Asset Class
One Quarter Ended March 31, 2016



	Large Cap Equity vs S&P 500	Small Cap Equity vs Russell 2000	Non-US Equity vs MSCI EAFE	Domestic Fixed Income vs Barclays Aggr Bd	Non-US Fixed Income vs Citi Non-US Govt	Real Estate vs NCREIF Index
10th Percentile	1.85	3.75	0.64	3.40	9.74	3.72
25th Percentile	0.95	1.90	(0.70)	3.20	9.29	3.18
Median	(0.19)	(0.63)	(2.46)	3.01	8.71	2.42
75th Percentile	(1.45)	(4.04)	(3.32)	2.84	7.50	1.74
90th Percentile	(3.39)	(7.14)	(3.97)	2.61	0.39	(0.11)
Index ▲	1.35	(1.52)	(3.01)	3.03	9.10	2.21

Range of Separate Account Manager Returns by Asset Class
One Year Ended March 31, 2016



	Large Cap Equity vs S&P 500	Small Cap Equity vs Russell 2000	Non-US Equity vs MSCI EAFE	Domestic Fixed Income vs Barclays Aggr Bd	Non-US Fixed Income vs Citi Non-US Govt	Real Estate vs NCREIF Index
10th Percentile	3.08	(1.78)	(2.27)	2.66	7.00	21.54
25th Percentile	0.92	(4.47)	(4.29)	2.48	6.53	16.75
Median	(0.96)	(7.22)	(6.23)	2.11	5.38	13.40
75th Percentile	(2.94)	(11.91)	(8.51)	1.76	1.16	7.69
90th Percentile	(5.28)	(17.15)	(10.63)	1.30	(1.52)	1.75
Index ▲	1.78	(9.76)	(8.27)	1.96	7.74	11.84

Callan

Capital Market Review

First Quarter 2016

Don't Believe the Hype (or the Markets)

ECONOMY

2 PAGE

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

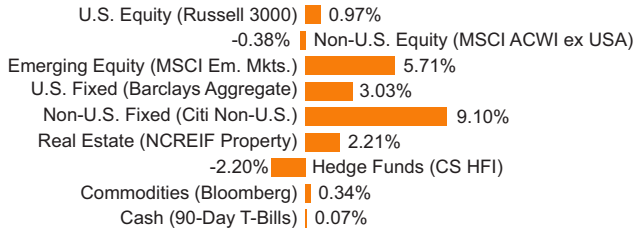
Progress Discounted

FUND SPONSOR

4 PAGE

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

Broad Market Quarterly Returns



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

Tale of Two Halves

U.S. EQUITY

6 PAGE

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

Mr. Draghi's Wild Ride

NON-U.S. EQUITY

9 PAGE

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

More T-Bills, Please

U.S. FIXED INCOME

12 PAGE

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

A Dole of Doves

NON-U.S. FIXED INCOME

15 PAGE

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

Slow and Low

REAL ESTATE

17 PAGE

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

Drip, Drip, Drip

PRIVATE EQUITY

19 PAGE

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

Market Tremors Panic Hedge Funds

HEDGE FUNDS

20 PAGE

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

Strong Quarter Can't Save 2015

DEFINED CONTRIBUTION

21 PAGE

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

Don't Believe the Hype (or the Markets)

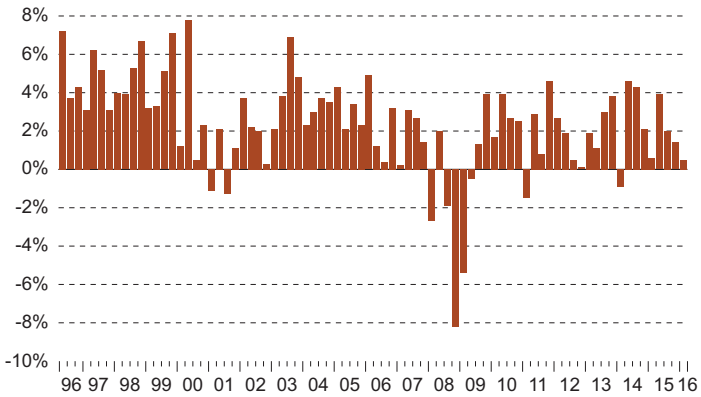
ECONOMY | Jay Kloepfer

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

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

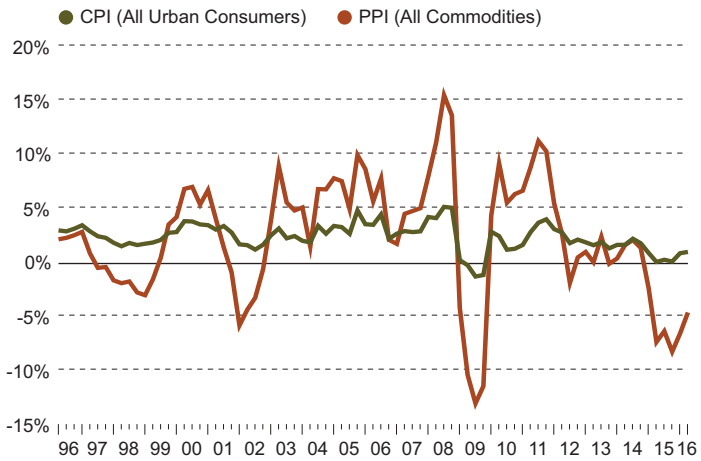
Real GDP growth has continued a familiar pattern, showing anemic first-quarter growth in five of the past six years. Such a pattern is a recent development in U.S. economic history, and suggests (to us) that part of this weakness may in fact be a problematic seasonal-adjustment process within the data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

Quarterly Real GDP Growth (20 Years)



Source: Bureau of Economic Analysis

Inflation Year-Over-Year



Source: Bureau of Labor Statistics

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

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

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

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

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

The Long-Term View

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

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

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

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

Recent Quarterly Indicators

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

*Estimate.

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

Progress Discounted

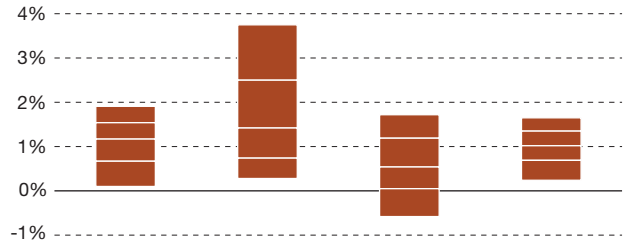
FUND SPONSOR | Rufash Lama

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

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

Looking at the Callan Fund Sponsor Quarterly Returns table, we see corporate funds outperformed other fund types at the median and across percentiles. Performance dispersion was highest in the 10th percentile: corporate funds gained 3.75%, due in part to their high U.S. fixed income exposure, while at the low end of the spectrum Taft-Hartley funds ended the quarter at +1.65%. Endowments/foundations trailed significantly in the 90th percentile at -0.58%. Overall, endowments/foundations performed the worst due to a relatively high exposure to non-U.S. equity and low exposure to U.S. fixed income. Public funds were buoyed by greater exposure to non-U.S. fixed income as accommodative central bank policies helped fixed income markets stage a strong rally. The Barclays Global Aggregate Index gained 5.90% for the quarter.

Callan Fund Sponsor Returns for the Quarter



	Public Database	Corporate Database	Endow/Fndn Database	Taft-Hartley Database
10th Percentile	1.91	3.75	1.72	1.65
25th Percentile	1.54	2.50	1.19	1.35
Median	1.17	1.42	0.54	1.02
75th Percentile	0.67	0.74	0.05	0.69
90th Percentile	0.10	0.28	-0.58	0.24

Source: Callan

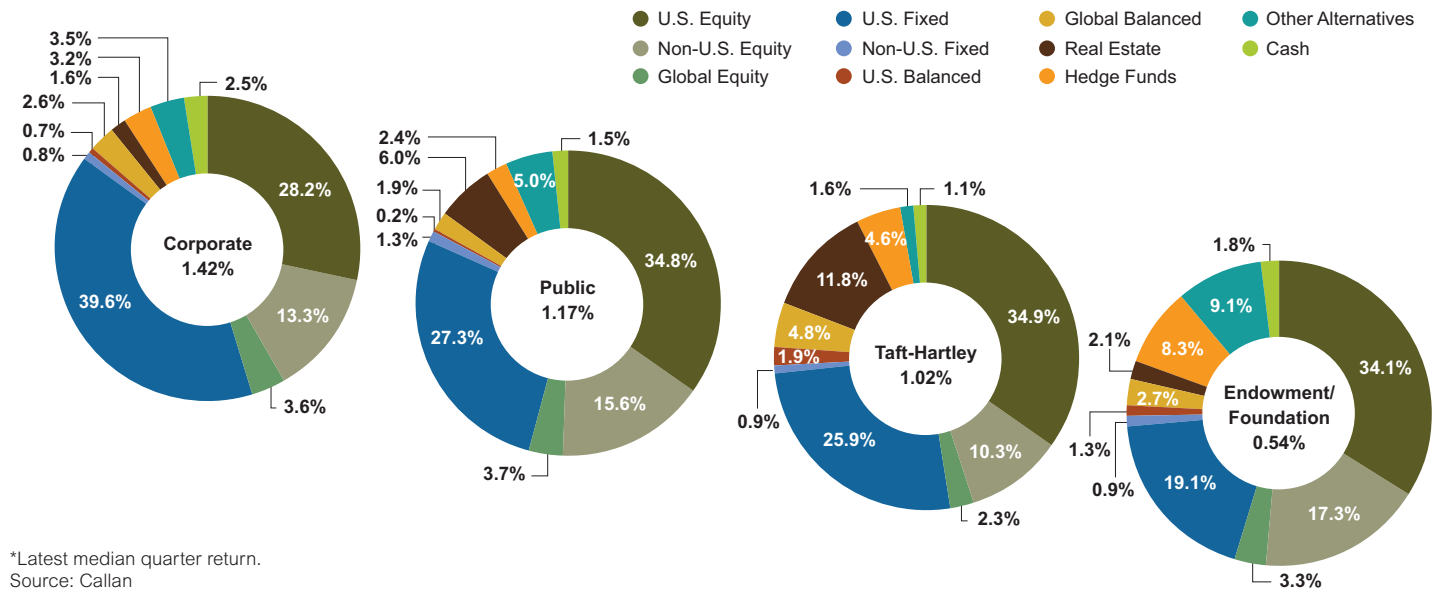
Callan Database Median and Index Returns for Periods ended March 31, 2016**

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

* The peer group includes funded ratio measures provided by large, institutional investment and actuarial consultants, as well as investment management firms.
**Returns less than one year are not annualized.
Sources: Callan, Barclays, MSCI, Russell Investment Group.

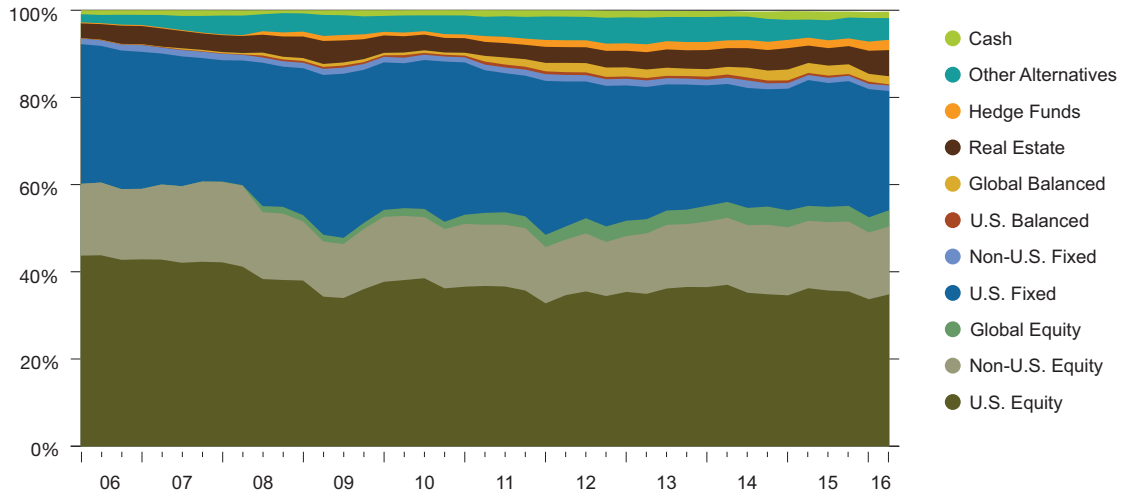
While one-year returns were consistently in the red, all fund types maintained performance in the +5% – +7% range for longer time periods. Taft-Hartley funds kept their lead over other fund types during three- and five-year periods, and corporate funds boasted the top returns over longer periods (10 and 15 years). Although the blended 60% Russell 3000 + 40% Barclays Aggregate Index (+1.79%) trailed the 60% MSCI World + 40% Barclays Global Aggregate Index (+2.15%) for the quarter, the U.S.-based benchmark continues to outperform over longer time periods. Callan's U.S. Balanced Database group maintained its edge over the Global Balanced Database group across all but the longest time periods shown in the table.

Callan Fund Sponsor Average Asset Allocation



*Latest median quarter return.
Source: Callan

Callan Public Fund Database Average Asset Allocation (10 Years)



Source: Callan

Tale of Two Halves

U.S. EQUITY | Lauren Mathias, CFA

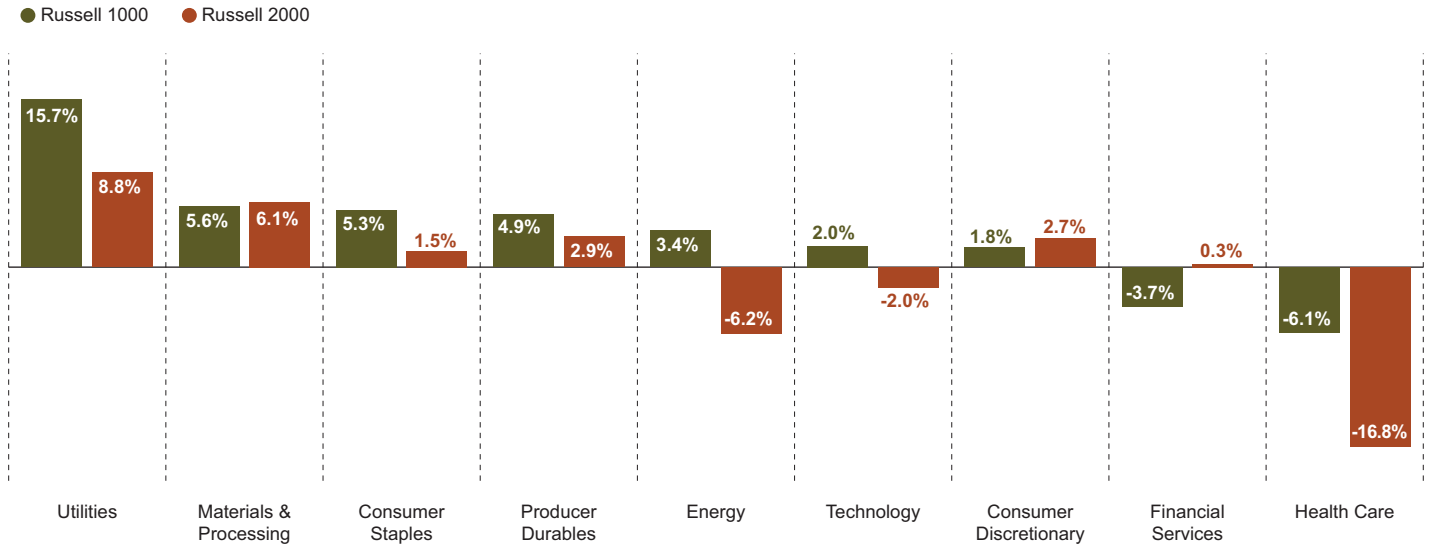
The first quarter of 2016 was a tale of two halves: the **S&P 500 Index** declined in the first half only to reverse course and post a positive quarterly return (+1.35%). Large cap companies held their lead over small cap, but in the trend of reversals, value overtook growth in all capitalizations. (**Russell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

Though the S&P 500 Index ended in positive territory, during the quarter performance dipped 10%. This is the first time since the Great Depression that the S&P fell to this depth only to rebound and end in the black. January was a disappointing month as economic concerns lingered from 2015. But in February and March, U.S. manufacturing activity grew, fourth-quarter 2015 GDP was revised to 1.4% from 1.0%, the labor force participation rate expanded to 63% (from 62.4%), and the U.S. economy added 215,000 jobs in March alone. Global concerns around the price of oil abated as the crude oil spot price ended the quarter at $38/barrel after bottoming at $26/barrel in mid-February. Investor sentiment rose in tandem with these positive developments. Despite some improvement, the U.S. Federal Reserve stated that global economic and financial developments continued to pose risks, and thus maintained the target range for the federal funds rate at 0.25%–0.50%.

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

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

Economic Sector Quarterly Performance



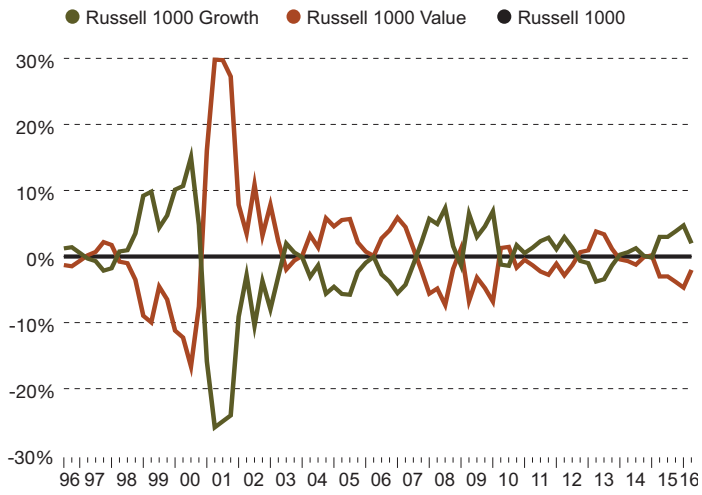
Source: Russell Investment Group

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

value, and the interest rate-sensitive Utilities sector expanded, but typically defensive Health Care trailed. Not only did sectors turnabout, so did factors—valuation metrics such as price/book and yield outpaced growth metrics such as projected EPS growth and price momentum. Volatility of stocks, as measured by the daily VIX, increased during February's pullback, ending the quarter near average levels. Correlations remained well above long-term averages and spreads between stock returns were below average (both based on the S&P 500 universe)—a difficult environment for stock-picking strategies.

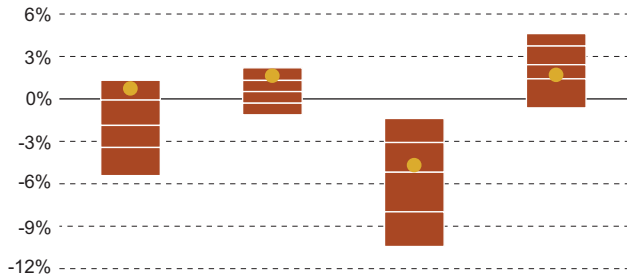
The U.S. equity market had a tumultuous start to the year, but found itself in positive territory by quarter end. This tale of two halves made it challenging for active management, with just 19% of large cap funds outperforming the S&P 500 Index during the quarter.

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



Source: Russell Investment Group

Callan Style Group Quarterly Returns



	Large Cap Growth Style	Large Cap Value Style	Small Cap Growth Style	Small Cap Value Style
10th Percentile	1.32	2.20	-1.38	4.62
25th Percentile	-0.08	1.31	-3.08	3.74
Median	-1.87	0.52	-5.18	2.42
75th Percentile	-3.43	-0.30	-7.98	1.42
90th Percentile	-5.42	-1.12	-10.43	-0.63
	R1000 Growth	**R1000 Value**	**R2000 Growth**	**R2000 Value**
Benchmark	0.74	1.64	-4.68	1.70

Sources: Callan, Russell Investment Group

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

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

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

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

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

*Returns less than one year are not annualized.
Sources: Callan, Dow Jones & Company, Russell Investment Group, Standard & Poor's, The NASDAQ Stock Market.

Mr. Draghi's Wild Ride

NON-U.S. EQUITY | Kevin Nagy

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

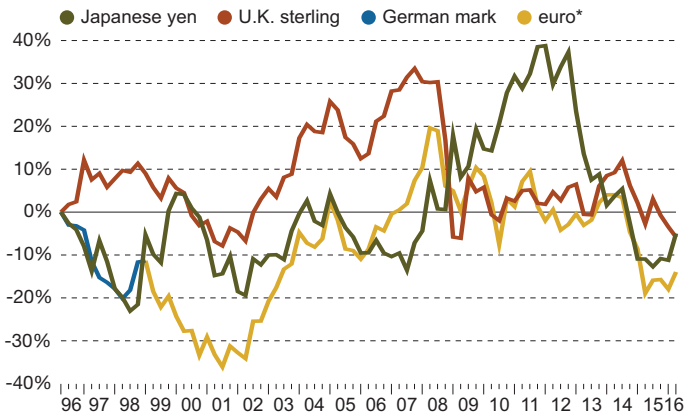
Falling oil prices, concerns about global economic growth, and declining corporate profits prompted a January sell-off, as many investors switched to a "risk-off" footing. Announcements of further European Central Bank (ECB) monetary stimulus and a modest rebound in commodity prices helped kick-start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

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

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

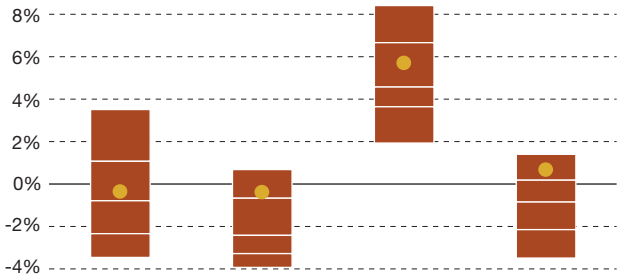
Southeast Asia and the Pacific (**MSCI Pacific Index**: -3.79%) underperformed Europe and other broad benchmarks. Japan (-6.52%) battled with tepid economic growth and large losses in the banking sector. The Financial sector was hit especially hard, losing 13.58%. Exporters also struggled due to the strengthening yen. Things were less gloomy in the rest of the region with New Zealand (+11.60%), Singapore (+5.05%), and Australia (+2.10%) benefitting from a commodities rally.

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



*euro returns from 1Q99
Source: MSCI

Callan Style Group Quarterly Returns

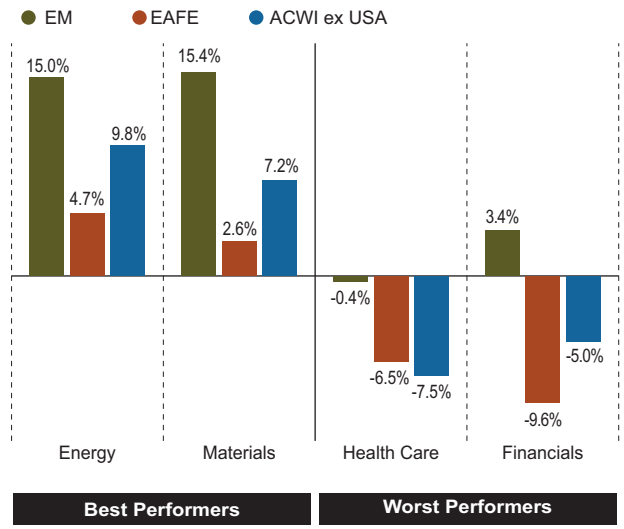


	Global Eq Style	Non-U.S. Eq Style	Emg Mkt Style	Small Cap Style
10th Percentile	3.47	0.64	8.37	1.36
25th Percentile	1.03	-0.71	6.62	0.14
Median	-0.83	-2.46	4.53	-0.89
75th Percentile	-2.38	-3.32	3.60	-2.19
90th Percentile	-3.50	-3.97	1.89	-3.53
	MSCI World	MSCI ACWI ex USA	MSCI Emg Mkts	MSCI ACWI ex USA SC
Benchmark	-0.35	-0.38	5.71	0.68

Sources: Callan, MSCI

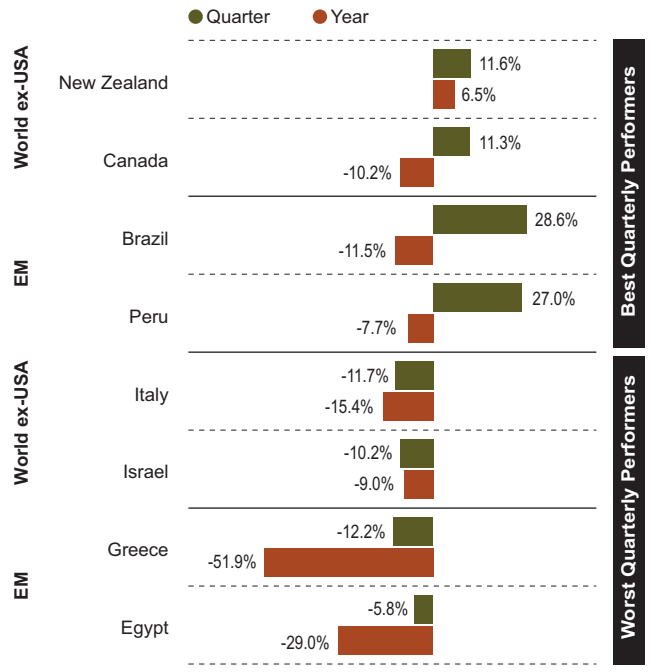
China (-4.80%) continued to struggle due to concerns over slowing growth and ineffective monetary policy. In an effort to sustain the economy's growth, Chinese authorities implemented selective capital controls to slow asset withdrawals and cut the required reserve ratio. Consumer Discretionary (-10.75%),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

Quarterly Returns: Strong and Struggling Sectors



Source: MSCI

Quarterly and Annual Country Performance Snapshot



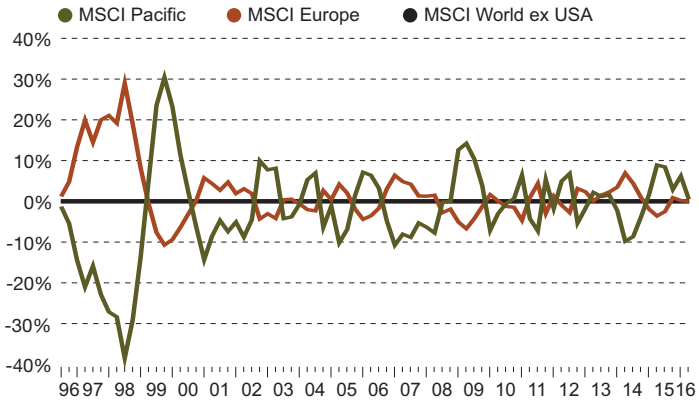
Source: MSCI

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

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

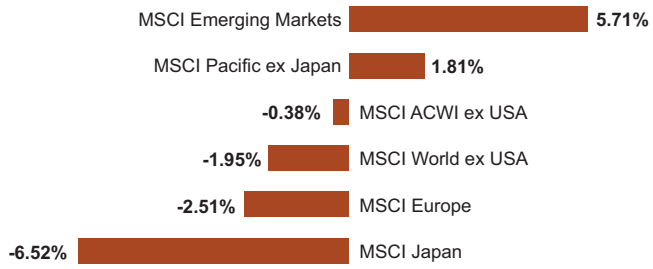
Sources: MSCI, Russell Investment Group, Standard & Poor's.

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



Source: MSCI

Regional Quarterly Performance (U.S. Dollar)



Source: MSCI

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

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

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

More T-Bills, Please

U.S. FIXED INCOME | Irina Sushch

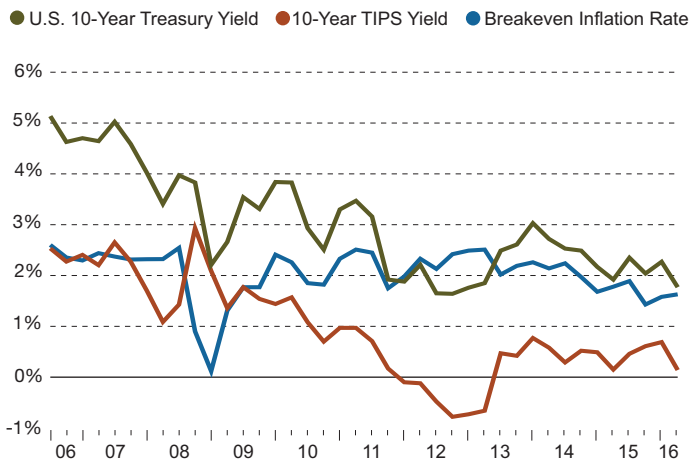
Yields plummeted during a volatile first quarter. A dovish Fed fostered uncertainty over global economic growth. **The Barclays Aggregate Index** gained 3.03% and the **Barclays Corporate High Yield Index** was up 3.35%.

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

Following December's federal funds rate hike, the Federal Reserve took on a neutral outlook. The Fed stated that financial and economic conditions are less favorable than they had been in December. The U.S. economy experienced modest growth despite improving employment and housing numbers. Fed chair Janet Yellen stated that the U.S. economy would have to get much worse before the Fed would consider the use of negative interest rates (six other central banks have implemented negative interest rates). The 10-year U.S. Treasury yield tumbled to 1.77%. The breakeven inflation rate (the difference between nominal and real yields) on 10-year Treasuries ticked up 1.63% as TIPS fell 55 bps, in line with their nominal counterparts.

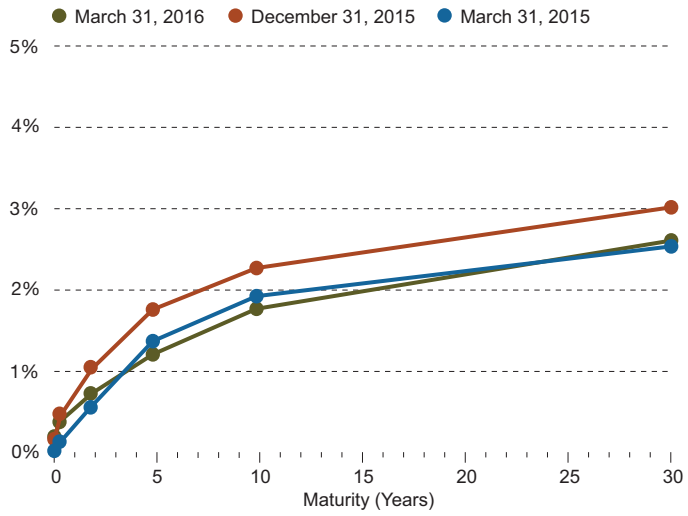
Sectors in the Barclays Aggregate posted positive returns across the board. CMBS outperformed like-duration Treasuries by 0.58% and rose 3.61% for the quarter. Credit was the highest returning sector (+3.92%), but only beat like-duration Treasuries

Historical 10-Year Yields



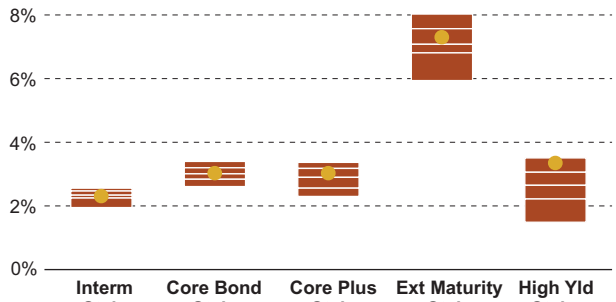
Source: Bloomberg

U.S. Treasury Yield Curves



Source: Bloomberg

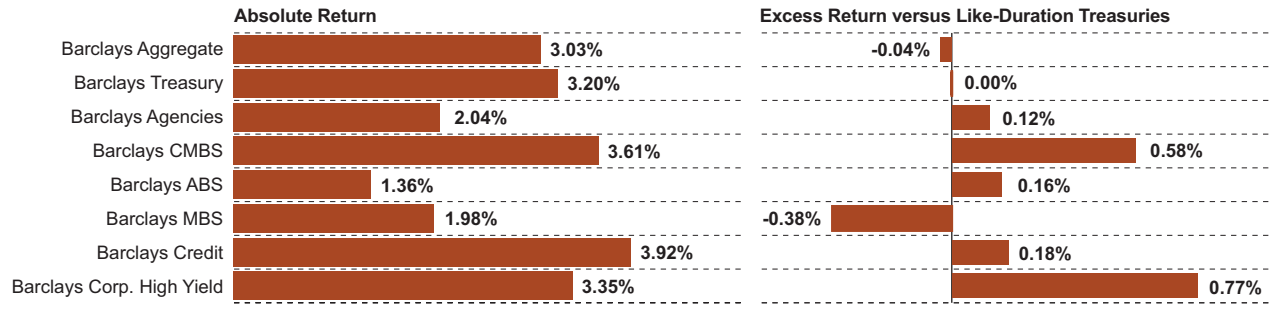
Callan Style Group Quarterly Returns



	Interm Style	Core Bond Style	Core Plus Style	Ext Maturity Style	High Yld Style
10th Percentile	2.56	3.40	3.37	8.03	3.51
25th Percentile	2.47	3.20	3.18	7.57	3.06
Median	2.34	3.01	2.90	7.08	2.65
75th Percentile	2.25	2.84	2.56	6.81	2.22
90th Percentile	1.95	2.61	2.30	5.94	1.49
	Barclays Interm Agg	Barclays Agg	Barclays Agg	Barclays Long G/C	Barclays High Yld
Benchmark	2.31	3.03	3.03	7.30	3.35

Sources: Barclays, Callan

Fixed Income Index Quarterly Returns

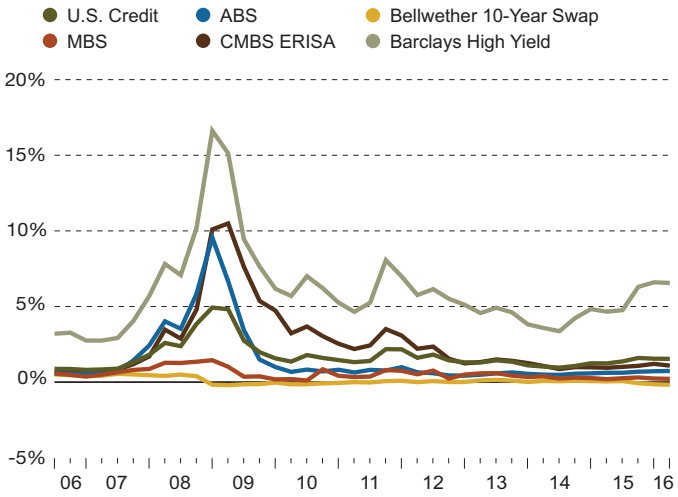


Source: Barclays

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

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

Effective Yield Over Treasuries



Source: Barclays

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

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

Source: Barclays

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

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

*Returns for less than one year are not annualized.

Sources: Barclays, Callan, Citigroup, Merrill Lynch.

A Dole of Doves

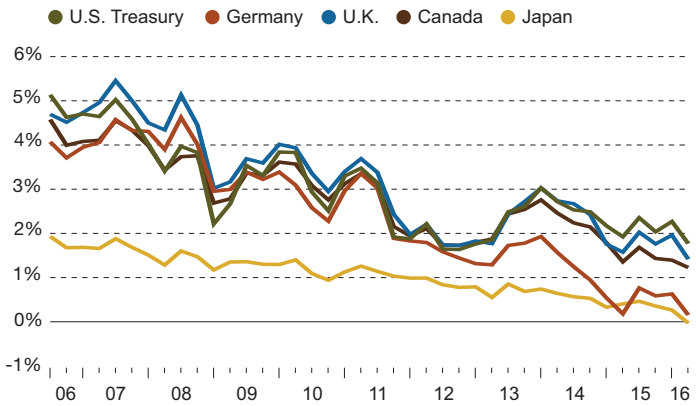
NON-U.S. FIXED INCOME | Kyle Fekete

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

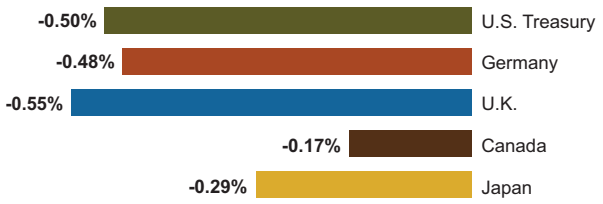
The U.S. dollar weakened versus most currencies during the quarter, providing a tailwind to unhedged foreign bond returns. The yen gained 7% versus the dollar as investors sought its safe-haven status amid market turbulence in China and concerns over the health of the European banking sector. The euro was also stronger versus the dollar (+5%). In March, the ECB continued its accomodative stance, slashing interest rates and increasing asset purchases. For the first time, the ECB included non-bank investment grade corporate bonds in its asset purchase program. Interest rates fell across developed markets, further bolstering returns. The **Barclays Global Aggregate** rose 5.90% (+3.28% hedged).

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

10-Year Global Government Bond Yields



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



Source: Bloomberg

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

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

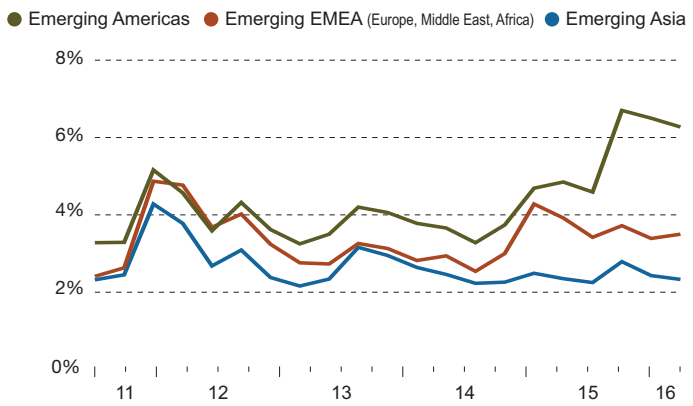
Source: Citigroup

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

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

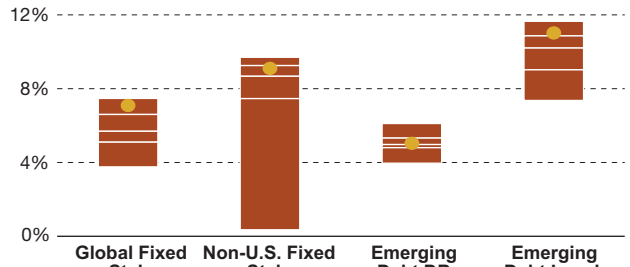
Emerging market bonds rebounded. In late February and March, commodity prices stabilized, risk appetite returned, and confidence in the Chinese renminbi stabilized. The hard currency **JPM EMBI Global Diversified Index** rose 5.04% while the local currency **JPM GBI-EM Global Diversified** soared 11.02%,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

Emerging Spreads Over Developed (By Region)



Source: Barclays

Callan Style Group Quarterly Returns



	Global Fixed Style	Non-U.S. Fixed Style	Emerging Debt DB	Emerging Debt Local
10th Percentile	7.51	9.74	6.15	11.69
25th Percentile	6.64	9.29	5.36	10.90
Median	5.73	8.71	5.01	10.24
75th Percentile	5.14	7.50	4.84	9.06
90th Percentile	3.80	0.39	4.00	7.40
	Citi World Gov	Citi Non-U.S. World Gov	JPM EMBI Gl Div	JPM GBI-EM Gl Div
Benchmark ●	7.09	9.10	5.04	11.02

Sources: Callan, Citigroup, JPMorgan Chase

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

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

*Returns less than one year are not annualized.
Sources: Callan, Citigroup, JPMorgan Chase.

Slow and Low

REAL ESTATE | Avery Robinson

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

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

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

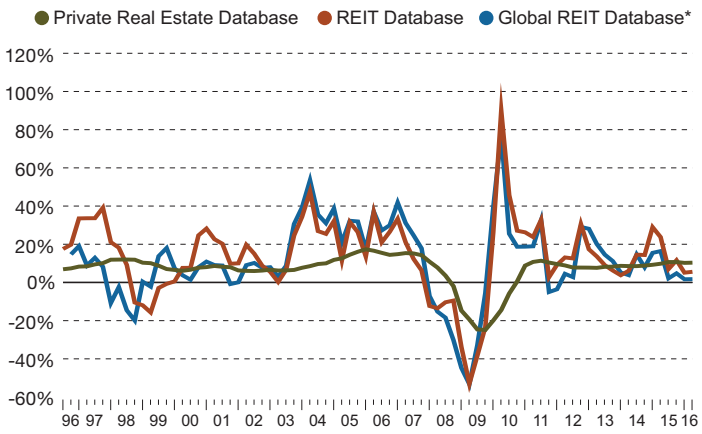
In the listed real estate market, the **FTSE EPRA/NAREIT Developed REIT Index (USD)** gained 5.43% and U.S. REITs tracked by the **FTSE NAREIT Equity REITs Index** advanced 6.00%.

In the U.S., volatility continued as REIT sectors rebounded sharply in March to generate positive returns for the quarter. Sector performance was led once again by Self-Storage (+10.85%), followed by Retail (+8.21%), Residential (+8.38%), and Industrial (+6.49%). The only negative was single family homes (-1.03%). As of March 31, U.S. REITs were trading at a 3% premium to net asset value. This marked the first time REITs have traded at a premium over the past 10 months. U.S. REITs raised $15.1 billion, despite no IPO activity for the quarter. There were 24 secondary equity offerings and 14 secondary debt offerings.

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

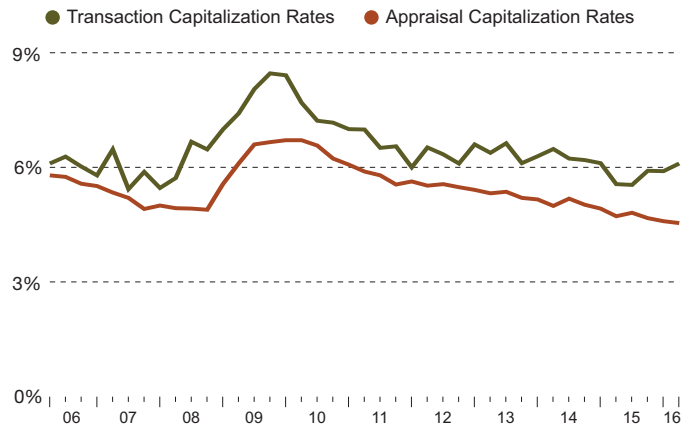
CMBS issuance reached $19.3 billion, significantly down from the first quarter of 2015 ($27.0 billion). This decline was widely credited to the instability in the broader financial market.

Rolling One-Year Returns



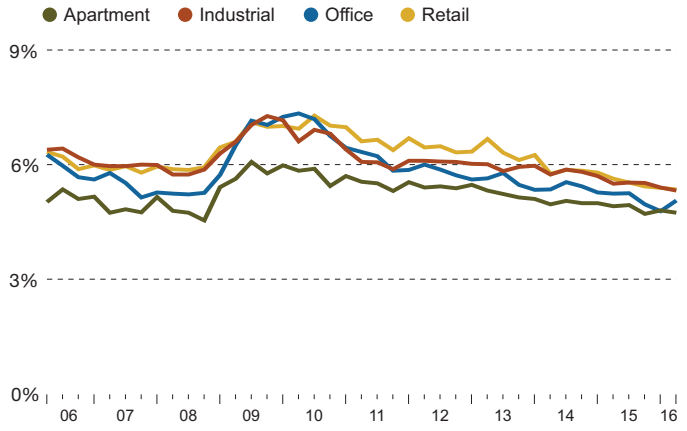
*Global REIT returns from 3Q96
Source: Callan

NCREIF Transaction and Appraisal Capitalization Rates



Source: NCREIF
Note: Transaction capitalization rate is equal-weighted.

NCREIF Capitalization Rates by Property Type



Source: NCREIF
Note: Capitalization rates are appraisal-based.

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

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

*Returns for less than one year are not annualized.
All REIT returns are reported gross in USD.
Sources: Callan, NAREIT, NCREIF, The FTSE Group. NCREIF statistics are the product of direct queries and may fluctuate over time.

Drip, Drip, Drip

PRIVATE EQUITY | Gary Robertson

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

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

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

Regarding exits, *Buyouts* reports that steep declines occurred in the first quarter of 2016. There were 107 private M&A exits of buyout-backed companies, with 31 deals disclosing values totaling $14.6 billion. The M&A exits count was down 27% year-over-year from 147, and the announced value declined 53% from $30.9 billion. There were no buyout-backed IPOs in the first quarter.

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

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

Funds Closed January 1 to March 31, 2016

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

Source: Private Equity Analyst

Private Equity Performance Database (%) (Pooled Horizon IRRs through Sept. 30, 2015*)

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

Private equity returns are net of fees.
Sources: Standard & Poor's, Thomson/Cambridge.
*Most recent data available at time of publication.

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

Market Tremors Panic Hedge Funds

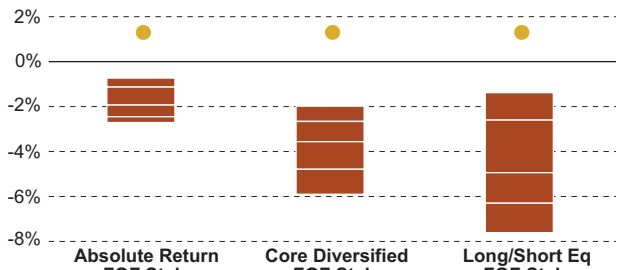
HEDGE FUNDS | Jim McKee

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

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

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

Callan Style Group Quarterly Returns



	Absolute Return FOF Style	Core Diversified FOF Style	Long/Short Eq FOF Style
10th Percentile	-0.73	-1.98	-1.38
25th Percentile	-1.13	-2.66	-2.60
Median	-1.93	-3.56	-4.94
75th Percentile	-2.45	-4.79	-6.30
90th Percentile	-2.71	-5.90	-7.61
T-Bills + 5% ●	1.30	1.30	1.30

Sources: Callan, Merrill Lynch

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

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

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

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

Strong Quarter Can't Save 2015

DEFINED CONTRIBUTION | Tom Szkwarla

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

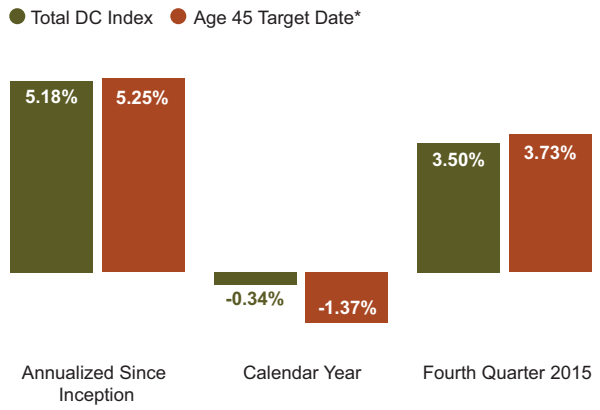
The Age 45 Target Date Fund—the average of target date funds that would be selected by participants age 45 and retiring at age 65—beat the DC Index for the quarter, but underperformed it by 1.03% for the year. Both results were driven by the fact that the Age 45 Target Date Fund has a higher allocation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

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

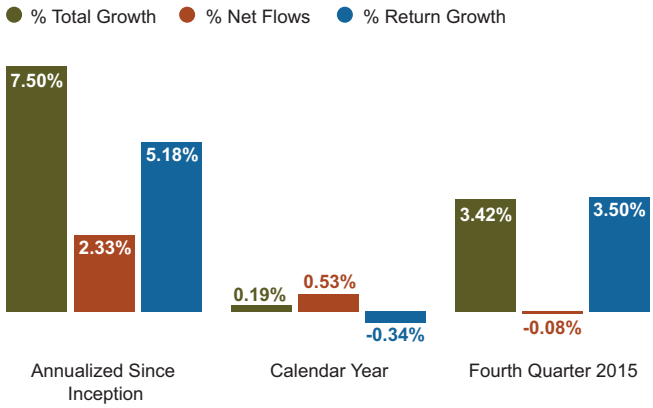
Fourth quarter turnover (i.e., net transfer activity) in the DC Index was 0.46%. Turnover has been steadily increasing since the beginning of the year, but remains below the historical average of 0.65%.

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

Investment Performance*



Growth Sources*



Net Cash Flow Analysis (Fourth Quarter 2015)*
(Top Two and Bottom Two Asset Gatherers)

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

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

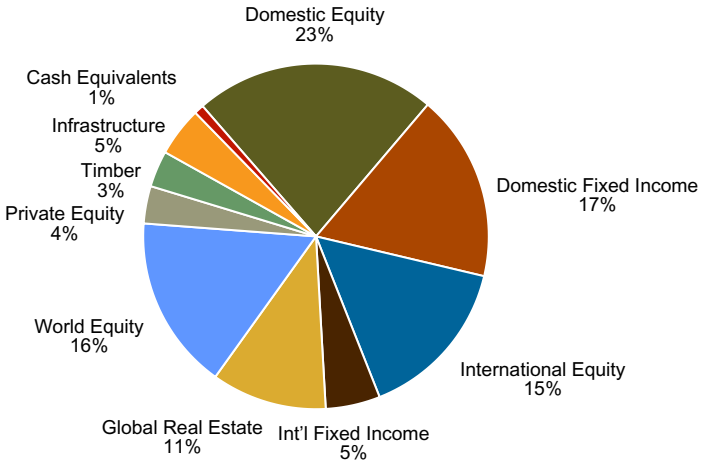
* DC Index inception date is January 2006. DB plan performance is gross of fees.

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

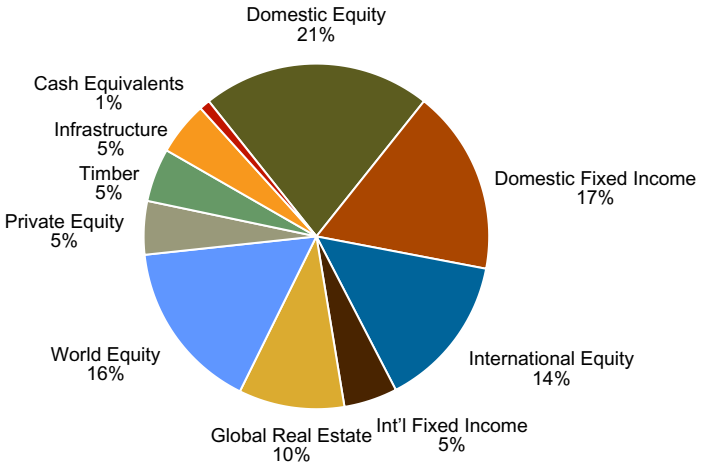
Actual vs Target Asset Allocation
As of March 31, 2016

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

Actual Asset Allocation

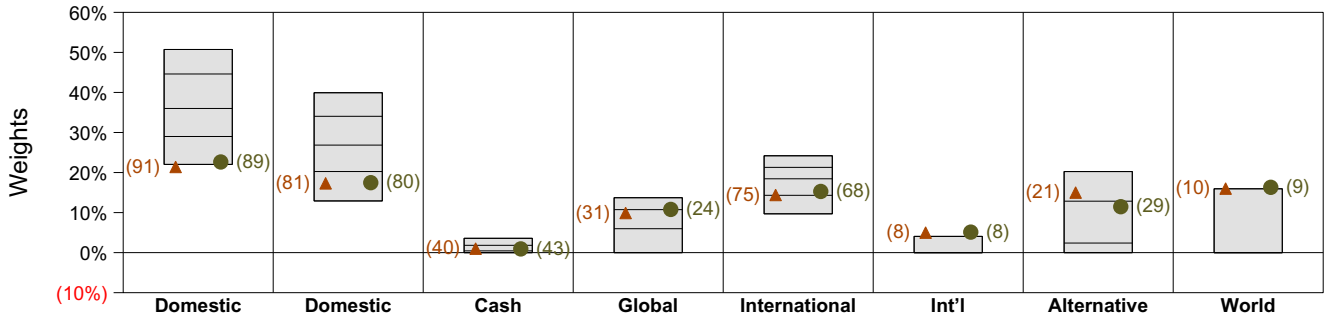


Target Asset Allocation



Asset Class	$000s Actual	Weight Actual	Target	Percent Difference	$000s Difference
Domestic Equity	1,053,891	22.6%	21.4%	1.2%	57,491
Domestic Fixed Income	813,405	17.5%	17.3%	0.2%	7,904
International Equity	711,253	15.3%	14.4%	0.9%	40,778
Int'l Fixed Income	238,540	5.1%	5.0%	0.1%	5,736
Global Real Estate	502,278	10.8%	9.9%	0.9%	41,326
World Equity	759,328	16.3%	16.0%	0.3%	14,356
Private Equity	163,010	3.5%	5.0%	(1.5%)	(69,794)
Timber	156,098	3.4%	5.0%	(1.6%)	(76,706)
Infrastructure	215,022	4.6%	5.0%	(0.4%)	(17,782)
Cash Equivalents	43,251	0.9%	1.0%	(0.1%)	(3,310)
Total	4,656,075	100.0%	100.0%		

Asset Class Weights vs Public Fund Sponsor Database



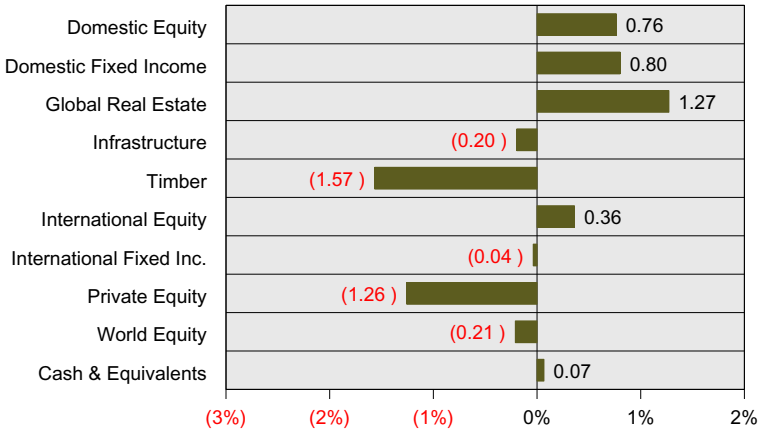
	Domestic Equity	Domestic Fixed Income	Cash Equivalents	Global Real Estate	International Equity	Int'l Fixed Income	Alternative	World Equity
10th Percentile	50.73	39.93	3.58	13.71	24.19	4.06	20.25	15.94
25th Percentile	44.61	34.04	1.83	10.74	21.29	0.00	12.84	0.00
Median	36.00	26.85	0.44	5.98	18.44	0.00	2.40	0.00
75th Percentile	29.00	20.25	0.00	0.00	14.31	0.00	0.00	0.00
90th Percentile	22.03	12.91	0.00	0.00	9.69	0.00	0.00	0.00
Fund ●	22.63	17.47	0.93	10.79	15.28	5.12	11.47	16.31
Target ▲	21.40	17.30	1.00	9.90	14.40	5.00	15.00	16.00
% Group Invested	97.44%	96.92%	70.26%	61.03%	89.74%	19.49%	44.62%	23.08%

* Current Quarter Target = 16.5% Russell 1000 Index, 16.0% MSCI World, 12.3% Barclays Aggregate Index, 11.2% MSCI EAFE, 9.9% NCREIF Total Index, 5.0% CPI-W, 5.0% NDSIB PEN - Private Equity, 5.0% Barclays HY Corp 2% Issue, 5.0% Barclays Global Agg ex-US, 5.0% NCREIF Timberland Index, 4.9% Russell 2000 Index, 3.2% MSCI EM and 1.0% 3-month Treasury Bill.

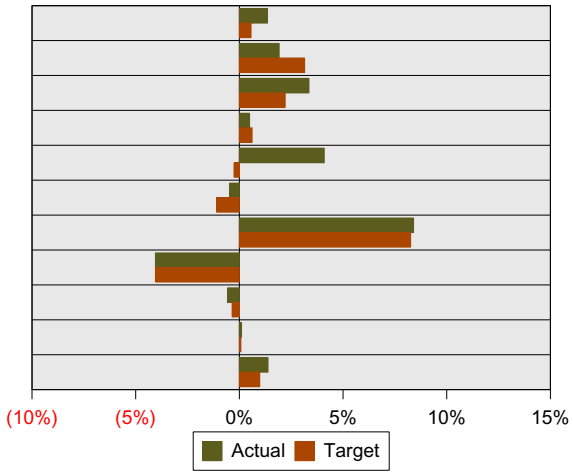
Quarterly Total Fund Relative Attribution - March 31, 2016

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

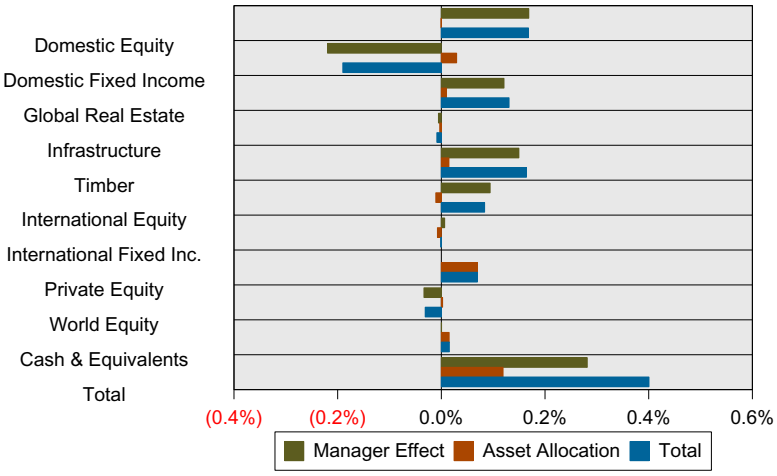
Asset Class Under or Overweighting



Actual vs Target Returns



Relative Attribution by Asset Class



Relative Attribution Effects for Quarter ended March 31, 2016

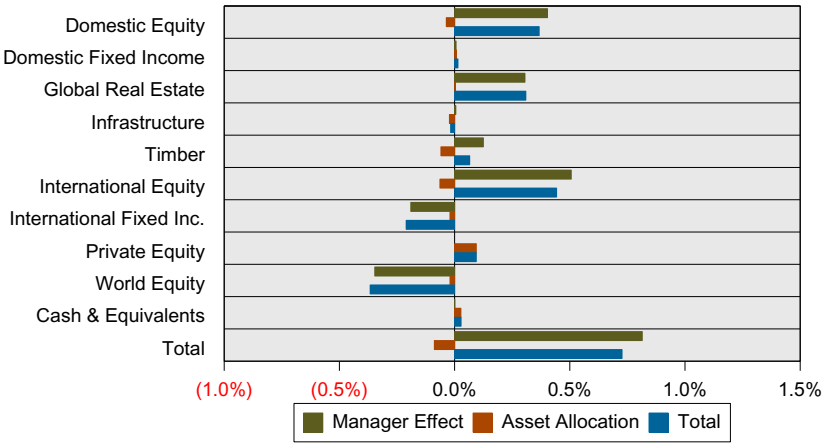
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	22%	21%	1.35%	0.56%	0.17%	(0.00%)	0.17%
Domestic Fixed Income	18%	17%	1.92%	3.15%	(0.22%)	0.03%	(0.19%)
Global Real Estate	11%	10%	3.36%	2.21%	0.12%	0.01%	0.13%
Infrastructure	5%	5%	0.49%	0.61%	(0.01%)	(0.00%)	(0.01%)
Timber	3%	5%	4.09%	(0.26%)	0.15%	0.01%	0.16%
International Equity	15%	14%	(0.48%)	(1.10%)	0.09%	(0.01%)	0.08%
International Fixed Inc.	5%	5%	8.40%	8.26%	0.01%	(0.01%)	(0.00%)
Private Equity	4%	5%	(4.05%)	(4.05%)	0.00%	0.07%	0.07%
World Equity	16%	16%	(0.57%)	(0.35%)	(0.03%)	0.00%	(0.03%)
Cash & Equivalents	1%	1%	0.10%	0.07%	0.00%	0.02%	0.02%
Total			**1.38% =**	**0.98% +**	**0.28% +**	**0.12%**	**0.40%**

* Current Quarter Target = 16.5% Russell 1000 Index, 16.0% MSCI World, 12.3% Barclays Aggregate Index, 11.2% MSCI EAFE, 9.9% NCREIF Total Index, 5.0% CPI-W, 5.0% NDSIB PEN - Private Equity, 5.0% Barclays HY Corp 2% Issue, 5.0% Barclays Global Agg ex-US, 5.0% NCREIF Timberland Index, 4.9% Russell 2000 Index, 3.2% MSCI EM and 1.0% 3-month Treasury Bill.

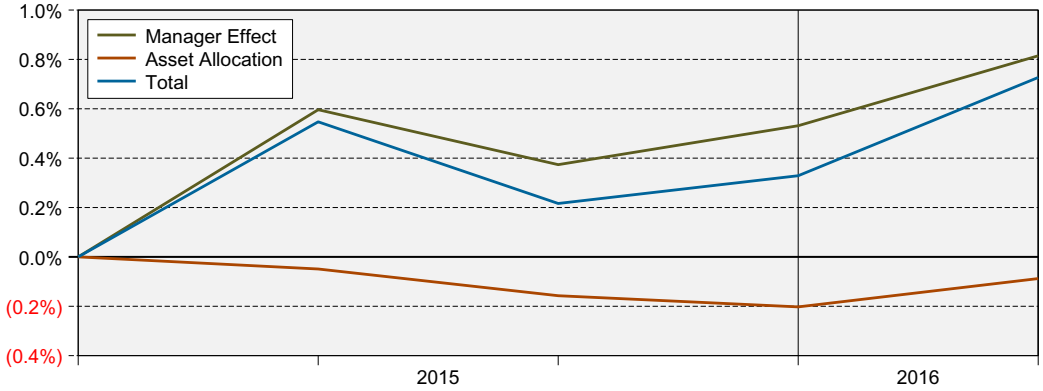
Cumulative Total Fund Relative Attribution - March 31, 2016

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

One Year Relative Attribution Effects



Cumulative Relative Attribution Effects



One Year Relative Attribution Effects

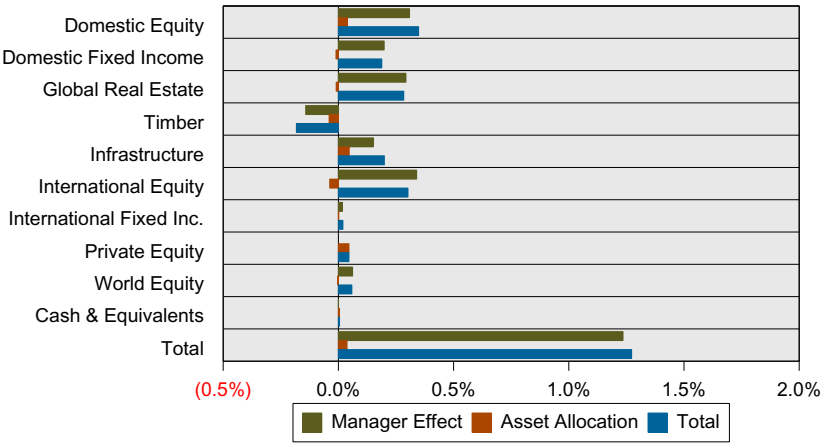
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	22%	21%	(0.05%)	(1.88%)	0.40%	(0.04%)	0.37%
Domestic Fixed Income	19%	18%	0.44%	0.43%	0.01%	0.01%	0.01%
Global Real Estate	10%	10%	15.30%	11.84%	0.31%	0.00%	0.31%
Infrastructure	5%	5%	0.55%	0.50%	0.01%	(0.02%)	(0.02%)
Timber	4%	5%	6.65%	2.90%	0.12%	(0.06%)	0.07%
International Equity	15%	14%	(5.68%)	(8.96%)	0.51%	(0.06%)	0.44%
International Fixed Inc.	5%	5%	2.64%	6.69%	(0.19%)	(0.02%)	(0.21%)
Private Equity	4%	5%	(9.28%)	(9.28%)	0.00%	0.09%	0.09%
World Equity	16%	16%	(5.59%)	(3.45%)	(0.35%)	(0.02%)	(0.37%)
Cash & Equivalents	1%	1%	0.19%	0.12%	0.00%	0.03%	0.03%
Total			**(0.10%) =**	**(0.83%) +**	**0.81% +**	**(0.09%)**	**0.73%**

* Current Quarter Target = 16.5% Russell 1000 Index, 16.0% MSCI World, 12.3% Barclays Aggregate Index, 11.2% MSCI EAFE, 9.9% NCREIF Total Index, 5.0% CPI-W, 5.0% NDSIB PEN - Private Equity, 5.0% Barclays HY Corp 2% Issue, 5.0% Barclays Global Agg ex-US, 5.0% NCREIF Timberland Index, 4.9% Russell 2000 Index, 3.2% MSCI EM and 1.0% 3-month Treasury Bill.

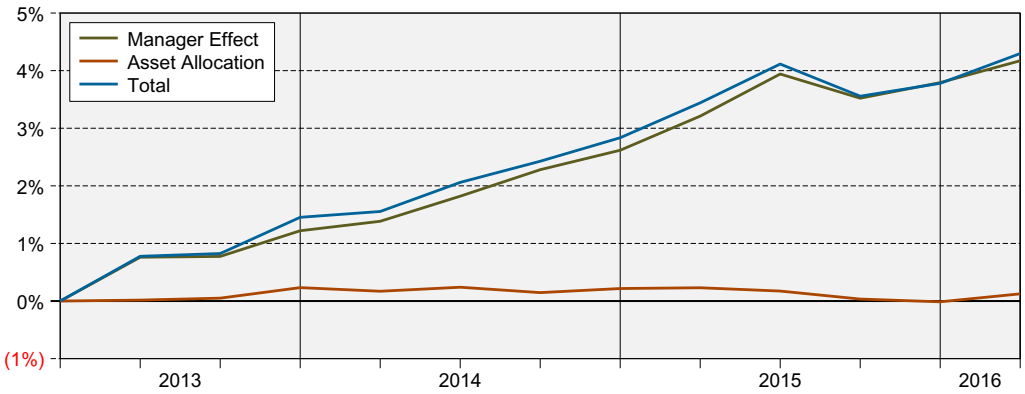
Cumulative Total Fund Relative Attribution - March 31, 2016

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

Three Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Three Year Annualized Relative Attribution Effects

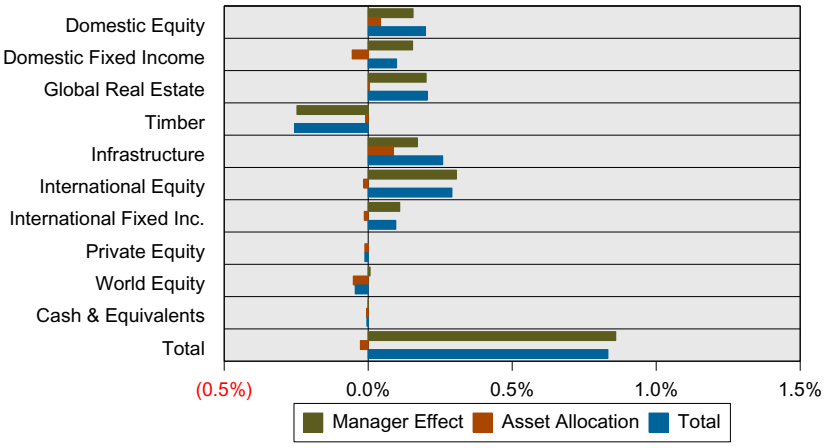
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	23%	21%	11.95%	10.50%	0.31%	0.04%	0.35%
Domestic Fixed Income	19%	18%	3.37%	2.35%	0.20%	(0.01%)	0.19%
Global Real Estate	10%	10%	15.24%	11.91%	0.29%	(0.01%)	0.28%
Timber	4%	5%	4.64%	7.71%	(0.14%)	(0.04%)	(0.18%)
Infrastructure	4%	5%	4.29%	0.42%	0.15%	0.05%	0.20%
International Equity	14%	14%	3.12%	0.82%	0.34%	(0.04%)	0.30%
International Fixed Inc.	5%	5%	0.02%	(0.32%)	0.02%	0.00%	0.02%
Private Equity	4%	5%	(1.69%)	(1.69%)	0.00%	0.05%	0.05%
World Equity	16%	16%	7.22%	6.82%	0.06%	(0.00%)	0.06%
Cash & Equivalents	1%	1%	0.10%	0.07%	0.00%	0.00%	0.00%
Total			**6.71% =**	**5.44% +**	**1.24% +**	**0.04%**	**1.27%**

* Current Quarter Target = 16.5% Russell 1000 Index, 16.0% MSCI World, 12.3% Barclays Aggregate Index, 11.2% MSCI EAFE, 9.9% NCREIF Total Index, 5.0% CPI-W, 5.0% NDSIB PEN - Private Equity, 5.0% Barclays HY Corp 2% Issue, 5.0% Barclays Global Agg ex-US, 5.0% NCREIF Timberland Index, 4.9% Russell 2000 Index, 3.2% MSCI EM and 1.0% 3-month Treasury Bill.

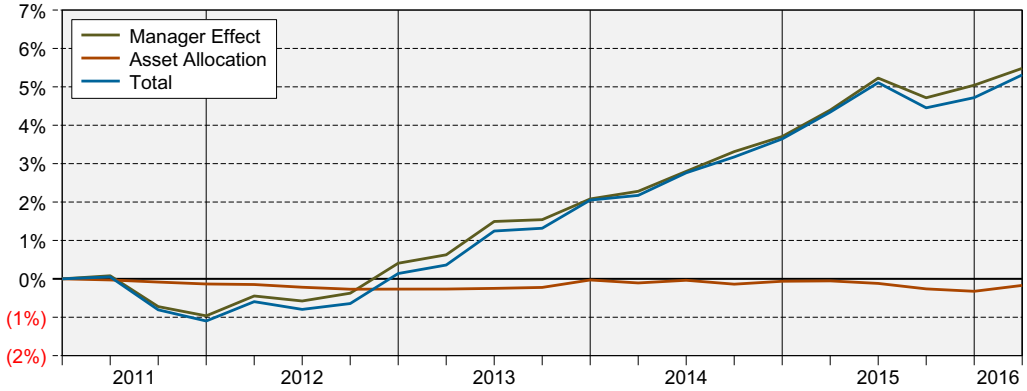
Cumulative Total Fund Relative Attribution - March 31, 2016

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

Five Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Five Year Annualized Relative Attribution Effects

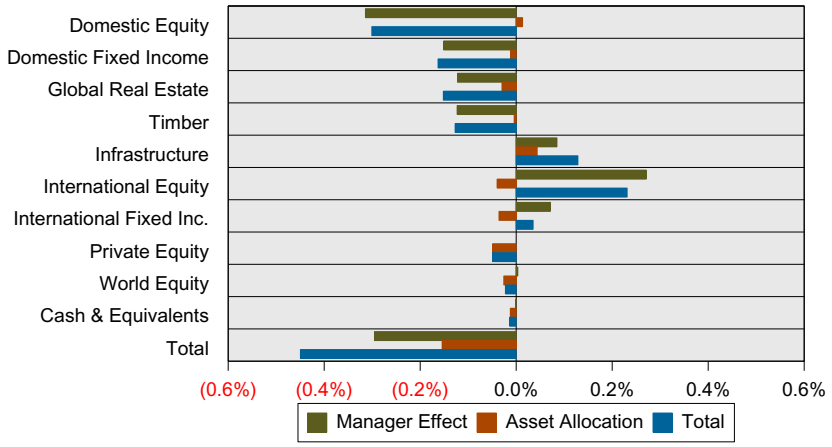
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	26%	25%	11.43%	10.55%	0.16%	0.04%	0.20%
Domestic Fixed Income	19%	19%	5.33%	4.20%	0.15%	(0.06%)	0.10%
Global Real Estate	9%	9%	14.31%	11.93%	0.20%	0.00%	0.21%
Timber	4%	4%	-	-	(0.25%)	(0.01%)	(0.26%)
Infrastructure	3%	4%	-	-	0.17%	0.09%	0.26%
International Equity	16%	16%	2.83%	0.89%	0.31%	(0.02%)	0.29%
International Fixed Inc.	5%	5%	2.41%	0.39%	0.11%	(0.01%)	0.10%
Private Equity	5%	5%	0.94%	0.94%	0.00%	(0.01%)	(0.01%)
World Equity	11%	12%	-	-	0.01%	(0.05%)	(0.05%)
Cash & Equivalents	1%	1%	0.11%	0.08%	0.00%	(0.01%)	(0.00%)
Total			**6.70%** =	**5.87%** +	**0.86%** +	**(0.03%)**	**0.83%**

* Current Quarter Target = 16.5% Russell 1000 Index, 16.0% MSCI World, 12.3% Barclays Aggregate Index, 11.2% MSCI EAFE, 9.9% NCREIF Total Index, 5.0% CPI-W, 5.0% NDSIB PEN - Private Equity, 5.0% Barclays HY Corp 2% Issue, 5.0% Barclays Global Agg ex-US, 5.0% NCREIF Timberland Index, 4.9% Russell 2000 Index, 3.2% MSCI EM and 1.0% 3-month Treasury Bill.

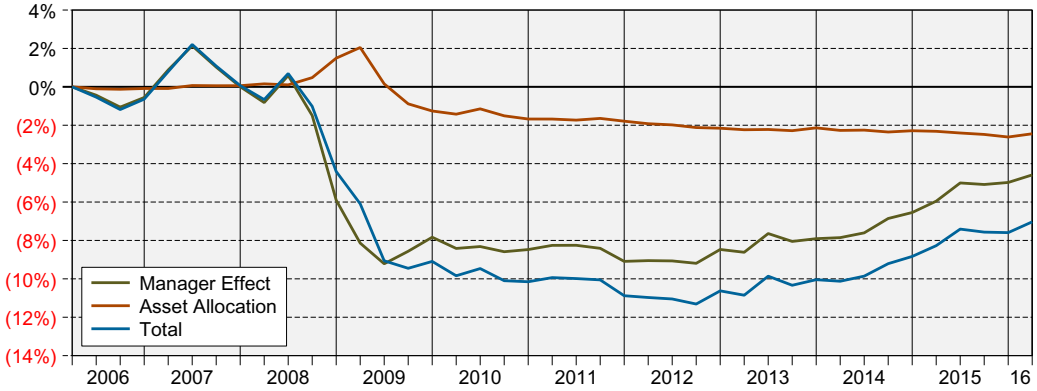
Cumulative Total Fund Relative Attribution - March 31, 2016

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

Ten Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Ten Year Annualized Relative Attribution Effects

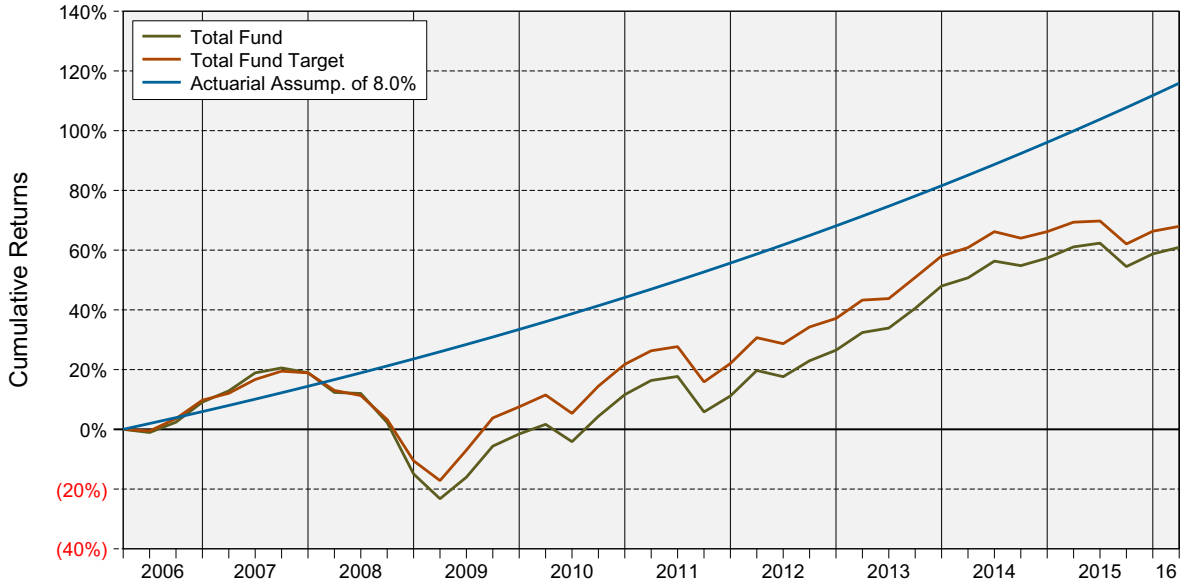
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	32%	32%	5.80%	6.64%	(0.31%)	0.01%	(0.30%)
Domestic Fixed Income	23%	22%	5.59%	5.61%	(0.15%)	(0.01%)	(0.16%)
Global Real Estate	9%	8%	6.16%	7.61%	(0.12%)	(0.03%)	(0.15%)
Timber	2%	2%	-	-	(0.12%)	(0.00%)	(0.13%)
Infrastructure	2%	2%	-	-	0.08%	0.04%	0.13%
International Equity	17%	17%	3.63%	2.06%	0.27%	(0.04%)	0.23%
International Fixed Inc.	5%	5%	5.40%	4.11%	0.07%	(0.04%)	0.04%
Private Equity	4%	5%	1.33%	1.33%	0.00%	(0.05%)	(0.05%)
World Equity	6%	6%	-	-	0.00%	(0.03%)	(0.02%)
Cash & Equivalents	1%	1%	0.92%	1.15%	(0.00%)	(0.01%)	(0.01%)
Total			**4.87% =**	**5.32% +**	**(0.30%) +**	**(0.15%)**	**(0.45%)**

* Current Quarter Target = 16.5% Russell 1000 Index, 16.0% MSCI World, 12.3% Barclays Aggregate Index, 11.2% MSCI EAFE, 9.9% NCREIF Total Index, 5.0% CPI-W, 5.0% NDSIB PEN - Private Equity, 5.0% Barclays HY Corp 2% Issue, 5.0% Barclays Global Agg ex-US, 5.0% NCREIF Timberland Index, 4.9% Russell 2000 Index, 3.2% MSCI EM and 1.0% 3-month Treasury Bill.

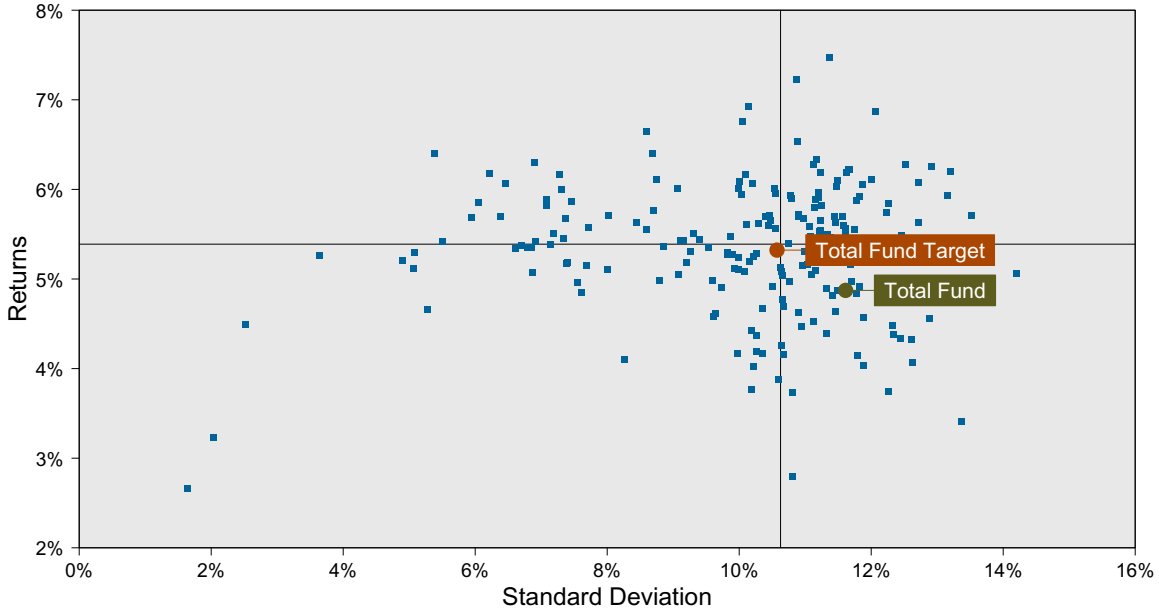
Cumulative Performance Relative to Target

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

Cumulative Returns Actual vs Target



Ten Year Annualized Risk vs Return



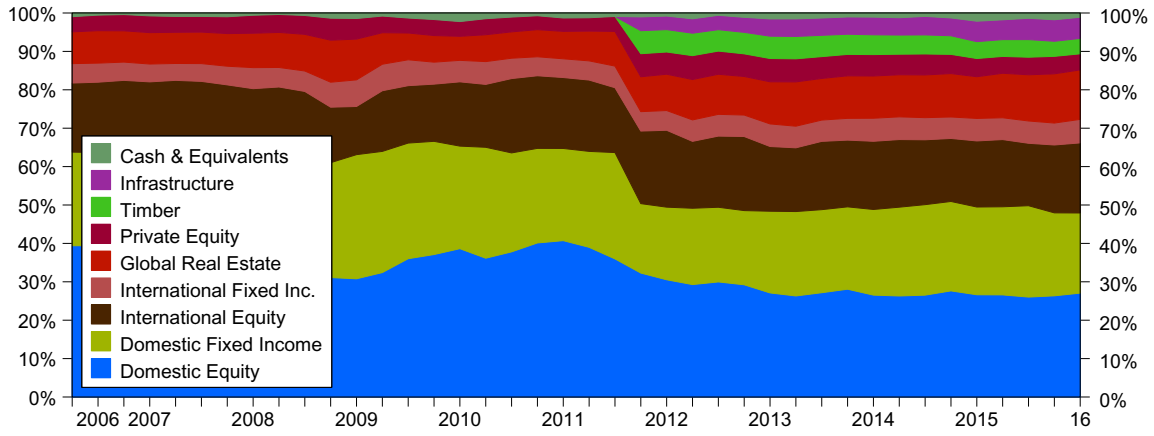
Squares represent membership of the Public Fund Sponsor Database

* Current Quarter Target = 16.5% Russell 1000 Index, 16.0% MSCI World, 12.3% Barclays Aggregate Index, 11.2% MSCI EAFE, 9.9% NCREIF Total Index, 5.0% CPI-W, 5.0% NDSIB PEN - Private Equity, 5.0% Barclays HY Corp 2% Issue, 5.0% Barclays Global Agg ex-US, 5.0% NCREIF Timberland Index, 4.9% Russell 2000 Index, 3.2% MSCI EM and 1.0% 3-month Treasury Bill.

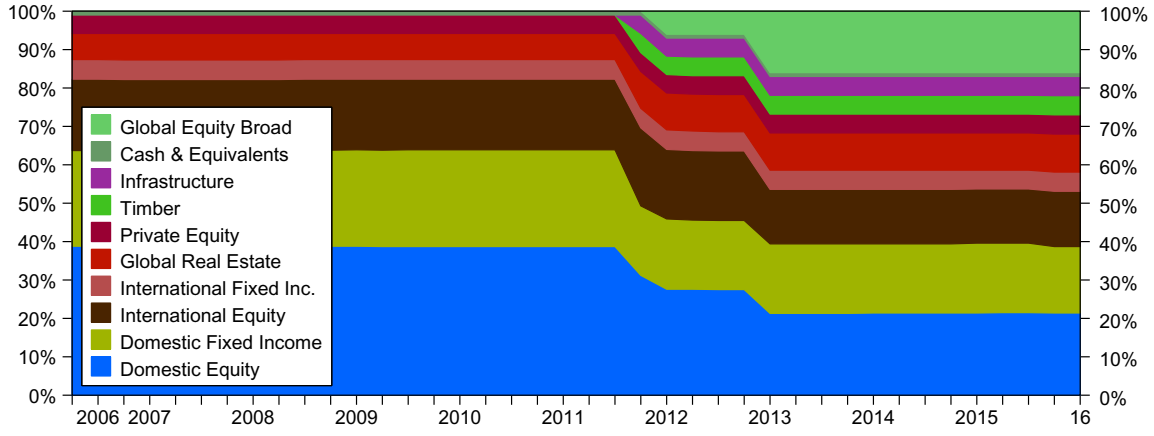
Actual vs Target Historical Asset Allocation

The Historical asset allocation for a fund is by far the largest factor explaining its performance. The charts below show the fund's historical actual asset allocation, the fund's historical target asset allocation, and the historical asset allocation of the average fund in the Public Fund Sponsor Database.

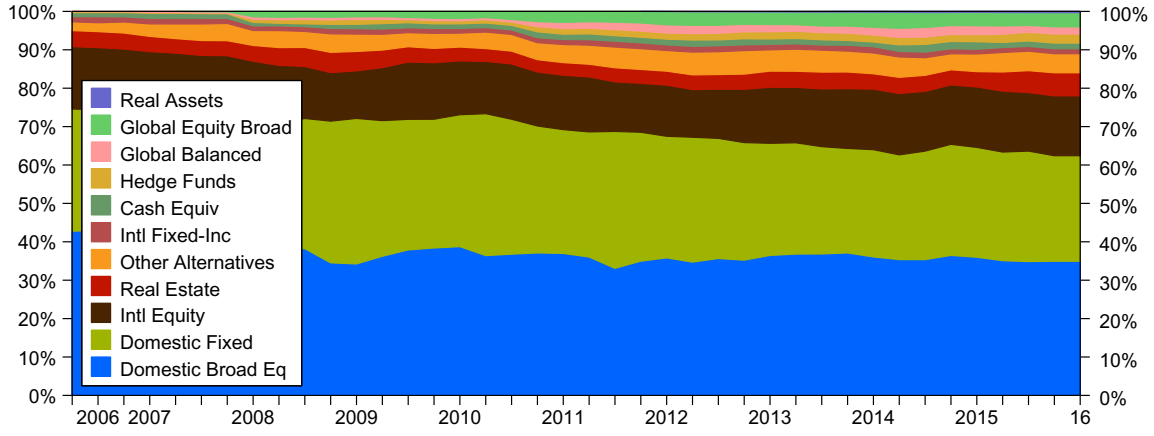
Actual Historical Asset Allocation



Target Historical Asset Allocation



Average Public Fund Sponsor Database Historical Asset Allocation

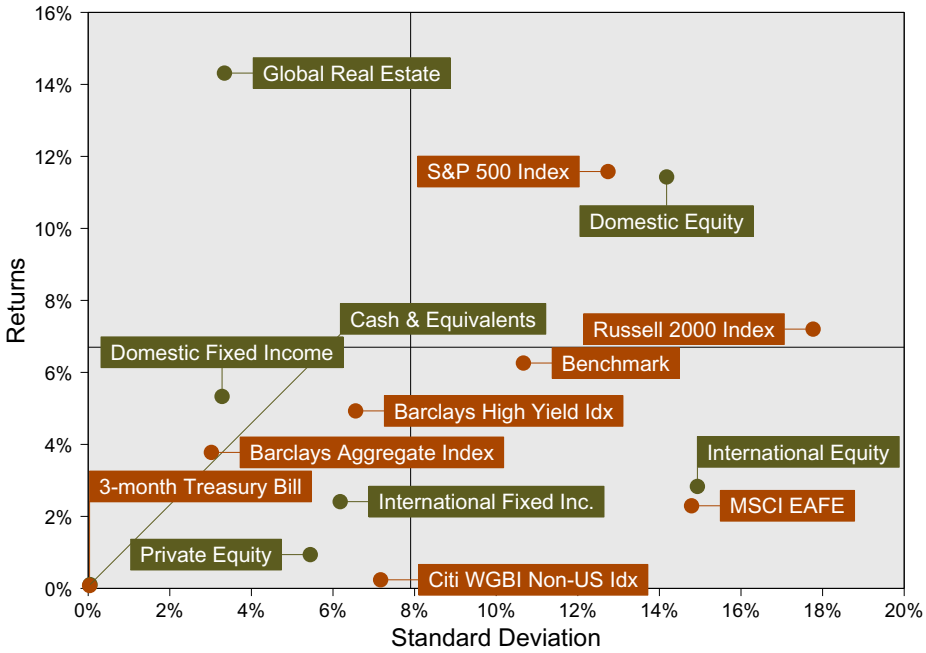


* Current Quarter Target = 16.5% Russell 1000 Index, 16.0% MSCI World, 12.3% Barclays Aggregate Index, 11.2% MSCI EAFE, 9.9% NCREIF Total Index, 5.0% CPI-W, 5.0% NDSIB PEN - Private Equity, 5.0% Barclays HY Corp 2% Issue, 5.0% Barclays Global Agg ex-US, 5.0% NCREIF Timberland Index, 4.9% Russell 2000 Index, 3.2% MSCI EM and 1.0% 3-month Treasury Bill.

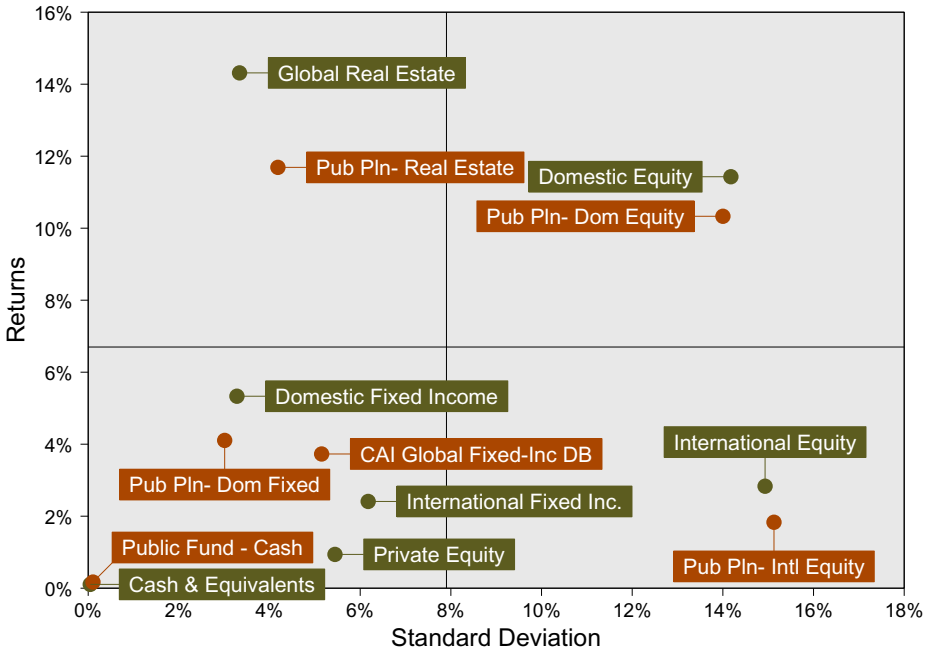
Asset Class Risk and Return

The charts below show the five year annualized risk and return for each asset class component of the Total Fund. The first graph contrasts these values with those of the appropriate index for each asset class. The second chart contrasts them with the risk and return of the median portfolio in each of the appropriate CAI comparative databases. In each case, the crosshairs on the chart represent the return and risk of the Total Fund.

Five Year Annualized Risk vs Return
Asset Classes vs Benchmark Indices



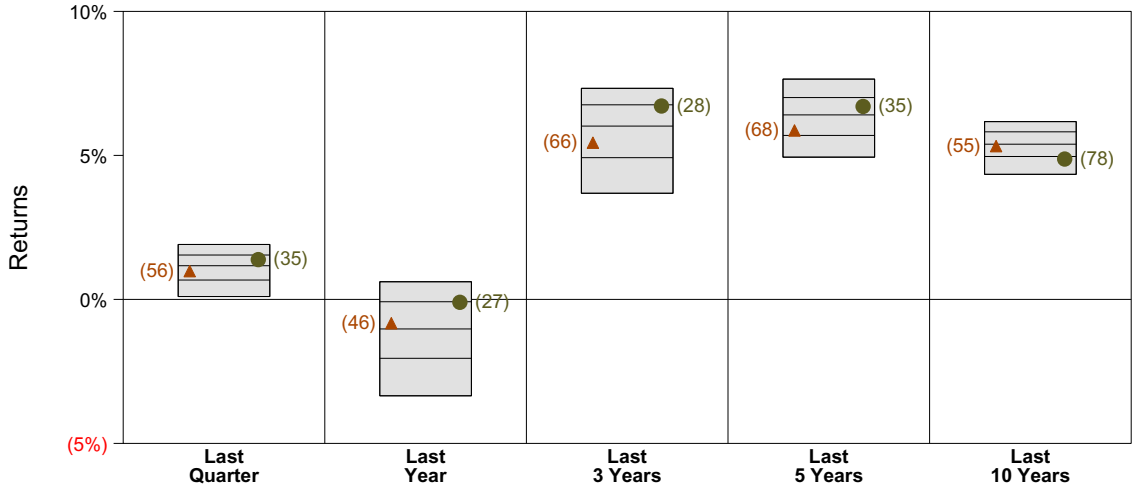
Five Year Annualized Risk vs Return
Asset Classes vs Asset Class Median



Total Fund Ranking

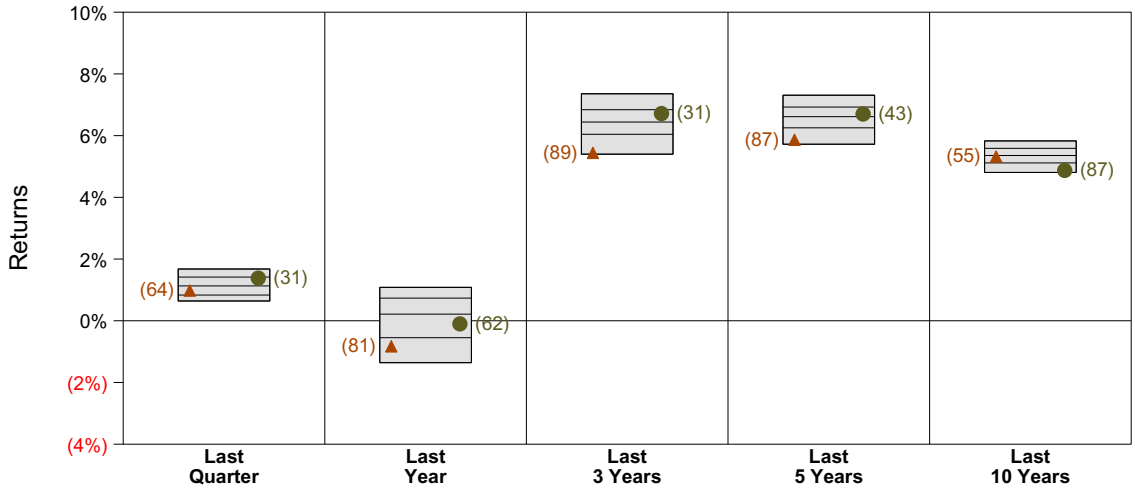
The first two charts show the ranking of the Total Fund's performance relative to that of the Public Fund Sponsor Database for periods ended March 31, 2016. The first chart is a standard unadjusted ranking. In the second chart each fund in the database is adjusted to have the same historical asset allocation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

Public Fund Sponsor Database



	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
10th Percentile	1.91	0.61	7.33	7.65	6.17
25th Percentile	1.54	(0.08)	6.76	7.01	5.82
Median	1.17	(1.03)	6.02	6.41	5.39
75th Percentile	0.67	(2.05)	4.92	5.69	4.96
90th Percentile	0.10	(3.35)	3.69	4.94	4.34
Total Fund ●	1.38	(0.10)	6.71	6.70	4.87
Policy Target ▲	0.98	(0.83)	5.44	5.87	5.32

Asset Allocation Adjusted Ranking



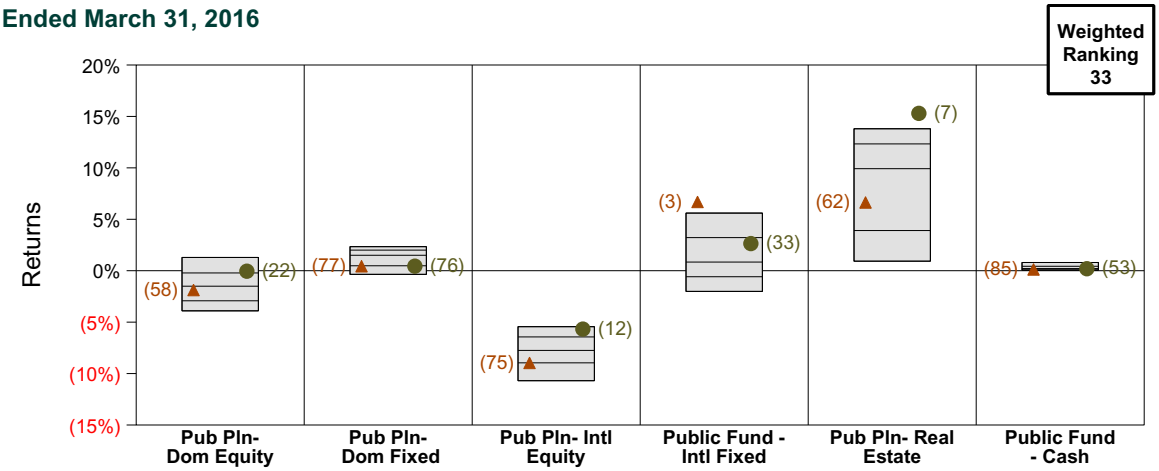
	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
10th Percentile	1.68	1.08	7.36	7.31	5.83
25th Percentile	1.42	0.73	6.84	6.93	5.59
Median	1.13	0.21	6.44	6.62	5.36
75th Percentile	0.83	(0.55)	6.04	6.25	5.12
90th Percentile	0.64	(1.36)	5.40	5.72	4.81
Total Fund ●	1.38	(0.10)	6.71	6.70	4.87
Policy Target ▲	0.98	(0.83)	5.44	5.87	5.32

* Current Quarter Target = 16.5% Russell 1000 Index, 16.0% MSCI World, 12.3% Barclays Aggregate Index, 11.2% MSCI EAFE, 9.9% NCREIF Total Index, 5.0% CPI-W, 5.0% NDSIB PEN - Private Equity, 5.0% Barclays HY Corp 2% Issue, 5.0% Barclays Global Agg ex-US, 5.0% NCREIF Timberland Index, 4.9% Russell 2000 Index, 3.2% MSCI EM and 1.0% 3-month Treasury Bill.

Asset Class Rankings

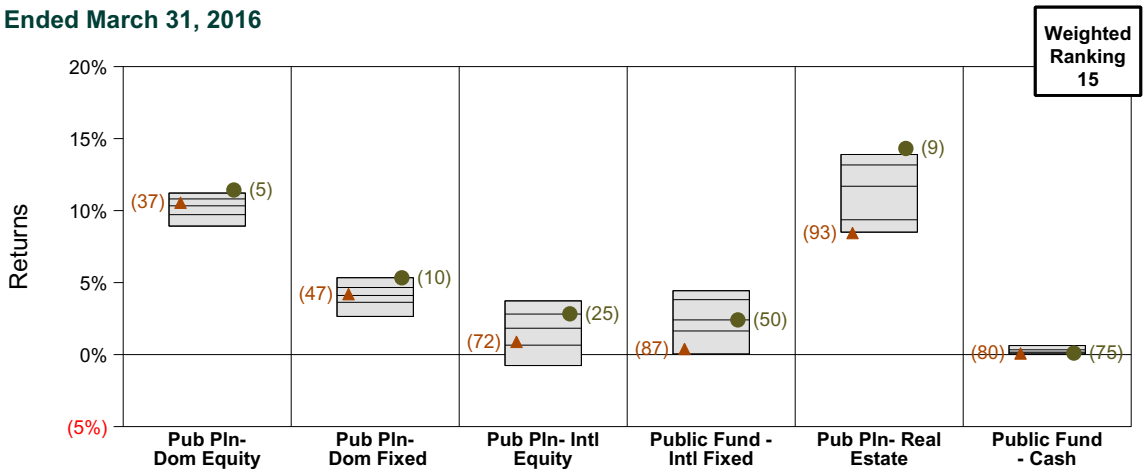
The charts below show the rankings of each asset class component of the Total Fund relative to appropriate comparative databases. In the upper right corner of each graph is the weighted average of the rankings across the different asset classes. The weights of the fund's actual asset allocation are used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

Total Asset Class Performance
One Year Ended March 31, 2016



	Pub Pln- Dom Equity	Pub Pln- Dom Fixed	Pub Pln- Intl Equity	Public Fund - Intl Fixed	Pub Pln- Real Estate	Public Fund - Cash
10th Percentile	1.29	2.34	(5.44)	5.60	13.80	0.80
25th Percentile	(0.22)	2.00	(6.44)	3.22	12.33	0.43
Median	(1.51)	1.50	(7.75)	0.84	9.92	0.21
75th Percentile	(2.92)	0.48	(8.96)	(0.59)	3.91	0.17
90th Percentile	(3.90)	(0.35)	(10.69)	(2.01)	0.93	0.06
Asset Class Composite ●	(0.05)	0.44	(5.68)	2.64	15.30	0.19
Composite Benchmark ▲	(1.88)	0.43	(8.96)	6.69	6.63	0.12

Total Asset Class Performance
Five Years Ended March 31, 2016



	Pub Pln- Dom Equity	Pub Pln- Dom Fixed	Pub Pln- Intl Equity	Public Fund - Intl Fixed	Pub Pln- Real Estate	Public Fund - Cash
10th Percentile	11.22	5.34	3.73	4.44	13.90	0.63
25th Percentile	10.81	4.66	2.82	3.81	13.17	0.33
Median	10.33	4.11	1.83	2.41	11.69	0.17
75th Percentile	9.72	3.63	0.66	1.64	9.36	0.11
90th Percentile	8.92	2.65	(0.76)	0.04	8.50	0.03
Asset Class Composite ●	11.43	5.33	2.83	2.41	14.31	0.11
Composite Benchmark ▲	10.55	4.20	0.89	0.39	8.44	0.08

* Current Quarter Target = 16.5% Russell 1000 Index, 16.0% MSCI World, 12.3% Barclays Aggregate Index, 11.2% MSCI EAFE, 9.9% NCREIF Total Index, 5.0% CPI-W, 5.0% NDSIB PEN - Private Equity, 5.0% Barclays HY Corp 2% Issue, 5.0% Barclays Global Agg ex-US, 5.0% NCREIF Timberland Index, 4.9% Russell 2000 Index, 3.2% MSCI EM and 1.0% 3-month Treasury Bill.

Investment Manager Asset Allocation

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

Asset Distribution Across Investment Managers

	March 31, 2016				December 31, 2015	
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
GLOBAL EQUITY	**$2,687,481,139**	**57.72%**	**$76,845,804**	**$5,746,892**	**$2,604,888,443**	**56.82%**
Domestic Equity	**$1,053,890,769**	**22.63%**	**$23,779,475**	**$15,897,882**	**$1,014,213,411**	**22.12%**
Large Cap Domestic Equity	**$816,411,405**	**17.53%**	**$7,779,475**	**$16,993,759**	**$791,638,170**	**17.27%**
L.A. Capital	309,966,684	6.66%	(164,825)	6,604,690	303,526,819	6.62%
LACM Enhanced Index	186,257,069	4.00%	(55,699)	4,248,677	182,064,091	3.97%
Northern Trust AM Enh S&P 500	142,175,451	3.05%	8,000,000	3,099,846	131,075,605	2.86%
Parametric Clifton Enh S&P 500	178,012,201	3.82%	0	3,040,546	174,971,655	3.82%
Small Cap Domestic Equity	**$237,479,364**	**5.10%**	**$16,000,000**	**$(1,095,877)**	**$222,575,241**	**4.85%**
Parametric Clifton Enh Small Cap	128,568,464	2.76%	16,000,000	858,599	111,709,864	2.44%
Small Cap Transition Account	108,910,901	2.34%	0	(1,954,476)	110,865,377	2.42%
International Equity	**$711,252,733**	**15.28%**	**$32,133,944**	**$(1,078,903)**	**$680,197,692**	**14.84%**
Developed Int'l Equity	**$538,098,821**	**11.56%**	**$21,133,944**	**$(8,000,172)**	**$524,965,050**	**11.45%**
Capital Group	123,552,063	2.65%	(132,456)	(1,629,188)	125,313,707	2.73%
DFA Int'l Small Cap	74,268,888	1.60%	0	(606,203)	74,875,091	1.63%
Northern Trust AM World Ex US	248,208,296	5.33%	21,459,911	(2,888,130)	229,636,515	5.01%
Wellington Management Co.	92,069,575	1.98%	(193,511)	(2,876,651)	95,139,737	2.08%
Emerging Markets Equity	**$173,153,912**	**3.72%**	**$11,000,000**	**$6,921,269**	**$155,232,643**	**3.39%**
Axiom	128,666,451	2.76%	8,250,000	4,529,716	115,886,735	2.53%
DFA	44,487,461	0.96%	2,750,000	2,391,553	39,345,908	0.86%
World Equity	**$759,327,813**	**16.31%**	**$26,370,373**	**$(2,026,124)**	**$734,983,564**	**16.03%**
EPOCH Investment Partners	339,370,267	7.29%	18,973,774	(5,802,730)	326,199,223	7.12%
LSV Asset Management	419,957,546	9.02%	7,396,599	3,776,606	408,784,341	8.92%

Investment Manager Asset Allocation

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

Asset Distribution Across Investment Managers

	March 31, 2016				December 31, 2015	
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
Private Equity	**$163,009,824**	**3.50%**	**$(5,437,988)**	**$(7,045,963)**	**$175,493,775**	**3.83%**
Adams Street Direct Co-Invest Fd	8,321,246	0.18%	(597,069)	(70,485)	8,988,800	0.20%
Adams Street Direct Fund 2010	1,477,177	0.03%	0	41,588	1,435,589	0.03%
Adams Street 1998 Partnership	125,676	0.00%	0	1,947	123,729	0.00%
Adams Street 1999 Partnership	332,283	0.01%	(245,537)	9,433	568,387	0.01%
Adams Street 2000 Partnership	1,455,563	0.03%	0	56,248	1,399,315	0.03%
Adams Street 2001 Partnership	1,627,635	0.03%	(327,238)	122,675	1,832,198	0.04%
Adams Street 2002 Partnership	703,782	0.02%	(193,975)	41,066	856,691	0.02%
Adams Street 2003 Partnership	372,794	0.01%	(80,203)	15,837	437,160	0.01%
Adams Street 2010 Partnership	5,543,614	0.12%	0	29,039	5,514,575	0.12%
Adams Street 2008 Fund	7,630,132	0.16%	0	238,958	7,391,174	0.16%
Adams Street 1999 Non-US	396,505	0.01%	0	(10,595)	407,100	0.01%
Adams Street 2000 Non-US	722,423	0.02%	0	(1,523)	723,946	0.02%
Adams Street 2001 Non-US	179,589	0.00%	(157,177)	(9,841)	346,607	0.01%
Adams Street 2002 Non-US	1,015,145	0.02%	(211,985)	114,590	1,112,540	0.02%
Adams Street 2003 Non-US	857,962	0.02%	0	79,543	778,419	0.02%
Adams Street 2004 Non-US	424,944	0.01%	(112,959)	9,708	528,195	0.01%
Adams Street 2010 Non-US	2,625,692	0.06%	0	66,096	2,559,596	0.06%
Adams Street 2010 Non-US Emg	1,302,728	0.03%	0	53,080	1,249,648	0.03%
Adams Street 2015 Global Fd	1,595,368	0.03%	570,000	215,368	810,000	0.02%
Adams Street BVCF IV Fund	3,776,726	0.08%	0	8,654	3,768,072	0.08%
Hearthstone Advisors MSII	1	0.00%	0	0	1	0.00%
Hearthstone Advisors MSIII	18,126	0.00%	0	(130,012)	148,138	0.00%
CorsAir III	13,539,166	0.29%	51,364	(208,138)	13,695,940	0.30%
ND Investors	12,604,490	0.27%	55,000	1,473,508	11,075,982	0.24%
CorsAir IV	20,529,107	0.44%	(2,222,573)	(843,733)	23,595,413	0.51%
Capital International V	7,391,459	0.16%	(1,323,215)	(407,413)	9,122,087	0.20%
Capital International VI	15,520,198	0.33%	129,303	(495,496)	15,886,391	0.35%
EIG Energy Fund XIV	6,334,976	0.14%	(1,487,019)	(6,253,846)	14,075,841	0.31%
Lewis & Clark, LP	2,724,490	0.06%	0	0	2,724,490	0.06%
Lewis & Clark II	9,435,908	0.20%	0	0	9,435,908	0.21%
Quantum Energy Partners	7,002,399	0.15%	315,296	0	6,687,103	0.15%
Quantum Resources	1	0.00%	0	0	1	0.00%
Matlin Patterson I	13,401	0.00%	0	1,280	12,121	0.00%
Matlin Patterson II	1,744,082	0.04%	0	129,660	1,614,422	0.04%
Matlin Patterson III	25,665,036	0.55%	400,000	(1,323,160)	26,588,196	0.58%

Investment Manager Asset Allocation

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

Asset Distribution Across Investment Managers

	March 31, 2016				December 31, 2015	
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
GLOBAL FIXED INCOME	**$1,051,945,373**	**22.59%**	**$(33,954,858)**	**$33,887,441**	**$1,052,012,790**	**22.95%**
Domestic Fixed Income	**$813,405,274**	**17.47%**	**$(33,755,225)**	**$15,400,646**	**$831,759,853**	**18.14%**
Inv. Grade Fixed Income	**$568,230,561**	**12.20%**	**$(33,343,786)**	**$9,718,617**	**$591,855,730**	**12.91%**
Declaration Total Return	84,863,258	1.82%	(30,422)	167,365	84,726,314	1.85%
J. P. Morgan MBS	112,199,186	2.41%	(13,064,698)	2,392,451	122,871,434	2.68%
PIMCO DiSCO II	89,612,490	1.92%	0	99,384	89,513,106	1.95%
PIMCO MBS	165,914,206	3.56%	(151,026)	2,894,137	163,171,095	3.56%
PIMCO Unconstrained	60,712,217	1.30%	(10,090,937)	(700,120)	71,503,274	1.56%
SSgA Long US Treas Index	54,929,204	1.18%	(10,006,704)	4,865,399	60,070,508	1.31%
Below Inv. Grade Fixed Income	**$245,174,713**	**5.27%**	**$(411,439)**	**$5,682,029**	**$239,904,123**	**5.23%**
Goldman Sachs 2006 Offshore	1,176,294	0.03%	(172,641)	84	1,348,851	0.03%
Goldman Sachs Offshore V	2,721,258	0.06%	0	(88,246)	2,809,504	0.06%
Loomis Sayles	195,154,558	4.19%	(238,798)	4,354,949	191,038,407	4.17%
PIMCO Bravo II Fund	46,122,603	0.99%	0	1,415,242	44,707,361	0.98%
Internationall Fixed Income	**$238,540,099**	**5.12%**	**$(199,633)**	**$18,486,795**	**$220,252,936**	**4.80%**
Brandywine	131,973,448	2.83%	(117,381)	10,312,059	121,778,769	2.66%
UBS Global Asset Mgmt.	106,566,651	2.29%	(82,252)	8,174,736	98,474,167	2.15%
GLOBAL REAL ASSETS	**$873,397,515**	**18.76%**	**$(10,433,452)**	**$24,065,605**	**$859,765,362**	**18.75%**
Global Real Estate	**$502,277,707**	**10.79%**	**$(7,657,069)**	**$16,857,339**	**$493,077,437**	**10.76%**
Invesco Core Real Estate	215,818,471	4.64%	(188,130)	3,135,529	212,871,072	4.64%
Invesco Fund II	8,981,947	0.19%	0	(149,170)	9,131,117	0.20%
Invesco Fund III	27,132,712	0.58%	(1,850,000)	2,193,260	26,789,452	0.58%
Invesco Asia RE Feeder	1,106,290	0.02%	(6,509,000)	341,229	7,274,061	0.16%
Invesco Asia RE Fund III	8,308,710	0.18%	0	(213,790)	8,522,500	0.19%
Invesco Value Added Fd IV	19,509,360	0.42%	906,293	1,491,826	17,111,241	0.37%
JP Morgan	182,262,721	3.91%	0	3,867,623	178,395,097	3.89%
JP Morgan Alternative Fd	313,904	0.01%	0	10,202	303,703	0.01%
JP Morgan China Property Fd	9,698,327	0.21%	(3,804)	(106,687)	9,808,819	0.21%
JP Morgan Greater European Opp Fd	29,145,265	0.63%	(12,429)	6,287,318	22,870,375	0.50%
Timber	**$156,097,708**	**3.35%**	**$(1,000,000)**	**$6,148,248**	**$150,949,460**	**3.29%**
TIR Teredo	35,636,364	0.77%	(1,000,000)	4,052,126	32,584,238	0.71%
TIR Springbank	120,461,344	2.59%	0	2,096,122	118,365,222	2.58%
Infrastructure	**$215,022,099**	**4.62%**	**$(1,776,383)**	**$1,060,017**	**$215,738,465**	**4.71%**
JP Morgan Asian Infrastructure	28,668,764	0.62%	112,597	(497,423)	29,053,590	0.63%
JP Morgan IIF	140,059,358	3.01%	(377,199)	472,758	139,963,800	3.05%
Grosvenor Cust. Infrastructure	40,481,892	0.87%	424,201	1,242,372	38,815,319	0.85%
Grosvenor Cust. Infrastructure II	5,812,085	0.12%	(1,935,981)	(157,690)	7,905,756	0.17%
CASH & CASH EQUIVALENTS	**$43,251,022**	**0.93%**	**$(24,708,732)**	**$44,803**	**$67,914,951**	**1.48%**
Cash Account	43,251,022	0.93%	(24,708,732)	44,803	67,914,951	1.48%
Securities Lending Income	**$0**	**0.00%**	**$(136,243)**	**$136,243**	**-**	**-**
Total Fund	**$4,656,075,049**	**100.0%**	**$7,612,519**	**$63,880,984**	**$4,584,581,545**	**100.0%**

Investment Manager Returns

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

Returns for Periods Ended March 31, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Global Equity					
Gross	0.00%	(3.69%)	7.31%	-	-
Net	(0.05%)	(3.99%)	6.93%	-	-
Wtd Avg Global Equity Benchmark	(0.50%)	(4.66%)	6.03%	-	-
Domestic Equity					
Gross	1.35%	(0.05%)	11.95%	11.43%	5.80%
Net	1.33%	(0.18%)	11.71%	11.16%	5.48%
Wtd Avg Domestic Equity Benchmark	0.56%	(1.88%)	10.50%	10.55%	6.64%
Large Cap Equity					
Gross	2.07%	2.89%	13.34%	12.34%	5.53%
Net	2.04%	2.77%	13.15%	12.14%	5.28%
Large Cap Benchmark (1)	1.17%	0.50%	11.52%	11.55%	7.00%
L.A. Capital - Gross	2.18%	4.52%	14.86%	12.69%	8.71%
L.A. Capital - Net	2.12%	4.31%	14.63%	12.45%	8.50%
Russell 1000 Growth Index	0.74%	2.52%	13.61%	12.38%	8.28%
LACM Enhanced Index - Goss	2.34%	2.90%	13.16%	12.09%	7.79%
LACM Enhanced Index - Net	2.30%	2.78%	13.02%	11.95%	7.63%
Russell 1000 Index	1.17%	0.50%	11.52%	11.35%	7.06%
Northern Tr AM Enh S&P500 - Gross	1.82%	0.38%	12.11%	12.38%	7.15%
Northern Tr AM Enh S&P500 - Net	1.82%	0.38%	11.68%	12.02%	6.97%
S&P 500 Index	1.35%	1.78%	11.82%	11.58%	7.01%
Parametric Clifton Enh S&P500 - Gross	1.74%	2.05%	11.88%	11.76%	-
Parametric Clifton Enh S&P500 - Net	1.74%	2.05%	11.87%	11.70%	-
S&P 500 Index	1.35%	1.78%	11.82%	11.58%	7.01%
Small Cap Equity					
Gross	(1.20%)	(9.68%)	7.16%	8.36%	6.08%
Net	(1.20%)	(9.85%)	6.77%	7.89%	5.58%
Russell 2000 Index	(1.52%)	(9.76%)	6.84%	7.20%	5.26%
Parametric Clifton Enh SmCap - Gross	(1.05%)	(8.31%)	7.84%	8.49%	-
Parametric Clifton Enh SmCap - Net	(1.05%)	(8.65%)	7.38%	8.00%	-
Russell 2000 Index	(1.52%)	(9.76%)	6.84%	7.20%	5.26%

(1) S&P 500 Index through 12/31/2011 and Russell 1000 Index thereafter.

Investment Manager Returns

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

Returns for Periods Ended March 31, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
International Equity					
Gross	(0.48%)	(5.68%)	3.12%	2.83%	3.63%
Net	(0.53%)	(5.86%)	2.83%	2.48%	3.23%
Wtd Avg Int'l Equity Benchmark	(1.10%)	(8.96%)	0.82%	0.89%	2.06%
Developed Intl Equity					
Gross	(1.76%)	(4.44%)	4.64%	3.62%	2.76%
Net	(1.83%)	(4.68%)	4.34%	3.29%	2.41%
Benchmark(1)	(3.01%)	(8.27%)	2.23%	2.29%	1.34%
Capital Group - Gross	(1.29%)	(7.79%)	2.82%	3.24%	1.74%
Capital Group - Net	(1.41%)	(8.17%)	2.37%	2.90%	1.50%
Benchmark(1)	(3.01%)	(8.27%)	2.23%	2.29%	1.34%
DFA Int'l Small Cap Value - Net	(0.81%)	(1.46%)	6.33%	4.40%	-
World ex US SC Value	1.18%	(1.39%)	4.36%	3.29%	3.51%
Northern Tr AM World ex US - Gross	(1.87%)	(8.15%)	-	-	-
Northern Tr AM World ex US - Net	(1.89%)	(8.19%)	-	-	-
MSCI World ex US	(1.95%)	(8.44%)	1.69%	1.62%	1.80%
Wellington Management - Gross	(3.01%)	8.79%	11.32%	9.71%	6.64%
Wellington Management - Net	(3.23%)	7.89%	10.40%	8.78%	5.74%
BMI, EPAC, <$2 B	0.08%	3.03%	6.29%	4.55%	3.25%
Emerging Markets Equity					
Gross	3.74%	(10.59%)	(2.89%)	(0.67%)	4.80%
Net	3.74%	(10.59%)	(3.15%)	(1.07%)	4.30%
Emerging Mkts - Net	5.71%	(12.03%)	(4.50%)	(4.13%)	3.02%
Axiom - Net	3.25%	(11.59%)	-	-	-
Emerging Mkts - Net	5.71%	(12.03%)	(4.50%)	(4.13%)	3.02%
DFA - Net	5.15%	(7.17%)	(1.61%)	(0.87%)	6.45%
Emerging Mkts - Net	5.71%	(12.03%)	(4.50%)	(4.13%)	3.02%
World Equity					
Gross	(0.57%)	(5.59%)	7.22%	-	-
Net	(0.66%)	(6.31%)	6.47%	-	-
MSCI World Index	(0.35%)	(3.45%)	6.82%	6.51%	4.27%
EPOCH Investment - Gross(2)	(2.30%)	(5.65%)	7.92%	-	-
EPOCH Investment - Net	(2.47%)	(6.25%)	7.19%	-	-
MSCI World Index	(0.35%)	(3.45%)	6.82%	6.51%	4.27%
LSV Asset Management - Gross(3)	0.79%	(5.58%)	7.24%	-	-
LSV Asset Management - Net	0.76%	(6.38%)	6.47%	-	-
MSCI ACWI Idx	0.38%	(3.81%)	6.10%	5.80%	4.63%

(1) MSCI EAFE through 12/31/1996; 50% Hedged EAFE through 3/31/2011 and MSCI EAFE again thereafter.
(2) EPOCH Investment was removed from the Domestic Equity Composite to the World Equity Composite as of 1/1/2012.
(3) LSV Asset Management was removed from the Domestic Equity and International Equity Composites to the World Equity Composite as of February 1, 2013.

Investment Manager Returns

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

Returns for Periods Ended March 31, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Private Equity*					
Net	(4.05%)	(9.28%)	(1.72%)	0.82%	1.62%
Adams Street Direct Co-Invest Fd	(0.81%)	6.78%	18.87%	14.06%	-
Adams Street Direct Fund 2010	2.90%	17.92%	18.09%	15.48%	-
Adams Street 1998 Partnership	1.57%	3.85%	4.84%	1.47%	3.05%
Adams Street 1999 Partnership	2.92%	8.81%	3.06%	3.91%	4.70%
Adams Street 2000 Partnership	4.02%	1.19%	0.34%	3.23%	5.71%
Adams Street 2001 Partnership	8.15%	(3.36%)	6.94%	7.38%	6.45%
Adams Street 2002 Partnership	6.20%	0.73%	1.73%	4.78%	4.46%
Adams Street 2003 Partnership	4.44%	6.60%	15.76%	9.89%	9.20%
Adams Street 2010 Partnership	0.53%	9.15%	15.12%	13.41%	-
Adams Street 2008 Fund	3.23%	13.71%	13.44%	9.86%	-
Adams Street 1999 Non-US	(2.60%)	9.11%	1.37%	9.43%	10.46%
Adams Street 2000 Non-US	(0.21%)	(9.87%)	(2.15%)	(0.96%)	4.43%
Adams Street 2001 Non-US	(3.22%)	35.78%	28.59%	13.89%	6.18%
Adams Street 2002 Non-US	12.72%	23.19%	7.24%	7.44%	8.90%
Adams Street 2003 Non-US	10.22%	14.26%	9.79%	10.26%	14.23%
Adams Street 2004 Non-US	1.94%	(0.35%)	8.33%	5.63%	6.38%
Adams Street 2010 Non-US	2.58%	7.55%	6.91%	5.31%	-
Adams Street 2010 Non-US Emg	4.25%	16.78%	11.51%	(2.37%)	-
Adams Street 2015 Global Fd	24.57%	-	-	-	-
Adams Street BVCF IV Fund	0.23%	26.47%	24.46%	31.58%	30.66%
CorsAir III	(1.51%)	23.83%	7.02%	2.61%	-
ND Investors	13.24%	7.77%	5.35%	3.71%	-
CorsAir IV	(3.92%)	7.54%	15.47%	5.74%	-
Capital International V	(5.09%)	(31.57%)	(11.25%)	(5.38%)	-
Capital International VI	(3.10%)	(11.69%)	(18.01%)	-	-
EIG Energy Fund XIV	(44.65%)	(61.49%)	(30.60%)	(19.12%)	-
Lewis & Clark, LP	0.00%	(32.09%)	(16.16%)	(5.81%)	1.54%
Lewis & Clark II	0.00%	(14.35%)	(6.80%)	(7.39%)	-
Quantum Energy Partners	0.00%	(36.79%)	1.68%	9.64%	-
Matlin Patterson I	10.56%	10.56%	3.79%	648.58%	183.78%
Matlin Patterson II	8.03%	43.24%	1.59%	(31.54%)	(23.21%)
Matlin Patterson III	(4.96%)	0.19%	(2.60%)	20.67%	-

* Corsair III and North Dakota Investors were taken out from the Private Equity Composite on July 1, 2009. They were then added back into the Private Equity Composite on October 1, 2011. At this time Corsair IV, Capital Intl and EIG were also added to this composite.

Investment Manager Returns

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

Returns for Periods Ended March 31, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Global Fixed Income					
Gross	3.31%	1.00%	2.73%	-	-
Net	3.23%	0.75%	2.50%	-	-
Wtd Avg Global FI Benchmark	4.28%	1.85%	1.81%	-	-
Domestic Fixed Income					
Gross	1.92%	0.44%	3.37%	5.33%	5.59%
Net	1.85%	0.23%	3.15%	5.12%	5.32%
Wtd Avg Domestic FI Benchmark	3.15%	0.43%	2.35%	4.20%	5.61%
Inv. Grade Fixed Income					
Gross	1.68%	1.61%	3.42%	4.93%	5.36%
Net	1.63%	1.47%	3.31%	4.78%	5.13%
Barclays Aggregate Index	3.03%	1.96%	2.50%	3.78%	4.90%
Declaration Total Return - Net	0.20%	0.64%	3.14%	-	-
Libor-3 Month	0.16%	0.40%	0.30%	0.34%	1.56%
J.P. Morgan MBS - Gross	1.99%	2.35%	-	-	-
J.P. Morgan MBS - Net	1.93%	2.13%	-	-	-
Barclays Mortgage	1.98%	2.43%	2.70%	3.24%	4.85%
PIMCO Unconstrained - Gross(1)	(0.57%)	(1.81%)	(0.53%)	-	-
PIMCO Unconstrained - Net	(0.71%)	(2.12%)	(0.75%)	-	-
Blended Benchmark(2)	0.16%	0.40%	0.37%	-	-
PIMCO DiSCO II - Net	0.11%	3.66%	6.29%	-	-
Barclays Aggregate Index	3.03%	1.96%	2.50%	3.78%	4.90%
PIMCO MBS - Gross	1.77%	2.44%	2.41%	-	-
PIMCO MBS - Net	1.68%	2.25%	2.23%	-	-
Barclays Mortgage	1.98%	2.43%	2.70%	3.24%	4.85%
SSgA Long US Treas Idx - Gross	8.15%	2.76%	-	-	-
SSgA Long US Treas Idx - Net	8.13%	2.72%	-	-	-
Barclays Long Treas	8.15%	2.77%	6.14%	9.67%	7.97%
Below Inv. Grade Fixed Income					
Gross	2.38%	(2.61%)	3.11%	6.14%	5.87%
Net	2.27%	(3.01%)	2.67%	5.77%	5.47%
Barclays HY Corp 2% Issue	3.35%	(3.66%)	1.86%	4.93%	7.03%
Goldman Sachs 2006 Offshore - Net	0.06%	10.79%	20.68%	13.77%	-
Goldman Sachs Offshore V - Net	(3.14%)	7.11%	11.10%	12.93%	-
PIMCO Bravo II Fund - Net	3.17%	10.22%	-	-	-
Barclays HY Corp 2% Issue	3.35%	(3.66%)	1.86%	4.93%	7.03%
Loomis Sayles - Gross	2.29%	(4.95%)	1.77%	4.96%	6.98%
Loomis Sayles - Net	2.15%	(5.42%)	1.27%	4.55%	6.62%
Barclays HY Corp 2% Issue	3.35%	(3.66%)	1.86%	4.93%	7.03%

(1) The product changed from Commingled Fund to Separate Account in March 2014.
(2) Libor-3 month through Feb. 28, 2014; Fund's performance through March 31, 2014; Libor-3 month thereafter.

Investment Manager Returns

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

Returns for Periods Ended March 31, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
International Fixed Income					
Gross	8.40%	2.64%	0.02%	2.41%	5.40%
Net	8.30%	2.22%	(0.34%)	2.11%	5.16%
Wtd Avg Int'l FI Benchmark	8.26%	6.69%	(0.32%)	0.39%	4.11%
Brandywine - Gross	8.48%	0.05%	0.93%	4.76%	6.95%
Brandywine - Net	8.37%	(0.42%)	0.54%	4.47%	6.77%
Barclays Global Aggregate	5.90%	4.57%	0.87%	1.81%	4.35%
UBS Global Asset Mgmt. - Gross	8.31%	6.10%	(0.79%)	(0.01%)	3.62%
UBS Global Asset Mgmt. - Net	8.22%	5.74%	(1.10%)	(0.32%)	3.31%
Blended Benchmark(1)	8.26%	6.69%	(0.32%)	0.39%	4.11%
Global Real Assets					
Gross	2.78%	9.68%	10.02%	-	-
Net	2.67%	9.25%	9.59%	-	-
Wtd Avg Global Real Assets Benchmark	1.19%	6.63%	7.88%	-	-
Global Real Estate					
Gross	3.36%	15.30%	15.24%	14.31%	6.16%
Net	3.23%	14.77%	14.69%	13.50%	4.40%
NCREIF Total Index	2.21%	11.84%	11.91%	11.93%	7.61%
Invesco Core Real Estate - Gross	1.47%	12.71%	13.11%	12.79%	6.73%
Invesco Core Real Estate - Net	1.38%	12.33%	12.70%	12.36%	6.21%
Invesco Fund II - Net	(1.63%)	6.45%	13.46%	17.22%	-
Invesco Fund III - Net	8.19%	15.18%	20.82%	-	-
Invesco Asia RE Feeder - Net	4.68%	56.44%	23.54%	10.89%	-
Invesco Asia RE Fund III - Net	(2.51%)	-	-	-	-
Invesco Value Added Fd IV - Net	7.63%	-	-	-	-
JP Morgan - Gross	2.17%	14.41%	14.61%	14.70%	6.92%
JP Morgan - Net	1.93%	13.35%	13.47%	13.58%	5.85%
JP Morgan Alternative Fd - Net	3.36%	4.15%	(12.06%)	(0.33%)	(5.45%)
JP Morgan China Property Fd - Net	(1.09%)	5.99%	24.44%	14.44%	-
JPM Greater European Opp Fd - Net	27.49%	47.84%	27.75%	*******%)	-
NCREIF Total Index	2.21%	11.84%	11.91%	11.93%	7.61%
Timber					
Net	4.09%	6.65%	4.64%	-	-
TIR Teredo	12.75%	16.71%	14.02%	8.14%	11.11%
TIR Springbank	1.77%	3.71%	0.35%	(1.30%)	1.11%
NCREIF Timberland Index	(0.26%)	2.90%	7.71%	6.63%	6.65%
Infrastructure					
Gross	0.49%	0.55%	4.29%	-	-
Net	0.35%	(0.01%)	3.70%	-	-
JP Morgan Asian Infrastructure - Net	(1.71%)	(8.16%)	(1.03%)	2.09%	-
JP Morgan IIF - Gross	0.34%	1.05%	3.63%	6.09%	-
JP Morgan IIF - Net	0.12%	0.18%	2.71%	5.00%	-
Grosvenor Cust. Infrastructure - Net	3.17%	4.68%	10.36%	-	-
Grosvenor Cust. Infrastructure II - Net	(2.24%)	(0.84%)	-	-	-
CPI-W	0.61%	0.50%	0.42%	1.08%	1.75%
Cash & Cash Equivalents - Net	**0.10%**	**0.19%**	**0.10%**	**0.11%**	**0.92%**
Cash Account - Net	0.10%	0.19%	0.10%	0.11%	0.91%
3-month Treasury Bill	0.07%	0.12%	0.07%	0.08%	1.15%
Total Fund					
Gross	1.38%	(0.10%)	6.71%	6.70%	4.87%
Net	1.32%	(0.41%)	6.37%	6.27%	4.65%
Target*	0.98%	(0.83%)	5.44%	5.87%	5.32%

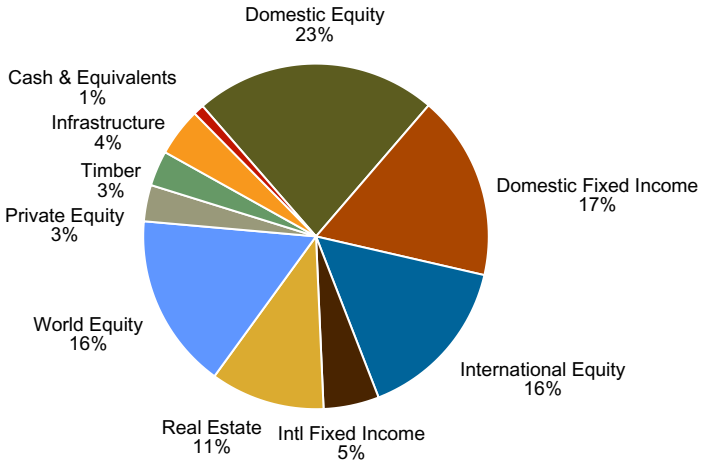
* Current Quarter Target = 16.5% Russell 1000 Index, 16.0% MSCI World, 12.3% Barclays Aggregate Index, 11.2% MSCI EAFE, 9.9% NCREIF Total Index, 5.0% CPI-W, 5.0% NDSIB PEN - Private Equity, 5.0% Barclays HY Corp 2% Issue, 5.0% Barclays Global Agg ex-US, 5.0% NCREIF Timberland Index, 4.9% Russell 2000 Index, 3.2% MSCI EM and 1.0% 3-month Treasury Bill.

(1) Citigroup Non-US Govt through 12/31/2009 and the Barclays Global Aggregate Index ex US thereafter.

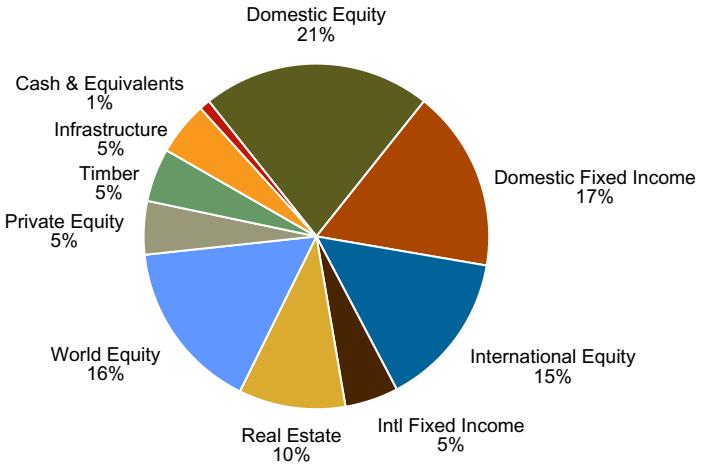
Actual vs Target Asset Allocation
As of March 31, 2016

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

Actual Asset Allocation

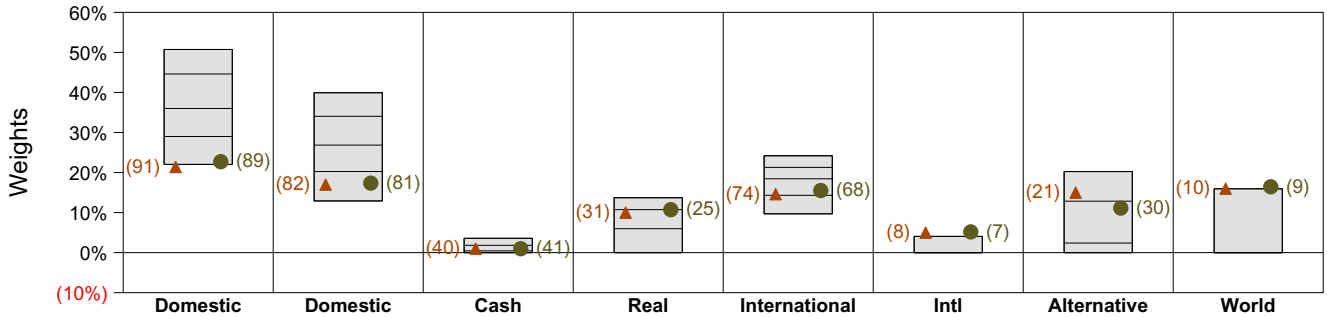


Target Asset Allocation



Asset Class	$000s Actual	Weight Actual	Target	Percent Difference	$000s Difference
Domestic Equity	549,965	22.7%	21.4%	1.3%	31,660
Domestic Fixed Income	420,156	17.3%	17.0%	0.3%	8,419
International Equity	375,521	15.5%	14.6%	0.9%	21,911
Intl Fixed Income	125,433	5.2%	5.0%	0.2%	4,334
Real Estate	259,649	10.7%	10.0%	0.7%	17,450
World Equity	398,052	16.4%	16.0%	0.4%	10,534
Private Equity	81,780	3.4%	5.0%	(1.6%)	(39,320)
Timber	78,848	3.3%	5.0%	(1.7%)	(42,251)
Infrastructure	108,778	4.5%	5.0%	(0.5%)	(12,322)
Cash & Equivalents	23,805	1.0%	1.0%	0.0%	(414)
Total	2,421,987	100.0%	100.0%		

Asset Class Weights vs Public Fund Sponsor Database



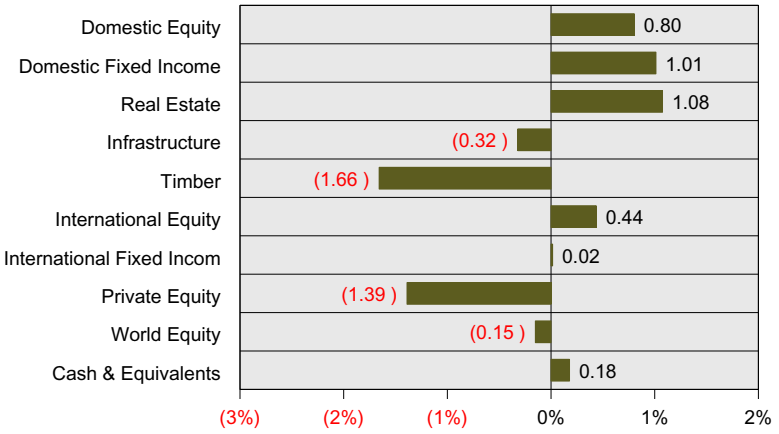
	Domestic Equity	Domestic Fixed Income	Cash & Equivalents	Real Estate	International Equity	Intl Fixed Income	Alternative	World Equity
10th Percentile	50.73	39.93	3.58	13.71	24.19	4.06	20.25	15.94
25th Percentile	44.61	34.04	1.83	10.74	21.29	0.00	12.84	0.00
Median	36.00	26.85	0.44	5.98	18.44	0.00	2.40	0.00
75th Percentile	29.00	20.25	0.00	0.00	14.31	0.00	0.00	0.00
90th Percentile	22.03	12.91	0.00	0.00	9.69	0.00	0.00	0.00
Fund ●	22.71	17.35	0.98	10.72	15.50	5.18	11.12	16.43
Target ▲	21.40	17.00	1.00	10.00	14.60	5.00	15.00	16.00
% Group Invested	97.44%	96.92%	70.26%	61.03%	89.74%	19.49%	44.62%	23.08%

* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 12.0% Barclays Aggregate Index, 11.1% MSCI EAFE, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB PERS - Private Equity, 5.0% Barclays Global Agg ex-US, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 3.5% MSCI EM and 1.0% 3-month Treasury Bill.

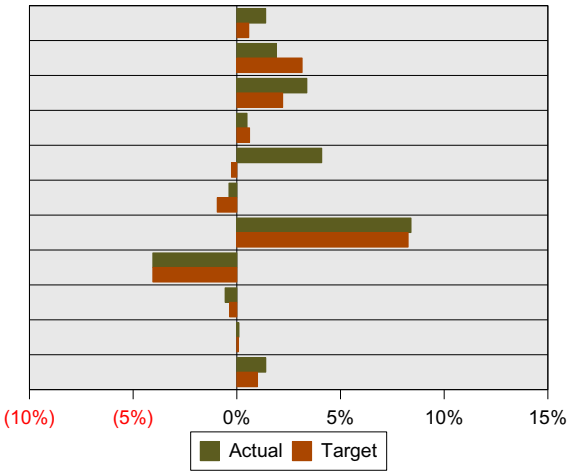
Quarterly Total Fund Relative Attribution - March 31, 2016

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

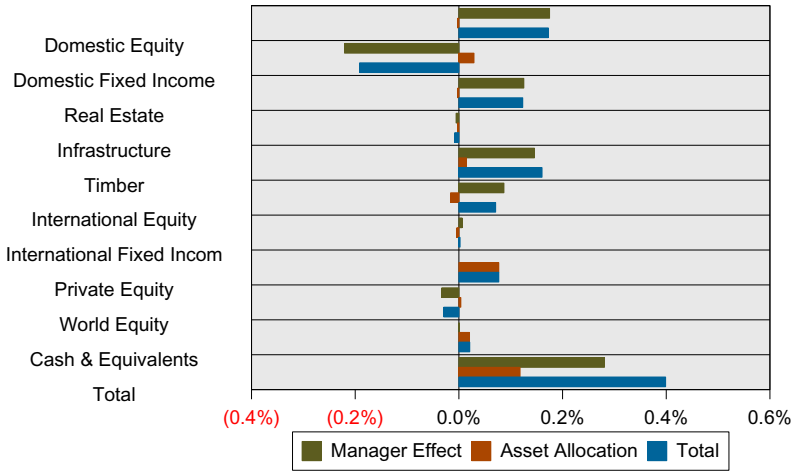
Asset Class Under or Overweighting



Actual vs Target Returns



Relative Attribution by Asset Class



Relative Attribution Effects for Quarter ended March 31, 2016

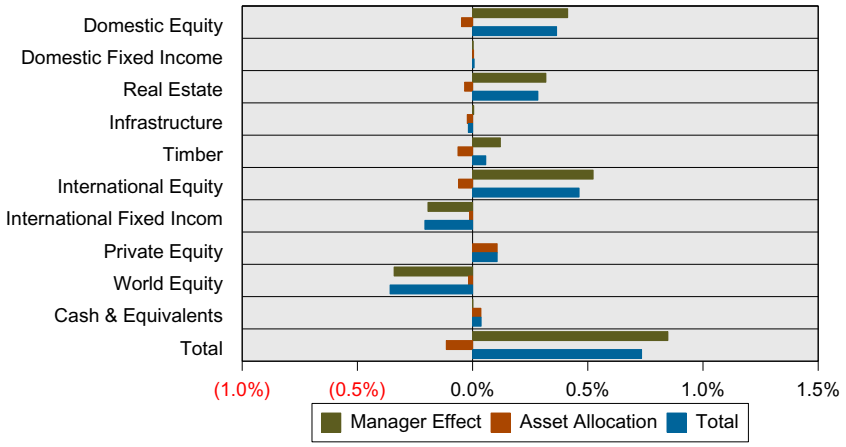
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	22%	21%	1.39%	0.58%	0.17%	(0.00%)	0.17%
Domestic Fixed Income	18%	17%	1.91%	3.15%	(0.22%)	0.03%	(0.19%)
Real Estate	11%	10%	3.38%	2.21%	0.13%	(0.00%)	0.12%
Infrastructure	5%	5%	0.49%	0.61%	(0.01%)	(0.00%)	(0.01%)
Timber	3%	5%	4.09%	(0.26%)	0.15%	0.01%	0.16%
International Equity	15%	15%	(0.38%)	(0.95%)	0.09%	(0.02%)	0.07%
International Fixed Incom	5%	5%	8.40%	8.26%	0.01%	(0.00%)	0.00%
Private Equity	4%	5%	(4.05%)	(4.05%)	0.00%	0.08%	0.08%
World Equity	16%	16%	(0.57%)	(0.35%)	(0.03%)	0.00%	(0.03%)
Cash & Equivalents	1%	1%	0.10%	0.07%	0.00%	0.02%	0.02%
Total			**1.40% =**	**1.00% +**	**0.28% +**	**0.12%**	**0.40%**

* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 12.0% Barclays Aggregate Index, 11.1% MSCI EAFE, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB PERS - Private Equity, 5.0% Barclays Global Agg ex-US, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 3.5% MSCI EM and 1.0% 3-month Treasury Bill.

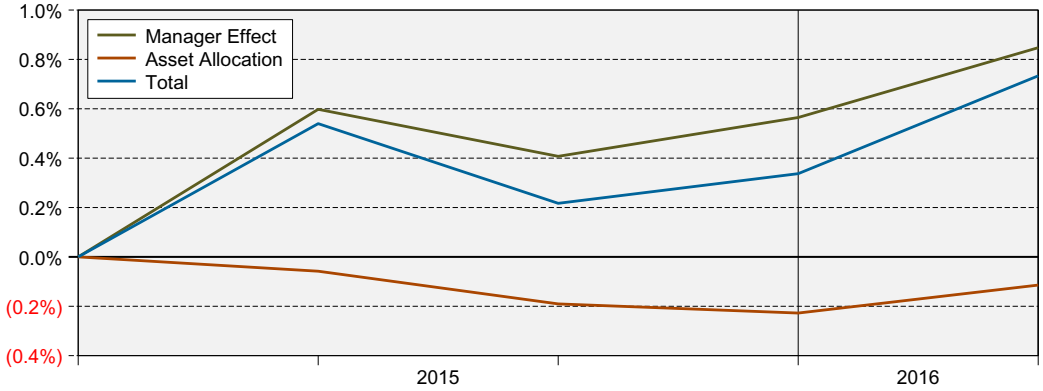
Cumulative Total Fund Relative Attribution - March 31, 2016

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

One Year Relative Attribution Effects



Cumulative Relative Attribution Effects



One Year Relative Attribution Effects

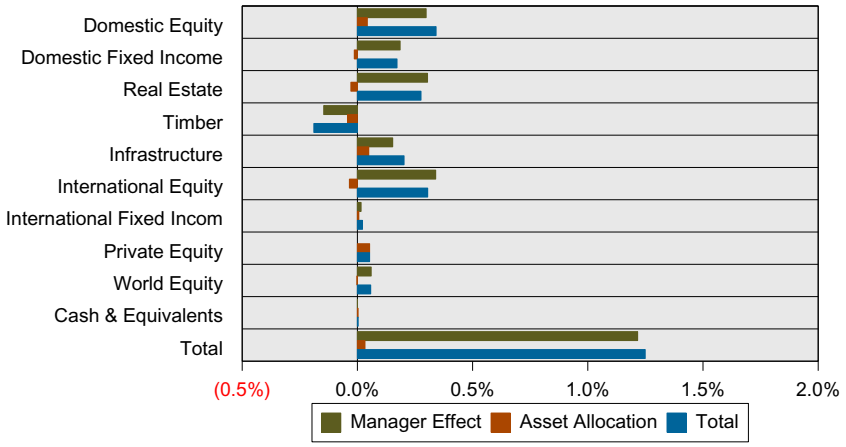
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	23%	21%	0.02%	(1.83%)	0.41%	(0.05%)	0.36%
Domestic Fixed Income	18%	17%	0.38%	0.33%	0.00%	0.00%	0.01%
Real Estate	10%	10%	15.41%	11.84%	0.32%	(0.03%)	0.28%
Infrastructure	5%	5%	0.55%	0.50%	0.00%	(0.02%)	(0.02%)
Timber	4%	5%	6.65%	2.90%	0.12%	(0.06%)	0.06%
International Equity	15%	15%	(5.74%)	(9.05%)	0.52%	(0.06%)	0.46%
International Fixed Incom	5%	5%	2.64%	6.69%	(0.19%)	(0.01%)	(0.21%)
Private Equity	4%	5%	(9.27%)	(9.27%)	0.00%	0.11%	0.11%
World Equity	16%	16%	(5.56%)	(3.45%)	(0.34%)	(0.02%)	(0.36%)
Cash & Equivalents	1%	1%	0.19%	0.12%	0.00%	0.04%	0.04%
Total			**(0.12%) =**	**(0.85%) +**	**0.85% +**	**(0.11%)**	**0.73%**

* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 12.0% Barclays Aggregate Index, 11.1% MSCI EAFE, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB PERS - Private Equity, 5.0% Barclays Global Agg ex-US, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 3.5% MSCI EM and 1.0% 3-month Treasury Bill.

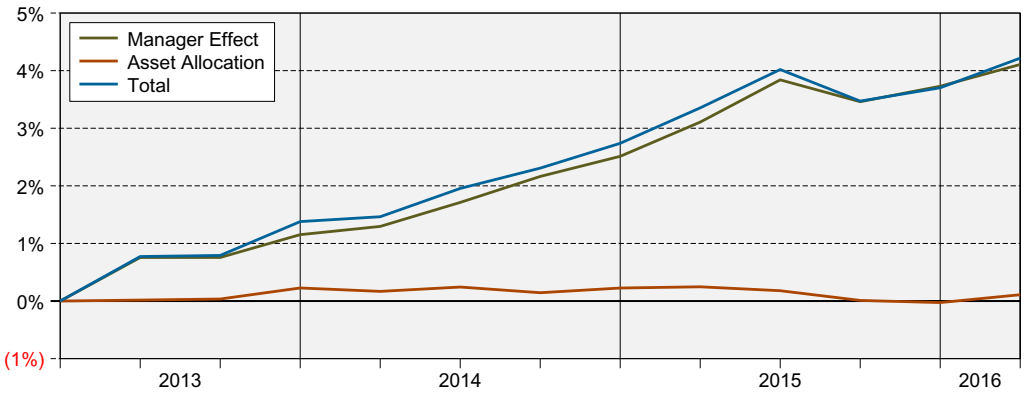
Cumulative Total Fund Relative Attribution - March 31, 2016

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

Three Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Three Year Annualized Relative Attribution Effects

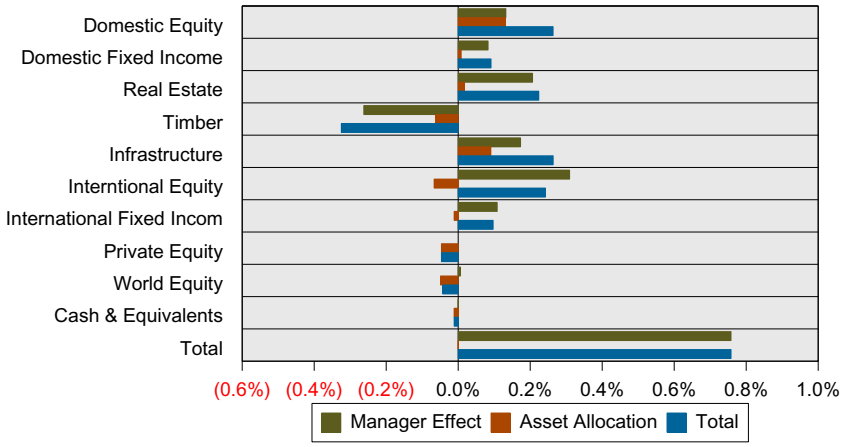
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	23%	21%	11.91%	10.52%	0.30%	0.04%	0.34%
Domestic Fixed Income	18%	17%	3.36%	2.34%	0.19%	(0.01%)	0.17%
Real Estate	10%	10%	15.30%	11.91%	0.30%	(0.03%)	0.28%
Timber	4%	5%	4.65%	7.71%	(0.15%)	(0.04%)	(0.19%)
Infrastructure	4%	5%	4.30%	0.42%	0.15%	0.05%	0.20%
International Equity	15%	15%	2.92%	0.67%	0.34%	(0.03%)	0.31%
International Fixed Incom	5%	5%	0.03%	(0.32%)	0.02%	0.01%	0.02%
Private Equity	4%	5%	(1.75%)	(1.75%)	0.00%	0.05%	0.05%
World Equity	16%	16%	7.21%	6.82%	0.06%	(0.00%)	0.06%
Cash & Equivalents	1%	1%	0.10%	0.07%	0.00%	0.00%	0.00%
Total			**6.70% =**	**5.45% +**	**1.22% +**	**0.03%**	**1.25%**

* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 12.0% Barclays Aggregate Index, 11.1% MSCI EAFE, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB PERS - Private Equity, 5.0% Barclays Global Agg ex-US, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 3.5% MSCI EM and 1.0% 3-month Treasury Bill.

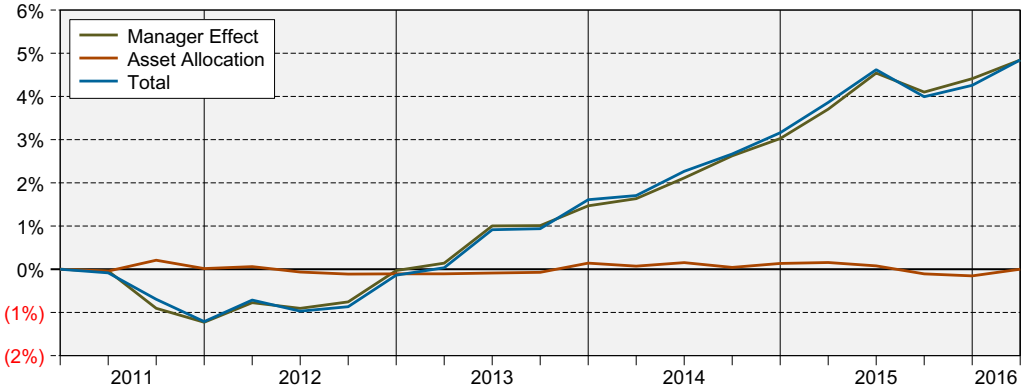
Cumulative Total Fund Relative Attribution - March 31, 2016

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

Five Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Five Year Annualized Relative Attribution Effects

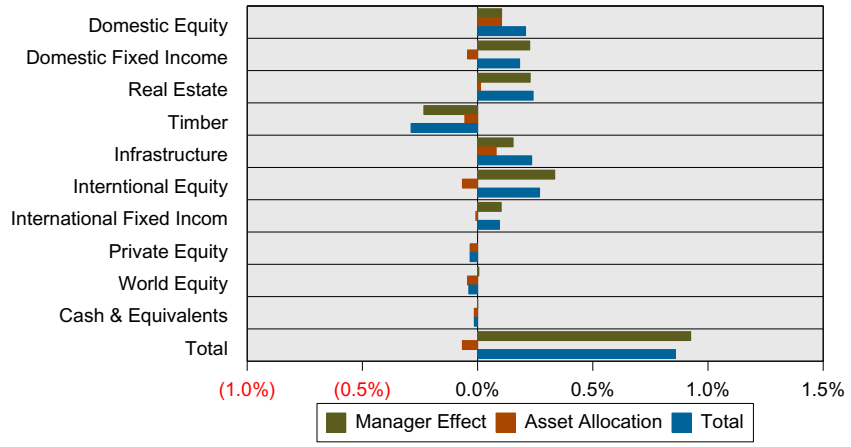
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	26%	25%	11.36%	10.55%	0.13%	0.13%	0.26%
Domestic Fixed Income	19%	18%	5.44%	4.44%	0.08%	0.01%	0.09%
Real Estate	9%	10%	14.35%	11.93%	0.21%	0.02%	0.22%
Timber	4%	5%	-	-	(0.26%)	(0.06%)	(0.32%)
Infrastructure	4%	5%	-	-	0.17%	0.09%	0.26%
Interntional Equity	16%	16%	2.71%	0.69%	0.31%	(0.07%)	0.24%
International Fixed Incom	5%	5%	2.41%	0.39%	0.11%	(0.01%)	0.10%
Private Equity	5%	5%	0.85%	0.85%	0.00%	(0.05%)	(0.05%)
World Equity	11%	12%	-	-	0.01%	(0.05%)	(0.04%)
Cash & Equivalents	1%	1%	0.09%	0.08%	0.00%	(0.01%)	(0.01%)
Total			**6.71% =**	**5.95% +**	**0.76% +**	**0.00%**	**0.76%**

* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 12.0% Barclays Aggregate Index, 11.1% MSCI EAFE, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB PERS - Private Equity, 5.0% Barclays Global Agg ex-US, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 3.5% MSCI EM and 1.0% 3-month Treasury Bill.

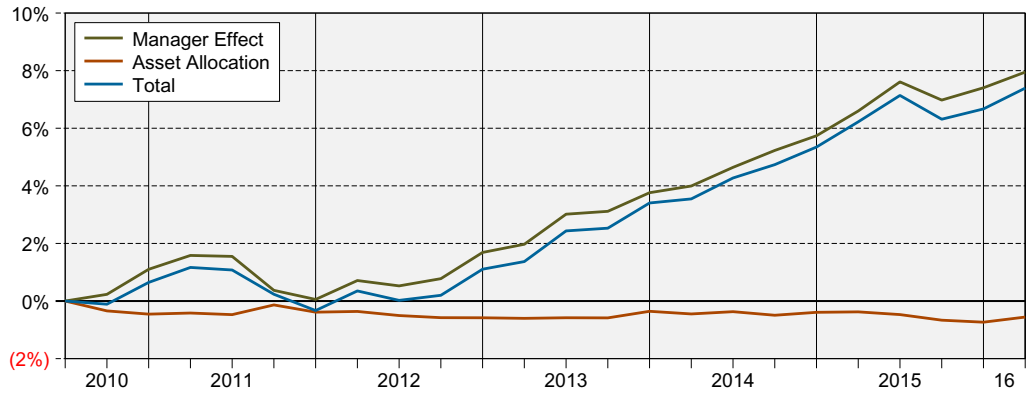
Cumulative Total Fund Relative Attribution - March 31, 2016

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

Five and Three-Quarter Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Five and Three-Quarter Year Annualized Relative Attribution Effects

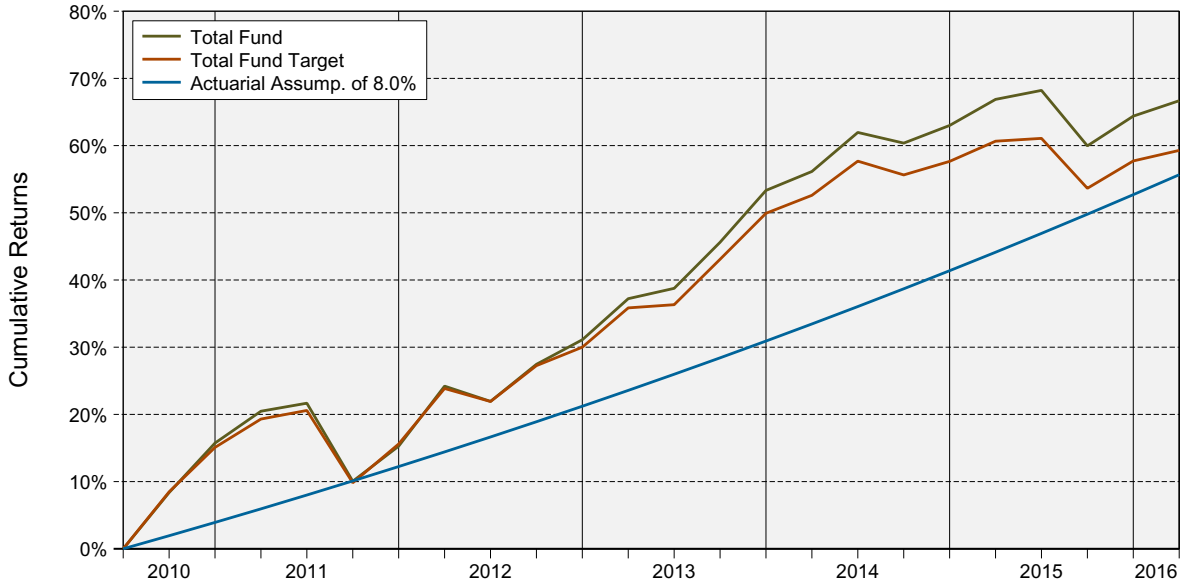
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	28%	27%	15.35%	14.64%	0.10%	0.10%	0.21%
Domestic Fixed Income	20%	20%	5.90%	4.51%	0.23%	(0.04%)	0.18%
Real Estate	9%	9%	15.59%	12.54%	0.23%	0.01%	0.24%
Timber	4%	4%	-	-	(0.23%)	(0.06%)	(0.29%)
Infrastructure	3%	4%	-	-	0.15%	0.08%	0.23%
Interntional Equity	16%	16%	6.70%	4.49%	0.33%	(0.07%)	0.27%
International Fixed Incom	5%	5%	4.16%	2.23%	0.10%	(0.01%)	0.09%
Private Equity	5%	5%	2.86%	2.86%	0.00%	(0.03%)	(0.03%)
World Equity	10%	10%	-	-	0.01%	(0.04%)	(0.04%)
Cash & Equivalents	1%	1%	0.11%	0.09%	0.00%	(0.01%)	(0.01%)
Total			**9.29%** =	**8.43%** +	**0.92%** +	**(0.07%)**	**0.86%**

* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 12.0% Barclays Aggregate Index, 11.1% MSCI EAFE, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB PERS - Private Equity, 5.0% Barclays Global Agg ex-US, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 3.5% MSCI EM and 1.0% 3-month Treasury Bill.

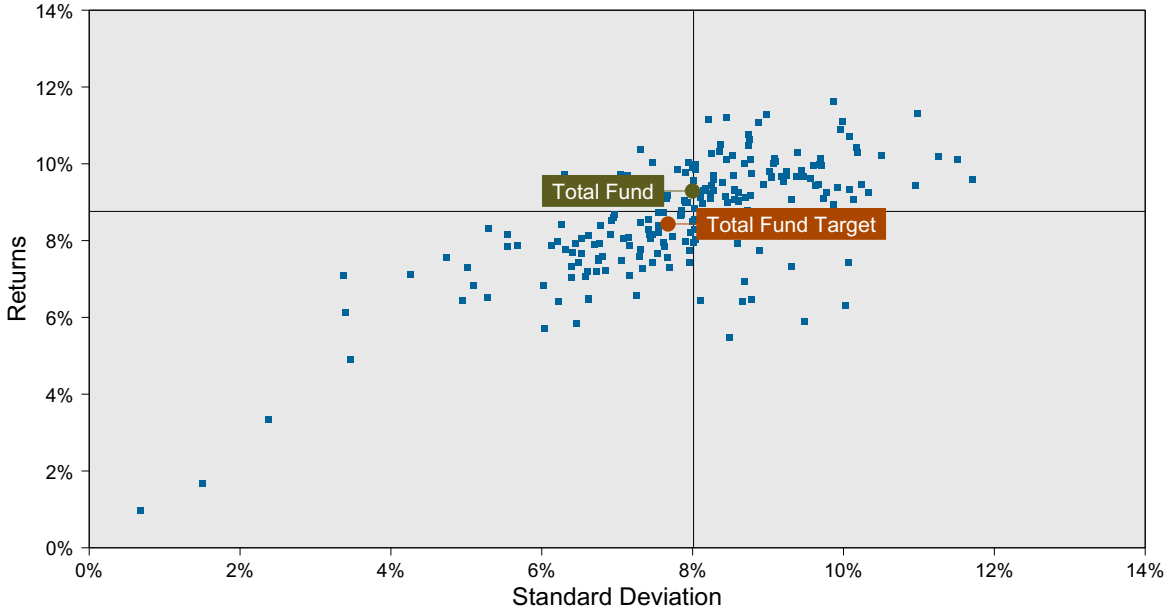
Cumulative Performance Relative to Target

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

Cumulative Returns Actual vs Target



Five and Three-Quarter Year Annualized Risk vs Return



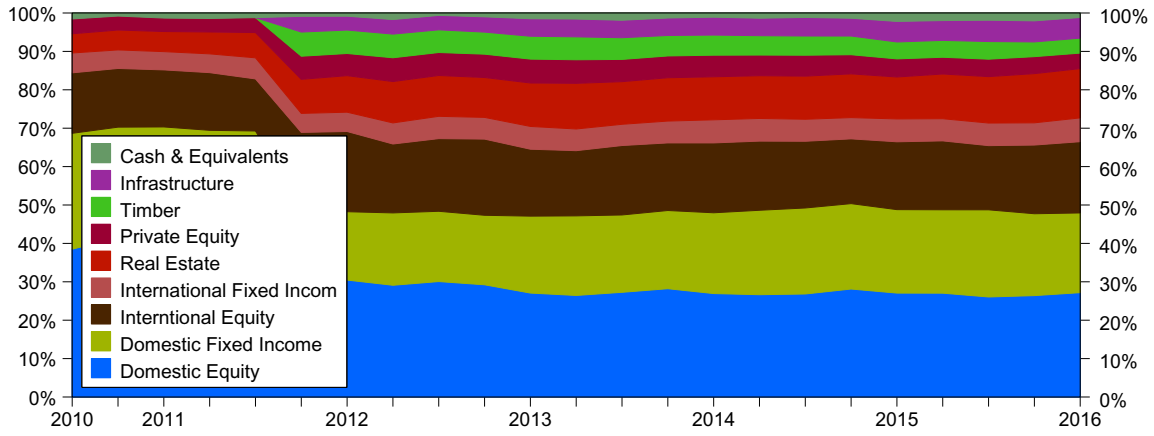
Squares represent membership of the Public Fund Sponsor Database

* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 12.0% Barclays Aggregate Index, 11.1% MSCI EAFE, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB PERS - Private Equity, 5.0% Barclays Global Agg ex-US, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 3.5% MSCI EM and 1.0% 3-month Treasury Bill.

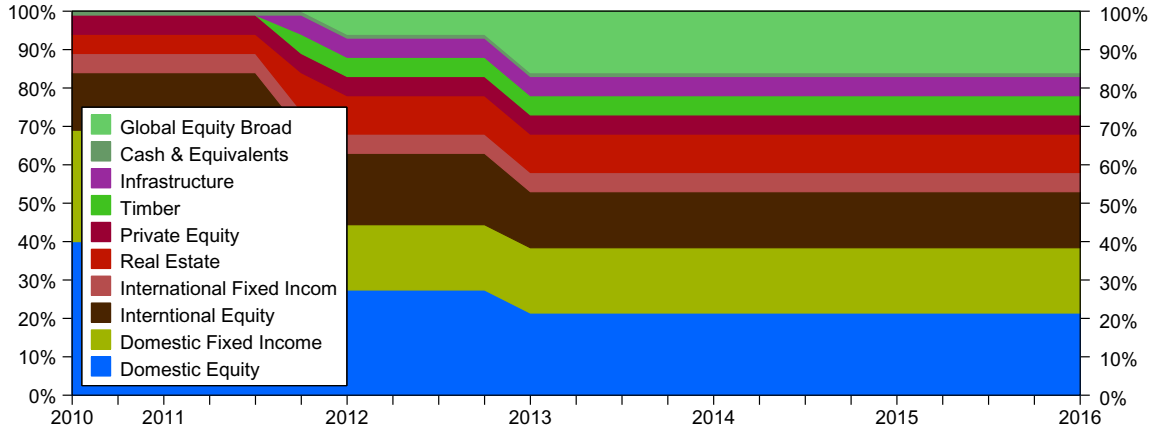
Actual vs Target Historical Asset Allocation

The Historical asset allocation for a fund is by far the largest factor explaining its performance. The charts below show the fund's historical actual asset allocation, the fund's historical target asset allocation, and the historical asset allocation of the average fund in the Public Fund Sponsor Database.

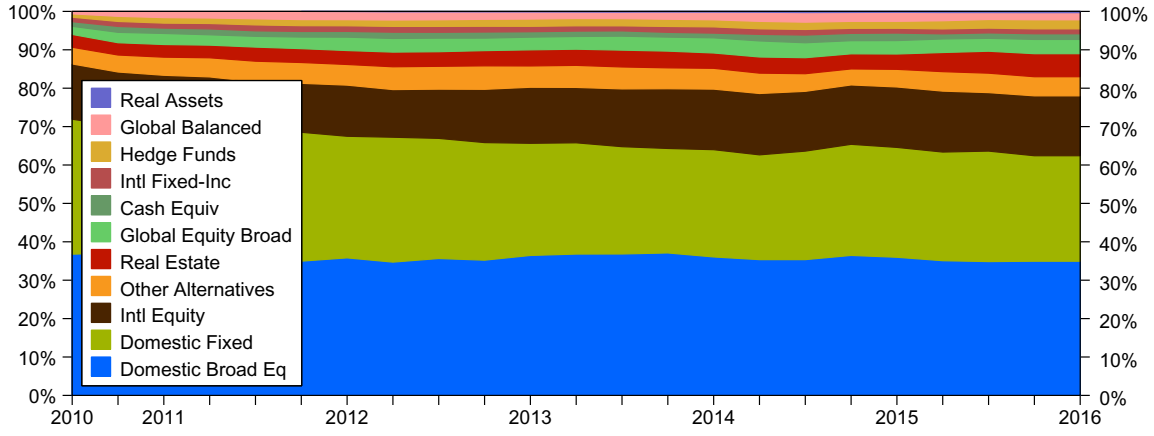
Actual Historical Asset Allocation



Target Historical Asset Allocation



Average Public Fund Sponsor Database Historical Asset Allocation

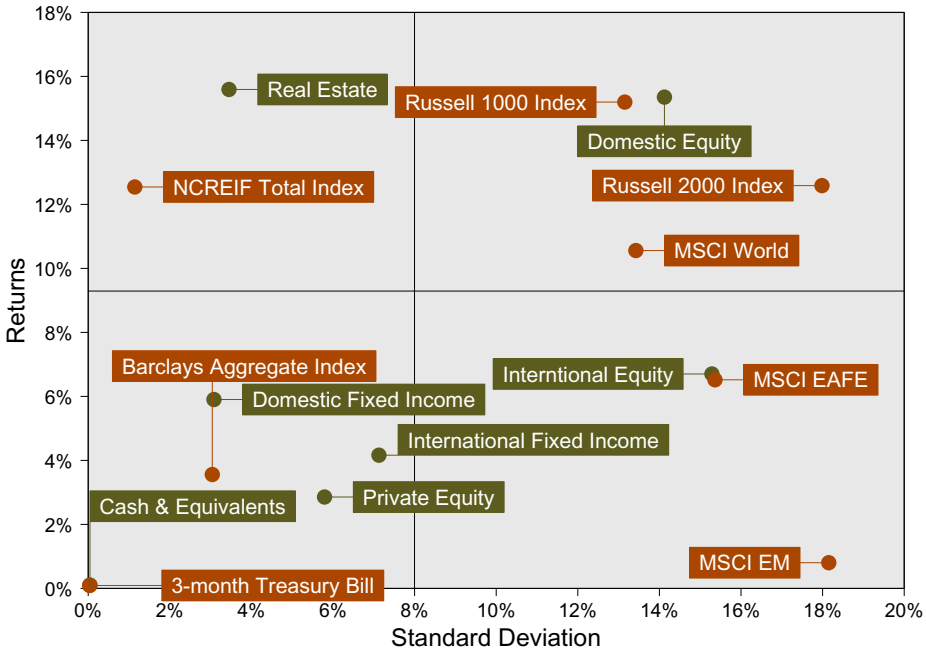


* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 12.0% Barclays Aggregate Index, 11.1% MSCI EAFE, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB PERS - Private Equity, 5.0% Barclays Global Agg ex-US, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 3.5% MSCI EM and 1.0% 3-month Treasury Bill.

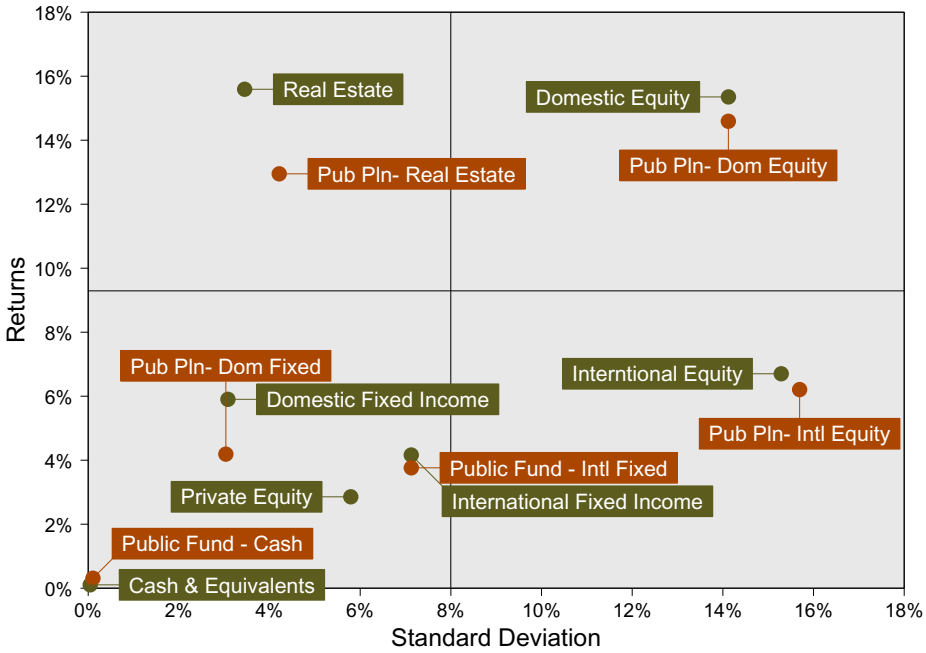
Asset Class Risk and Return

The charts below show the five and three-quarter year annualized risk and return for each asset class component of the Total Fund. The first graph contrasts these values with those of the appropriate index for each asset class. The second chart contrasts them with the risk and return of the median portfolio in each of the appropriate CAI comparative databases. In each case, the crosshairs on the chart represent the return and risk of the Total Fund.

Five and Three-Quarter Year Annualized Risk vs Return
Asset Classes vs Benchmark Indices



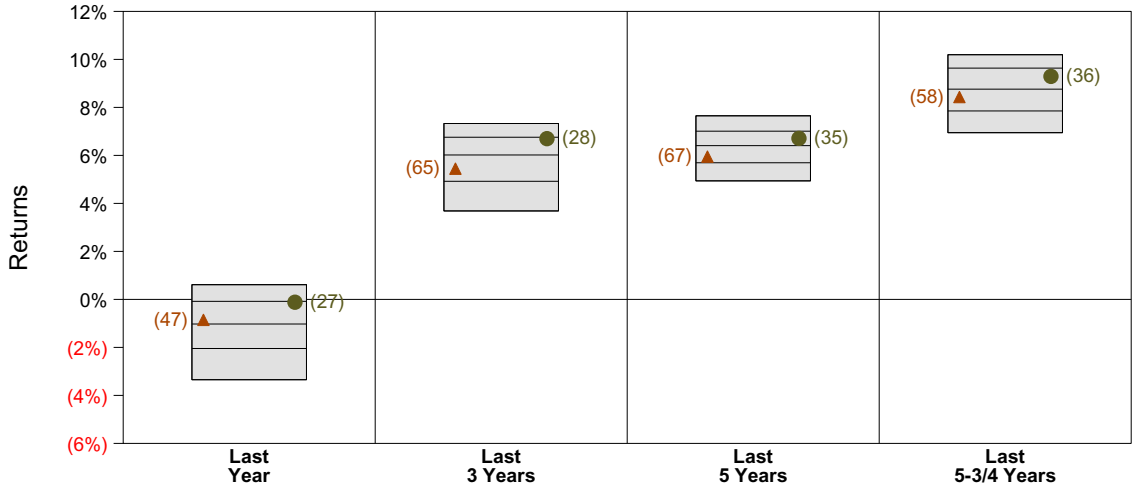
Five and Three-Quarter Year Annualized Risk vs Return
Asset Classes vs Asset Class Median



Total Fund Ranking

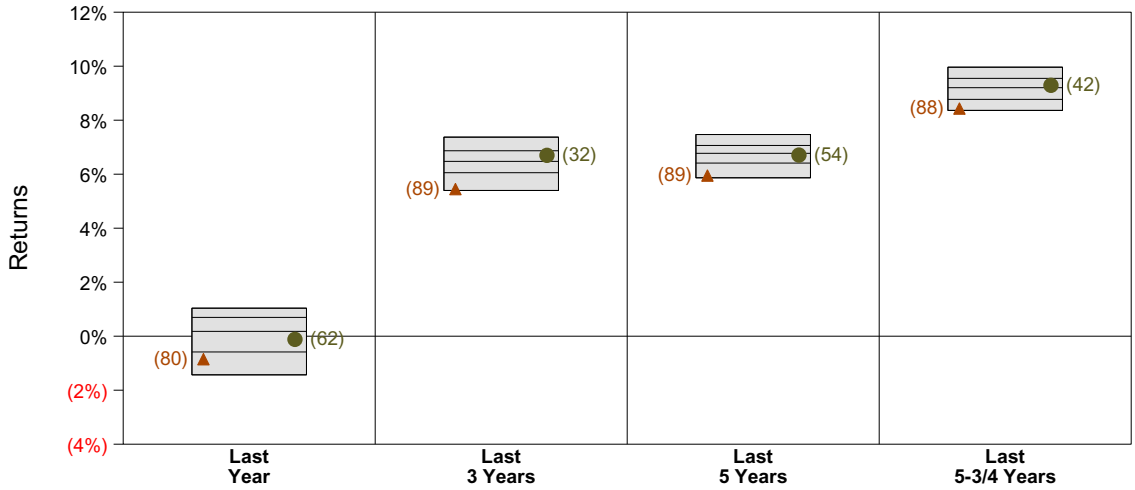
The first two charts show the ranking of the Total Fund's performance relative to that of the Public Fund Sponsor Database for periods ended March 31, 2016. The first chart is a standard unadjusted ranking. In the second chart each fund in the database is adjusted to have the same historical asset allocation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

Public Fund Sponsor Database



	Last Year	Last 3 Years	Last 5 Years	Last 5-3/4 Years
10th Percentile	0.61	7.33	7.65	10.20
25th Percentile	(0.08)	6.76	7.01	9.64
Median	(1.03)	6.02	6.41	8.76
75th Percentile	(2.05)	4.92	5.69	7.85
90th Percentile	(3.35)	3.69	4.94	6.95
Total Fund ●	(0.12)	6.70	6.71	9.29
Policy Target ▲	(0.85)	5.45	5.95	8.43

Asset Allocation Adjusted Ranking



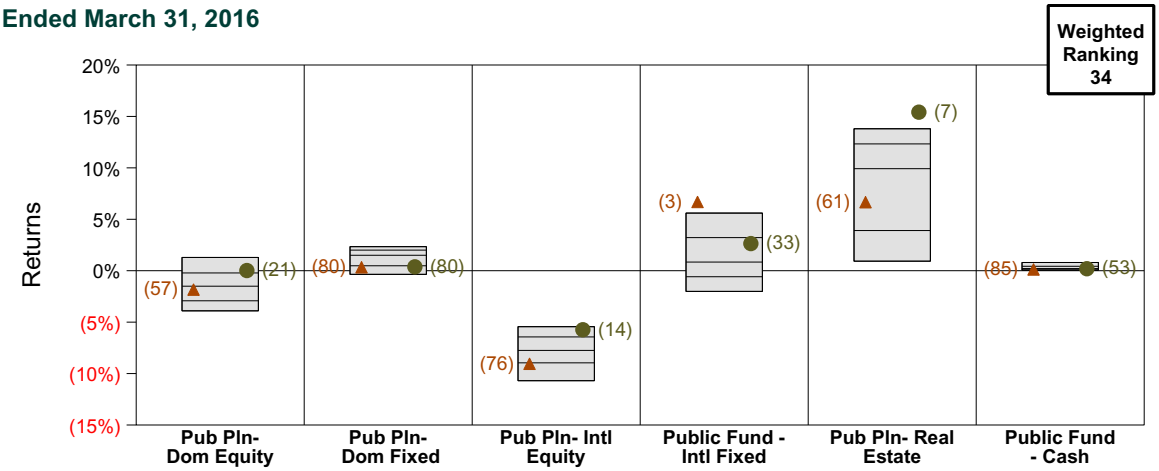
	Last Year	Last 3 Years	Last 5 Years	Last 5-3/4 Years
10th Percentile	1.04	7.37	7.47	9.96
25th Percentile	0.70	6.87	7.06	9.55
Median	0.18	6.48	6.77	9.20
75th Percentile	(0.58)	6.06	6.41	8.77
90th Percentile	(1.43)	5.40	5.87	8.36
Total Fund ●	(0.12)	6.70	6.71	9.29
Policy Target ▲	(0.85)	5.45	5.95	8.43

* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 12.0% Barclays Aggregate Index, 11.1% MSCI EAFE, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB PERS - Private Equity, 5.0% Barclays Global Agg ex-US, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 3.5% MSCI EM and 1.0% 3-month Treasury Bill.

Asset Class Rankings

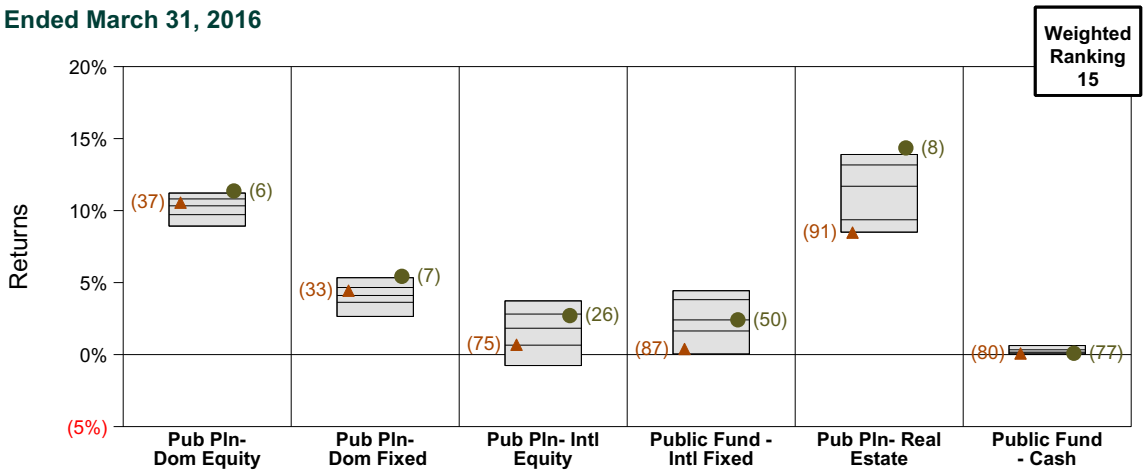
The charts below show the rankings of each asset class component of the Total Fund relative to appropriate comparative databases. In the upper right corner of each graph is the weighted average of the rankings across the different asset classes. The weights of the fund's actual asset allocation are used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

Total Asset Class Performance
One Year Ended March 31, 2016



	Pub Pln- Dom Equity	Pub Pln- Dom Fixed	Pub Pln- Intl Equity	Public Fund - Intl Fixed	Pub Pln- Real Estate	Public Fund - Cash
10th Percentile	1.29	2.34	(5.44)	5.60	13.80	0.80
25th Percentile	(0.22)	2.00	(6.44)	3.22	12.33	0.43
Median	(1.51)	1.50	(7.75)	0.84	9.92	0.21
75th Percentile	(2.92)	0.48	(8.96)	(0.59)	3.91	0.17
90th Percentile	(3.90)	(0.35)	(10.69)	(2.01)	0.93	0.06
Asset Class Composite ●	0.02	0.38	(5.74)	2.64	15.41	0.19
Composite Benchmark ▲	(1.83)	0.33	(9.05)	6.69	6.66	0.12

Total Asset Class Performance
Five Years Ended March 31, 2016



	Pub Pln- Dom Equity	Pub Pln- Dom Fixed	Pub Pln- Intl Equity	Public Fund - Intl Fixed	Pub Pln- Real Estate	Public Fund - Cash
10th Percentile	11.22	5.34	3.73	4.44	13.90	0.63
25th Percentile	10.81	4.66	2.82	3.81	13.17	0.33
Median	10.33	4.11	1.83	2.41	11.69	0.17
75th Percentile	9.72	3.63	0.66	1.64	9.36	0.11
90th Percentile	8.92	2.65	(0.76)	0.04	8.50	0.03
Asset Class Composite ●	11.36	5.44	2.71	2.41	14.35	0.09
Composite Benchmark ▲	10.55	4.44	0.69	0.39	8.47	0.08

* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 12.0% Barclays Aggregate Index, 11.1% MSCI EAFE, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB PERS - Private Equity, 5.0% Barclays Global Agg ex-US, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 3.5% MSCI EM and 1.0% 3-month Treasury Bill.

Asset Class Allocation

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

Asset Class Allocation

	March 31, 2016				December 31, 2015	
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
GLOBAL EQUITY	**$1,405,317,251**	**58.02%**	**$50,370,975**	**$3,747,731**	**$1,351,198,545**	**56.98%**
Domestic Equity	**$549,964,985**	**22.71%**	**$16,284,885**	**$8,419,112**	**$525,260,988**	**22.15%**
Large Cap	427,641,315	17.66%	5,909,885	8,919,958	412,811,472	17.41%
Small Cap	122,323,669	5.05%	10,375,000	(500,846)	112,449,516	4.74%
International Equity	**$375,521,049**	**15.50%**	**$19,810,449**	**$(238,476)**	**$355,949,076**	**15.01%**
Developed Intl Equity	279,150,385	11.53%	13,810,449	(4,084,571)	269,424,507	11.36%
Emerging Markets	96,370,664	3.98%	6,000,000	3,846,095	86,524,569	3.65%
World Equity	**$398,051,637**	**16.43%**	**$17,003,798**	**$(898,051)**	**$381,945,890**	**16.11%**
Private Equity	**$81,779,580**	**3.38%**	**$(2,728,157)**	**$(3,534,854)**	**$88,042,590**	**3.71%**
GLOBAL FIXED INCOME	**$545,589,781**	**22.53%**	**$(11,257,399)**	**$17,630,478**	**$539,216,703**	**22.74%**
Domestic Fixed Income	**$420,156,402**	**17.35%**	**$(11,928,428)**	**$7,916,929**	**$424,167,902**	**17.89%**
Inv. Grade Fixed Income	293,068,200	12.10%	(12,267,060)	4,962,548	300,372,713	12.67%
Below Inv. Grade Fixed Income	127,088,202	5.25%	338,632	2,954,381	123,795,189	5.22%
International Fixed Income	**$125,433,379**	**5.18%**	**$671,029**	**$9,713,549**	**$115,048,801**	**4.85%**
GLOBAL REAL ASSETS	**$447,274,664**	**18.47%**	**$(5,362,044)**	**$12,356,139**	**$440,280,569**	**18.57%**
Real Estate	259,649,063	10.72%	(3,958,270)	8,714,288	254,893,045	10.75%
Timber	78,847,973	3.26%	(505,119)	3,105,599	76,247,493	3.22%
Infrastructure	108,777,628	4.49%	(898,654)	536,252	109,140,031	4.60%
Cash & Equivalents	**$23,805,431**	**0.98%**	**$(16,943,626)**	**$25,562**	**$40,723,495**	**1.72%**
Securities Lending Income	**$0**	**0.00%**	**$(44,781)**	**$44,781**	**-**	**-**
Total Fund	**$2,421,987,127**	**100.0%**	**$16,763,125**	**$33,804,691**	**$2,371,419,311**	**100.0%**

PLEASE REFER TO PAGES 36-38 FOR INVESTMENT MANAGER LEVEL ASSET ALLOCATION.

Investment Manager Returns

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

Returns for Periods Ended March 31, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 5-3/4 Years
Global Equity					
Gross	0.05%	(3.68%)	7.21%	-	-
Net	0.00%	(3.98%)	6.86%	-	-
Wtd Avg Global Equity Benchmark	(0.48%)	(4.79%)	5.85%	-	-
Domestic Equity					
Gross	1.39%	0.02%	11.91%	11.36%	15.35%
Net	1.37%	(0.11%)	11.71%	11.13%	15.10%
Wtd Avg Domestci Equity Benchmark	0.58%	(1.83%)	10.52%	10.55%	14.64%
Large Cap Equity					
Gross	2.07%	2.87%	13.30%	12.32%	15.99%
Net	2.04%	2.76%	13.12%	12.09%	15.73%
Benchmark(1)	1.17%	0.50%	11.52%	11.55%	15.19%
Small Cap Equity					
Gross	(1.20%)	(9.67%)	7.01%	8.21%	13.10%
Net	(1.20%)	(9.85%)	6.77%	7.97%	12.86%
Russell 2000 Index	(1.52%)	(9.76%)	6.84%	7.20%	12.59%
International Equity					
Gross	(0.38%)	(5.74%)	2.92%	2.71%	6.70%
Net	(0.44%)	(5.93%)	2.68%	2.40%	6.37%
Wtd Avg Intl Equity Benchmark	(0.95%)	(9.05%)	0.67%	0.69%	4.49%
Developed Intl Equity					
Gross	(1.74%)	(4.41%)	4.59%	3.44%	7.68%
Net	(1.82%)	(4.66%)	4.32%	3.14%	7.35%
Benchmark(2)	(3.01%)	(8.27%)	2.23%	2.29%	5.53%
Emerging Markets					
Gross	3.75%	(10.60%)	(2.96%)	(0.70%)	3.15%
Net	3.75%	(10.60%)	(3.13%)	(1.01%)	2.81%
Benchmark(3)	5.71%	(12.03%)	(4.50%)	(4.11%)	0.85%
World Equity					
Gross	(0.57%)	(5.56%)	7.21%	-	-
Net	(0.65%)	(6.30%)	6.46%	-	-
MSCI World Index	(0.35%)	(3.45%)	6.82%	6.51%	10.56%
Private Equity					
Net	(4.05%)	(9.28%)	(1.78%)	0.78%	2.76%

(1) S&P 500 Index through 12/31/2011 and the Russell 1000 Index thereafter.
(2) 50% Hedged EAFE through 3/31/2011 and MSCI EAFE thereafter.
(3) MSCI Emerging Mkts Idx (Gross) through 6/30/2011 and MSCI Emerging Mkts Idx Net thereafter.

PLEASE REFER TO PAGES 39-43 FOR INVESTMENT MANAGER LEVEL RETURNS.

Investment Manager Returns

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

Returns for Periods Ended March 31, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 5-3/4 Years
Global Fixed Income					
Gross	3.32%	0.92%	2.70%	-	-
Net	3.25%	0.66%	2.45%	-	-
Wtd Avg Global Fixed Income Benchmark	4.29%	1.76%	1.76%	-	-
Domestic Fixed Income					
Gross	1.91%	0.38%	3.36%	5.44%	5.90%
Net	1.85%	0.16%	3.14%	5.20%	5.65%
Wtd Avg Domestic FI Benchmark	3.15%	0.33%	2.34%	4.44%	4.51%
Inv. Grade Fixed Income					
Gross	1.68%	1.62%	3.43%	4.92%	5.15%
Net	1.62%	1.49%	3.31%	4.77%	4.98%
Barclays Aggregate Index	3.03%	1.96%	2.50%	3.78%	3.56%
Below Inv. Grade Fixed Income					
Gross	2.38%	(2.61%)	3.11%	6.14%	8.02%
Net	2.27%	(3.01%)	2.67%	5.70%	7.58%
Barclays HY Corp 2% Issue	3.35%	(3.66%)	1.86%	4.93%	6.73%
International Fixed Income					
Gross	8.40%	2.64%	0.03%	2.41%	4.16%
Net	8.30%	2.22%	(0.33%)	2.05%	3.79%
Wtd Avg Intl Fixed Income Benchmark	8.26%	6.69%	(0.32%)	0.39%	2.23%
Global Real Assets					
Gross	2.80%	9.78%	10.08%	-	-
Net	2.69%	9.35%	9.65%	-	-
Wtd Avg Global Real Assets Benchmark	1.19%	6.68%	7.93%	-	-
Real Estate					
Gross	3.38%	15.41%	15.30%	14.35%	15.59%
Net	3.25%	14.88%	14.75%	13.80%	15.02%
NCREIF Total Index	2.21%	11.84%	11.91%	11.93%	12.54%
Timber					
Net	4.09%	6.65%	4.65%	-	-
NCREIF Timberland Index	(0.26%)	2.90%	7.71%	6.63%	5.71%
Infrastructure					
Gross	0.49%	0.55%	4.30%	-	-
Net	0.35%	(0.01%)	3.70%	-	-
CPI-W	0.61%	0.50%	0.42%	1.08%	1.44%
Cash & Equivalents - Net	**0.10%**	**0.19%**	**0.10%**	**0.09%**	**0.11%**
3-month Treasury Bill	0.07%	0.12%	0.07%	0.08%	0.09%
Total Fund					
Gross	1.40%	(0.12%)	6.70%	6.71%	9.29%
Net	1.33%	(0.43%)	6.36%	6.37%	8.94%
Target*	1.00%	(0.85%)	5.45%	5.95%	8.43%

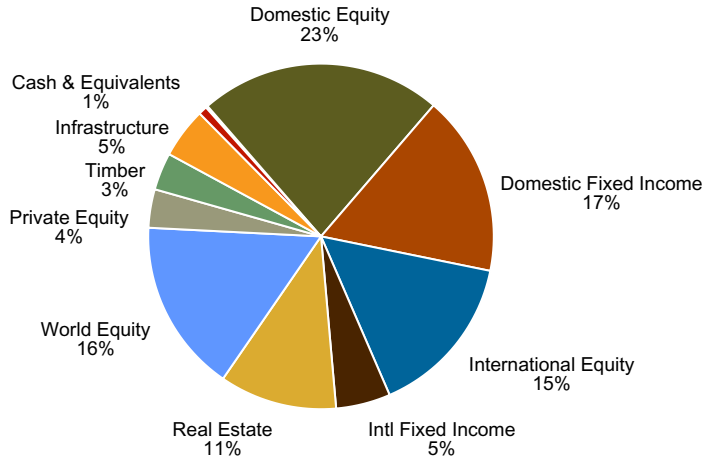
* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 12.0% Barclays Aggregate Index, 11.1% MSCI EAFE, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB PERS - Private Equity, 5.0% Barclays Global Agg ex-US, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 3.5% MSCI EM and 1.0% 3-month Treasury Bill.

PLEASE REFER TO PAGES 39-43 FOR INVESTMENT MANAGER LEVEL RETURNS.

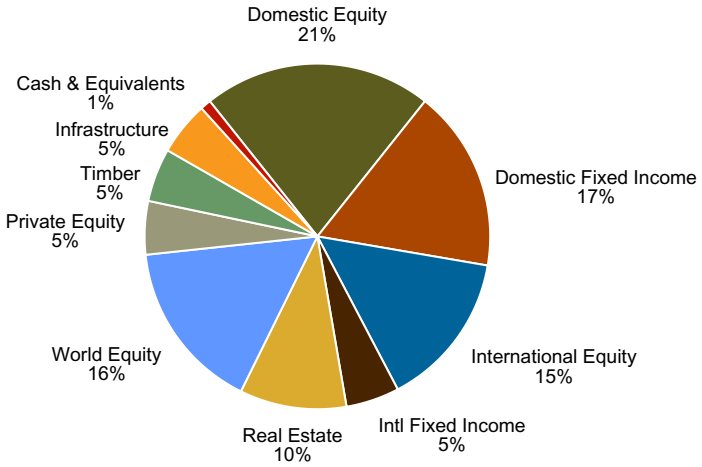
Actual vs Target Asset Allocation
As of March 31, 2016

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

Actual Asset Allocation

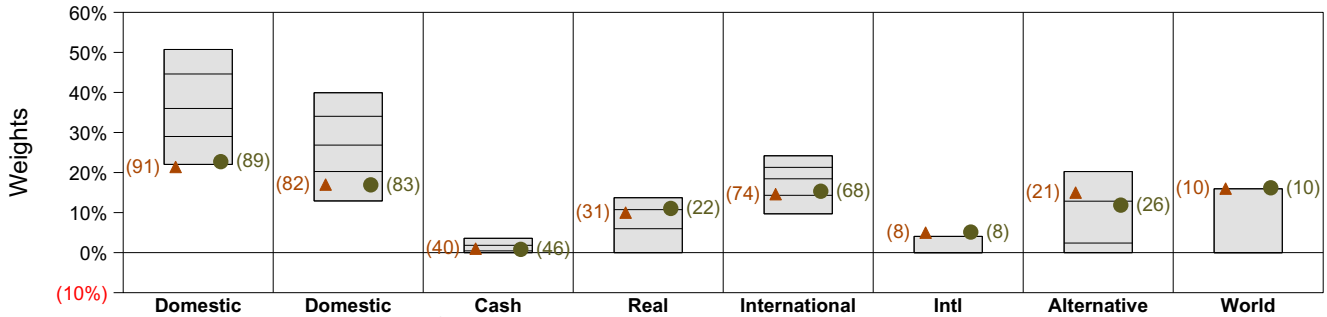


Target Asset Allocation



Asset Class	$000s Actual	Weight Actual	Target	Percent Difference	$000s Difference
Domestic Equity	467,358	22.7%	21.4%	1.3%	27,076
Domestic Fixed Income	348,194	16.9%	17.0%	(0.1%)	(1,564)
International Equity	315,365	15.3%	14.6%	0.7%	14,985
Intl Fixed Income	105,630	5.1%	5.0%	0.1%	2,760
Real Estate	227,060	11.0%	10.0%	1.0%	21,321
World Equity	333,046	16.2%	16.0%	0.2%	3,862
Private Equity	75,064	3.6%	5.0%	(1.4%)	(27,805)
Timber	71,518	3.5%	5.0%	(1.5%)	(31,352)
Infrastructure	97,394	4.7%	5.0%	(0.3%)	(5,476)
Cash & Equivalents	16,767	0.8%	1.0%	(0.2%)	(3,807)
Total	2,057,395	100.0%	100.0%		

Asset Class Weights vs Public Fund Sponsor Database



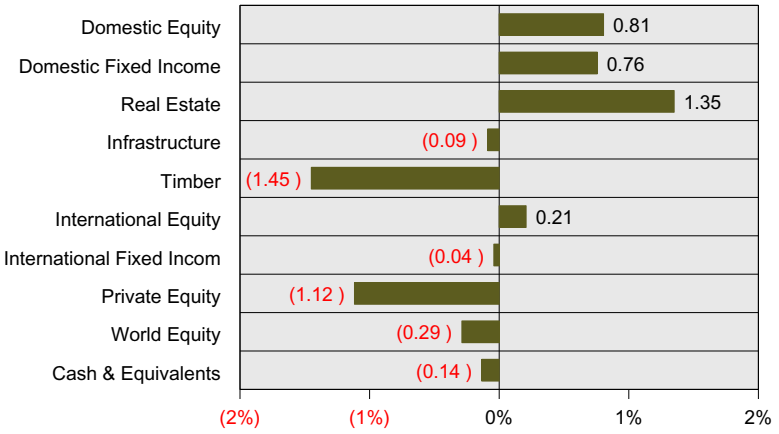
	Domestic Equity	Domestic Fixed Income	Cash & Equivalents	Real Estate	International Equity	Intl Fixed Income	Alternative	World Equity
10th Percentile	50.73	39.93	3.58	13.71	24.19	4.06	20.25	15.94
25th Percentile	44.61	34.04	1.83	10.74	21.29	0.00	12.84	0.00
Median	36.00	26.85	0.44	5.98	18.44	0.00	2.40	0.00
75th Percentile	29.00	20.25	0.00	0.00	14.31	0.00	0.00	0.00
90th Percentile	22.03	12.91	0.00	0.00	9.69	0.00	0.00	0.00
Fund ●	22.72	16.92	0.81	11.04	15.33	5.13	11.86	16.19
Target ▲	21.40	17.00	1.00	10.00	14.60	5.00	15.00	16.00
% Group Invested	97.44%	96.92%	70.26%	61.03%	89.74%	19.49%	44.62%	23.08%

* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 12.0% Barclays Aggregate Index, 11.8% MSCI EAFE, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB TFFR - Private Equity, 5.0% Barclays Global Agg ex-US, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 2.8% MSCI EM and 1.0% 3-month Treasury Bill.

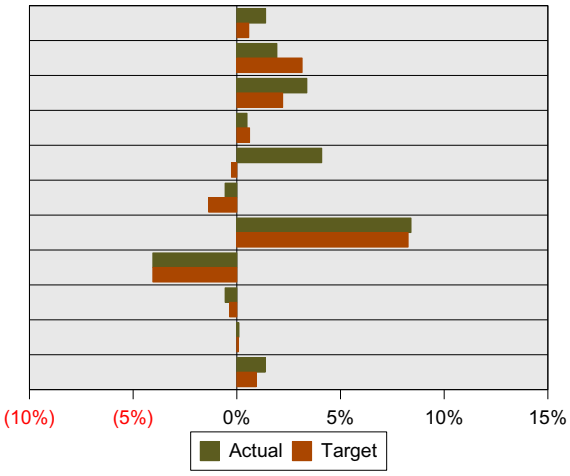
Quarterly Total Fund Relative Attribution - March 31, 2016

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

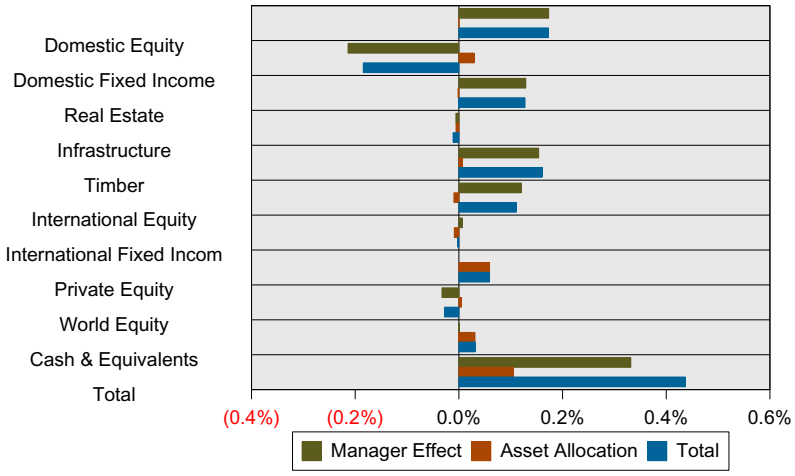
Asset Class Under or Overweighting



Actual vs Target Returns



Relative Attribution by Asset Class



Relative Attribution Effects for Quarter ended March 31, 2016

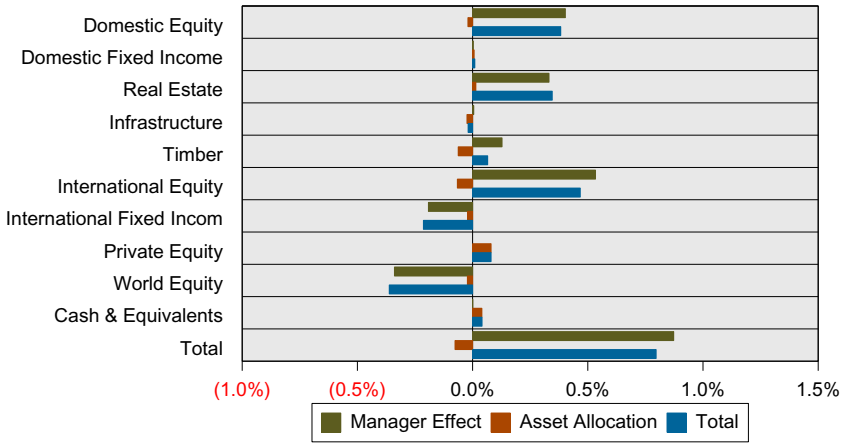
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	22%	21%	1.39%	0.58%	0.17%	(0.00%)	0.17%
Domestic Fixed Income	18%	17%	1.93%	3.15%	(0.21%)	0.03%	(0.18%)
Real Estate	11%	10%	3.38%	2.21%	0.13%	(0.00%)	0.13%
Infrastructure	5%	5%	0.49%	0.61%	(0.01%)	(0.01%)	(0.01%)
Timber	4%	5%	4.09%	(0.26%)	0.15%	0.01%	0.16%
International Equity	15%	15%	(0.57%)	(1.36%)	0.12%	(0.01%)	0.11%
International Fixed Incom	5%	5%	8.40%	8.26%	0.01%	(0.01%)	(0.00%)
Private Equity	4%	5%	(4.05%)	(4.05%)	0.00%	0.06%	0.06%
World Equity	16%	16%	(0.56%)	(0.35%)	(0.03%)	0.00%	(0.03%)
Cash & Equivalents	1%	1%	0.10%	0.07%	0.00%	0.03%	0.03%
Total			**1.37% =**	**0.93% +**	**0.33% +**	**0.11%**	**0.44%**

* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 12.0% Barclays Aggregate Index, 11.8% MSCI EAFE, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB TFFR - Private Equity, 5.0% Barclays Global Agg ex-US, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 2.8% MSCI EM and 1.0% 3-month Treasury Bill.

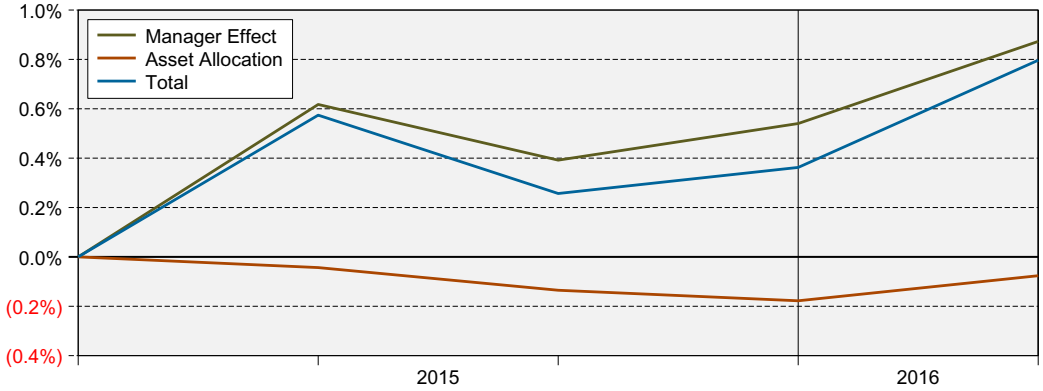
Cumulative Total Fund Relative Attribution - March 31, 2016

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

One Year Relative Attribution Effects



Cumulative Relative Attribution Effects



One Year Relative Attribution Effects

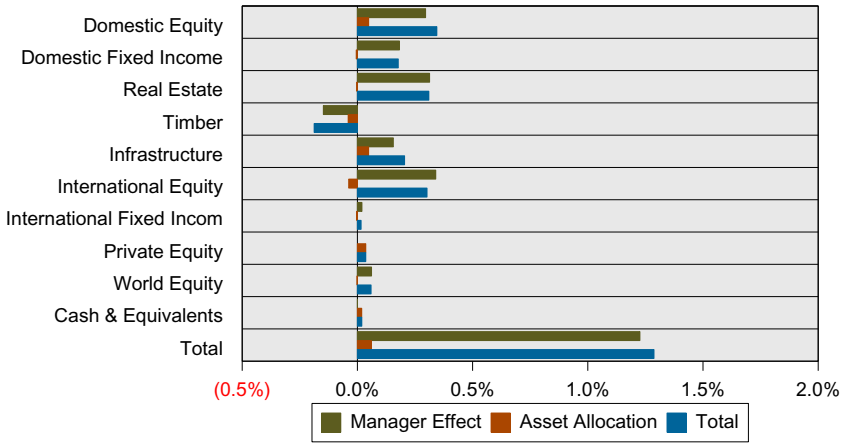
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	22%	21%	0.01%	(1.83%)	0.40%	(0.02%)	0.38%
Domestic Fixed Income	18%	17%	0.37%	0.33%	0.00%	0.01%	0.01%
Real Estate	11%	10%	15.42%	11.84%	0.33%	0.01%	0.35%
Infrastructure	5%	5%	0.55%	0.50%	0.01%	(0.02%)	(0.02%)
Timber	4%	5%	6.65%	2.90%	0.13%	(0.06%)	0.07%
International Equity	15%	15%	(5.51%)	(8.89%)	0.53%	(0.07%)	0.47%
International Fixed Incom	5%	5%	2.64%	6.69%	(0.19%)	(0.02%)	(0.21%)
Private Equity	4%	5%	(9.27%)	(9.27%)	0.00%	0.08%	0.08%
World Equity	16%	16%	(5.56%)	(3.45%)	(0.34%)	(0.02%)	(0.36%)
Cash & Equivalents	1%	1%	0.19%	0.12%	0.00%	0.04%	0.04%
Total			**(0.03%) =**	**(0.83%) +**	**0.87% +**	**(0.08%)**	**0.80%**

* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 12.0% Barclays Aggregate Index, 11.8% MSCI EAFE, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB TFFR - Private Equity, 5.0% Barclays Global Agg ex-US, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 2.8% MSCI EM and 1.0% 3-month Treasury Bill.

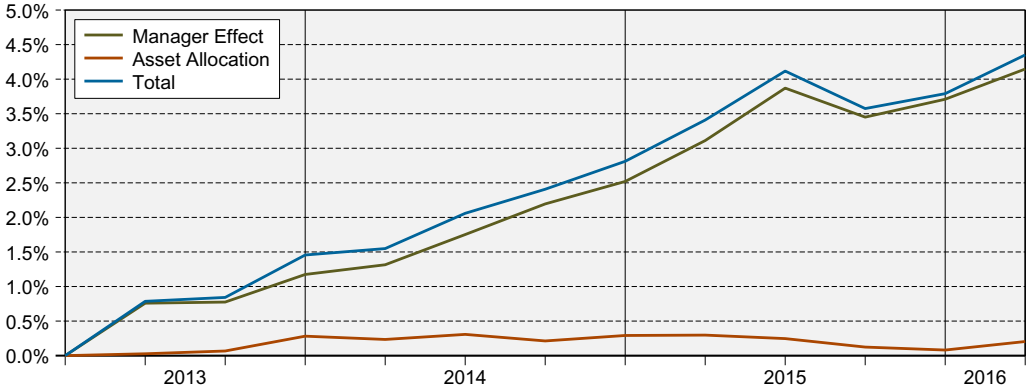
Cumulative Total Fund Relative Attribution - March 31, 2016

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

Three Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Three Year Annualized Relative Attribution Effects

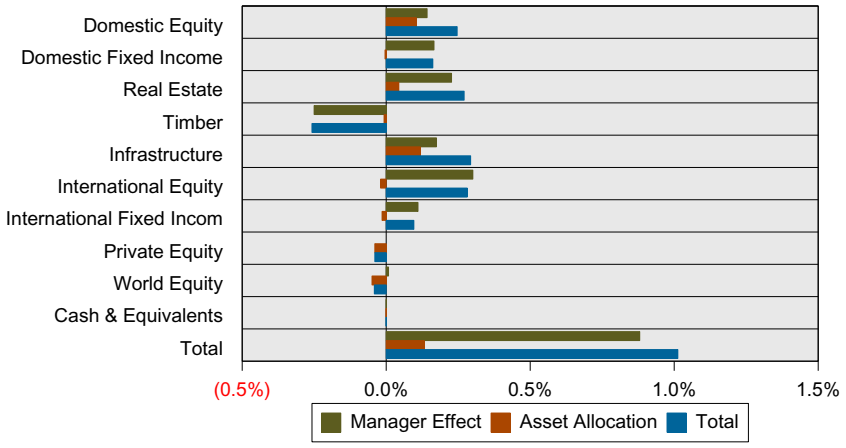
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	23%	21%	11.92%	10.52%	0.30%	0.05%	0.34%
Domestic Fixed Income	18%	17%	3.35%	2.34%	0.18%	(0.01%)	0.18%
Real Estate	10%	10%	15.30%	11.91%	0.31%	(0.00%)	0.31%
Timber	4%	5%	4.65%	7.71%	(0.15%)	(0.04%)	(0.19%)
Infrastructure	4%	5%	4.30%	0.42%	0.16%	0.05%	0.20%
International Equity	15%	15%	3.23%	0.99%	0.34%	(0.04%)	0.30%
International Fixed Incom	5%	5%	0.03%	(0.32%)	0.02%	(0.00%)	0.02%
Private Equity	5%	5%	(1.73%)	(1.73%)	0.00%	0.04%	0.04%
World Equity	16%	16%	7.21%	6.82%	0.06%	(0.00%)	0.06%
Cash & Equivalents	1%	1%	0.10%	0.07%	0.00%	0.02%	0.02%
Total			**6.78% =**	**5.50% +**	**1.23% +**	**0.06%**	**1.29%**

* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 12.0% Barclays Aggregate Index, 11.8% MSCI EAFE, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB TFFR - Private Equity, 5.0% Barclays Global Agg ex-US, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 2.8% MSCI EM and 1.0% 3-month Treasury Bill.

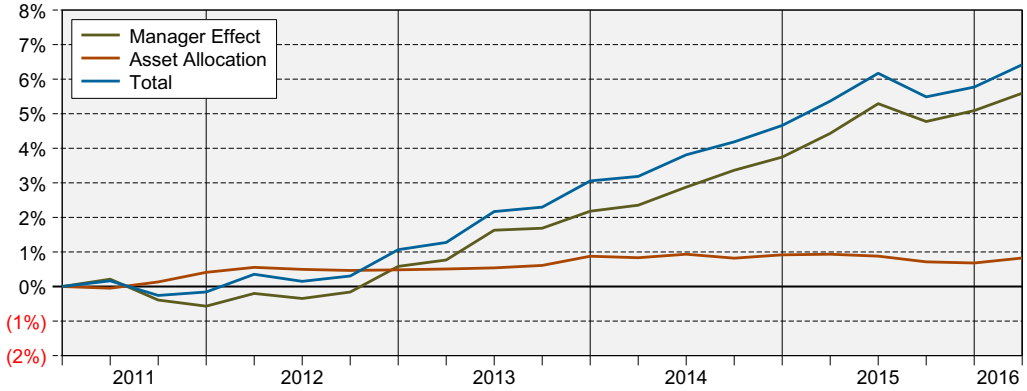
Cumulative Total Fund Relative Attribution - March 31, 2016

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

Five Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Five Year Annualized Relative Attribution Effects

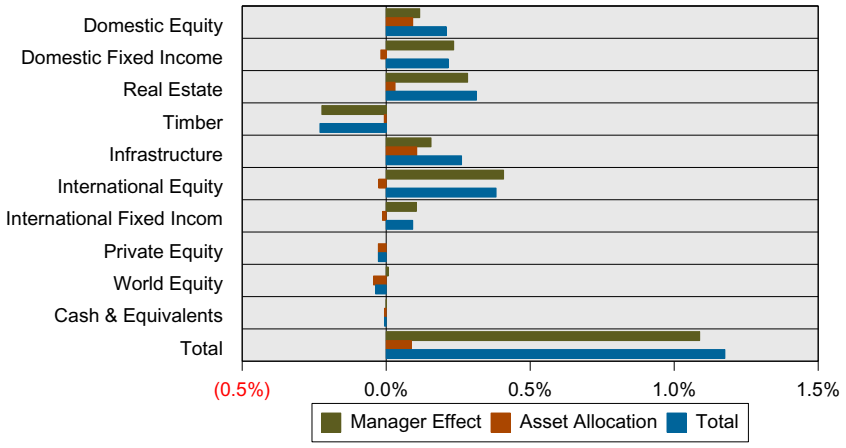
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	26%	25%	11.35%	10.52%	0.14%	0.10%	0.25%
Domestic Fixed Income	18%	17%	5.03%	3.99%	0.17%	(0.00%)	0.16%
Real Estate	10%	10%	14.35%	11.93%	0.23%	0.04%	0.27%
Timber	4%	5%	-	-	(0.25%)	(0.01%)	(0.26%)
Infrastructure	4%	5%	-	-	0.17%	0.12%	0.29%
International Equity	17%	17%	2.87%	1.08%	0.30%	(0.02%)	0.28%
International Fixed Incom	5%	5%	2.42%	0.39%	0.11%	(0.01%)	0.10%
Private Equity	5%	5%	0.86%	0.86%	0.00%	(0.04%)	(0.04%)
World Equity	11%	12%	-	-	0.01%	(0.05%)	(0.04%)
Cash & Equivalents	1%	1%	0.10%	0.08%	0.00%	(0.00%)	(0.00%)
Total			**6.61%** =	**5.60%** +	**0.88%** +	**0.13%**	**1.01%**

* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 12.0% Barclays Aggregate Index, 11.8% MSCI EAFE, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB TFFR - Private Equity, 5.0% Barclays Global Agg ex-US, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 2.8% MSCI EM and 1.0% 3-month Treasury Bill.

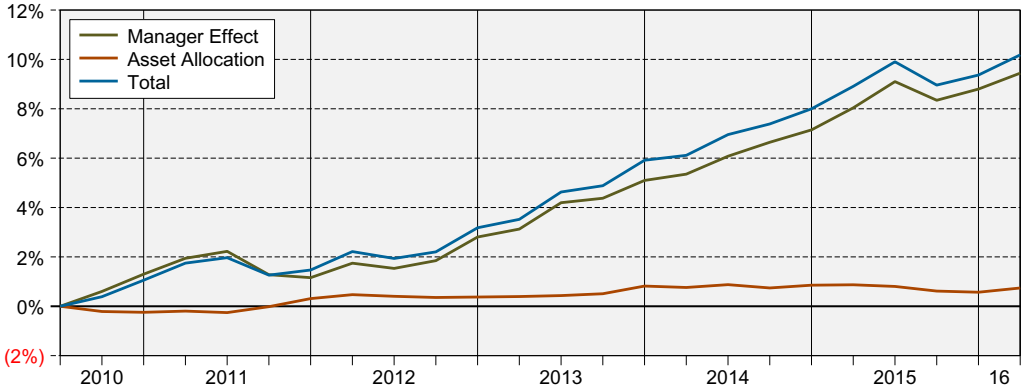
Cumulative Total Fund Relative Attribution - March 31, 2016

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

Five and Three-Quarter Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Five and Three-Quarter Year Annualized Relative Attribution Effects

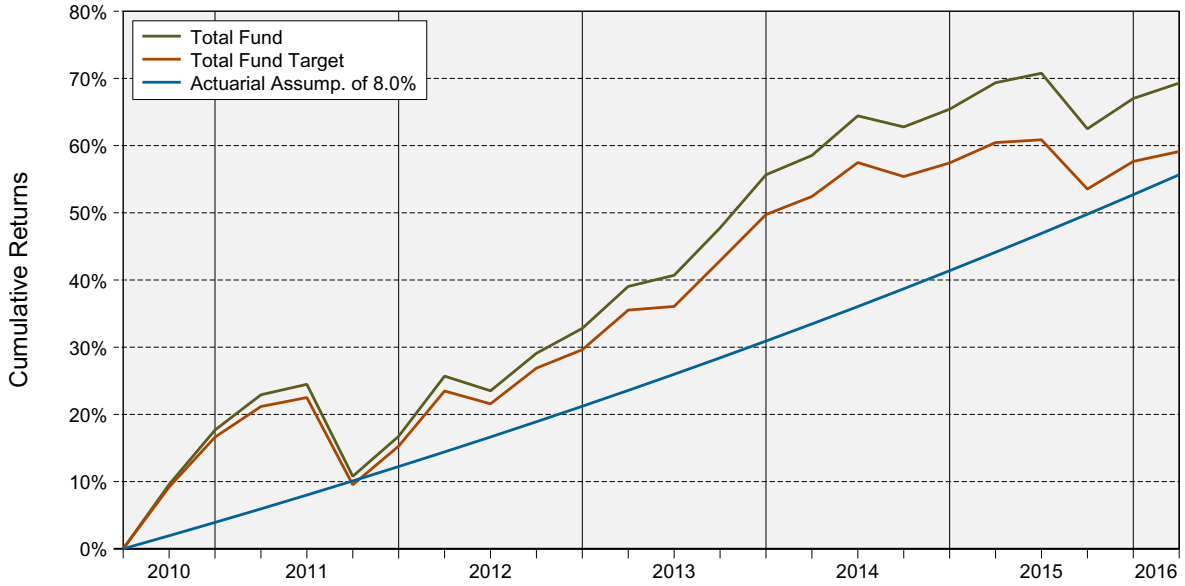
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	27%	27%	15.36%	14.63%	0.12%	0.09%	0.21%
Domestic Fixed Income	18%	17%	5.92%	4.54%	0.23%	(0.02%)	0.22%
Real Estate	10%	10%	15.59%	12.54%	0.28%	0.03%	0.31%
Timber	4%	4%	-	-	(0.22%)	(0.01%)	(0.23%)
Infrastructure	3%	4%	-	-	0.16%	0.11%	0.26%
International Equity	18%	17%	6.90%	4.71%	0.41%	(0.03%)	0.38%
International Fixed Incom	5%	5%	4.17%	2.23%	0.10%	(0.01%)	0.09%
Private Equity	5%	5%	2.88%	2.88%	0.00%	(0.03%)	(0.03%)
World Equity	10%	10%	-	-	0.01%	(0.04%)	(0.04%)
Cash & Equivalents	1%	1%	0.11%	0.09%	0.00%	(0.01%)	(0.01%)
Total			**9.59% =**	**8.41% +**	**1.09% +**	**0.09%**	**1.18%**

* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 12.0% Barclays Aggregate Index, 11.8% MSCI EAFE, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB TFFR - Private Equity, 5.0% Barclays Global Agg ex-US, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 2.8% MSCI EM and 1.0% 3-month Treasury Bill.

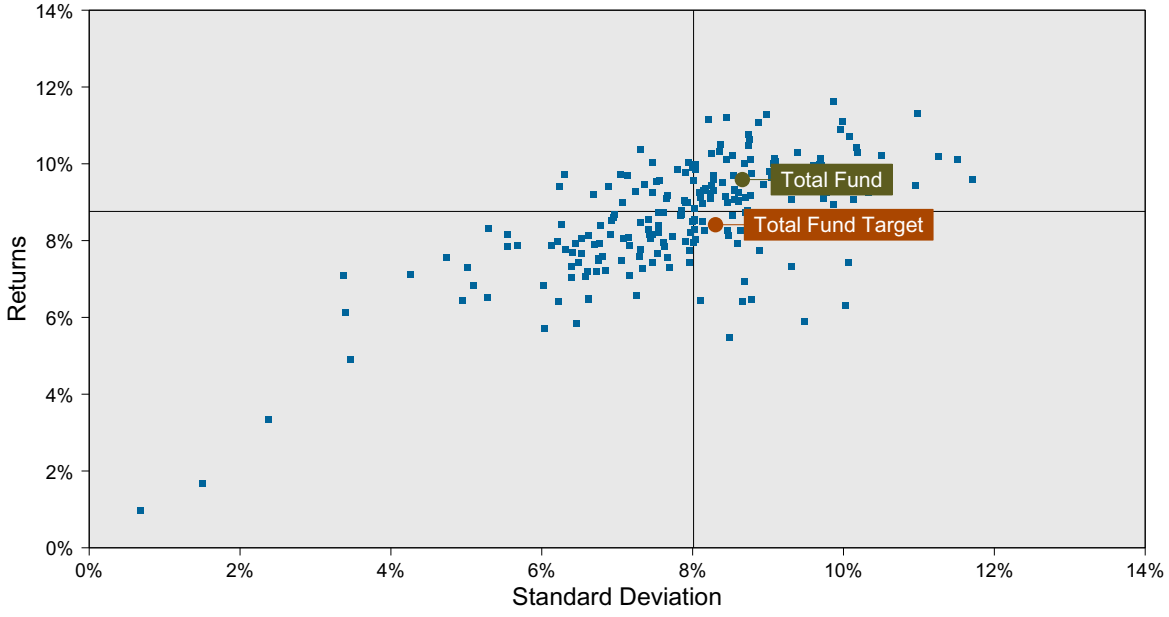
Cumulative Performance Relative to Target

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

Cumulative Returns Actual vs Target



Five and Three-Quarter Year Annualized Risk vs Return



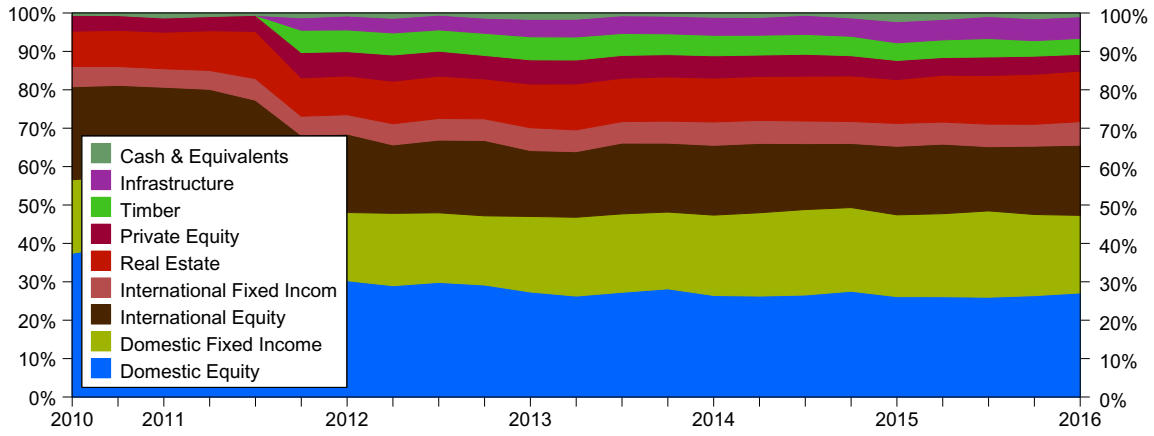
Squares represent membership of the Public Fund Sponsor Database

* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 12.0% Barclays Aggregate Index, 11.8% MSCI EAFE, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB TFFR - Private Equity, 5.0% Barclays Global Agg ex-US, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 2.8% MSCI EM and 1.0% 3-month Treasury Bill.

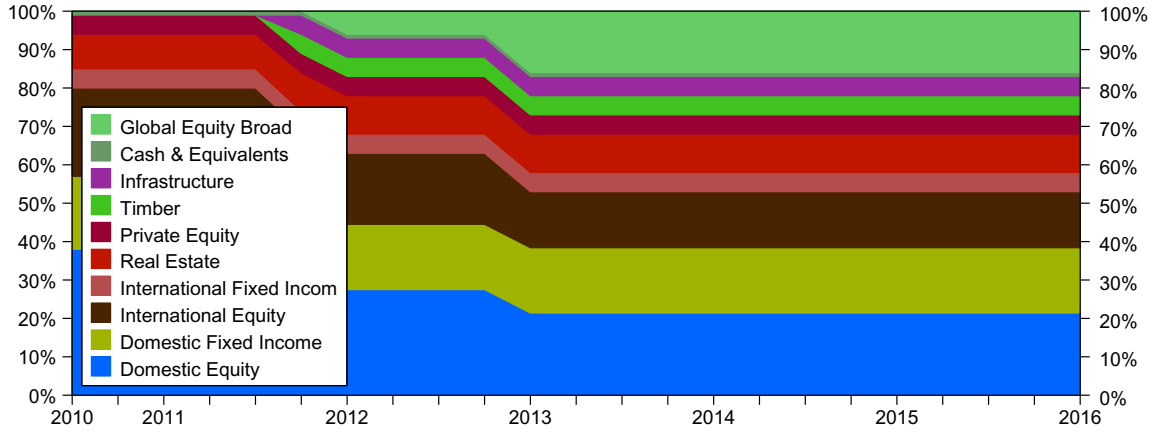
Actual vs Target Historical Asset Allocation

The Historical asset allocation for a fund is by far the largest factor explaining its performance. The charts below show the fund's historical actual asset allocation, the fund's historical target asset allocation, and the historical asset allocation of the average fund in the Public Fund Sponsor Database.

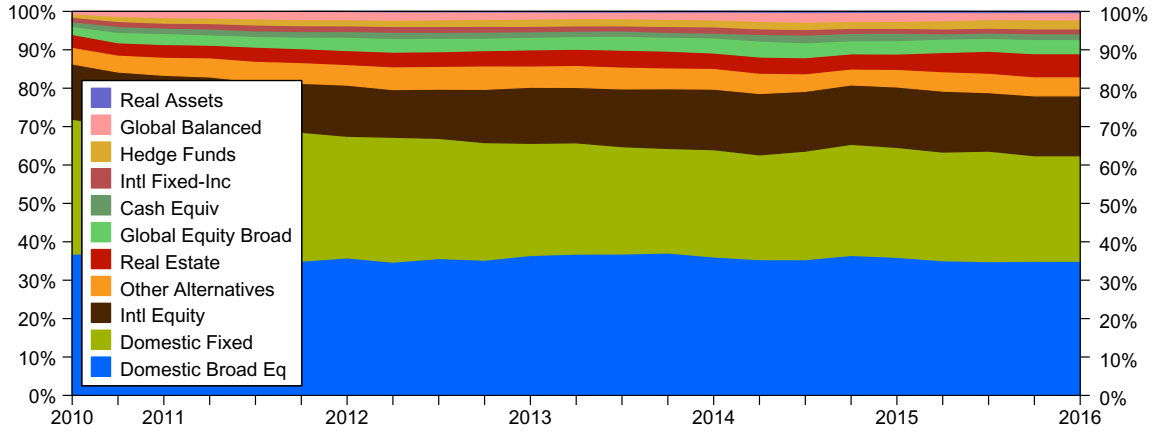
Actual Historical Asset Allocation



Target Historical Asset Allocation



Average Public Fund Sponsor Database Historical Asset Allocation

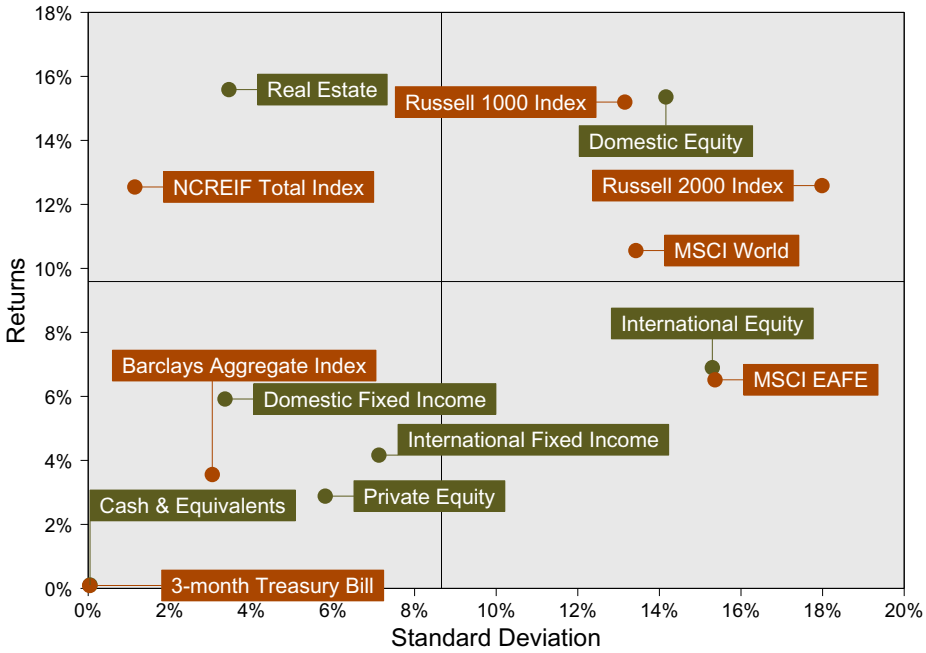


* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 12.0% Barclays Aggregate Index, 11.8% MSCI EAFE, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB TFFR - Private Equity, 5.0% Barclays Global Agg ex-US, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 2.8% MSCI EM and 1.0% 3-month Treasury Bill.

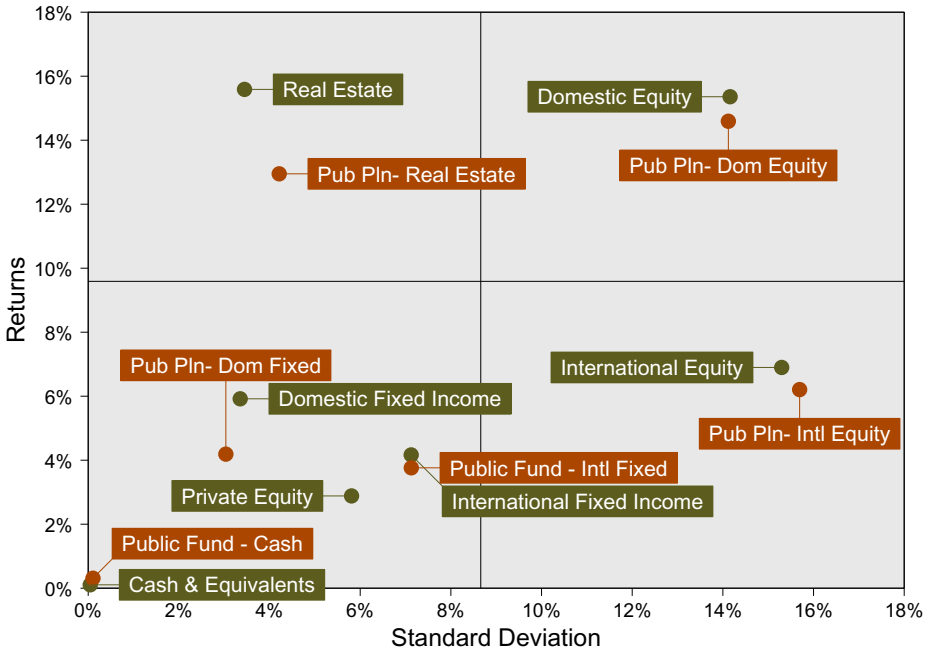
Asset Class Risk and Return

The charts below show the five and three-quarter year annualized risk and return for each asset class component of the Total Fund. The first graph contrasts these values with those of the appropriate index for each asset class. The second chart contrasts them with the risk and return of the median portfolio in each of the appropriate CAI comparative databases. In each case, the crosshairs on the chart represent the return and risk of the Total Fund.

Five and Three-Quarter Year Annualized Risk vs Return
Asset Classes vs Benchmark Indices



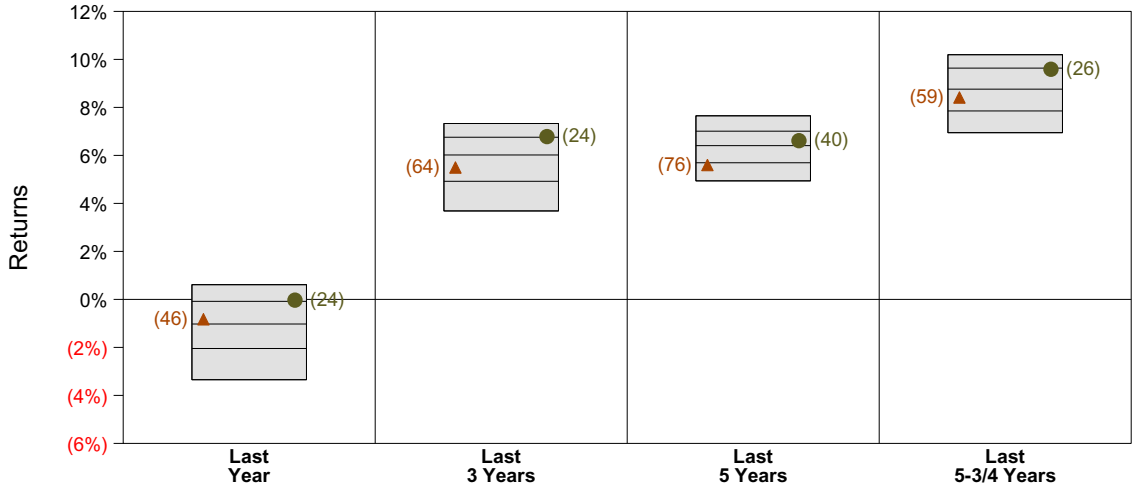
Five and Three-Quarter Year Annualized Risk vs Return
Asset Classes vs Asset Class Median



Total Fund Ranking

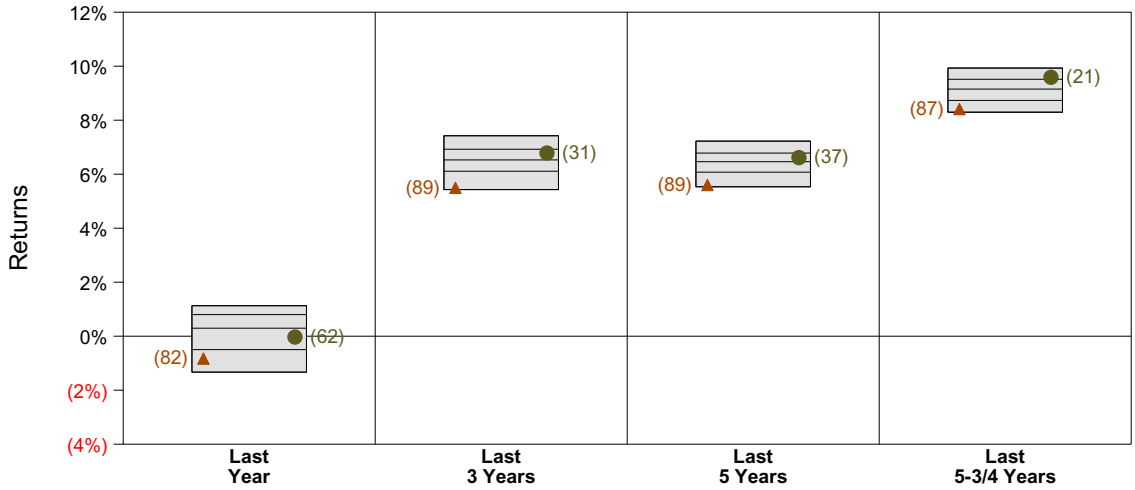
The first two charts show the ranking of the Total Fund's performance relative to that of the Public Fund Sponsor Database for periods ended March 31, 2016. The first chart is a standard unadjusted ranking. In the second chart each fund in the database is adjusted to have the same historical asset allocation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

Public Fund Sponsor Database



	Last Year	Last 3 Years	Last 5 Years	Last 5-3/4 Years
10th Percentile	0.61	7.33	7.65	10.20
25th Percentile	(0.08)	6.76	7.01	9.64
Median	(1.03)	6.02	6.41	8.76
75th Percentile	(2.05)	4.92	5.69	7.85
90th Percentile	(3.35)	3.69	4.94	6.95
Total Fund ●	(0.03)	6.78	6.61	9.59
Policy Target ▲	(0.83)	5.50	5.60	8.41

Asset Allocation Adjusted Ranking



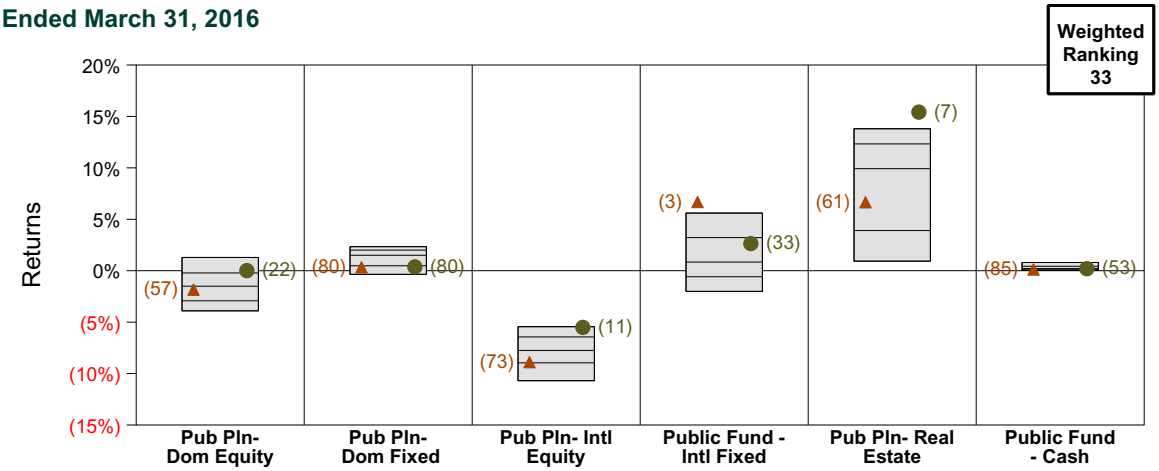
	Last Year	Last 3 Years	Last 5 Years	Last 5-3/4 Years
10th Percentile	1.13	7.42	7.23	9.93
25th Percentile	0.80	6.92	6.78	9.52
Median	0.30	6.53	6.46	9.15
75th Percentile	(0.50)	6.11	6.07	8.73
90th Percentile	(1.33)	5.43	5.53	8.30
Total Fund ●	(0.03)	6.78	6.61	9.59
Policy Target ▲	(0.83)	5.50	5.60	8.41

* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 12.0% Barclays Aggregate Index, 11.8% MSCI EAFE, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB TFFR - Private Equity, 5.0% Barclays Global Agg ex-US, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 2.8% MSCI EM and 1.0% 3-month Treasury Bill.

Asset Class Rankings

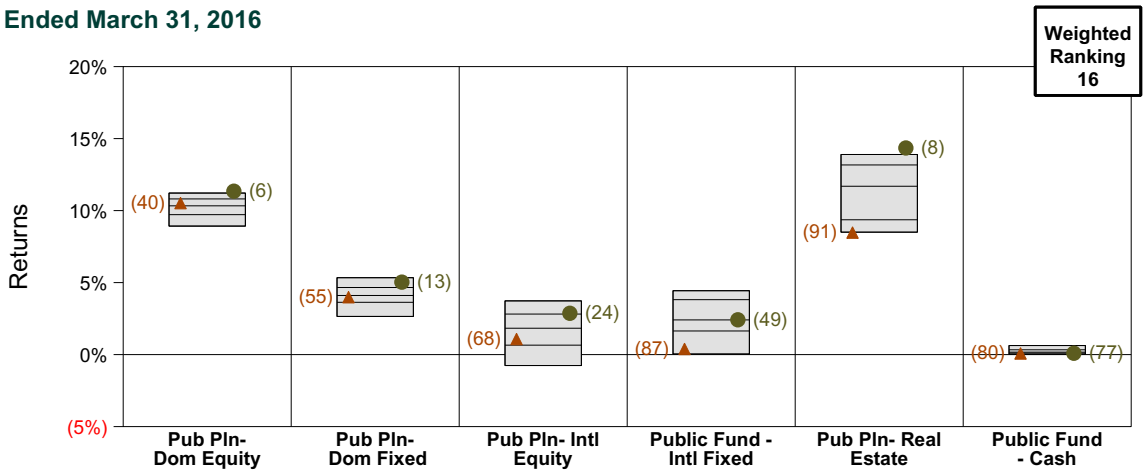
The charts below show the rankings of each asset class component of the Total Fund relative to appropriate comparative databases. In the upper right corner of each graph is the weighted average of the rankings across the different asset classes. The weights of the fund's actual asset allocation are used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

Total Asset Class Performance
One Year Ended March 31, 2016



	Pub Pln- Dom Equity	Pub Pln- Dom Fixed	Pub Pln- Intl Equity	Public Fund - Intl Fixed	Pub Pln- Real Estate	Public Fund - Cash
10th Percentile	1.29	2.34	(5.44)	5.60	13.80	0.80
25th Percentile	(0.22)	2.00	(6.44)	3.22	12.33	0.43
Median	(1.51)	1.50	(7.75)	0.84	9.92	0.21
75th Percentile	(2.92)	0.48	(8.96)	(0.59)	3.91	0.17
90th Percentile	(3.90)	(0.35)	(10.69)	(2.01)	0.93	0.06
Asset Class Composite ●	0.01	0.37	(5.51)	2.64	15.42	0.19
Composite Benchmark ▲	(1.83)	0.33	(8.89)	6.69	6.66	0.12

Total Asset Class Performance
Five Years Ended March 31, 2016



	Pub Pln- Dom Equity	Pub Pln- Dom Fixed	Pub Pln- Intl Equity	Public Fund - Intl Fixed	Pub Pln- Real Estate	Public Fund - Cash
10th Percentile	11.22	5.34	3.73	4.44	13.90	0.63
25th Percentile	10.81	4.66	2.82	3.81	13.17	0.33
Median	10.33	4.11	1.83	2.41	11.69	0.17
75th Percentile	9.72	3.63	0.66	1.64	9.36	0.11
90th Percentile	8.92	2.65	(0.76)	0.04	8.50	0.03
Asset Class Composite ●	11.35	5.03	2.87	2.42	14.35	0.10
Composite Benchmark ▲	10.52	3.99	1.08	0.39	8.47	0.08

* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 12.0% Barclays Aggregate Index, 11.8% MSCI EAFE, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB TFFR - Private Equity, 5.0% Barclays Global Agg ex-US, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 2.8% MSCI EM and 1.0% 3-month Treasury Bill.

Asset Class Allocation

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

Asset Class Allocation

	March 31, 2016				December 31, 2015	
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
GLOBAL EQUITY	**$1,190,832,950**	**57.88%**	**$27,187,691**	**$1,883,765**	**$1,161,761,495**	**57.05%**
Domestic Equity	**$467,358,240**	**22.72%**	**$8,431,554**	**$7,039,350**	**$451,887,336**	**22.19%**
Large Cap	364,073,168	17.70%	2,831,554	7,549,478	353,692,136	17.37%
Small Cap	103,285,072	5.02%	5,600,000	(510,128)	98,195,200	4.82%
International Equity	**$315,364,760**	**15.33%**	**$11,707,945**	**$(890,067)**	**$304,546,882**	**14.96%**
Developed Intl Equity	245,195,128	11.92%	6,962,945	(3,703,581)	241,935,764	11.88%
Emerging Markets	70,169,632	3.41%	4,745,000	2,813,513	62,611,119	3.07%
World Equity	**$333,045,631**	**16.19%**	**$9,552,328**	**$(1,020,925)**	**$324,514,228**	**15.94%**
Private Equity	**$75,064,319**	**3.65%**	**$(2,504,136)**	**$(3,244,592)**	**$80,813,048**	**3.97%**
GLOBAL FIXED INCOME	**$453,823,202**	**22.06%**	**$(20,251,988)**	**$14,873,172**	**$459,202,019**	**22.55%**
Fixed Income Comp	**$348,193,572**	**16.92%**	**$(20,163,721)**	**$6,686,904**	**$361,670,389**	**17.76%**
Investment Grade Fixed	239,715,936	11.65%	(19,982,783)	4,172,869	255,525,850	12.55%
Below Inv. Grade Fixed Income	108,477,636	5.27%	(180,938)	2,514,034	106,144,539	5.21%
International Fixed Income	**$105,629,631**	**5.13%**	**$(88,267)**	**$8,186,268**	**$97,531,630**	**4.79%**
GLOBAL REAL ASSETS	**$395,971,612**	**19.25%**	**$(4,724,230)**	**$10,917,559**	**$389,778,283**	**19.14%**
Real Estate	227,060,113	11.04%	(3,461,462)	7,620,544	222,901,030	10.95%
Timber	71,517,775	3.48%	(458,160)	2,816,883	69,159,052	3.40%
Infrastructure	97,393,725	4.73%	(804,608)	480,132	97,718,201	4.80%
Cash & Equivalents	**$16,767,088**	**0.81%**	**$(8,768,628)**	**$17,041**	**$25,518,674**	**1.25%**
Securities Lending Income	**$0**	**0.00%**	**$(38,242)**	**$38,242**	**-**	**-**
Total Fund	**$2,057,394,852**	**100.0%**	**$(6,595,398)**	**$27,729,779**	**$2,036,260,471**	**100.0%**

PLEASE REFER TO PAGES 36-38 FOR INVESTMENT MANAGER LEVEL ASSET ALLOCATION.

Investment Manager Returns

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

Returns for Periods Ended March 31, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 5-3/4 Years
Global Equity					
Gross	(0.02%)	(3.66%)	7.25%	-	-
Net	(0.07%)	(3.97%)	6.91%	-	-
Wtd Avg Global Equity Benchmark	(0.59%)	(4.75%)	5.93%	-	-
Domestic Equity					
Gross	1.39%	0.01%	11.92%	11.35%	15.36%
Net	1.37%	(0.12%)	11.72%	11.11%	15.10%
Wtd Avg Domestic Equity Benchmark	0.58%	(1.83%)	10.52%	10.52%	14.63%
Large Cap Equity					
Gross	2.07%	2.87%	13.30%	12.30%	15.98%
Net	2.04%	2.76%	13.12%	12.07%	15.71%
Benchmark(1)	1.17%	0.50%	11.52%	11.55%	15.19%
Small Cap Equity					
Gross	(1.20%)	(9.67%)	7.01%	8.21%	13.13%
Net	(1.20%)	(9.85%)	6.77%	7.96%	12.89%
Russell 2000 Index	(1.52%)	(9.76%)	6.84%	7.20%	12.59%
International Equity					
Gross	(0.57%)	(5.51%)	3.23%	2.87%	6.90%
Net	(0.62%)	(5.71%)	2.98%	2.56%	6.57%
Wtd Avg Intl Equity Benchmark	(1.36%)	(8.89%)	0.99%	1.08%	4.71%
Developed Intl Equity					
Gross	(1.75%)	(4.42%)	4.59%	3.61%	7.73%
Net	(1.82%)	(4.67%)	4.32%	3.30%	7.41%
Benchmark(2)	(3.01%)	(8.27%)	2.23%	2.29%	5.53%
Emerging Markets					
Gross	3.74%	(10.59%)	(2.96%)	(0.74%)	3.12%
Net	3.74%	(10.59%)	(3.13%)	(1.06%)	2.77%
Benchmark(3)	5.71%	(12.03%)	(4.50%)	(4.11%)	0.85%
World Equity					
Gross	(0.56%)	(5.56%)	7.21%	-	-
Net	(0.65%)	(6.30%)	6.46%	-	-
MSCI World Index	(0.35%)	(3.45%)	6.82%	6.51%	10.56%
Private Equity					
Net	(4.05%)	(9.28%)	(1.76%)	0.79%	2.79%

(1) S&P 500 Index through 12/31/2011 and the Russell 1000 Index thereafter.
(2) 50% Hedged EAFE through 3/31/2011 and MSCI EAFE thereafter.
(3) MSCI Emerging Mkts Idx (Gross) through 6/30/2011 and MSCI Emerging Mkts Idx Net thereafter.

PLEASE REFER TO PAGES 39-43 FOR INVESTMENT MANAGER LEVEL RETURNS.

Investment Manager Returns

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

Returns for Periods Ended March 31, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 5-3/4 Years
Global Fixed Income					
Gross	3.35%	0.92%	2.66%	-	-
Net	3.28%	0.66%	2.42%	-	-
Wtd Avg Global Fixed Inc. Benchmark	4.29%	1.76%	1.76%	-	-
Domestic Fixed Income					
Gross	1.93%	0.37%	3.35%	5.03%	5.92%
Net	1.87%	0.15%	3.14%	4.93%	5.79%
Wtd Avg Domestic FI Benchmark	3.15%	0.33%	2.34%	3.99%	4.54%
Inv. Grade Fixed Income					
Gross	1.68%	1.62%	3.42%	4.92%	5.16%
Net	1.62%	1.48%	3.31%	4.77%	4.98%
Barclays Aggregate Index	3.03%	1.96%	2.50%	3.78%	3.56%
Below Inv. Grade Fixed Income					
Gross	2.38%	(2.60%)	3.11%	6.13%	8.01%
Net	2.27%	(3.01%)	2.67%	5.69%	7.57%
Barclays HY Corp 2% Issue	3.35%	(3.66%)	1.86%	4.93%	6.73%
International Fixed Income					
Gross	8.40%	2.64%	0.03%	2.42%	4.17%
Net	8.30%	2.22%	(0.33%)	2.05%	3.80%
Wtd Avg Intl Fixed Income Benchmark	8.26%	6.69%	(0.32%)	0.39%	2.23%
Global Real Assets					
Gross	2.79%	9.79%	10.10%	-	-
Net	2.68%	9.35%	9.66%	-	-
Wtd Avg Global Real Assets Benchmark	1.19%	6.68%	7.93%	-	-
Real Estate					
Gross	3.38%	15.42%	15.30%	14.35%	15.59%
Net	3.25%	14.88%	14.75%	13.80%	15.01%
NCREIF Total Index	2.21%	11.84%	11.91%	11.93%	12.54%
Timber					
Net	4.09%	6.65%	4.65%	-	-
NCREIF Timberland Index	(0.26%)	2.90%	7.71%	6.63%	5.71%
Infrastructure					
Gross	0.49%	0.55%	4.30%	-	-
Net	0.35%	(0.01%)	3.70%	-	-
CPI-W	0.61%	0.50%	0.42%	1.08%	1.44%
Cash & Equivalents - Net	**0.10%**	**0.19%**	**0.10%**	**0.10%**	**0.11%**
3-month Treasury Bill	0.07%	0.12%	0.07%	0.08%	0.09%
Total Fund					
Gross	1.37%	(0.03%)	6.78%	6.61%	9.59%
Net	1.31%	(0.35%)	6.45%	6.27%	9.23%
Target*	0.93%	(0.83%)	5.50%	5.60%	8.41%

* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 12.0% Barclays Aggregate Index, 11.8% MSCI EAFE, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB TFFR - Private Equity, 5.0% Barclays Global Agg ex-US, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 2.8% MSCI EM and 1.0% 3-month Treasury Bill.

PLEASE REFER TO PAGES 39-43 FOR INVESTMENT MANAGER LEVEL RETURNS.

L.A. Capital
Period Ended March 31, 2016

Investment Philosophy

The LA Capital Structured portfolio is a large growth portfolio benchmarked to the Russell 1000 Growth Index. It is an active assignment meaning that it targets a 2% alpha and constrains its risk budget (tracking error) to 4% relative to the benchmark. LA Capital believes that investment results are driven by Investor Preferences and thus recognize that when preferences shift a different posture related to that factor is warranted.

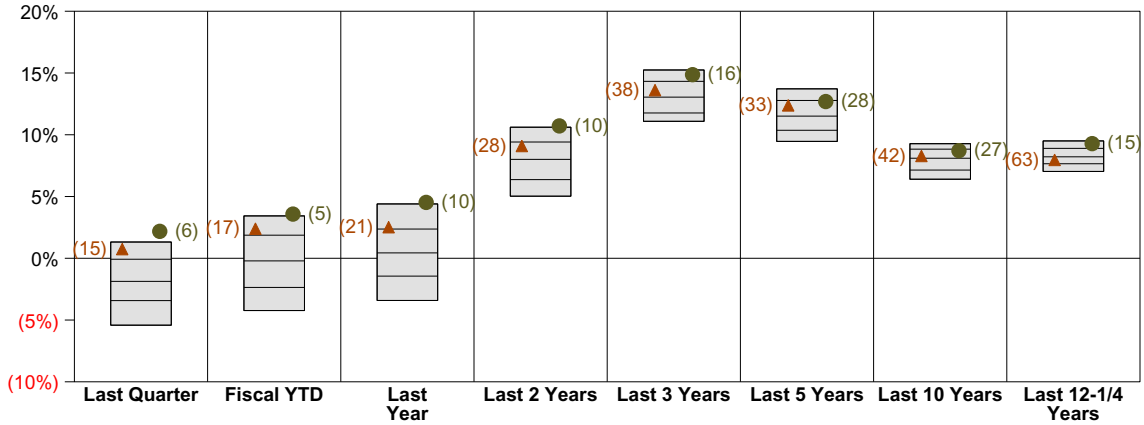
Quarterly Summary and Highlights

- L.A. Capital's portfolio posted a 2.18% return for the quarter placing it in the 6 percentile of the CAI Large Cap Growth Style group for the quarter and in the 10 percentile for the last year.
- L.A. Capital's portfolio outperformed the Russell 1000 Growth Index by 1.44% for the quarter and outperformed the Russell 1000 Growth Index for the year by 2.01%.

Quarterly Asset Growth

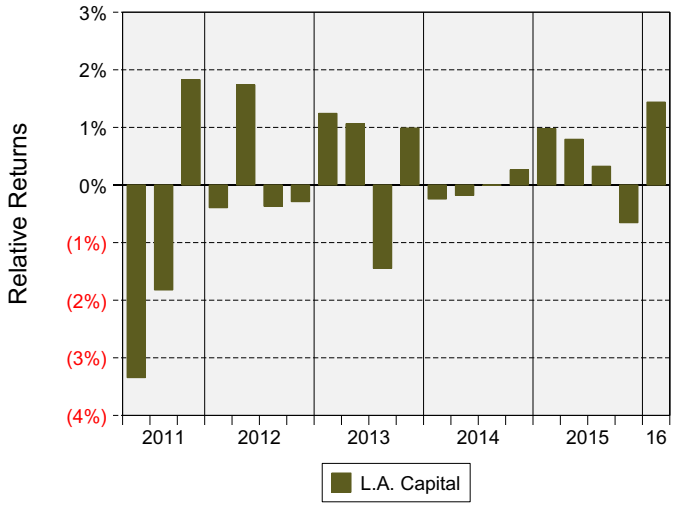
Beginning Market Value	$303,526,819
Net New Investment	$-164,825
Investment Gains/(Losses)	$6,604,690
Ending Market Value	$309,966,684

Performance vs CAI Large Cap Growth Style (Gross)

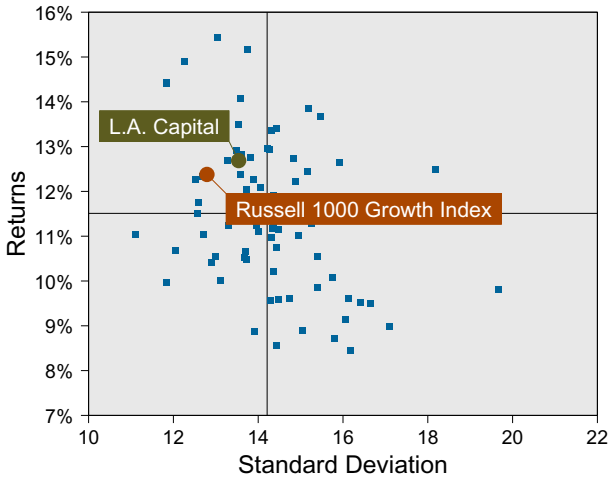


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 10 Years	Last 12-1/4 Years
10th Percentile	1.32	3.43	4.40	10.61	15.24	13.72	9.28	9.50
25th Percentile	(0.08)	1.87	2.37	9.41	14.32	12.78	8.83	8.90
Median	(1.87)	(0.21)	0.44	8.01	13.05	11.51	8.10	8.21
75th Percentile	(3.43)	(2.36)	(1.45)	6.37	11.76	10.36	7.14	7.65
90th Percentile	(5.42)	(4.23)	(3.42)	5.03	11.09	9.46	6.40	7.03
L.A. Capital ●	2.18	3.58	4.52	10.71	14.86	12.69	8.71	9.28
Russell 1000 Growth Index ▲	0.74	2.39	2.52	9.09	13.61	12.38	8.28	7.96

Relative Return vs Russell 1000 Growth Index



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



L.A. Capital Management Enhanced Index
Period Ended March 31, 2016

Investment Philosophy

The LA Capital Enhanced portfolio is a large core portfolio benchmarked to the Russell 1000 Index. Characterized as an enhanced index assignment, its objective is to track the benchmark with lower variability. The pension portfolio began in August of 2000 and the insurance portfolio was initiated in April of 2004. Since October of 2006 a small portion of each of the two core accounts was allocated into the Large Cap Alpha Fund with intent to add incremental alpha to the assignment given that the information ratio was expected to be higher.

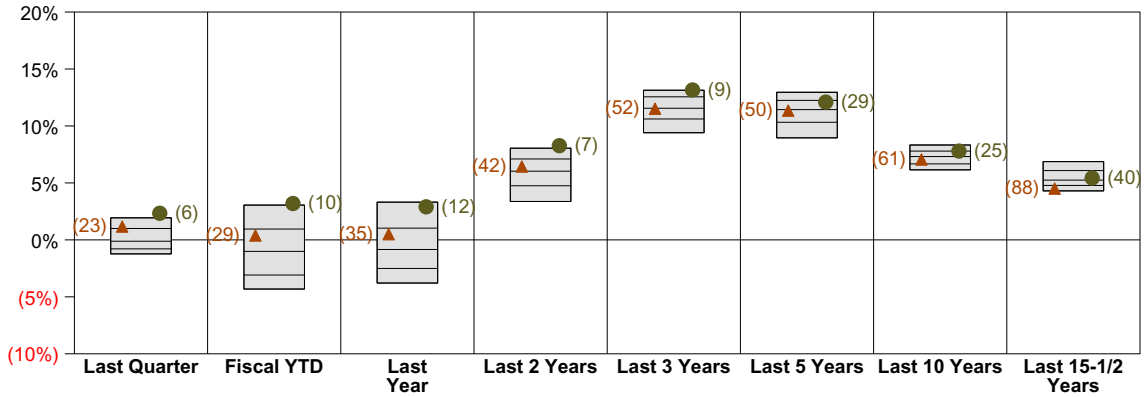
Quarterly Summary and Highlights

- LACM Enhanced Index's portfolio posted a 2.34% return for the quarter placing it in the 6 percentile of the CAI Large Cap Core Style group for the quarter and in the 12 percentile for the last year.
- LACM Enhanced Index's portfolio outperformed the Russell 1000 Index by 1.16% for the quarter and outperformed the Russell 1000 Index for the year by 2.40%.

Quarterly Asset Growth

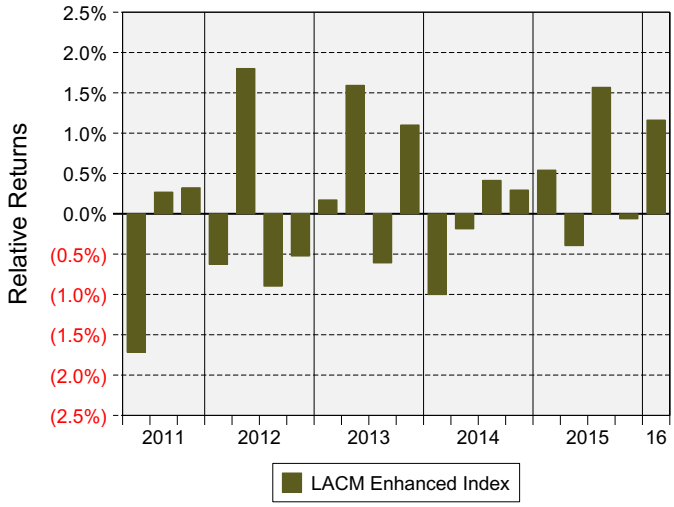
Beginning Market Value	$182,064,091
Net New Investment	$-55,699
Investment Gains/(Losses)	$4,248,677
Ending Market Value	$186,257,069

Performance vs CAI Large Cap Core Style (Gross)

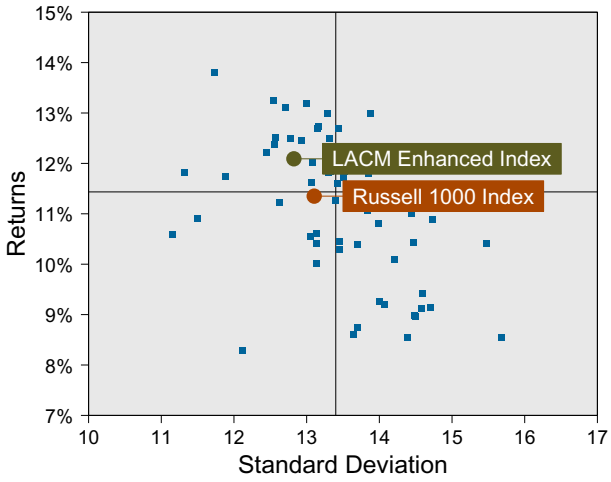


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 10 Years	Last 15-1/2 Years
10th Percentile	1.94	3.06	3.31	8.05	13.14	12.96	8.33	6.87
25th Percentile	1.00	0.95	1.03	7.10	12.56	12.25	7.79	6.08
Median	(0.12)	(1.01)	(0.84)	6.03	11.55	11.43	7.32	5.24
75th Percentile	(0.79)	(3.09)	(2.51)	4.75	10.61	10.32	6.67	4.78
90th Percentile	(1.23)	(4.32)	(3.79)	3.37	9.41	8.96	6.15	4.30
LACM Enhanced Index ●	2.34	3.19	2.90	8.27	13.16	12.09	7.79	5.43
Russell 1000 Index ▲	1.17	0.39	0.50	6.44	11.52	11.35	7.06	4.51

Relative Return vs Russell 1000 Index



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



Northern Trust AM Enh S&P500
Period Ended March 31, 2016

Investment Philosophy

Northern Trust AM Enhanced S&P 500 employs a quantitative investment approach, focusing on the stock selection process as the principal source of value added. The account invests primarily in a broadly diversified portfolio of equity securities that include securities convertible into equity securities (including common stock), warrants, rights and units or shares in trusts, exchange traded funds and investment companies. The Investment Manager intends to use futures and options to manage market risk associated with the account's investments.

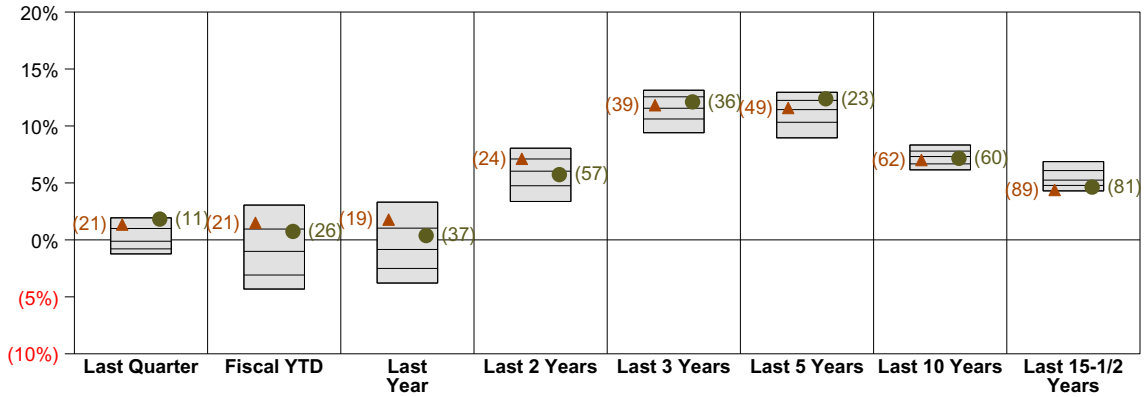
Quarterly Summary and Highlights

- Northern Trust AM Enh S&P500's portfolio posted a 1.82% return for the quarter placing it in the 11 percentile of the CAI Large Cap Core Style group for the quarter and in the 37 percentile for the last year.
- Northern Trust AM Enh S&P500's portfolio outperformed the S&P 500 Index by 0.48% for the quarter and underperformed the S&P 500 Index for the year by 1.41%.

Quarterly Asset Growth

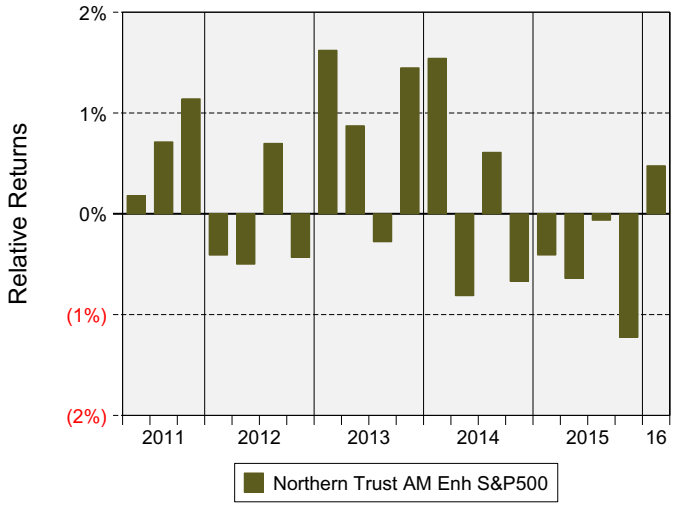
Beginning Market Value	$131,075,605
Net New Investment	$8,000,000
Investment Gains/(Losses)	$3,099,846
Ending Market Value	$142,175,451

Performance vs CAI Large Cap Core Style (Gross)

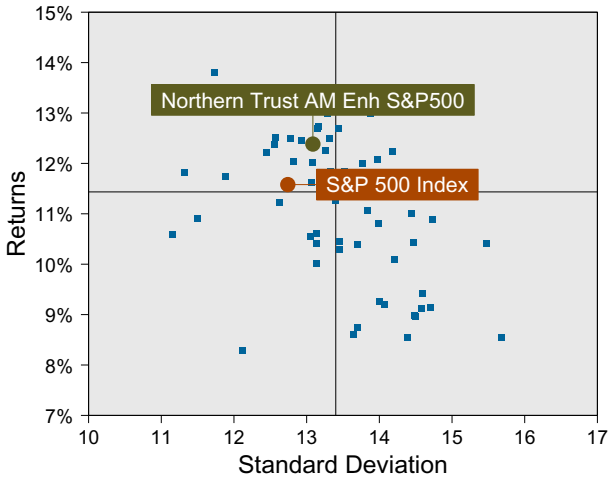


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 10 Years	Last 15-1/2 Years
10th Percentile	1.94	3.06	3.31	8.05	13.14	12.96	8.33	6.87
25th Percentile	1.00	0.95	1.03	7.10	12.56	12.25	7.79	6.08
Median	(0.12)	(1.01)	(0.84)	6.03	11.55	11.43	7.32	5.24
75th Percentile	(0.79)	(3.09)	(2.51)	4.75	10.61	10.32	6.67	4.78
90th Percentile	(1.23)	(4.32)	(3.79)	3.37	9.41	8.96	6.15	4.30
Northern Trust AM Enh S&P500 ●	1.82	0.74	0.38	5.73	12.11	12.38	7.15	4.63
S&P 500 Index ▲	1.35	1.50	1.78	7.12	11.82	11.58	7.01	4.38

Relative Return vs S&P 500 Index



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



Parametric Clifton Enh S&P
Period Ended March 31, 2016

Investment Philosophy

Parametric Clifton utilizes equity futures to gain benchmark exposure in constructing the portfolio it believes provides the greatest likelihood of outperforming the index. In this construction the underlying cash portfolio is invested in a liquid, high quality short duration fixed income portfolio. Over market cycles excess return generated by the short duration portfolio, when added to the performance of futures is expected to allow the strategy to achieve 0.50% to 1.00% of gross excess annual performance.

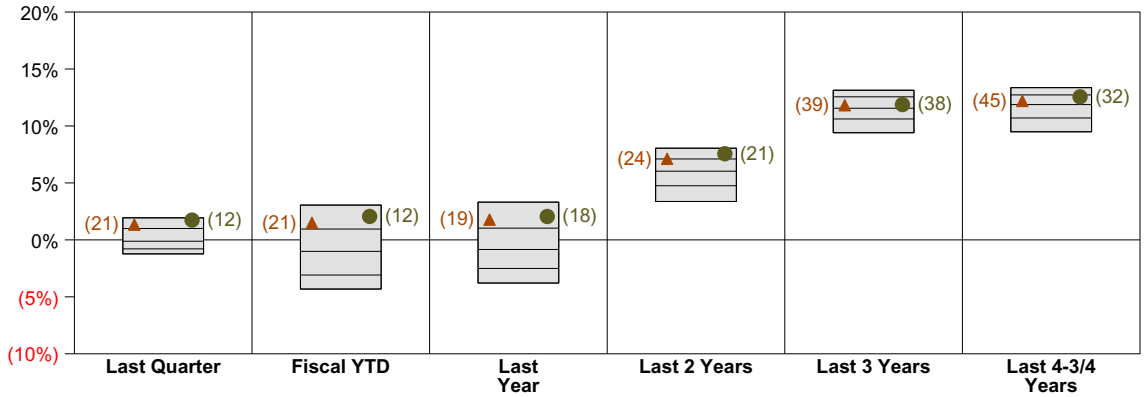
Quarterly Summary and Highlights

- Parametric Clifton Enh S&P's portfolio posted a 1.74% return for the quarter placing it in the 12 percentile of the CAI Large Cap Core Style group for the quarter and in the 18 percentile for the last year.
- Parametric Clifton Enh S&P's portfolio outperformed the S&P 500 Index by 0.39% for the quarter and outperformed the S&P 500 Index for the year by 0.27%.

Quarterly Asset Growth

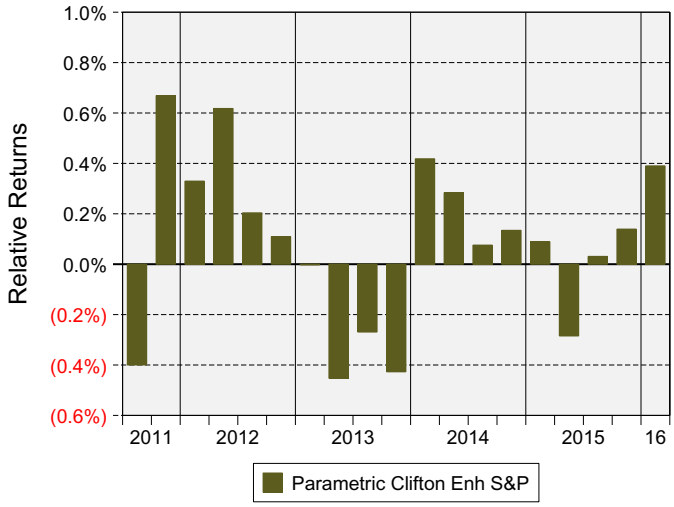
Beginning Market Value	$174,971,655
Net New Investment	$0
Investment Gains/(Losses)	$3,040,546
Ending Market Value	$178,012,201

Performance vs CAI Large Cap Core Style (Gross)

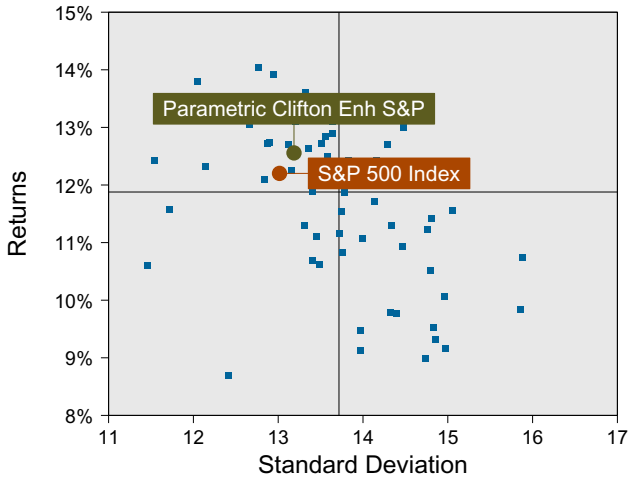


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 4-3/4 Years
10th Percentile	1.94	3.06	3.31	8.05	13.14	13.36
25th Percentile	1.00	0.95	1.03	7.10	12.56	12.72
Median	(0.12)	(1.01)	(0.84)	6.03	11.55	11.88
75th Percentile	(0.79)	(3.09)	(2.51)	4.75	10.61	10.70
90th Percentile	(1.23)	(4.32)	(3.79)	3.37	9.41	9.49
Parametric Clifton Enh S&P ●	1.74	2.06	2.05	7.56	11.88	12.56
S&P 500 Index ▲	1.35	1.50	1.78	7.12	11.82	12.20

Relative Return vs S&P 500 Index



CAI Large Cap Core Style (Gross) Annualized Four and Three-Quarter Year Risk vs Return



Parametric Clifton Enh SmCap
Period Ended March 31, 2016

Investment Philosophy

Parametric Clifton utilizes equity futures to gain benchmark exposure in constructing the portfolio it believes provides the greatest likelihood of outperforming the index. In this construction the underlying cash portfolio is invested in a liquid, high quality short duration fixed income portfolio. Over market cycles excess return generated by the short duration portfolio, when added to the performance of futures is expected to allow the strategy to achieve 0.50% to 1.00% of gross excess annual performance.

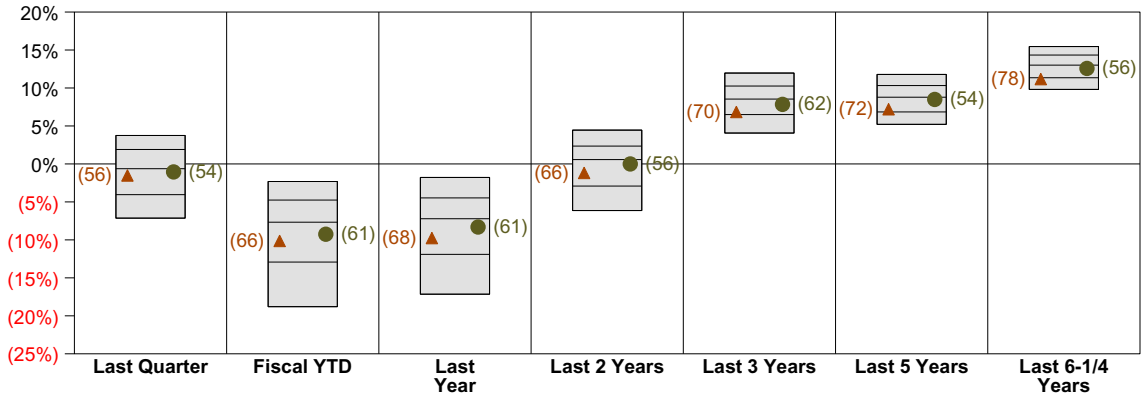
Quarterly Summary and Highlights

- Parametric Clifton Enh SmCap's portfolio posted a (1.05)% return for the quarter placing it in the 54 percentile of the CAI Small Capitalization Style group for the quarter and in the 61 percentile for the last year.
- Parametric Clifton Enh SmCap's portfolio outperformed the Russell 2000 Index by 0.46% for the quarter and outperformed the Russell 2000 Index for the year by 1.45%.

Quarterly Asset Growth

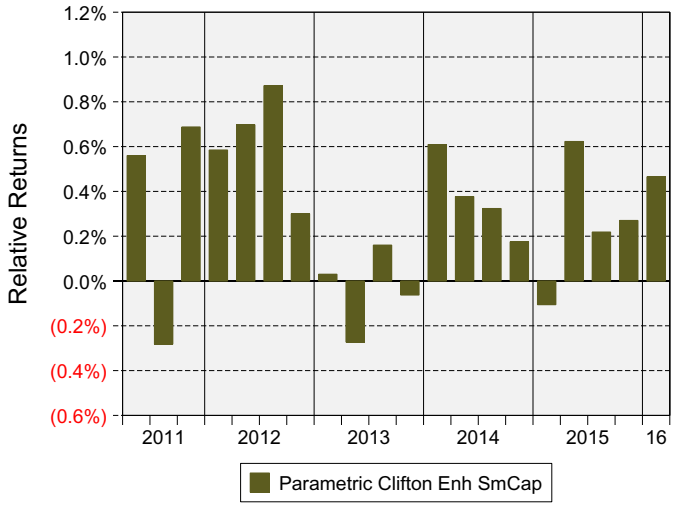
Beginning Market Value	$111,709,864
Net New Investment	$16,000,000
Investment Gains/(Losses)	$858,599
Ending Market Value	$128,568,464

Performance vs CAI Small Capitalization Style (Gross)

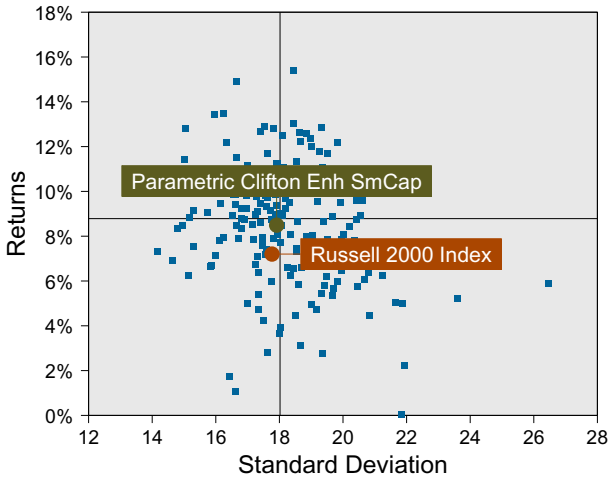


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 6-1/4 Years
10th Percentile	3.75	(2.31)	(1.78)	4.45	11.97	11.78	15.45
25th Percentile	1.90	(4.76)	(4.47)	2.35	10.26	10.32	14.34
Median	(0.63)	(7.67)	(7.22)	0.57	8.54	8.78	13.01
75th Percentile	(4.04)	(12.92)	(11.91)	(2.91)	6.50	6.85	11.35
90th Percentile	(7.14)	(18.80)	(17.15)	(6.14)	4.07	5.21	9.81
Parametric Clifton Enh SmCap ●	(1.05)	(9.25)	(8.31)	(0.00)	7.84	8.49	12.58
Russell 2000 Index ▲	(1.52)	(10.14)	(9.76)	(1.18)	6.84	7.20	11.17

Relative Return vs Russell 2000 Index



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



Capital Group
Period Ended March 31, 2016

Investment Philosophy

The Portfolio will invest primarily in equity or equity type securities of companies in developed countries excluding the U.S. These equity securities will be listed on a stock exchange or traded in another recognized market and include, but are not limited to, common and preferred stocks, securities convertible or exchangeable into common or preferred stock, warrants, rights and depository arrangements. ***MSCI EAFE through 12/31/1996, 50% Hedged EAFE through 03/31/2011 and MSCI EAFE again thereafter.**

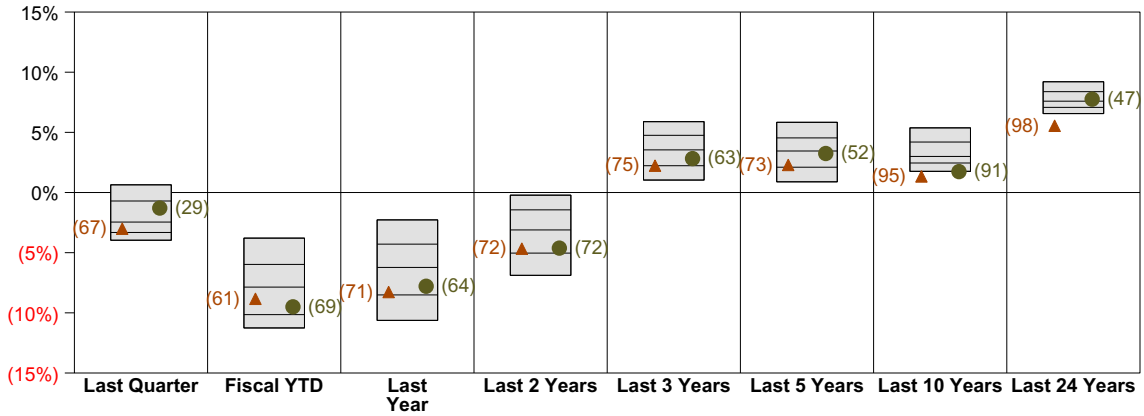
Quarterly Summary and Highlights

- Capital Group's portfolio posted a (1.29)% return for the quarter placing it in the 29 percentile of the CAI Non-U.S. Equity Style group for the quarter and in the 64 percentile for the last year.
- Capital Group's portfolio outperformed the Benchmark by 1.71% for the quarter and outperformed the Benchmark for the year by 0.48%.

Quarterly Asset Growth

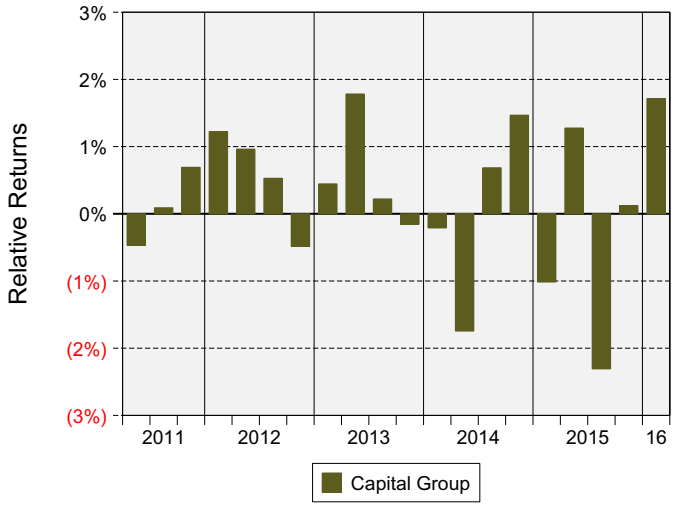
Beginning Market Value	$125,313,707
Net New Investment	$-132,456
Investment Gains/(Losses)	$-1,629,188
Ending Market Value	$123,552,063

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

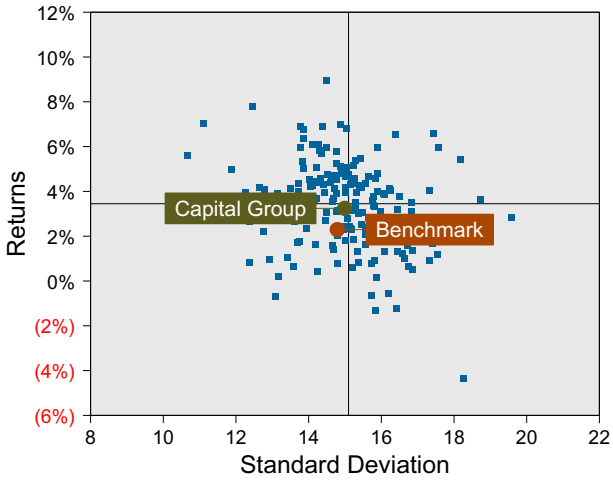


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 10 Years	Last 24 Years
10th Percentile	0.64	(3.79)	(2.27)	(0.22)	5.89	5.84	5.37	9.21
25th Percentile	(0.70)	(5.97)	(4.29)	(1.44)	4.75	4.54	4.20	8.38
Median	(2.46)	(7.86)	(6.23)	(3.11)	3.54	3.45	3.00	7.59
75th Percentile	(3.32)	(10.15)	(8.51)	(5.04)	2.23	2.10	2.45	7.08
90th Percentile	(3.97)	(11.26)	(10.63)	(6.88)	1.03	0.89	1.76	6.56
Capital Group ●	(1.29)	(9.50)	(7.79)	(4.62)	2.82	3.24	1.74	7.76
Benchmark ▲	(3.01)	(8.83)	(8.27)	(4.67)	2.23	2.29	1.34	5.55

Relative Return vs Benchmark



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



DFA International Small Cap Value Fund
Period Ended March 31, 2016

Investment Philosophy

The International Small Cap Value Portfolio invests in the stocks of small, non-US developed markets companies that Dimensional believes to be value stocks at the time of purchase. Specifically, it looks at companies that fall within the smallest 8-10% of each country's market capitalization, and who's shares have a high book value in relation to their market value (BtM). It does not invest in emerging markets.

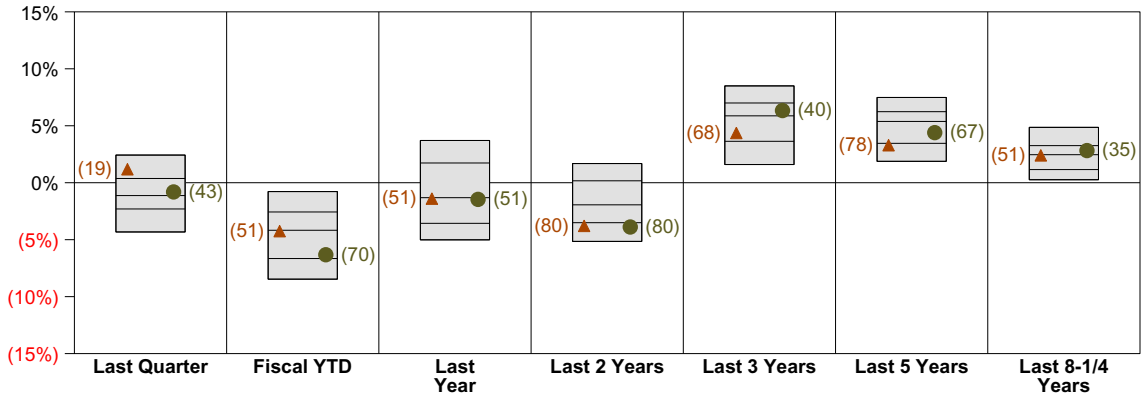
Quarterly Summary and Highlights

- DFA Intl Small Cap Value's portfolio posted a (0.81)% return for the quarter placing it in the 43 percentile of the Lipper: International Small Cap Obj group for the quarter and in the 51 percentile for the last year.
- DFA Intl Small Cap Value's portfolio underperformed the World ex US SC Value by 1.99% for the quarter and underperformed the World ex US SC Value for the year by 0.07%.

Quarterly Asset Growth

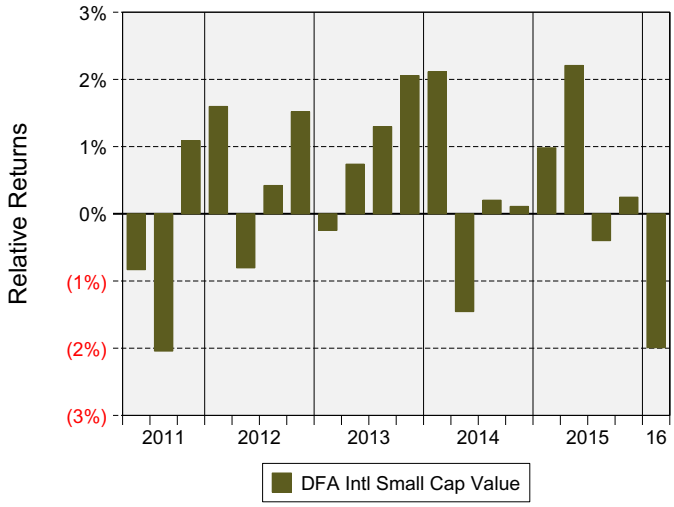
Beginning Market Value	$74,875,091
Net New Investment	$0
Investment Gains/(Losses)	$-606,203
Ending Market Value	$74,268,888

Performance vs Lipper: International Small Cap Obj (Net)

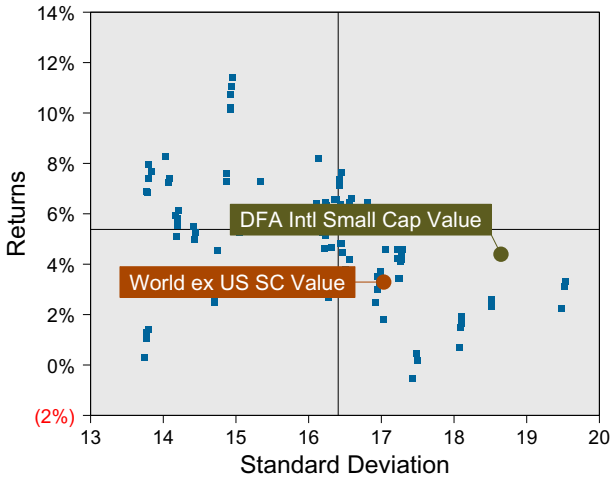


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 8-1/4 Years
10th Percentile	2.43	(0.78)	3.71	1.68	8.50	7.48	4.86
25th Percentile	0.37	(2.57)	1.73	0.17	7.00	6.24	3.26
Median	(1.13)	(4.17)	(1.31)	(1.94)	5.87	5.38	2.46
75th Percentile	(2.30)	(6.66)	(3.56)	(3.51)	3.63	3.46	1.16
90th Percentile	(4.32)	(8.47)	(5.01)	(5.15)	1.60	1.88	0.26
DFA Intl Small Cap Value ●	(0.81)	(6.32)	(1.46)	(3.89)	6.33	4.40	2.82
World ex US SC Value ▲	1.18	(4.25)	(1.39)	(3.79)	4.36	3.29	2.40

Relative Return vs World ex US SC Value



Lipper: International Small Cap Obj (Net) Annualized Five Year Risk vs Return



Northern Tr AM Wrld ex US
Period Ended March 31, 2016

Investment Philosophy

The Fund's objective is to provide investment results that approximate the overall performance of the MSCI World ex-US Equity Index.

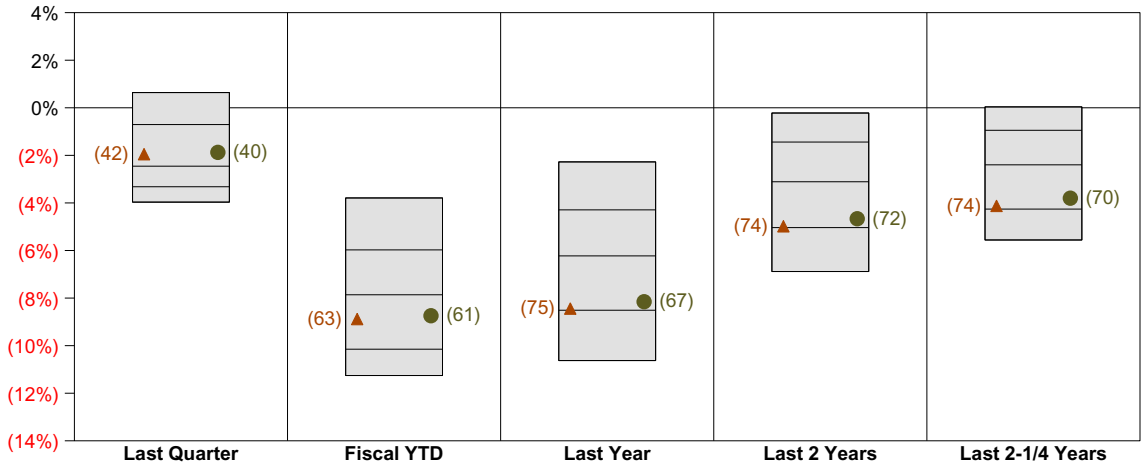
Quarterly Summary and Highlights

- Northern Tr AM Wrld ex US's portfolio posted a (1.87)% return for the quarter placing it in the 40 percentile of the CAI Non-U.S. Equity Style group for the quarter and in the 67 percentile for the last year.
- Northern Tr AM Wrld ex US's portfolio outperformed the MSCI World ex US by 0.08% for the quarter and outperformed the MSCI World ex US for the year by 0.29%.

Quarterly Asset Growth

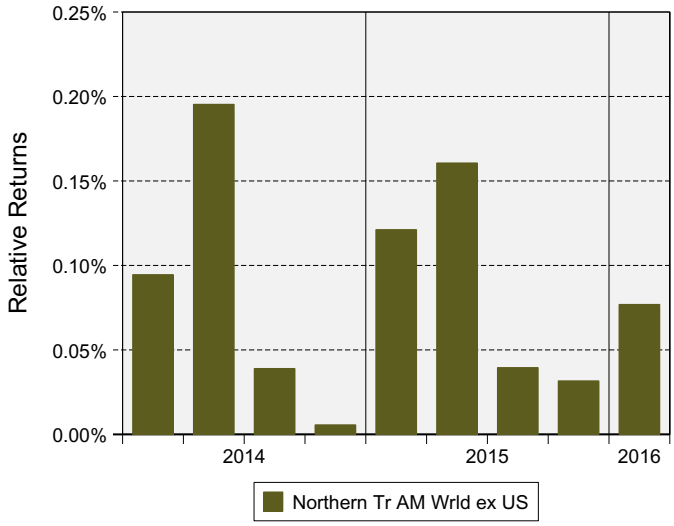
Beginning Market Value	$229,636,515
Net New Investment	$21,459,911
Investment Gains/(Losses)	$-2,888,130
Ending Market Value	$248,208,296

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

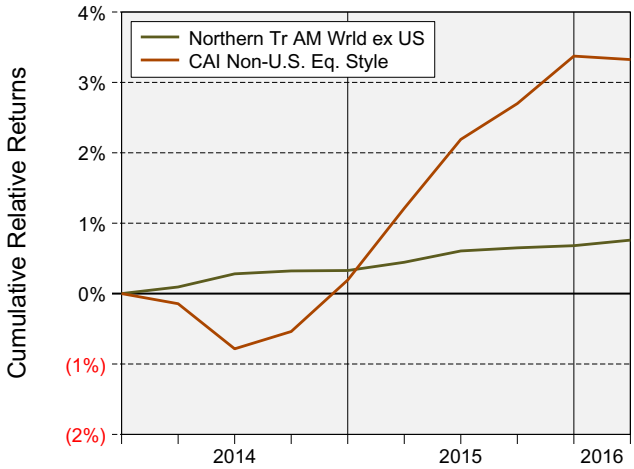


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 2-1/4 Years
10th Percentile	0.64	(3.79)	(2.27)	(0.22)	0.04
25th Percentile	(0.70)	(5.97)	(4.29)	(1.44)	(0.95)
Median	(2.46)	(7.86)	(6.23)	(3.11)	(2.40)
75th Percentile	(3.32)	(10.15)	(8.51)	(5.04)	(4.26)
90th Percentile	(3.97)	(11.26)	(10.63)	(6.88)	(5.56)
Northern Tr AM Wrld ex US ●	(1.87)	(8.74)	(8.15)	(4.66)	(3.80)
MSCI World ex US ▲	(1.95)	(8.88)	(8.44)	(4.98)	(4.12)

Relative Return vs MSCI World ex US



Cumulative Returns vs MSCI World ex US



Wellington Management
Period Ended March 31, 2016

Investment Philosophy

The International Small Cap Opportunities investment approach is bottom-up focused, and leverages the global research resources at Wellington Management. In implementing purchase decisions, consideration is given to the size, liquidity, and volatility of these prospects. Sell decisions are based on changing fundamentals or valuations, or on finding better opportunities elsewhere. The assets are not hedged.

Quarterly Summary and Highlights

- Wellington Management's portfolio posted a (3.01)% return for the quarter placing it in the 83 percentile of the CAI International Small Cap Style group for the quarter and in the 6 percentile for the last year.
- Wellington Management's portfolio underperformed the S&P BMI EPAC <$2 B by 3.09% for the quarter and outperformed the S&P BMI EPAC <$2 B for the year by 5.76%.

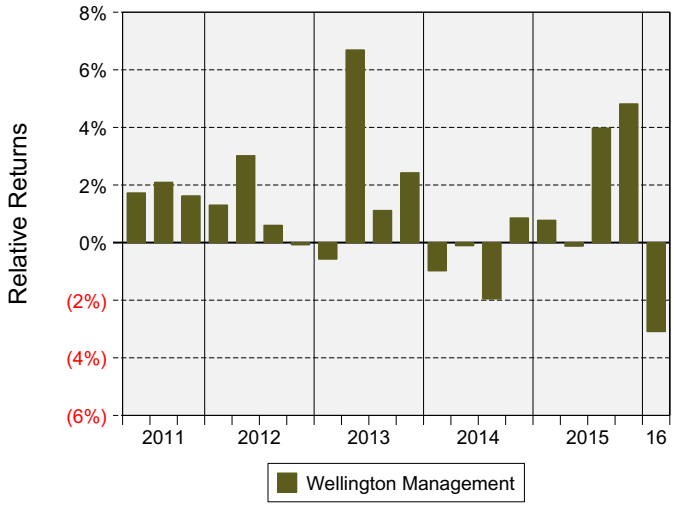
Quarterly Asset Growth

Beginning Market Value	$95,139,737
Net New Investment	$-193,511
Investment Gains/(Losses)	$-2,876,651
Ending Market Value	$92,069,575

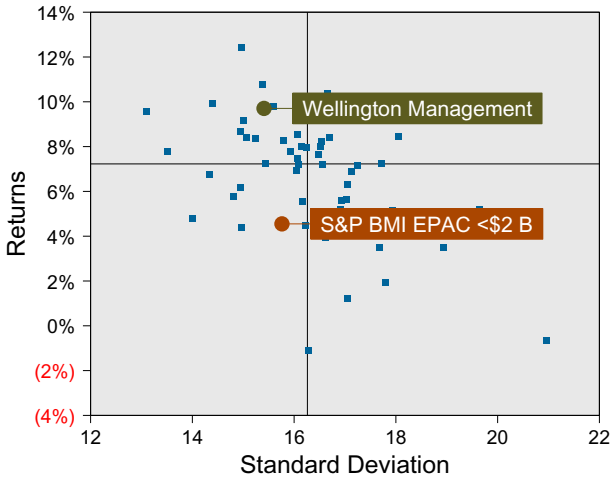
Performance vs CAI International Small Cap Style (Gross)

	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 10 Years	Last 14 Years
10th Percentile	1.36	1.41	6.77	3.68	11.75	9.86	7.82	13.27
25th Percentile	0.14	0.06	5.99	2.04	9.41	8.44	6.62	12.10
Median	(0.89)	(1.57)	2.36	0.81	7.94	7.23	5.28	11.19
75th Percentile	(2.19)	(3.98)	0.23	(0.81)	5.69	5.21	4.41	9.85
90th Percentile	(3.53)	(5.84)	(2.13)	(4.48)	3.53	3.48	1.47	8.16
Wellington Management ●	(3.01)	2.79	8.79	3.42	11.32	9.71	6.64	11.28
S&P BMI EPAC <$2 B ▲	0.08	(2.77)	3.03	0.94	6.29	4.55	3.25	9.49

Relative Return vs S&P BMI EPAC <$2 B



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



Axiom Emerging Markets
Period Ended March 31, 2016

Investment Philosophy

The Emerging Markets Equity strategy seeks to invest in emerging market securities issued by companies whose key business drivers are both improving and exceeding expectations, as determined by Axiom's stock selection techniques focused on fundamental company analysis. The strategy considers companies either (i) located in countries that are not included in the MSCI Developed Markets Index series or (ii) that derive a majority of their revenues or assets from a country or countries not included in the MSCI Developed Markets Index series, in each case at the time of investment. Although the Manager generally expects the strategy's investment portfolio to be geographically diverse, there are no prescribed limits on geographic distribution of the strategy's investments and the strategy has the authority to invest in securities traded in securities markets or any country in the world.

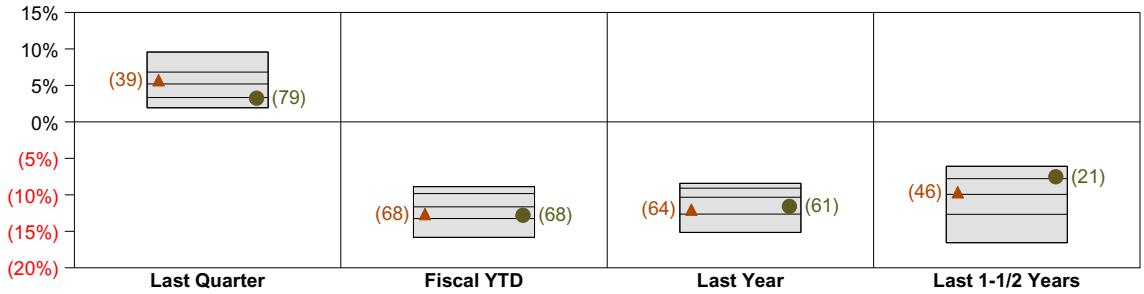
Quarterly Summary and Highlights

- Axiom Emerging Markets's portfolio posted a 3.25% return for the quarter placing it in the 79 percentile of the CAI MF - Emerging Markets Style group for the quarter and in the 61 percentile for the last year.
- Axiom Emerging Markets's portfolio underperformed the MSCI EM by 2.47% for the quarter and outperformed the MSCI EM for the year by 0.44%.

Quarterly Asset Growth

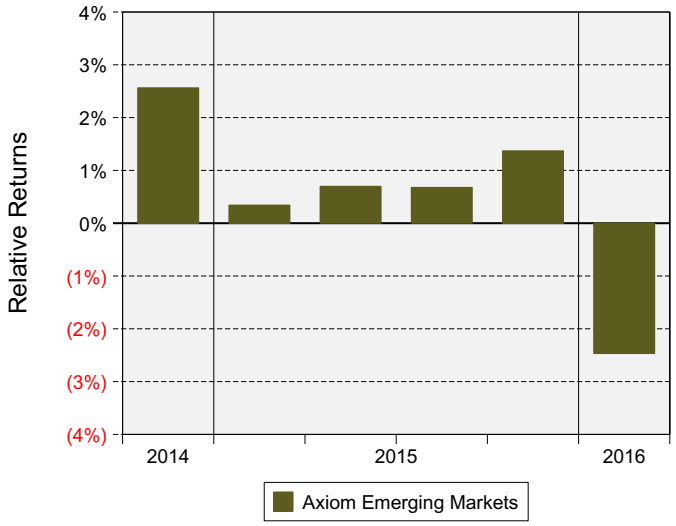
Beginning Market Value	$115,886,735
Net New Investment	$8,250,000
Investment Gains/(Losses)	$4,529,716
Ending Market Value	$128,666,451

Performance vs CAI MF - Emerging Markets Style (Net)

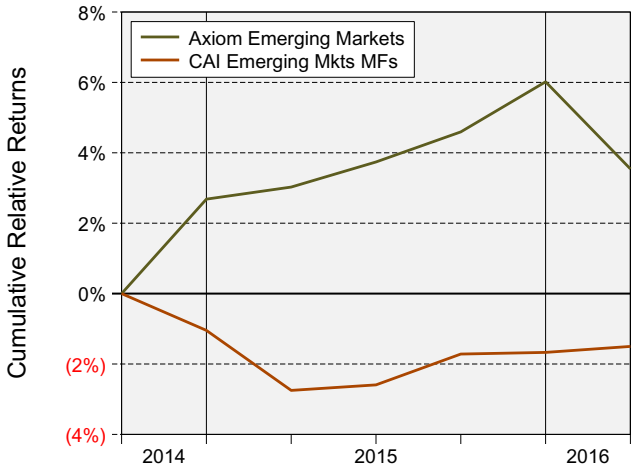


	Last Quarter	Fiscal YTD	Last Year	Last 1-1/2 Years
10th Percentile	9.57	(8.87)	(8.43)	(6.08)
25th Percentile	6.82	(9.82)	(9.08)	(7.78)
Median	5.20	(11.65)	(10.33)	(9.93)
75th Percentile	3.34	(13.25)	(12.64)	(12.67)
90th Percentile	1.93	(15.83)	(15.15)	(16.56)
Axiom Emerging Markets ●	3.25	(12.80)	(11.59)	(7.52)
MSCI EM ▲	5.71	(12.63)	(12.03)	(9.64)

Relative Return vs MSCI EM



Cumulative Returns vs MSCI EM



DFA Emerging Markets
Period Ended March 31, 2016

Investment Philosophy

The Emerging Markets Small Cap Portfolio invests in small cap emerging markets companies. Presently, this means investment in companies whose market capitalization is less than $2.3 billion at the time of purchase. Dimensional considers, among other things, information disseminated by the International Finance Corporation in determining and approving emerging market countries.

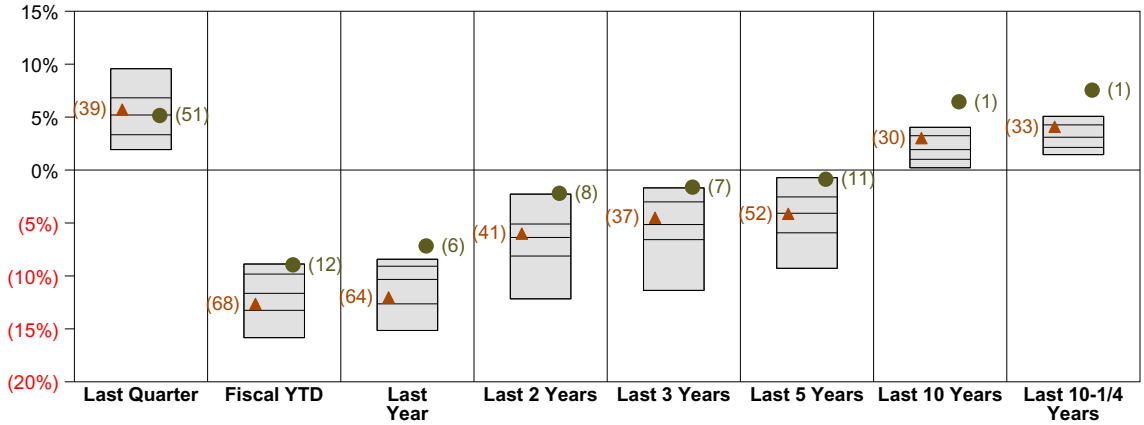
Quarterly Summary and Highlights

- DFA Emerging Markets's portfolio posted a 5.15% return for the quarter placing it in the 51 percentile of the CAI MF - Emerging Markets Style group for the quarter and in the 6 percentile for the last year.
- DFA Emerging Markets's portfolio underperformed the MSCI EM by 0.56% for the quarter and outperformed the MSCI EM for the year by 4.86%.

Quarterly Asset Growth

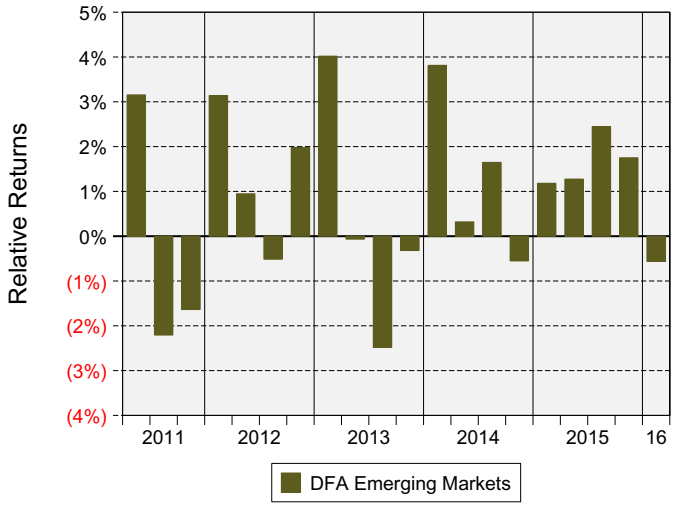
Beginning Market Value	$39,345,908
Net New Investment	$2,750,000
Investment Gains/(Losses)	$2,391,553
Ending Market Value	$44,487,461

Performance vs CAI MF - Emerging Markets Style (Net)

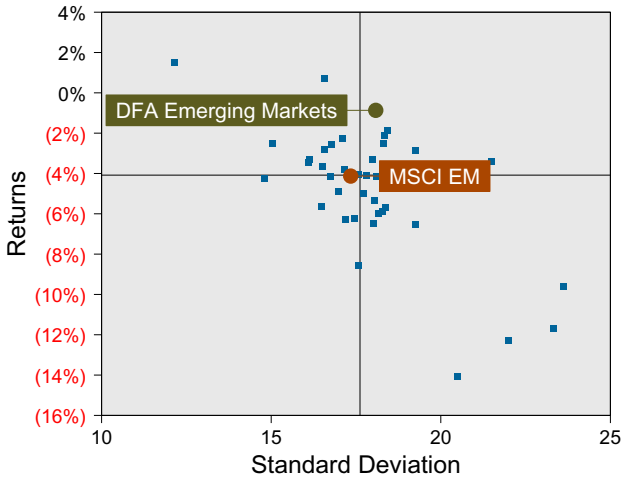


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 10 Years	Last 10-1/4 Years
10th Percentile	9.57	(8.87)	(8.43)	(2.27)	(1.68)	(0.72)	4.04	5.07
25th Percentile	6.82	(9.82)	(9.08)	(5.10)	(3.01)	(2.54)	3.24	4.26
Median	5.20	(11.65)	(10.33)	(6.37)	(5.15)	(4.08)	1.93	3.10
75th Percentile	3.34	(13.25)	(12.64)	(8.12)	(6.57)	(5.93)	1.01	2.14
90th Percentile	1.93	(15.83)	(15.15)	(12.16)	(11.37)	(9.28)	0.21	1.46
DFA Emerging Markets ●	5.15	(8.96)	(7.17)	(2.20)	(1.61)	(0.87)	6.45	7.55
MSCI EM ▲	5.71	(12.63)	(12.03)	(6.00)	(4.50)	(4.13)	3.02	4.09

Relative Return vs MSCI EM



CAI MF - Emerging Markets Style (Net) Annualized Five Year Risk vs Return



EPOCH Investment
Period Ended March 31, 2016

Investment Philosophy

Epoch seeks to produce superior risk adjusted returns by building portfolios of businesses with outstanding risk/reward profiles without running a high degree of capital risk. They analyze businesses in the same manner private investors would in looking to purchase the entire company. The strategy only invests in businesses that are understood and where they have confidence in the financial statements. They seek businesses that generate "free cash flow" and securities that have unrecognized potential yet possess a combination of above average yield, above average free cash flow growth, and/or below average valuation. Global Choice is a "best ideas" portfolio at Epoch with every stock held in other strategies managed by the firm. **The EPOCH Blended Benchmark consists of the S&P 500 Index through 12/31/2011 and the MSCI World Index thereafter.**

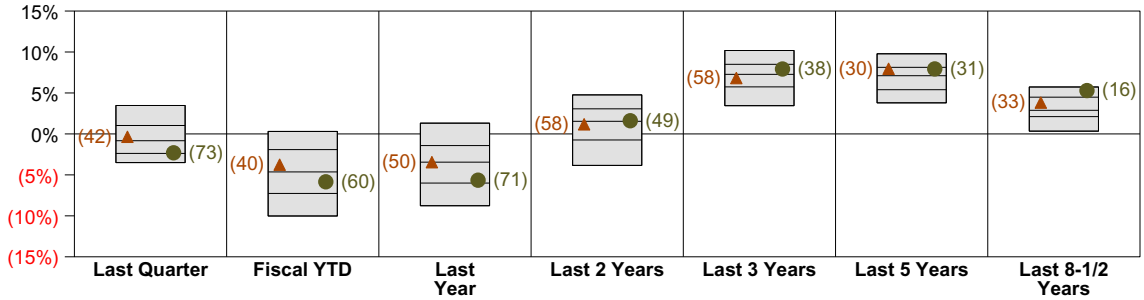
Quarterly Summary and Highlights

- EPOCH Investment's portfolio posted a (2.30)% return for the quarter placing it in the 73 percentile of the CAI Global Equity Broad Style group for the quarter and in the 71 percentile for the last year.
- EPOCH Investment's portfolio underperformed the EPOCH Blended Benchmark by 1.95% for the quarter and underperformed the EPOCH Blended Benchmark for the year by 2.20%.

Quarterly Asset Growth

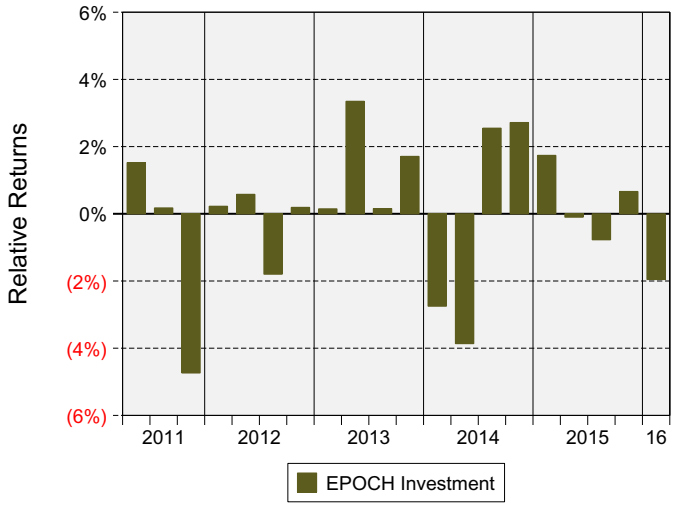
Beginning Market Value	$326,199,223
Net New Investment	$18,973,774
Investment Gains/(Losses)	$-5,802,730
Ending Market Value	$339,370,267

Performance vs CAI Global Equity Broad Style (Gross)

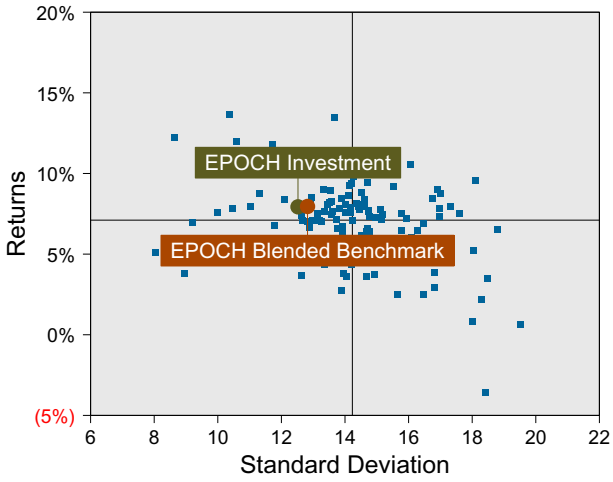


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 8-1/2 Years
10th Percentile	3.47	0.30	1.31	4.76	10.18	9.78	5.73
25th Percentile	1.03	(1.91)	(1.42)	3.06	8.49	8.13	4.48
Median	(0.83)	(4.64)	(3.45)	1.54	7.27	7.11	2.88
75th Percentile	(2.38)	(7.27)	(6.00)	(0.74)	5.74	5.40	2.11
90th Percentile	(3.50)	(10.02)	(8.77)	(3.84)	3.45	3.79	0.34
EPOCH Investment ●	(2.30)	(5.85)	(5.65)	1.61	7.92	7.93	5.29
EPOCH Blended Benchmark ▲	(0.35)	(3.75)	(3.45)	1.18	6.82	7.95	3.83

Relative Returns vs EPOCH Blended Benchmark



CAI Global Equity Broad Style (Gross) Annualized Five Year Risk vs Return



LSV Asset Management
Period Ended March 31, 2016

Investment Philosophy

The Global Value (ACWI) Equity strategy is managed using quantitative techniques to select individual securities in a risk-controlled, bottom-up approach. Value factors and security selection dominate sector/industry factors as explanators of performance.

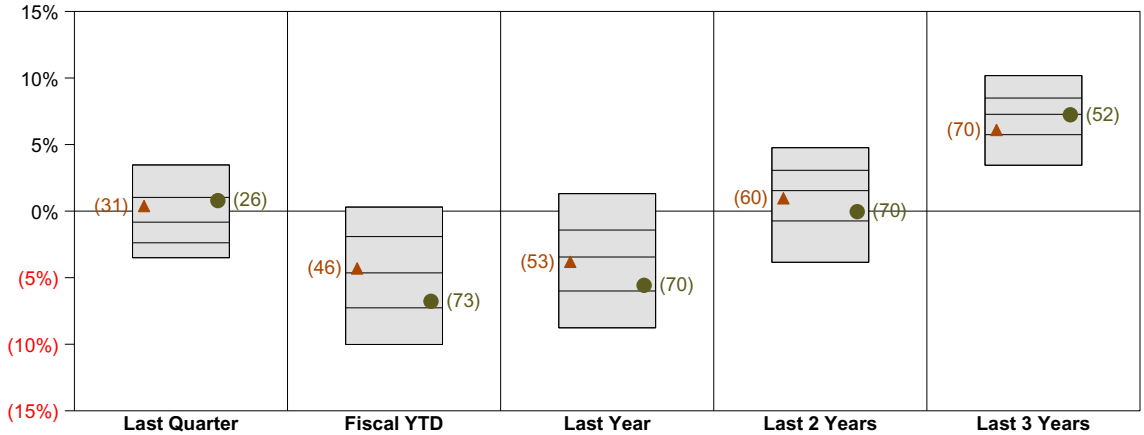
Quarterly Summary and Highlights

- LSV Asset Management's portfolio posted a 0.79% return for the quarter placing it in the 26 percentile of the CAI Global Equity Broad Style group for the quarter and in the 70 percentile for the last year.
- LSV Asset Management's portfolio outperformed the MSCI ACWI Gross by 0.40% for the quarter and underperformed the MSCI ACWI Gross for the year by 1.77%.

Quarterly Asset Growth

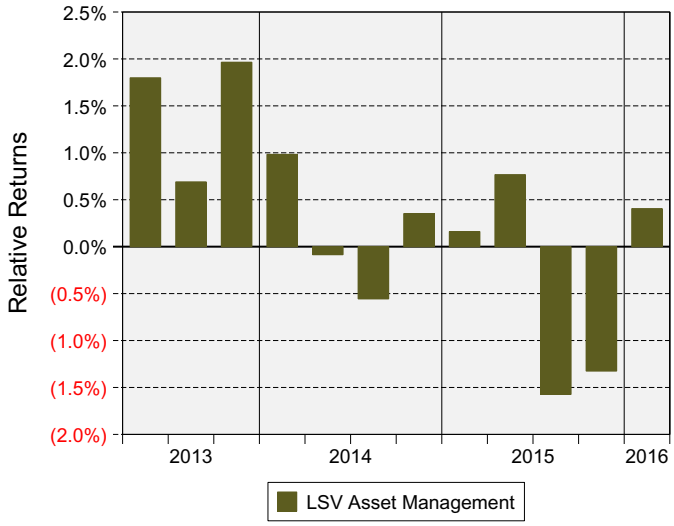
Beginning Market Value	$408,784,341
Net New Investment	$7,396,599
Investment Gains/(Losses)	$3,776,606
Ending Market Value	$419,957,546

Performance vs CAI Global Equity Broad Style (Gross)

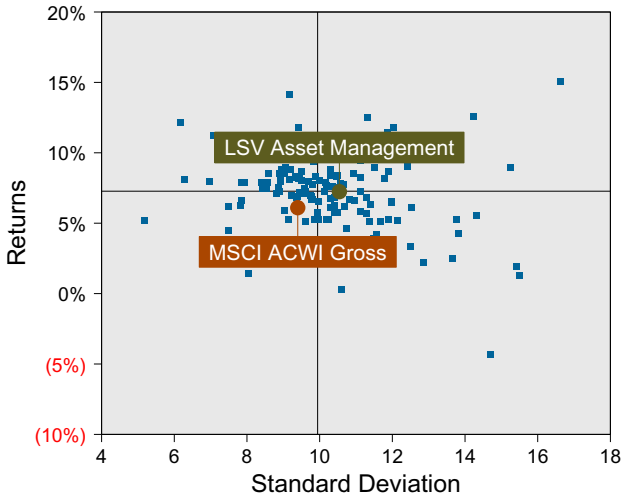


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years
10th Percentile	3.47	0.30	1.31	4.76	10.18
25th Percentile	1.03	(1.91)	(1.42)	3.06	8.49
Median	(0.83)	(4.64)	(3.45)	1.54	7.27
75th Percentile	(2.38)	(7.27)	(6.00)	(0.74)	5.74
90th Percentile	(3.50)	(10.02)	(8.77)	(3.84)	3.45
LSV Asset Management ●	0.79	(6.77)	(5.58)	(0.04)	7.24
MSCI ACWI Gross ▲	0.38	(4.30)	(3.81)	0.97	6.10

Relative Return vs MSCI ACWI Gross



CAI Global Equity Broad Style (Gross) Annualized Three Year Risk vs Return



Investment Manager Returns

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

Returns for Periods Ended March 31, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 15-1/4 Years
Private Equity	**(4.05%)**	**(9.28%)**	**(1.72%)**	**0.82%**	**1.85%**
Adams Street Direct Co-Invest Fd	(0.81%)	6.78%	18.87%	14.06%	-
Adams Street Direct Fd 2010	2.90%	17.92%	18.09%	15.48%	-
Adams Street 1998 Partnership	1.57%	3.85%	4.84%	1.47%	1.81%
Adams Street 1999 Partnership	2.92%	8.81%	3.06%	3.91%	2.87%
Adams Street 2000 Partnership	4.02%	1.19%	0.34%	3.23%	3.52%
Adams Street 2001 Partnership	8.15%	(3.36%)	6.94%	7.38%	4.00%
Adams Street 2002 Partnership	6.20%	0.73%	1.73%	4.78%	-
Adams Street 2003 Partnership	4.44%	6.60%	15.76%	9.89%	-
Adams Street 2010 Partnership	0.53%	9.15%	15.12%	13.41%	-
Adams Street 2008 Fund	3.23%	13.71%	13.44%	9.86%	-
Adams Street 1999 Non-US	(2.60%)	9.11%	1.37%	9.43%	6.55%
Adams Street 2000 Non-US	(0.21%)	(9.87%)	(2.15%)	(0.96%)	2.70%
Adams Street 2001 Non-US	(3.22%)	35.78%	28.59%	13.89%	-
Adams Street 2002 Non-US	12.72%	23.19%	7.24%	7.44%	-
Adams Street 2003 Non-US	10.22%	14.26%	9.79%	10.26%	-
Adams Street 2004 Non-US	1.94%	(0.35%)	8.33%	5.63%	-
Adams Street 2010 Non-US	2.58%	7.55%	6.91%	5.31%	-
Adams Street 2010 NonUS Emg	4.25%	16.78%	11.51%	(2.37%)	-
Adams Street 2015 Global Fd	24.57%	-	-	-	-
Adams Street BVCF IV Fund	0.23%	26.47%	24.46%	31.58%	18.96%
CorsAir III	(1.51%)	23.83%	7.02%	2.61%	-
ND Investors	13.24%	7.77%	5.35%	3.71%	-
CorsAir IV	(3.92%)	7.54%	15.47%	5.74%	-
Capital International V	(5.09%)	(31.57%)	(11.25%)	(5.38%)	-
Capital International VI	(3.10%)	(11.69%)	(18.01%)	-	-
EIG Energy Fund XIV	(44.65%)	(61.49%)	(30.60%)	(19.12%)	-
Lewis & Clark	0.00%	(32.09%)	(16.16%)	(5.81%)	-
Lewis & Clark II	0.00%	(14.35%)	(6.80%)	(7.39%)	-
Quantum Energy Partners	0.00%	(36.79%)	1.68%	9.64%	-
Matlin Patterson I	10.56%	10.56%	3.79%	648.58%	-
Matlin Patterson II	8.03%	43.24%	1.59%	(31.54%)	-
Matlin Patterson III	(4.96%)	0.19%	(2.60%)	20.67%	-
Russell 1000 Index	1.17%	0.50%	11.52%	11.35%	5.24%
Russell 2000 Index	(1.52%)	(9.76%)	6.84%	7.20%	7.04%

Declaration Total Return
Period Ended March 31, 2016

Investment Philosophy

The Fund's portfolio holdings consist primarily of RMBS issued by private sector companies (Non-Agency RMBS) and government agencies (Agency MBS) and CMBS issued by private sector companies. Agency MBS includes securities issued by the Federal National Mortgage Association (Fannie Mae), the Federal Home Loan Mortgage Corporation (Freddie Mac) and the Government National Mortgage Association (Ginnie Mae). Portfolio holdings may range from short tenure senior classes to stressed issues or subordinated securities with substantial risk of non-payment and correspondingly higher yields. Smaller portfolio allocations may include consumer asset-backed securities (ABS), or other structured credit securities and corporate bonds. As a diversification strategy and a potential hedge to credit risk, the Fund may invest in securities which tend to benefit from slow mortgage prepayments and economic growth, such as interest only (IO) MBS.

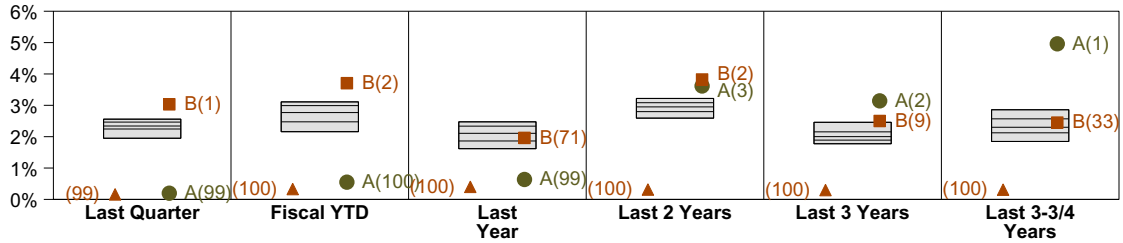
Quarterly Summary and Highlights

- Declaration Total Return's portfolio posted a 0.20% return for the quarter placing it in the 99 percentile of the CAI Intermediate Fixed-Inc Style group for the quarter and in the 99 percentile for the last year.
- Declaration Total Return's portfolio outperformed the Libor-3 Month by 0.04% for the quarter and outperformed the Libor-3 Month for the year by 0.23%.

Quarterly Asset Growth

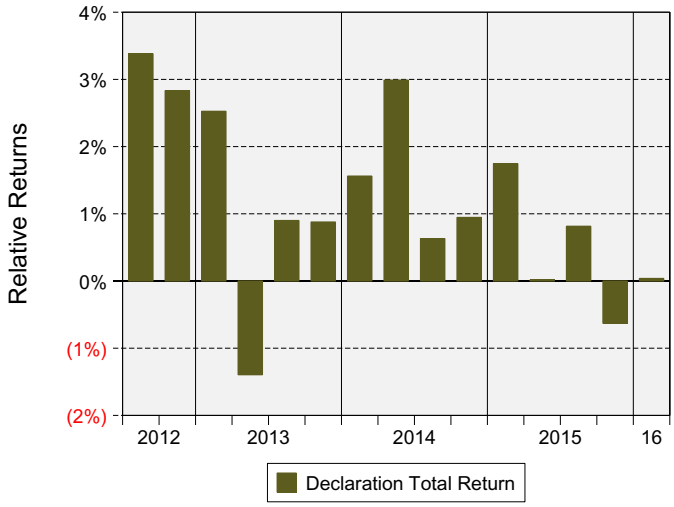
Beginning Market Value	$84,726,314
Net New Investment	$-30,422
Investment Gains/(Losses)	$167,365
Ending Market Value	$84,863,258

Performance vs CAI Intermediate Fixed-Inc Style (Gross)

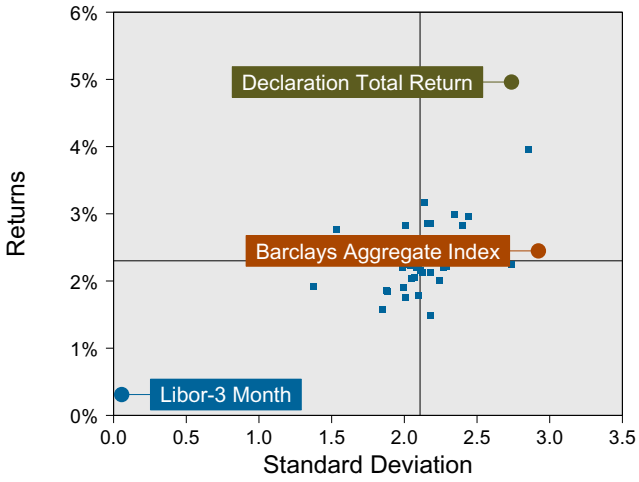


		Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 3-3/4 Years
10th Percentile		2.56	3.11	2.47	3.22	2.46	2.86
25th Percentile		2.46	2.99	2.34	3.08	2.15	2.57
Median		2.34	2.77	2.11	2.95	2.00	2.30
75th Percentile		2.24	2.47	1.86	2.80	1.89	2.12
90th Percentile		1.95	2.16	1.62	2.59	1.77	1.85
Declaration Total Return	● A	0.20	0.55	0.64	3.62	3.14	4.96
Barclays Aggregate Index	■ B	3.03	3.71	1.96	3.82	2.50	2.45
Libor-3 Month	▲	0.16	0.33	0.40	0.31	0.30	0.31

Relative Return vs Libor-3 Month



CAI Intermediate Fixed-Inc Style (Gross) Annualized Three and Three-Quarter Year Risk vs Return



J.P. Morgan MBS
Period Ended March 31, 2016

Investment Philosophy

JP Morgan seeks to outperform the benchmark over longer horizons regardless of the market environment.

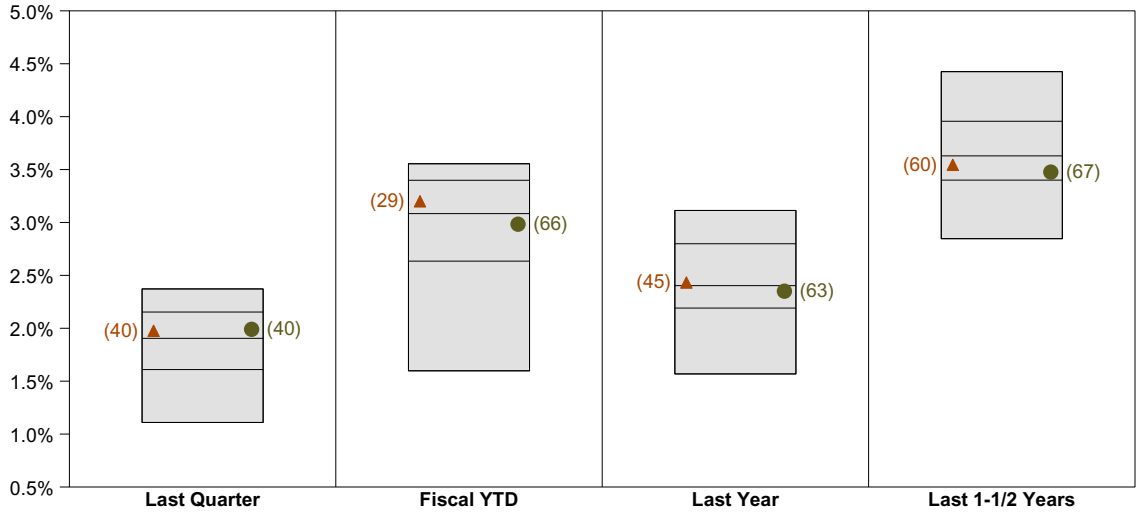
Quarterly Summary and Highlights

- J.P. Morgan MBS's portfolio posted a 1.99% return for the quarter placing it in the 40 percentile of the CAI Mtg-Backed FI Style group for the quarter and in the 63 percentile for the last year.
- J.P. Morgan MBS's portfolio outperformed the Barclays Mortgage by 0.01% for the quarter and underperformed the Barclays Mortgage for the year by 0.08%.

Quarterly Asset Growth

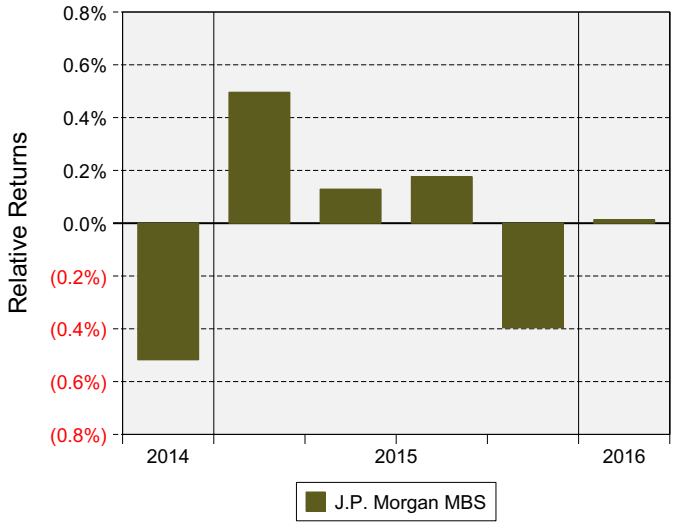
Beginning Market Value	$122,871,434
Net New Investment	$-13,064,698
Investment Gains/(Losses)	$2,392,451
Ending Market Value	$112,199,186

Performance vs CAI Mtg-Backed FI Style (Gross)

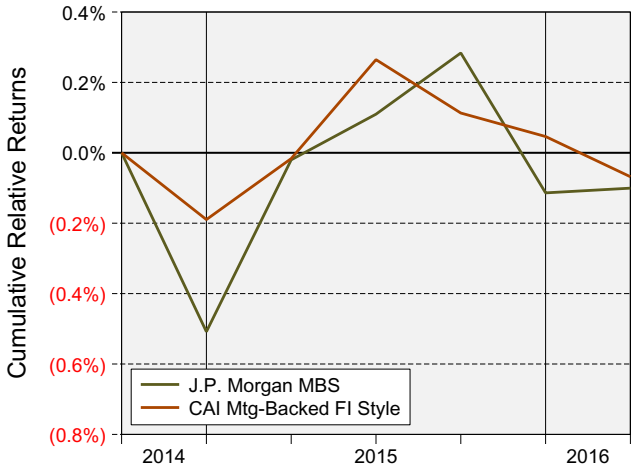


	Last Quarter	Fiscal YTD	Last Year	Last 1-1/2 Years
10th Percentile	2.37	3.55	3.11	4.43
25th Percentile	2.15	3.40	2.80	3.96
Median	1.90	3.08	2.40	3.63
75th Percentile	1.61	2.63	2.19	3.40
90th Percentile	1.11	1.60	1.57	2.85
J.P. Morgan MBS ●	1.99	2.98	2.35	3.48
Barclays Mortgage ▲	1.98	3.20	2.43	3.55

Relative Return vs Barclays Mortgage



Cumulative Returns vs Barclays Mortgage



PIMCO DiSCO II
Period Ended March 31, 2016

Investment Philosophy

The PIMCO Distressed Senior Credit Opportunities Fund is an opportunistic private-equity style Fund which seeks to provide investors enhanced returns principally through long-biased investments in undervalued senior and super senior structured credit securities that are expected to produce attractive levels of current income and that may also appreciate in value over the long term. The fund will look to capitalize on forced sales by liquidity constrained investors.

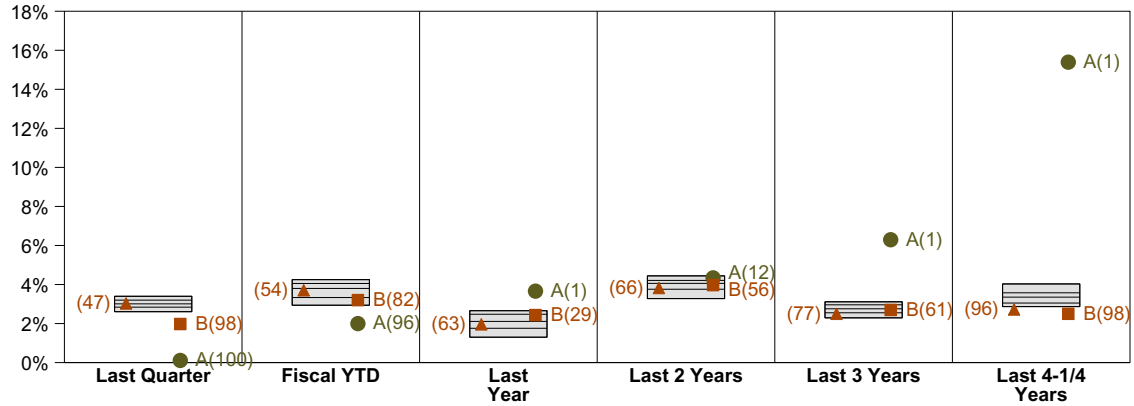
Quarterly Summary and Highlights

- PIMCO DiSCO II's portfolio posted a 0.11% return for the quarter placing it in the 100 percentile of the CAI Core Bond Fixed-Inc Style group for the quarter and in the 1 percentile for the last year.
- PIMCO DiSCO II's portfolio underperformed the Barclays Aggregate Index by 2.92% for the quarter and outperformed the Barclays Aggregate Index for the year by 1.70%.

Quarterly Asset Growth

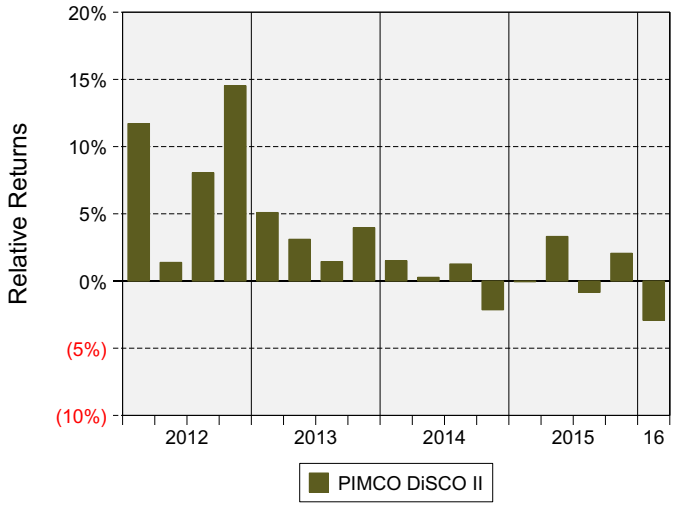
Beginning Market Value	$89,513,106
Net New Investment	$0
Investment Gains/(Losses)	$99,384
Ending Market Value	$89,612,490

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

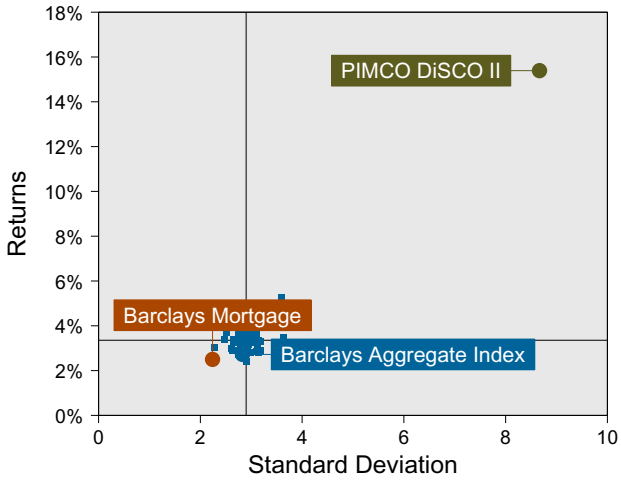


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 4-1/4 Years
10th Percentile	3.40	4.25	2.66	4.44	3.11	4.03
25th Percentile	3.20	4.05	2.48	4.21	2.96	3.58
Median	3.01	3.80	2.11	4.06	2.76	3.35
75th Percentile	2.84	3.33	1.76	3.76	2.55	3.05
90th Percentile	2.61	2.94	1.30	3.28	2.29	2.87
PIMCO DiSCO II ● A	0.11	2.00	3.66	4.34	6.29	15.39
Barclays Mortgage ■ B	1.98	3.20	2.43	3.97	2.70	2.50
Barclays Aggregate Index ▲	3.03	3.71	1.96	3.82	2.50	2.72

Relative Return vs Barclays Aggregate Index



CAI Core Bond Fixed-Inc Style (Gross) Annualized Four and One-Quarter Year Risk vs Return



PIMCO MBS
Period Ended March 31, 2016

Investment Philosophy

The PIMCO Mortgage-Backed Securities Strategy is an actively managed bond portfolio that invests in high quality, short to intermediate duration mortgage-backed securities. The fund invests primarily in securities that are highly rated, such as US Government guaranteed Ginnie Mae securities and Agency-guaranteed Fannie Mae and Freddie Mac mortgage-backed securities.

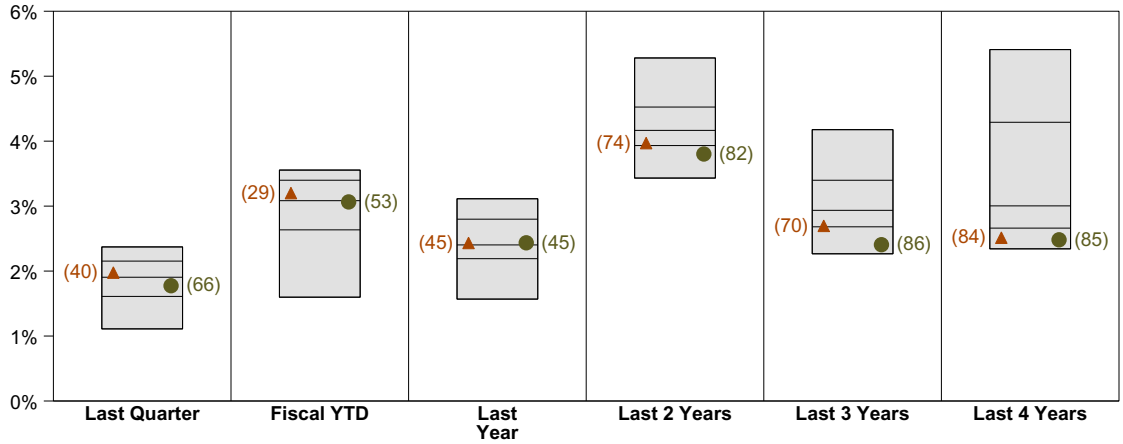
Quarterly Summary and Highlights

- PIMCO MBS's portfolio posted a 1.77% return for the quarter placing it in the 66 percentile of the CAI Mtg-Backed FI Style group for the quarter and in the 45 percentile for the last year.
- PIMCO MBS's portfolio underperformed the Barclays Mortgage by 0.20% for the quarter and outperformed the Barclays Mortgage for the year by 0.00%.

Quarterly Asset Growth

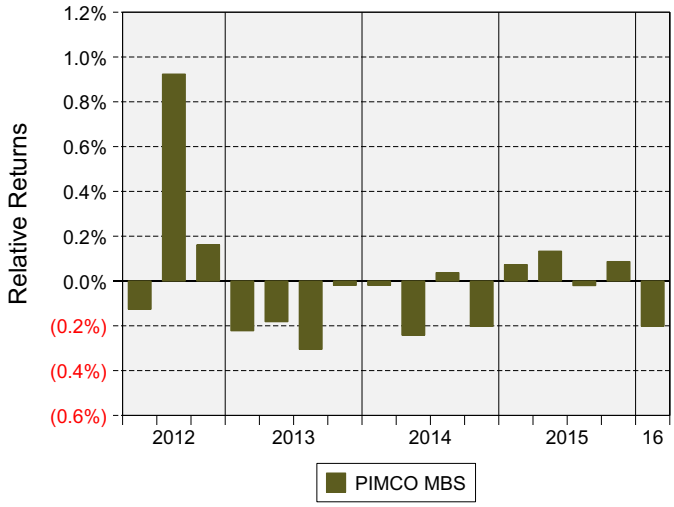
Beginning Market Value	$163,171,095
Net New Investment	$-151,026
Investment Gains/(Losses)	$2,894,137
Ending Market Value	$165,914,206

Performance vs CAI Mtg-Backed FI Style (Gross)

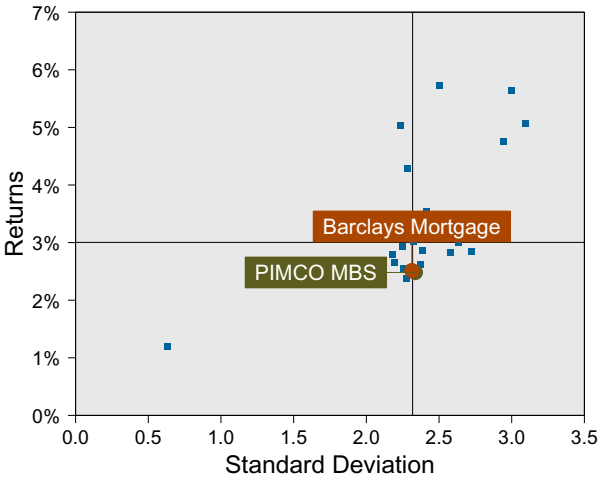


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 4 Years
10th Percentile	2.37	3.55	3.11	5.28	4.18	5.41
25th Percentile	2.15	3.40	2.80	4.52	3.40	4.29
Median	1.90	3.08	2.40	4.17	2.94	3.00
75th Percentile	1.61	2.63	2.19	3.93	2.68	2.66
90th Percentile	1.11	1.60	1.57	3.43	2.27	2.34
PIMCO MBS ●	1.77	3.06	2.44	3.80	2.41	2.48
Barclays Mortgage ▲	1.98	3.20	2.43	3.97	2.70	2.51

Relative Return vs Barclays Mortgage



CAI Mtg-Backed FI Style (Gross) Annualized Four Year Risk vs Return



PIMCO Unconstrained
Period Ended March 31, 2016

Investment Philosophy

The PIMCO Unconstrained Bond Strategy is an absolute return-oriented, investment grade quality fixed income strategy that leverages PIMCO's secular thinking, global themes, and integrated investment process without the constraints of a benchmark or significant sector/instrument limitations. The strategy focuses on long-term economic, social and political trends. Over shorter cyclical time frames, the unconstrained nature of the strategy allows PIMCO to take on more risk when tactical opportunities are identified, and it allows for reduction and diversification of risk at times when the outlook may be more challenging for traditional fixed income benchmarks. **The product changed from Commingled Fund to Separate Account in March 2014. *Libor-3 month through February 28, 2014; Fund's performance through March 31, 2014; Libor-3 month thereafter.**

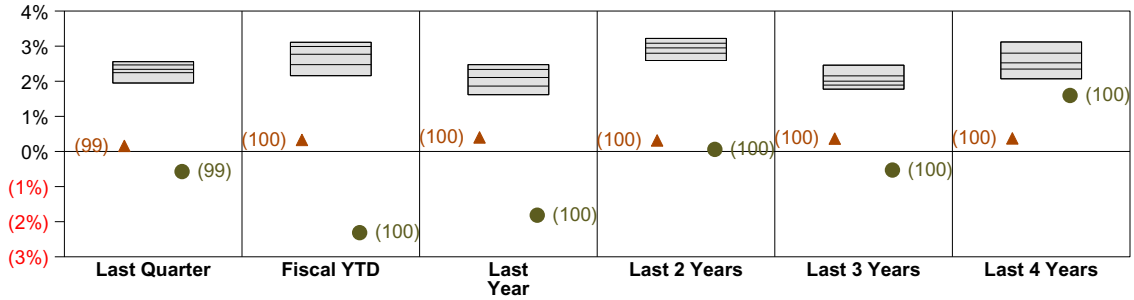
Quarterly Summary and Highlights

- PIMCO Unconstrained's portfolio posted a (0.57)% return for the quarter placing it in the 99 percentile of the CAI Intermediate Fixed-Inc Style group for the quarter and in the 100 percentile for the last year.
- PIMCO Unconstrained's portfolio underperformed the Blended Benchmark* by 0.73% for the quarter and underperformed the Blended Benchmark* for the year by 2.22%.

Quarterly Asset Growth

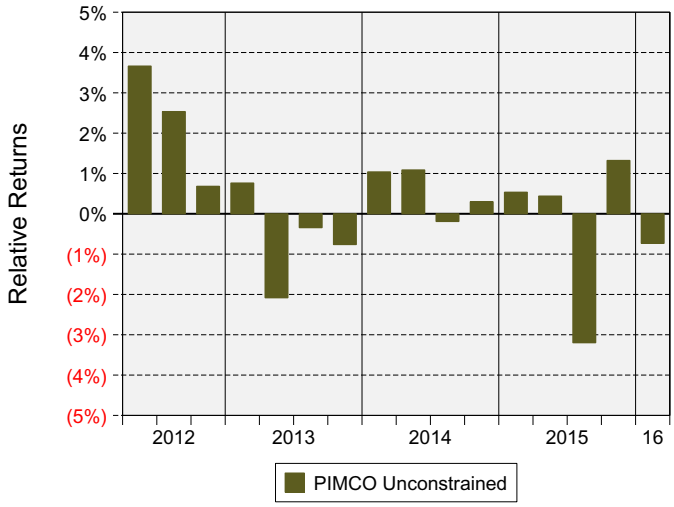
Beginning Market Value	$71,503,274
Net New Investment	$-10,090,937
Investment Gains/(Losses)	$-700,120
Ending Market Value	$60,712,217

Performance vs CAI Intermediate Fixed-Inc Style (Gross)

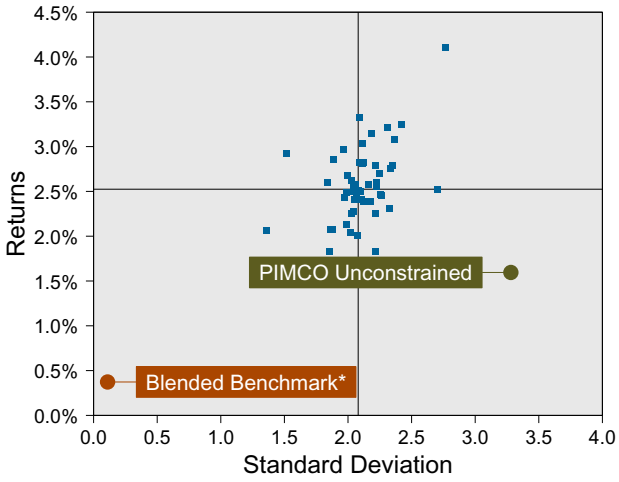


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 4 Years
10th Percentile	2.56	3.11	2.47	3.22	2.46	3.12
25th Percentile	2.46	2.99	2.34	3.08	2.15	2.80
Median	2.34	2.77	2.11	2.95	2.00	2.52
75th Percentile	2.24	2.47	1.86	2.80	1.89	2.35
90th Percentile	1.95	2.16	1.62	2.59	1.77	2.07
PIMCO Unconstrained ●	(0.57)	(2.31)	(1.81)	0.06	(0.53)	1.60
Blended Benchmark* ▲	0.16	0.33	0.40	0.31	0.37	0.37

Relative Return vs Blended Benchmark*



CAI Intermediate Fixed-Inc Style (Gross) Annualized Four Year Risk vs Return



SSgA Long US Treas Index
Period Ended March 31, 2016

Investment Philosophy

The Fund seeks an investment return that approximates as closely as practicable, before expenses, the performance of the Barclays Capital U.S. Long Treasury Bond Index over the long term.

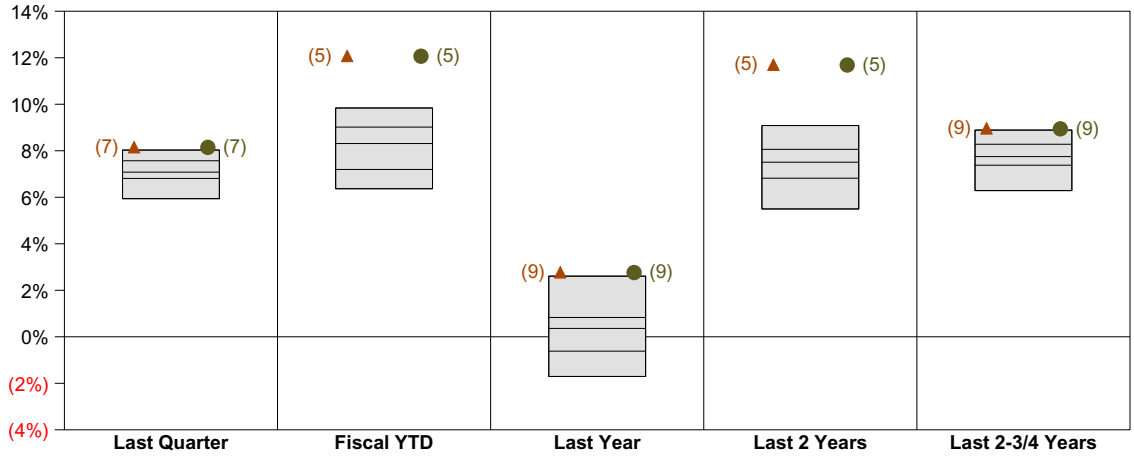
Quarterly Summary and Highlights

- SSgA Long US Treas Index's portfolio posted a 8.15% return for the quarter placing it in the 7 percentile of the CAI Extended Maturity Fixed-Inc Style group for the quarter and in the 9 percentile for the last year.
- SSgA Long US Treas Index's portfolio underperformed the Barclays Long Treas by 0.01% for the quarter and underperformed the Barclays Long Treas for the year by 0.01%.

Quarterly Asset Growth

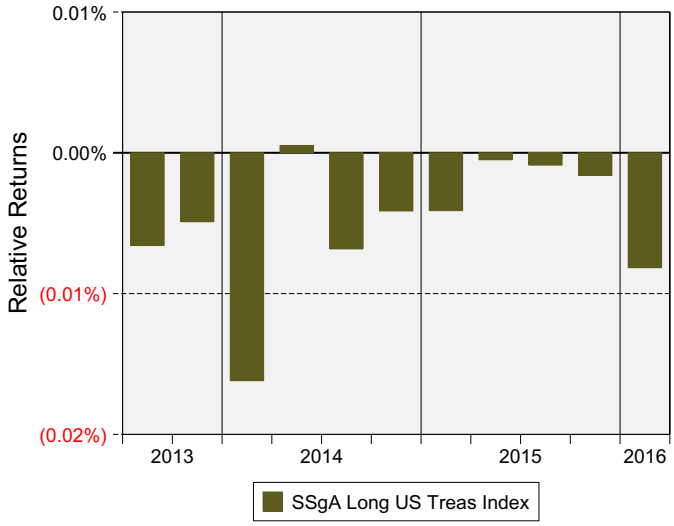
Beginning Market Value	$60,070,508
Net New Investment	$-10,006,704
Investment Gains/(Losses)	$4,865,399
Ending Market Value	$54,929,204

Performance vs CAI Extended Maturity Fixed-Inc Style (Gross)

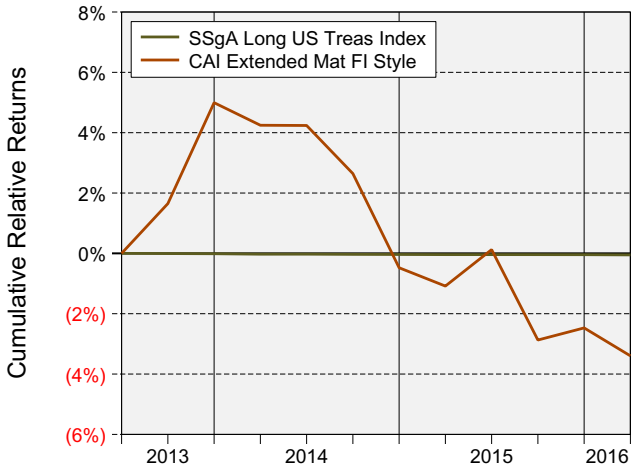


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 2-3/4 Years
10th Percentile	8.03	9.84	2.61	9.09	8.89
25th Percentile	7.57	9.02	0.83	8.06	8.28
Median	7.08	8.31	0.36	7.51	7.75
75th Percentile	6.81	7.20	(0.62)	6.82	7.38
90th Percentile	5.94	6.37	(1.71)	5.50	6.29
SSgA Long US Treas Index ●	8.15	12.07	2.76	11.69	8.94
Barclays Long Treas ▲	8.15	12.08	2.77	11.70	8.96

Relative Return vs Barclays Long Treas



Cumulative Returns vs Barclays Long Treas



Goldman Sachs 2006 Offshore
Period Ended March 31, 2016

Investment Philosophy

GS Mezzanine Partners seeks large-sized mezzanine investments comprised generally of fixed income securities and an associated equity component. They focus on providing "private high yield" capital for mid- to large-sized leveraged and management buyout transactions, recapitalizations, financings, re-financings, acquisitions and restructurings for private equity firms, private family companies and corporate issuers.

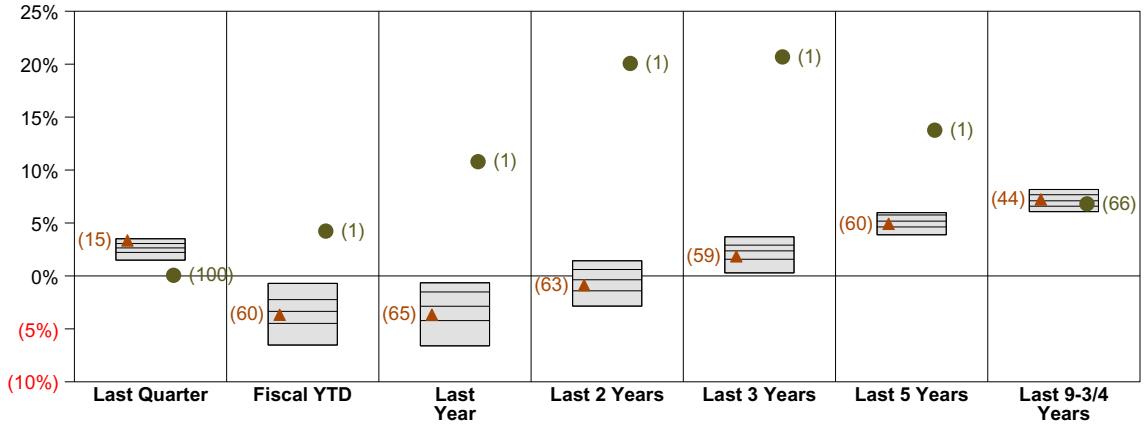
Quarterly Summary and Highlights

- Goldman Sachs's portfolio posted a 0.06% return for the quarter placing it in the 100 percentile of the CAI High Yield Fixed-Inc Style group for the quarter and in the 1 percentile for the last year.
- Goldman Sachs's portfolio underperformed the Barclays HY Corp 2% Issue by 3.29% for the quarter and outperformed the Barclays HY Corp 2% Issue for the year by 14.45%.

Quarterly Asset Growth

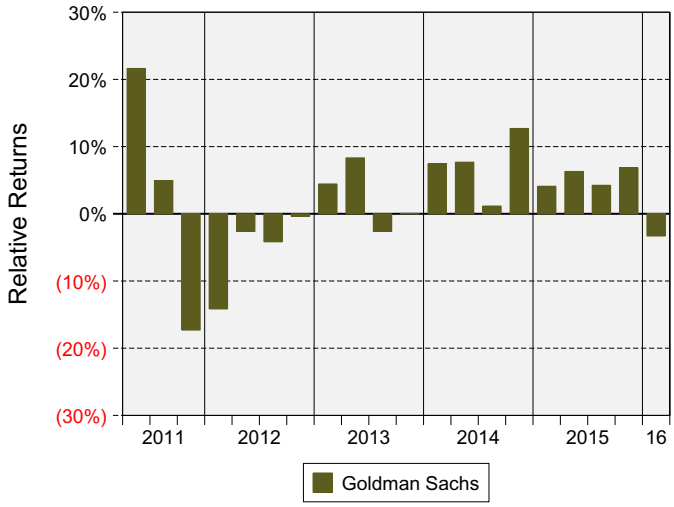
Beginning Market Value	$1,348,851
Net New Investment	$-172,641
Investment Gains/(Losses)	$84
Ending Market Value	$1,176,294

Performance vs CAI High Yield Fixed-Inc Style (Gross)

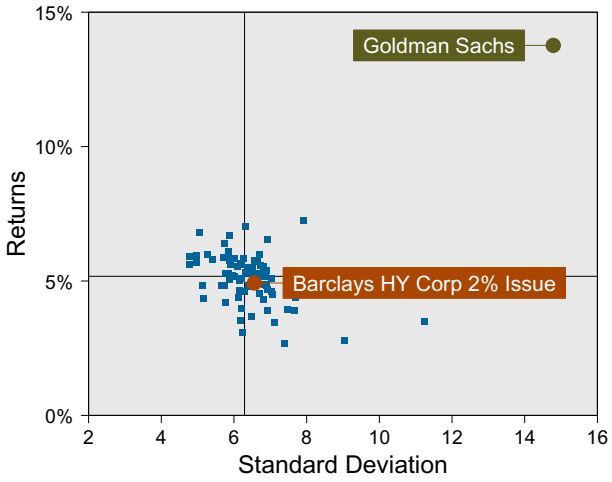


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 9-3/4 Years
10th Percentile	3.51	(0.70)	(0.65)	1.43	3.70	5.98	8.17
25th Percentile	3.06	(2.24)	(1.52)	0.61	2.91	5.76	7.67
Median	2.65	(3.35)	(2.87)	(0.36)	2.37	5.17	7.09
75th Percentile	2.22	(4.48)	(4.22)	(1.41)	1.57	4.63	6.59
90th Percentile	1.49	(6.53)	(6.60)	(2.85)	0.29	3.88	6.07
Goldman Sachs ●	0.06	4.23	10.79	20.07	20.68	13.77	6.80
Barclays HY Corp 2% Issue ▲	3.35	(3.66)	(3.66)	(0.87)	1.86	4.93	7.22

Relative Return vs Barclays HY Corp 2% Issue



CAI High Yield Fixed-Inc Style (Gross) Annualized Five Year Risk vs Return



Goldman Sachs Offshore Fund V
Period Ended March 31, 2016

Investment Philosophy

GS Mezzanine Partners seeks large-sized mezzanine investments comprised generally of fixed income securities and an associated equity component. They focus on providing "private high yield" capital for mid- to large-sized leveraged and management buyout transactions, recapitalizations, financings, re-financings, acquisitions and restructurings for private equity firms, private family companies and corporate issuers.

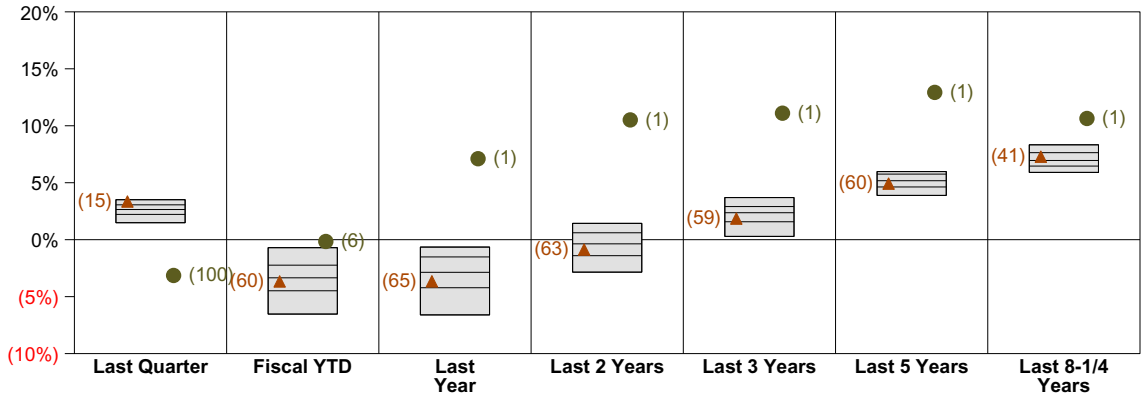
Quarterly Summary and Highlights

- Goldman Sachs Offshore V's portfolio posted a (3.14)% return for the quarter placing it in the 100 percentile of the CAI High Yield Fixed-Inc Style group for the quarter and in the 1 percentile for the last year.
- Goldman Sachs Offshore V's portfolio underperformed the Barclays HY Corp 2% Issue by 6.49% for the quarter and outperformed the Barclays HY Corp 2% Issue for the year by 10.76%.

Quarterly Asset Growth

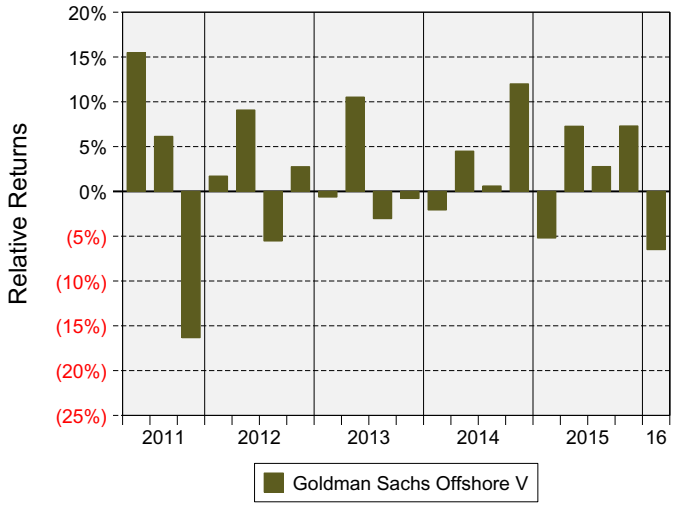
Beginning Market Value	$2,809,504
Net New Investment	$0
Investment Gains/(Losses)	$-88,246
Ending Market Value	$2,721,258

Performance vs CAI High Yield Fixed-Inc Style (Gross)

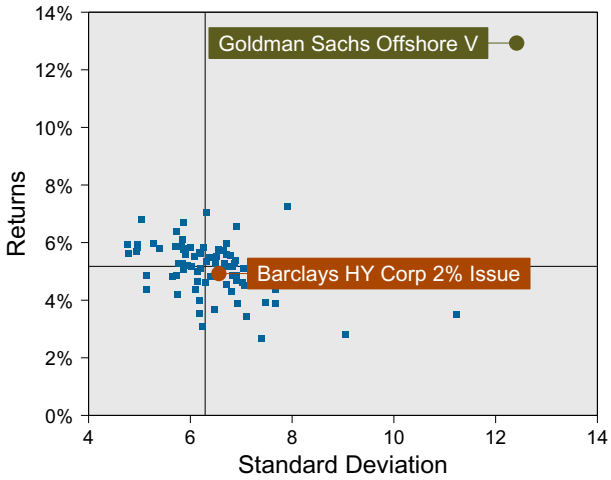


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 8-1/4 Years
10th Percentile	3.51	(0.70)	(0.65)	1.43	3.70	5.98	8.33
25th Percentile	3.06	(2.24)	(1.52)	0.61	2.91	5.76	7.64
Median	2.65	(3.35)	(2.87)	(0.36)	2.37	5.17	6.95
75th Percentile	2.22	(4.48)	(4.22)	(1.41)	1.57	4.63	6.46
90th Percentile	1.49	(6.53)	(6.60)	(2.85)	0.29	3.88	5.91
Goldman Sachs Offshore V ●	(3.14)	(0.16)	7.11	10.51	11.10	12.93	10.64
Barclays HY Corp 2% Issue ▲	3.35	(3.66)	(3.66)	(0.87)	1.86	4.93	7.29

Relative Return vs Barclays HY Corp 2% Issue



CAI High Yield Fixed-Inc Style (Gross) Annualized Five Year Risk vs Return



Loomis Sayles
Period Ended March 31, 2016

Investment Philosophy

The High Yield Full Discretion Strategy seeks to identify attractive sectors and specific investment opportunities primarily within the global fixed income market through a global economic and interest rate framework. Portfolio managers incorporate a long-term macroeconomic view along with a stringent bottom-up investment evaluation process that drives security selection and resulting sector allocations. Opportunistic investments in non-benchmark sectors including investment grade corporate, emerging market, and non-US dollar debt and convertible bonds help to manage overall portfolio risk and enhance total return potential.

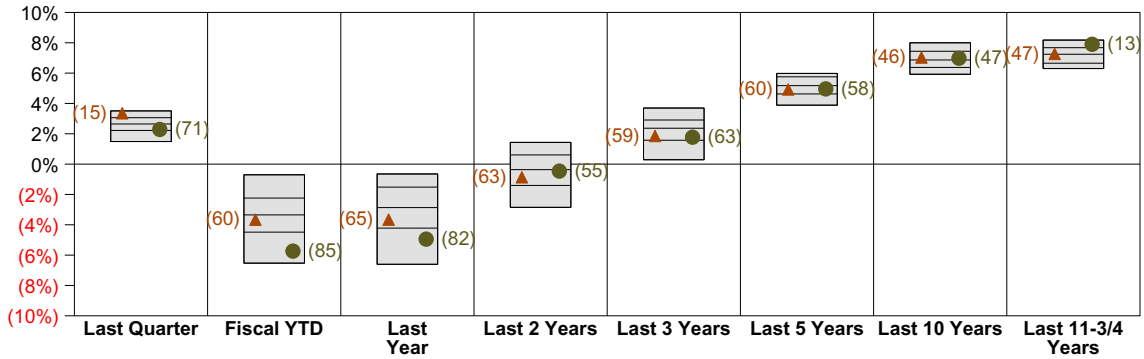
Quarterly Summary and Highlights

- Loomis Sayles's portfolio posted a 2.29% return for the quarter placing it in the 71 percentile of the CAI High Yield Fixed-Inc Style group for the quarter and in the 82 percentile for the last year.
- Loomis Sayles's portfolio underperformed the Barclays HY Corp 2% Issue by 1.07% for the quarter and underperformed the Barclays HY Corp 2% Issue for the year by 1.29%.

Quarterly Asset Growth

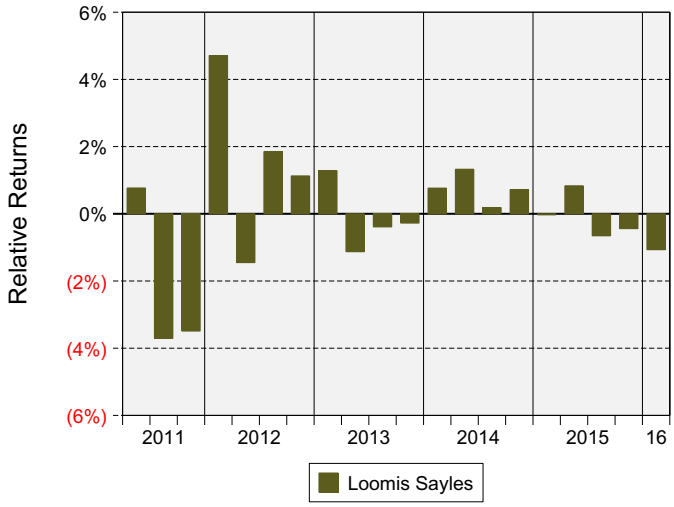
Beginning Market Value	$191,038,407
Net New Investment	$-238,798
Investment Gains/(Losses)	$4,354,949
Ending Market Value	$195,154,558

Performance vs CAI High Yield Fixed-Inc Style (Gross)

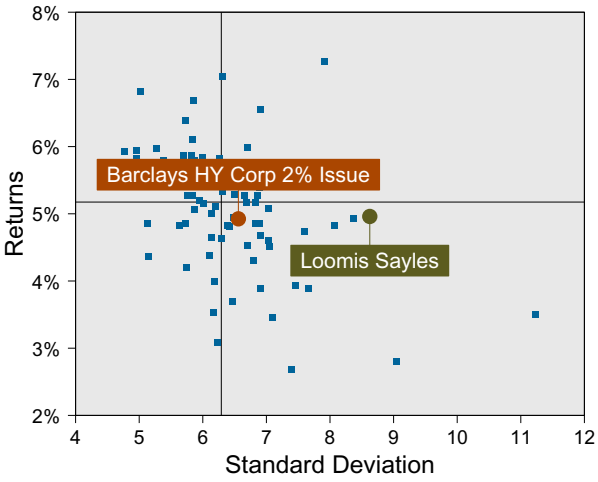


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 10 Years	Last 11-3/4 Years
10th Percentile	3.51	(0.70)	(0.65)	1.43	3.70	5.98	8.00	8.18
25th Percentile	3.06	(2.24)	(1.52)	0.61	2.91	5.76	7.44	7.68
Median	2.65	(3.35)	(2.87)	(0.36)	2.37	5.17	6.87	7.24
75th Percentile	2.22	(4.48)	(4.22)	(1.41)	1.57	4.63	6.38	6.65
90th Percentile	1.49	(6.53)	(6.60)	(2.85)	0.29	3.88	5.92	6.30
Loomis Sayles ●	2.29	(5.74)	(4.95)	(0.46)	1.77	4.96	6.98	7.90
Barclays HY Corp 2% Issue ▲	3.35	(3.66)	(3.66)	(0.87)	1.86	4.93	7.03	7.27

Relative Return vs Barclays HY Corp 2% Issue



CAI High Yield Fixed-Inc Style (Gross) Annualized Five Year Risk vs Return



PIMCO Bravo II Fund
Period Ended March 31, 2016

Investment Philosophy

The BRAVO II Fund is a private equity style fund targeting an annualized IRR of 15-20% and multiple of 1.8-2x, net of fees and carried interest with an initial 5-year term. The fund will seek to capitalize on non-economic asset sale decisions by global financial institutions. The fund will have the flexibility to acquire attractively discounted, less liquid loans, structured credit and other assets tied to residential or commercial real estate markets in the U.S. and Europe.

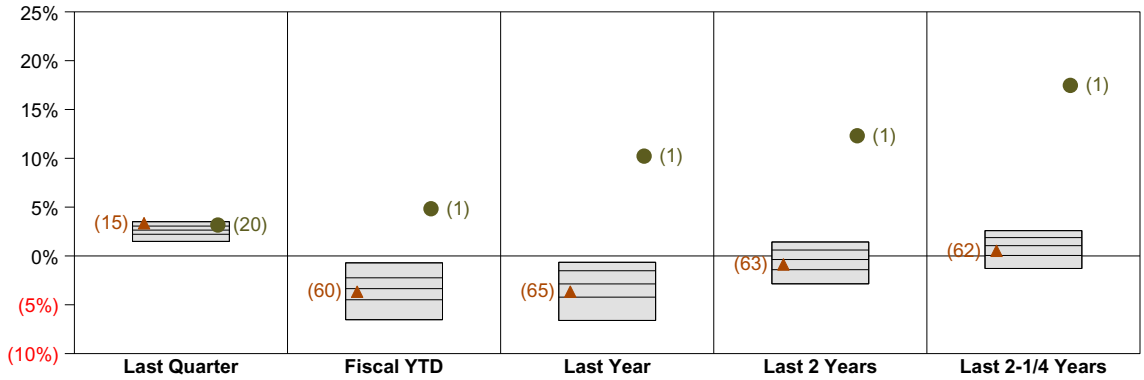
Quarterly Summary and Highlights

- PIMCO Bravo II Fund's portfolio posted a 3.17% return for the quarter placing it in the 20 percentile of the CAI High Yield Fixed-Inc Style group for the quarter and in the 1 percentile for the last year.
- PIMCO Bravo II Fund's portfolio underperformed the Barclays HY Corp 2% Issue by 0.19% for the quarter and outperformed the Barclays HY Corp 2% Issue for the year by 13.88%.

Quarterly Asset Growth

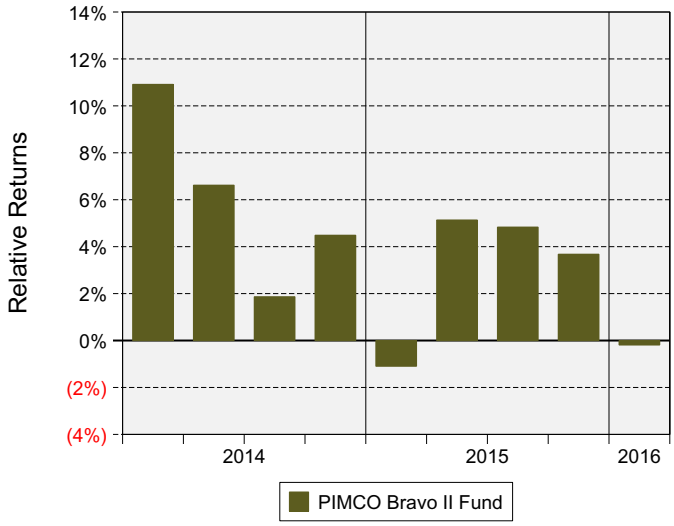
Beginning Market Value	$44,707,361
Net New Investment	$0
Investment Gains/(Losses)	$1,415,242
Ending Market Value	$46,122,603

Performance vs CAI High Yield Fixed-Inc Style (Gross)

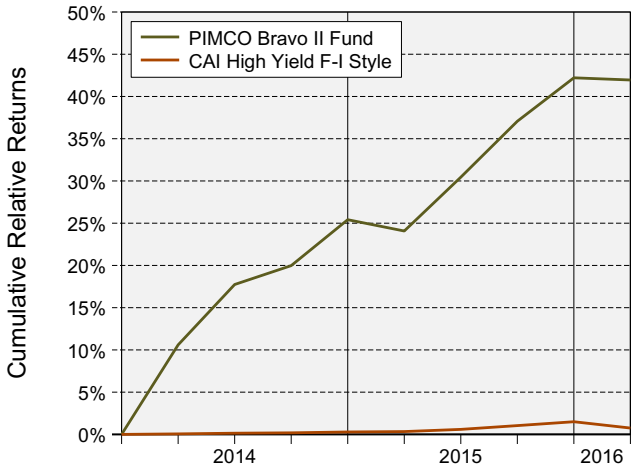


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 2-1/4 Years
10th Percentile	3.51	(0.70)	(0.65)	1.43	2.59
25th Percentile	3.06	(2.24)	(1.52)	0.61	1.88
Median	2.65	(3.35)	(2.87)	(0.36)	1.05
75th Percentile	2.22	(4.48)	(4.22)	(1.41)	0.05
90th Percentile	1.49	(6.53)	(6.60)	(2.85)	(1.28)
PIMCO Bravo II Fund ●	3.17	4.84	10.22	12.31	17.47
Barclays HY Corp 2% Issue ▲	3.35	(3.66)	(3.66)	(0.87)	0.53

Relative Return vs Barclays HY Corp 2% Issue



Cumulative Returns vs Barclays HY Corp 2% Issue



Brandywine Asset Management
Period Ended March 31, 2016

Investment Philosophy

Brandywine engages in a disciplined, active, value-driven, strategic approach. Their investment strategy concentrates on top-down analysis of macro-economic conditions in order to determine where the most attractive valuations exist. Specifically, they invest in bonds with the highest real yields globally. They manage currency to protect principal and increase returns, patiently rotated among countries and attempt to control risk by purchasing undervalued securities.

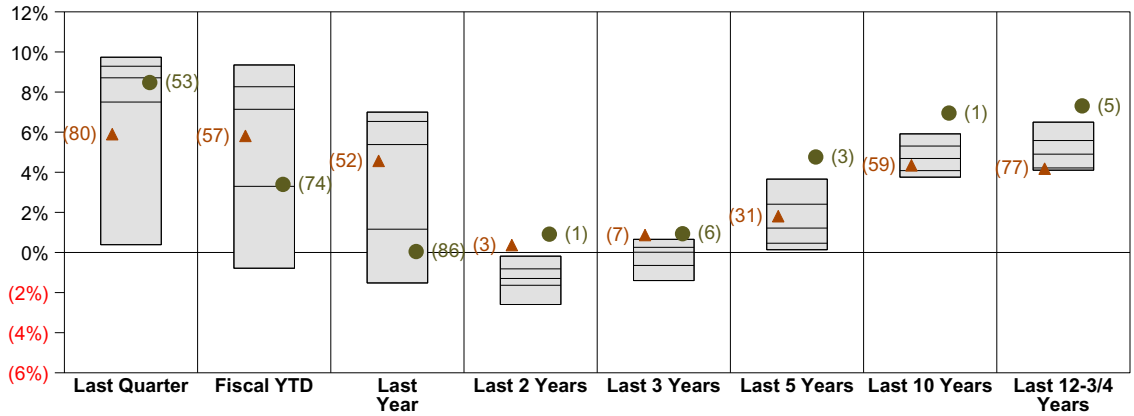
Quarterly Summary and Highlights

- Brandywine's portfolio posted a 8.48% return for the quarter placing it in the 53 percentile of the CAI Non-U.S. Fixed-Inc Style group for the quarter and in the 86 percentile for the last year.
- Brandywine's portfolio outperformed the Barclays Global Aggregate Index by 2.58% for the quarter and underperformed the Barclays Global Aggregate Index for the year by 4.52%.

Quarterly Asset Growth

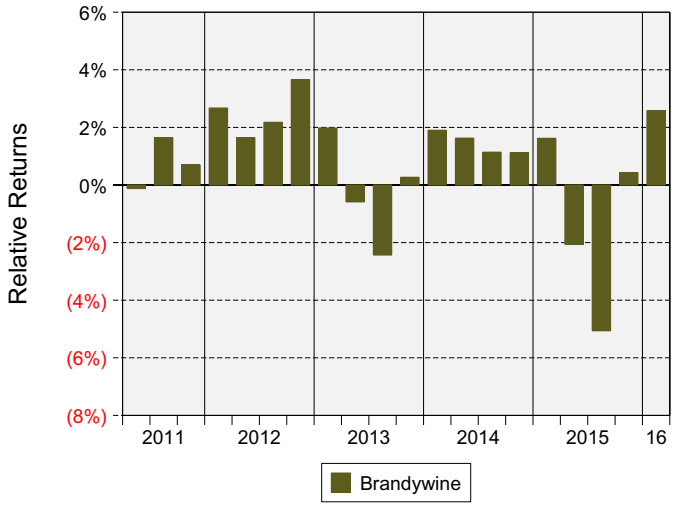
Beginning Market Value	$121,778,769
Net New Investment	$-117,381
Investment Gains/(Losses)	$10,312,059
Ending Market Value	$131,973,448

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

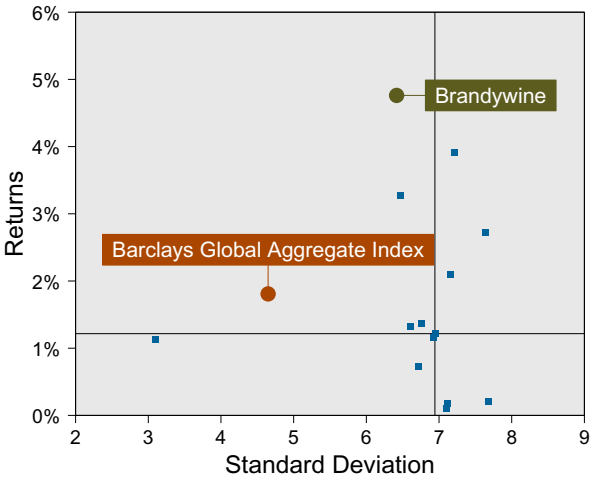


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 10 Years	Last 12-3/4 Years
10th Percentile	9.74	9.35	7.00	(0.18)	0.66	3.66	5.92	6.50
25th Percentile	9.29	8.26	6.53	(0.82)	0.26	2.41	5.31	5.58
Median	8.71	7.14	5.38	(1.30)	0.01	1.22	4.69	4.90
75th Percentile	7.50	3.30	1.16	(1.64)	(0.65)	0.46	4.08	4.22
90th Percentile	0.39	(0.79)	(1.52)	(2.59)	(1.40)	0.14	3.76	4.10
Brandywine ●	8.48	3.40	0.05	0.91	0.93	4.76	6.95	7.31
Barclays Global Aggregate Index ▲	5.90	5.81	4.57	0.37	0.87	1.81	4.35	4.18

Relative Returns vs Barclays Global Aggregate Index



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



UBS Global Asset Management
Period Ended March 31, 2016

Investment Philosophy

UBS Global Asset Management's non-US fixed income portfolio's assets are invested in emerging markets debt on an opportunistic basis up to the stated maximum allocation of 5%. The account's non-US fixed income assets will be fully-invested at all times, but such assets may be invested in the UBS US Cash Management Prime Collective Fund for operational and risk management purposes. ***Citigroup Non-US Govt Index through 12/31/2009 and the Barclays Global Aggregate ex-US Index thereafter.**

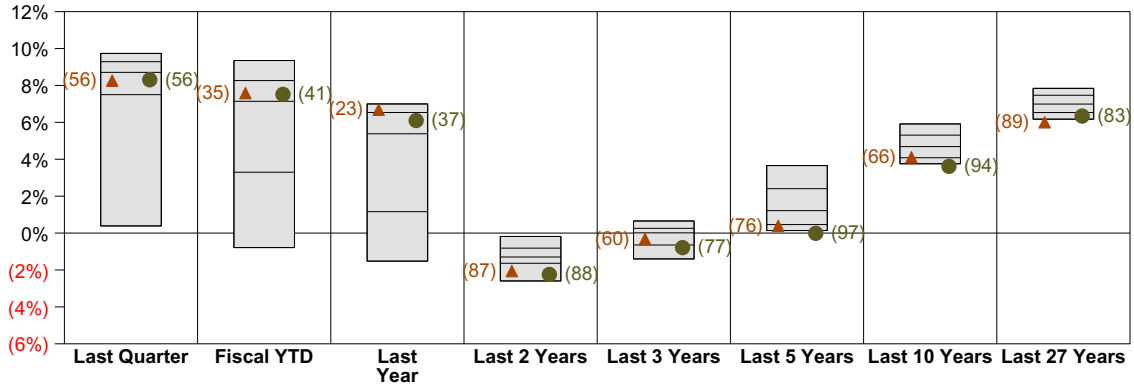
Quarterly Summary and Highlights

- UBS Global Asset Management's portfolio posted a 8.31% return for the quarter placing it in the 56 percentile of the CAI Non-U.S. Fixed-Inc Style group for the quarter and in the 37 percentile for the last year.
- UBS Global Asset Management's portfolio outperformed the Blended Benchmark* by 0.05% for the quarter and underperformed the Blended Benchmark* for the year by 0.59%.

Quarterly Asset Growth

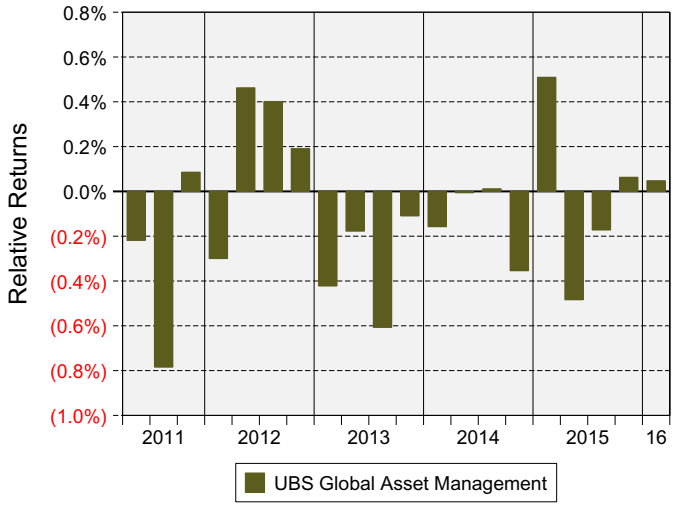
Beginning Market Value	$98,474,167
Net New Investment	$-82,252
Investment Gains/(Losses)	$8,174,736
Ending Market Value	$106,566,651

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

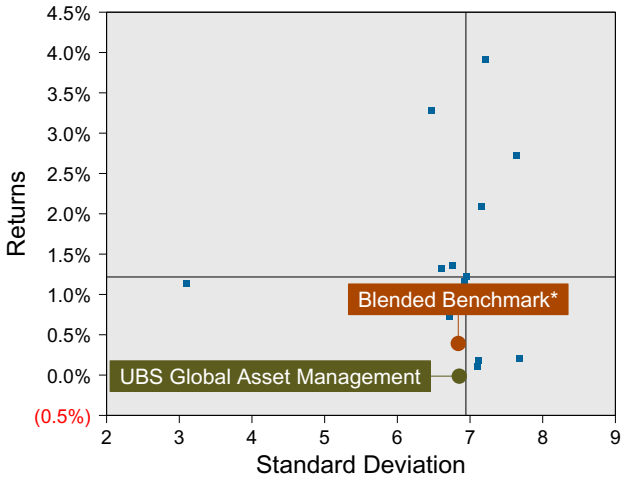


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 10 Years	Last 27 Years
10th Percentile	9.74	9.35	7.00	(0.18)	0.66	3.66	5.92	7.84
25th Percentile	9.29	8.26	6.53	(0.82)	0.26	2.41	5.31	7.47
Median	8.71	7.14	5.38	(1.30)	0.01	1.22	4.69	6.99
75th Percentile	7.50	3.30	1.16	(1.64)	(0.65)	0.46	4.08	6.53
90th Percentile	0.39	(0.79)	(1.52)	(2.59)	(1.40)	0.14	3.76	6.17
UBS Global Asset Management ●	8.31	7.52	6.10	(2.24)	(0.79)	(0.01)	3.62	6.34
Blended Benchmark* ▲	8.26	7.58	6.69	(2.06)	(0.32)	0.39	4.11	6.01

Relative Return vs Blended Benchmark*



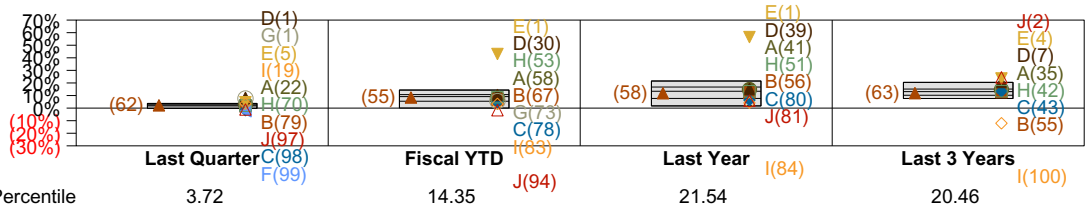
CAI Non-U.S. Fixed-Inc Style (Gross) Annualized Five Year Risk vs Return



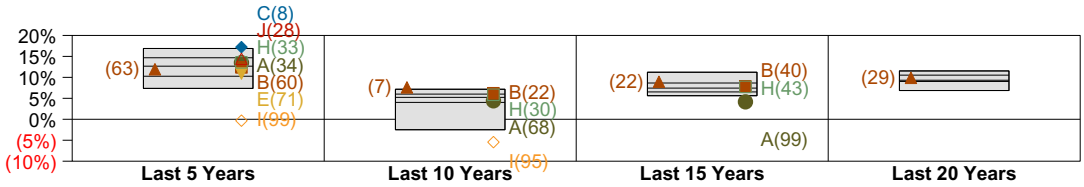
North Dakota State Investment Board Pension Funds
Performance vs Total Real Estate DB
Periods Ended March 31, 2016

Return Ranking

The chart below illustrates fund rankings over various periods versus the Total Real Estate DB. The bars represent the range of returns from the 10th percentile to the 90th percentile for each period for all funds in the Total Real Estate DB. The numbers to the right of the bar represent the percentile rankings of the funds being analyzed. The table below the chart details the rates of return plotted in the graph above.



		Last Quarter	Fiscal YTD	Last Year	Last 3 Years
10th Percentile		3.72	14.35	21.54	20.46
25th Percentile		3.18	10.74	16.75	15.15
Median		2.42	9.15	13.40	13.11
75th Percentile		1.74	5.47	7.69	10.23
90th Percentile		(0.11)	0.03	1.75	7.64
Total Real Estate	● A	3.23	8.16	14.77	14.69
Invesco Core Real Estate	■ B	1.38	6.82	12.33	12.70
Invesco Fund II	◆ C	(1.63)	4.75	6.45	13.46
Invesco Fund III	▲ D	8.19	10.47	15.18	20.82
Invesco Asia RE Feeder	▼ E	4.68	43.00	56.44	23.54
Invesco Asia RE Fund III	◀ F	(2.51)	-	-	-
Invesco Value Added Fd IV	○ G	7.63	5.57	-	-
JP Morgan Investment	□ H	1.93	8.72	13.35	13.47
JP Morgan Alternative Fd	◇ I	3.36	3.36	4.15	(12.06)
JP Morgan Greater China Fund	△ J	(1.09)	(1.66)	5.99	24.44
NCREIF Total Index	▲	2.21	8.44	11.84	11.91



		Last 5 Years	Last 10 Years	Last 15 Years	Last 20 Years
10th Percentile		16.89	7.16	11.22	11.53
25th Percentile		14.67	6.00	8.65	10.53
Median		12.66	5.23	7.44	9.31
75th Percentile		10.27	4.03	6.53	9.02
90th Percentile		7.36	(2.50)	5.62	6.86
Total Real Estate	● A	13.50	4.40	4.16	-
Invesco Core Real Estate	■ B	12.36	6.21	7.82	-
Invesco Fund II	◆ C	17.22	-	-	-
Invesco Fund III	▲ D	-	-	-	-
Invesco Asia RE Feeder	▼ E	10.89	-	-	-
Invesco Asia RE Fund III	◀ F	-	-	-	-
Invesco Value Added Fd IV	○ G	-	-	-	-
JP Morgan Investment	□ H	13.58	5.85	7.72	-
JP Morgan Alternative Fd	◇ I	(0.33)	(5.45)	-	-
JP Morgan Greater China Fund	△ J	14.44	-	-	-
NCREIF Total Index	▲	11.93	7.61	8.95	9.89

TIR Teredo
Period Ended March 31, 2016

Investment Philosophy

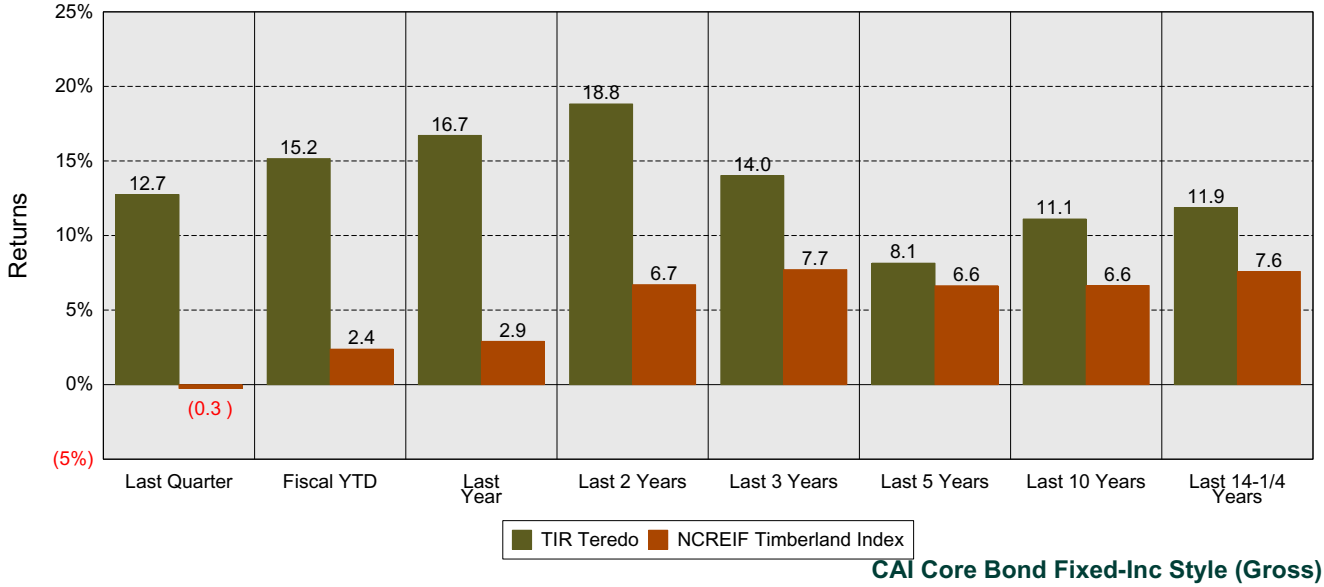
Teredo Timber LLC - The investment objective of Teredo is to provide competitive investment returns from increasing saw timber production through the 20 year term of the partnership. TIR's management strategy is to maximize saw timber volume by applying intensive forest management techniques which accelerate growth through the diameter class distribution. Periodic cash flows are produced from thinning and final harvests of the individual timber stands.

Quarterly Summary and Highlights

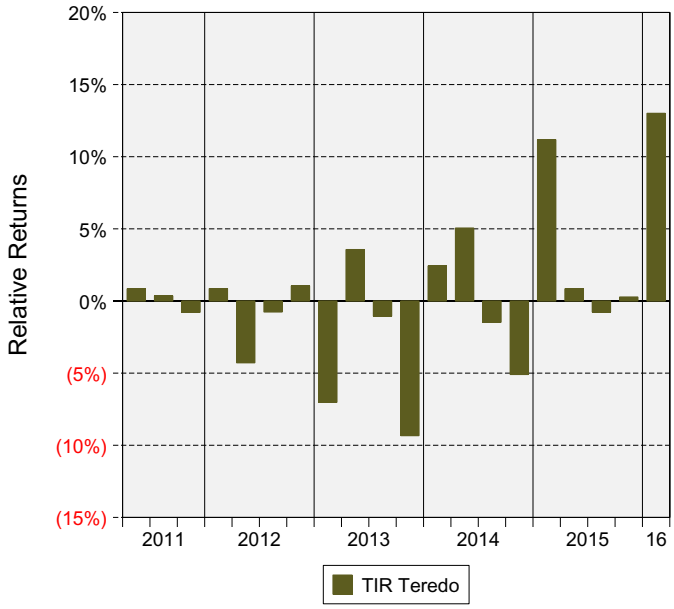
- TIR Teredo's portfolio posted a 12.75% return for the quarter placing it in the 1 percentile of the CAI Core Bond Fixed-Inc Style group for the quarter and in the 1 percentile for the last year.
- TIR Teredo's portfolio outperformed the NCREIF Timberland Index by 13.01% for the quarter and outperformed the NCREIF Timberland Index for the year by 13.81%.

Quarterly Asset Growth

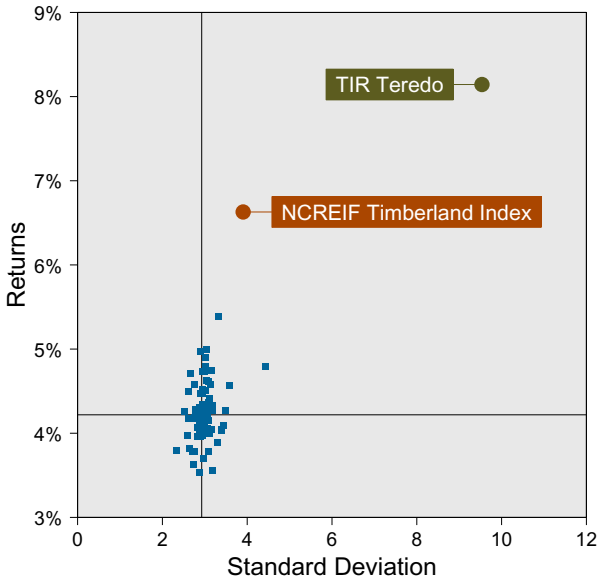
Beginning Market Value	$32,584,238
Net New Investment	$-1,000,000
Investment Gains/(Losses)	$4,052,126
Ending Market Value	$35,636,364



Relative Return vs NCREIF Timberland Index



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



TIR Springbank
Period Ended March 31, 2016

Investment Philosophy

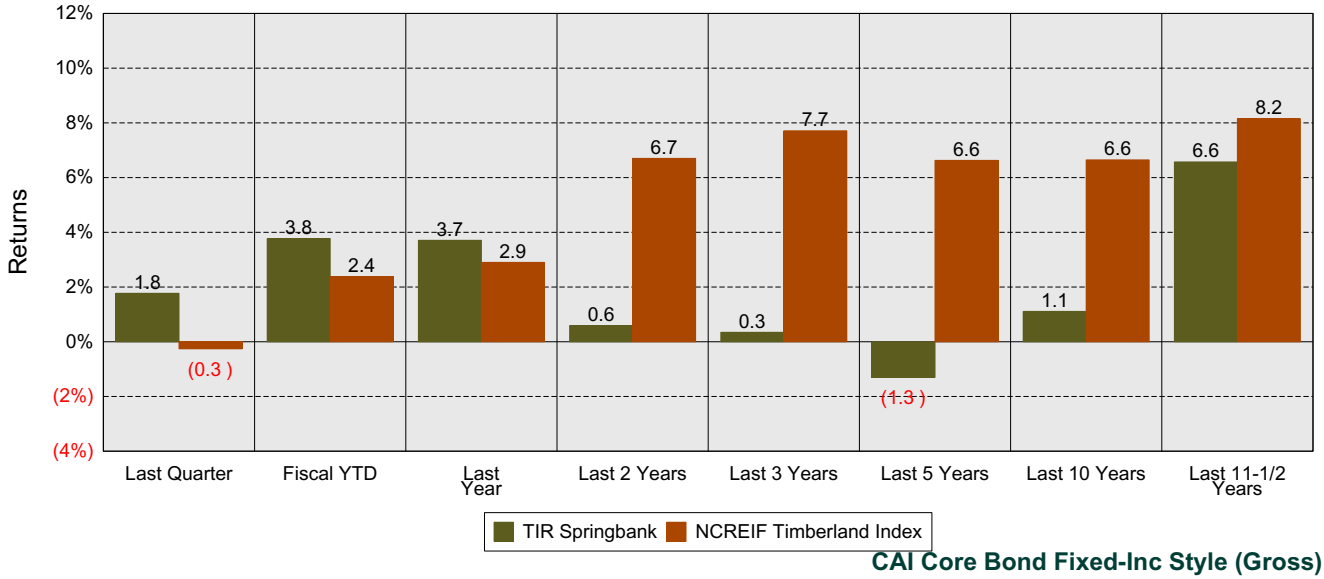
Springbank LLC - The investment objective of Springbank is to maximize long-term investment potential by means of the formation of a dedicated land management group, intensive timber management to increase timber production, the coordination of timber harvesting with land management activities and direct marketing and selective real estate partnerships.

Quarterly Summary and Highlights

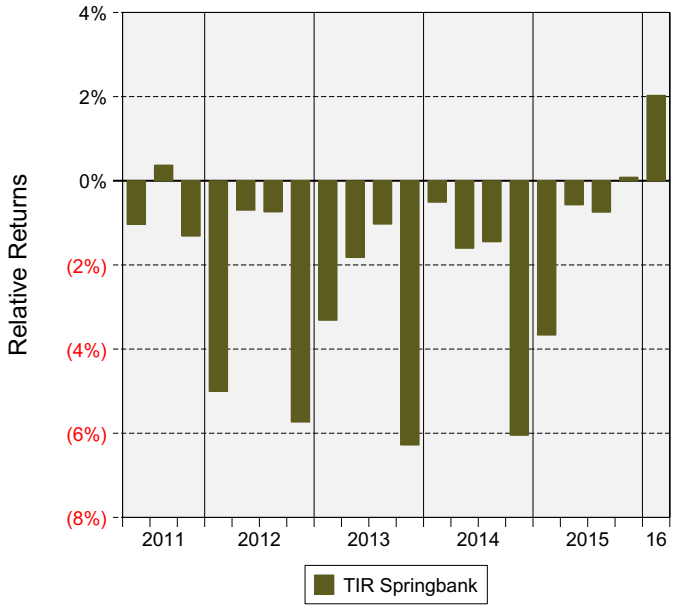
- TIR Springbank's portfolio posted a 1.77% return for the quarter placing it in the 98 percentile of the CAI Core Bond Fixed-Inc Style group for the quarter and in the 1 percentile for the last year.
- TIR Springbank's portfolio outperformed the NCREIF Timberland Index by 2.03% for the quarter and outperformed the NCREIF Timberland Index for the year by 0.81%.

Quarterly Asset Growth

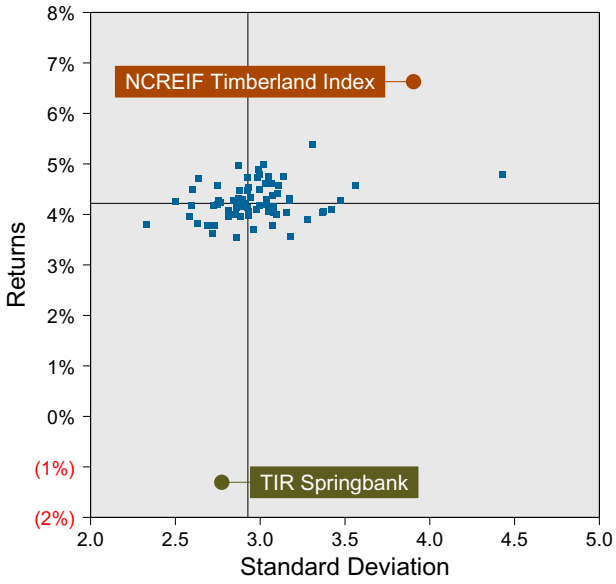
Beginning Market Value	$118,365,222
Net New Investment	$0
Investment Gains/(Losses)	$2,096,122
Ending Market Value	$120,461,344



Relative Return vs NCREIF Timberland Index



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



JP Morgan Asian Infrastructure
Period Ended March 31, 2016

Investment Philosophy

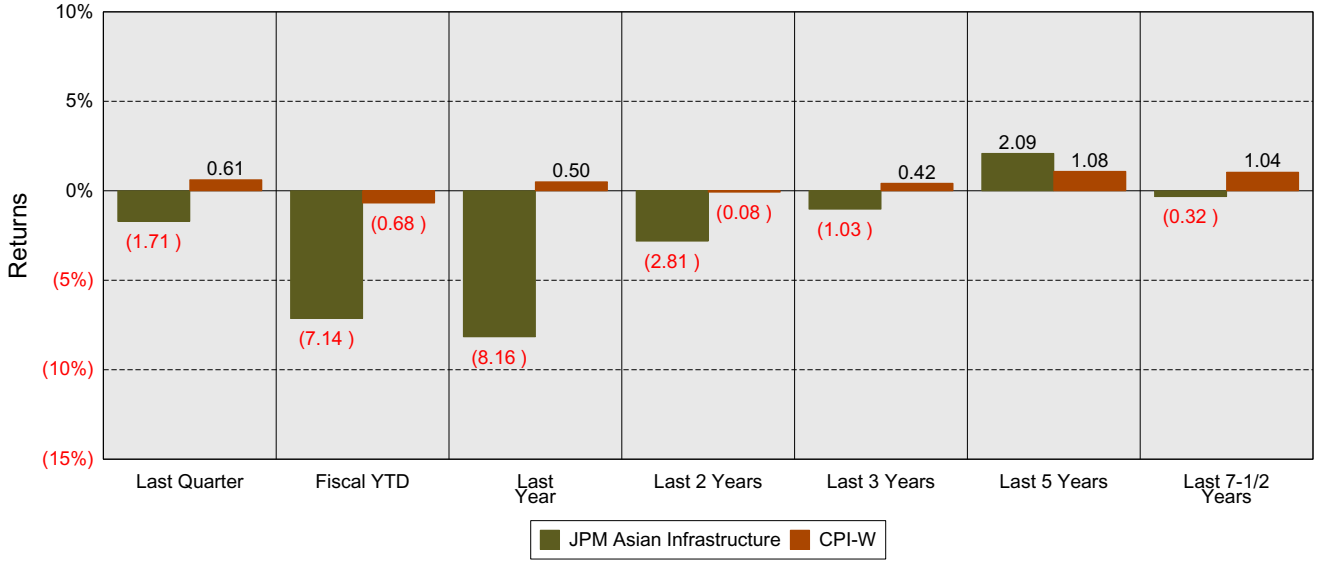
The JPMorgan Asian Infrastructure & Related Resources Opportunity ("AIRRO") Fund seeks to invest in infrastructure and related resources opportunities across the greater Asia Pacific region. The Fund seeks to invest in a broad range of assets, including: core infrastructure, power both from conventional and renewable sources, communications, water and waste-water, public works, urban development and other "social" infrastructure assets and related resources.

Quarterly Summary and Highlights

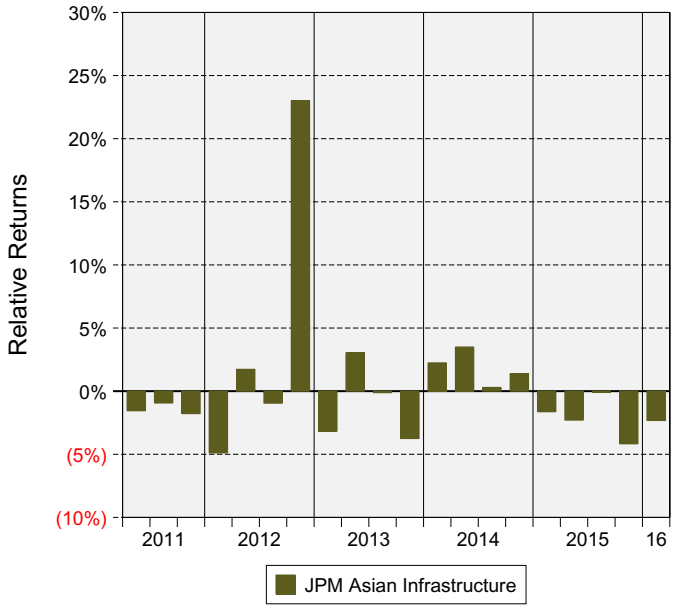
- JPM Asian Infrastructure's portfolio underperformed the CPI-W by 2.32% for the quarter and underperformed the CPI-W for the year by 8.66%.

Quarterly Asset Growth

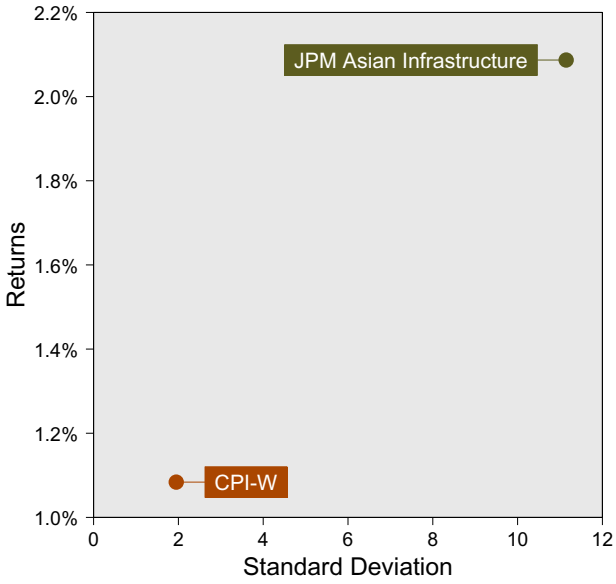
Beginning Market Value	$29,053,590
Net New Investment	$112,597
Investment Gains/(Losses)	$-497,423
Ending Market Value	$28,668,764



Relative Return vs CPI-W



Annualized Five Year Risk vs Return



JPM Infrastructure Fund
Period Ended March 31, 2016

Investment Philosophy

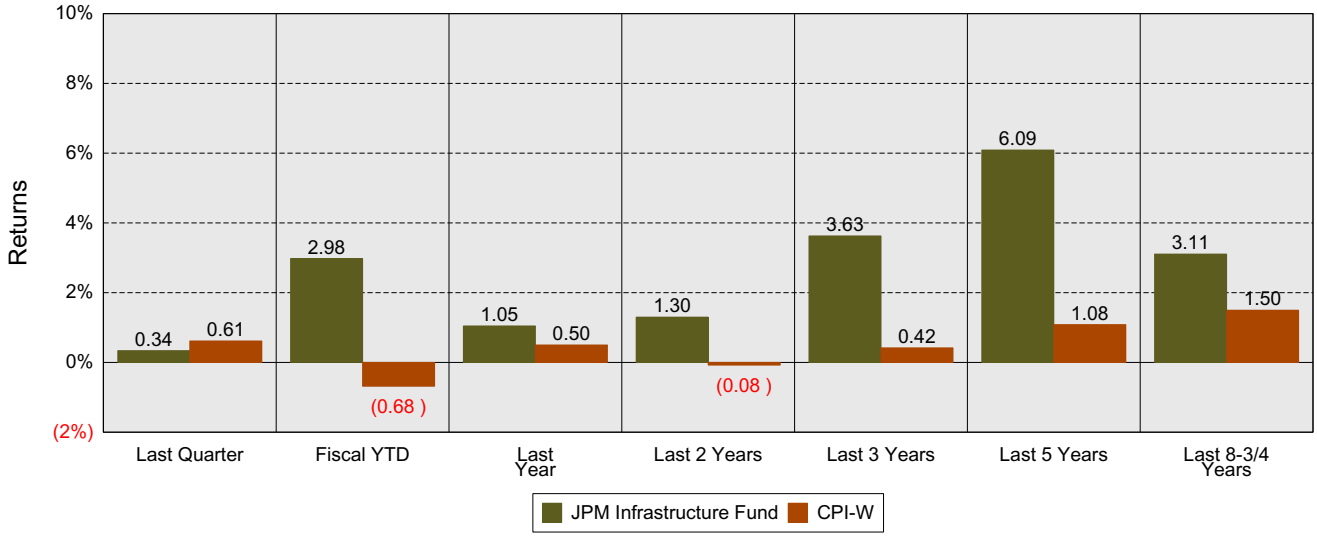
The only open-ended private commingled infrastructure fund in the U.S, the JPMorgan Infrastructure Investments Fund invests in stabilized assets in OECD countries with selected value-added opportunities, across infrastructure industry sub-sectors, including: toll roads, bridges and tunnels; oil and gas pipelines; electricity transmission and distribution facilities; contracted power generation assets; water distribution; waste-water collection and processing; railway lines and rapid rail links; and seaports and airports.

Quarterly Summary and Highlights

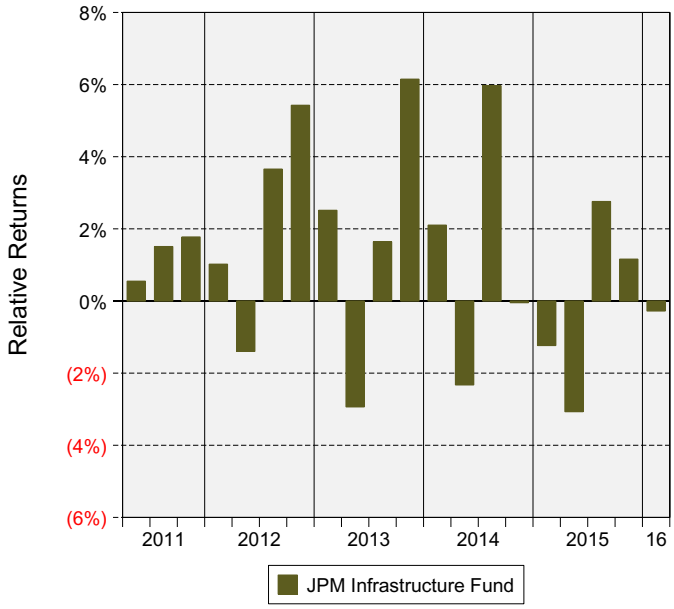
- JPM Infrastructure Fund's portfolio underperformed the CPI-W by 0.28% for the quarter and outperformed the CPI-W for the year by 0.55%.

Quarterly Asset Growth

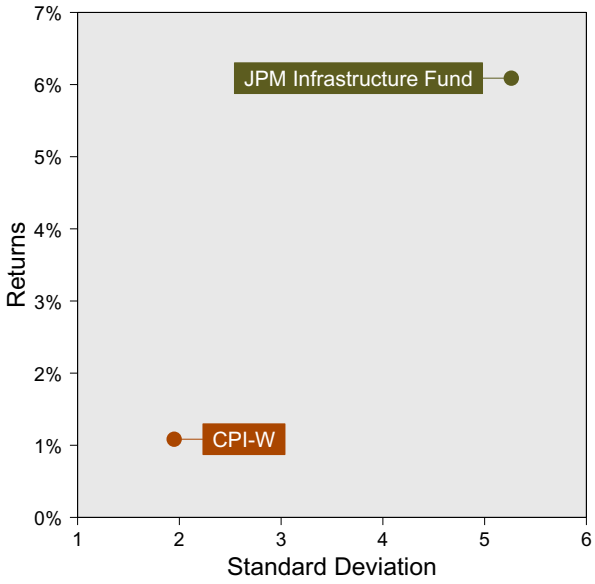
Beginning Market Value	$139,963,800
Net New Investment	$-377,199
Investment Gains/(Losses)	$472,758
Ending Market Value	$140,059,358



Relative Return vs CPI-W



Annualized Five Year Risk vs Return



Grosvenor Cust. Infrastructure
Period Ended March 31, 2016

Investment Philosophy

The Customized Infrastructure Strategies LP is a commingled fund focused on providing a comprehensive, diversified solution for investors looking to access the infrastructure asset class. The Fund seeks to generate stable, long-term yield and attractive risk-adjusted returns by investing in a diversified portfolio of primary core and core plus infrastructure funds (30%), co-investments (40%) and opportunistic secondary fund purchases (30%).

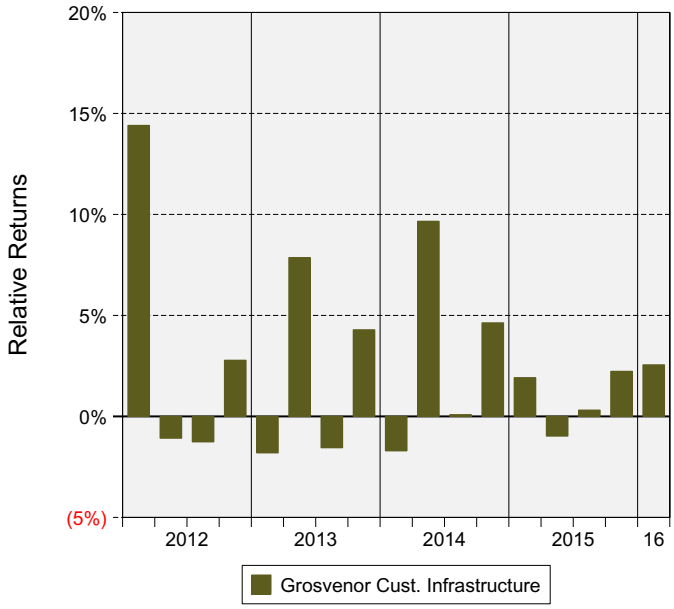
Quarterly Summary and Highlights

- Grosvenor Cust. Infrastructure's portfolio outperformed the CPI-W by 2.55% for the quarter and outperformed the CPI-W for the year by 4.18%.

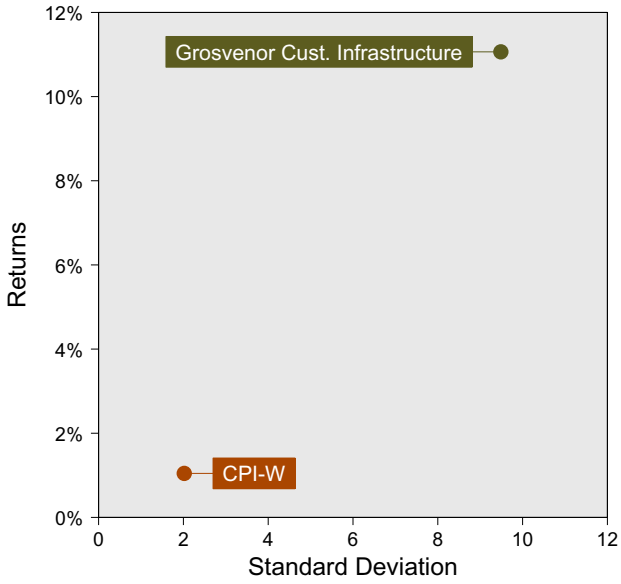
Quarterly Asset Growth

Beginning Market Value	$38,815,319
Net New Investment	$424,201
Investment Gains/(Losses)	$1,242,372
Ending Market Value	$40,481,892

Relative Return vs CPI-W



Annualized Four and One-Quarter Year Risk vs Return



Grosvenor Cust. Infrastructure II
Period Ended March 31, 2016

Investment Philosophy

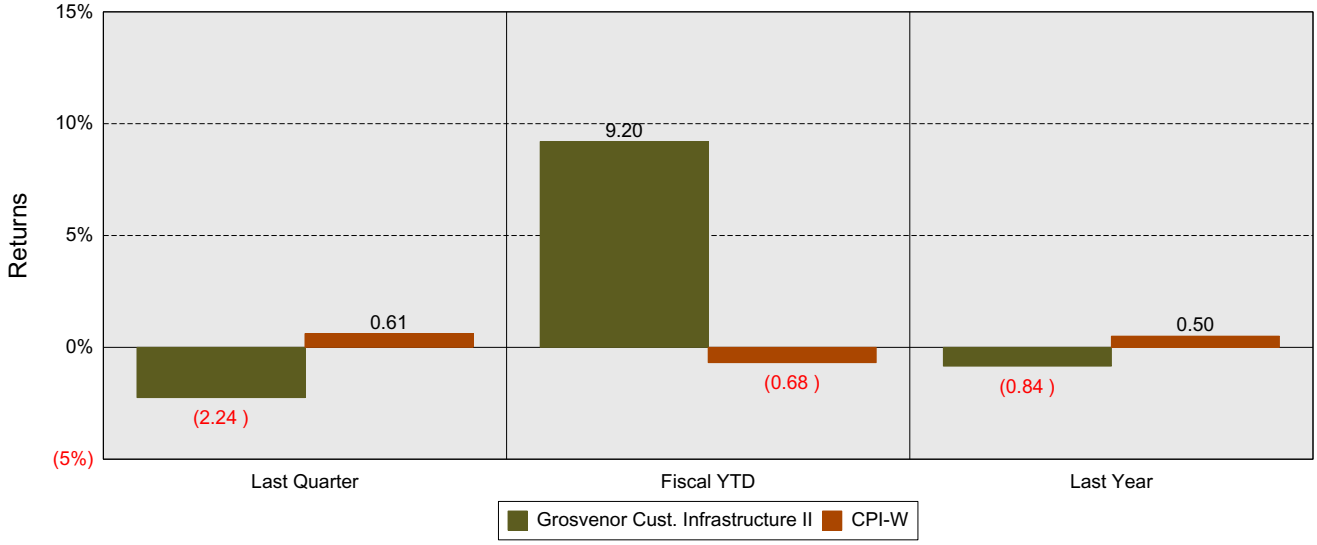
The Customized Infrastructure Strategies LP is a commingled fund focused on providing a comprehensive, diversified solution for investors looking to access the infrastructure asset class. The Fund seeks to generate stable, long-term yield and attractive risk-adjusted returns by investing in a diversified portfolio of primary core and core plus infrastructure funds (30%), co-investments (40%) and opportunistic secondary fund purchases (30%).

Quarterly Summary and Highlights

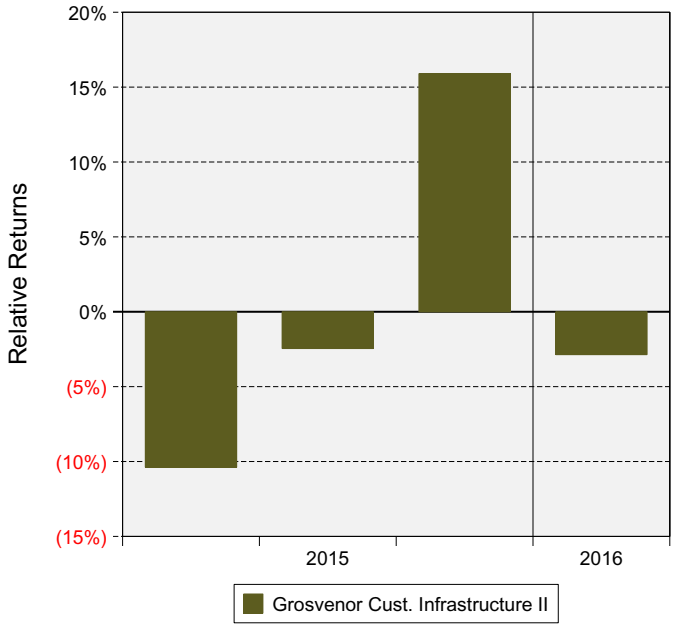
- Grosvenor Cust. Infrastructure II's portfolio underperformed the CPI-W by 2.86% for the quarter and underperformed the CPI-W for the year by 1.34%.

Quarterly Asset Growth

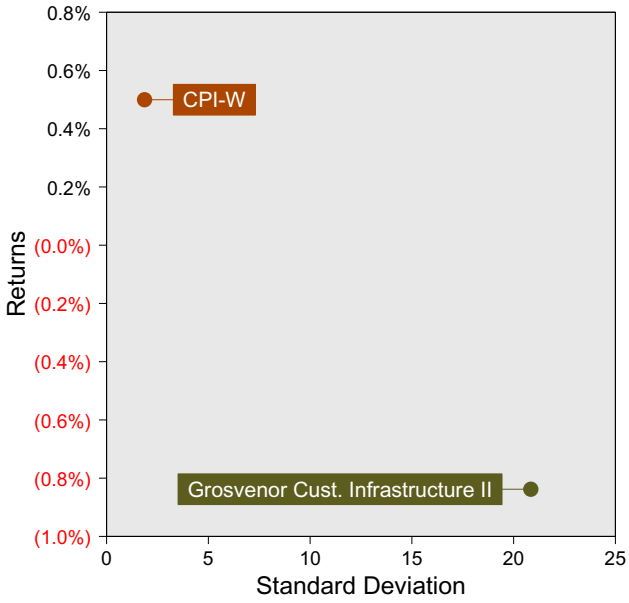
Beginning Market Value	$7,905,756
Net New Investment	$-1,935,981
Investment Gains/(Losses)	$-157,690
Ending Market Value	$5,812,085



Relative Return vs CPI-W



One Year Risk vs Return



Callan

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1st Quarter 2016

Education

Research and Educational Programs

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

Recent Research

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

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

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

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

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

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

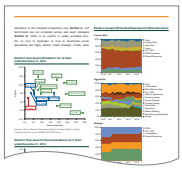
October Regional Workshop Summary We reviewed real assets and the implementation implications of building out a robust real assets allocation in portfolios.

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

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

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

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



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

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

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

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

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

Events

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

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

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

For more information about events, please contact Barb Gerraty: 415.974.5060 / institute@callan.com

The Center for Investment Training Educational Sessions

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

Introduction to Investments

San Francisco, CA, July 19–20, 2016
Chicago, IL, October 18–19, 2016

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

Customized Sessions

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

Learn more at https://www.callan.com/education/college/ or contact Kathleen Cunnie: 415.274.3029 / cunnie@callan.com

Education: By the Numbers

500	Attendees (on average) of the Institute's annual National Conference	**50+**	Unique pieces of research the Institute generates each year
3,300	Total attendees of the "Callan College" since 1994	**1980**	Year the Callan Investments Institute was founded

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

Ron Peyton, Chairman and CEO

Callan

Quarterly List as of March 31, 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
13D Management
1607 Capital Partners, LLC
Aberdeen Asset Management PLC
Acadian Asset Management LLC
AEGON USA Investment Management
Affiliated Managers Group, Inc.
AllianceBernstein
Allianz Global Investors
Allianz Life Insurance Company of North America
AlphaOne Investment Services
American Century Investment Management
Amundi Smith Breeden LLC
Analytic Investors
Angelo, Gordon & Co.
Apollo Global Management
AQR Capital Management
Ares Management LLC
Ariel Investments, LLC
Aristotle Capital Management, LLC
Artisan Holdings
Atlanta Capital Management Co., LLC
Aviva Investors Americas
AXA Investment Managers
Babson Capital Management
Baillie Gifford Overseas Limited
Baird Advisors
Bank of America
Baring Asset Management
Baron Capital Management, Inc.
Barrow, Hanley, Mewhinney & Strauss, LLC
BlackRock
BMO Asset Management, Corp.
BNP Paribas Investment Partners
BNY Mellon Asset Management
Boston Partners
Brandes Investment Partners, L.P.
Brandywine Global Investment Management, LLC

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

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

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

Callan

March 31, 2016

North Dakota State Investment Board Insurance Trust

Investment Measurement Service Quarterly Review

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

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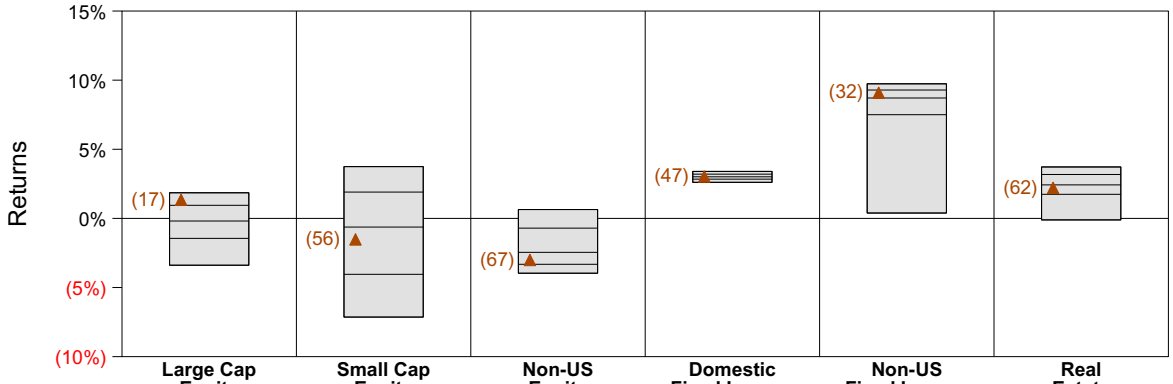
Market Overview
Active Management vs Index Returns

Market Overview

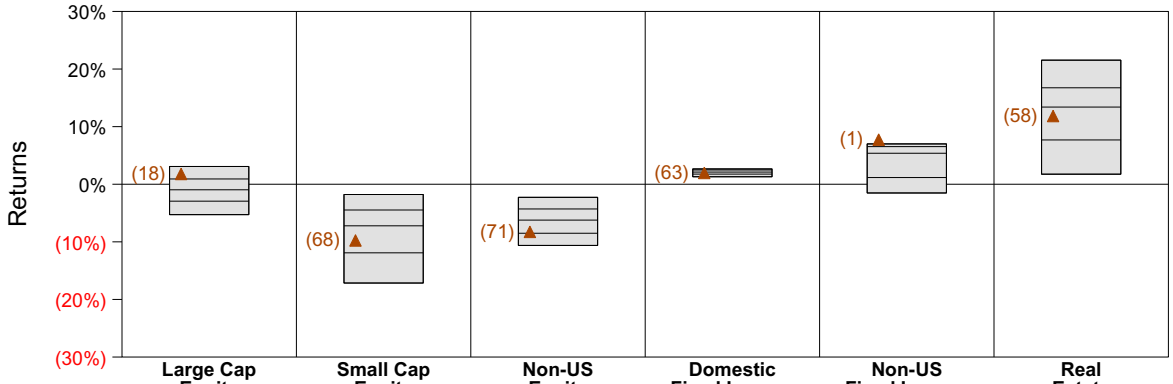
The charts below illustrate the range of returns across managers in Callan's Separate Account database over the most recent one quarter and one year time periods. The database is broken down by asset class to illustrate the difference in returns across those asset classes. An appropriate index is also shown for each asset class for comparison purposes. As an example, the first bar in the upper chart illustrates the range of returns for domestic equity managers over the last quarter. The triangle represents the S&P 500 return. The number next to the triangle represents the ranking of the S&P 500 in the Large Cap Equity manager database.

Range of Separate Account Manager Returns by Asset Class
One Quarter Ended March 31, 2016



	Large Cap Equity vs S&P 500	Small Cap Equity vs Russell 2000	Non-US Equity vs MSCI EAFE	Domestic Fixed Income vs Barclays Aggr Bd	Non-US Fixed Income vs Citi Non-US Govt	Real Estate vs NCREIF Index
10th Percentile	1.85	3.75	0.64	3.40	9.74	3.72
25th Percentile	0.95	1.90	(0.70)	3.20	9.29	3.18
Median	(0.19)	(0.63)	(2.46)	3.01	8.71	2.42
75th Percentile	(1.45)	(4.04)	(3.32)	2.84	7.50	1.74
90th Percentile	(3.39)	(7.14)	(3.97)	2.61	0.39	(0.11)
Index ▲	1.35	(1.52)	(3.01)	3.03	9.10	2.21

Range of Separate Account Manager Returns by Asset Class
One Year Ended March 31, 2016



	Large Cap Equity vs S&P 500	Small Cap Equity vs Russell 2000	Non-US Equity vs MSCI EAFE	Domestic Fixed Income vs Barclays Aggr Bd	Non-US Fixed Income vs Citi Non-US Govt	Real Estate vs NCREIF Index
10th Percentile	3.08	(1.78)	(2.27)	2.66	7.00	21.54
25th Percentile	0.92	(4.47)	(4.29)	2.48	6.53	16.75
Median	(0.96)	(7.22)	(6.23)	2.11	5.38	13.40
75th Percentile	(2.94)	(11.91)	(8.51)	1.76	1.16	7.69
90th Percentile	(5.28)	(17.15)	(10.63)	1.30	(1.52)	1.75
Index ▲	1.78	(9.76)	(8.27)	1.96	7.74	11.84

Callan

Capital Market Review

First Quarter 2016

Don't Believe the Hype (or the Markets)

ECONOMY

2 PAGE

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

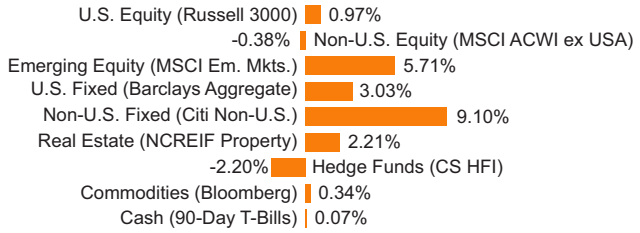
Progress Discounted

FUND SPONSOR

4 PAGE

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

Broad Market Quarterly Returns



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

Tale of Two Halves

U.S. EQUITY

6 PAGE

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

Mr. Draghi's Wild Ride

NON-U.S. EQUITY

9 PAGE

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

More T-Bills, Please

U.S. FIXED INCOME

12 PAGE

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

A Dole of Doves

NON-U.S. FIXED INCOME

15 PAGE

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

Slow and Low

REAL ESTATE

17 PAGE

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

Drip, Drip, Drip

PRIVATE EQUITY

19 PAGE

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

Market Tremors Panic Hedge Funds

HEDGE FUNDS

20 PAGE

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

Strong Quarter Can't Save 2015

DEFINED CONTRIBUTION

21 PAGE

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

Don't Believe the Hype (or the Markets)

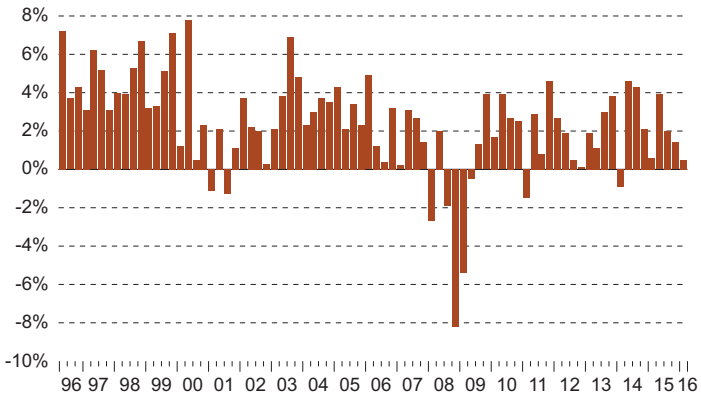
ECONOMY | Jay Kloepfer

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

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

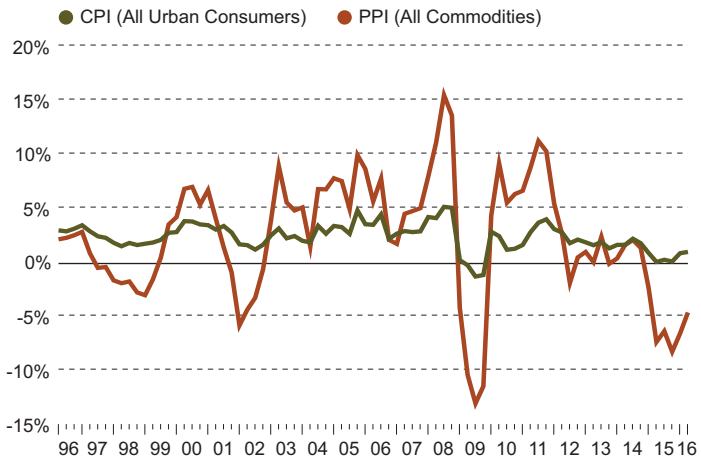
Real GDP growth has continued a familiar pattern, showing anemic first-quarter growth in five of the past six years. Such a pattern is a recent development in U.S. economic history, and suggests (to us) that part of this weakness may in fact be a problematic seasonal-adjustment process within the data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

Quarterly Real GDP Growth (20 Years)



Source: Bureau of Economic Analysis

Inflation Year-Over-Year



Source: Bureau of Labor Statistics

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

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

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

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

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

The Long-Term View

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

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

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

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

Recent Quarterly Indicators

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

*Estimate.

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

Progress Discounted

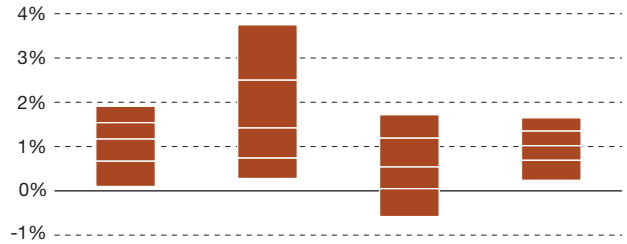
FUND SPONSOR | Rufash Lama

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

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

Looking at the Callan Fund Sponsor Quarterly Returns table, we see corporate funds outperformed other fund types at the median and across percentiles. Performance dispersion was highest in the 10th percentile: corporate funds gained 3.75%, due in part to their high U.S. fixed income exposure, while at the low end of the spectrum Taft-Hartley funds ended the quarter at +1.65%. Endowments/foundations trailed significantly in the 90th percentile at -0.58%. Overall, endowments/foundations performed the worst due to a relatively high exposure to non-U.S. equity and low exposure to U.S. fixed income. Public funds were buoyed by greater exposure to non-U.S. fixed income as accommodative central bank policies helped fixed income markets stage a strong rally. The Barclays Global Aggregate Index gained 5.90% for the quarter.

Callan Fund Sponsor Returns for the Quarter



	Public Database	Corporate Database	Endow/Fndn Database	Taft-Hartley Database
10th Percentile	1.91	3.75	1.72	1.65
25th Percentile	1.54	2.50	1.19	1.35
Median	1.17	1.42	0.54	1.02
75th Percentile	0.67	0.74	0.05	0.69
90th Percentile	0.10	0.28	-0.58	0.24

Source: Callan

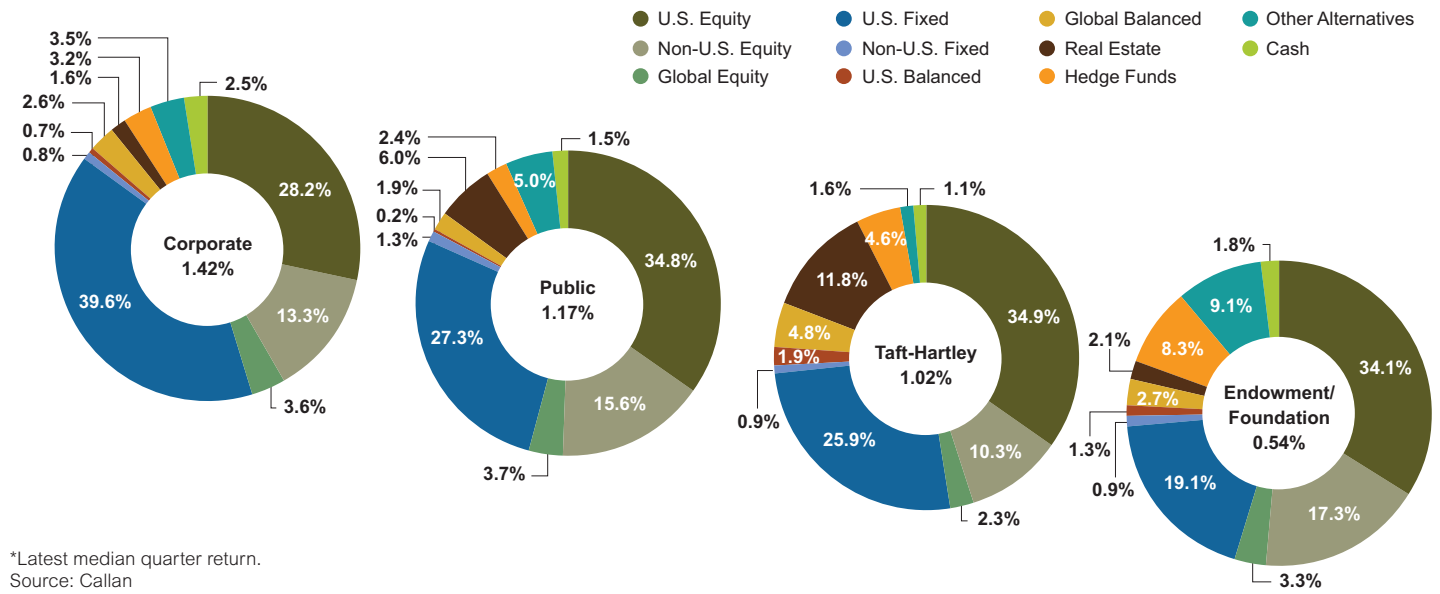
Callan Database Median and Index Returns for Periods ended March 31, 2016**

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

* The peer group includes funded ratio measures provided by large, institutional investment and actuarial consultants, as well as investment management firms.
**Returns less than one year are not annualized.
Sources: Callan, Barclays, MSCI, Russell Investment Group.

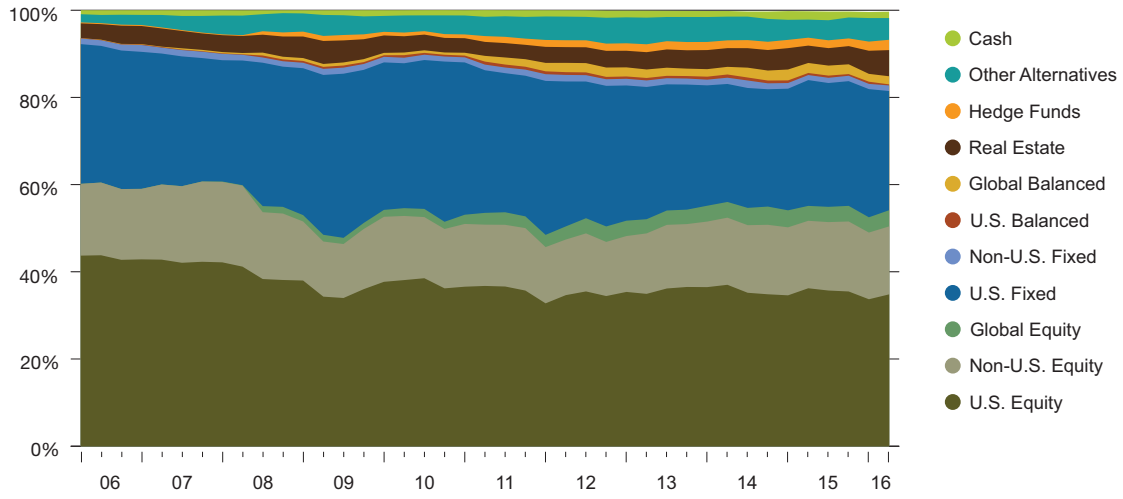
While one-year returns were consistently in the red, all fund types maintained performance in the +5% – +7% range for longer time periods. Taft-Hartley funds kept their lead over other fund types during three- and five-year periods, and corporate funds boasted the top returns over longer periods (10 and 15 years). Although the blended 60% Russell 3000 + 40% Barclays Aggregate Index (+1.79%) trailed the 60% MSCI World + 40% Barclays Global Aggregate Index (+2.15%) for the quarter, the U.S.-based benchmark continues to outperform over longer time periods. Callan's U.S. Balanced Database group maintained its edge over the Global Balanced Database group across all but the longest time periods shown in the table.

Callan Fund Sponsor Average Asset Allocation



*Latest median quarter return.
Source: Callan

Callan Public Fund Database Average Asset Allocation (10 Years)



Source: Callan

Tale of Two Halves

U.S. EQUITY | Lauren Mathias, CFA

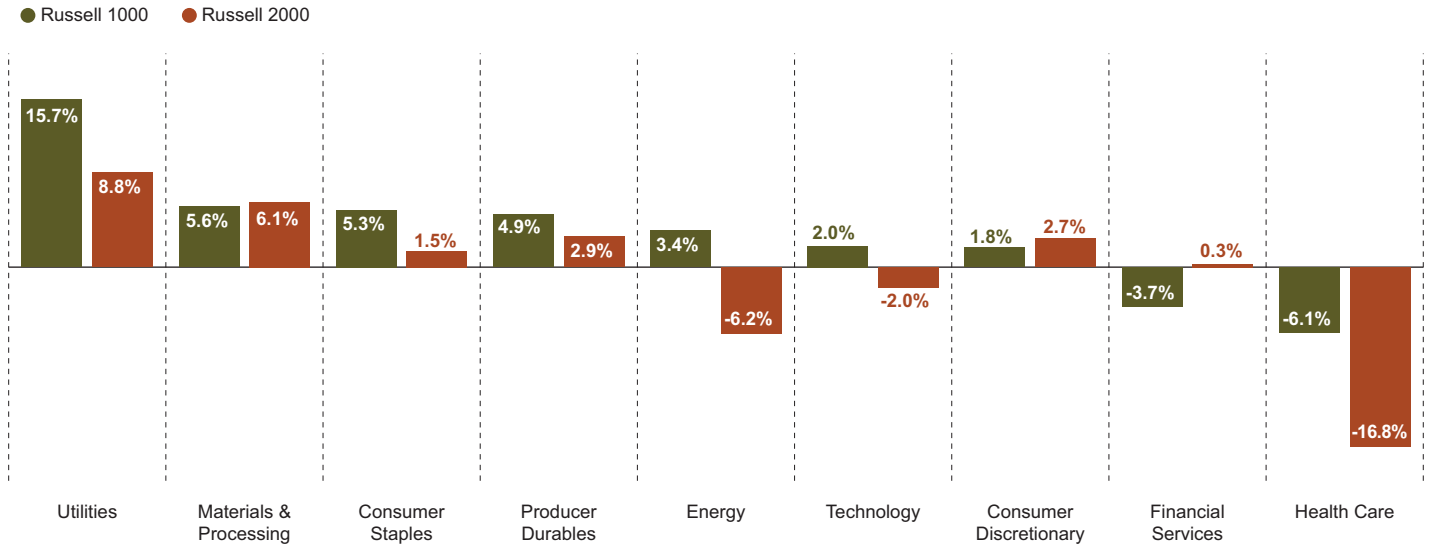
The first quarter of 2016 was a tale of two halves: the **S&P 500 Index** declined in the first half only to reverse course and post a positive quarterly return (+1.35%). Large cap companies held their lead over small cap, but in the trend of reversals, value overtook growth in all capitalizations. (**Russell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

Though the S&P 500 Index ended in positive territory, during the quarter performance dipped 10%. This is the first time since the Great Depression that the S&P fell to this depth only to rebound and end in the black. January was a disappointing month as economic concerns lingered from 2015. But in February and March, U.S. manufacturing activity grew, fourth-quarter 2015 GDP was revised to 1.4% from 1.0%, the labor force participation rate expanded to 63% (from 62.4%), and the U.S. economy added 215,000 jobs in March alone. Global concerns around the price of oil abated as the crude oil spot price ended the quarter at $38/barrel after bottoming at $26/barrel in mid-February. Investor sentiment rose in tandem with these positive developments. Despite some improvement, the U.S. Federal Reserve stated that global economic and financial developments continued to pose risks, and thus maintained the target range for the federal funds rate at 0.25%–0.50%.

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

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

Economic Sector Quarterly Performance



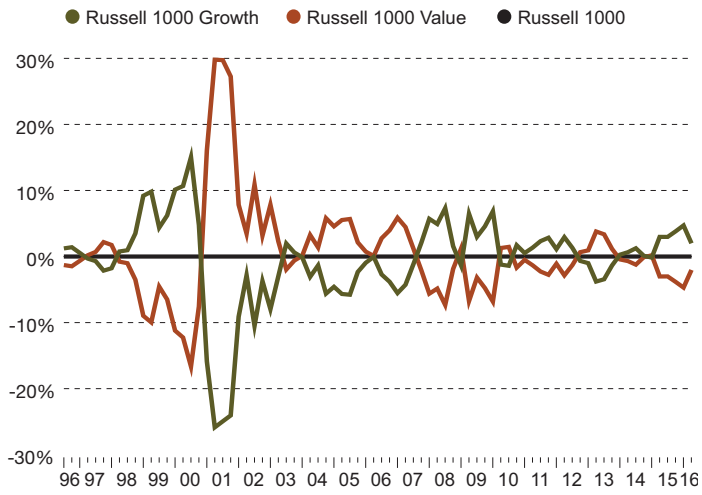
Source: Russell Investment Group

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

value, and the interest rate-sensitive Utilities sector expanded, but typically defensive Health Care trailed. Not only did sectors turnabout, so did factors—valuation metrics such as price/book and yield outpaced growth metrics such as projected EPS growth and price momentum. Volatility of stocks, as measured by the daily VIX, increased during February's pullback, ending the quarter near average levels. Correlations remained well above long-term averages and spreads between stock returns were below average (both based on the S&P 500 universe)—a difficult environment for stock-picking strategies.

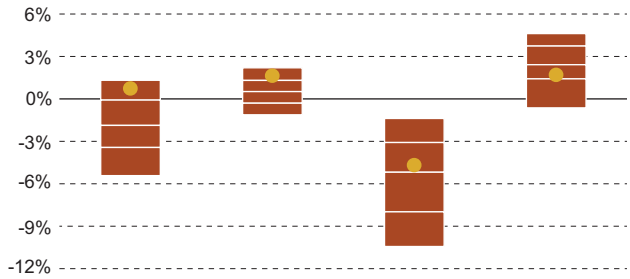
The U.S. equity market had a tumultuous start to the year, but found itself in positive territory by quarter end. This tale of two halves made it challenging for active management, with just 19% of large cap funds outperforming the S&P 500 Index during the quarter.

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



Source: Russell Investment Group

Callan Style Group Quarterly Returns



	Large Cap Growth Style	Large Cap Value Style	Small Cap Growth Style	Small Cap Value Style
10th Percentile	1.32	2.20	-1.38	4.62
25th Percentile	-0.08	1.31	-3.08	3.74
Median	-1.87	0.52	-5.18	2.42
75th Percentile	-3.43	-0.30	-7.98	1.42
90th Percentile	-5.42	-1.12	-10.43	-0.63
	R1000 Growth	**R1000 Value**	**R2000 Growth**	**R2000 Value**
Benchmark	0.74	1.64	-4.68	1.70

Sources: Callan, Russell Investment Group

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

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

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

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

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

*Returns less than one year are not annualized.
Sources: Callan, Dow Jones & Company, Russell Investment Group, Standard & Poor's, The NASDAQ Stock Market.

Mr. Draghi's Wild Ride

NON-U.S. EQUITY | Kevin Nagy

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

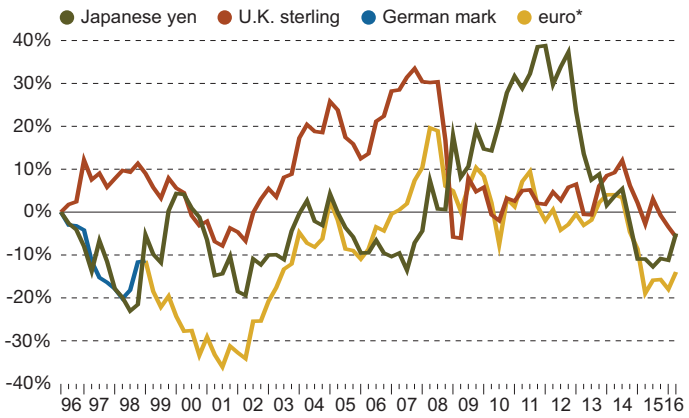
Falling oil prices, concerns about global economic growth, and declining corporate profits prompted a January sell-off, as many investors switched to a "risk-off" footing. Announcements of further European Central Bank (ECB) monetary stimulus and a modest rebound in commodity prices helped kick-start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

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

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

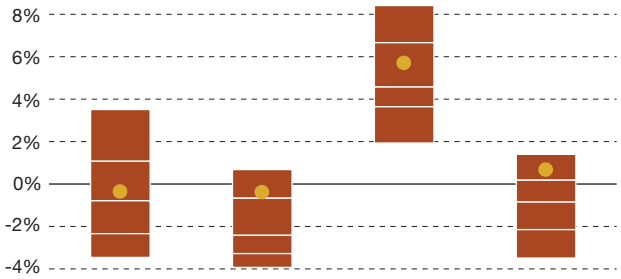
Southeast Asia and the Pacific (**MSCI Pacific Index**: -3.79%) underperformed Europe and other broad benchmarks. Japan (-6.52%) battled with tepid economic growth and large losses in the banking sector. The Financial sector was hit especially hard, losing 13.58%. Exporters also struggled due to the strengthening yen. Things were less gloomy in the rest of the region with New Zealand (+11.60%), Singapore (+5.05%), and Australia (+2.10%) benefitting from a commodities rally.

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



*euro returns from 1Q99
Source: MSCI

Callan Style Group Quarterly Returns

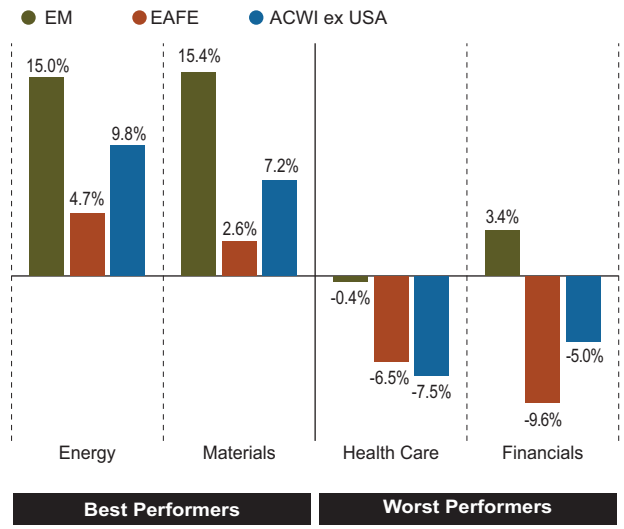


	Global Eq Style	Non-U.S. Eq Style	Emg Mkt Style	Small Cap Style
10th Percentile	3.47	0.64	8.37	1.36
25th Percentile	1.03	-0.71	6.62	0.14
Median	-0.83	-2.46	4.53	-0.89
75th Percentile	-2.38	-3.32	3.60	-2.19
90th Percentile	-3.50	-3.97	1.89	-3.53
	MSCI World	MSCI ACWI ex USA	MSCI Emg Mkts	MSCI ACWI ex USA SC
Benchmark	-0.35	-0.38	5.71	0.68

Sources: Callan, MSCI

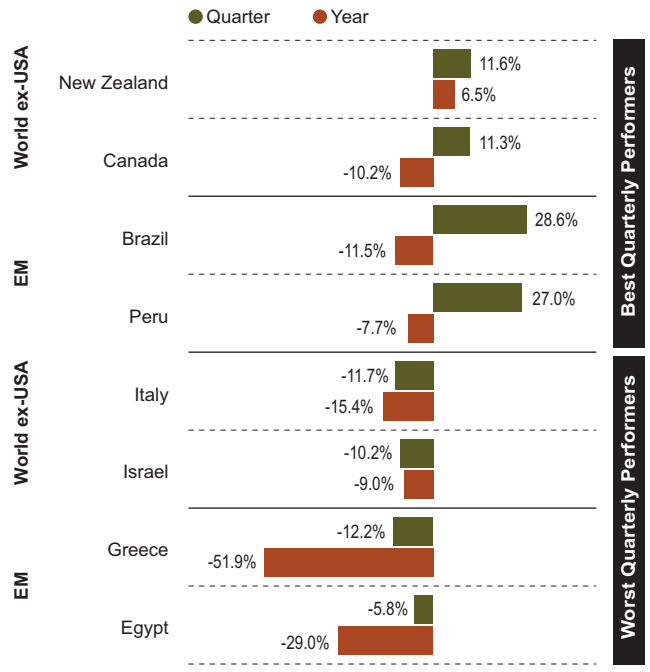
China (-4.80%) continued to struggle due to concerns over slowing growth and ineffective monetary policy. In an effort to sustain the economy's growth, Chinese authorities implemented selective capital controls to slow asset withdrawals and cut the required reserve ratio. Consumer Discretionary (-10.75%),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

Quarterly Returns: Strong and Struggling Sectors



Source: MSCI

Quarterly and Annual Country Performance Snapshot



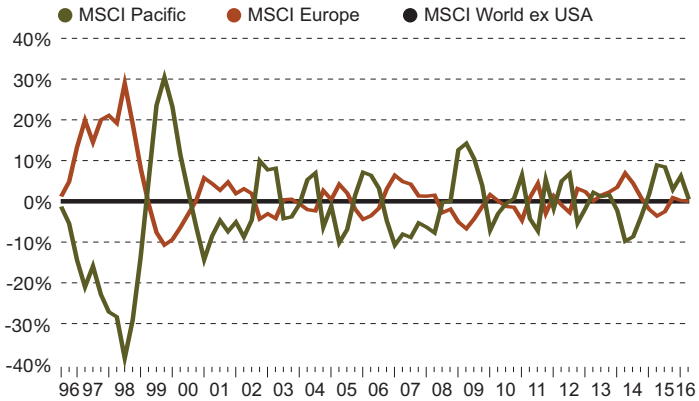
Source: MSCI

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

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

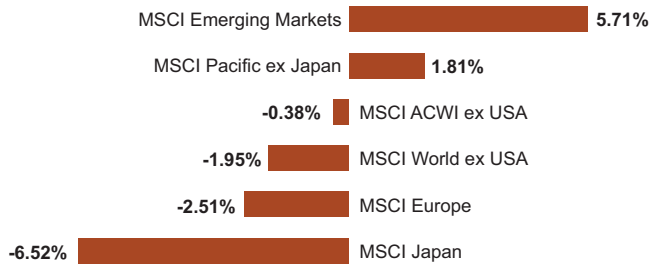
Sources: MSCI, Russell Investment Group, Standard & Poor's.

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



Source: MSCI

Regional Quarterly Performance (U.S. Dollar)



Source: MSCI

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

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

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

More T-Bills, Please

U.S. FIXED INCOME | Irina Sushch

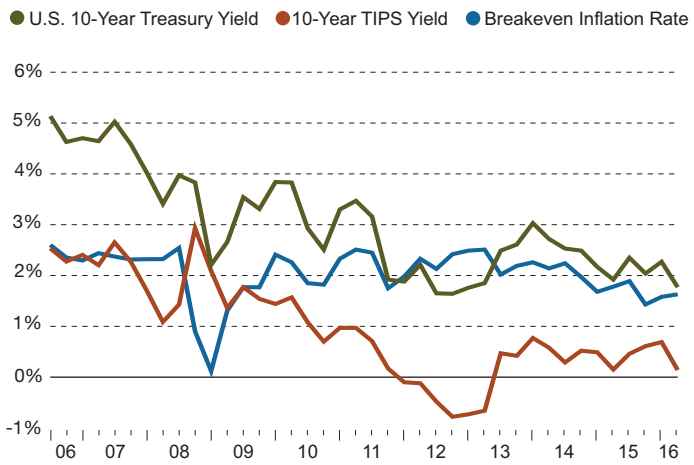
Yields plummeted during a volatile first quarter. A dovish Fed fostered uncertainty over global economic growth. **The Barclays Aggregate Index** gained 3.03% and the **Barclays Corporate High Yield Index** was up 3.35%.

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

Following December's federal funds rate hike, the Federal Reserve took on a neutral outlook. The Fed stated that financial and economic conditions are less favorable than they had been in December. The U.S. economy experienced modest growth despite improving employment and housing numbers. Fed chair Janet Yellen stated that the U.S. economy would have to get much worse before the Fed would consider the use of negative interest rates (six other central banks have implemented negative interest rates). The 10-year U.S. Treasury yield tumbled to 1.77%. The breakeven inflation rate (the difference between nominal and real yields) on 10-year Treasuries ticked up 1.63% as TIPS fell 55 bps, in line with their nominal counterparts.

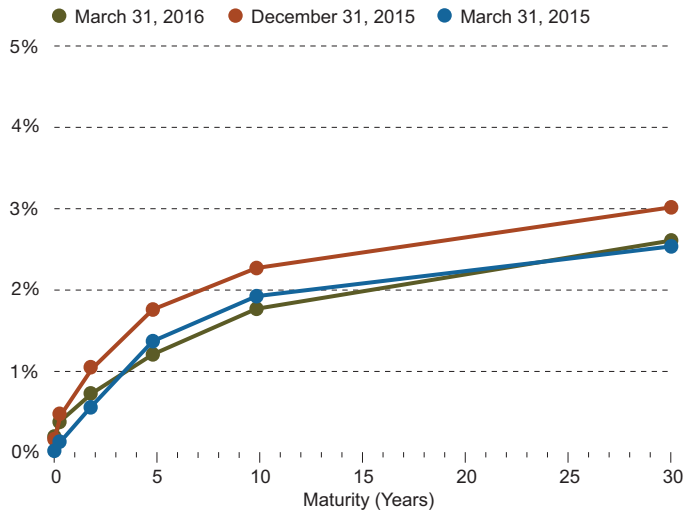
Sectors in the Barclays Aggregate posted positive returns across the board. CMBS outperformed like-duration Treasuries by 0.58% and rose 3.61% for the quarter. Credit was the highest returning sector (+3.92%), but only beat like-duration Treasuries

Historical 10-Year Yields



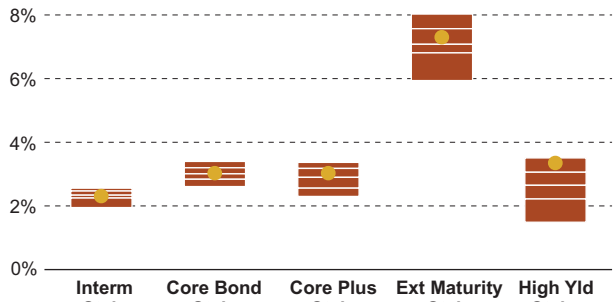
Source: Bloomberg

U.S. Treasury Yield Curves



Source: Bloomberg

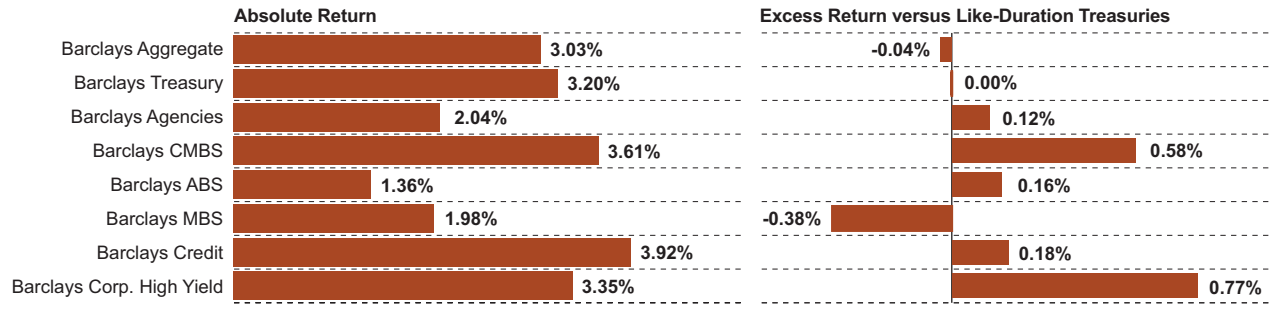
Callan Style Group Quarterly Returns



	Interm Style	Core Bond Style	Core Plus Style	Ext Maturity Style	High Yld Style
10th Percentile	2.56	3.40	3.37	8.03	3.51
25th Percentile	2.47	3.20	3.18	7.57	3.06
Median	2.34	3.01	2.90	7.08	2.65
75th Percentile	2.25	2.84	2.56	6.81	2.22
90th Percentile	1.95	2.61	2.30	5.94	1.49
	Barclays Interm Agg	Barclays Agg	Barclays Agg	Barclays Long G/C	Barclays High Yld
Benchmark	2.31	3.03	3.03	7.30	3.35

Sources: Barclays, Callan

Fixed Income Index Quarterly Returns

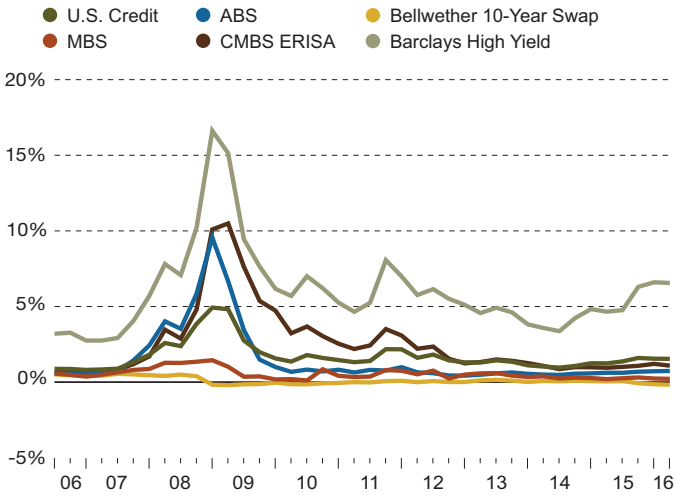


Source: Barclays

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

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

Effective Yield Over Treasuries



Source: Barclays

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

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

Source: Barclays

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

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

*Returns for less than one year are not annualized.

Sources: Barclays, Callan, Citigroup, Merrill Lynch.

A Dole of Doves

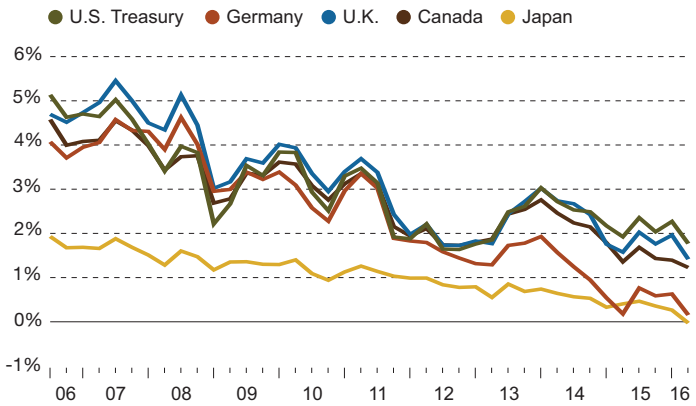
NON-U.S. FIXED INCOME | Kyle Fekete

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

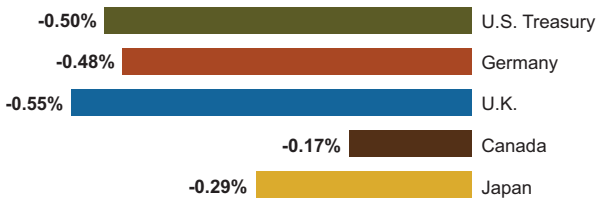
The U.S. dollar weakened versus most currencies during the quarter, providing a tailwind to unhedged foreign bond returns. The yen gained 7% versus the dollar as investors sought its safe-haven status amid market turbulence in China and concerns over the health of the European banking sector. The euro was also stronger versus the dollar (+5%). In March, the ECB continued its accomodative stance, slashing interest rates and increasing asset purchases. For the first time, the ECB included non-bank investment grade corporate bonds in its asset purchase program. Interest rates fell across developed markets, further bolstering returns. The **Barclays Global Aggregate** rose 5.90% (+3.28% hedged).

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

10-Year Global Government Bond Yields



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



Source: Bloomberg

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

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

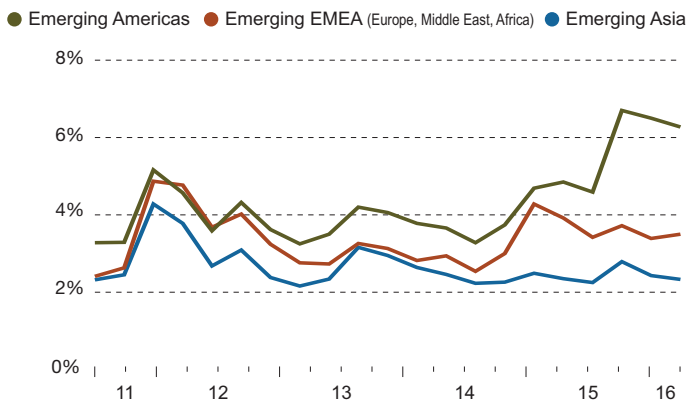
Source: Citigroup

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

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

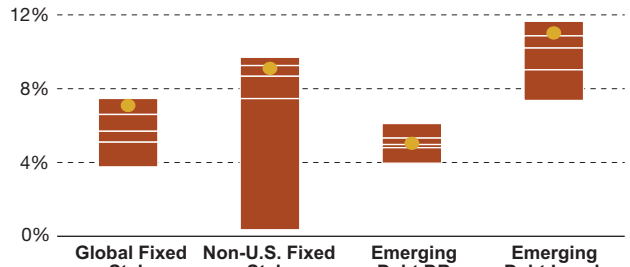
Emerging market bonds rebounded. In late February and March, commodity prices stabilized, risk appetite returned, and confidence in the Chinese renminbi stabilized. The hard currency **JPM EMBI Global Diversified Index** rose 5.04% while the local currency **JPM GBI-EM Global Diversified** soared 11.02%,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

Emerging Spreads Over Developed (By Region)



Source: Barclays

Callan Style Group Quarterly Returns



	Global Fixed Style	Non-U.S. Fixed Style	Emerging Debt DB	Emerging Debt Local
10th Percentile	7.51	9.74	6.15	11.69
25th Percentile	6.64	9.29	5.36	10.90
Median	5.73	8.71	5.01	10.24
75th Percentile	5.14	7.50	4.84	9.06
90th Percentile	3.80	0.39	4.00	7.40
	Citi World Gov	Citi Non-U.S. World Gov	JPM EMBI Gl Div	JPM GBI-EM Gl Div
Benchmark ●	7.09	9.10	5.04	11.02

Sources: Callan, Citigroup, JPMorgan Chase

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

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

*Returns less than one year are not annualized.
Sources: Callan, Citigroup, JPMorgan Chase.

Slow and Low

REAL ESTATE | Avery Robinson

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

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

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

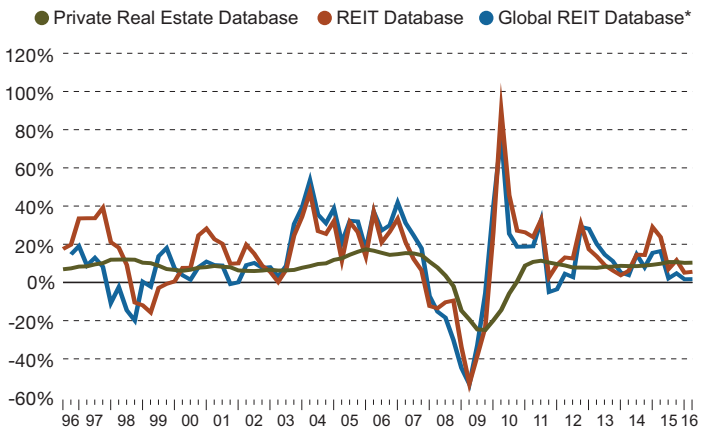
In the listed real estate market, the **FTSE EPRA/NAREIT Developed REIT Index (USD)** gained 5.43% and U.S. REITs tracked by the **FTSE NAREIT Equity REITs Index** advanced 6.00%.

In the U.S., volatility continued as REIT sectors rebounded sharply in March to generate positive returns for the quarter. Sector performance was led once again by Self-Storage (+10.85%), followed by Retail (+8.21%), Residential (+8.38%), and Industrial (+6.49%). The only negative was single family homes (-1.03%). As of March 31, U.S. REITs were trading at a 3% premium to net asset value. This marked the first time REITs have traded at a premium over the past 10 months. U.S. REITs raised $15.1 billion, despite no IPO activity for the quarter. There were 24 secondary equity offerings and 14 secondary debt offerings.

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

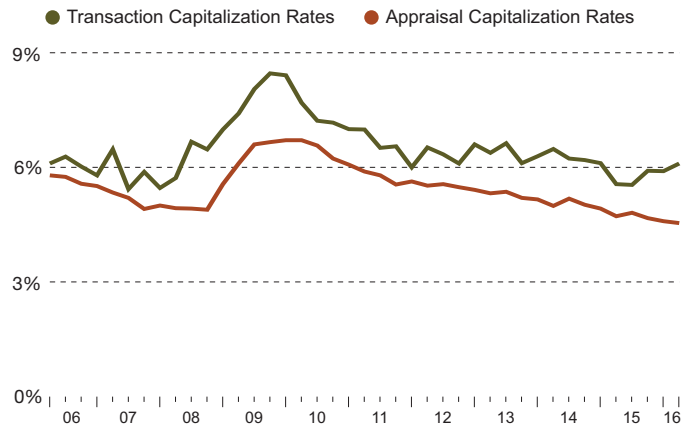
CMBS issuance reached $19.3 billion, significantly down from the first quarter of 2015 ($27.0 billion). This decline was widely credited to the instability in the broader financial market.

Rolling One-Year Returns



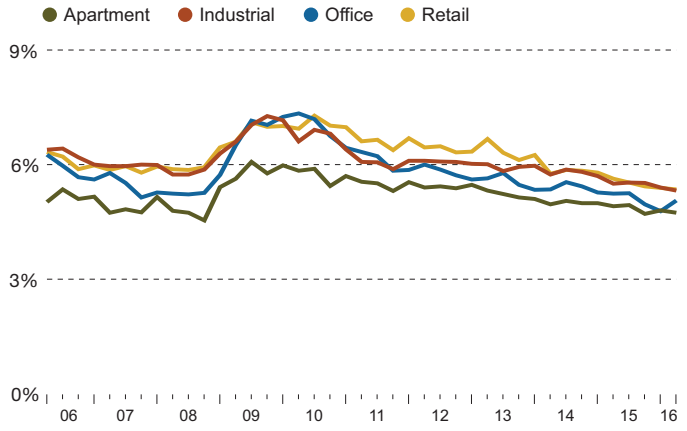
*Global REIT returns from 3Q96
Source: Callan

NCREIF Transaction and Appraisal Capitalization Rates



Source: NCREIF
Note: Transaction capitalization rate is equal-weighted.

NCREIF Capitalization Rates by Property Type



Source: NCREIF
Note: Capitalization rates are appraisal-based.

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

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

*Returns for less than one year are not annualized.
All REIT returns are reported gross in USD.
Sources: Callan, NAREIT, NCREIF, The FTSE Group. NCREIF statistics are the product of direct queries and may fluctuate over time.

Drip, Drip, Drip

PRIVATE EQUITY | Gary Robertson

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

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

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

Regarding exits, *Buyouts* reports that steep declines occurred in the first quarter of 2016. There were 107 private M&A exits of buyout-backed companies, with 31 deals disclosing values totaling $14.6 billion. The M&A exits count was down 27% year-over-year from 147, and the announced value declined 53% from $30.9 billion. There were no buyout-backed IPOs in the first quarter.

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

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

Funds Closed January 1 to March 31, 2016

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

Source: Private Equity Analyst

Private Equity Performance Database (%) (Pooled Horizon IRRs through Sept. 30, 2015*)

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

Private equity returns are net of fees.
Sources: Standard & Poor's, Thomson/Cambridge.
*Most recent data available at time of publication.

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

Market Tremors Panic Hedge Funds

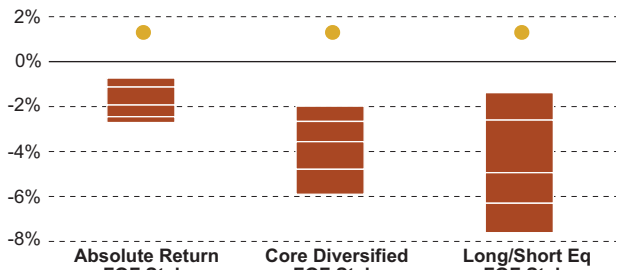
HEDGE FUNDS | Jim McKee

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

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

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

Callan Style Group Quarterly Returns



	Absolute Return FOF Style	Core Diversified FOF Style	Long/Short Eq FOF Style
10th Percentile	-0.73	-1.98	-1.38
25th Percentile	-1.13	-2.66	-2.60
Median	-1.93	-3.56	-4.94
75th Percentile	-2.45	-4.79	-6.30
90th Percentile	-2.71	-5.90	-7.61
T-Bills + 5% ●	1.30	1.30	1.30

Sources: Callan, Merrill Lynch

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

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

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

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

Strong Quarter Can't Save 2015

DEFINED CONTRIBUTION | Tom Szkwarla

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

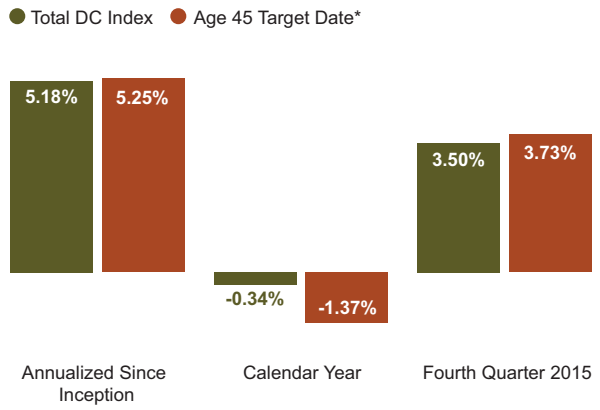
The Age 45 Target Date Fund—the average of target date funds that would be selected by participants age 45 and retiring at age 65—beat the DC Index for the quarter, but underperformed it by 1.03% for the year. Both results were driven by the fact that the Age 45 Target Date Fund has a higher allocation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

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

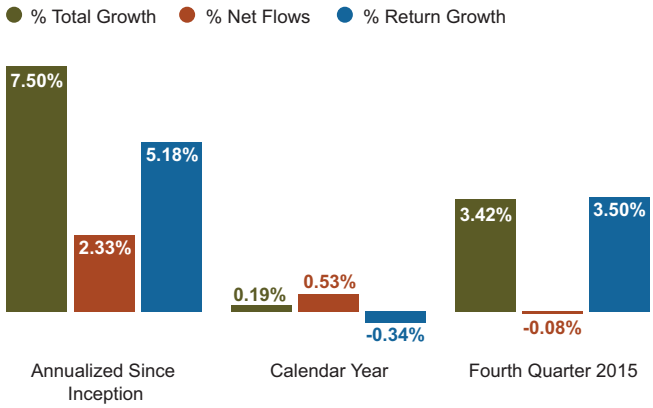
Fourth quarter turnover (i.e., net transfer activity) in the DC Index was 0.46%. Turnover has been steadily increasing since the beginning of the year, but remains below the historical average of 0.65%.

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

Investment Performance*



Growth Sources*



Net Cash Flow Analysis (Fourth Quarter 2015)*
(Top Two and Bottom Two Asset Gatherers)

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

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

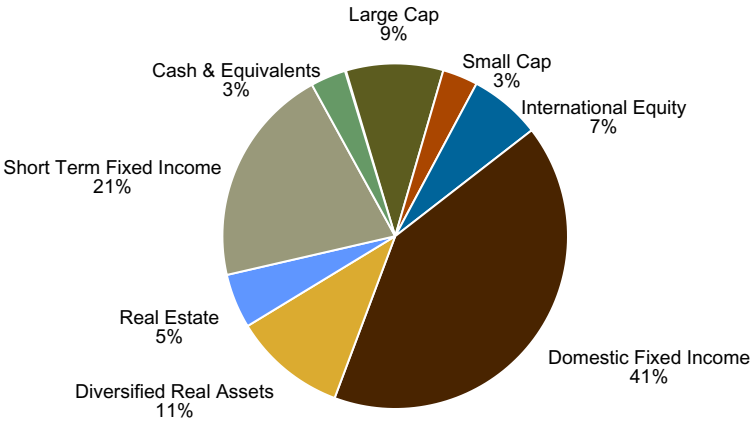
* DC Index inception date is January 2006. DB plan performance is gross of fees.

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

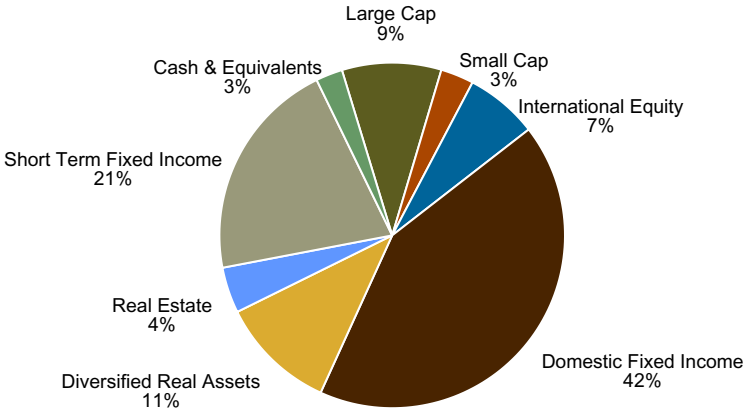
Actual vs Target Asset Allocation
As of March 31, 2016

The first chart below shows the Fund's asset allocation as of March 31, 2016. The second chart shows the Fund's target asset allocation as outlined in the investment policy statement.

Actual Asset Allocation



Target Asset Allocation



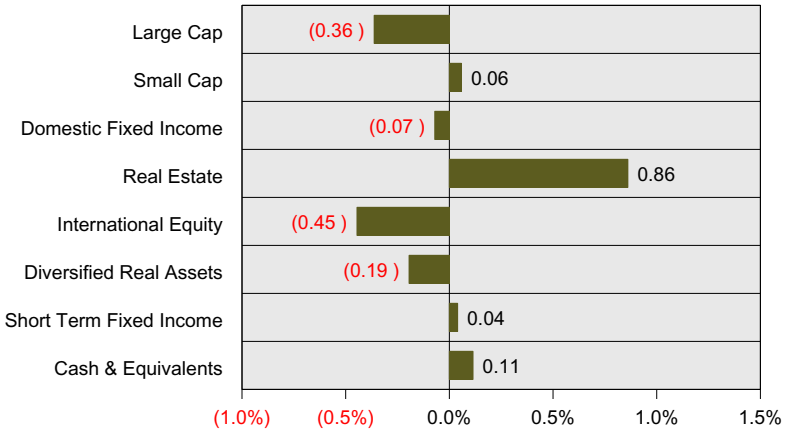
Asset Class	$000s Actual	Weight Actual	Target	Percent Difference	$000s Difference
Large Cap	228,253	9.1%	9.3%	(0.2%)	(4,791)
Small Cap	83,626	3.3%	3.1%	0.2%	5,944
International Equity	168,135	6.7%	6.8%	(0.1%)	(2,262)
Domestic Fixed Income	1,033,487	41.2%	42.3%	(1.1%)	(26,485)
Diversified Real Assets	265,564	10.6%	10.9%	(0.3%)	(7,573)
Real Estate	126,803	5.1%	4.3%	0.8%	19,052
Short Term Fixed Income	517,412	20.6%	20.8%	(0.2%)	(3,803)
Cash & Equivalents	82,564	3.3%	2.5%	0.8%	19,918
Total	2,505,844	100.0%	100.0%		

* Current Quarter Target = 42.3% Barclays Aggregate Index, 20.8% Barclays Gov 1-3 Yr, 10.9% NDSIB INS DRA Weighted Benchmark, 9.3% Russell 1000 Index, 6.8% MSCI EAFE, 4.3% NCREIF Total Index, 3.1% Russell 2000 Index and 2.5% 3-month Treasury Bill.

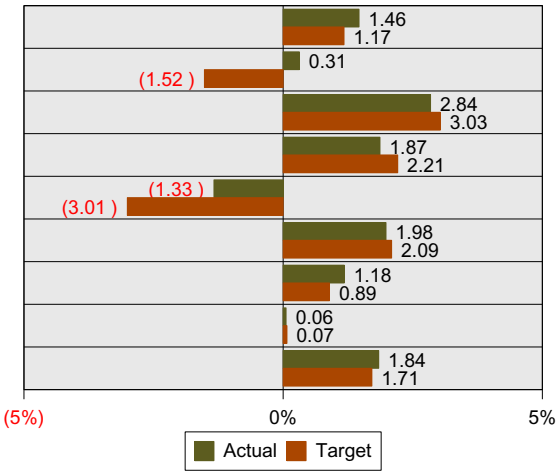
Quarterly Total Fund Relative Attribution - March 31, 2016

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

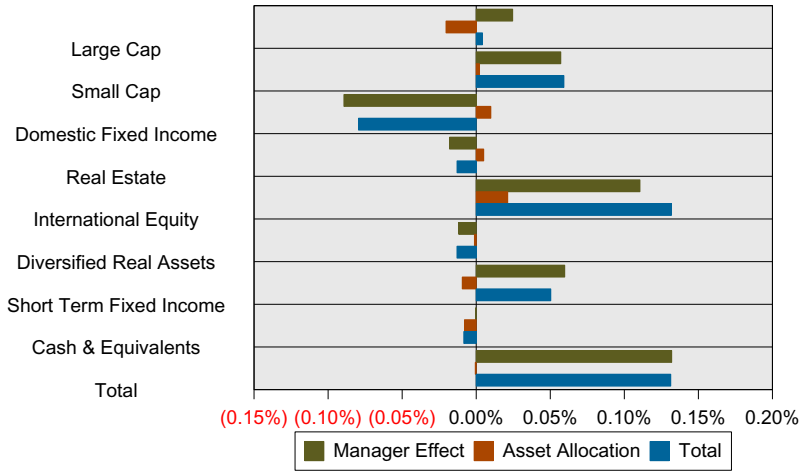
Asset Class Under or Overweighting



Actual vs Target Returns



Relative Attribution by Asset Class



Relative Attribution Effects for Quarter ended March 31, 2016

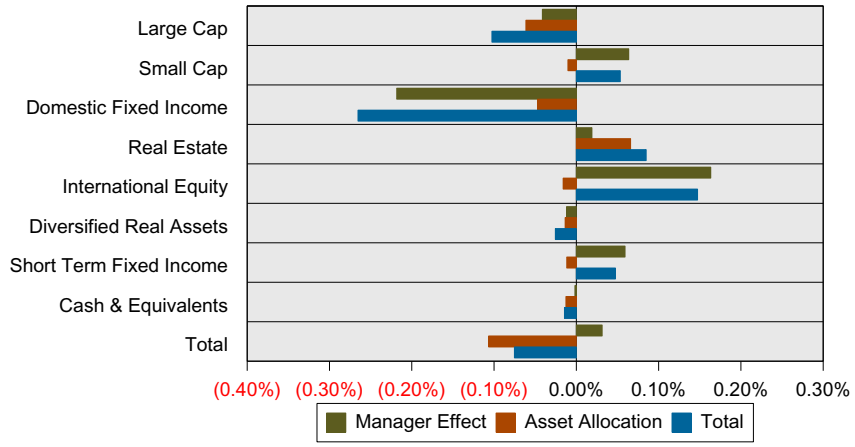
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	9%	9%	1.46%	1.17%	0.02%	(0.02%)	0.00%
Small Cap	3%	3%	0.31%	(1.52%)	0.06%	0.00%	0.06%
Domestic Fixed Income	42%	42%	2.84%	3.03%	(0.09%)	0.01%	(0.08%)
Real Estate	5%	4%	1.87%	2.21%	(0.02%)	0.01%	(0.01%)
International Equity	6%	7%	(1.33%)	(3.01%)	0.11%	0.02%	0.13%
Diversified Real Assets	11%	11%	1.98%	2.09%	(0.01%)	(0.00%)	(0.01%)
Short Term Fixed Income	21%	21%	1.18%	0.89%	0.06%	(0.01%)	0.05%
Cash & Equivalents	3%	2%	0.06%	0.07%	(0.00%)	(0.01%)	(0.01%)
Total			**1.84% =**	**1.71% +**	**0.13% +**	**(0.00%)**	**0.13%**

* Current Quarter Target = 42.3% Barclays Aggregate Index, 20.8% Barclays Gov 1-3 Yr, 10.9% NDSIB INS DRA Weighted Benchmark, 9.3% Russell 1000 Index, 6.8% MSCI EAFE, 4.3% NCREIF Total Index, 3.1% Russell 2000 Index and 2.5% 3-month Treasury Bill.

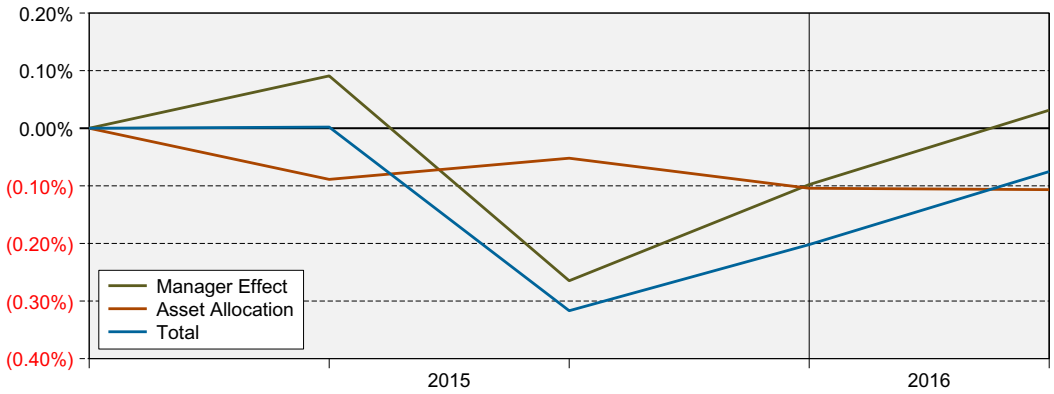
Cumulative Total Fund Relative Attribution - March 31, 2016

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

One Year Relative Attribution Effects



Cumulative Relative Attribution Effects



One Year Relative Attribution Effects

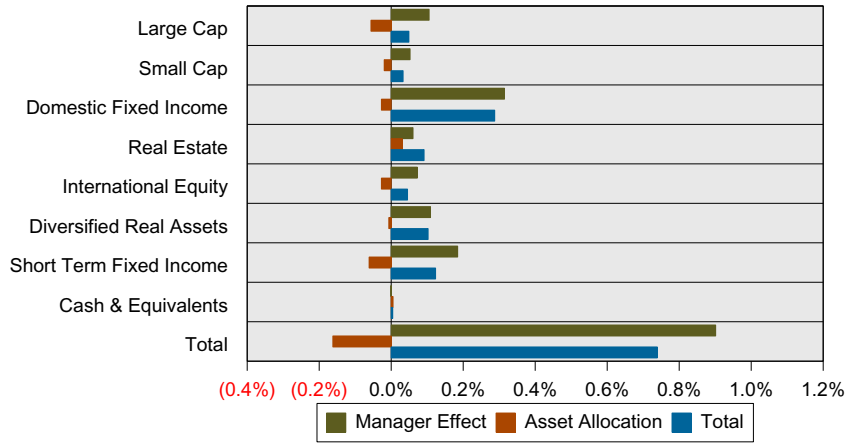
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	11%	11%	1.19%	0.50%	(0.04%)	(0.06%)	(0.10%)
Small Cap	3%	3%	(7.78%)	(9.76%)	0.06%	(0.01%)	0.05%
Domestic Fixed Income	42%	42%	1.48%	1.96%	(0.22%)	(0.05%)	(0.27%)
Real Estate	5%	4%	12.37%	11.84%	0.02%	0.07%	0.08%
International Equity	6%	7%	(5.72%)	(8.27%)	0.16%	(0.02%)	0.15%
Diversified Real Assets	10%	11%	0.66%	1.25%	(0.01%)	(0.01%)	(0.03%)
Short Term Fixed Income	19%	20%	1.24%	0.93%	0.06%	(0.01%)	0.05%
Cash & Equivalents	3%	3%	0.06%	0.12%	(0.00%)	(0.01%)	(0.01%)
Total			**0.99% =**	**1.06% +**	**0.03% +**	**(0.11%)**	**(0.08%)**

* Current Quarter Target = 42.3% Barclays Aggregate Index, 20.8% Barclays Gov 1-3 Yr, 10.9% NDSIB INS DRA Weighted Benchmark, 9.3% Russell 1000 Index, 6.8% MSCI EAFE, 4.3% NCREIF Total Index, 3.1% Russell 2000 Index and 2.5% 3-month Treasury Bill.

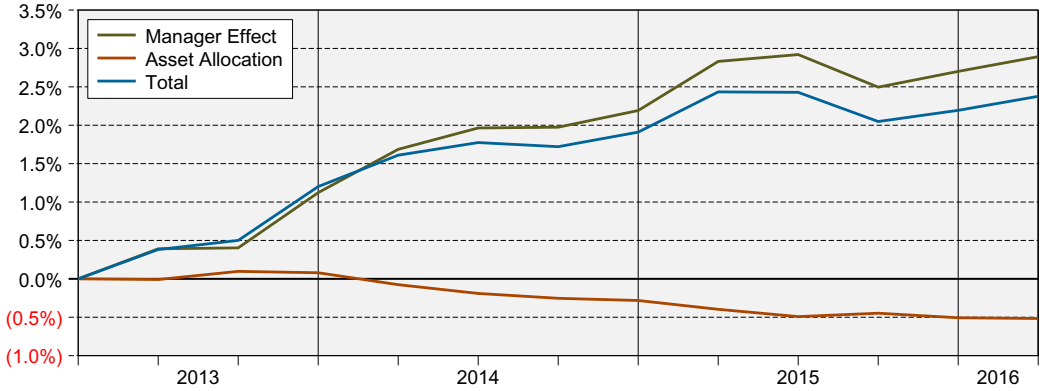
Cumulative Total Fund Relative Attribution - March 31, 2016

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

Three Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Three Year Annualized Relative Attribution Effects

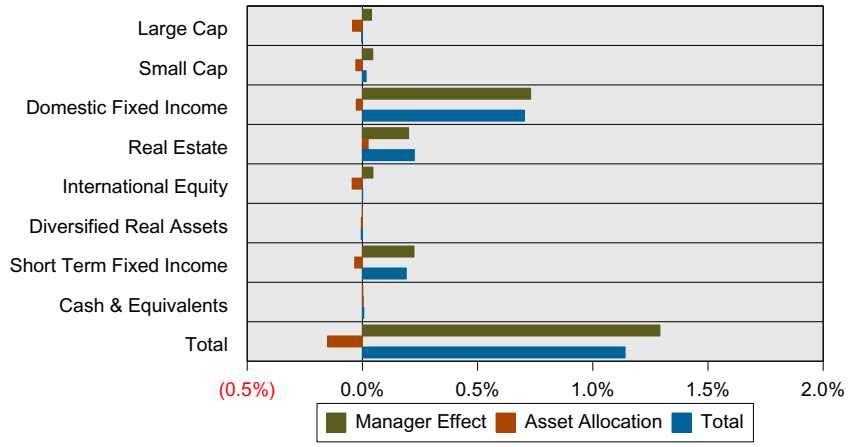
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	11%	11%	13.00%	11.52%	0.11%	(0.06%)	0.05%
Small Cap	4%	4%	8.63%	6.84%	0.05%	(0.02%)	0.03%
Domestic Fixed Income	35%	35%	3.56%	2.50%	0.31%	(0.03%)	0.29%
Real Estate	4%	4%	13.52%	11.91%	0.06%	0.03%	0.09%
International Equity	8%	8%	3.99%	2.23%	0.07%	(0.03%)	0.05%
Diversified Real Assets	10%	10%	2.29%	1.14%	0.11%	(0.01%)	0.10%
Short Term Fixed Income	26%	25%	1.51%	0.79%	0.18%	(0.06%)	0.12%
Cash & Equivalents	3%	2%	0.04%	0.07%	(0.00%)	0.01%	0.00%
Total			**3.88% =**	**3.14% +**	**0.90% +**	**(0.16%)**	**0.74%**

* Current Quarter Target = 42.3% Barclays Aggregate Index, 20.8% Barclays Gov 1-3 Yr, 10.9% NDSIB INS DRA Weighted Benchmark, 9.3% Russell 1000 Index, 6.8% MSCI EAFE, 4.3% NCREIF Total Index, 3.1% Russell 2000 Index and 2.5% 3-month Treasury Bill.

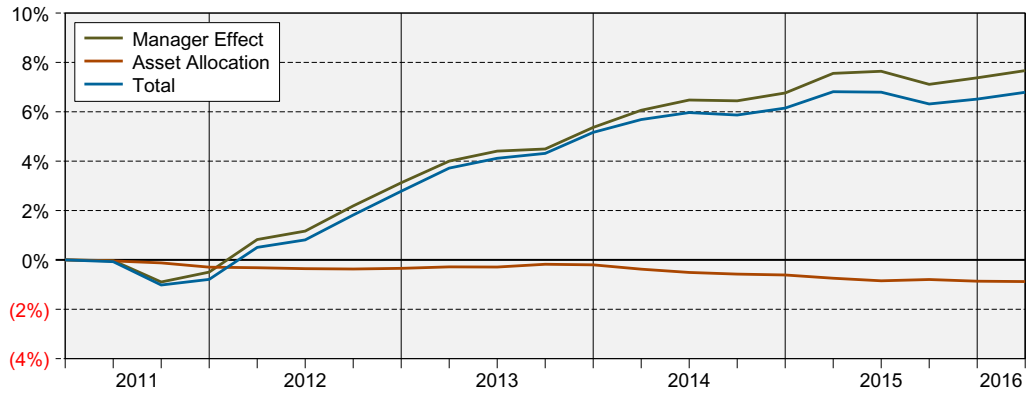
Cumulative Total Fund Relative Attribution - March 31, 2016

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

Five Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Five Year Annualized Relative Attribution Effects

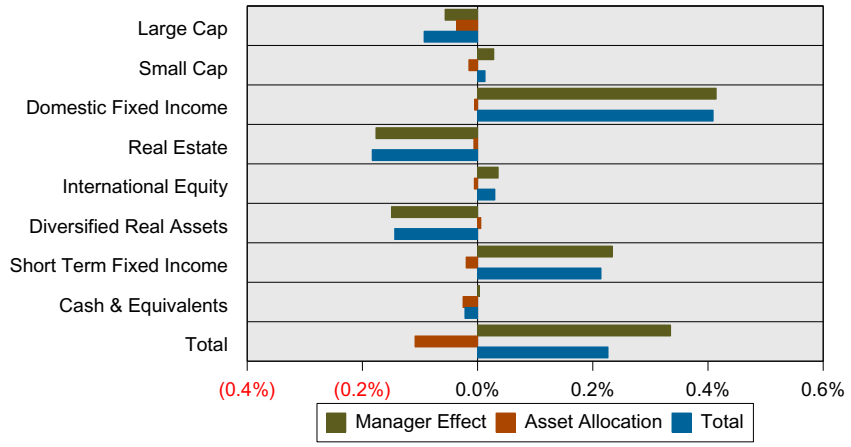
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return		Target Return		Manager Effect		Asset Allocation	Total Relative Return
Large Cap	10%	10%	12.15%		11.55%		0.04%		(0.04%)	(0.00%)
Small Cap	3%	3%	8.80%		7.20%		0.04%		(0.03%)	0.02%
Domestic Fixed Income	36%	36%	6.07%		3.78%		0.73%		(0.03%)	0.70%
Real Estate	4%	4%	16.85%		11.93%		0.20%		0.03%	0.23%
International Equity	6%	7%	3.48%		2.29%		0.05%		(0.04%)	0.00%
Diversified Real Assets	12%	12%	3.71%		3.33%		(0.00%)		(0.00%)	(0.01%)
Short Term Fixed Income	26%	26%	1.30%		0.65%		0.22%		(0.03%)	0.19%
Cash & Equivalents	3%	3%	0.13%		0.08%		0.00%		0.00%	0.01%
Total			**5.04%**	**=**	**3.90%**	**+**	**1.29%**	**+**	**(0.15%)**	**1.14%**

* Current Quarter Target = 42.3% Barclays Aggregate Index, 20.8% Barclays Gov 1-3 Yr, 10.9% NDSIB INS DRA Weighted Benchmark, 9.3% Russell 1000 Index, 6.8% MSCI EAFE, 4.3% NCREIF Total Index, 3.1% Russell 2000 Index and 2.5% 3-month Treasury Bill.

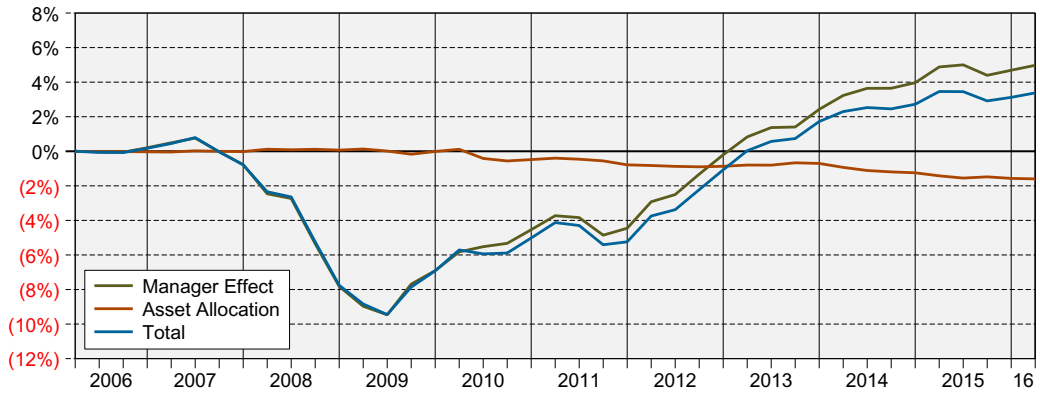
Cumulative Total Fund Relative Attribution - March 31, 2016

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

Ten Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Ten Year Annualized Relative Attribution Effects

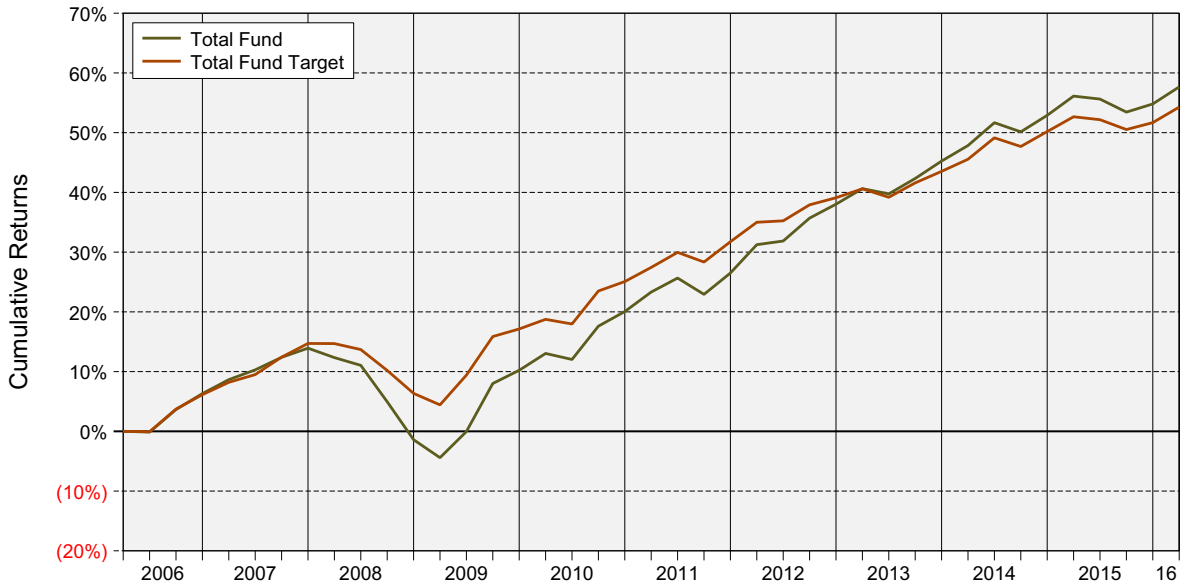
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	10%	10%	6.61%	7.00%	(0.06%)	(0.04%)	(0.09%)
Small Cap	3%	3%	6.06%	5.26%	0.03%	(0.02%)	0.01%
Domestic Fixed Income	41%	41%	6.30%	4.90%	0.41%	(0.01%)	0.41%
Real Estate	5%	5%	3.47%	7.61%	(0.18%)	(0.01%)	(0.18%)
International Equity	7%	7%	2.05%	1.34%	0.04%	(0.01%)	0.03%
Diversified Real Assets	16%	16%	4.09%	4.60%	(0.15%)	0.01%	(0.14%)
Short Term Fixed Income	15%	15%	-	-	0.23%	(0.02%)	0.21%
Cash & Equivalents	4%	3%	1.23%	1.15%	0.00%	(0.03%)	(0.02%)
Total			**4.66% =**	**4.43% +**	**0.34% +**	**(0.11%)**	**0.23%**

* Current Quarter Target = 42.3% Barclays Aggregate Index, 20.8% Barclays Gov 1-3 Yr, 10.9% NDSIB INS DRA Weighted Benchmark, 9.3% Russell 1000 Index, 6.8% MSCI EAFE, 4.3% NCREIF Total Index, 3.1% Russell 2000 Index and 2.5% 3-month Treasury Bill.

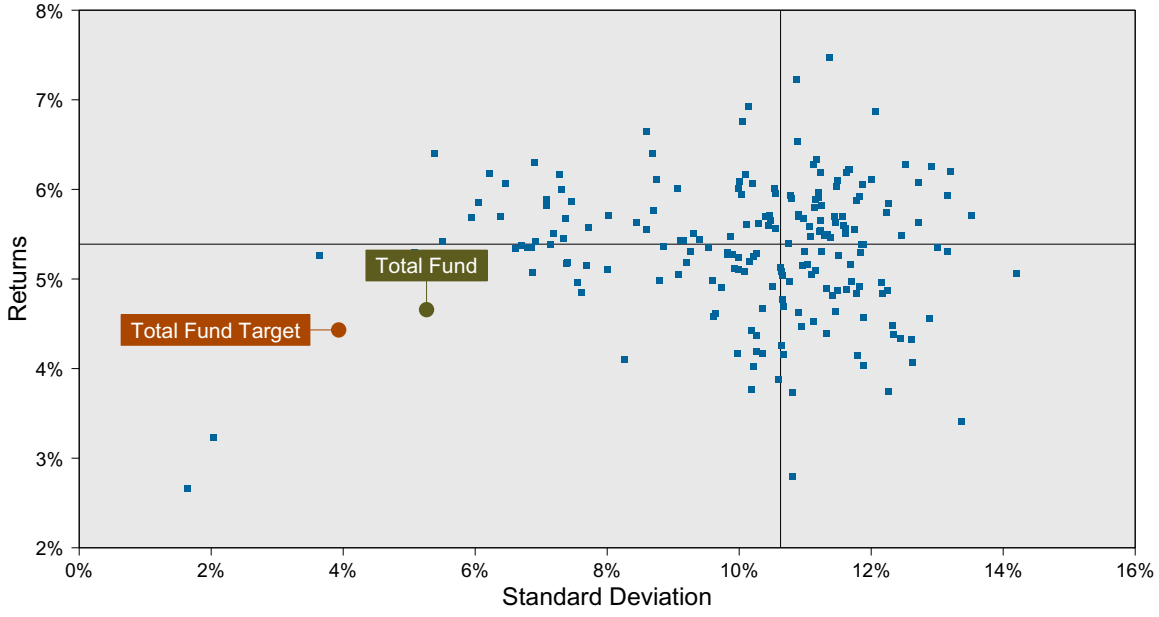
Cumulative Performance Relative to Target

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

Cumulative Returns Actual vs Target



Ten Year Annualized Risk vs Return



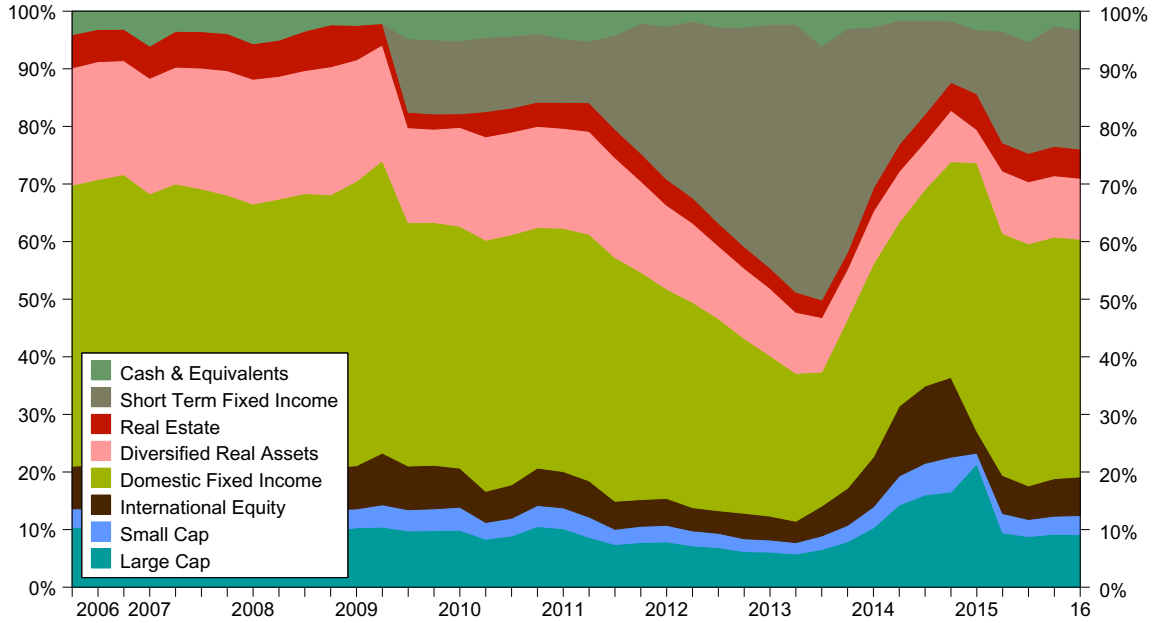
Squares represent membership of the Public Fund Sponsor Database

* Current Quarter Target = 42.3% Barclays Aggregate Index, 20.8% Barclays Gov 1-3 Yr, 10.9% NDSIB INS DRA Weighted Benchmark, 9.3% Russell 1000 Index, 6.8% MSCI EAFE, 4.3% NCREIF Total Index, 3.1% Russell 2000 Index and 2.5% 3-month Treasury Bill.

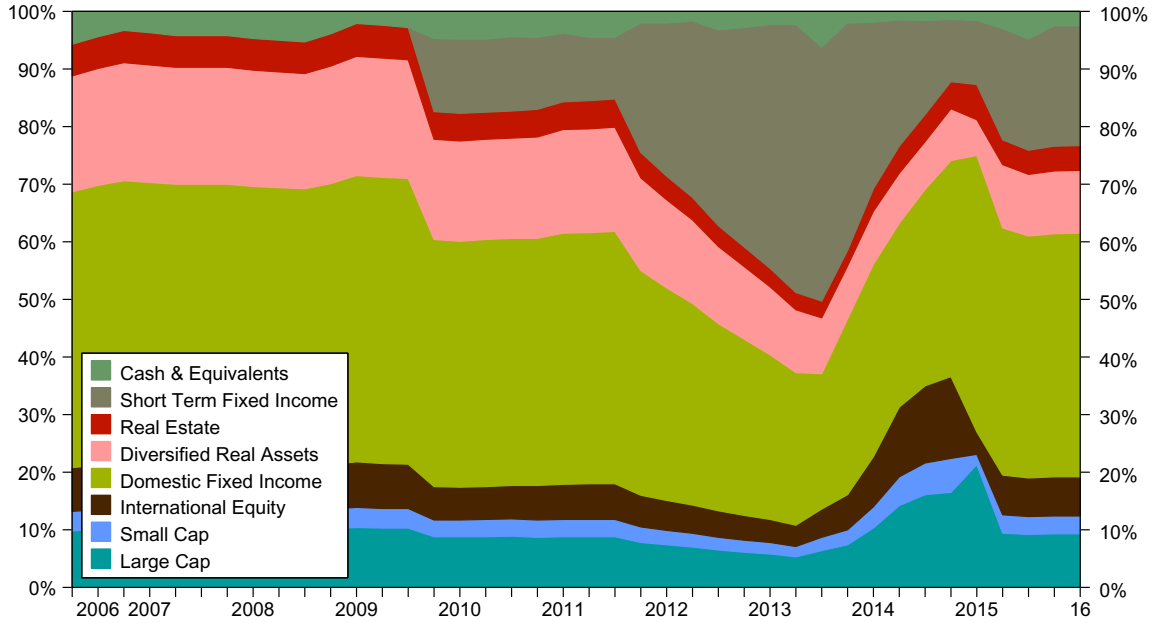
Actual vs Target Historical Asset Allocation

The Historical asset allocation for a fund is by far the largest factor explaining its performance. The charts below show the fund's historical actual asset allocation, and the fund's historical target asset allocation.

Actual Historical Asset Allocation



Target Historical Asset Allocation

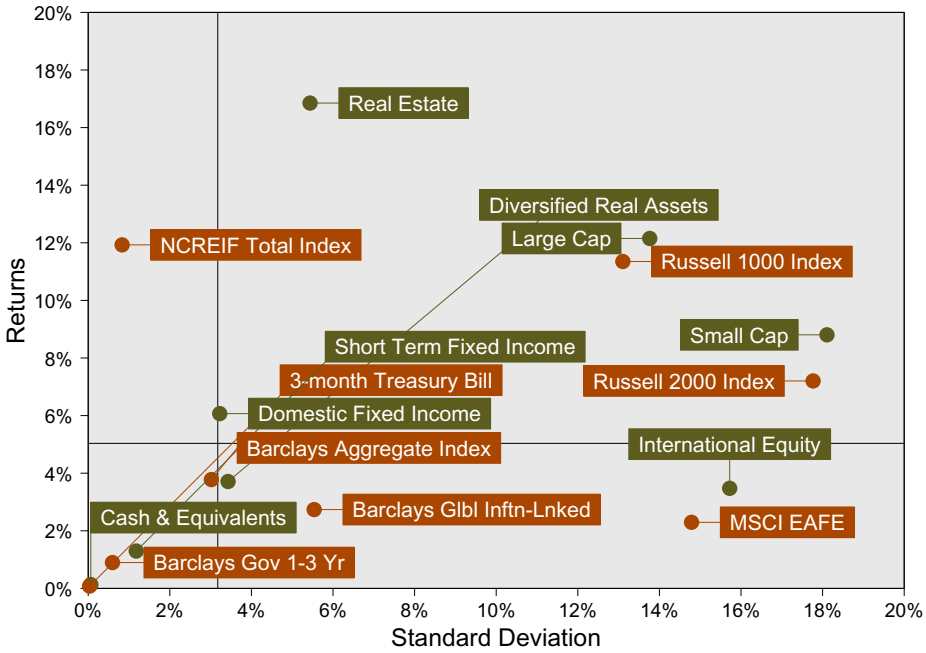


* Current Quarter Target = 42.3% Barclays Aggregate Index, 20.8% Barclays Gov 1-3 Yr, 10.9% NDSIB INS DRA Weighted Benchmark, 9.3% Russell 1000 Index, 6.8% MSCI EAFE, 4.3% NCREIF Total Index, 3.1% Russell 2000 Index and 2.5% 3-month Treasury Bill.

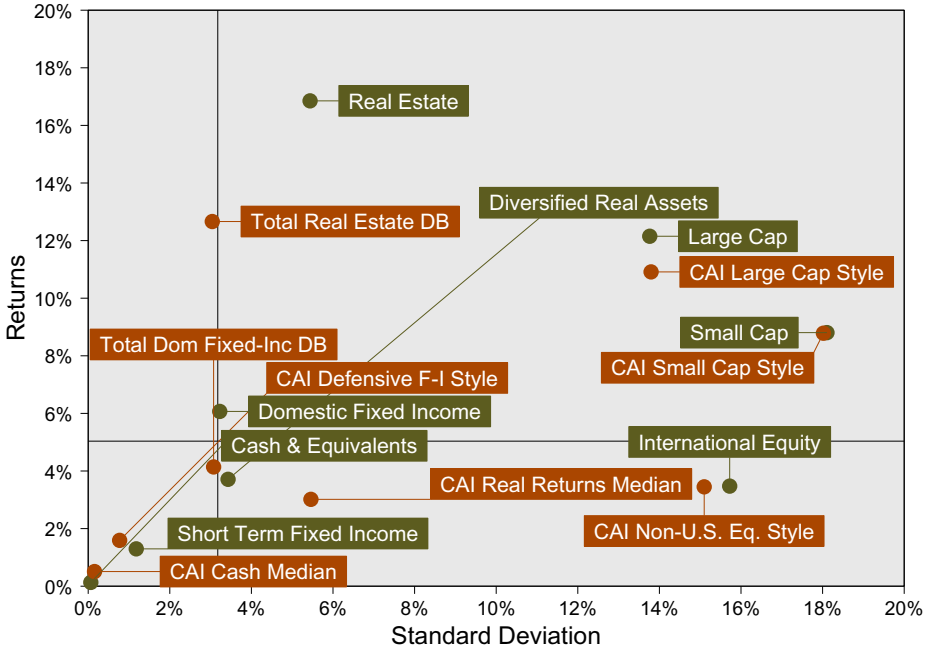
Asset Class Risk and Return

The charts below show the five year annualized risk and return for each asset class component of the Total Fund. The first graph contrasts these values with those of the appropriate index for each asset class. The second chart contrasts them with the risk and return of the median portfolio in each of the appropriate CAI comparative databases. In each case, the crosshairs on the chart represent the return and risk of the Total Fund.

Five Year Annualized Risk vs Return
Asset Classes vs Benchmark Indices



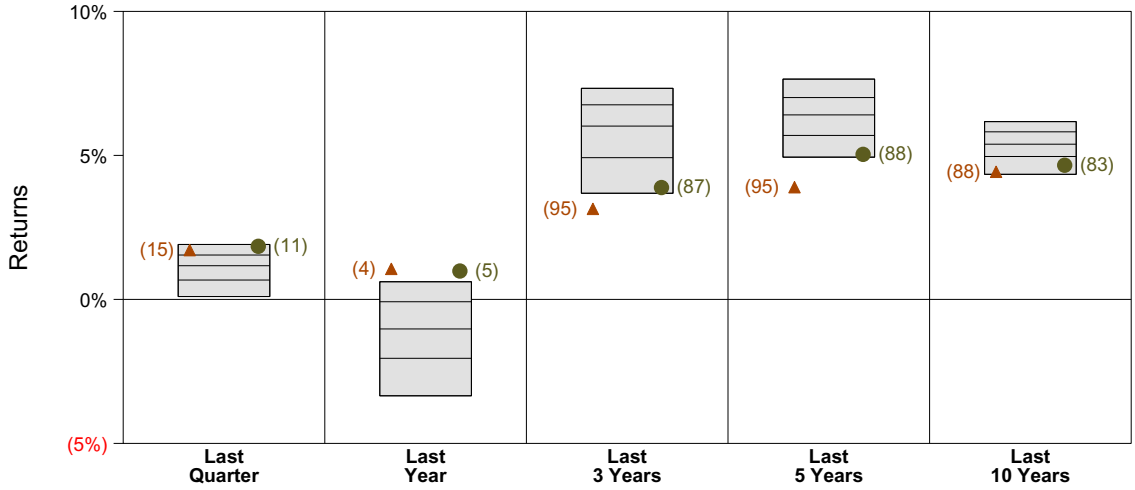
Five Year Annualized Risk vs Return
Asset Classes vs Asset Class Median



Total Fund Ranking

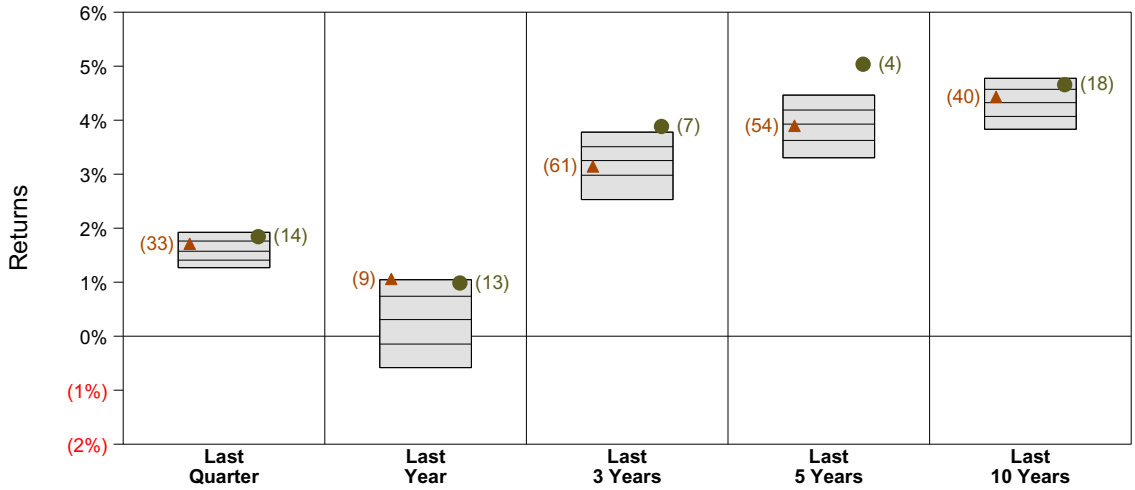
The first two charts show the ranking of the Total Fund's performance relative to that of the Public Fund Sponsor Database for periods ended March 31, 2016. The first chart is a standard unadjusted ranking. In the second chart each fund in the database is adjusted to have the same historical asset allocation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

Public Fund Sponsor Database



	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
10th Percentile	1.91	0.61	7.33	7.65	6.17
25th Percentile	1.54	(0.08)	6.76	7.01	5.82
Median	1.17	(1.03)	6.02	6.41	5.39
75th Percentile	0.67	(2.05)	4.92	5.69	4.96
90th Percentile	0.10	(3.35)	3.69	4.94	4.34
Total Fund ●	1.84	0.99	3.88	5.04	4.66
Policy Target ▲	1.71	1.06	3.14	3.90	4.43

Asset Allocation Adjusted Ranking



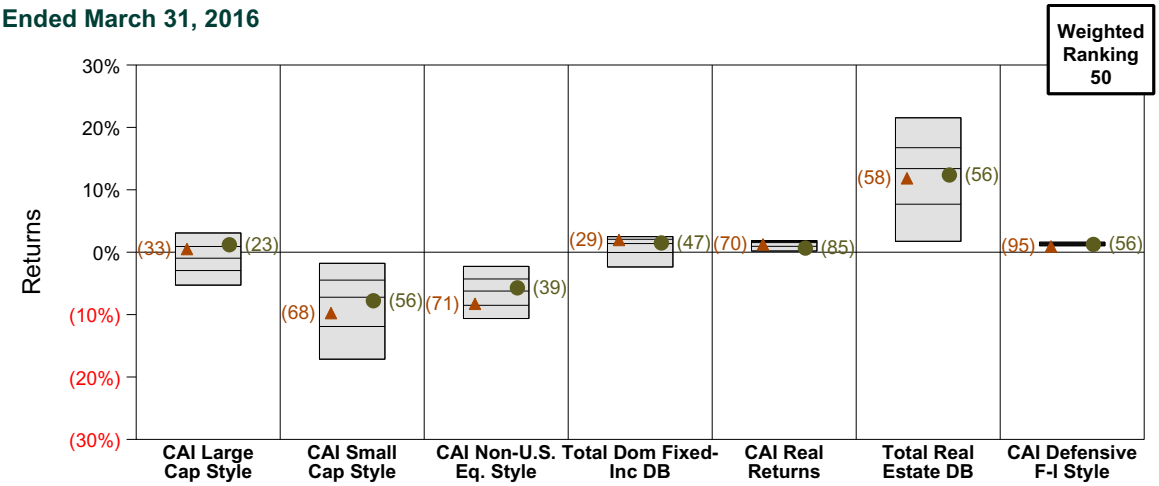
	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
10th Percentile	1.92	1.05	3.78	4.46	4.78
25th Percentile	1.76	0.74	3.51	4.19	4.57
Median	1.57	0.31	3.25	3.93	4.33
75th Percentile	1.41	(0.15)	2.98	3.63	4.07
90th Percentile	1.27	(0.58)	2.53	3.30	3.83
Total Fund ●	1.84	0.99	3.88	5.04	4.66
Policy Target ▲	1.71	1.06	3.14	3.90	4.43

* Current Quarter Target = 42.3% Barclays Aggregate Index, 20.8% Barclays Gov 1-3 Yr, 10.9% NDSIB INS DRA Weighted Benchmark, 9.3% Russell 1000 Index, 6.8% MSCI EAFE, 4.3% NCREIF Total Index, 3.1% Russell 2000 Index and 2.5% 3-month Treasury Bill.

Asset Class Rankings

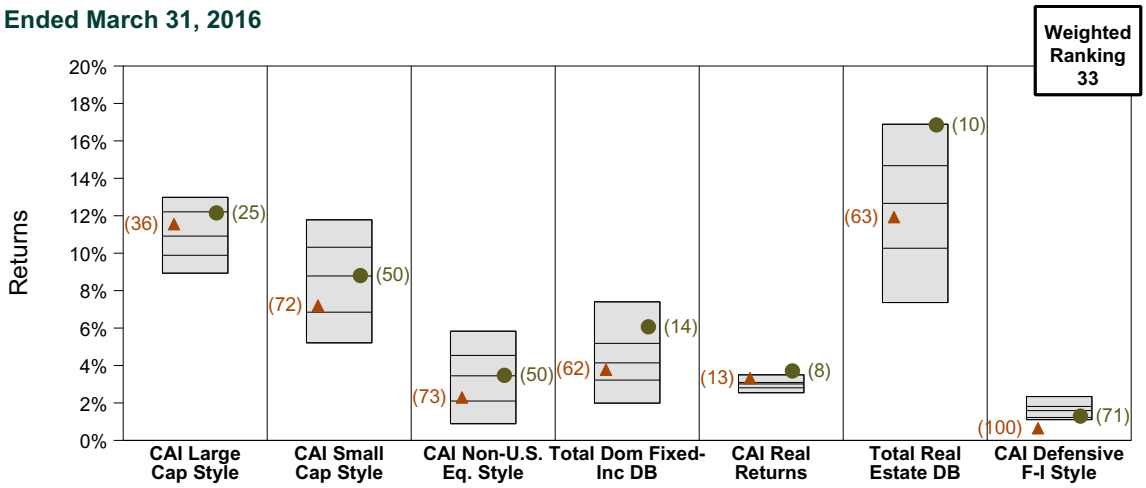
The charts below show the rankings of each asset class component of the Total Fund relative to appropriate comparative databases. In the upper right corner of each graph is the weighted average of the rankings across the different asset classes. The weights of the fund's actual asset allocation are used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

Total Asset Class Performance
One Year Ended March 31, 2016



	CAI Large Cap Style	CAI Small Cap Style	CAI Non-U.S. Eq. Style	Total Dom Fixed-Inc DB	CAI Real Returns	Total Real Estate DB	CAI Defensive F-I Style
10th Percentile	3.08	(1.78)	(2.27)	2.50	1.87	21.54	1.60
25th Percentile	0.92	(4.47)	(4.29)	2.07	1.71	16.75	1.40
Median	(0.96)	(7.22)	(6.23)	1.38	1.54	13.40	1.26
75th Percentile	(2.94)	(11.91)	(8.51)	(0.04)	0.94	7.69	1.14
90th Percentile	(5.28)	(17.15)	(10.63)	(2.37)	0.18	1.75	1.03
Asset Class Composite ●	1.19	(7.78)	(5.72)	1.48	0.66	12.37	1.24
Composite Benchmark ▲	0.50	(9.76)	(8.27)	1.96	1.25	11.84	0.93

Total Asset Class Performance
Five Years Ended March 31, 2016



	CAI Large Cap Style	CAI Small Cap Style	CAI Non-U.S. Eq. Style	Total Dom Fixed-Inc DB	CAI Real Returns	Total Real Estate DB	CAI Defensive F-I Style
10th Percentile	12.98	11.78	5.84	7.40	3.50	16.89	2.34
25th Percentile	12.21	10.32	4.54	5.18	3.10	14.67	1.82
Median	10.91	8.78	3.45	4.14	3.02	12.66	1.59
75th Percentile	9.89	6.85	2.10	3.22	2.81	10.27	1.22
90th Percentile	8.93	5.21	0.89	1.99	2.55	7.36	1.11
Asset Class Composite ●	12.15	8.80	3.48	6.07	3.71	16.85	1.30
Composite Benchmark ▲	11.55	7.20	2.29	3.78	3.33	11.93	0.65

* Current Quarter Target = 42.3% Barclays Aggregate Index, 20.8% Barclays Gov 1-3 Yr, 10.9% NDSIB INS DRA Weighted Benchmark, 9.3% Russell 1000 Index, 6.8% MSCI EAFE, 4.3% NCREIF Total Index, 3.1% Russell 2000 Index and 2.5% 3-month Treasury Bill.

Investment Manager Asset Allocation

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

Asset Distribution Across Investment Managers

	March 31, 2016				December 31, 2015	
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
Domestic Equity	**$311,878,337**	**12.45%**	**$6,177,195**	**$4,158,974**	**$301,542,168**	**12.33%**
Large Cap	**$228,252,727**	**9.11%**	**$(104,454)**	**$3,285,110**	**$225,072,072**	**9.21%**
Parametric Clifton Large Cap	46,263,350	1.85%	0	800,380	45,462,970	1.86%
L.A. Capital Large Cap Growth	68,245,342	2.72%	(35,714)	1,488,143	66,792,913	2.73%
L.A. Capital Enhanced	46,718,726	1.86%	(16,813)	1,073,560	45,661,979	1.87%
LSV Large Cap Value	67,025,309	2.67%	(51,927)	(76,973)	67,154,209	2.75%
Small Cap	**$83,625,610**	**3.34%**	**$6,281,649**	**$873,864**	**$76,470,097**	**3.13%**
Parametric Clifton Small Cap	51,289,190	2.05%	0	(591,505)	51,880,695	2.12%
PIMCO RAE	32,336,420	1.29%	6,281,649	1,465,369	24,589,402	1.01%
International Equity	**$168,135,047**	**6.71%**	**$9,862,100**	**$(1,319,250)**	**$159,592,197**	**6.53%**
Capital Group	60,039,664	2.40%	(75,663)	(436,596)	60,551,922	2.48%
DFA Int'l Small Cap Value	17,423,824	0.70%	0	(142,218)	17,566,042	0.72%
LSV Intl Value	72,663,546	2.90%	9,937,763	(371,820)	63,097,602	2.58%
Vanguard Intl Explorer Fund	18,008,014	0.72%	0	(368,617)	18,376,630	0.75%
Domestic Fixed Income	**$1,033,487,064**	**41.24%**	**$(20,342,246)**	**$28,746,568**	**$1,025,082,742**	**41.93%**
Declaration Total Return	78,466,901	3.13%	(28,128)	154,750	78,340,279	3.20%
PIMCO DiSCO II	80,561,946	3.21%	0	89,346	80,472,600	3.29%
PIMCO Bravo II Fund	46,122,603	1.84%	0	1,415,242	44,707,361	1.83%
Prudential	99,480,067	3.97%	(65,802)	3,367,992	96,177,877	3.93%
SSgA US Govt Credit Bd Idx	136,639,062	5.45%	(3,511,834)	4,642,423	135,508,473	5.54%
Wells Capital	299,320,190	11.94%	(7,134,163)	10,584,707	295,869,646	12.10%
Western Asset Management	292,896,294	11.69%	(9,602,319)	8,492,107	294,006,506	12.03%
Diversified Real Assets	**$265,563,836**	**10.60%**	**$(22,674)**	**$5,165,861**	**$260,420,650**	**10.65%**
Western Asset Management	111,893,066	4.47%	(37,190)	4,676,709	107,253,548	4.39%
JP Morgan Infrastructure	74,194,203	2.96%	(197,584)	250,427	74,141,360	3.03%
Eastern Timber Opportunities	59,235,631	2.36%	0	(382,462)	59,618,093	2.44%
Grosvenor Cust. Infrastructure	20,240,936	0.81%	212,100	621,187	19,407,649	0.79%
Real Estate	**$126,803,116**	**5.06%**	**$(260,679)**	**$2,327,828**	**$124,735,967**	**5.10%**
Invesco Core Real Estate	59,789,368	2.39%	(52,119)	867,749	58,973,738	2.41%
JP Morgan RE	67,013,748	2.67%	(208,560)	1,460,078	65,762,229	2.69%
Short Term Fixed Income	**$517,412,297**	**20.65%**	**$(1,173,208)**	**$6,034,724**	**$512,550,782**	**20.96%**
JP Morgan Short Term Bonds	276,522,303	11.04%	(1,071,518)	2,885,152	274,708,669	11.24%
Babson Short Term Bonds	240,889,993	9.61%	(101,691)	3,149,572	237,842,112	9.73%
Cash & Equivalents	**$82,563,899**	**3.29%**	**$21,648,137**	**$40,370**	**$60,875,392**	**2.49%**
Cash Account	82,563,899	3.29%	21,648,137	40,370	60,875,392	2.49%
Securities Lending Income	**$0**	**0.00%**	**$(53,503)**	**$53,503**	**-**	**-**
Total Fund	**$2,505,843,595**	**100.0%**	**$15,835,121**	**$45,208,577**	**$2,444,799,898**	**100.0%**

Investment Manager Returns

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

Returns for Periods Ended March 31, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Domestic Equity					
Gross	1.19%	(0.78%)	11.84%	11.24%	6.48%
Net	1.15%	(1.03%)	11.59%	10.96%	6.12%
Large Cap Equity					
Gross	1.46%	1.19%	13.00%	12.15%	6.61%
Net	1.41%	1.00%	12.80%	11.93%	6.28%
Benchmark(1)	1.17%	0.50%	11.52%	11.55%	7.00%
Parametric Clifton Large Cap - Gross	1.76%	2.38%	12.16%	12.08%	-
Parametric Clifton Large Cap - Net	1.76%	2.31%	12.08%	11.90%	-
S&P 500 Index	1.35%	1.78%	11.82%	11.58%	7.01%
L.A. Capital - Gross	2.23%	3.58%	14.64%	12.48%	8.84%
L.A. Capital - Net	2.17%	3.38%	14.42%	12.26%	8.65%
Russell 1000 Growth Index	0.74%	2.52%	13.61%	12.38%	8.28%
L.A. Capital Enhanced - Gross	2.35%	2.65%	13.10%	11.98%	8.21%
L.A. Capital Enhanced - Net	2.31%	2.52%	12.96%	11.83%	8.05%
Russell 1000 Index	1.17%	0.50%	11.52%	11.35%	7.06%
LSV Asset Management - Gross	(0.11%)	(2.87%)	11.80%	11.61%	6.92%
LSV Asset Management - Net	(0.19%)	(3.16%)	11.49%	11.30%	6.61%
Russell 1000 Value Index	1.64%	(1.54%)	9.38%	10.25%	5.72%
Small Cap Equity					
Gross	0.31%	(7.78%)	8.63%	8.80%	6.06%
Net	0.29%	(8.19%)	8.25%	8.36%	5.58%
Russell 2000 Index	(1.52%)	(9.76%)	6.84%	7.20%	5.26%
Parametric Clifton Small Cap - Gross	(1.14%)	(8.75%)	7.99%	8.55%	-
Parametric Clifton SmallCap - Net	(1.14%)	(9.19%)	7.60%	8.10%	-
Russell 2000 Index	(1.52%)	(9.76%)	6.84%	7.20%	5.26%
PIMCO RAE - Gross	2.54%	(6.44%)	9.04%	8.90%	-
PIMCO RAE - Net	2.45%	(6.73%)	8.69%	8.48%	-
Russell 2000	(1.52%)	(9.76%)	6.84%	7.20%	5.26%
International Equity					
Gross	(1.33%)	(5.72%)	3.99%	3.48%	2.05%
Net	(1.43%)	(6.05%)	3.60%	3.11%	1.78%
Benchmark(2)	(3.01%)	(8.27%)	2.23%	2.29%	1.34%
Capital Group - Gross	(0.71%)	(7.86%)	2.31%	2.76%	1.77%
Capital Group - Net	(0.85%)	(8.32%)	1.88%	2.47%	1.61%
Benchmark(2)	(3.01%)	(8.27%)	2.23%	2.29%	1.34%
DFA Intl Small Cap Value - Net	(0.81%)	(1.46%)	6.33%	4.40%	-
World ex US SC Va	1.18%	(1.39%)	4.36%	3.29%	3.51%
LSV Asset Management - Gross	(2.09%)	(6.02%)	3.83%	3.61%	1.23%
LSV Asset Management - Net	(2.19%)	(6.40%)	3.41%	3.16%	0.92%
Benchmark(2)	(3.01%)	(8.27%)	2.23%	2.29%	1.34%
Vanguard Intl Explorer Fund - Net	(2.01%)	(0.80%)	8.12%	4.46%	3.98%
BMI, EPAC, <$2 B	0.08%	3.03%	6.29%	4.55%	3.25%

(1) S&P 500 Index through 12/31/2011 and Russell 1000 Index thereafter.
(2) MSCI EAFE through 9/30/2000; 50% Hedged EAFE through 3/31/2011 and MSCI EAFE again thereafter.

Investment Manager Returns

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

Returns for Periods Ended March 31, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Domestic Fixed Income					
Gross	2.84%	1.48%	3.56%	6.07%	6.30%
Net	2.81%	1.36%	3.41%	5.91%	6.12%
Barclays Aggregate Index	3.03%	1.96%	2.50%	3.78%	4.90%
Declaration Total Return - Net	0.20%	0.64%	-	-	-
Libor-3 Month	0.16%	0.40%	0.30%	0.34%	1.56%
PIMCO DiSCO II - Net	0.11%	3.66%	6.30%	-	-
PIMCO Bravo II Fund - Net	3.17%	10.22%	-	-	-
Barclays Aggregate Index	3.03%	1.96%	2.50%	3.78%	4.90%
Prudential - Gross	3.50%	1.77%	3.08%	5.38%	-
Prudential - Net	3.43%	1.50%	2.80%	5.17%	-
Barclays Aggregate Index	3.03%	1.96%	2.50%	3.78%	4.90%
Wells Capital - Gross	3.66%	(0.40%)	3.27%	5.85%	7.19%
Wells Capital - Net	3.61%	(0.58%)	3.08%	5.64%	6.97%
Barclays Baa Credit 3%	4.32%	(0.84%)	2.54%	5.30%	6.37%
Western Asset - Gross	2.95%	2.22%	3.42%	5.17%	5.77%
Western Asset - Net	2.91%	2.07%	3.27%	5.00%	5.57%
Barclays Aggregate	3.03%	1.96%	2.50%	3.78%	4.90%
SSgA US Govt Cr Bd Idx - Gross	3.47%	1.75%	-	-	-
SSgA US Govt Cr Bd Idx - Net	3.46%	1.71%	-	-	-
Barclays Govt/Credit Bd	3.47%	1.75%	2.42%	4.04%	4.93%
Diversified Real Assets					
Gross	1.98%	0.66%	2.29%	3.71%	4.09%
Net	1.91%	0.35%	1.99%	3.39%	3.81%
Weighted Benchmark	2.09%	1.25%	1.14%	3.33%	4.60%
Western TIPS - Gross	4.36%	0.96%	0.41%	2.71%	3.86%
Western TIPS - Net	4.33%	0.83%	0.26%	2.55%	3.70%
Barclays Glbl Inftn-Linked(1)	4.70%	1.04%	0.18%	2.74%	4.30%
JP Morgan Infrastructure - Gross	0.34%	(0.40%)	3.26%	5.86%	-
JP Morgan Infrastructure - Net	0.12%	(1.31%)	2.30%	4.74%	-
CPI-W	0.61%	0.50%	0.42%	1.08%	1.75%
Eastern Timber Opportunities - Net	(0.64%)	0.33%	5.00%	3.36%	-
NCREIF Timberland Index	(0.26%)	2.90%	7.71%	6.63%	6.65%
Grosvenor Cust. Infrastructure - Net	3.17%	4.68%	10.36%	-	-
CPI-W	0.61%	0.50%	0.42%	1.08%	1.75%

(1) Barclays US TIPS through 12/31/2009 and Barclays Global Inflation-Linked thereafter.

Investment Manager Returns

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

Returns for Periods Ended March 31, 2016

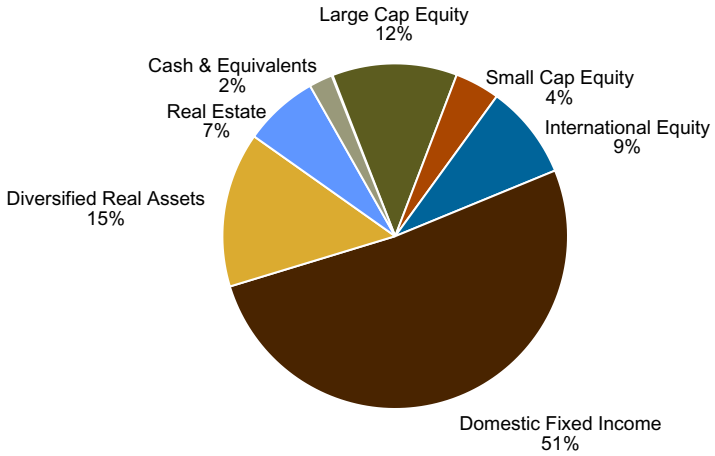
	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Real Estate					
Gross	1.87%	12.37%	13.52%	16.85%	3.47%
Net	1.69%	11.76%	12.68%	15.75%	2.40%
NCREIF Total Index	2.21%	11.84%	11.91%	11.93%	7.61%
Invesco Core Real Estate - Gross	1.47%	12.72%	13.12%	-	-
Invesco Core Real Estate - Net	1.38%	12.33%	12.70%	-	-
NCREIF Total Index	2.21%	11.84%	11.91%	11.93%	7.61%
JP Morgan - Gross	2.22%	12.06%	13.83%	17.52%	3.76%
JP Morgan - Net	1.96%	11.25%	12.69%	16.15%	2.58%
NCREIF Total Index	2.21%	11.84%	11.91%	11.93%	7.61%
Short Term Fixed Income					
Gross	1.18%	1.24%	1.51%	1.30%	-
Net	1.14%	1.11%	1.36%	1.18%	-
Barclays Gov 1-3 Yr	0.89%	0.93%	0.79%	0.90%	2.56%
Babson Short Term Bonds - Gross	1.32%	1.38%	1.90%	-	-
Babson Short Term Bonds - Net	1.28%	1.22%	1.75%	-	-
Barclays Gov 1-3 Yr	0.89%	0.93%	0.79%	0.90%	2.56%
JP Morgan Short Term Bds - Gross	1.05%	1.20%	1.08%	-	-
JP Morgan Short Term Bds - Net	1.03%	1.08%	0.96%	-	-
Barclays Gov/Credit 1-3 Y	0.98%	1.04%	0.95%	1.14%	2.80%
Cash & Equivalents - Net	**0.06%**	**0.06%**	**0.04%**	**0.13%**	**1.23%**
Cash Account- Net	0.06%	0.06%	0.04%	0.13%	1.23%
90 Day Treasury Bills	0.07%	0.12%	0.07%	0.08%	1.15%
Total Fund					
Gross	1.84%	0.99%	3.88%	5.04%	4.66%
Net	1.79%	0.79%	3.67%	4.81%	4.41%
Target*	1.71%	1.06%	3.14%	3.90%	4.43%

* Current Quarter Target = 42.3% Barclays Aggregate Index, 20.8% Barclays Gov 1-3 Yr, 10.9% NDSIB INS DRA Weighted Benchmark, 9.3% Russell 1000 Index, 6.8% MSCI EAFE, 4.3% NCREIF Total Index, 3.1% Russell 2000 Index and 2.5% 3-month Treasury Bill.

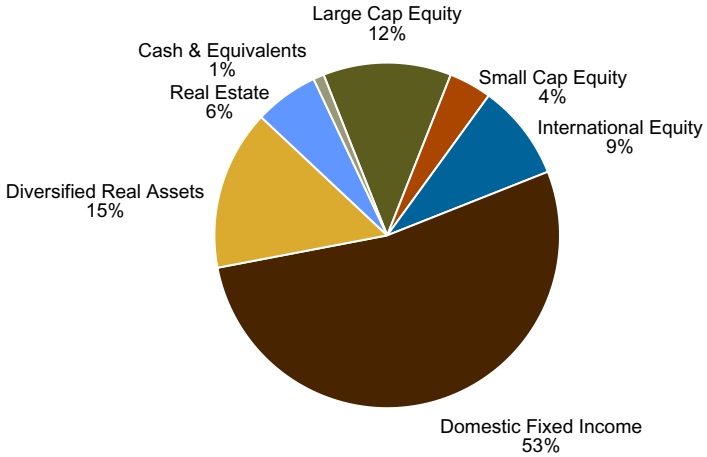
Actual vs Target Asset Allocation
As of March 31, 2016

The first chart below shows the Fund's asset allocation as of March 31, 2016. The second chart shows the Fund's target asset allocation as outlined in the investment policy statement.

Actual Asset Allocation



Target Asset Allocation



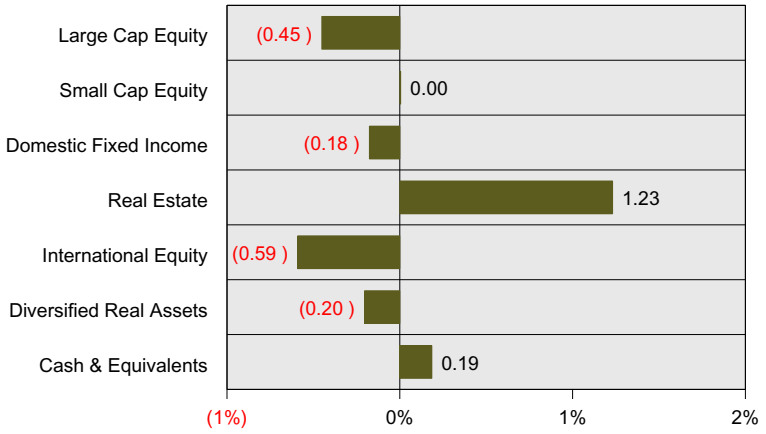
Asset Class	$000s Actual	Weight Actual	Target	Percent Difference	$000s Difference
Large Cap Equity	210,858	11.7%	12.0%	(0.3%)	(5,267)
Small Cap Equity	76,172	4.2%	4.0%	0.2%	4,130
International Equity	159,288	8.8%	9.0%	(0.2%)	(2,807)
Domestic Fixed Income	927,265	51.5%	53.0%	(1.5%)	(27,290)
Diversified Real Assets	261,743	14.5%	15.0%	(0.5%)	(8,414)
Real Estate	126,739	7.0%	6.0%	1.0%	18,677
Cash & Equivalents	38,981	2.2%	1.0%	1.2%	20,971
Total	1,801,047	100.0%	100.0%		

* Current Quarter Target = 53.0% Barclays Aggregate Index, 15.0% NDSIB WSI DRA Weighted Benchmark, 12.0% Russell 1000 Index, 9.0% MSCI EAFE, 6.0% NCREIF Total Index, 4.0% Russell 2000 Index and 1.0% 3-month Treasury Bill.

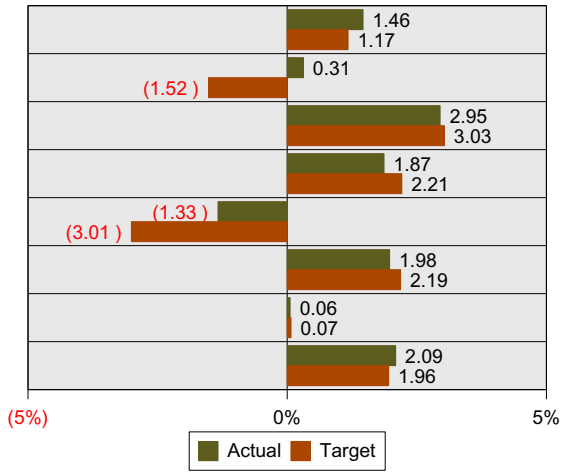
Quarterly Total Fund Relative Attribution - March 31, 2016

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

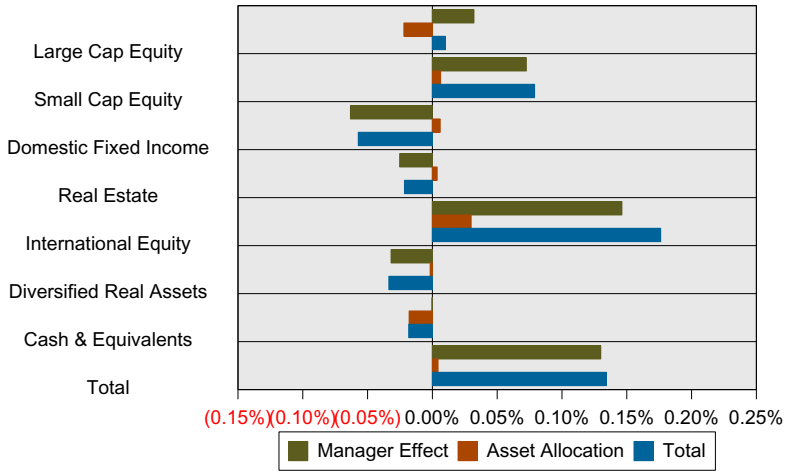
Asset Class Under or Overweighting



Actual vs Target Returns



Relative Attribution by Asset Class



Relative Attribution Effects for Quarter ended March 31, 2016

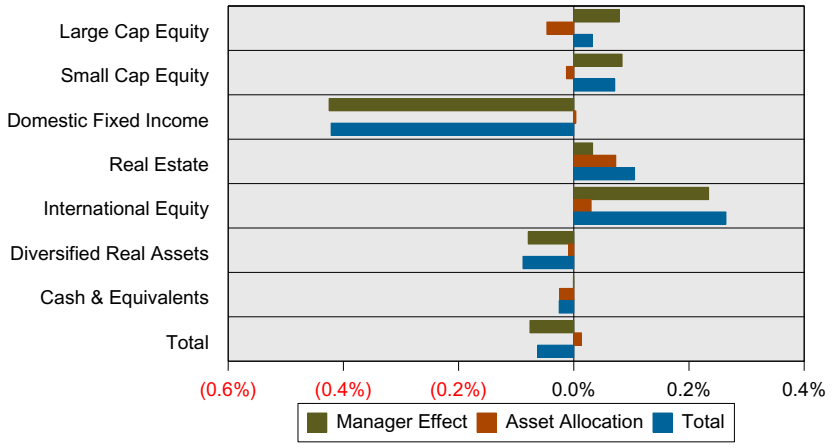
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap Equity	12%	12%	1.46%	1.17%	0.03%	(0.02%)	0.01%
Small Cap Equity	4%	4%	0.31%	(1.52%)	0.07%	0.01%	0.08%
Domestic Fixed Income	53%	53%	2.95%	3.03%	(0.06%)	0.01%	(0.06%)
Real Estate	7%	6%	1.87%	2.21%	(0.03%)	0.00%	(0.02%)
International Equity	8%	9%	(1.33%)	(3.01%)	0.15%	0.03%	0.18%
Diversified Real Assets	15%	15%	1.98%	2.19%	(0.03%)	(0.00%)	(0.03%)
Cash & Equivalents	1%	1%	0.06%	0.07%	(0.00%)	(0.02%)	(0.02%)
Total			**2.09%** =	**1.96%** +	**0.13%** +	**0.00%**	**0.13%**

* Current Quarter Target = 53.0% Barclays Aggregate Index, 15.0% NDSIB WSI DRA Weighted Benchmark, 12.0% Russell 1000 Index, 9.0% MSCI EAFE, 6.0% NCREIF Total Index, 4.0% Russell 2000 Index and 1.0% 3-month Treasury Bill.

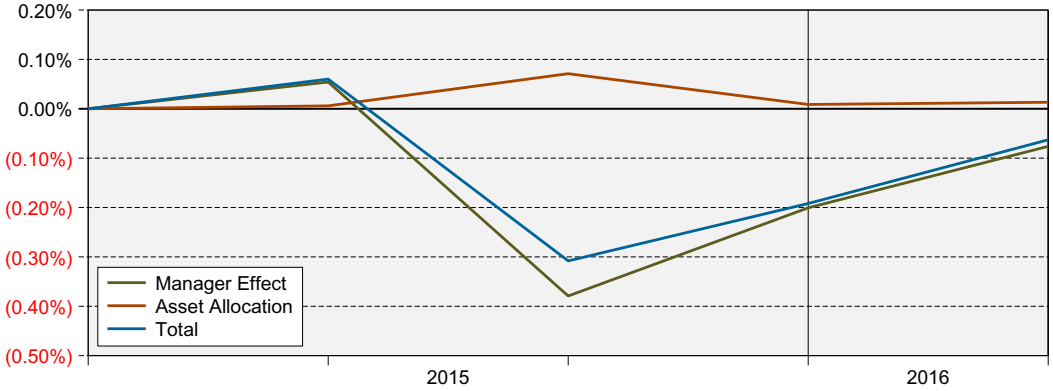
Cumulative Total Fund Relative Attribution - March 31, 2016

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

One Year Relative Attribution Effects



Cumulative Relative Attribution Effects



One Year Relative Attribution Effects

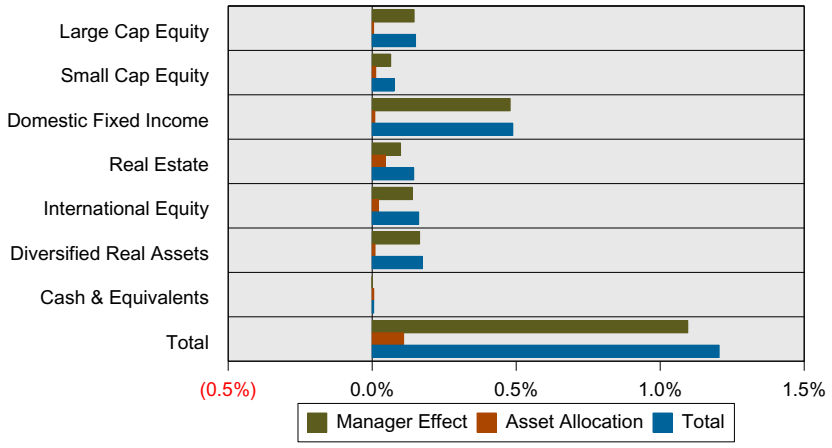
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap Equity	12%	12%	1.20%	0.50%	0.08%	(0.05%)	0.03%
Small Cap Equity	4%	4%	(7.78%)	(9.76%)	0.08%	(0.01%)	0.07%
Domestic Fixed Income	53%	53%	1.20%	1.96%	(0.42%)	0.00%	(0.42%)
Real Estate	7%	6%	12.40%	11.84%	0.03%	0.07%	0.11%
International Equity	9%	9%	(5.71%)	(8.27%)	0.23%	0.03%	0.26%
Diversified Real Assets	15%	15%	0.69%	1.34%	(0.08%)	(0.01%)	(0.09%)
Cash & Equivalents	1%	1%	0.06%	0.12%	(0.00%)	(0.02%)	(0.03%)
Total			**0.95% =**	**1.02% +**	**(0.08%) +**	**0.01%**	**(0.06%)**

* Current Quarter Target = 53.0% Barclays Aggregate Index, 15.0% NDSIB WSI DRA Weighted Benchmark, 12.0% Russell 1000 Index, 9.0% MSCI EAFE, 6.0% NCREIF Total Index, 4.0% Russell 2000 Index and 1.0% 3-month Treasury Bill.

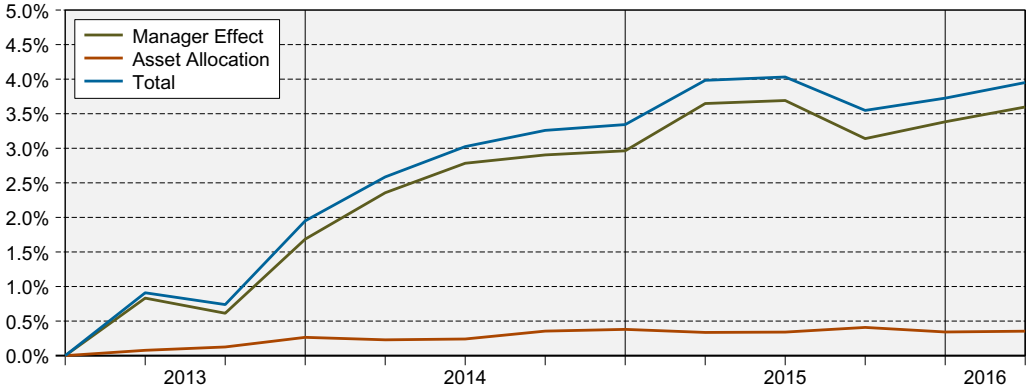
Cumulative Total Fund Relative Attribution - March 31, 2016

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

Three Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Three Year Annualized Relative Attribution Effects

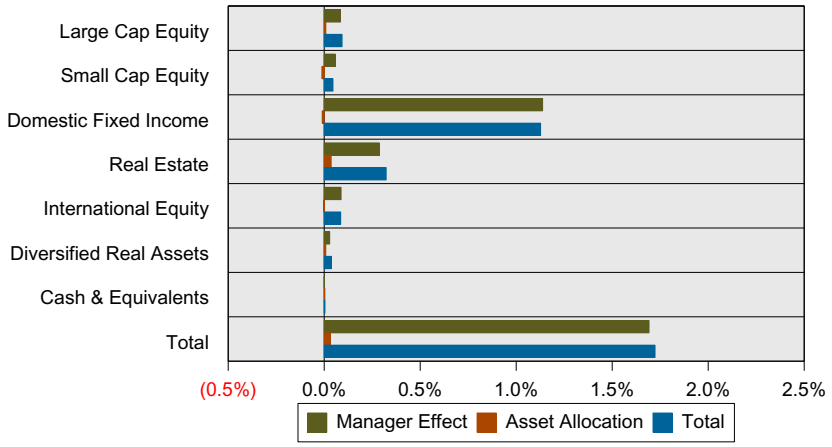
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return		Target Return		Manager Effect		Asset Allocation	Total Relative Return
Large Cap Equity	11%	11%	12.94%		11.52%		0.15%		0.00%	0.15%
Small Cap Equity	4%	4%	8.65%		6.84%		0.06%		0.01%	0.08%
Domestic Fixed Income	52%	52%	3.47%		2.50%		0.48%		0.01%	0.49%
Real Estate	7%	6%	13.51%		11.91%		0.10%		0.05%	0.14%
International Equity	8%	8%	3.90%		2.23%		0.14%		0.02%	0.16%
Diversified Real Assets	18%	18%	2.57%		1.76%		0.16%		0.01%	0.17%
Cash & Equivalents	1%	1%	0.04%		0.07%		(0.00%)		0.01%	0.01%
Total			**5.16%**	**=**	**3.95%**	**+**	**1.10%**	**+**	**0.11%**	**1.20%**

* Current Quarter Target = 53.0% Barclays Aggregate Index, 15.0% NDSIB WSI DRA Weighted Benchmark, 12.0% Russell 1000 Index, 9.0% MSCI EAFE, 6.0% NCREIF Total Index, 4.0% Russell 2000 Index and 1.0% 3-month Treasury Bill.

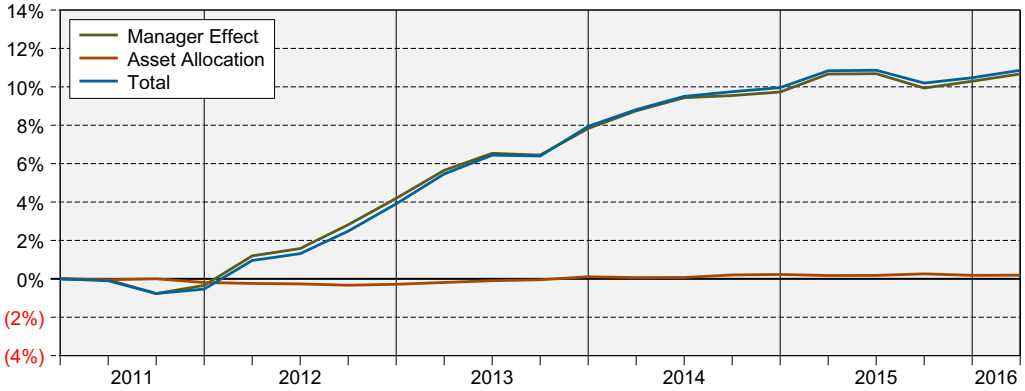
Cumulative Total Fund Relative Attribution - March 31, 2016

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

Five Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Five Year Annualized Relative Attribution Effects

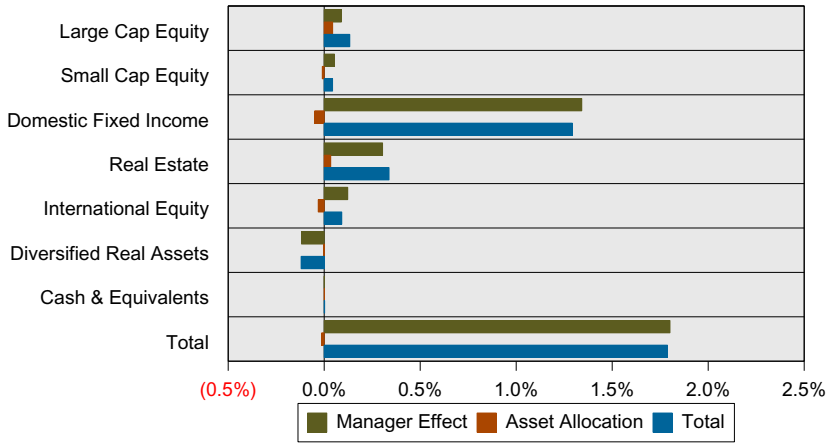
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return		Target Return		Manager Effect		Asset Allocation	Total Relative Return
Large Cap Equity	11%	11%	12.14%		11.35%		0.08%		0.01%	0.09%
Small Cap Equity	4%	4%	8.82%		7.20%		0.06%		(0.01%)	0.05%
Domestic Fixed Income	51%	52%	6.02%		3.78%		1.14%		(0.01%)	1.13%
Real Estate	7%	6%	16.83%		11.93%		0.29%		0.04%	0.32%
International Equity	7%	8%	3.36%		2.29%		0.09%		(0.00%)	0.09%
Diversified Real Assets	19%	20%	3.88%		3.71%		0.03%		0.01%	0.04%
Cash & Equivalents	1%	1%	0.13%		0.08%		0.00%		0.00%	0.00%
Total			**6.82%**	**=**	**5.10%**	**+**	**1.69%**	**+**	**0.03%**	**1.72%**

* Current Quarter Target = 53.0% Barclays Aggregate Index, 15.0% NDSIB WSI DRA Weighted Benchmark, 12.0% Russell 1000 Index, 9.0% MSCI EAFE, 6.0% NCREIF Total Index, 4.0% Russell 2000 Index and 1.0% 3-month Treasury Bill.

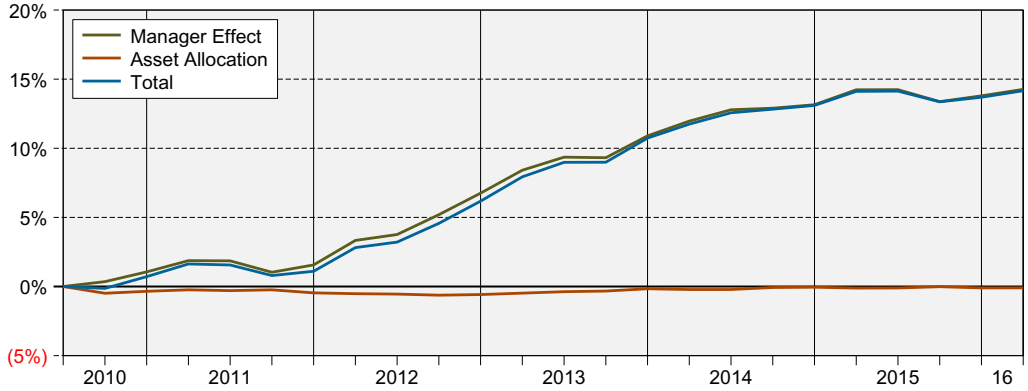
Cumulative Total Fund Relative Attribution - March 31, 2016

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

Five and Three-Quarter Year Annualized Relative Attribution Effects



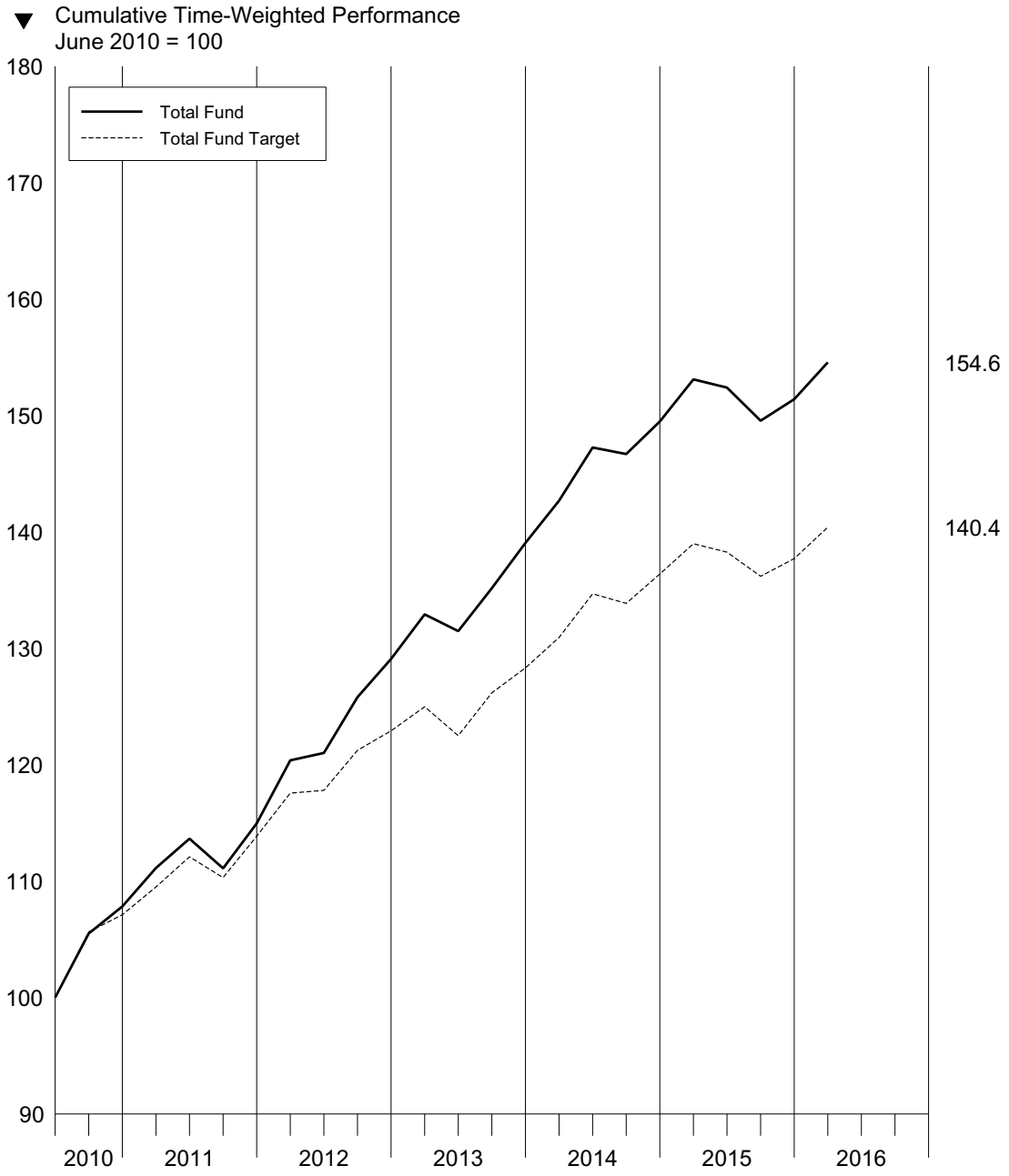
Cumulative Relative Attribution Effects



Five and Three-Quarter Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap Equity	11%	10%	16.06%	15.20%	0.09%	0.04%	0.13%
Small Cap Equity	4%	3%	14.17%	12.59%	0.05%	(0.01%)	0.04%
Domestic Fixed Income	52%	52%	6.14%	3.56%	1.34%	(0.05%)	1.29%
Real Estate	6%	6%	17.79%	12.54%	0.30%	0.03%	0.34%
International Equity	7%	8%	7.13%	5.53%	0.12%	(0.03%)	0.09%
Diversified Real Assets	19%	20%	4.43%	5.05%	(0.12%)	(0.00%)	(0.12%)
Cash & Equivalents	1%	1%	0.16%	0.09%	0.00%	0.00%	0.00%
Total			**7.87% =**	**6.08% +**	**1.80% +**	**(0.01%)**	**1.79%**

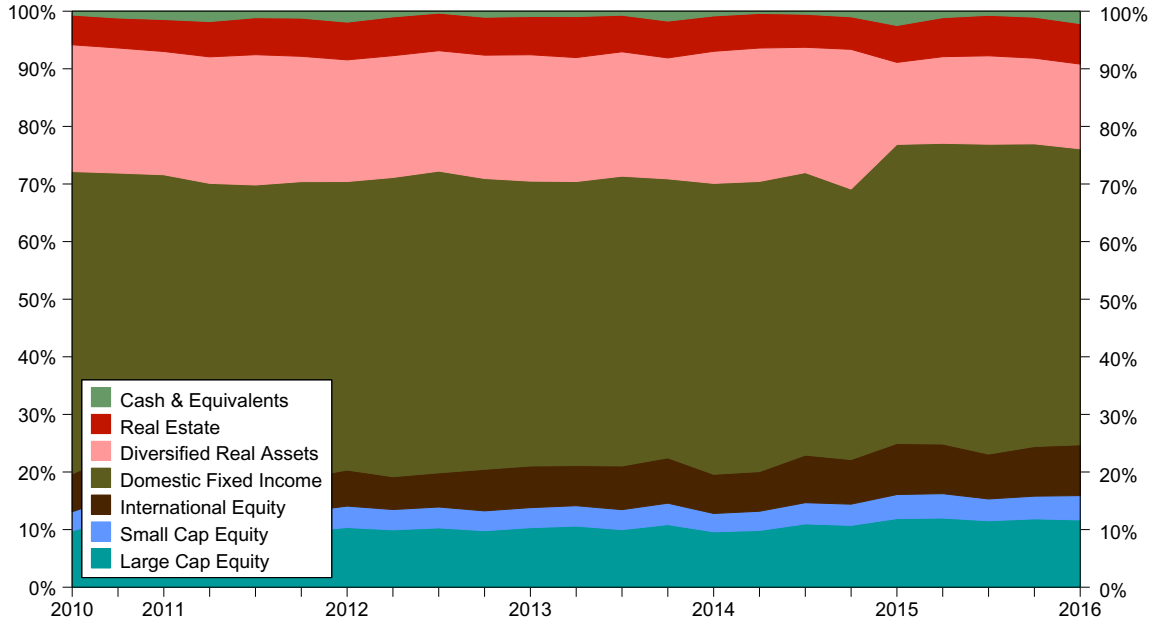
* Current Quarter Target = 53.0% Barclays Aggregate Index, 15.0% NDSIB WSI DRA Weighted Benchmark, 12.0% Russell 1000 Index, 9.0% MSCI EAFE, 6.0% NCREIF Total Index, 4.0% Russell 2000 Index and 1.0% 3-month Treasury Bill.


Cumulative Time-Weighted Performance
June 2010 = 100
Total Fund
Total Fund Target
180
170
160
150
140
130
120
110
100
90
2010
2011
2012
2013
2014
2015
2016
154.6
140.4

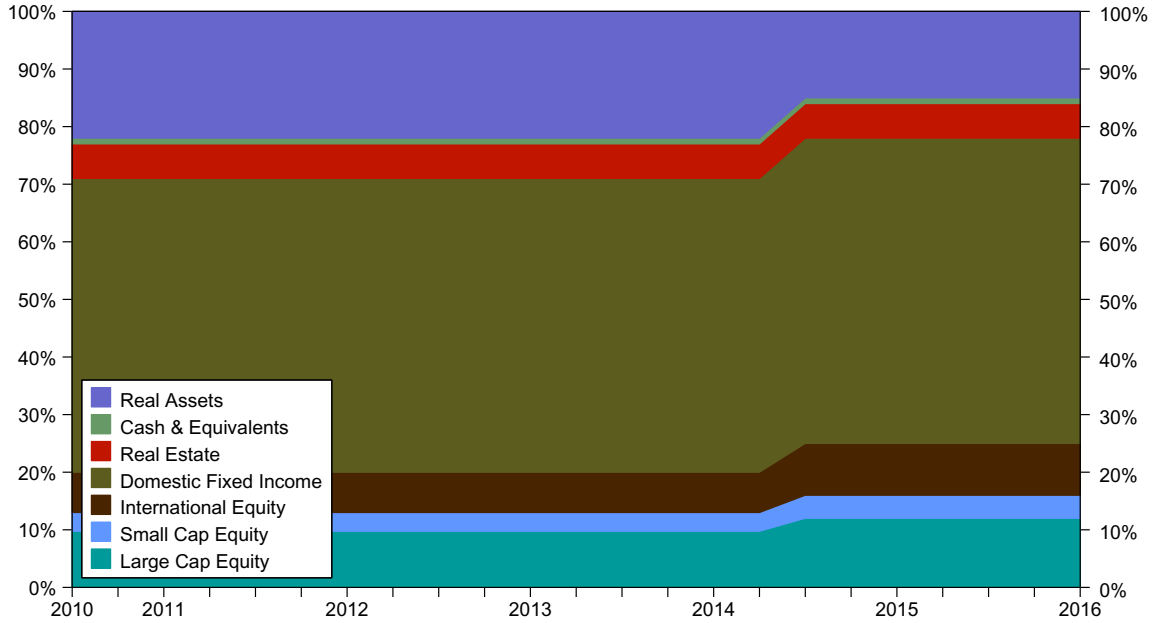
Actual vs Target Historical Asset Allocation

The Historical asset allocation for a fund is by far the largest factor explaining its performance. The charts below show the fund's historical actual asset allocation, and the fund's historical target asset allocation.

Actual Historical Asset Allocation



Target Historical Asset Allocation

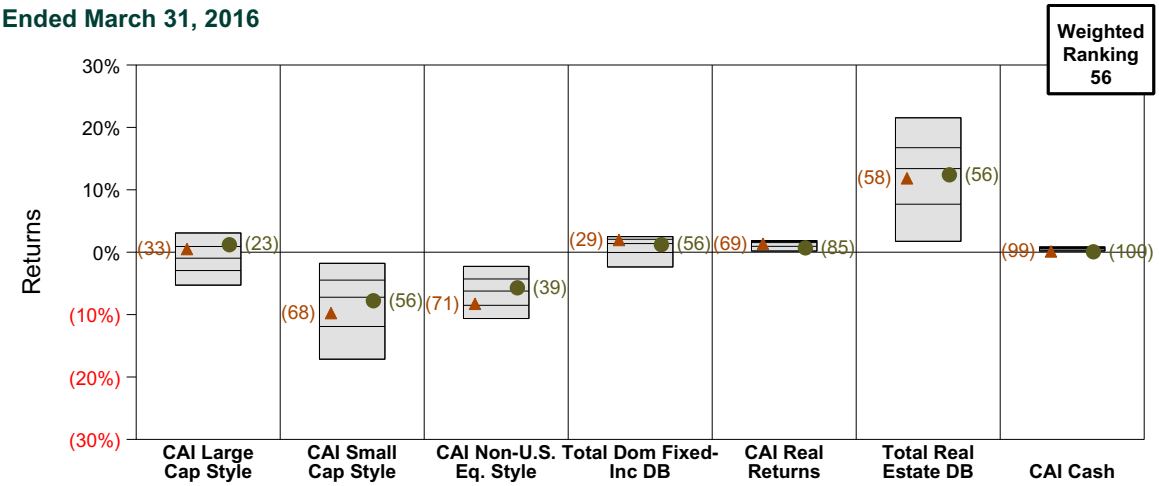


* Current Quarter Target = 53.0% Barclays Aggregate Index, 15.0% NDSIB WSI DRA Weighted Benchmark, 12.0% Russell 1000 Index, 9.0% MSCI EAFE, 6.0% NCREIF Total Index, 4.0% Russell 2000 Index and 1.0% 3-month Treasury Bill.

Asset Class Rankings

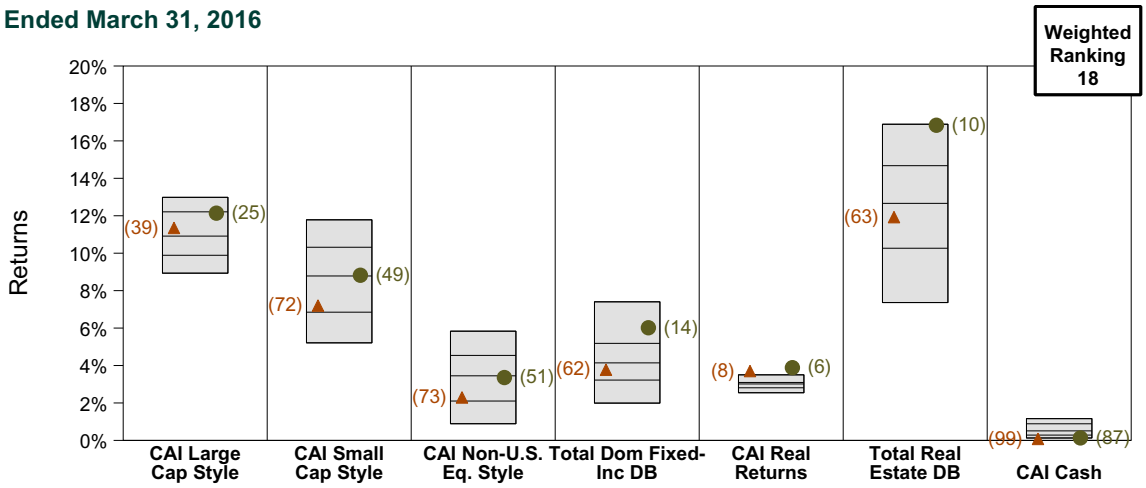
The charts below show the rankings of each asset class component of the Total Fund relative to appropriate comparative databases. In the upper right corner of each graph is the weighted average of the rankings across the different asset classes. The weights of the fund's actual asset allocation are used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

Total Asset Class Performance
One Year Ended March 31, 2016



	CAI Large Cap Style	CAI Small Cap Style	CAI Non-U.S. Eq. Style	Total Dom Fixed-Inc DB	CAI Real Returns	Total Real Estate DB	CAI Cash
10th Percentile	3.08	(1.78)	(2.27)	2.50	1.87	21.54	0.85
25th Percentile	0.92	(4.47)	(4.29)	2.07	1.71	16.75	0.75
Median	(0.96)	(7.22)	(6.23)	1.38	1.54	13.40	0.59
75th Percentile	(2.94)	(11.91)	(8.51)	(0.04)	0.94	7.69	0.35
90th Percentile	(5.28)	(17.15)	(10.63)	(2.37)	0.18	1.75	0.19
Asset Class Composite ●	1.20	(7.78)	(5.71)	1.21	0.69	12.40	0.06
Composite Benchmark ▲	0.50	(9.76)	(8.27)	1.96	1.34	11.84	0.12

Total Asset Class Performance
Five Years Ended March 31, 2016



	CAI Large Cap Style	CAI Small Cap Style	CAI Non-U.S. Eq. Style	Total Dom Fixed-Inc DB	CAI Real Returns	Total Real Estate DB	CAI Cash
10th Percentile	12.98	11.78	5.84	7.40	3.50	16.89	1.16
25th Percentile	12.21	10.32	4.54	5.18	3.10	14.67	0.89
Median	10.91	8.78	3.45	4.14	3.02	12.66	0.51
75th Percentile	9.89	6.85	2.10	3.22	2.81	10.27	0.28
90th Percentile	8.93	5.21	0.89	1.99	2.55	7.36	0.13
Asset Class Composite ●	12.14	8.82	3.36	6.02	3.88	16.83	0.13
Composite Benchmark ▲	11.35	7.20	2.29	3.78	3.71	11.93	0.08

* Current Quarter Target = 53.0% Barclays Aggregate Index, 15.0% NDSIB WSI DRA Weighted Benchmark, 12.0% Russell 1000 Index, 9.0% MSCI EAFE, 6.0% NCREIF Total Index, 4.0% Russell 2000 Index and 1.0% 3-month Treasury Bill.

Asset Class Allocation

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

Asset Class Allocation

	March 31, 2016				December 31, 2015	
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
Large Cap Equity	$210,858,433	11.71%	$131,378	$3,011,337	$207,715,718	11.89%
Small Cap Equity	$76,172,012	4.23%	$6,342,145	$816,764	$69,013,104	3.95%
International Equity	$159,287,511	8.84%	$9,759,342	$(1,234,555)	$150,762,724	8.63%
Domestic Fixed Income	$927,264,950	51.48%	$(19,491,529)	$26,756,411	$920,000,068	52.67%
Diversified Real Assets	$261,743,294	14.53%	$94,764	$5,072,261	$256,576,269	14.69%
Real Estate	$126,739,488	7.04%	$(259,548)	$2,326,649	$124,672,387	7.14%
Cash & Equivalents	$38,981,359	2.16%	$20,902,154	$11,881	$18,067,324	1.03%
Securities Lending Income	$0	0.00%	$(29,658)	$29,658	-	-
Total Fund	$1,801,047,047	100.0%	$17,449,047	$36,790,406	$1,746,807,594	100.0%

PLEASE REFER TO PAGE 36 FOR INVESTMENT MANAGER LEVEL ASSET ALLOCATION.

Asset Class Returns

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

Returns for Periods Ended March 31, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 5-3/4 Years
Large Cap Equity					
Gross	1.46%	1.20%	12.94%	12.14%	16.06%
Net	1.41%	1.01%	12.74%	11.91%	15.79%
Benchmark(1)	1.17%	0.50%	11.52%	11.55%	15.19%
Small Cap Equity					
Gross	0.31%	(7.78%)	8.65%	8.82%	14.17%
Net	0.29%	(8.19%)	8.27%	8.38%	13.55%
Russell 2000	(1.52%)	(9.76%)	6.84%	7.20%	12.59%
International Equity					
Gross	(1.33%)	(5.71%)	3.90%	3.36%	7.13%
Net	(1.43%)	(6.05%)	3.55%	2.98%	6.73%
Benchmark(2)	(3.01%)	(8.27%)	2.23%	2.29%	5.53%
Domestic Fixed Income					
Gross	2.95%	1.21%	3.47%	6.02%	6.14%
Net	2.92%	1.07%	3.33%	5.85%	5.96%
Barclays Aggregate	3.03%	1.96%	2.50%	3.78%	3.56%
Diversified Real Assets					
Gross	1.98%	0.69%	2.57%	3.88%	4.43%
Net	1.90%	0.38%	2.25%	3.54%	4.08%
Weighted Benchmark	2.19%	1.34%	1.76%	3.71%	5.05%
Real Estate					
Gross	1.87%	12.40%	13.51%	16.83%	17.79%
Net	1.69%	11.78%	12.69%	15.75%	16.73%
NCREIF Total Index	2.21%	11.84%	11.91%	11.93%	12.54%
Cash & Equivalents - Net	**0.06%**	**0.06%**	**0.04%**	**0.13%**	**0.16%**
90 Day Treasury Bills	0.07%	0.12%	0.07%	0.08%	0.09%
Total Fund					
Gross	2.09%	0.95%	5.16%	6.82%	7.87%
Net	2.03%	0.73%	4.91%	6.53%	7.57%
Target*	1.96%	1.02%	3.95%	5.10%	6.08%

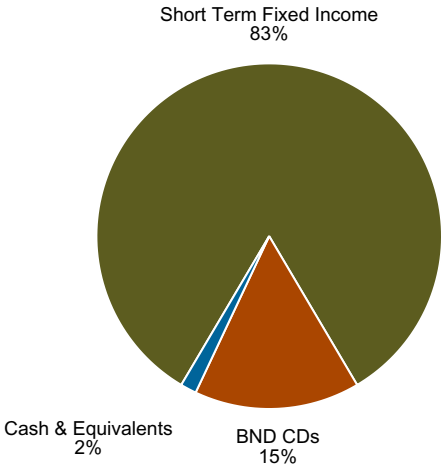
* Current Quarter Target = 53.0% Barclays Aggregate Index, 15.0% NDSIB WSI DRA Weighted Benchmark, 12.0% Russell 1000 Index, 9.0% MSCI EAFE, 6.0% NCREIF Total Index, 4.0% Russell 2000 Index and 1.0% 3-month Treasury Bill.
(1) S&P 500 Index through 12/31/2011 and Russell 1000 Index thereafter.
(2) MSCI EAFE through 9/30/2000; 50% Hedged EAFE through 3/31/2011 and MSCI EAFE again thereafter.

PLEASE REFER TO PAGE 37-39 FOR INVESTMENT MANAGER LEVEL RETURNS.

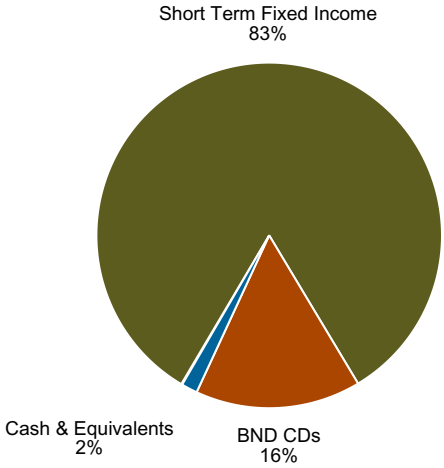
Actual vs Target Asset Allocation
As of March 31, 2016

The first chart below shows the Fund's asset allocation as of March 31, 2016. The second chart shows the Fund's target asset allocation as outlined in the investment policy statement.

Actual Asset Allocation



Target Asset Allocation



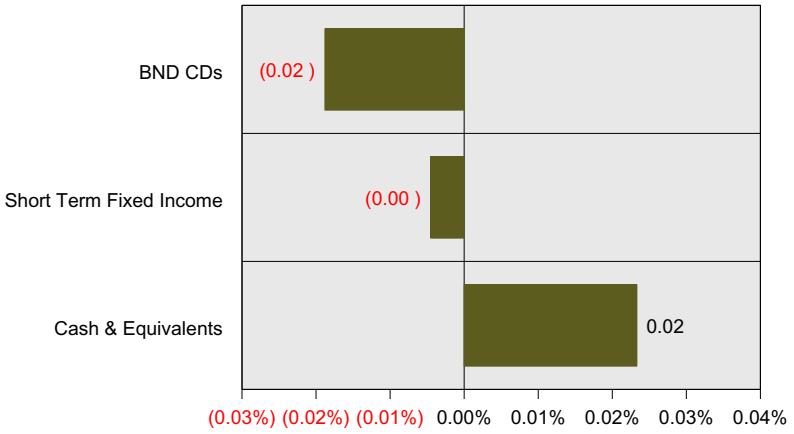
Asset Class	$000s Actual	Weight Actual	Target	Percent Difference	$000s Difference
Short Term Fixed Income	481,120	83.0%	83.0%	0.0%	168
BND CDs	89,814	15.5%	15.5%	0.0%	(230)
Cash & Equivalents	8,875	1.5%	1.5%	0.0%	62
Total	579,810	100.0%	100.0%		

* Current Quarter Target = 83.0% Barclays Gov 1-3 Yr, 15.5% NDSIB Budget - Bond CDs and 1.5% 3-month Treasury Bill.

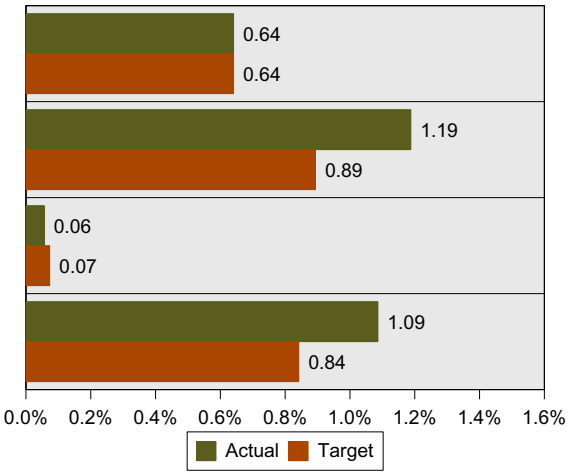
Quarterly Total Fund Relative Attribution - March 31, 2016

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

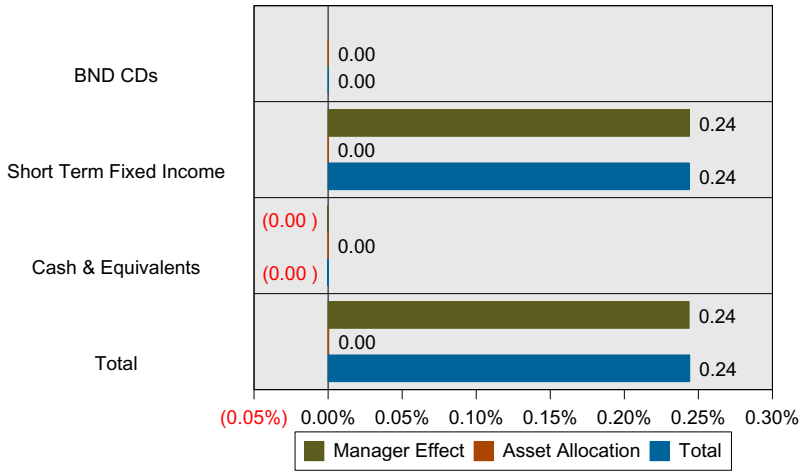
Asset Class Under or Overweighting



Actual vs Target Returns



Relative Attribution by Asset Class



Relative Attribution Effects for Quarter ended March 31, 2016

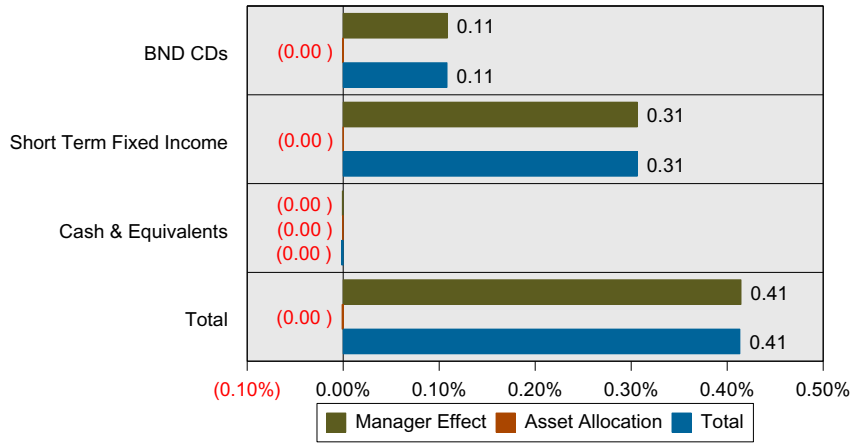
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
BND CDs	16%	16%	0.64%	0.64%	0.00%	0.00%	0.00%
Short Term Fixed Income	83%	83%	1.19%	0.89%	0.24%	0.00%	0.24%
Cash & Equivalents	1%	1%	0.06%	0.07%	(0.00%)	0.00%	(0.00%)
Total			**1.09%**	**= 0.84%**	**+ 0.24%**	**+ 0.00%**	**0.24%**

* Current Quarter Target = 83.0% Barclays Gov 1-3 Yr, 15.5% NDSIB Budget - Bond CDs and 1.5% 3-month Treasury Bill.

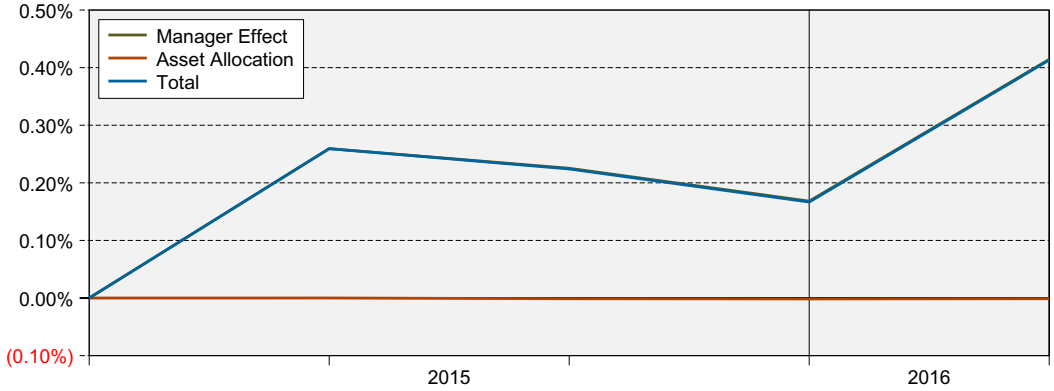
Cumulative Total Fund Relative Attribution - March 31, 2016

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

One Year Relative Attribution Effects



Cumulative Relative Attribution Effects



One Year Relative Attribution Effects

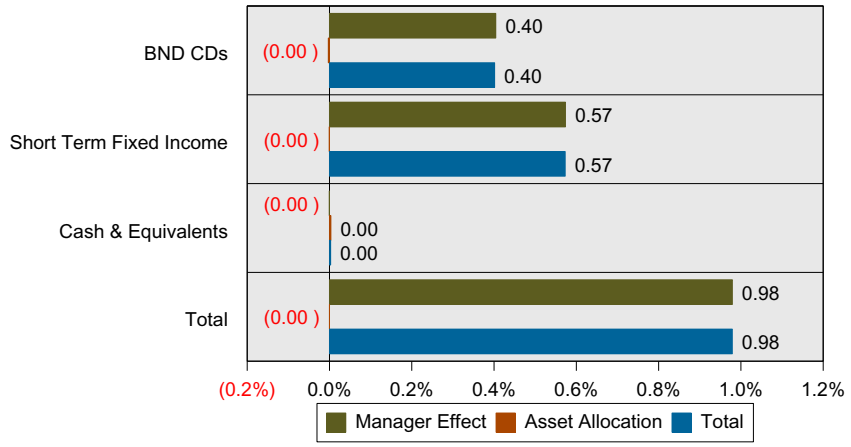
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return		Target Return		Manager Effect		Asset Allocation	Total Relative Return
BND CDs	16%	16%	2.63%		1.97%		0.11%		(0.00%)	0.11%
Short Term Fixed Income	82%	82%	1.30%		0.93%		0.31%		(0.00%)	0.31%
Cash & Equivalents	2%	2%	0.06%		0.12%		(0.00%)		(0.00%)	(0.00%)
Total			**1.49%**	**=**	**1.08%**	**+**	**0.41%**	**+**	**(0.00%)**	**0.41%**

* Current Quarter Target = 83.0% Barclays Gov 1-3 Yr, 15.5% NDSIB Budget - Bond CDs and 1.5% 3-month Treasury Bill.

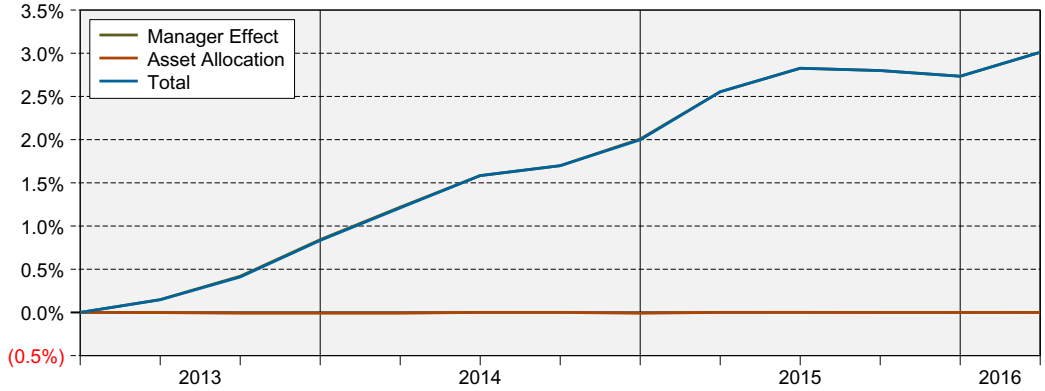
Cumulative Total Fund Relative Attribution - March 31, 2016

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

Three Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Three Year Annualized Relative Attribution Effects

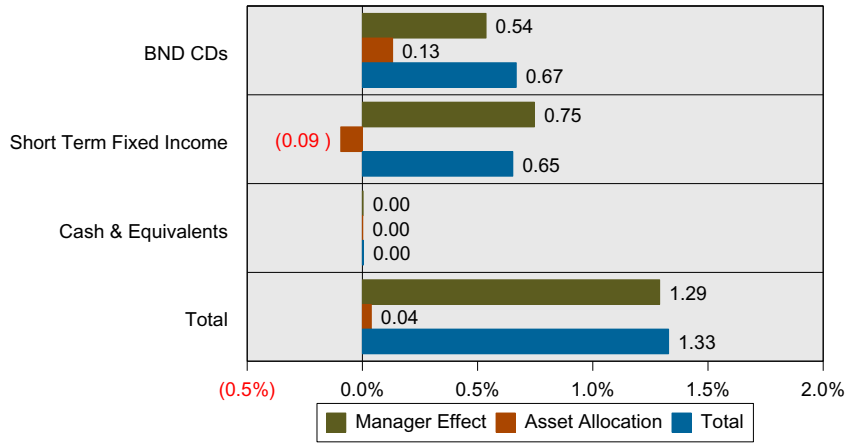
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return		Target Return		Manager Effect		Asset Allocation	Total Relative Return
BND CDs	19%	19%	2.75%		0.68%		0.40%		(0.00%)	0.40%
Short Term Fixed Income	80%	80%	1.49%		0.79%		0.57%		(0.00%)	0.57%
Cash & Equivalents	2%	2%	0.04%		0.07%		(0.00%)		0.00%	0.00%
Total			**1.73%**	**=**	**0.75%**	**+**	**0.98%**	**+**	**(0.00%)**	**0.98%**

* Current Quarter Target = 83.0% Barclays Gov 1-3 Yr, 15.5% NDSIB Budget - Bond CDs and 1.5% 3-month Treasury Bill.

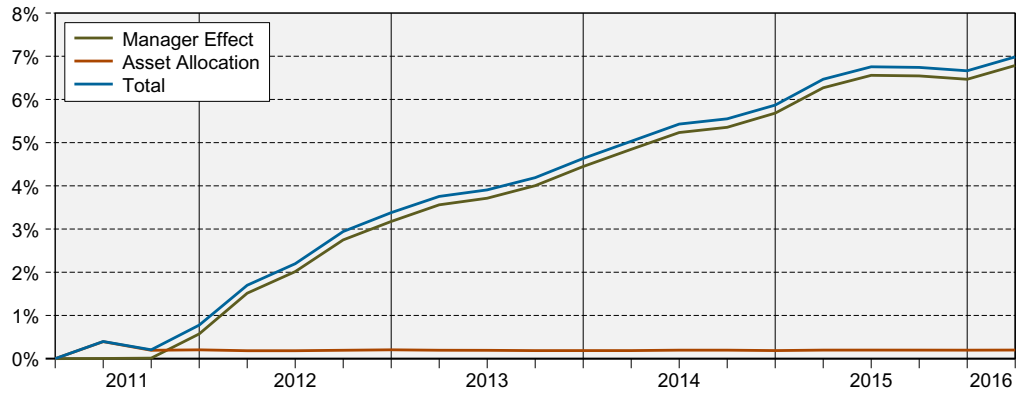
Cumulative Total Fund Relative Attribution - March 31, 2016

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

Five Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Five Year Annualized Relative Attribution Effects

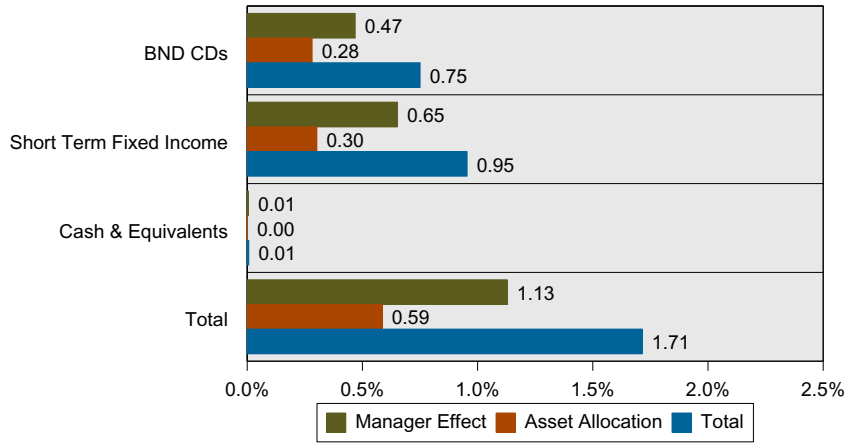
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return		Target Return		Manager Effect		Asset Allocation	Total Relative Return
BND CDs	22%	19%	3.33%		0.87%		0.54%		0.13%	0.67%
Short Term Fixed Income	75%	70%	1.46%		0.48%		0.75%		(0.09%)	0.65%
Cash & Equivalents	3%	12%	0.13%		0.08%		0.00%		0.00%	0.00%
Total			**1.92%**	**=**	**0.59%**	**+**	**1.29%**	**+**	**0.04%**	**1.33%**

* Current Quarter Target = 83.0% Barclays Gov 1-3 Yr, 15.5% NDSIB Budget - Bond CDs and 1.5% 3-month Treasury Bill.

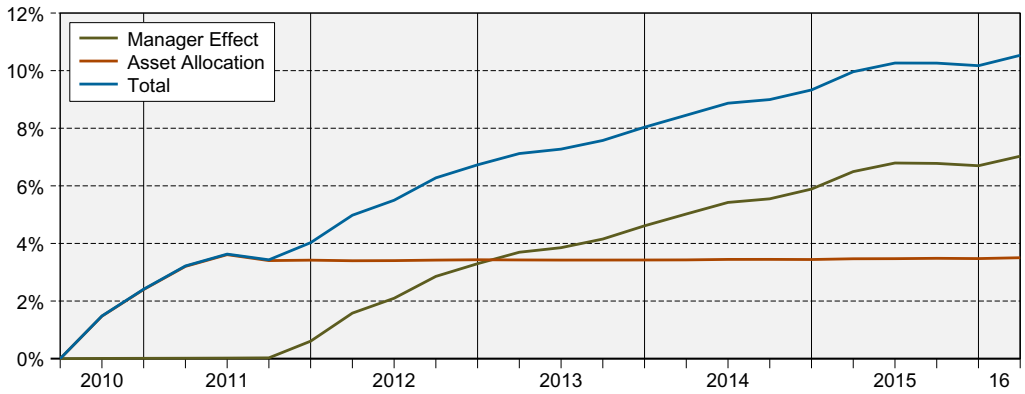
Cumulative Total Fund Relative Attribution - March 31, 2016

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

Five and Three-Quarter Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects

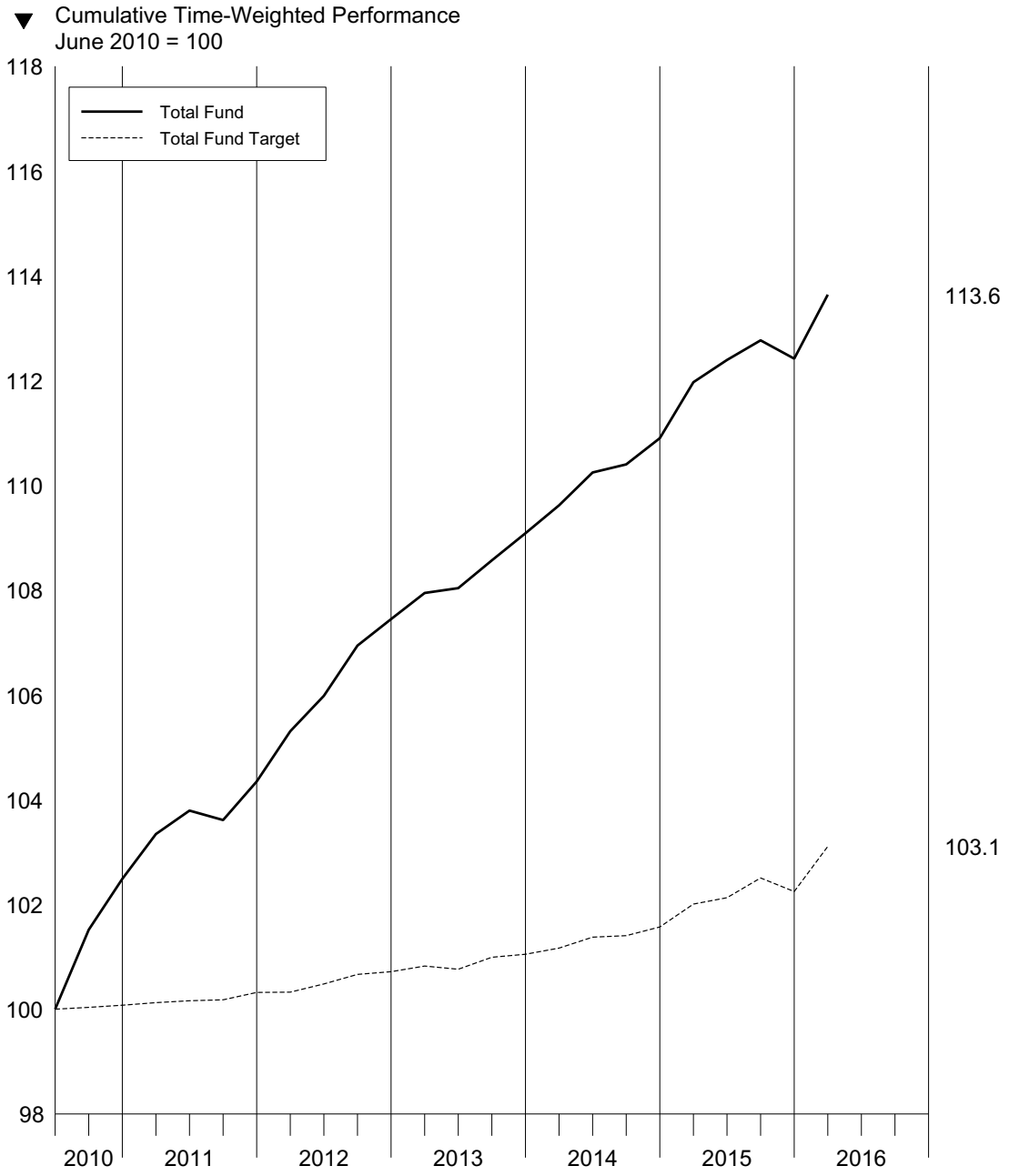


Five and Three-Quarter Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return		Target Return		Manager Effect		Asset Allocation	Total Relative Return
BND CDs	23%	16%	3.46%		1.33%		0.47%		0.28%	0.75%
Short Term Fixed Income	73%	61%	1.95%		1.09%		0.65%		0.30%	0.95%
Cash & Equivalents	4%	23%	0.16%		0.09%		0.01%		0.00%	0.01%
Total			**2.25%**	**=**	**0.53%**	**+**	**1.13%**	**+**	**0.59%**	**1.71%**

* Current Quarter Target = 83.0% Barclays Gov 1-3 Yr, 15.5% NDSIB Budget - Bond CDs and 1.5% 3-month Treasury Bill.

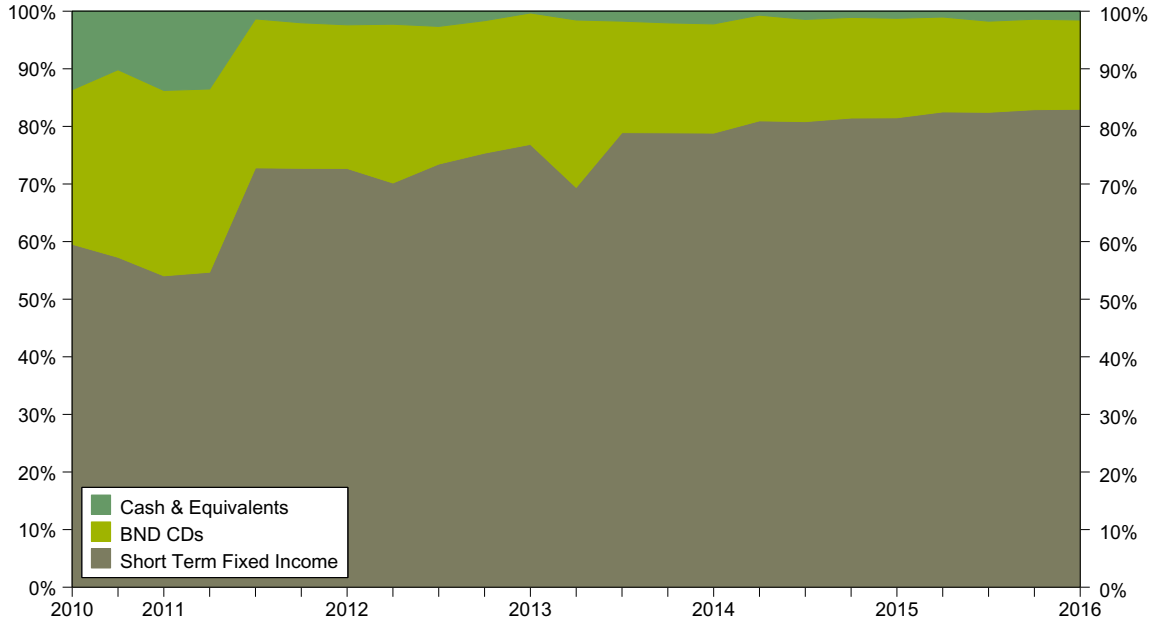
NDSIB - Budget Stabilization Fund
Cumulative Results



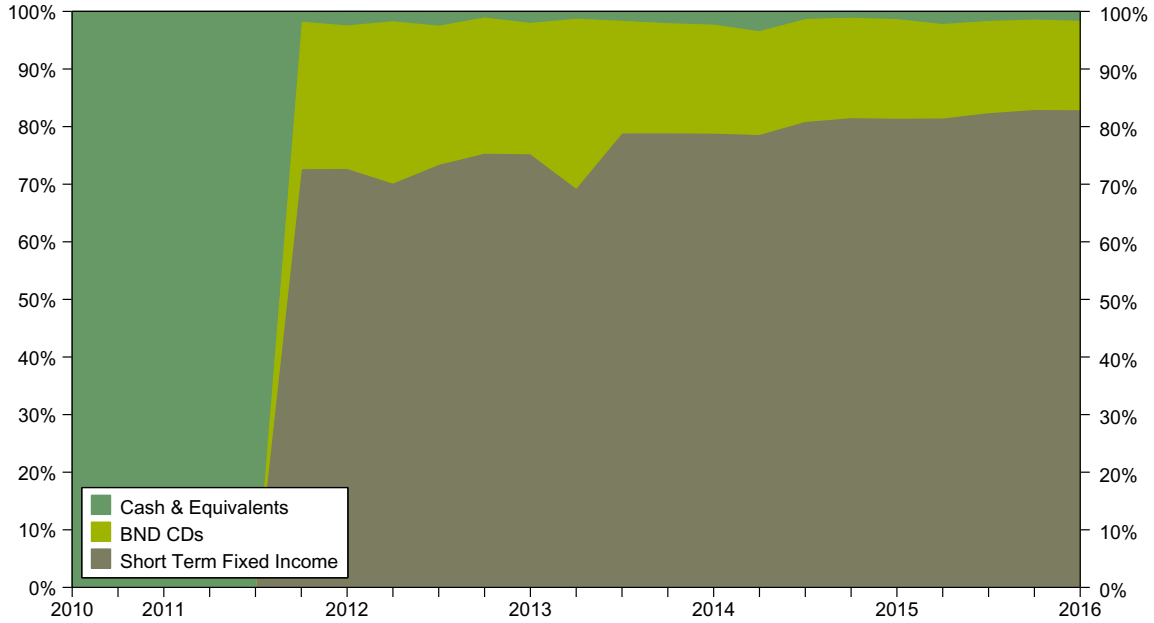
Actual vs Target Historical Asset Allocation

The Historical asset allocation for a fund is by far the largest factor explaining its performance. The charts below show the fund's historical actual asset allocation, and the fund's historical target asset allocation.

Actual Historical Asset Allocation



Target Historical Asset Allocation



* Current Quarter Target = 83.0% Barclays Gov 1-3 Yr, 15.5% NDSIB Budget - Bond CDs and 1.5% 3-month Treasury Bill.

Asset Class Allocation

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

Asset Class Allocation

	March 31, 2016				December 31, 2015	
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
Short Term Fixed Income	$481,120,159	82.98%	$(217,603)	$5,649,517	$475,688,246	82.91%
BND CDs	$89,814,194	15.49%	$(795,230)	$573,145	$90,036,279	15.69%
Cash & Equivalents	$8,875,391	1.53%	$851,250	$4,852	$8,019,289	1.40%
Securities Lending Income	$0	0.00%	$(3,644)	$3,644	-	-
Total Fund	$579,809,745	100.0%	$(165,227)	$6,231,158	$573,743,813	100.0%

PLEASE REFER TO PAGE 36 FOR INVESTMENT MANAGER LEVEL ASSET ALLOCATION.

Investment Manager Returns

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

Returns for Periods Ended March 31, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 5-3/4 Years
Short Term Fixed Income					
Gross	1.19%	1.30%	1.49%	1.46%	1.95%
Net	1.15%	1.15%	1.36%	1.33%	1.83%
Barclays Gov 1-3 Yr	0.89%	0.93%	0.79%	0.90%	0.88%
BND CDs - Net	**0.64%**	**2.63%**	**2.75%**	**3.33%**	**3.46%**
Cash & Equivalents - Net	**0.06%**	**0.06%**	**0.04%**	**0.13%**	**0.16%**
3-month Treasury Bill	0.07%	0.12%	0.07%	0.08%	0.09%
Total Fund					
Gross	1.09%	1.49%	1.73%	1.92%	2.25%
Net	1.06%	1.37%	1.62%	1.82%	2.16%
Target*	0.84%	1.08%	0.75%	0.59%	0.53%

* Current Quarter Target = 83.0% Barclays Gov 1-3 Yr, 15.5% NDSIB Budget - Bond CDs and 1.5% 3-month Treasury Bill.

PLEASE REFER TO PAGES 37-39 FOR INVESTMENT MANAGER LEVEL RETURNS.

Parametric Clifton Large Cap
Period Ended March 31, 2016

Investment Philosophy

Parametric Clifton utilizes equity futures to gain benchmark exposure in constructing the portfolio it believes provides the greatest likelihood of outperforming the index. In this construction the underlying cash portfolio is invested in a liquid, high quality short duration fixed income portfolio. Over market cycles excess return generated by the short duration portfolio, when added to the performance of futures is expected to allow the strategy to achieve 0.50% to 1.00% of gross excess annual performance.

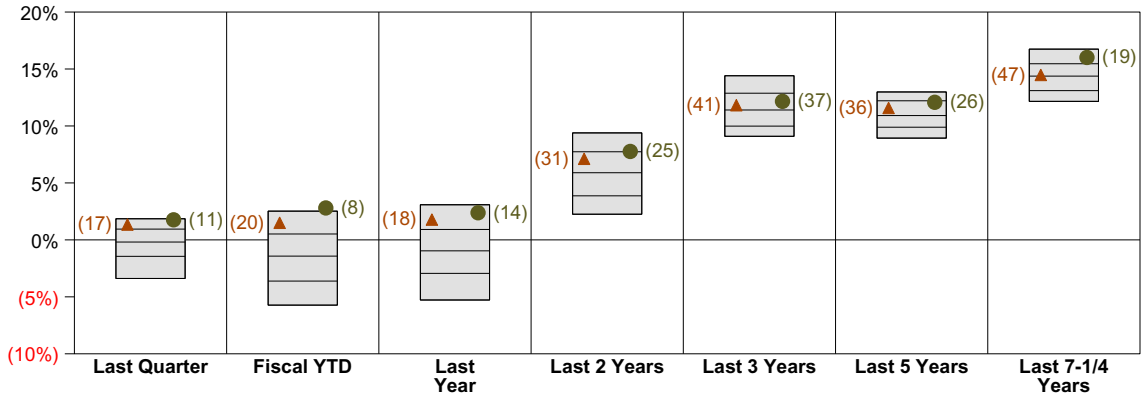
Quarterly Summary and Highlights

- Parametric Clifton Large Cap's portfolio posted a 1.76% return for the quarter placing it in the 11 percentile of the CAI Large Capitalization Style group for the quarter and in the 14 percentile for the last year.
- Parametric Clifton Large Cap's portfolio outperformed the S&P 500 Index by 0.41% for the quarter and outperformed the S&P 500 Index for the year by 0.60%.

Quarterly Asset Growth

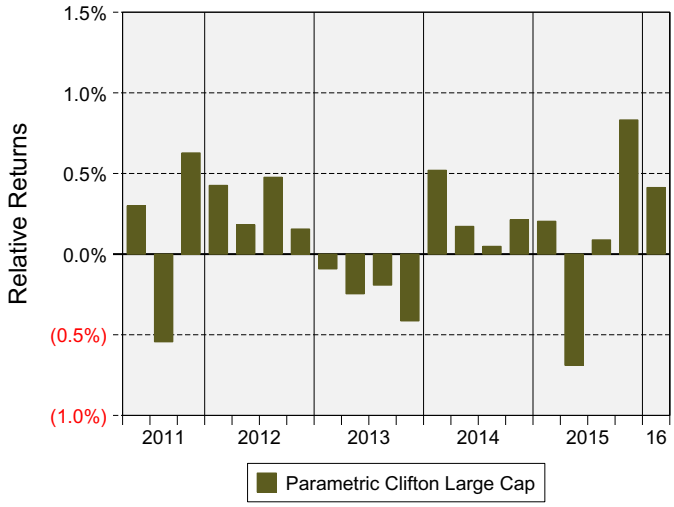
Beginning Market Value	$45,462,970
Net New Investment	$0
Investment Gains/(Losses)	$800,380
Ending Market Value	$46,263,350

Performance vs CAI Large Capitalization Style (Gross)

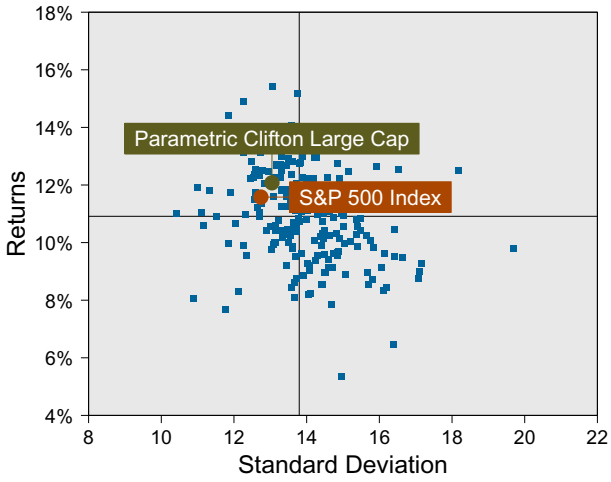


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 7-1/4 Years
10th Percentile	1.85	2.52	3.08	9.39	14.41	12.98	16.74
25th Percentile	0.95	0.52	0.92	7.73	12.87	12.21	15.46
Median	(0.19)	(1.43)	(0.96)	5.90	11.40	10.91	14.38
75th Percentile	(1.45)	(3.62)	(2.94)	3.87	9.99	9.89	13.10
90th Percentile	(3.39)	(5.73)	(5.28)	2.25	9.09	8.93	12.16
Parametric Clifton Large Cap ●	1.76	2.80	2.38	7.76	12.16	12.08	16.01
S&P 500 Index ▲	1.35	1.50	1.78	7.12	11.82	11.58	14.48

Relative Return vs S&P 500 Index



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



L.A. Capital
Period Ended March 31, 2016

Investment Philosophy

The LA Capital Structured portfolio is a large growth portfolio benchmarked to the Russell 1000 Growth Index. It is an active assignment meaning that it targets a 2% alpha and constrains its risk budget (tracking error) to 4% relative to the benchmark. LA Capital believes that investment results are driven by Investor Preferences and thus recognize that when preferences shift a different posture related to that factor is warranted.

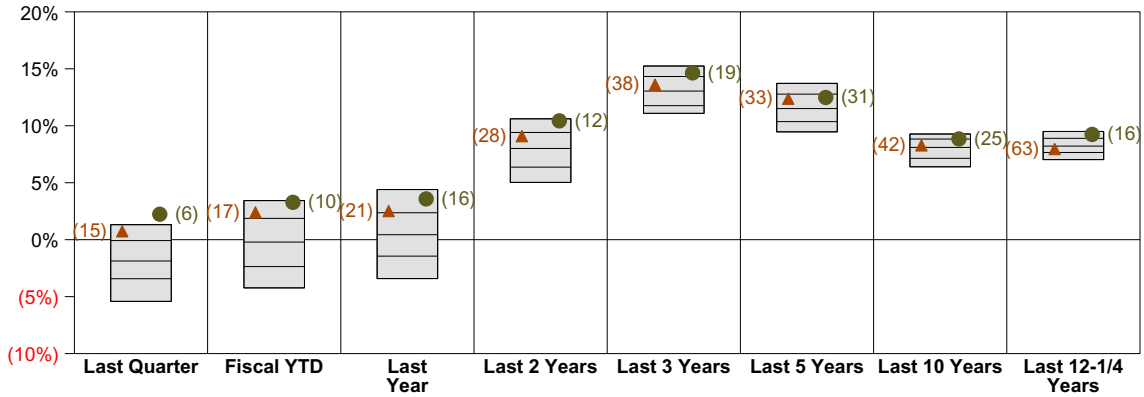
Quarterly Summary and Highlights

- L.A. Capital Large Cap Growth's portfolio posted a 2.23% return for the quarter placing it in the 6 percentile of the CAI Large Cap Growth Style group for the quarter and in the 16 percentile for the last year.
- L.A. Capital Large Cap Growth's portfolio outperformed the Russell 1000 Growth Index by 1.49% for the quarter and outperformed the Russell 1000 Growth Index for the year by 1.06%.

Quarterly Asset Growth

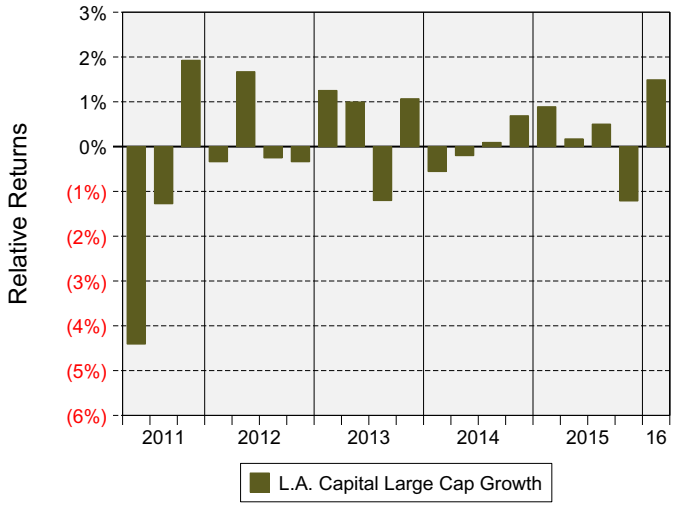
Beginning Market Value	$66,792,913
Net New Investment	$-35,714
Investment Gains/(Losses)	$1,488,143
Ending Market Value	$68,245,342

Performance vs CAI Large Cap Growth Style (Gross)

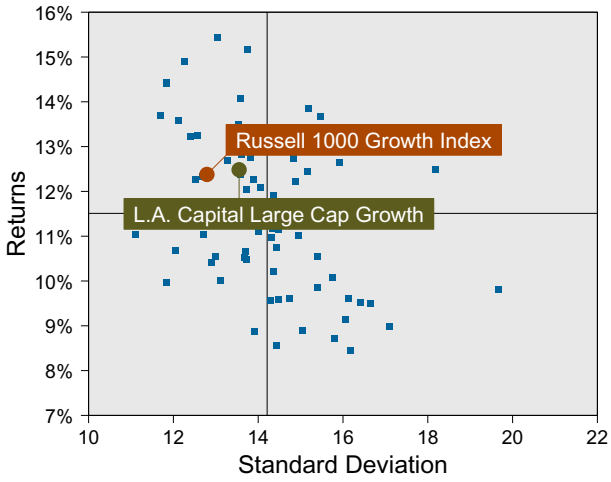


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 10 Years	Last 12-1/4 Years
10th Percentile	1.32	3.43	4.40	10.61	15.24	13.72	9.28	9.50
25th Percentile	(0.08)	1.87	2.37	9.41	14.32	12.78	8.83	8.90
Median	(1.87)	(0.21)	0.44	8.01	13.05	11.51	8.10	8.21
75th Percentile	(3.43)	(2.36)	(1.45)	6.37	11.76	10.36	7.14	7.65
90th Percentile	(5.42)	(4.23)	(3.42)	5.03	11.09	9.46	6.40	7.03
L.A. Capital Large Cap Growth ●	2.23	3.28	3.58	10.43	14.64	12.48	8.84	9.24
Russell 1000 Growth Index ▲	0.74	2.39	2.52	9.09	13.61	12.38	8.28	7.96

Relative Return vs Russell 1000 Growth Index



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



L.A. Capital Enhanced
Period Ended March 31, 2016

Investment Philosophy

The LA Capital Enhanced portfolio is a large core portfolio benchmarked to the Russell 1000 Index. Characterized as an enhanced index assignment, its objective is to track the benchmark with lower variability. The pension portfolio began in August of 2000 and the insurance portfolio was initiated in April of 2004. Since October of 2006 a small portion of each of the two core accounts was allocated into the Large Cap Alpha Fund with intent to add incremental alpha to the assignment given that the information ratio was expected to be higher.

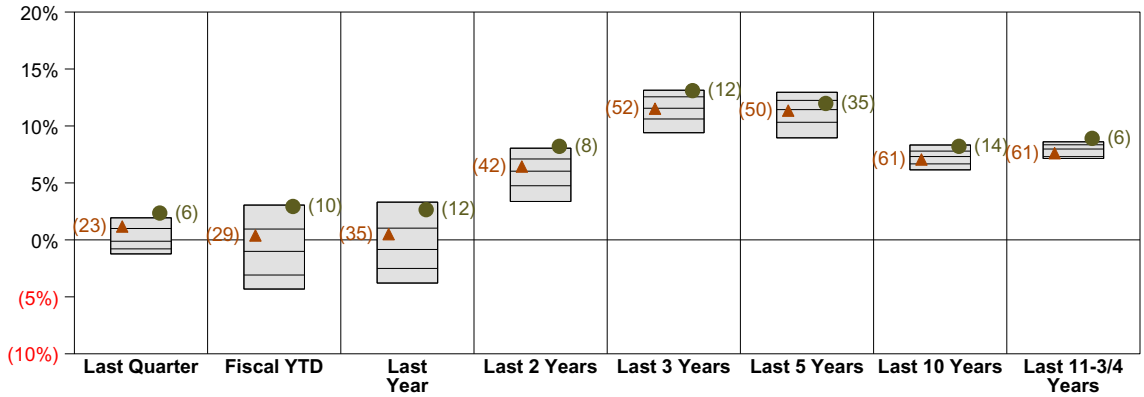
Quarterly Summary and Highlights

- L.A. Capital Enhanced's portfolio posted a 2.35% return for the quarter placing it in the 6 percentile of the CAI Large Cap Core Style group for the quarter and in the 12 percentile for the last year.
- L.A. Capital Enhanced's portfolio outperformed the Russell 1000 Index by 1.18% for the quarter and outperformed the Russell 1000 Index for the year by 2.15%.

Quarterly Asset Growth

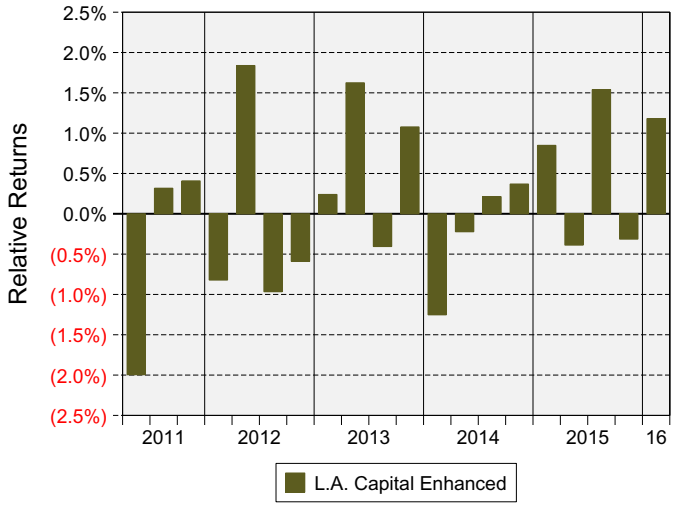
Beginning Market Value	$45,661,979
Net New Investment	$-16,813
Investment Gains/(Losses)	$1,073,560
Ending Market Value	$46,718,726

Performance vs CAI Large Cap Core Style (Gross)

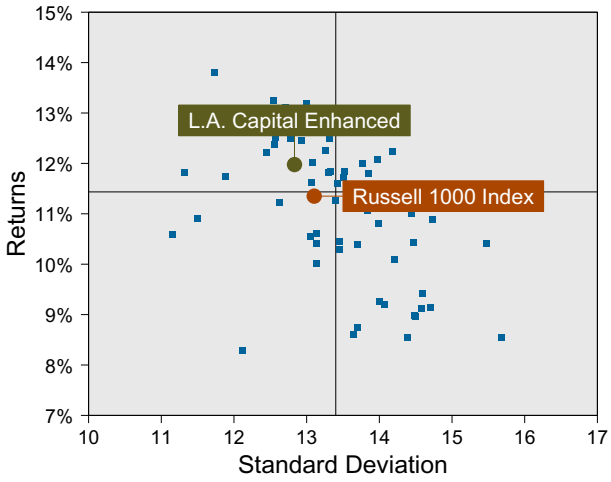


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 10 Years	Last 11-3/4 Years
10th Percentile	1.94	3.06	3.31	8.05	13.14	12.96	8.33	8.61
25th Percentile	1.00	0.95	1.03	7.10	12.56	12.25	7.79	8.35
Median	(0.12)	(1.01)	(0.84)	6.03	11.55	11.43	7.32	7.97
75th Percentile	(0.79)	(3.09)	(2.51)	4.75	10.61	10.32	6.67	7.31
90th Percentile	(1.23)	(4.32)	(3.79)	3.37	9.41	8.96	6.15	7.14
L.A. Capital Enhanced ●	2.35	2.93	2.65	8.21	13.10	11.98	8.21	8.91
Russell 1000 Index ▲	1.17	0.39	0.50	6.44	11.52	11.35	7.06	7.61

Relative Return vs Russell 1000 Index



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



LSV Asset Management
Period Ended March 31, 2016

Investment Philosophy

The objective of LSV Asset Management's Large Cap Value Equity (U.S.) strategy is to outperform the Russell 1000 Value by at least 200 basis points (gross of fees) per annum over a 3-5 year period with a tracking error of approximately 4%. Their stock selection process is a quantitative approach that ranks a broad universe of stocks on a combination of value and momentum factors and seeks to invest approximately 100 stocks in the most attractive securities possible within strict risk parameters to control the portfolio's tracking error relative to the benchmark. The resulting portfolio is broadly diversified across industry groups and fully invested.

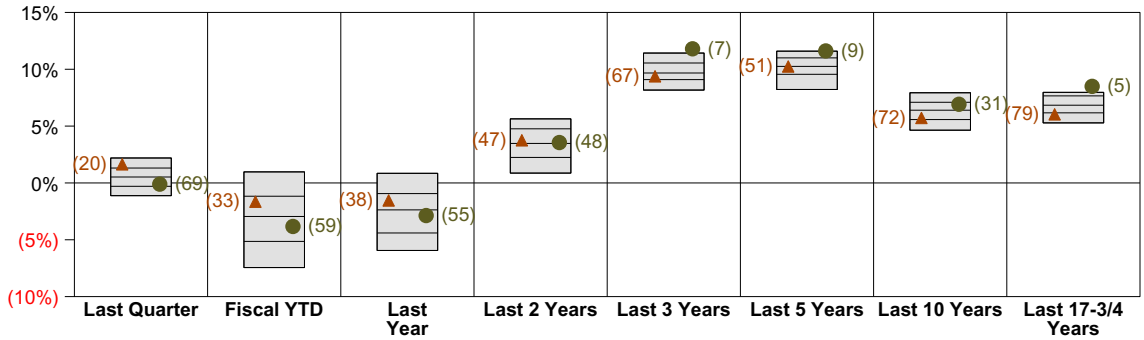
Quarterly Summary and Highlights

- LSV Large Cap Value's portfolio posted a (0.11)% return for the quarter placing it in the 69 percentile of the CAI Large Cap Value Style group for the quarter and in the 55 percentile for the last year.
- LSV Large Cap Value's portfolio underperformed the Russell 1000 Value Index by 1.74% for the quarter and underperformed the Russell 1000 Value Index for the year by 1.33%.

Quarterly Asset Growth

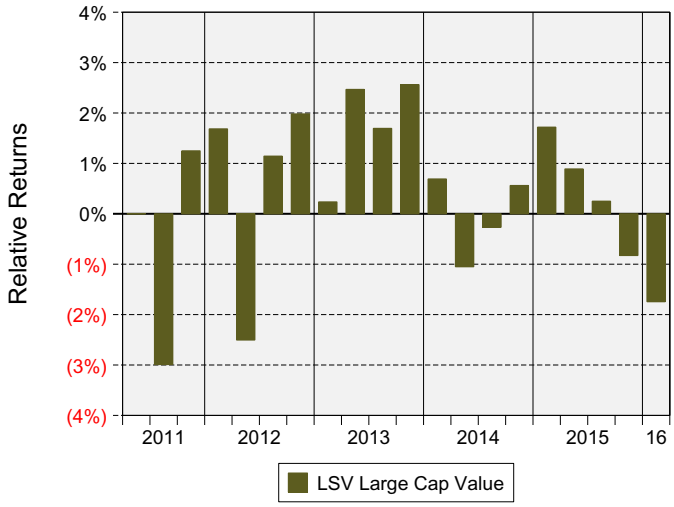
Beginning Market Value	$67,154,209
Net New Investment	$-51,927
Investment Gains/(Losses)	$-76,973
Ending Market Value	$67,025,309

Performance vs CAI Large Cap Value Style (Gross)

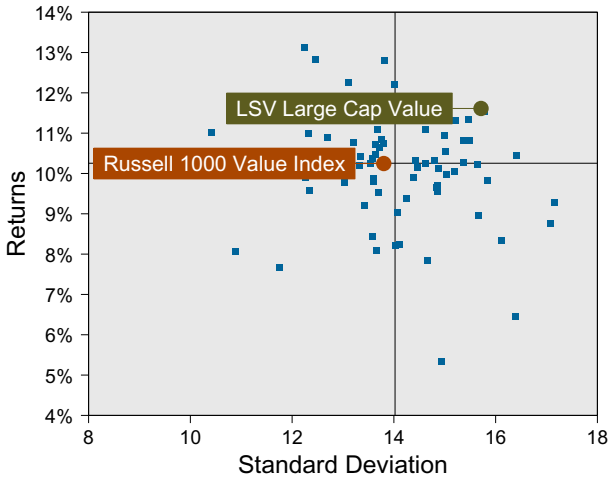


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 10 Years	Last 17-3/4 Years
10th Percentile	2.19	0.97	0.85	5.64	11.43	11.59	7.93	7.97
25th Percentile	1.31	(1.17)	(0.94)	4.76	10.55	11.00	7.10	7.66
Median	0.52	(2.95)	(2.37)	3.48	9.67	10.25	6.40	6.84
75th Percentile	(0.30)	(5.14)	(4.40)	2.24	9.09	9.56	5.58	6.17
90th Percentile	(1.12)	(7.44)	(5.94)	0.86	8.17	8.22	4.64	5.28
LSV Large Cap Value ●	(0.11)	(3.83)	(2.87)	3.55	11.80	11.61	6.92	8.50
Russell 1000 Value Index ▲	1.64	(1.65)	(1.54)	3.75	9.38	10.25	5.72	6.03

Relative Return vs Russell 1000 Value Index



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



Parametric Clifton SmallCap
Period Ended March 31, 2016

Investment Philosophy

Parametric Clifton utilizes equity futures to gain benchmark exposure in constructing the portfolio it believes provides the greatest likelihood of outperforming the index. In this construction the underlying cash portfolio is invested in a liquid, high quality short duration fixed income portfolio. Over market cycles excess return generated by the short duration portfolio, when added to the performance of futures is expected to allow the strategy to achieve 0.50% to 1.00% of gross excess annual performance.

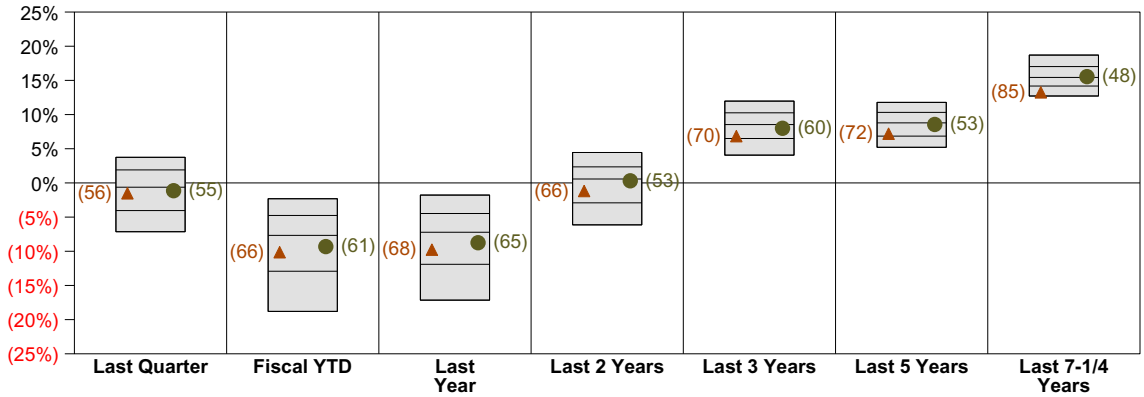
Quarterly Summary and Highlights

- Parametric Clifton SmallCap's portfolio posted a (1.14)% return for the quarter placing it in the 55 percentile of the CAI Small Capitalization Style group for the quarter and in the 65 percentile for the last year.
- Parametric Clifton SmallCap's portfolio outperformed the Russell 2000 Index by 0.38% for the quarter and outperformed the Russell 2000 Index for the year by 1.01%.

Quarterly Asset Growth

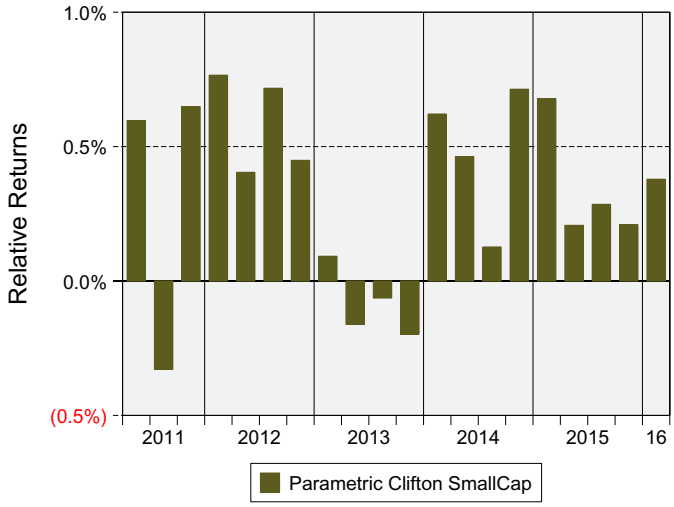
Beginning Market Value	$51,880,695
Net New Investment	$0
Investment Gains/(Losses)	$-591,505
Ending Market Value	$51,289,190

Performance vs CAI Small Capitalization Style (Gross)

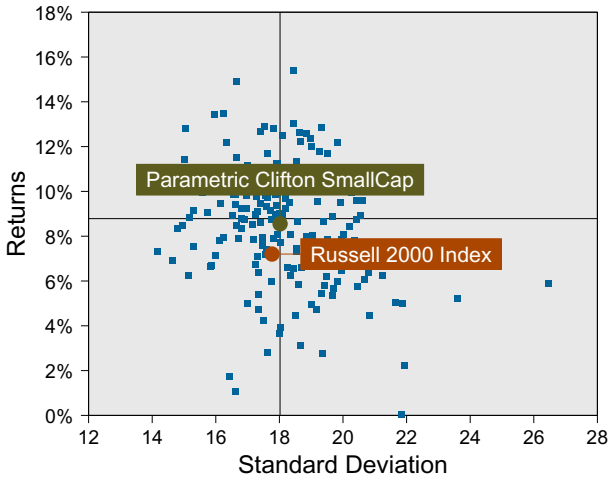


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 7-1/4 Years
10th Percentile	3.75	(2.31)	(1.78)	4.45	11.97	11.78	18.70
25th Percentile	1.90	(4.76)	(4.47)	2.35	10.26	10.32	17.02
Median	(0.63)	(7.67)	(7.22)	0.57	8.54	8.78	15.43
75th Percentile	(4.04)	(12.92)	(11.91)	(2.91)	6.50	6.85	14.17
90th Percentile	(7.14)	(18.80)	(17.15)	(6.14)	4.07	5.21	12.71
Parametric Clifton SmallCap ●	(1.14)	(9.32)	(8.75)	0.31	7.99	8.55	15.55
Russell 2000 Index ▲	(1.52)	(10.14)	(9.76)	(1.18)	6.84	7.20	13.25

Relative Return vs Russell 2000 Index



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



PIMCO RAE
Period Ended March 31, 2016

Investment Philosophy

Small company value equity portfolio utilizing the index strategy and philosophy described as the Enhanced RAFI US Small strategy which relies on portfolio weights derived from firm fundamentals (free cash flow, book equity value, total sales and gross dividend), instead of market capitalization. Additionally, the enhanced portfolio strategy uses a quality of earnings screening and a financial distress screening to augment portfolio returns and reduce portfolio volatility.

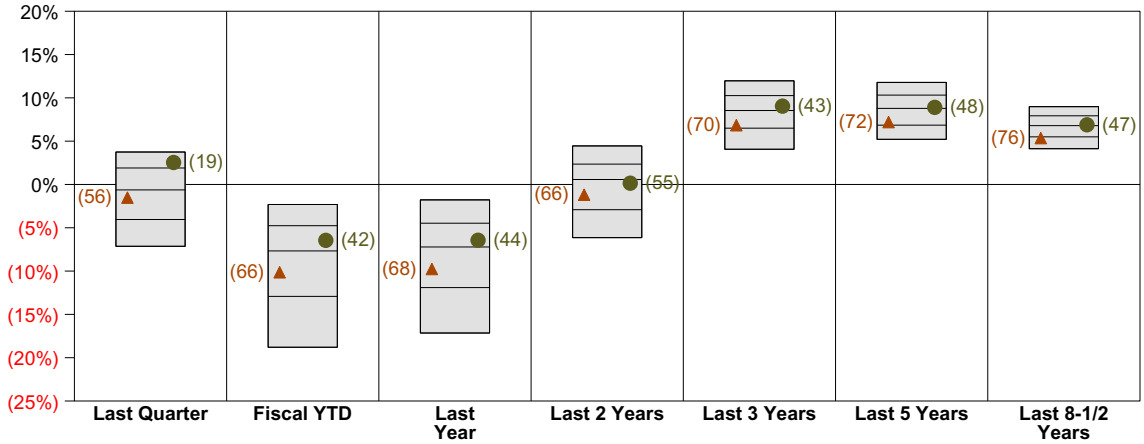
Quarterly Summary and Highlights

- PIMCO RAE's portfolio posted a 2.54% return for the quarter placing it in the 19 percentile of the CAI Small Capitalization Style group for the quarter and in the 44 percentile for the last year.
- PIMCO RAE's portfolio outperformed the Russell 2000 Index by 4.06% for the quarter and outperformed the Russell 2000 Index for the year by 3.32%.

Quarterly Asset Growth

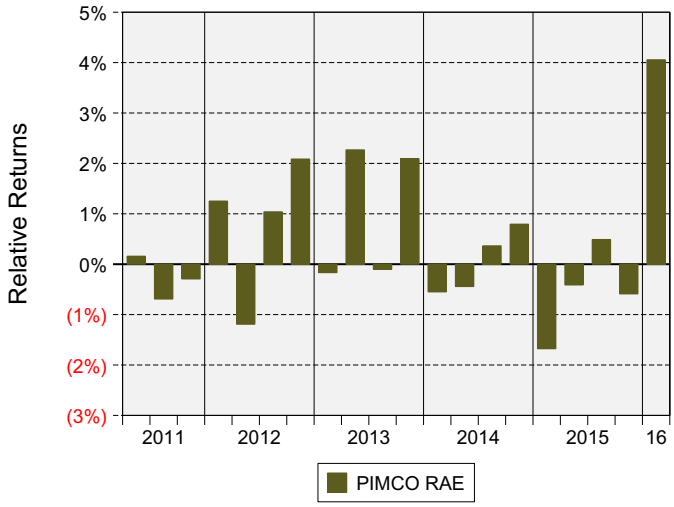
Beginning Market Value	$24,589,402
Net New Investment	$6,281,649
Investment Gains/(Losses)	$1,465,369
Ending Market Value	$32,336,420

Performance vs CAI Small Capitalization Style (Gross)

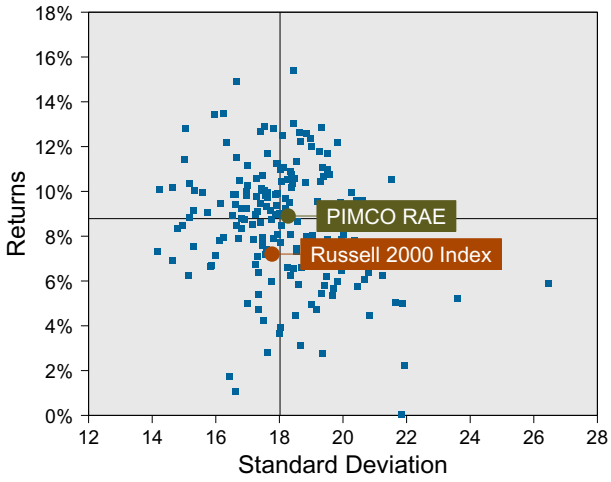


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 8-1/2 Years
10th Percentile	3.75	(2.31)	(1.78)	4.45	11.97	11.78	8.99
25th Percentile	1.90	(4.76)	(4.47)	2.35	10.26	10.32	7.93
Median	(0.63)	(7.67)	(7.22)	0.57	8.54	8.78	6.79
75th Percentile	(4.04)	(12.92)	(11.91)	(2.91)	6.50	6.85	5.50
90th Percentile	(7.14)	(18.80)	(17.15)	(6.14)	4.07	5.21	4.13
PIMCO RAE ●	2.54	(6.45)	(6.44)	0.14	9.04	8.90	6.89
Russell 2000 Index ▲	(1.52)	(10.14)	(9.76)	(1.18)	6.84	7.20	5.35

Relative Return vs Russell 2000 Index



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



Capital Group
Period Ended March 31, 2016

Investment Philosophy

The Portfolio will invest primarily in equity or equity type securities of companies in developed countries excluding the U.S. These equity securities will be listed on a stock exchange or traded in another recognized market and include, but are not limited to, common and preferred stocks, securities convertible or exchangeable into common or preferred stock, warrants, rights and depository arrangements. ***MSCI EAFE through 9/30/2000, 50% Hedged EAFE through 3/31/2011 and MSCI EAFE again thereafter.**

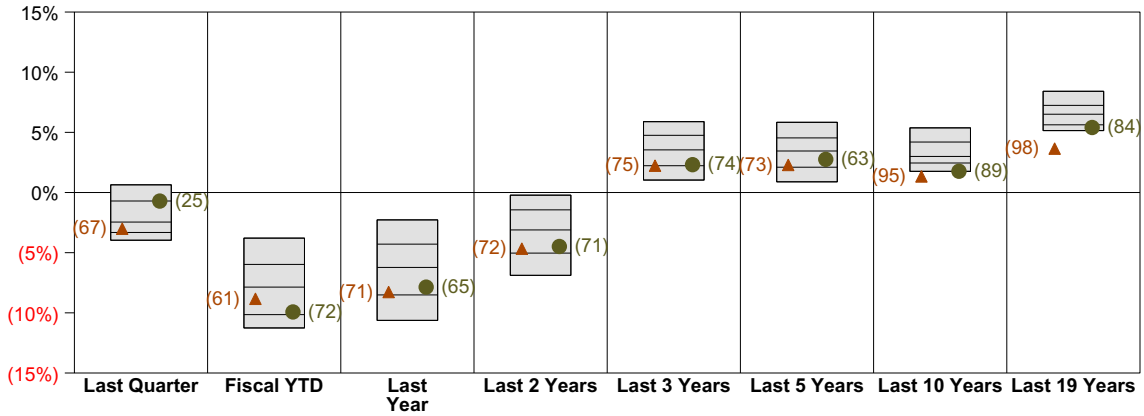
Quarterly Summary and Highlights

- Capital Group's portfolio posted a (0.71)% return for the quarter placing it in the 25 percentile of the CAI Non-U.S. Equity Style group for the quarter and in the 65 percentile for the last year.
- Capital Group's portfolio outperformed the MSCI EAFE Index by 2.29% for the quarter and outperformed the MSCI EAFE Index for the year by 0.41%.

Quarterly Asset Growth

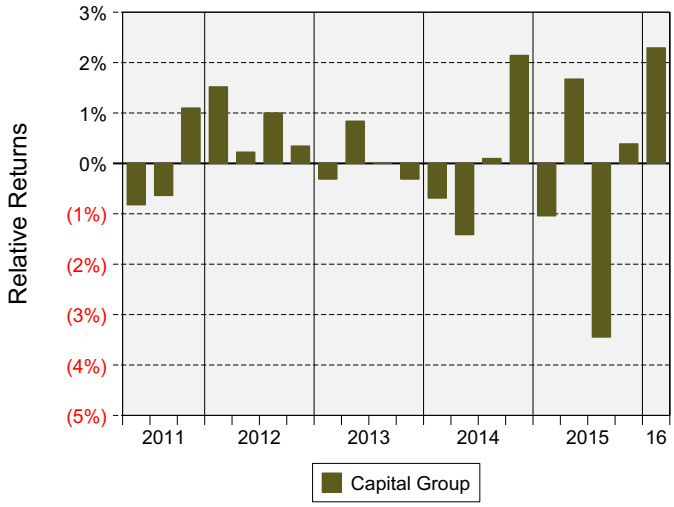
Beginning Market Value	$60,551,922
Net New Investment	$-75,663
Investment Gains/(Losses)	$-436,596
Ending Market Value	$60,039,664

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

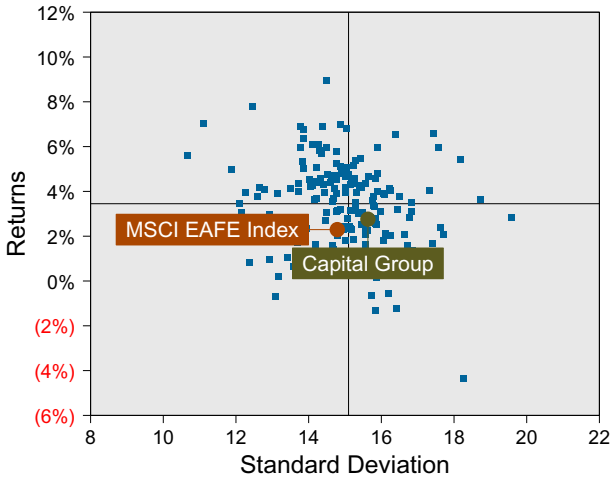


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 10 Years	Last 19 Years
10th Percentile	0.64	(3.79)	(2.27)	(0.22)	5.89	5.84	5.37	8.41
25th Percentile	(0.70)	(5.97)	(4.29)	(1.44)	4.75	4.54	4.20	7.24
Median	(2.46)	(7.86)	(6.23)	(3.11)	3.54	3.45	3.00	6.51
75th Percentile	(3.32)	(10.15)	(8.51)	(5.04)	2.23	2.10	2.45	5.63
90th Percentile	(3.97)	(11.26)	(10.63)	(6.88)	1.03	0.89	1.76	5.15
Capital Group ●	(0.71)	(9.93)	(7.86)	(4.49)	2.31	2.76	1.77	5.40
MSCI EAFE Index ▲	(3.01)	(8.83)	(8.27)	(4.67)	2.23	2.29	1.34	3.65

Relative Return vs MSCI EAFE Index



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



DFA Intl Small Cap Value
Period Ended March 31, 2016

Investment Philosophy

The International Small Cap Value Portfolio invests in the stocks of small, non-US developed markets companies that Dimensional believes to be value stocks at the time of purchase. Specifically, it looks at companies that fall within the smallest 8-10% of each country's market capitalization, and who's shares have a high book value in relation to their market value (BtM). It does not invest in emerging markets.

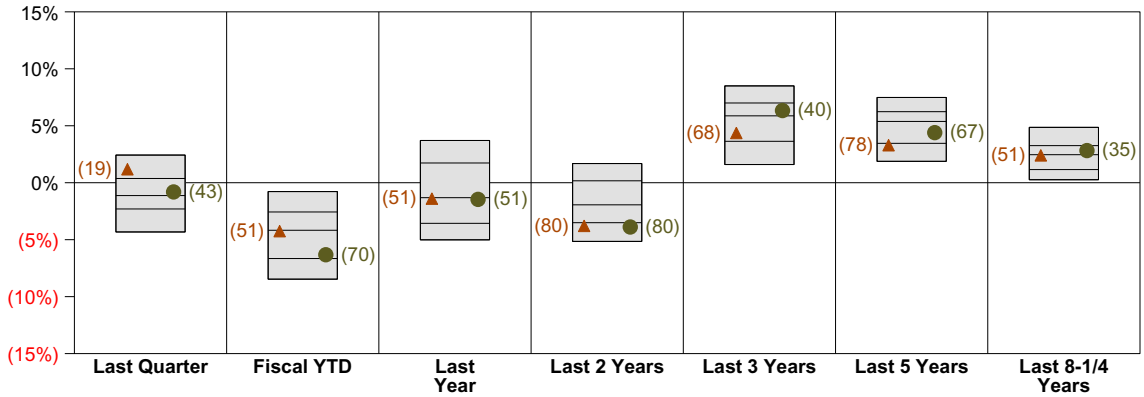
Quarterly Summary and Highlights

- DFA Intl Small Cap Value's portfolio posted a (0.81)% return for the quarter placing it in the 43 percentile of the Lipper: International Small Cap Obj group for the quarter and in the 51 percentile for the last year.
- DFA Intl Small Cap Value's portfolio underperformed the World ex US SC Value by 1.99% for the quarter and underperformed the World ex US SC Value for the year by 0.07%.

Quarterly Asset Growth

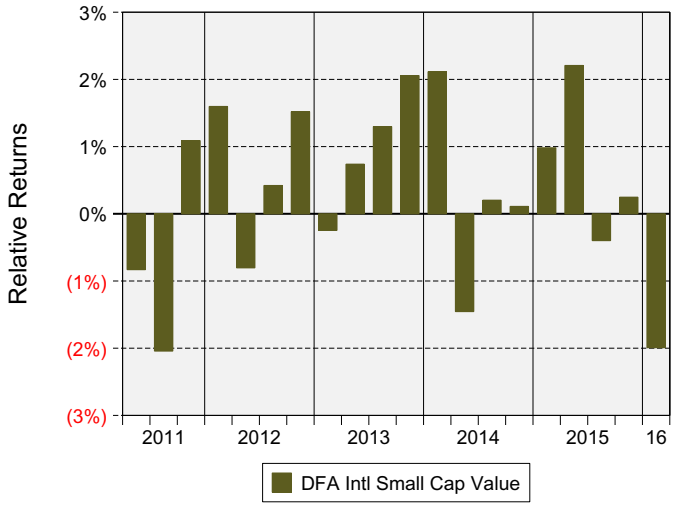
Beginning Market Value	$17,566,042
Net New Investment	$0
Investment Gains/(Losses)	$-142,218
Ending Market Value	$17,423,824

Performance vs Lipper: International Small Cap Obj (Net)

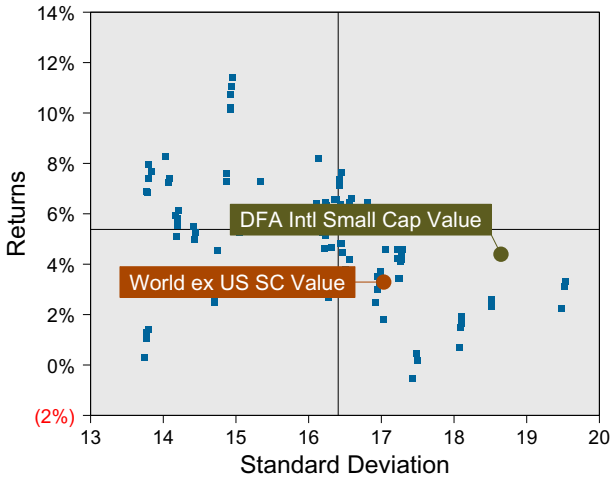


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 8-1/4 Years
10th Percentile	2.43	(0.78)	3.71	1.68	8.50	7.48	4.86
25th Percentile	0.37	(2.57)	1.73	0.17	7.00	6.24	3.26
Median	(1.13)	(4.17)	(1.31)	(1.94)	5.87	5.38	2.46
75th Percentile	(2.30)	(6.66)	(3.56)	(3.51)	3.63	3.46	1.16
90th Percentile	(4.32)	(8.47)	(5.01)	(5.15)	1.60	1.88	0.26
DFA Intl Small Cap Value ●	(0.81)	(6.32)	(1.46)	(3.89)	6.33	4.40	2.82
World ex US SC Value ▲	1.18	(4.25)	(1.39)	(3.79)	4.36	3.29	2.40

Relative Return vs World ex US SC Value



Lipper: International Small Cap Obj (Net) Annualized Five Year Risk vs Return



LSV Intl Value
Period Ended March 31, 2016

Investment Philosophy

The objective of LSV Asset Management's International Large Cap Value strategy is to outperform the MSCI EAFE Index by at least 250 basis points (gross of fees) per annum over an annualized 3-5 year period with a tracking error of approximately 5-6%. Their stock selection process is a quantitative approach that ranks a broad universe of stocks on a combination of value and momentum factors and seeks to invest approximately 150 stocks in the most attractive securities possible within strict risk parameters to control the portfolio's tracking error relative to the benchmark. The resulting portfolio is broadly diversified across industry groups and fully invested. LSV weights countries at a neutral weight relative to the benchmark country weights. 50% of the portfolio is US dollar hedged. ***MSCI EAFE through 9/30/2000, 50% Hedged EAFE through 3/31/2011 and MSCI EAFE again thereafter.**

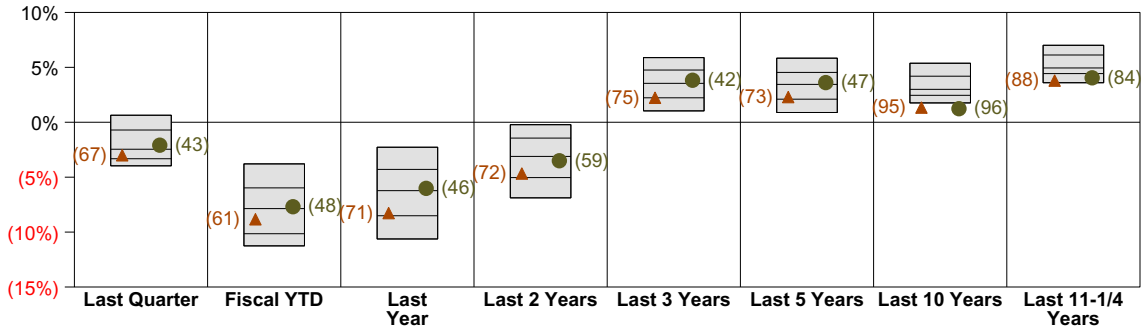
Quarterly Summary and Highlights

- LSV Intl Value's portfolio posted a (2.09)% return for the quarter placing it in the 43 percentile of the CAI Non-U.S. Equity Style group for the quarter and in the 46 percentile for the last year.
- LSV Intl Value's portfolio outperformed the Benchmark by 0.92% for the quarter and outperformed the Benchmark for the year by 2.25%.

Quarterly Asset Growth

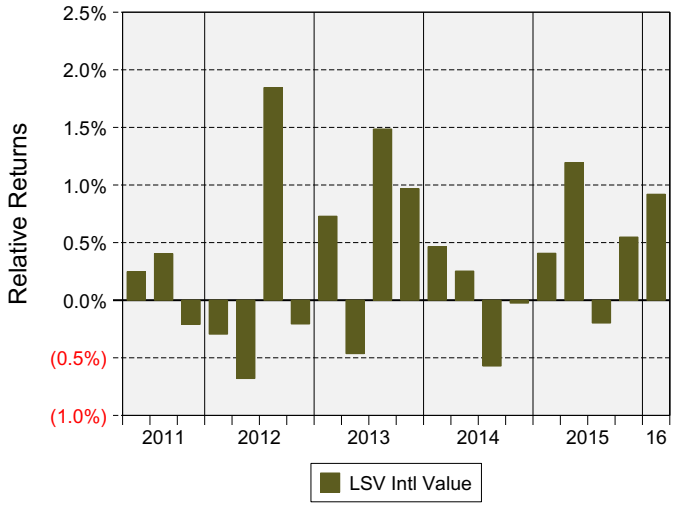
Beginning Market Value	$63,097,602
Net New Investment	$9,937,763
Investment Gains/(Losses)	$-371,820
Ending Market Value	$72,663,546

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

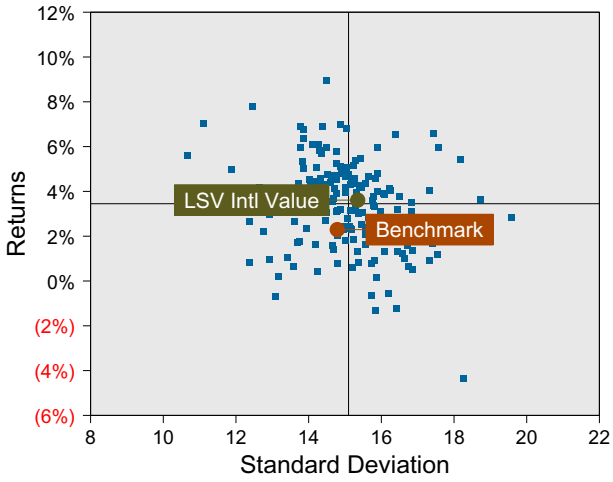


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 10 Years	Last 11-1/4 Years
10th Percentile	0.64	(3.79)	(2.27)	(0.22)	5.89	5.84	5.37	7.01
25th Percentile	(0.70)	(5.97)	(4.29)	(1.44)	4.75	4.54	4.20	6.12
Median	(2.46)	(7.86)	(6.23)	(3.11)	3.54	3.45	3.00	4.94
75th Percentile	(3.32)	(10.15)	(8.51)	(5.04)	2.23	2.10	2.45	4.43
90th Percentile	(3.97)	(11.26)	(10.63)	(6.88)	1.03	0.89	1.76	3.60
LSV Intl Value ●	(2.09)	(7.69)	(6.02)	(3.51)	3.83	3.61	1.23	4.05
Benchmark ▲	(3.01)	(8.83)	(8.27)	(4.67)	2.23	2.29	1.34	3.80

Relative Return vs Benchmark



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



Vanguard Intl Explorer Fund
Period Ended March 31, 2016

Investment Philosophy

Vanguard International Explorer Fund invests primarily in the equity securities of small-capitalization companies located outside the United States that the advisor believes offer the potential for long-term capital appreciation. The advisor considers, among other things, whether a company is likely to have above-average earnings growth, whether the company's securities are attractively valued, and whether the company has any proprietary advantages.

Quarterly Summary and Highlights

- Vanguard Intl Explorer Fund's portfolio posted a (2.01)% return for the quarter placing it in the 71 percentile of the Lipper: International Small Cap Obj group for the quarter and in the 46 percentile for the last year.
- Vanguard Intl Explorer Fund's portfolio underperformed the S&P BMI EPAC <$2 B by 2.09% for the quarter and underperformed the S&P BMI EPAC <$2 B for the year by 3.84%.

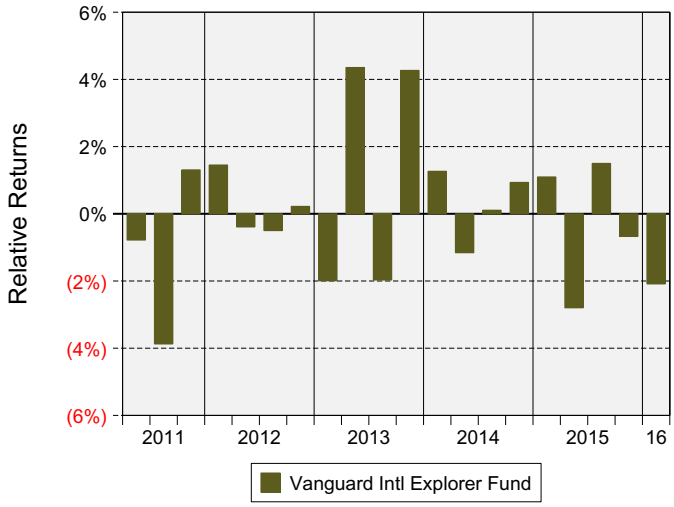
Quarterly Asset Growth

Beginning Market Value	$18,376,630
Net New Investment	$0
Investment Gains/(Losses)	$-368,617
Ending Market Value	$18,008,014

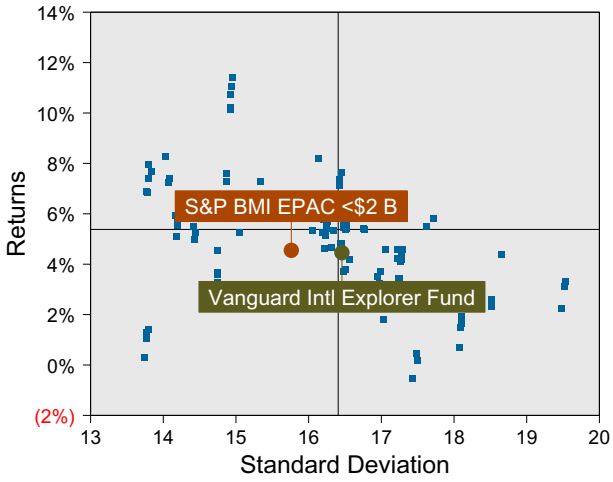
Performance vs Lipper: International Small Cap Obj (Net)

	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 10 Years	Last 12-3/4 Years
10th Percentile	2.43	(0.78)	3.71	1.68	8.50	7.48	6.70	12.40
25th Percentile	0.37	(2.57)	1.73	0.17	7.00	6.24	4.58	11.56
Median	(1.13)	(4.17)	(1.31)	(1.94)	5.87	5.38	3.61	9.91
75th Percentile	(2.30)	(6.66)	(3.56)	(3.51)	3.63	3.46	2.75	8.61
90th Percentile	(4.32)	(8.47)	(5.01)	(5.15)	1.60	1.88	2.27	7.75
Vanguard Intl Explorer Fund ●	(2.01)	(3.85)	(0.80)	(0.47)	8.12	4.46	3.98	10.32
S&P BMI EPAC <$2 B ▲	0.08	(2.77)	3.03	0.94	6.29	4.55	3.25	9.82

Relative Return vs S&P BMI EPAC <$2 B



Lipper: International Small Cap Obj (Net) Annualized Five Year Risk vs Return



Declaration Total Return
Period Ended March 31, 2016

Investment Philosophy

The Fund's portfolio holdings consist primarily of RMBS issued by private sector companies (Non-Agency RMBS) and government agencies (Agency MBS) and CMBS issued by private sector companies. Agency MBS includes securities issued by the Federal National Mortgage Association (Fannie Mae), the Federal Home Loan Mortgage Corporation (Freddie Mac) and the Government National Mortgage Association (Ginnie Mae). Portfolio holdings may range from short tenure senior classes to stressed issues or subordinated securities with substantial risk of non-payment and correspondingly higher yields. Smaller portfolio allocations may include consumer asset-backed securities (ABS), or other structured credit securities and corporate bonds. As a diversification strategy and a potential hedge to credit risk, the Fund may invest in securities which tend to benefit from slow mortgage prepayments and economic growth, such as interest only (IO) MBS.

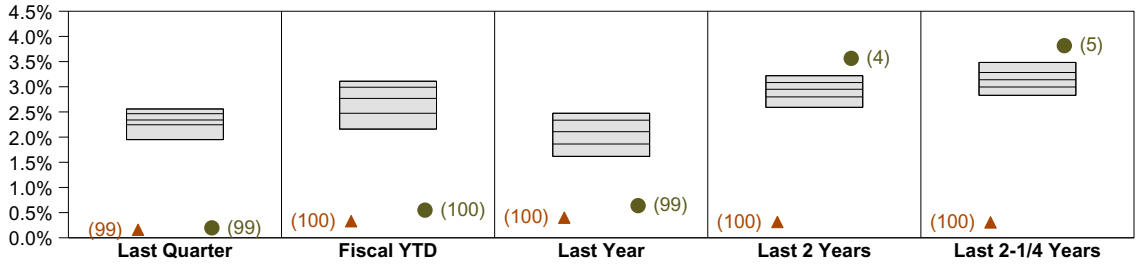
Quarterly Summary and Highlights

- Declaration Total Return's portfolio posted a 0.20% return for the quarter placing it in the 99 percentile of the CAI Intermediate Fixed-Inc Style group for the quarter and in the 99 percentile for the last year.
- Declaration Total Return's portfolio outperformed the Libor-3 Month by 0.04% for the quarter and outperformed the Libor-3 Month for the year by 0.24%.

Quarterly Asset Growth

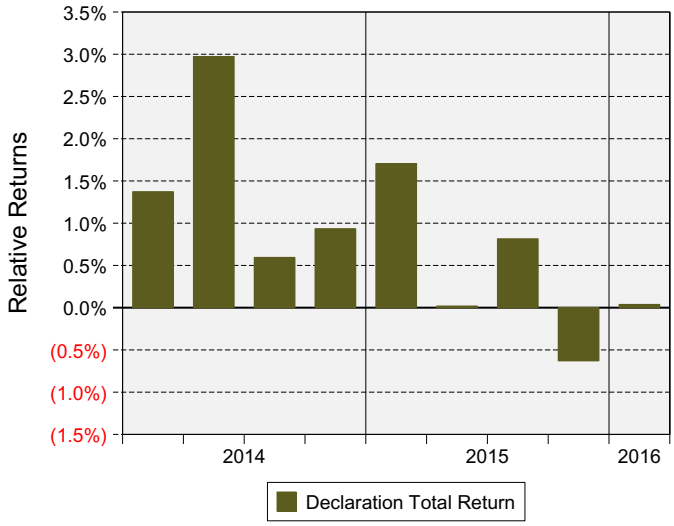
Beginning Market Value	$78,340,279
Net New Investment	$-28,128
Investment Gains/(Losses)	$154,750
Ending Market Value	$78,466,901

Performance vs CAI Intermediate Fixed-Inc Style (Gross)

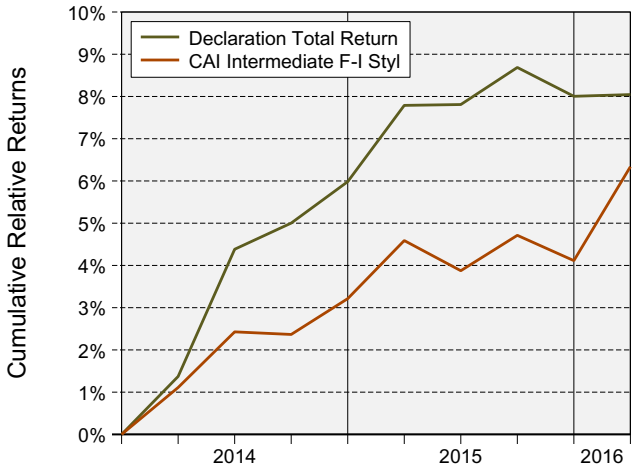


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 2-1/4 Years
10th Percentile	2.56	3.11	2.47	3.22	3.48
25th Percentile	2.46	2.99	2.34	3.08	3.28
Median	2.34	2.77	2.11	2.95	3.14
75th Percentile	2.24	2.47	1.86	2.80	3.00
90th Percentile	1.95	2.16	1.62	2.59	2.83
Declaration Total Return ●	0.20	0.55	0.64	3.56	3.82
Libor-3 Month ▲	0.16	0.33	0.40	0.31	0.31

Relative Return vs Libor-3 Month



Cumulative Returns vs Libor-3 Month



PIMCO DiSCO II
Period Ended March 31, 2016

Investment Philosophy

The PIMCO Distressed Senior Credit Opportunities Fund is an opportunistic private-equity style Fund which seeks to provide investors enhanced returns principally through long-biased investments in undervalued senior and super senior structured credit securities that are expected to produce attractive levels of current income and that may also appreciate in value over the long term. The fund will look to capitalize on forced sales by liquidity constrained investors.

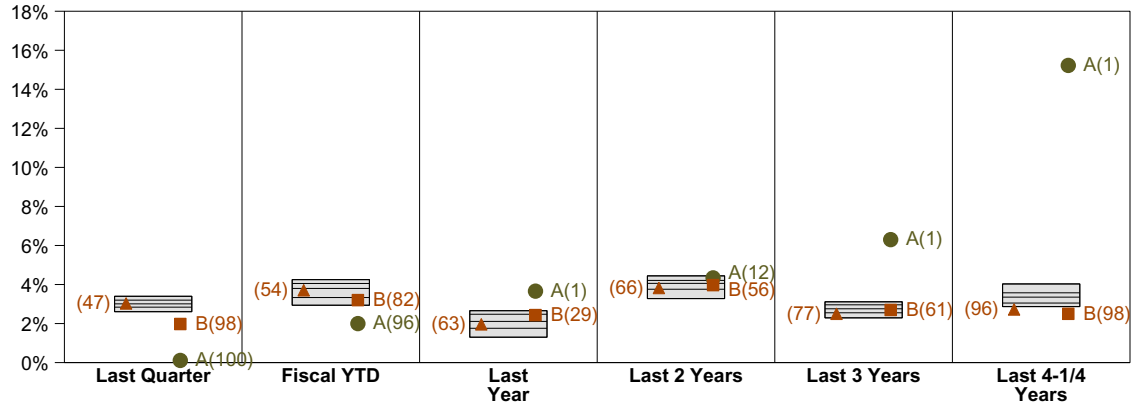
Quarterly Summary and Highlights

- PIMCO DiSCO II's portfolio posted a 0.11% return for the quarter placing it in the 100 percentile of the CAI Core Bond Fixed-Inc Style group for the quarter and in the 1 percentile for the last year.
- PIMCO DiSCO II's portfolio underperformed the Barclays Aggregate Index by 2.92% for the quarter and outperformed the Barclays Aggregate Index for the year by 1.70%.

Quarterly Asset Growth

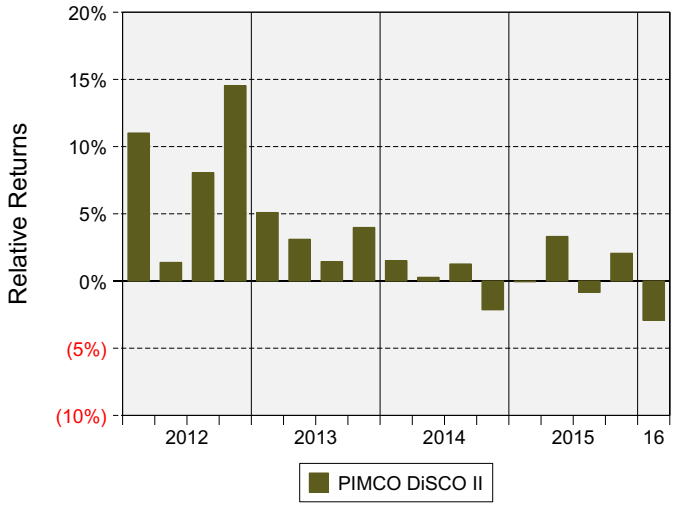
Beginning Market Value	$80,472,600
Net New Investment	$0
Investment Gains/(Losses)	$89,346
Ending Market Value	$80,561,946

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

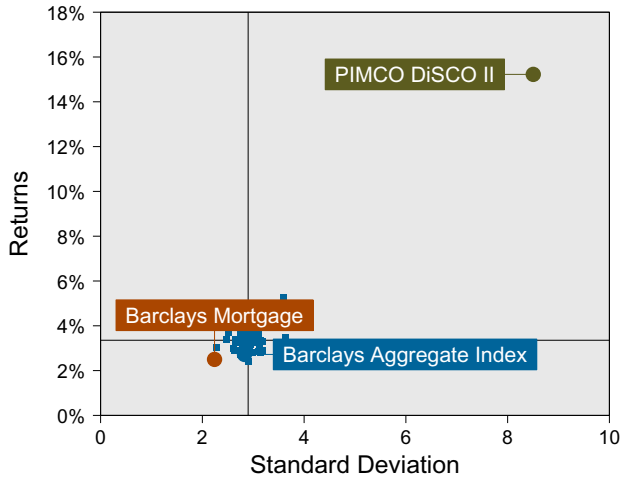


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 4-1/4 Years
10th Percentile	3.40	4.25	2.66	4.44	3.11	4.03
25th Percentile	3.20	4.05	2.48	4.21	2.96	3.58
Median	3.01	3.80	2.11	4.06	2.76	3.35
75th Percentile	2.84	3.33	1.76	3.76	2.55	3.05
90th Percentile	2.61	2.94	1.30	3.28	2.29	2.87
PIMCO DiSCO II ● A	0.11	2.00	3.66	4.34	6.30	15.22
Barclays Mortgage ■ B	1.98	3.20	2.43	3.97	2.70	2.50
Barclays Aggregate Index ▲	3.03	3.71	1.96	3.82	2.50	2.72

Relative Return vs Barclays Aggregate Index



CAI Core Bond Fixed-Inc Style (Gross) Annualized Four and One-Quarter Year Risk vs Return



PIMCO Bravo II Fund
Period Ended March 31, 2016

Investment Philosophy

The BRAVO II Fund is a private equity style fund targeting an annualized IRR of 15-20% and multiple of 1.8-2x, net of fees and carried interest with an initial 5-year term. The fund will seek to capitalize on non-economic asset sale decisions by global financial institutions. The fund will have the flexibility to acquire attractively discounted, less liquid loans, structured credit and other assets tied to residential or commercial real estate markets in the U.S. and Europe.

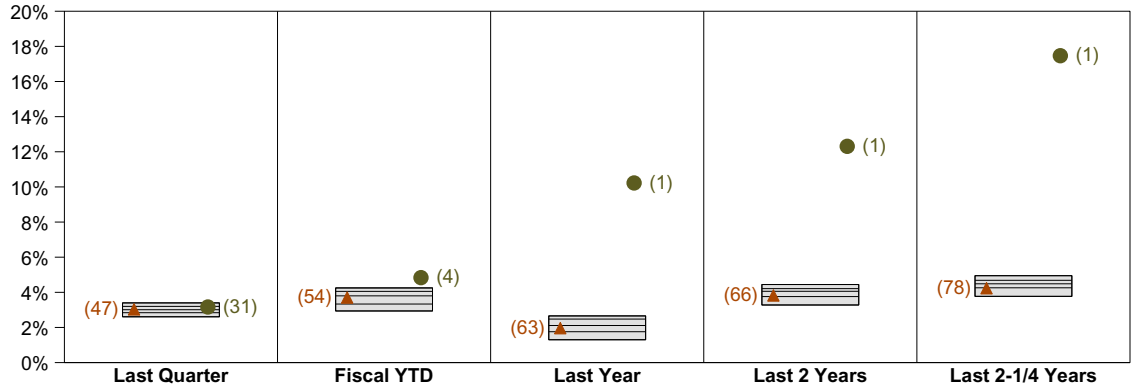
Quarterly Summary and Highlights

- PIMCO Bravo II Fund's portfolio posted a 3.17% return for the quarter placing it in the 31 percentile of the CAI Core Bond Fixed-Inc Style group for the quarter and in the 1 percentile for the last year.
- PIMCO Bravo II Fund's portfolio outperformed the Barclays Aggregate Index by 0.13% for the quarter and outperformed the Barclays Aggregate Index for the year by 8.26%.

Quarterly Asset Growth

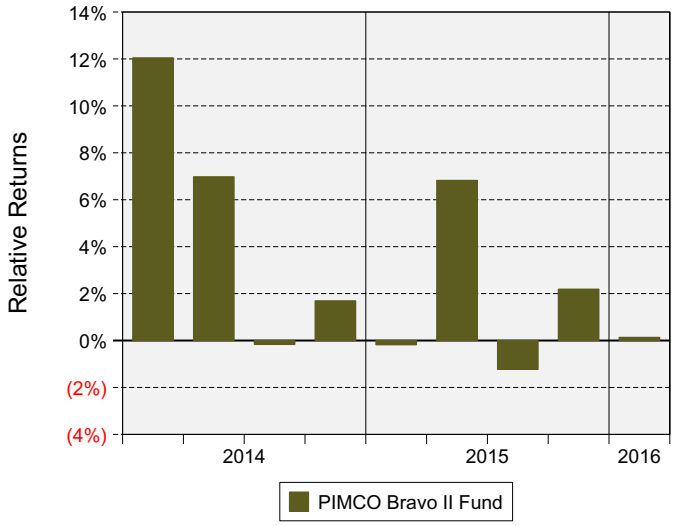
Beginning Market Value	$44,707,361
Net New Investment	$0
Investment Gains/(Losses)	$1,415,242
Ending Market Value	$46,122,603

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

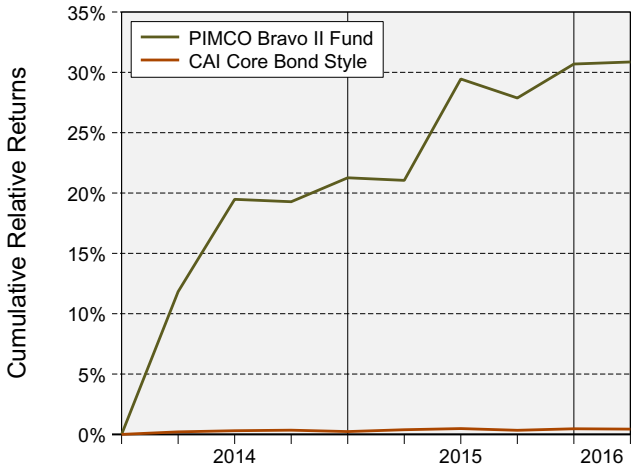


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 2-1/4 Years
10th Percentile	3.40	4.25	2.66	4.44	4.95
25th Percentile	3.20	4.05	2.48	4.21	4.68
Median	3.01	3.80	2.11	4.06	4.48
75th Percentile	2.84	3.33	1.76	3.76	4.26
90th Percentile	2.61	2.94	1.30	3.28	3.77
PIMCO Bravo II Fund ●	3.17	4.84	10.22	12.31	17.47
Barclays Aggregate Index ▲	3.03	3.71	1.96	3.82	4.23

Relative Return vs Barclays Aggregate Index



Cumulative Returns vs Barclays Aggregate Index



Prudential
Period Ended March 31, 2016

Investment Philosophy

The core plus fixed income account is a multi-sector strategy that is diversified across a broad range of fixed income sectors, including Treasuries, agencies, mortgage-backed securities, structured product (asset-backed securities, commercial mortgage-backed securities), investment grade corporate bonds, high yield bonds, bank loans and international debt. The primary sources of excess return are sector allocation and security selection, with duration and yield curve less of a focus.

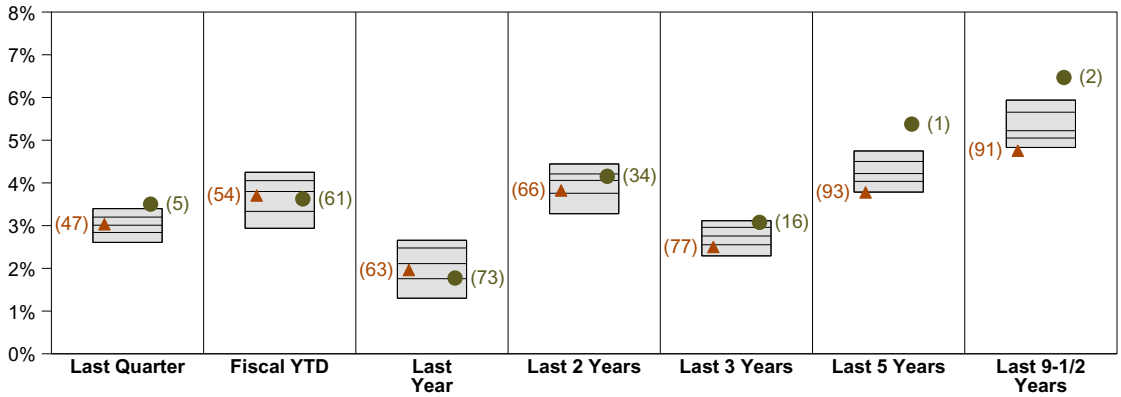
Quarterly Summary and Highlights

- Prudential's portfolio posted a 3.50% return for the quarter placing it in the 5 percentile of the CAI Core Bond Fixed-Inc Style group for the quarter and in the 73 percentile for the last year.
- Prudential's portfolio outperformed the Barclays Aggregate Index by 0.47% for the quarter and underperformed the Barclays Aggregate Index for the year by 0.19%.

Quarterly Asset Growth

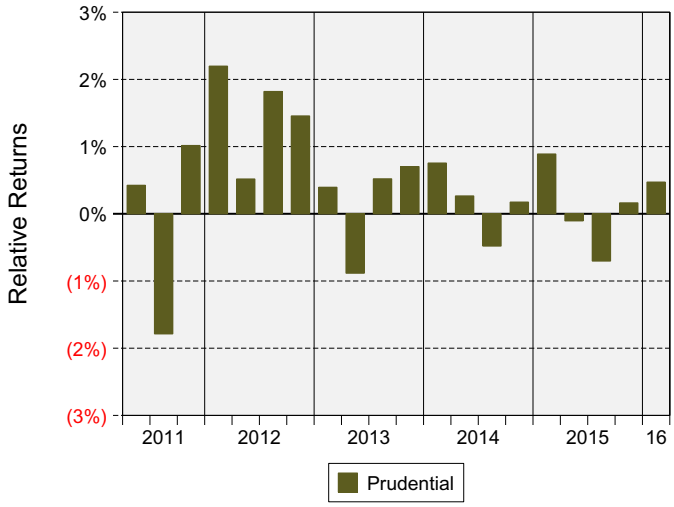
Beginning Market Value	$96,177,877
Net New Investment	$-65,802
Investment Gains/(Losses)	$3,367,992
Ending Market Value	$99,480,067

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

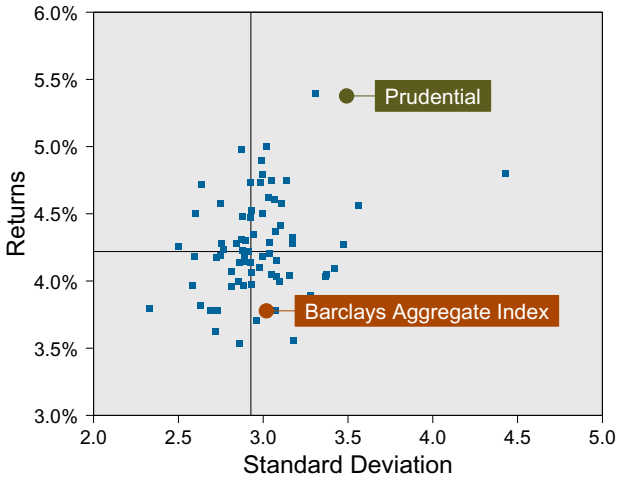


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 9-1/2 Years
10th Percentile	3.40	4.25	2.66	4.44	3.11	4.75	5.94
25th Percentile	3.20	4.05	2.48	4.21	2.96	4.50	5.66
Median	3.01	3.80	2.11	4.06	2.76	4.22	5.22
75th Percentile	2.84	3.33	1.76	3.76	2.55	4.04	5.05
90th Percentile	2.61	2.94	1.30	3.28	2.29	3.79	4.83
Prudential ●	3.50	3.63	1.77	4.15	3.08	5.38	6.47
Barclays Aggregate Index ▲	3.03	3.71	1.96	3.82	2.50	3.78	4.76

Relative Return vs Barclays Aggregate Index



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



SSgA US Govt Cr Bd Index
Period Ended March 31, 2016

Investment Philosophy

The Fund seeks an investment return that approximates as closely as practicable, before expenses, the performance of the Barclays Capital U.S. Government/Credit Bond Index over the long term.

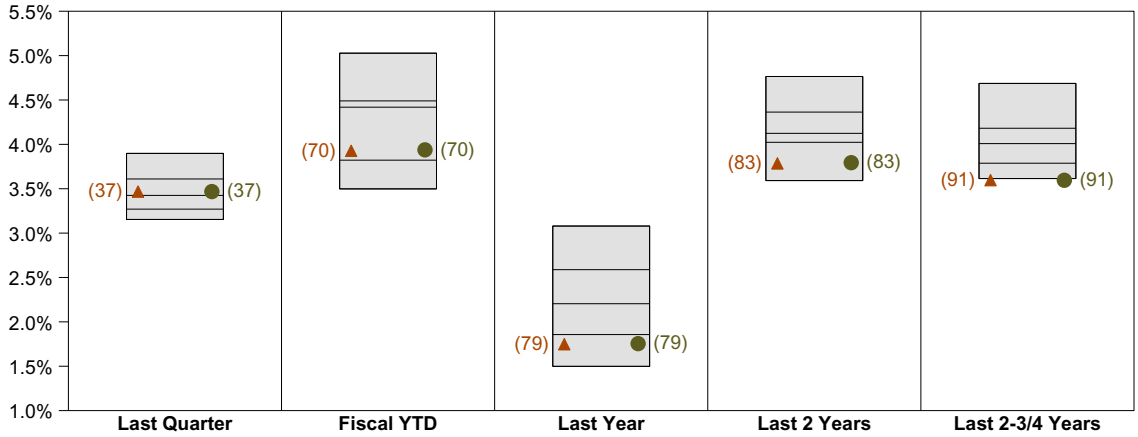
Quarterly Summary and Highlights

- SSgA US Govt Cr Bd Index's portfolio posted a 3.47% return for the quarter placing it in the 37 percentile of the CAI Govt/Credit Fixed-Income Style group for the quarter and in the 79 percentile for the last year.
- SSgA US Govt Cr Bd Index's portfolio underperformed the Barclays Govt/Credit Bd by 0.00% for the quarter and outperformed the Barclays Govt/Credit Bd for the year by 0.01%.

Quarterly Asset Growth

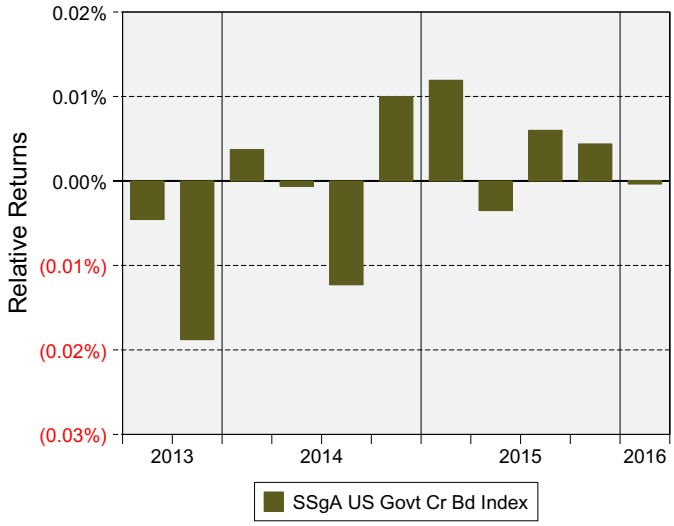
Beginning Market Value	$135,508,473
Net New Investment	$-3,511,834
Investment Gains/(Losses)	$4,642,423
Ending Market Value	$136,639,062

Performance vs CAI Govt/Credit Fixed-Income Style (Gross)

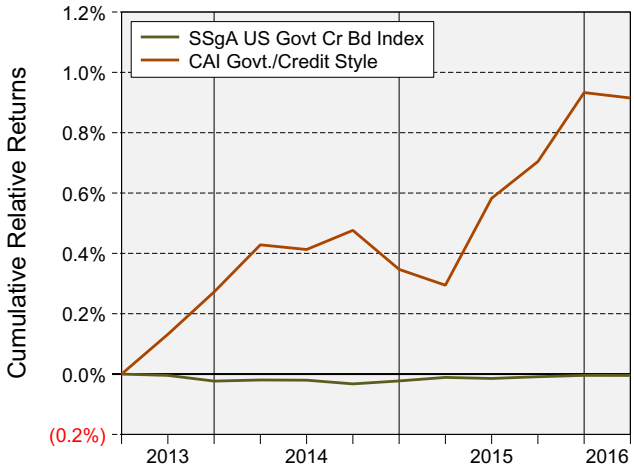


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 2-3/4 Years
10th Percentile	3.90	5.03	3.08	4.76	4.69
25th Percentile	3.61	4.49	2.59	4.36	4.18
Median	3.42	4.42	2.20	4.12	4.01
75th Percentile	3.27	3.82	1.86	4.02	3.79
90th Percentile	3.15	3.50	1.50	3.59	3.61
SSgA US Govt Cr Bd Index ●	3.47	3.94	1.75	3.79	3.60
Barclays Govt/Credit Bd ▲	3.47	3.93	1.75	3.79	3.60

Relative Return vs Barclays Govt/Credit Bd



Cumulative Returns vs Barclays Govt/Credit Bd



Wells Capital
Period Ended March 31, 2016

Investment Philosophy

The Medium Quality Credit fixed income strategy is designed to maximize total return from the high-grade corporate bond market while maintaining a strategic allocation to the BBB portion of the high yield market. The investment process for this fund starts with a "top-down" strategy. Security selection is determined by in-depth credit research, holding that in-depth knowledge of industries, companies, and their management teams can help identify credit trends that can lead to investment opportunities. Furthermore, a disciplined relative value framework is applied to help determine the optimal position to invest within an industry and within an individual issuer's capital structure.

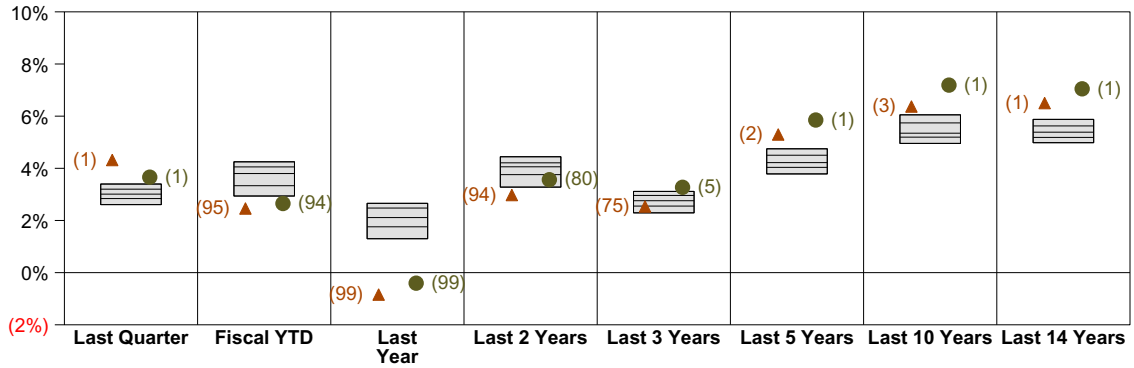
Quarterly Summary and Highlights

- Wells Capital's portfolio posted a 3.66% return for the quarter placing it in the 1 percentile of the CAI Core Bond Fixed-Inc Style group for the quarter and in the 99 percentile for the last year.
- Wells Capital's portfolio underperformed the Barclays Baa Credit 3% In by 0.66% for the quarter and outperformed the Barclays Baa Credit 3% In for the year by 0.44%.

Quarterly Asset Growth

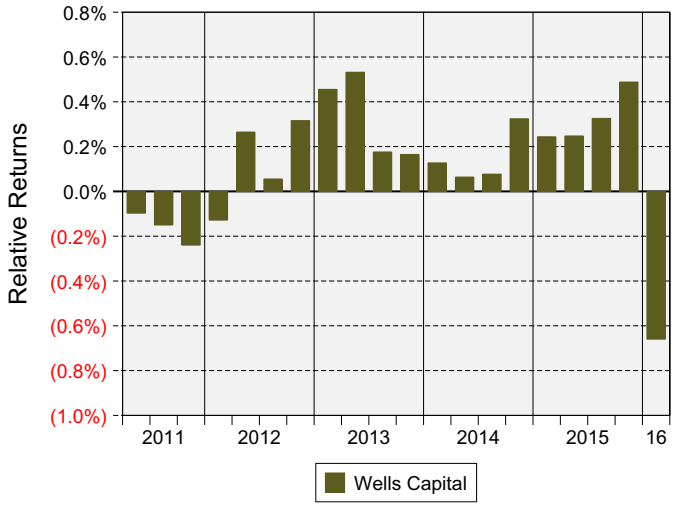
Beginning Market Value	$295,869,646
Net New Investment	$-7,134,163
Investment Gains/(Losses)	$10,584,707
Ending Market Value	$299,320,190

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

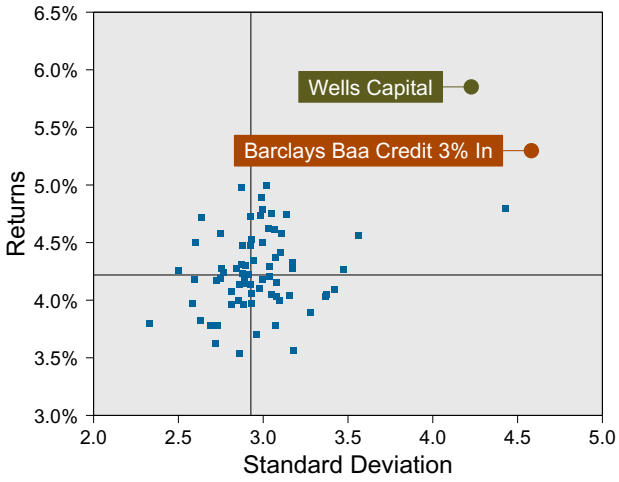


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 10 Years	Last 14 Years
10th Percentile	3.40	4.25	2.66	4.44	3.11	4.75	6.05	5.88
25th Percentile	3.20	4.05	2.48	4.21	2.96	4.50	5.74	5.63
Median	3.01	3.80	2.11	4.06	2.76	4.22	5.35	5.38
75th Percentile	2.84	3.33	1.76	3.76	2.55	4.04	5.19	5.18
90th Percentile	2.61	2.94	1.30	3.28	2.29	3.79	4.95	4.98
Wells Capital ●	3.66	2.65	(0.40)	3.56	3.27	5.85	7.19	7.05
Barclays Baa Credit 3% In ▲	4.32	2.46	(0.84)	2.98	2.54	5.30	6.37	6.50

Relative Return vs Barclays Baa Credit 3% In



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



Western Asset Management Company
Period Ended March 31, 2016

Investment Philosophy

Western Asset designs this portfolio using all major fixed-income sectors with a bias towards non-Treasuries, especially corporate, mortgage-backed and asset-backed securities. Value can be added through sector rotation, issue selection, duration and term structure weighting.

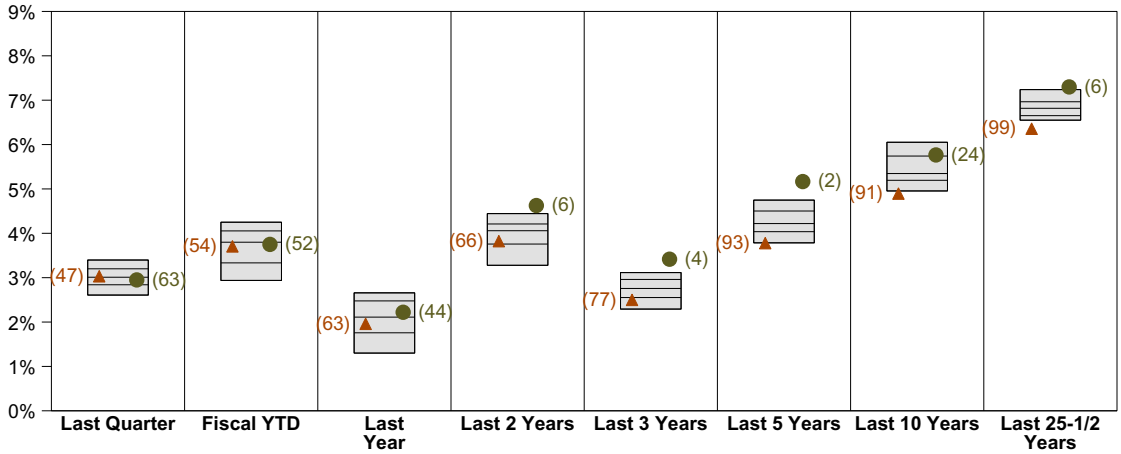
Quarterly Summary and Highlights

- Western Asset's portfolio posted a 2.95% return for the quarter placing it in the 63 percentile of the CAI Core Bond Fixed-Inc Style group for the quarter and in the 44 percentile for the last year.
- Western Asset's portfolio underperformed the Barclays Aggregate Index by 0.08% for the quarter and outperformed the Barclays Aggregate Index for the year by 0.26%.

Quarterly Asset Growth

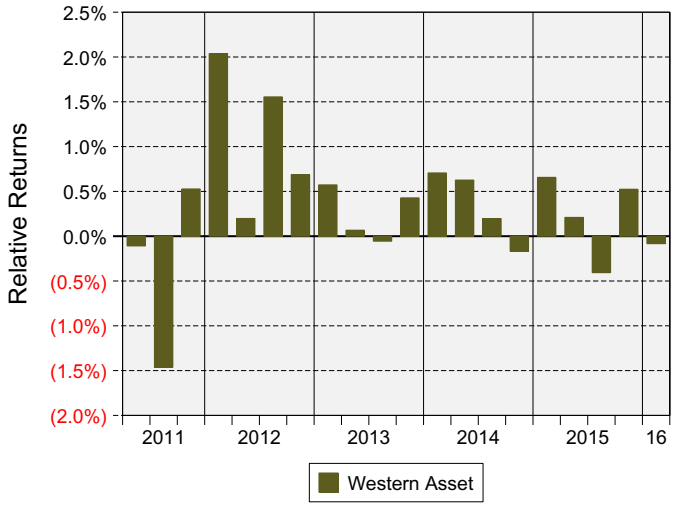
Beginning Market Value	$294,006,506
Net New Investment	$-9,602,319
Investment Gains/(Losses)	$8,492,107
Ending Market Value	$292,896,294

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

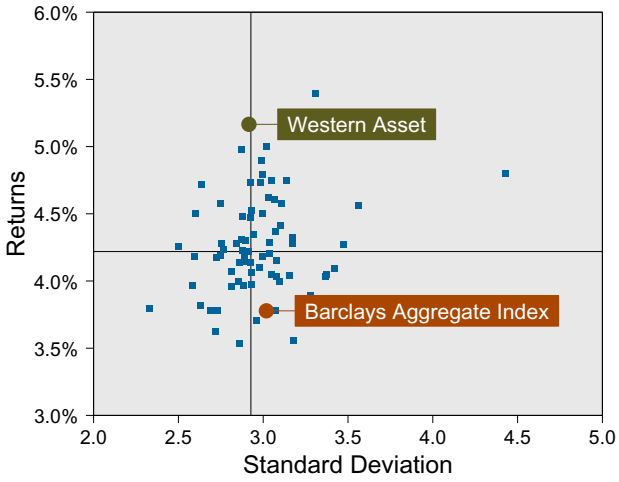


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 10 Years	Last 25-1/2 Years
10th Percentile	3.40	4.25	2.66	4.44	3.11	4.75	6.05	7.24
25th Percentile	3.20	4.05	2.48	4.21	2.96	4.50	5.74	6.96
Median	3.01	3.80	2.11	4.06	2.76	4.22	5.35	6.82
75th Percentile	2.84	3.33	1.76	3.76	2.55	4.04	5.19	6.65
90th Percentile	2.61	2.94	1.30	3.28	2.29	3.79	4.95	6.55
Western Asset ●	2.95	3.75	2.22	4.63	3.42	5.17	5.77	7.30
Barclays Aggregate Index ▲	3.03	3.71	1.96	3.82	2.50	3.78	4.90	6.36

Relative Return vs Barclays Aggregate Index



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



Western TIPS
Period Ended March 31, 2016

Investment Philosophy

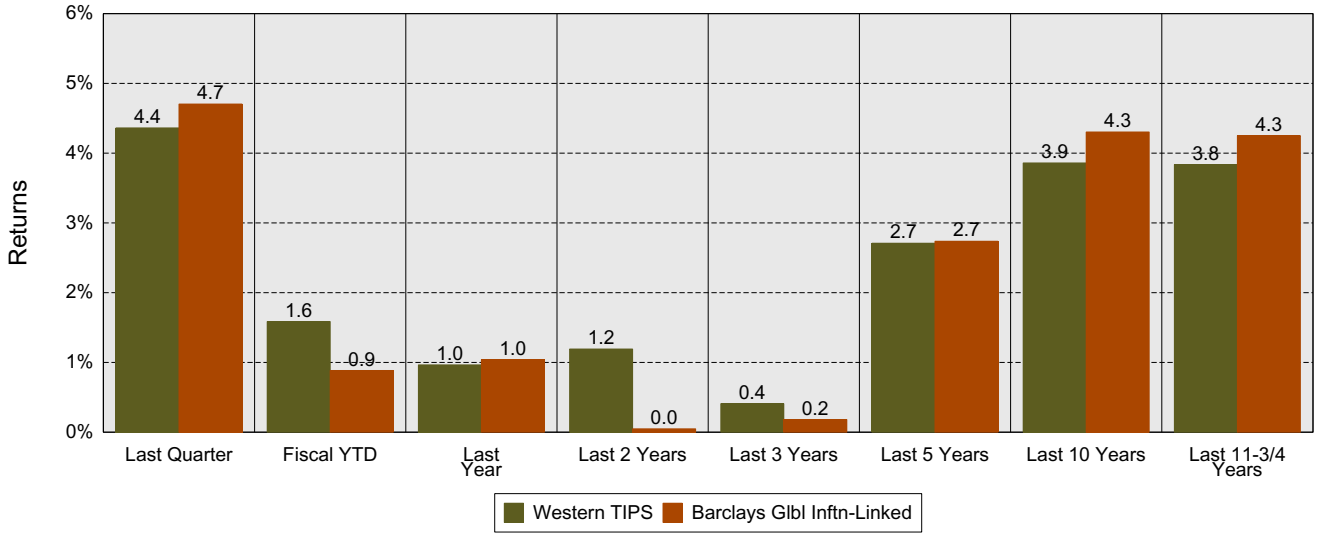
Western Asset's Global Inflation-Linked composite includes portfolios that employ an active, team-managed investment approach around a long-term, value-oriented investment philosophy. Constructed primarily of inflation-indexed securities, these portfolios use diversified strategies in seeking to add value while minimizing risk. Value can be added through country selection, term structure, issue selection, duration management and currency management. **Barclays US TIPS through 12/31/2009 and Barclays Glolbal Inflation-Linked thereafter.**

Quarterly Summary and Highlights

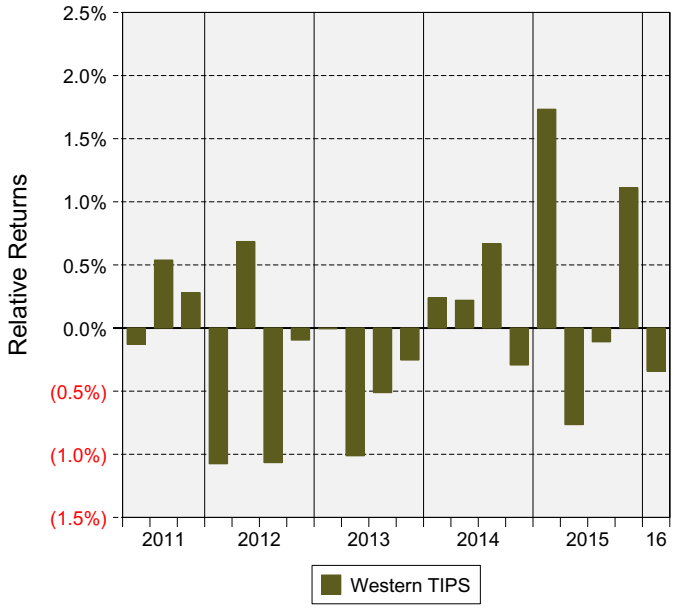
- Western TIPS's portfolio underperformed the Barclays Glbl Inftn-Linked by 0.34% for the quarter and underperformed the Barclays Glbl Inftn-Linked for the year by 0.07%.

Quarterly Asset Growth

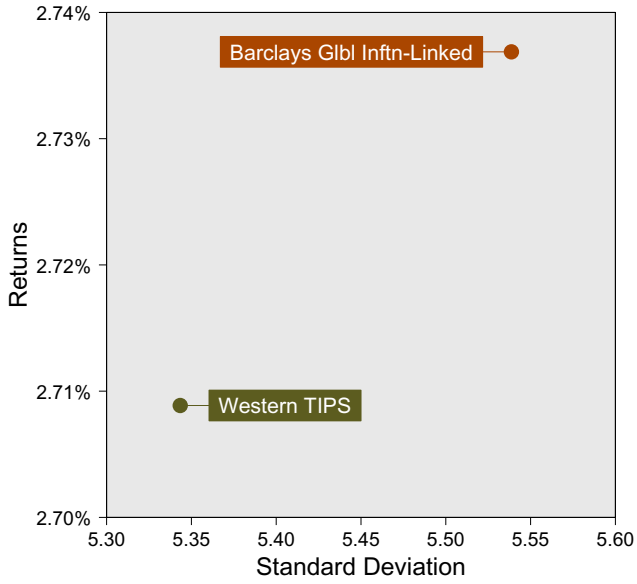
Beginning Market Value	$107,253,548
Net New Investment	$-37,190
Investment Gains/(Losses)	$4,676,709
Ending Market Value	$111,893,066



Relative Return vs Barclays Glbl Inftn-Linked



Annualized Five Year Risk vs Return



Eastern Timber Opportunities
Period Ended March 31, 2016

Investment Philosophy

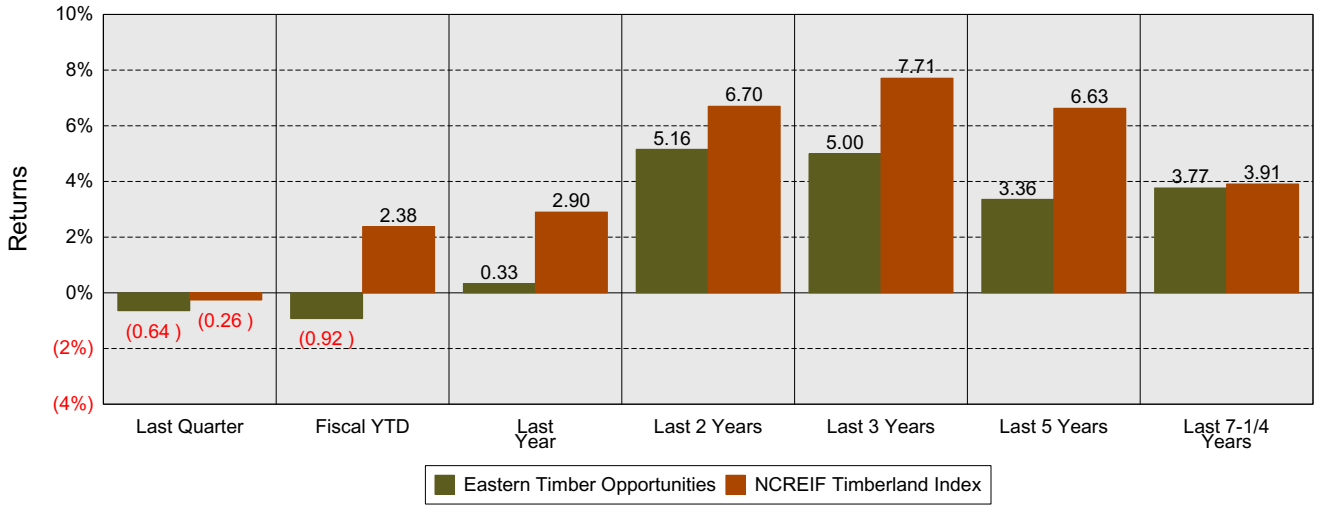
The investment objective of the Eastern Timberland Opportunities fund is to provide competitive timberland investment returns from Eastern US timberland investments by pursuing management strategies to increase timber production and land values through the investment term. TIR will maximize timber values within the portfolio with the application of intensive forest management techniques to accelerate the growth in timber volume and movement into higher value product categories. Additional value will be captured by realizing higher and better use opportunities for select timberland properties throughout the portfolio.

Quarterly Summary and Highlights

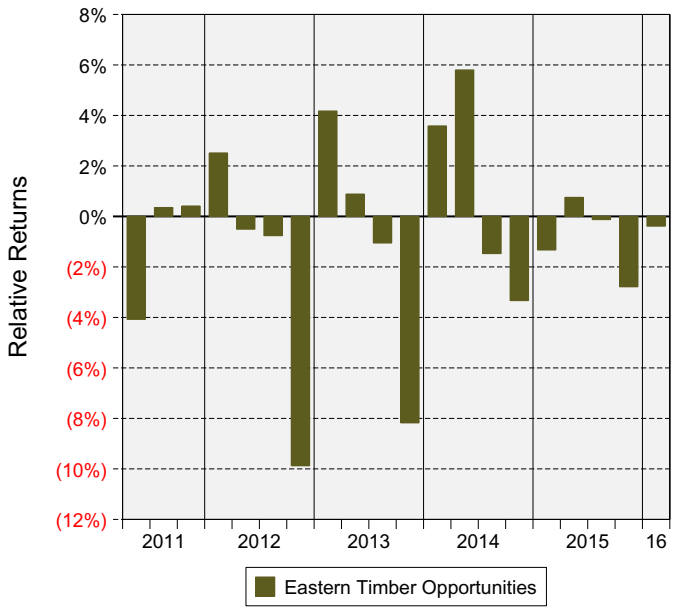
- Eastern Timber Opportunities's portfolio underperformed the NCREIF Timberland Index by 0.38% for the quarter and underperformed the NCREIF Timberland Index for the year by 2.57%.

Quarterly Asset Growth

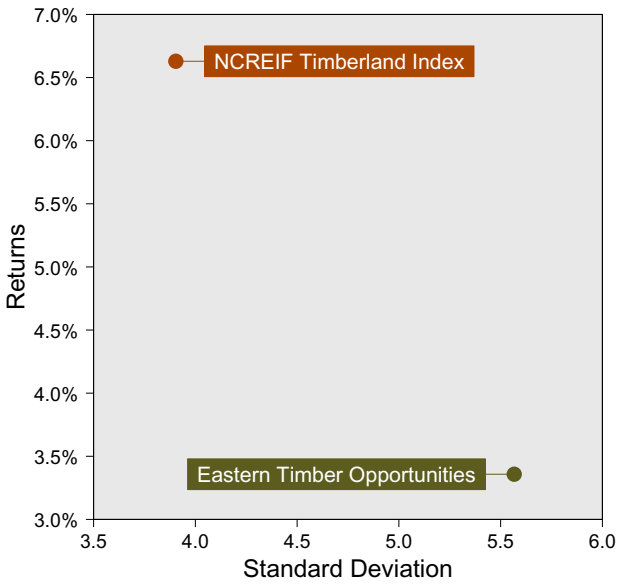
Beginning Market Value	$59,618,093
Net New Investment	$0
Investment Gains/(Losses)	$-382,462
Ending Market Value	$59,235,631



Relative Return vs NCREIF Timberland Index



Annualized Five Year Risk vs Return



JP Morgan Infrastructure
Period Ended March 31, 2016

Investment Philosophy

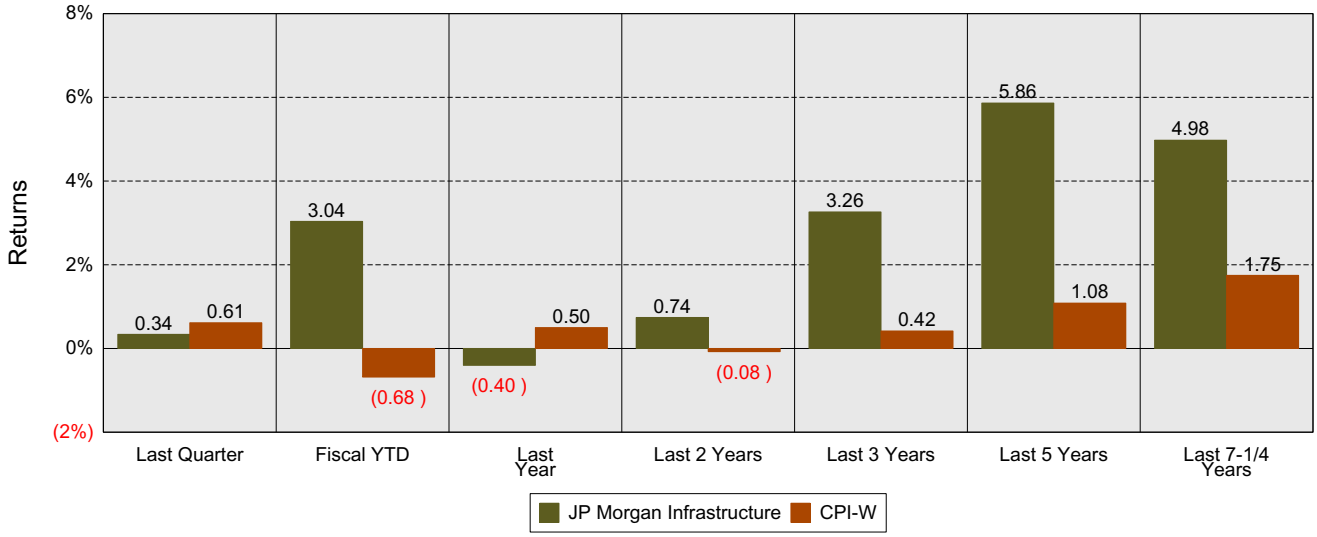
The only open-ended private commingled infrastructure fund in the U.S, the JPMorgan Infrastructure Investments Fund invests in stabilized assets in OECD countries with selected value-added opportunities, across infrastructure industry sub-sectors, including: toll roads, bridges and tunnels; oil and gas pipelines; electricity transmission and distribution facilities; contracted power generation assets; water distribution; waste-water collection and processing; railway lines and rapid rail links; and seaports and airports.

Quarterly Summary and Highlights

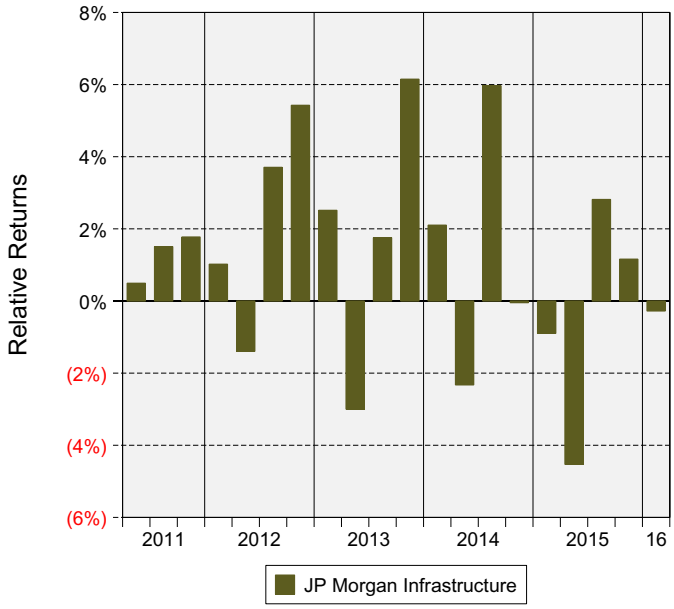
- JP Morgan Infrastructure's portfolio underperformed the CPI-W by 0.28% for the quarter and underperformed the CPI-W for the year by 0.90%.

Quarterly Asset Growth

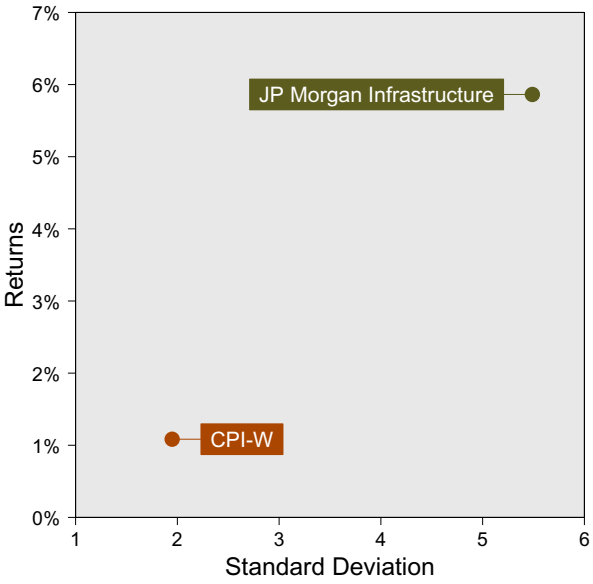
Beginning Market Value	$74,141,360
Net New Investment	$-197,584
Investment Gains/(Losses)	$250,427
Ending Market Value	$74,194,203



Relative Return vs CPI-W



Annualized Five Year Risk vs Return



Grosvenor Cust. Infrastructure
Period Ended March 31, 2016

Investment Philosophy

The Customized Infrastructure Strategies LP is a commingled fund focused on providing a comprehensive, diversified solution for investors looking to access the infrastructure asset class. The Fund seeks to generate stable, long-term yield and attractive risk-adjusted returns by investing in a diversified portfolio of primary core and core plus infrastructure funds (30%), co-investments (40%) and opportunistic secondary fund purchases (30%).

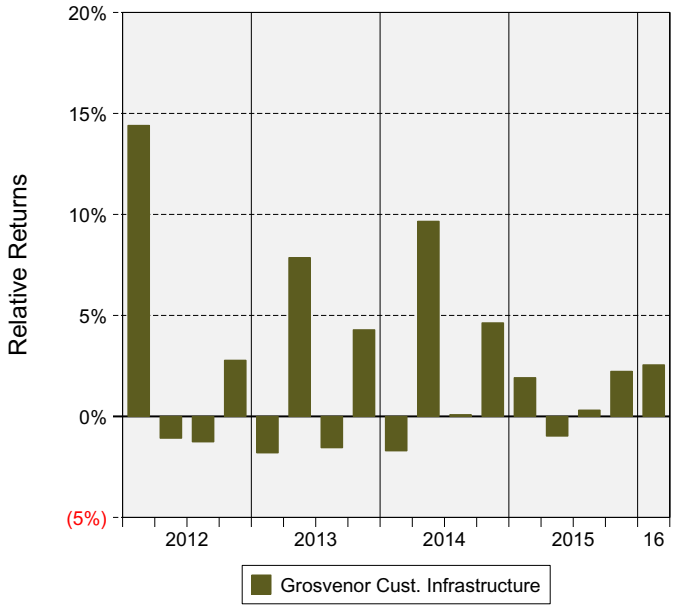
Quarterly Summary and Highlights

- Grosvenor Cust. Infrastructure's portfolio outperformed the CPI-W by 2.55% for the quarter and outperformed the CPI-W for the year by 4.18%.

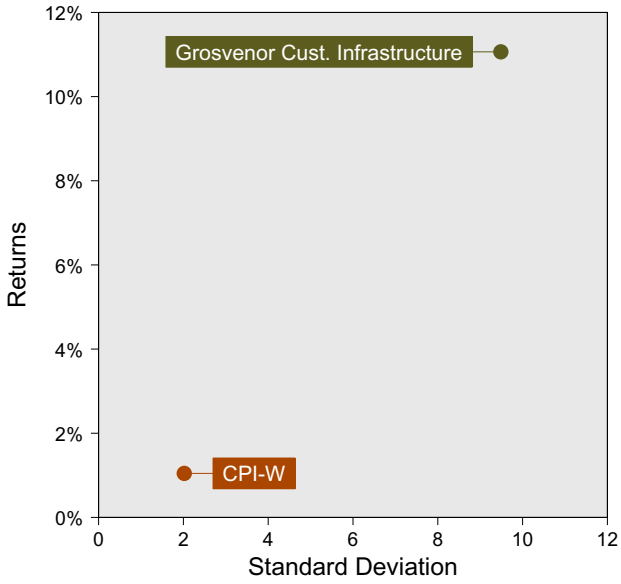
Quarterly Asset Growth

Beginning Market Value	$19,407,649
Net New Investment	$212,100
Investment Gains/(Losses)	$621,187
Ending Market Value	$20,240,936

Relative Return vs CPI-W



Annualized Four and One-Quarter Year Risk vs Return



Invesco Core Real Estate
Period Ended March 31, 2016

Investment Philosophy

IRE's investment philosophy is comprised of two fundamental principles: (1) maximize the predictability and consistency of investment returns and (2) minimize the risk of capital loss. This philosophy forms the cornerstone of the company's real estate investment philosophy.

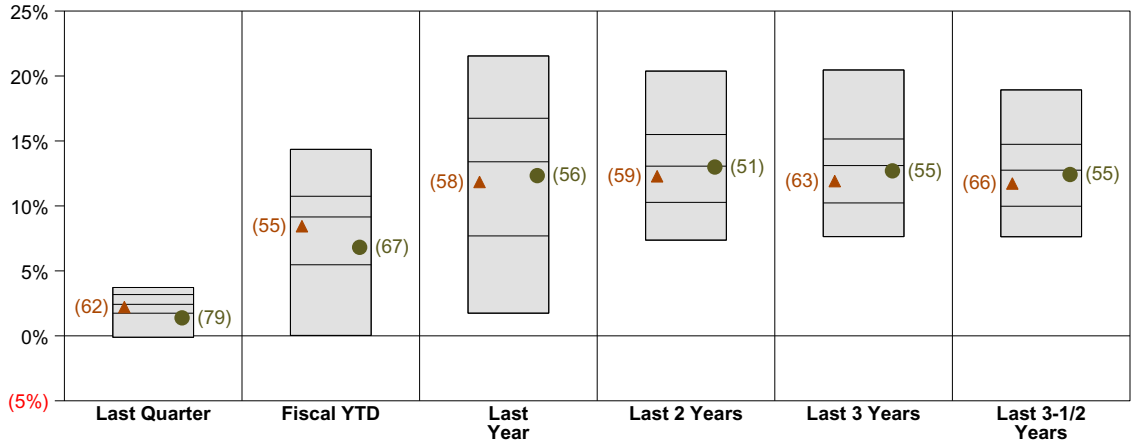
Quarterly Summary and Highlights

- Invesco Core Real Estate's portfolio posted a 1.38% return for the quarter placing it in the 79 percentile of the Total Real Estate DB group for the quarter and in the 56 percentile for the last year.
- Invesco Core Real Estate's portfolio underperformed the NCREIF Total Index by 0.83% for the quarter and outperformed the NCREIF Total Index for the year by 0.49%.

Quarterly Asset Growth

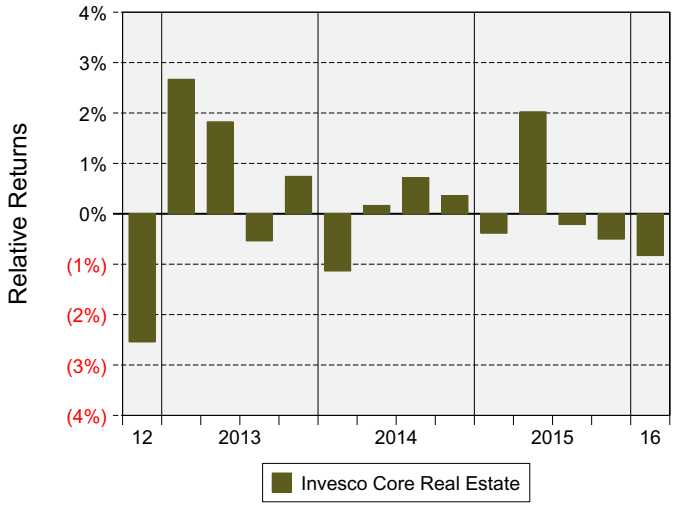
Beginning Market Value	$58,973,738
Net New Investment	$-52,119
Investment Gains/(Losses)	$867,749
Ending Market Value	$59,789,368

Performance vs Total Real Estate DB (Net)

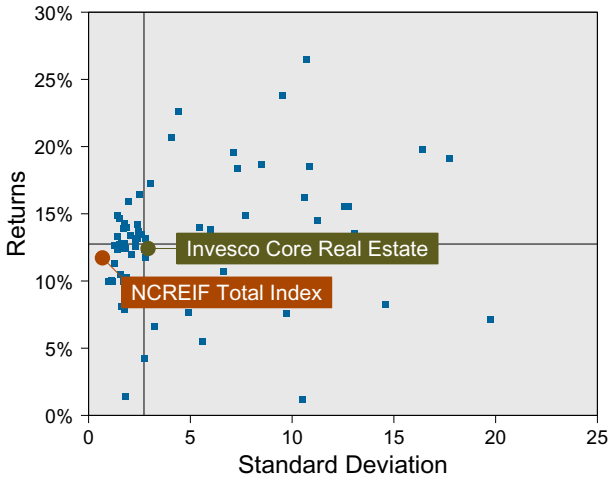


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 3-1/2 Years
10th Percentile	3.72	14.35	21.54	20.38	20.46	18.93
25th Percentile	3.18	10.74	16.75	15.49	15.15	14.74
Median	2.42	9.15	13.40	13.06	13.11	12.75
75th Percentile	1.74	5.47	7.69	10.27	10.23	9.98
90th Percentile	(0.11)	0.03	1.75	7.37	7.64	7.63
Invesco Core Real Estate ●	1.38	6.81	12.33	12.99	12.70	12.42
NCREIF Total Index ▲	2.21	8.44	11.84	12.28	11.91	11.72

Relative Return vs NCREIF Total Index



Total Real Estate DB (Net)
Annualized Three and One-Half Year Risk vs Return



JP Morgan Real Estate
Period Ended March 31, 2016

Investment Philosophy

The J.P. Morgan U.S. Real Estate Income and Growth Fund seeks to construct and opportunistically manage a portfolio of core direct real estate investments, complemented by other real estate and real estate-related assets. The Fund pursues a broadly diversified absolute-return strategy and pursues all property investments on an opportunistic basis. The majority of the Fund's investments will be in direct core properties in the office, industrial, retail and residential sectors.

Quarterly Summary and Highlights

- JP Morgan Real Estate's portfolio posted a 1.96% return for the quarter placing it in the 69 percentile of the Total Real Estate DB group for the quarter and in the 62 percentile for the last year.
- JP Morgan Real Estate's portfolio underperformed the NCREIF Total Index by 0.25% for the quarter and underperformed the NCREIF Total Index for the year by 0.60%.

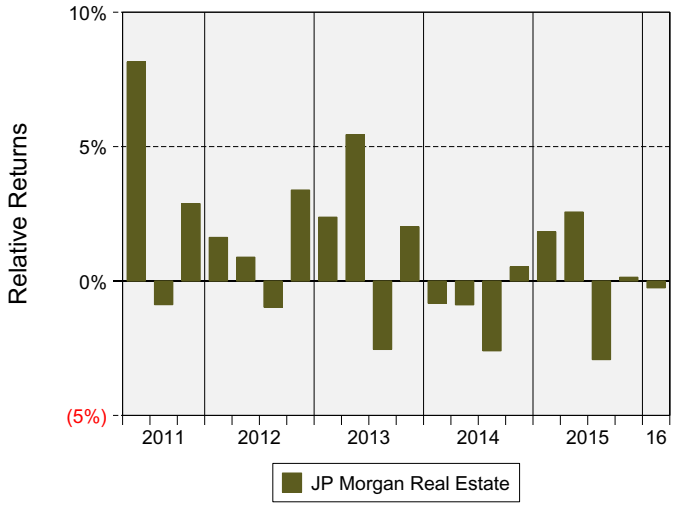
Quarterly Asset Growth

Beginning Market Value	$65,762,229
Net New Investment	$-35,570
Investment Gains/(Losses)	$1,287,089
Ending Market Value	$67,013,748

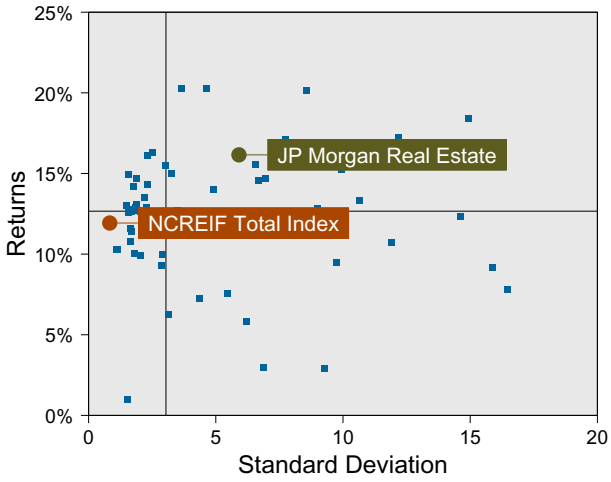
Performance vs Total Real Estate DB (Net)

	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 10 Years	Last 10-1/4 Years
10th Percentile	3.72	14.35	21.54	20.38	20.46	16.89	7.16	7.41
25th Percentile	3.18	10.74	16.75	15.49	15.15	14.67	6.00	6.26
Median	2.42	9.15	13.40	13.06	13.11	12.66	5.23	5.66
75th Percentile	1.74	5.47	7.69	10.27	10.23	10.27	4.03	4.14
90th Percentile	(0.11)	0.03	1.75	7.37	7.64	7.36	(2.50)	(0.18)
JP Morgan Real Estate ●	1.96	5.24	11.25	11.33	12.69	16.15	2.58	3.11
NCREIF Total Index ▲	2.21	8.44	11.84	12.28	11.91	11.93	7.61	7.79

Relative Return vs NCREIF Total Index



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



JP Morgan Short Term Bonds
Period Ended March 31, 2016

Investment Philosophy

The investment objective of this account is to outperform the Barclays Capital 1-3 year Government/Credit Index while maintaining total return risk similar to that of the benchmark as measured over a market cycle. The weighted average effective duration of the portfolio will typically remain within +/- 30% of the benchmark.

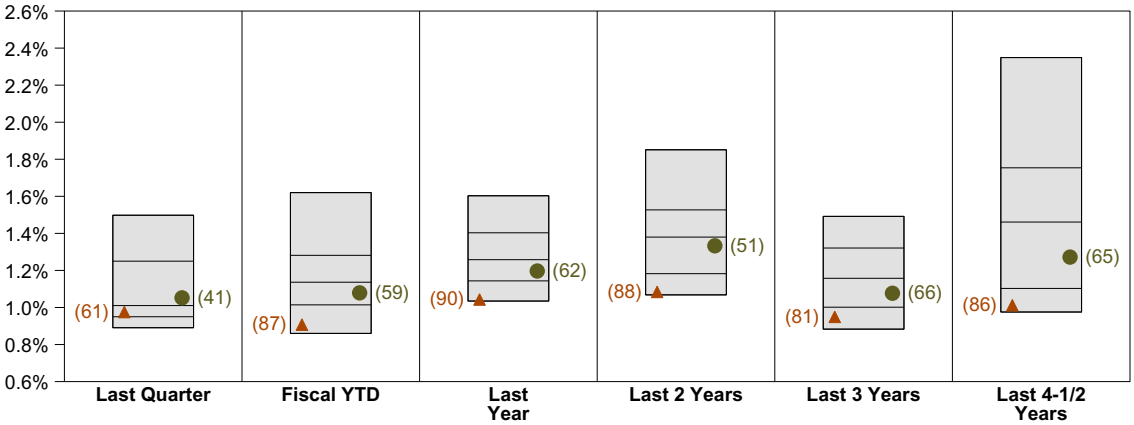
Quarterly Summary and Highlights

- JP Morgan Short Term Bonds's portfolio posted a 1.05% return for the quarter placing it in the 41 percentile of the CAI Defensive Fixed-Inc Style group for the quarter and in the 62 percentile for the last year.
- JP Morgan Short Term Bonds's portfolio outperformed the Barclays Gov/Credit 1-3 Yr by 0.08% for the quarter and outperformed the Barclays Gov/Credit 1-3 Yr for the year by 0.15%.

Quarterly Asset Growth

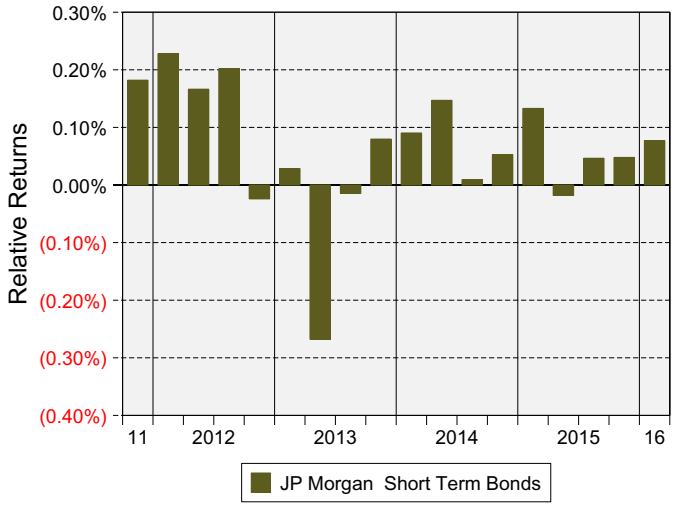
Beginning Market Value	$274,708,669
Net New Investment	$-1,071,518
Investment Gains/(Losses)	$2,885,152
Ending Market Value	$276,522,303

Performance vs CAI Defensive Fixed-Inc Style (Gross)

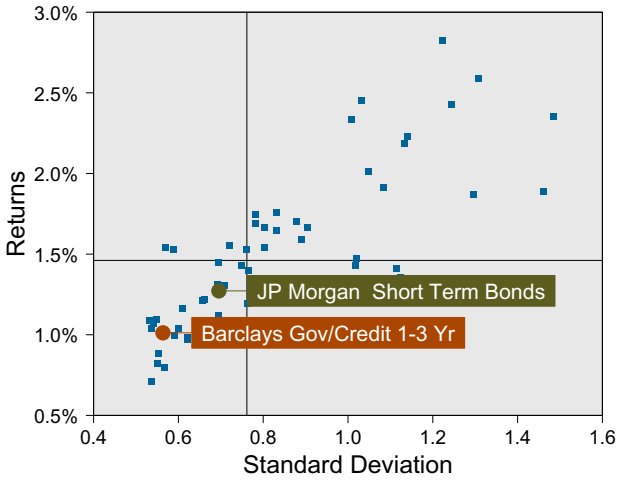


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 4-1/2 Years
10th Percentile	1.50	1.62	1.60	1.85	1.49	2.35
25th Percentile	1.25	1.28	1.40	1.53	1.32	1.75
Median	1.01	1.14	1.26	1.38	1.16	1.46
75th Percentile	0.95	1.01	1.14	1.18	1.00	1.10
90th Percentile	0.89	0.86	1.03	1.07	0.88	0.98
JP Morgan Short Term Bonds ●	1.05	1.08	1.20	1.33	1.08	1.27
Barclays Gov/Credit 1-3 Yr ▲	0.98	0.91	1.04	1.08	0.95	1.01

Relative Return vs Barclays Gov/Credit 1-3 Yr



CAI Defensive Fixed-Inc Style (Gross) Annualized Four and One-Half Year Risk vs Return



Babson Short Term Bonds
Period Ended March 31, 2016

Investment Philosophy

The investment objective of this account is to outperform the total return of the Barclays Capital 1-3 year US Government Index while minimizing fluctuations in capital value and providing sufficient liquidity to fund withdrawals.

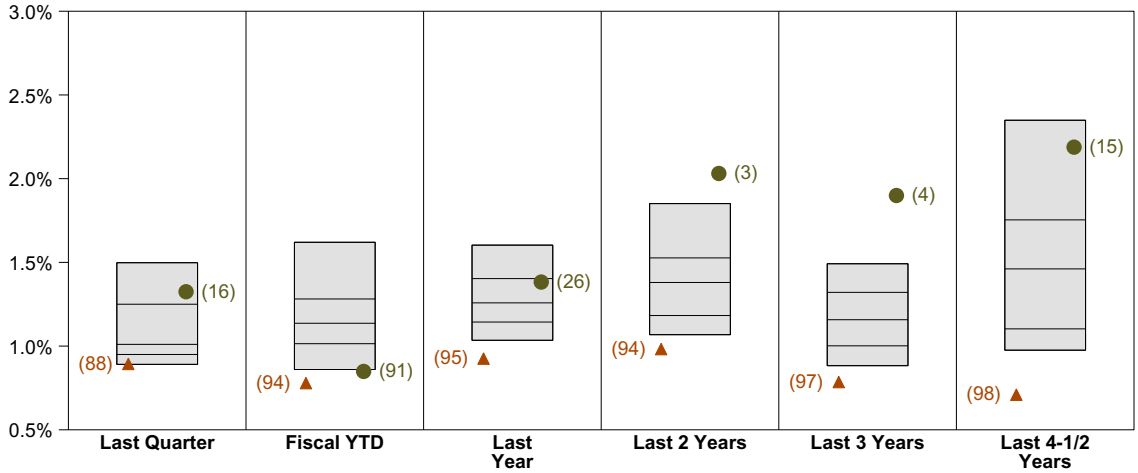
Quarterly Summary and Highlights

- Babson Short Term Bonds's portfolio posted a 1.32% return for the quarter placing it in the 16 percentile of the CAI Defensive Fixed-Inc Style group for the quarter and in the 26 percentile for the last year.
- Babson Short Term Bonds's portfolio outperformed the Barclays Gov 1-3 Yr by 0.43% for the quarter and outperformed the Barclays Gov 1-3 Yr for the year by 0.46%.

Quarterly Asset Growth

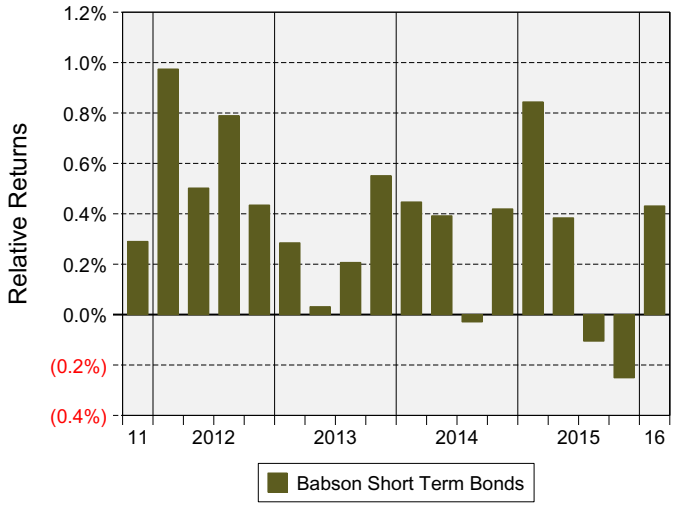
Beginning Market Value	$237,842,112
Net New Investment	$-101,691
Investment Gains/(Losses)	$3,149,572
Ending Market Value	$240,889,993

Performance vs CAI Defensive Fixed-Inc Style (Gross)

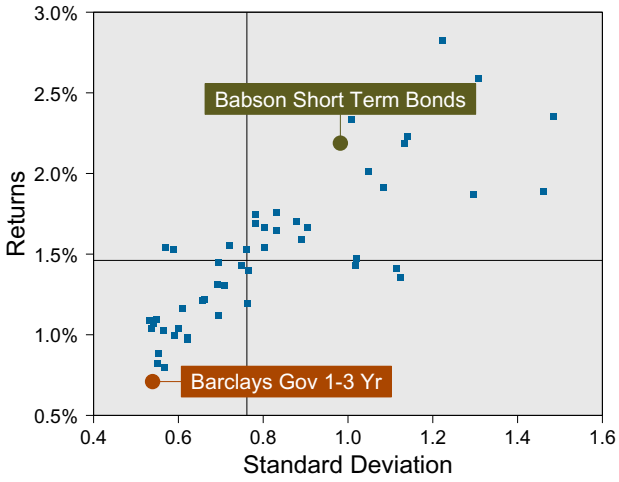


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 4-1/2 Years
10th Percentile	1.50	1.62	1.60	1.85	1.49	2.35
25th Percentile	1.25	1.28	1.40	1.53	1.32	1.75
Median	1.01	1.14	1.26	1.38	1.16	1.46
75th Percentile	0.95	1.01	1.14	1.18	1.00	1.10
90th Percentile	0.89	0.86	1.03	1.07	0.88	0.98
Babson Short Term Bonds ●	1.32	0.85	1.38	2.03	1.90	2.19
Barclays Gov 1-3 Yr ▲	0.89	0.78	0.93	0.98	0.79	0.71

Relative Return vs Barclays Gov 1-3 Yr



CAI Defensive Fixed-Inc Style (Gross) Annualized Four and One-Half Year Risk vs Return



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INVESTMENTS
INSTITUTE

1st Quarter 2016

Education

Research and Educational Programs

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

Recent Research

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

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

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

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

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

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

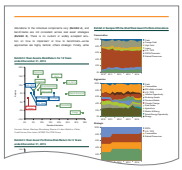
October Regional Workshop Summary We reviewed real assets and the implementation implications of building out a robust real assets allocation in portfolios.

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

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

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

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



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

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

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

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

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

Events

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

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

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

For more information about events, please contact Barb Gerraty: 415.974.5060 / institute@callan.com

The Center for Investment Training Educational Sessions

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

Introduction to Investments

San Francisco, CA, July 19–20, 2016
Chicago, IL, October 18–19, 2016

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

Customized Sessions

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

Learn more at https://www.callan.com/education/college/ or contact Kathleen Cunnie: 415.274.3029 / cunnie@callan.com

Education: By the Numbers

500	Attendees (on average) of the Institute's annual National Conference	**50+**	Unique pieces of research the Institute generates each year
3,300	Total attendees of the "Callan College" since 1994	**1980**	Year the Callan Investments Institute was founded

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

Ron Peyton, Chairman and CEO

Callan

Quarterly List as of March 31, 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
13D Management
1607 Capital Partners, LLC
Aberdeen Asset Management PLC
Acadian Asset Management LLC
AEGON USA Investment Management
Affiliated Managers Group, Inc.
AllianceBernstein
Allianz Global Investors
Allianz Life Insurance Company of North America
AlphaOne Investment Services
American Century Investment Management
Amundi Smith Breeden LLC
Analytic Investors
Angelo, Gordon & Co.
Apollo Global Management
AQR Capital Management
Ares Management LLC
Ariel Investments, LLC
Aristotle Capital Management, LLC
Artisan Holdings
Atlanta Capital Management Co., LLC
Aviva Investors Americas
AXA Investment Managers
Babson Capital Management
Baillie Gifford Overseas Limited
Baird Advisors
Bank of America
Baring Asset Management
Baron Capital Management, Inc.
Barrow, Hanley, Mewhinney & Strauss, LLC
BlackRock
BMO Asset Management, Corp.
BNP Paribas Investment Partners
BNY Mellon Asset Management
Boston Partners
Brandes Investment Partners, L.P.
Brandywine Global Investment Management, LLC

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

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

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

Callan

March 31, 2016

North Dakota State Investment Board Legacy Fund

Investment Measurement Service Quarterly Review

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

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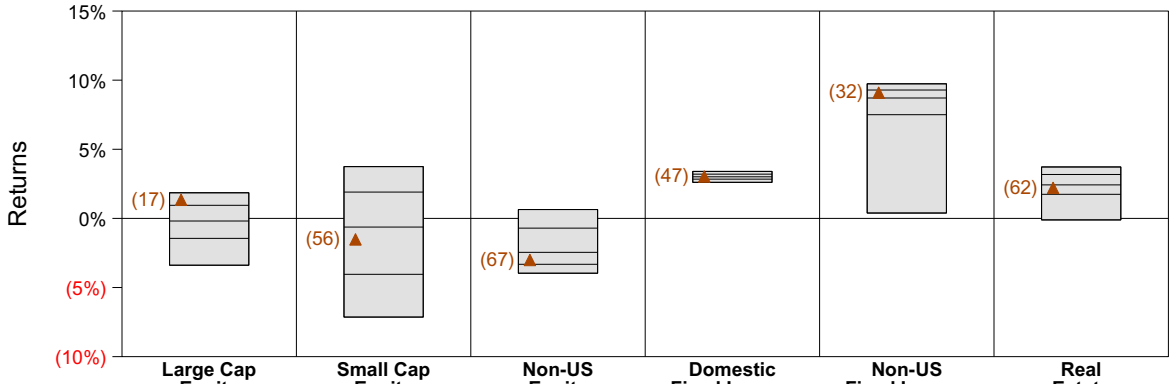
Market Overview
Active Management vs Index Returns

Market Overview

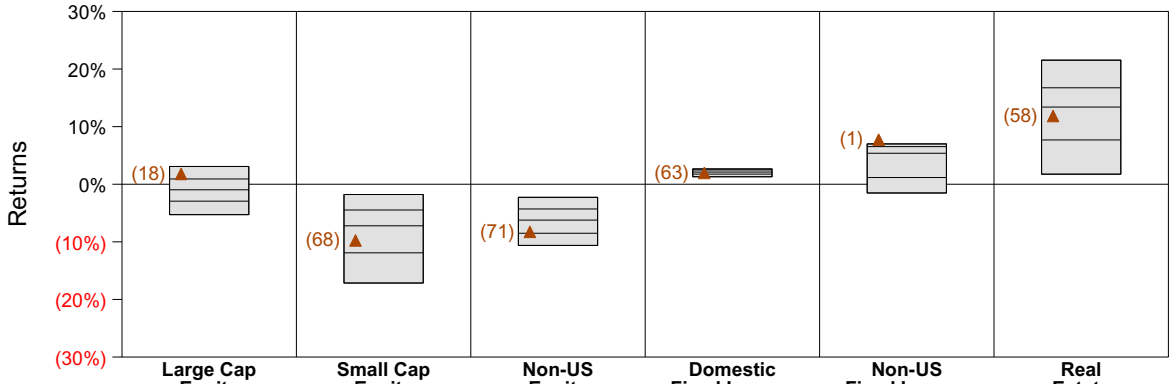
The charts below illustrate the range of returns across managers in Callan's Separate Account database over the most recent one quarter and one year time periods. The database is broken down by asset class to illustrate the difference in returns across those asset classes. An appropriate index is also shown for each asset class for comparison purposes. As an example, the first bar in the upper chart illustrates the range of returns for domestic equity managers over the last quarter. The triangle represents the S&P 500 return. The number next to the triangle represents the ranking of the S&P 500 in the Large Cap Equity manager database.

Range of Separate Account Manager Returns by Asset Class
One Quarter Ended March 31, 2016



	Large Cap Equity vs S&P 500	Small Cap Equity vs Russell 2000	Non-US Equity vs MSCI EAFE	Domestic Fixed Income vs Barclays Aggr Bd	Non-US Fixed Income vs Citi Non-US Govt	Real Estate vs NCREIF Index
10th Percentile	1.85	3.75	0.64	3.40	9.74	3.72
25th Percentile	0.95	1.90	(0.70)	3.20	9.29	3.18
Median	(0.19)	(0.63)	(2.46)	3.01	8.71	2.42
75th Percentile	(1.45)	(4.04)	(3.32)	2.84	7.50	1.74
90th Percentile	(3.39)	(7.14)	(3.97)	2.61	0.39	(0.11)
Index ▲	1.35	(1.52)	(3.01)	3.03	9.10	2.21

Range of Separate Account Manager Returns by Asset Class
One Year Ended March 31, 2016



	Large Cap Equity vs S&P 500	Small Cap Equity vs Russell 2000	Non-US Equity vs MSCI EAFE	Domestic Fixed Income vs Barclays Aggr Bd	Non-US Fixed Income vs Citi Non-US Govt	Real Estate vs NCREIF Index
10th Percentile	3.08	(1.78)	(2.27)	2.66	7.00	21.54
25th Percentile	0.92	(4.47)	(4.29)	2.48	6.53	16.75
Median	(0.96)	(7.22)	(6.23)	2.11	5.38	13.40
75th Percentile	(2.94)	(11.91)	(8.51)	1.76	1.16	7.69
90th Percentile	(5.28)	(17.15)	(10.63)	1.30	(1.52)	1.75
Index ▲	1.78	(9.76)	(8.27)	1.96	7.74	11.84

Callan

Capital Market Review

First Quarter 2016

Don't Believe the Hype (or the Markets)

ECONOMY

2 PAGE

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

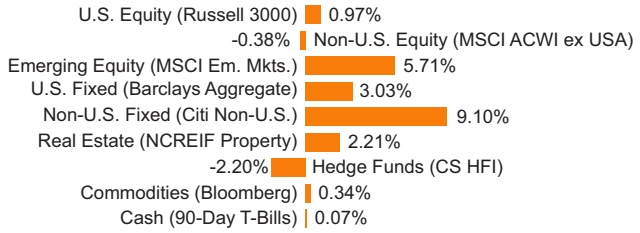
Progress Discounted

FUND SPONSOR

4 PAGE

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

Broad Market Quarterly Returns



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

Tale of Two Halves

U.S. EQUITY

6 PAGE

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

Mr. Draghi's Wild Ride

NON-U.S. EQUITY

9 PAGE

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

More T-Bills, Please

U.S. FIXED INCOME

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

A Dole of Doves

NON-U.S. FIXED INCOME

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

Slow and Low

REAL ESTATE

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

Drip, Drip, Drip

PRIVATE EQUITY

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

Market Tremors Panic Hedge Funds

HEDGE FUNDS

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

Strong Quarter Can't Save 2015

DEFINED CONTRIBUTION

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

Don't Believe the Hype (or the Markets)

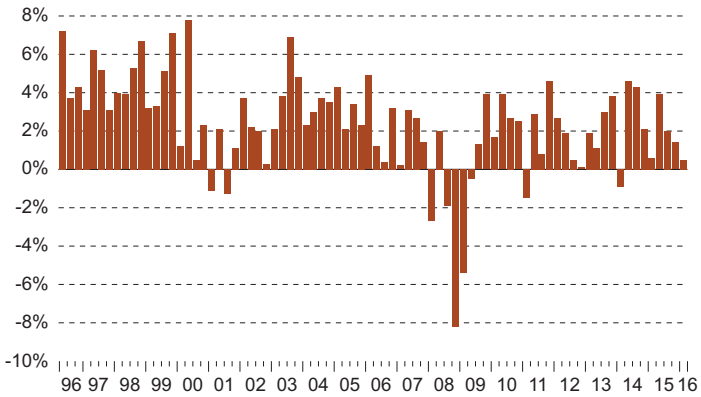
ECONOMY | Jay Kloepfer

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

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

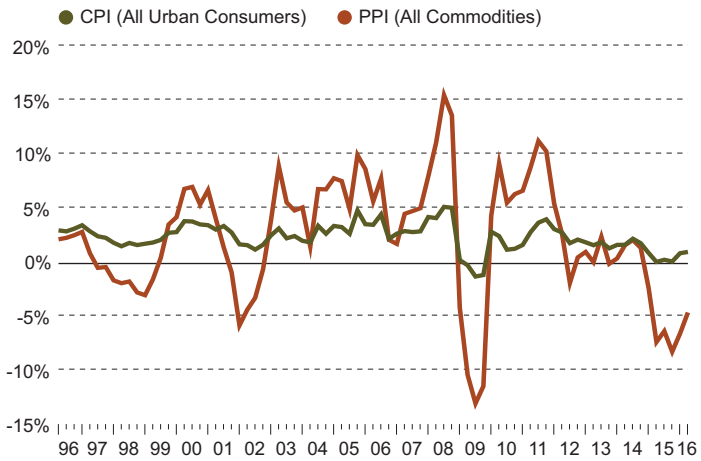
Real GDP growth has continued a familiar pattern, showing anemic first-quarter growth in five of the past six years. Such a pattern is a recent development in U.S. economic history, and suggests (to us) that part of this weakness may in fact be a problematic seasonal-adjustment process within the data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

Quarterly Real GDP Growth (20 Years)



Source: Bureau of Economic Analysis

Inflation Year-Over-Year



Source: Bureau of Labor Statistics

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

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

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

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

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

The Long-Term View

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

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

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

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

Recent Quarterly Indicators

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

*Estimate.

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

Progress Discounted

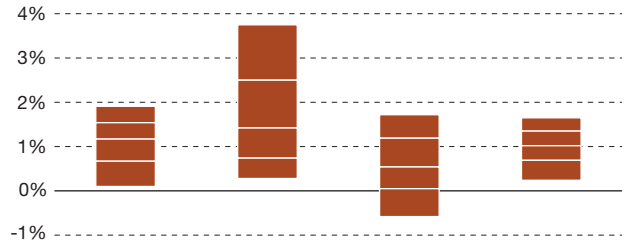
FUND SPONSOR | Rufash Lama

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

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

Looking at the Callan Fund Sponsor Quarterly Returns table, we see corporate funds outperformed other fund types at the median and across percentiles. Performance dispersion was highest in the 10th percentile: corporate funds gained 3.75%, due in part to their high U.S. fixed income exposure, while at the low end of the spectrum Taft-Hartley funds ended the quarter at +1.65%. Endowments/foundations trailed significantly in the 90th percentile at -0.58%. Overall, endowments/foundations performed the worst due to a relatively high exposure to non-U.S. equity and low exposure to U.S. fixed income. Public funds were buoyed by greater exposure to non-U.S. fixed income as accommodative central bank policies helped fixed income markets stage a strong rally. The Barclays Global Aggregate Index gained 5.90% for the quarter.

Callan Fund Sponsor Returns for the Quarter



	Public Database	Corporate Database	Endow/Fndn Database	Taft-Hartley Database
10th Percentile	1.91	3.75	1.72	1.65
25th Percentile	1.54	2.50	1.19	1.35
Median	1.17	1.42	0.54	1.02
75th Percentile	0.67	0.74	0.05	0.69
90th Percentile	0.10	0.28	-0.58	0.24

Source: Callan

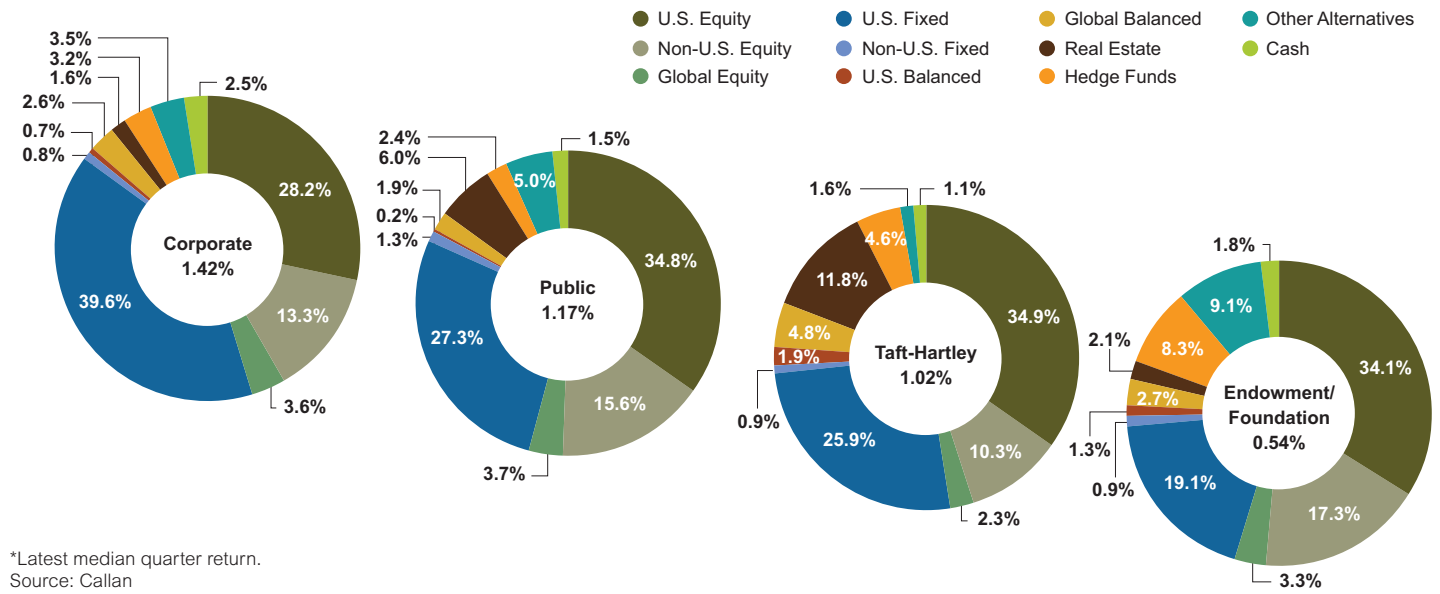
Callan Database Median and Index Returns for Periods ended March 31, 2016**

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

* The peer group includes funded ratio measures provided by large, institutional investment and actuarial consultants, as well as investment management firms.
**Returns less than one year are not annualized.
Sources: Callan, Barclays, MSCI, Russell Investment Group.

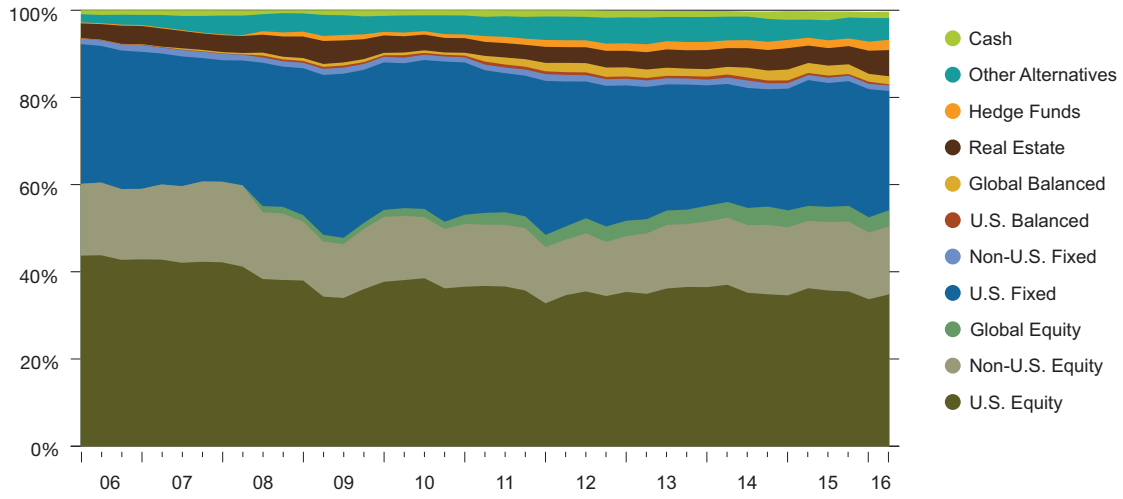
While one-year returns were consistently in the red, all fund types maintained performance in the +5% – +7% range for longer time periods. Taft-Hartley funds kept their lead over other fund types during three- and five-year periods, and corporate funds boasted the top returns over longer periods (10 and 15 years). Although the blended 60% Russell 3000 + 40% Barclays Aggregate Index (+1.79%) trailed the 60% MSCI World + 40% Barclays Global Aggregate Index (+2.15%) for the quarter, the U.S.-based benchmark continues to outperform over longer time periods. Callan's U.S. Balanced Database group maintained its edge over the Global Balanced Database group across all but the longest time periods shown in the table.

Callan Fund Sponsor Average Asset Allocation



*Latest median quarter return.
Source: Callan

Callan Public Fund Database Average Asset Allocation (10 Years)



Source: Callan

Tale of Two Halves

U.S. EQUITY | Lauren Mathias, CFA

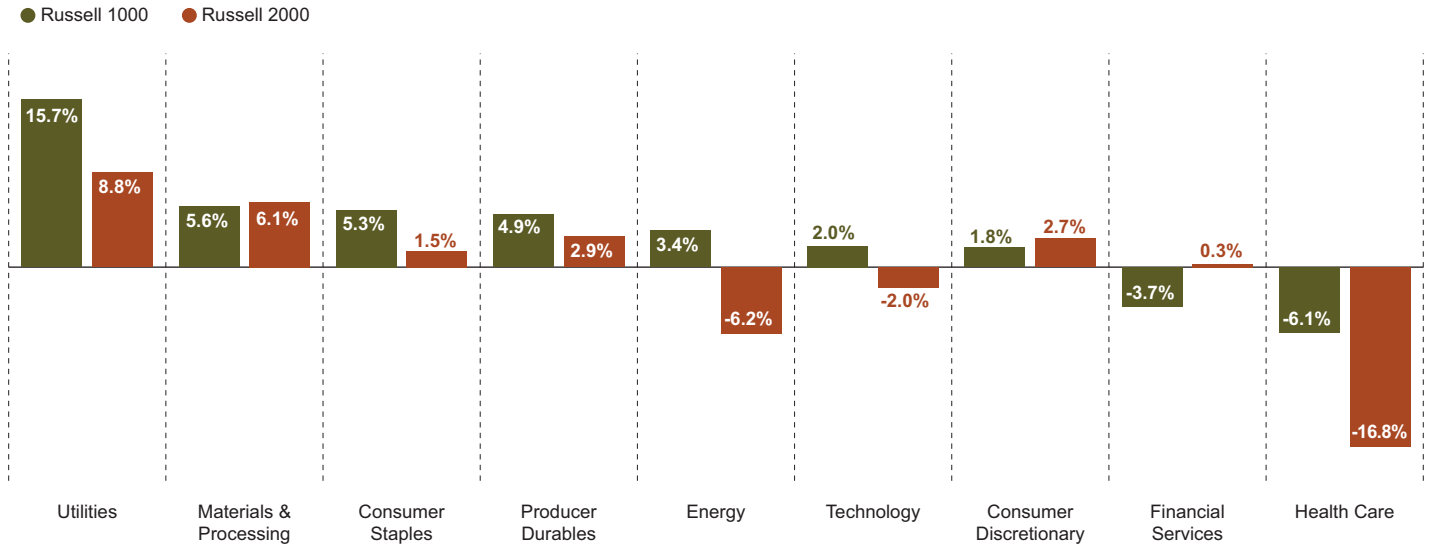
The first quarter of 2016 was a tale of two halves: the **S&P 500 Index** declined in the first half only to reverse course and post a positive quarterly return (+1.35%). Large cap companies held their lead over small cap, but in the trend of reversals, value overtook growth in all capitalizations. (**Russell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

Though the S&P 500 Index ended in positive territory, during the quarter performance dipped 10%. This is the first time since the Great Depression that the S&P fell to this depth only to rebound and end in the black. January was a disappointing month as economic concerns lingered from 2015. But in February and March, U.S. manufacturing activity grew, fourth-quarter 2015 GDP was revised to 1.4% from 1.0%, the labor force participation rate expanded to 63% (from 62.4%), and the U.S. economy added 215,000 jobs in March alone. Global concerns around the price of oil abated as the crude oil spot price ended the quarter at $38/barrel after bottoming at $26/barrel in mid-February. Investor sentiment rose in tandem with these positive developments. Despite some improvement, the U.S. Federal Reserve stated that global economic and financial developments continued to pose risks, and thus maintained the target range for the federal funds rate at 0.25%–0.50%.

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

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

Economic Sector Quarterly Performance



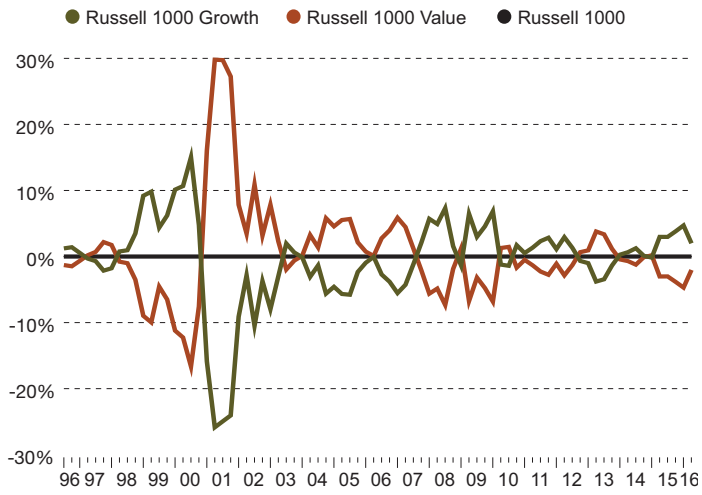
Source: Russell Investment Group

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

value, and the interest rate-sensitive Utilities sector expanded, but typically defensive Health Care trailed. Not only did sectors turnabout, so did factors—valuation metrics such as price/book and yield outpaced growth metrics such as projected EPS growth and price momentum. Volatility of stocks, as measured by the daily VIX, increased during February's pullback, ending the quarter near average levels. Correlations remained well above long-term averages and spreads between stock returns were below average (both based on the S&P 500 universe)—a difficult environment for stock-picking strategies.

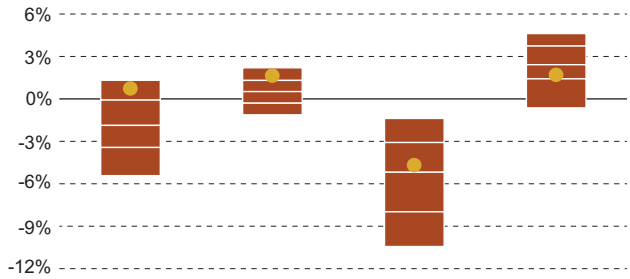
The U.S. equity market had a tumultuous start to the year, but found itself in positive territory by quarter end. This tale of two halves made it challenging for active management, with just 19% of large cap funds outperforming the S&P 500 Index during the quarter.

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



Source: Russell Investment Group

Callan Style Group Quarterly Returns



	Large Cap Growth Style	Large Cap Value Style	Small Cap Growth Style	Small Cap Value Style
10th Percentile	1.32	2.20	-1.38	4.62
25th Percentile	-0.08	1.31	-3.08	3.74
Median	-1.87	0.52	-5.18	2.42
75th Percentile	-3.43	-0.30	-7.98	1.42
90th Percentile	-5.42	-1.12	-10.43	-0.63
	R1000 Growth	**R1000 Value**	**R2000 Growth**	**R2000 Value**
Benchmark	0.74	1.64	-4.68	1.70

Sources: Callan, Russell Investment Group

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

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

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

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

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

*Returns less than one year are not annualized.
Sources: Callan, Dow Jones & Company, Russell Investment Group, Standard & Poor's, The NASDAQ Stock Market.

Mr. Draghi's Wild Ride

NON-U.S. EQUITY | Kevin Nagy

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

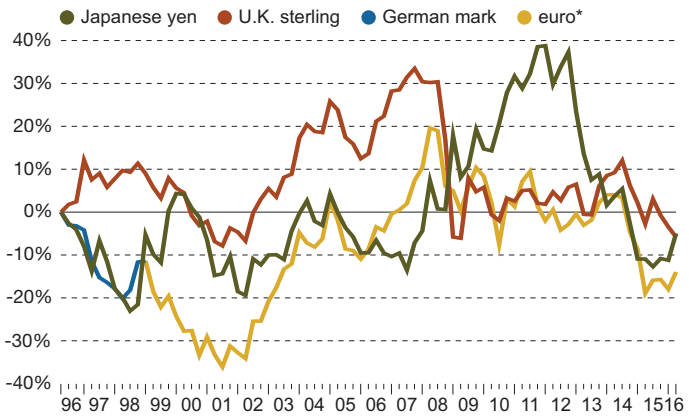
Falling oil prices, concerns about global economic growth, and declining corporate profits prompted a January sell-off, as many investors switched to a "risk-off" footing. Announcements of further European Central Bank (ECB) monetary stimulus and a modest rebound in commodity prices helped kick-start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

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

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

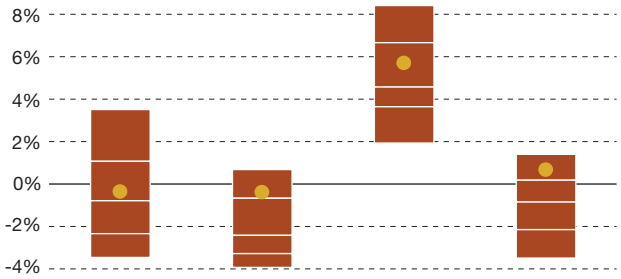
Southeast Asia and the Pacific (**MSCI Pacific Index**: -3.79%) underperformed Europe and other broad benchmarks. Japan (-6.52%) battled with tepid economic growth and large losses in the banking sector. The Financial sector was hit especially hard, losing 13.58%. Exporters also struggled due to the strengthening yen. Things were less gloomy in the rest of the region with New Zealand (+11.60%), Singapore (+5.05%), and Australia (+2.10%) benefitting from a commodities rally.

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



*euro returns from 1Q99
Source: MSCI

Callan Style Group Quarterly Returns

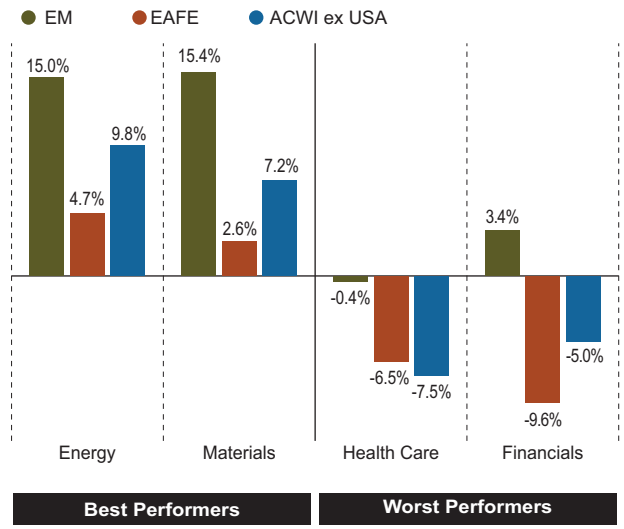


	Global Eq Style	Non-U.S. Eq Style	Emg Mkt Style	Small Cap Style
10th Percentile	3.47	0.64	8.37	1.36
25th Percentile	1.03	-0.71	6.62	0.14
Median	-0.83	-2.46	4.53	-0.89
75th Percentile	-2.38	-3.32	3.60	-2.19
90th Percentile	-3.50	-3.97	1.89	-3.53
	MSCI World	MSCI ACWI ex USA	MSCI Emg Mkts	MSCI ACWI ex USA SC
Benchmark	-0.35	-0.38	5.71	0.68

Sources: Callan, MSCI

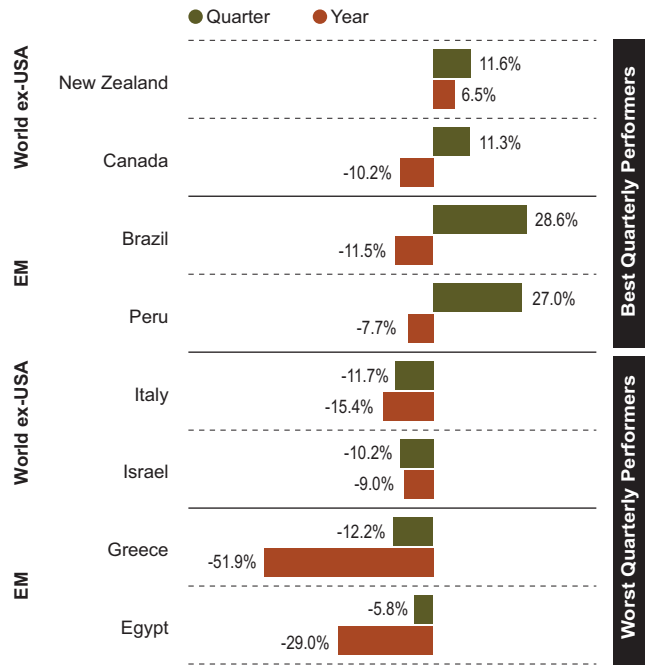
China (-4.80%) continued to struggle due to concerns over slowing growth and ineffective monetary policy. In an effort to sustain the economy's growth, Chinese authorities implemented selective capital controls to slow asset withdrawals and cut the required reserve ratio. Consumer Discretionary (-10.75%),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

Quarterly Returns: Strong and Struggling Sectors



Source: MSCI

Quarterly and Annual Country Performance Snapshot



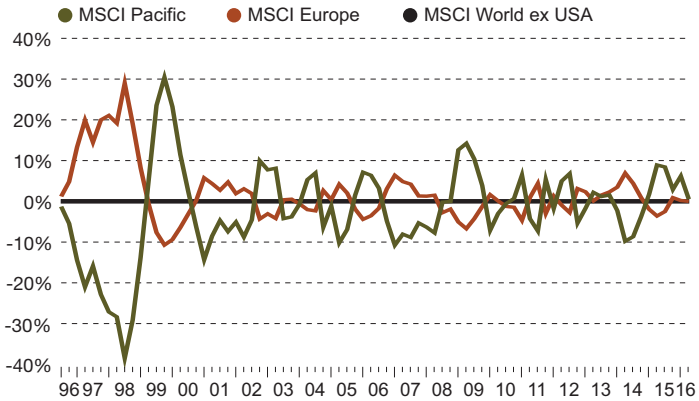
Source: MSCI

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

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

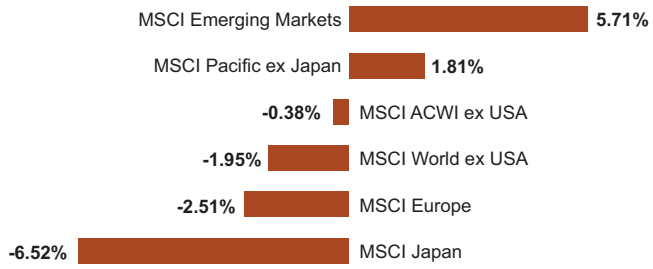
Sources: MSCI, Russell Investment Group, Standard & Poor's.

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



Source: MSCI

Regional Quarterly Performance (U.S. Dollar)



Source: MSCI

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

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

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

More T-Bills, Please

U.S. FIXED INCOME | Irina Sushch

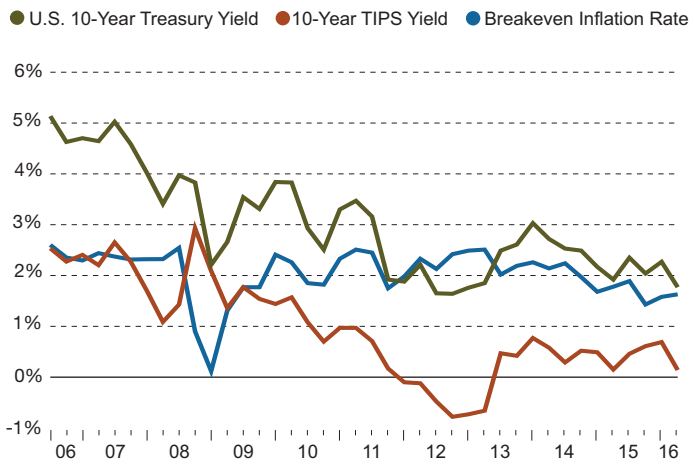
Yields plummeted during a volatile first quarter. A dovish Fed fostered uncertainty over global economic growth. **The Barclays Aggregate Index** gained 3.03% and the **Barclays Corporate High Yield Index** was up 3.35%.

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

Following December's federal funds rate hike, the Federal Reserve took on a neutral outlook. The Fed stated that financial and economic conditions are less favorable than they had been in December. The U.S. economy experienced modest growth despite improving employment and housing numbers. Fed chair Janet Yellen stated that the U.S. economy would have to get much worse before the Fed would consider the use of negative interest rates (six other central banks have implemented negative interest rates). The 10-year U.S. Treasury yield tumbled to 1.77%. The breakeven inflation rate (the difference between nominal and real yields) on 10-year Treasuries ticked up 1.63% as TIPS fell 55 bps, in line with their nominal counterparts.

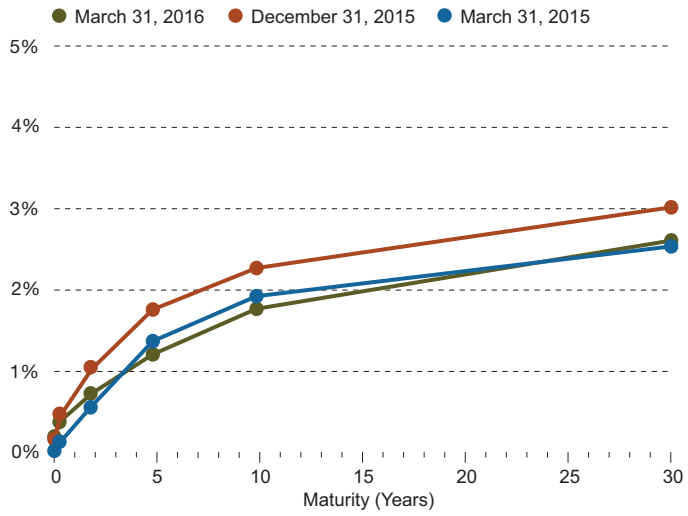
Sectors in the Barclays Aggregate posted positive returns across the board. CMBS outperformed like-duration Treasuries by 0.58% and rose 3.61% for the quarter. Credit was the highest returning sector (+3.92%), but only beat like-duration Treasuries

Historical 10-Year Yields



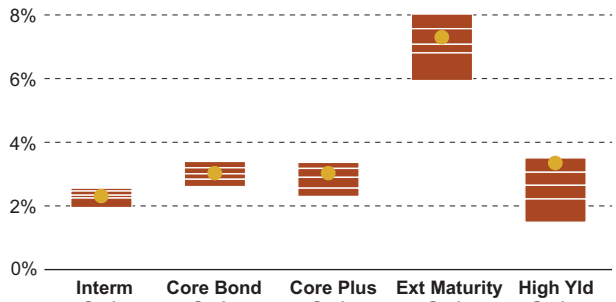
Source: Bloomberg

U.S. Treasury Yield Curves



Source: Bloomberg

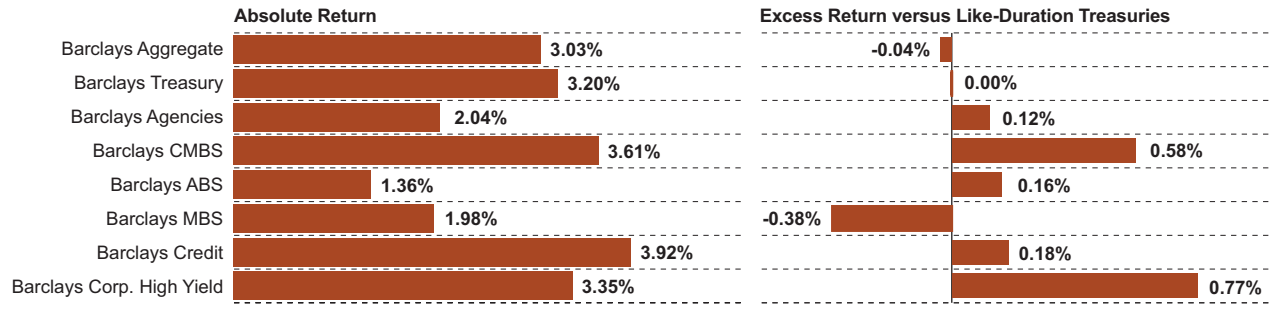
Callan Style Group Quarterly Returns



	Interm Style	Core Bond Style	Core Plus Style	Ext Maturity Style	High Yld Style
10th Percentile	2.56	3.40	3.37	8.03	3.51
25th Percentile	2.47	3.20	3.18	7.57	3.06
Median	2.34	3.01	2.90	7.08	2.65
75th Percentile	2.25	2.84	2.56	6.81	2.22
90th Percentile	1.95	2.61	2.30	5.94	1.49
	Barclays Interm Agg	Barclays Agg	Barclays Agg	Barclays Long G/C	Barclays High Yld
Benchmark	2.31	3.03	3.03	7.30	3.35

Sources: Barclays, Callan

Fixed Income Index Quarterly Returns

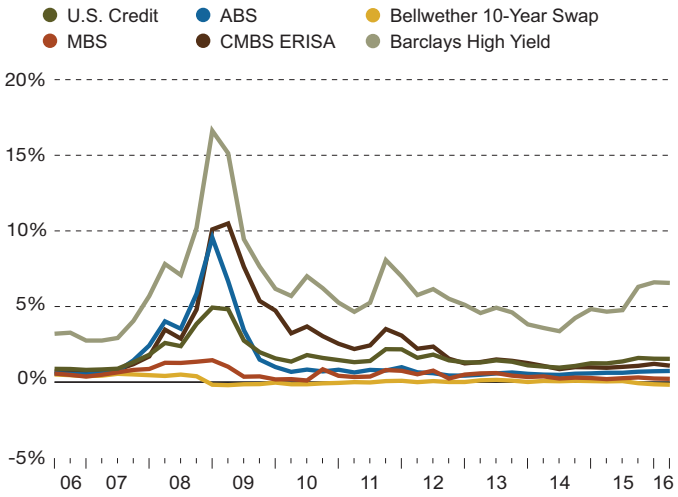


Source: Barclays

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

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

Effective Yield Over Treasuries



Source: Barclays

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

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

Source: Barclays

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

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

*Returns for less than one year are not annualized.

Sources: Barclays, Callan, Citigroup, Merrill Lynch.

A Dole of Doves

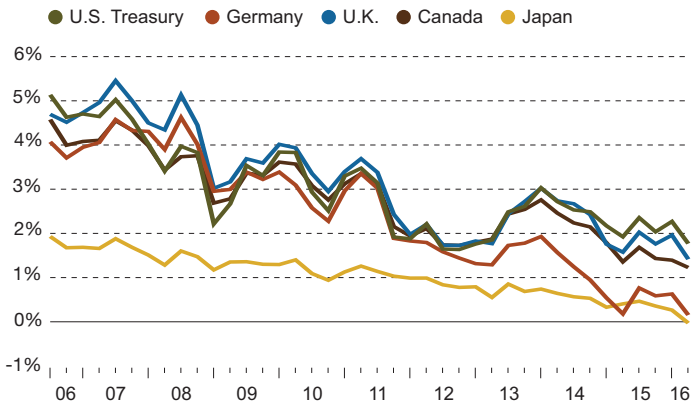
NON-U.S. FIXED INCOME | Kyle Fekete

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

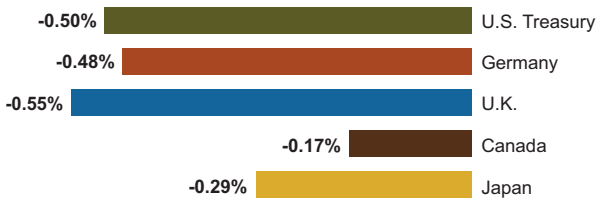
The U.S. dollar weakened versus most currencies during the quarter, providing a tailwind to unhedged foreign bond returns. The yen gained 7% versus the dollar as investors sought its safe-haven status amid market turbulence in China and concerns over the health of the European banking sector. The euro was also stronger versus the dollar (+5%). In March, the ECB continued its accomodative stance, slashing interest rates and increasing asset purchases. For the first time, the ECB included non-bank investment grade corporate bonds in its asset purchase program. Interest rates fell across developed markets, further bolstering returns. The **Barclays Global Aggregate** rose 5.90% (+3.28% hedged).

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

10-Year Global Government Bond Yields



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



Source: Bloomberg

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

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

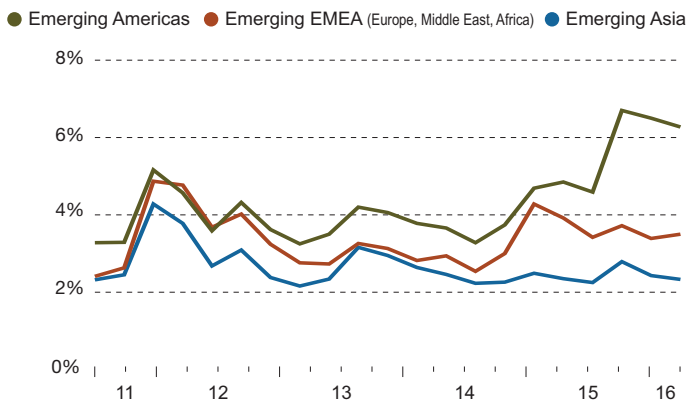
Source: Citigroup

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

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

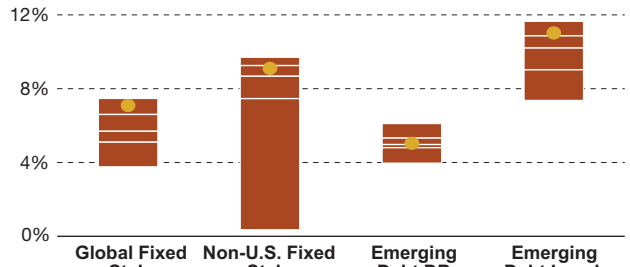
Emerging market bonds rebounded. In late February and March, commodity prices stabilized, risk appetite returned, and confidence in the Chinese renminbi stabilized. The hard currency **JPM EMBI Global Diversified Index** rose 5.04% while the local currency **JPM GBI-EM Global Diversified** soared 11.02%,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

Emerging Spreads Over Developed (By Region)



Source: Barclays

Callan Style Group Quarterly Returns



	Global Fixed Style	Non-U.S. Fixed Style	Emerging Debt DB	Emerging Debt Local
10th Percentile	7.51	9.74	6.15	11.69
25th Percentile	6.64	9.29	5.36	10.90
Median	5.73	8.71	5.01	10.24
75th Percentile	5.14	7.50	4.84	9.06
90th Percentile	3.80	0.39	4.00	7.40
	Citi World Gov	Citi Non-U.S. World Gov	JPM EMBI Gl Div	JPM GBI-EM Gl Div
Benchmark ●	7.09	9.10	5.04	11.02

Sources: Callan, Citigroup, JPMorgan Chase

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

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

*Returns less than one year are not annualized.
Sources: Callan, Citigroup, JPMorgan Chase.

Slow and Low

REAL ESTATE | Avery Robinson

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

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

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

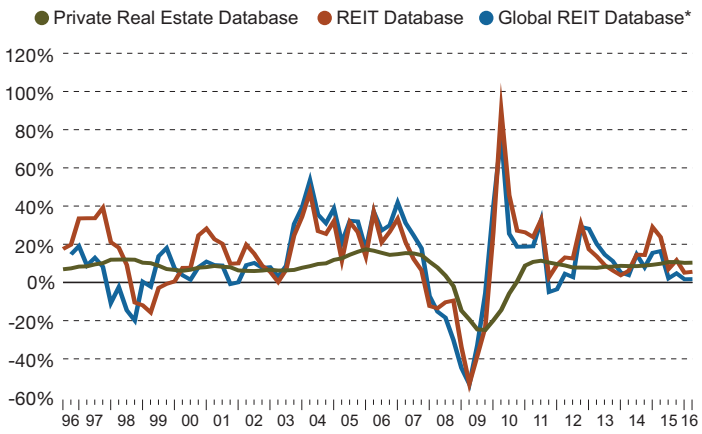
In the listed real estate market, the **FTSE EPRA/NAREIT Developed REIT Index (USD)** gained 5.43% and U.S. REITs tracked by the **FTSE NAREIT Equity REITs Index** advanced 6.00%.

In the U.S., volatility continued as REIT sectors rebounded sharply in March to generate positive returns for the quarter. Sector performance was led once again by Self-Storage (+10.85%), followed by Retail (+8.21%), Residential (+8.38%), and Industrial (+6.49%). The only negative was single family homes (-1.03%). As of March 31, U.S. REITs were trading at a 3% premium to net asset value. This marked the first time REITs have traded at a premium over the past 10 months. U.S. REITs raised $15.1 billion, despite no IPO activity for the quarter. There were 24 secondary equity offerings and 14 secondary debt offerings.

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

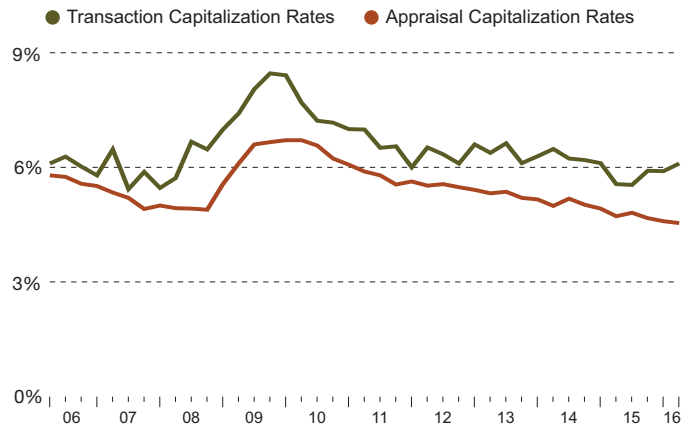
CMBS issuance reached $19.3 billion, significantly down from the first quarter of 2015 ($27.0 billion). This decline was widely credited to the instability in the broader financial market.

Rolling One-Year Returns



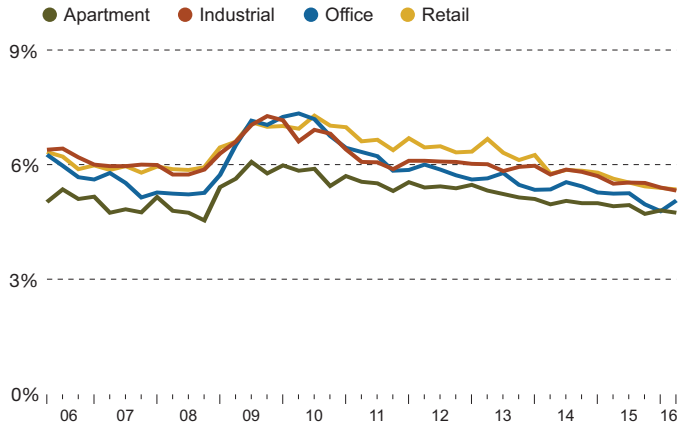
*Global REIT returns from 3Q96
Source: Callan

NCREIF Transaction and Appraisal Capitalization Rates



Source: NCREIF
Note: Transaction capitalization rate is equal-weighted.

NCREIF Capitalization Rates by Property Type



Source: NCREIF
Note: Capitalization rates are appraisal-based.

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

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

*Returns for less than one year are not annualized.
All REIT returns are reported gross in USD.
Sources: Callan, NAREIT, NCREIF, The FTSE Group. NCREIF statistics are the product of direct queries and may fluctuate over time.

Drip, Drip, Drip

PRIVATE EQUITY | Gary Robertson

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

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

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

Regarding exits, *Buyouts* reports that steep declines occurred in the first quarter of 2016. There were 107 private M&A exits of buyout-backed companies, with 31 deals disclosing values totaling $14.6 billion. The M&A exits count was down 27% year-over-year from 147, and the announced value declined 53% from $30.9 billion. There were no buyout-backed IPOs in the first quarter.

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

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

Funds Closed January 1 to March 31, 2016

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

Source: Private Equity Analyst

Private Equity Performance Database (%) (Pooled Horizon IRRs through Sept. 30, 2015*)

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

Private equity returns are net of fees.
Sources: Standard & Poor's, Thomson/Cambridge.
*Most recent data available at time of publication.

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

Market Tremors Panic Hedge Funds

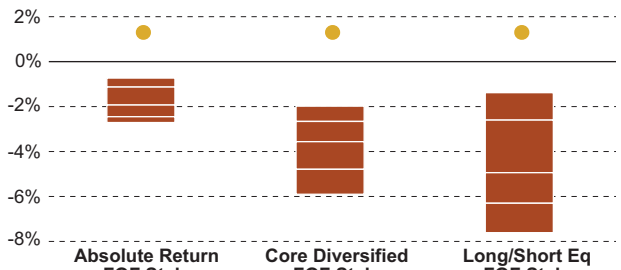
HEDGE FUNDS | Jim McKee

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

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

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

Callan Style Group Quarterly Returns



	Absolute Return FOF Style	Core Diversified FOF Style	Long/Short Eq FOF Style
10th Percentile	-0.73	-1.98	-1.38
25th Percentile	-1.13	-2.66	-2.60
Median	-1.93	-3.56	-4.94
75th Percentile	-2.45	-4.79	-6.30
90th Percentile	-2.71	-5.90	-7.61
T-Bills + 5% ●	1.30	1.30	1.30

Sources: Callan, Merrill Lynch

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

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

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

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

Strong Quarter Can't Save 2015

DEFINED CONTRIBUTION | Tom Szkwarla

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

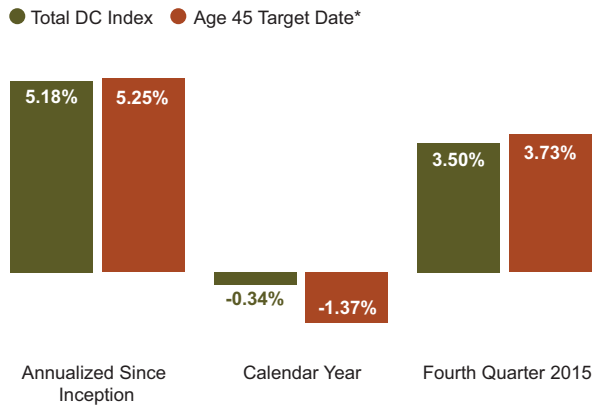
The Age 45 Target Date Fund—the average of target date funds that would be selected by participants age 45 and retiring at age 65—beat the DC Index for the quarter, but underperformed it by 1.03% for the year. Both results were driven by the fact that the Age 45 Target Date Fund has a higher allocation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

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

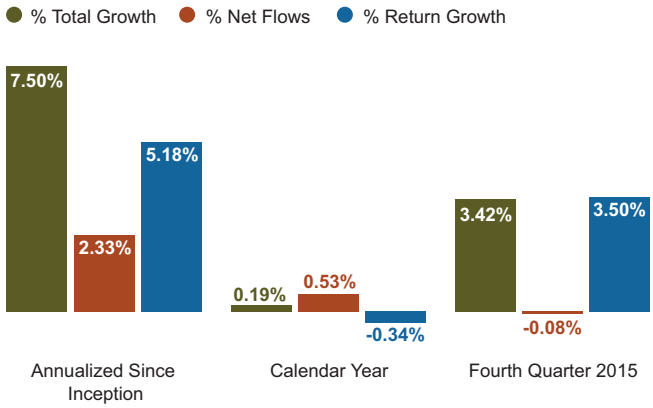
Fourth quarter turnover (i.e., net transfer activity) in the DC Index was 0.46%. Turnover has been steadily increasing since the beginning of the year, but remains below the historical average of 0.65%.

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

Investment Performance*



Growth Sources*



Net Cash Flow Analysis (Fourth Quarter 2015)*
(Top Two and Bottom Two Asset Gatherers)

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

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

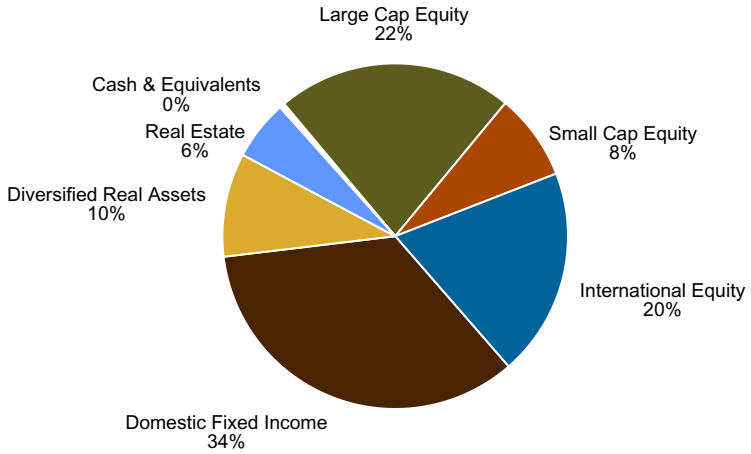
* DC Index inception date is January 2006. DB plan performance is gross of fees.

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

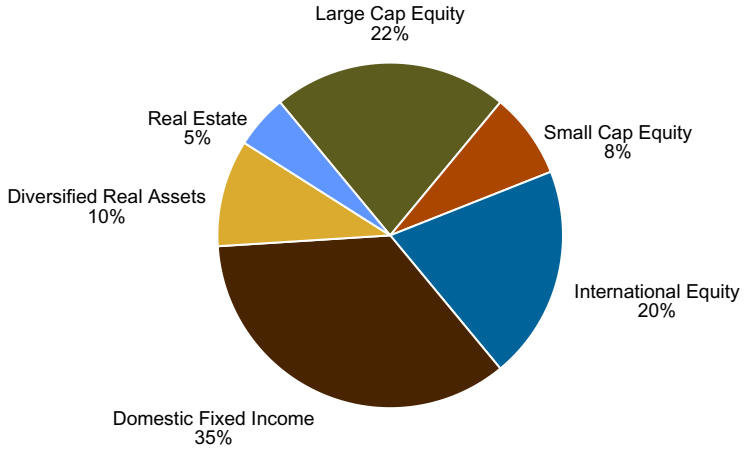
Actual vs Target Asset Allocation
As of March 31, 2016

The first chart below shows the Fund's asset allocation as of March 31, 2016. The second chart shows the Fund's target asset allocation as outlined in the investment policy statement.

Actual Asset Allocation



Target Asset Allocation



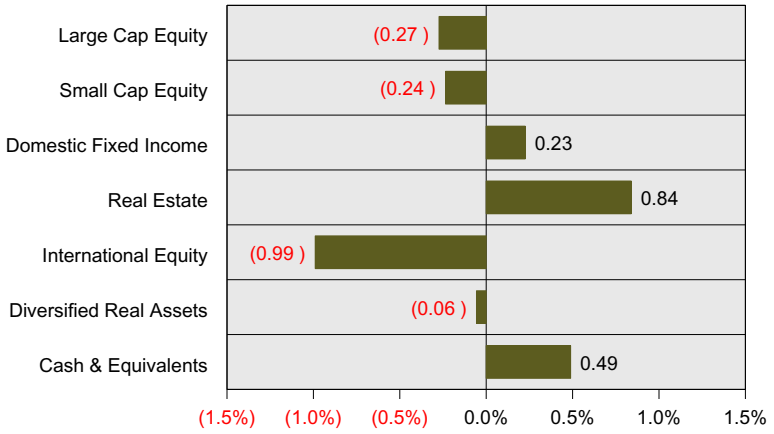
Asset Class	$000s Actual	Weight Actual	Target	Percent Difference	$000s Difference
Large Cap Equity	813,339	22.1%	22.0%	0.1%	5,121
Small Cap Equity	298,351	8.1%	8.0%	0.1%	4,454
International Equity	718,092	19.5%	20.0%	(0.5%)	(16,652)
Domestic Fixed Income	1,266,162	34.5%	35.0%	(0.5%)	(19,639)
Diversified Real Assets	355,004	9.7%	10.0%	(0.3%)	(12,368)
Real Estate	207,321	5.6%	5.0%	0.6%	23,635
Cash & Equivalents	15,449	0.4%	0.0%	0.4%	15,449
Total	3,673,717	100.0%	100.0%		

* Current Quarter Target = 35.0% Barclays Aggregate Index, 22.0% Russell 1000 Index, 20.0% MSCI EAFE, 10.0% NDSIB Legacy DRA Weighted Benchmark, 8.0% Russell 2000 Index and 5.0% NCREIF Total Index.

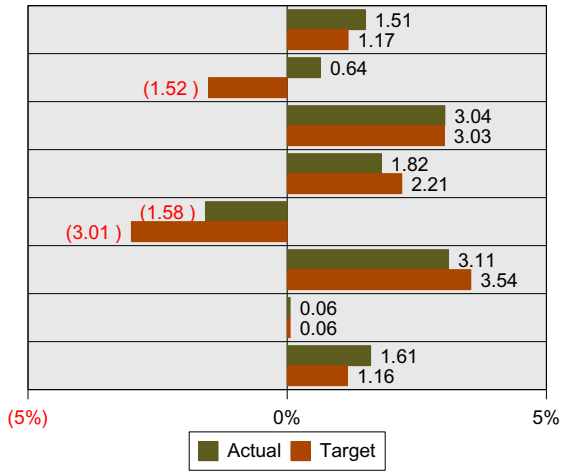
Quarterly Total Fund Relative Attribution - March 31, 2016

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

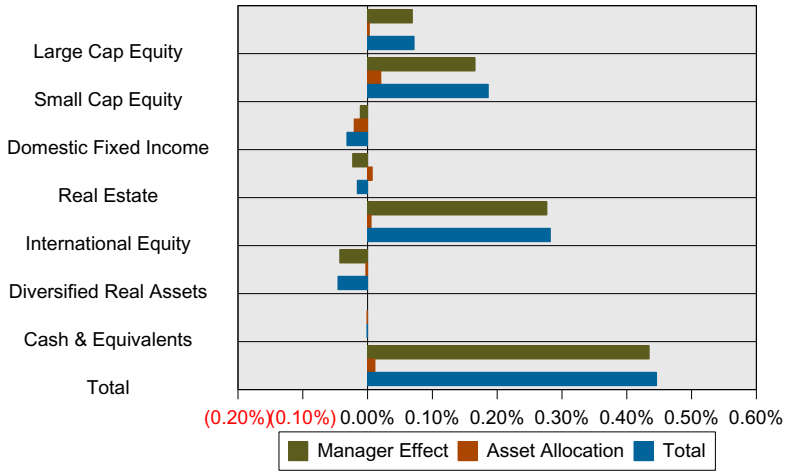
Asset Class Under or Overweighting



Actual vs Target Returns



Relative Attribution by Asset Class



Relative Attribution Effects for Quarter ended March 31, 2016

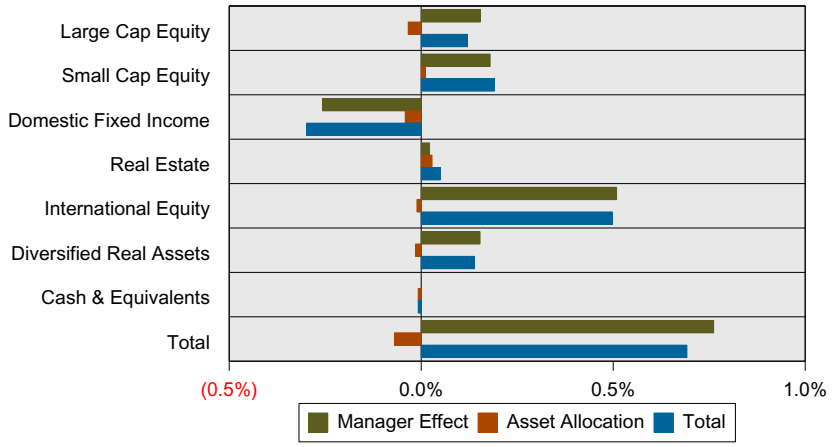
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap Equity	22%	22%	1.51%	1.17%	0.07%	0.00%	0.07%
Small Cap Equity	8%	8%	0.64%	(1.52%)	0.17%	0.02%	0.19%
Domestic Fixed Income	35%	35%	3.04%	3.03%	(0.01%)	(0.02%)	(0.03%)
Real Estate	6%	5%	1.82%	2.21%	(0.02%)	0.01%	(0.02%)
International Equity	19%	20%	(1.58%)	(3.01%)	0.28%	0.01%	0.28%
Diversified Real Assets	10%	10%	3.11%	3.54%	(0.04%)	(0.00%)	(0.05%)
Cash & Equivalents	0%	0%	0.06%	0.06%	0.00%	(0.00%)	(0.00%)
Total			**1.61% =**	**1.16% +**	**0.43% +**	**0.01%**	**0.45%**

* Current Quarter Target = 35.0% Barclays Aggregate Index, 22.0% Russell 1000 Index, 20.0% MSCI EAFE, 10.0% NDSIB Legacy DRA Weighted Benchmark, 8.0% Russell 2000 Index and 5.0% NCREIF Total Index.

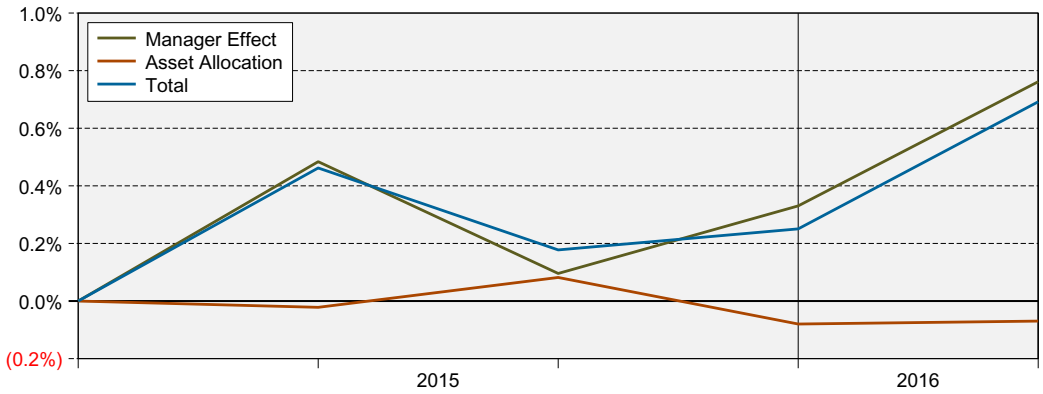
Cumulative Total Fund Relative Attribution - March 31, 2016

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

One Year Relative Attribution Effects



Cumulative Relative Attribution Effects



One Year Relative Attribution Effects

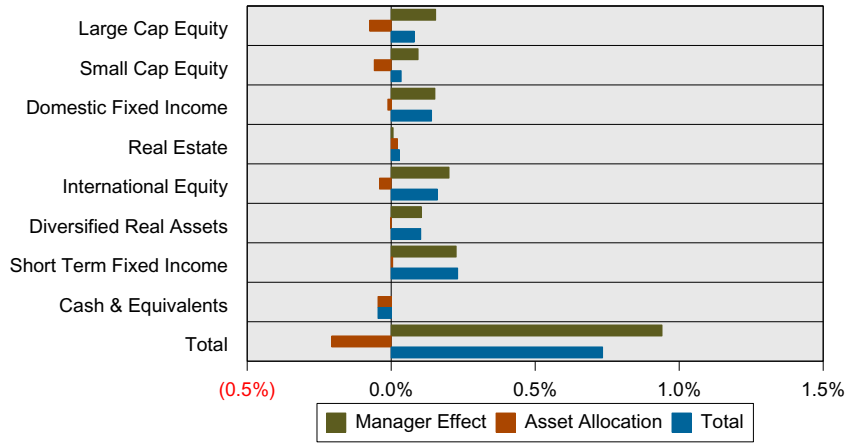
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap Equity	22%	22%	1.24%	0.50%	0.15%	(0.03%)	0.12%
Small Cap Equity	8%	8%	(7.54%)	(9.76%)	0.18%	0.01%	0.19%
Domestic Fixed Income	35%	35%	1.28%	1.96%	(0.26%)	(0.04%)	(0.30%)
Real Estate	5%	5%	12.40%	11.84%	0.02%	0.03%	0.05%
International Equity	20%	20%	(5.80%)	(8.27%)	0.51%	(0.01%)	0.50%
Diversified Real Assets	10%	10%	2.38%	0.79%	0.15%	(0.01%)	0.14%
Cash & Equivalents	0%	0%	0.06%	0.06%	0.00%	(0.01%)	(0.01%)
Total			**(0.09%) =**	**(0.79%) +**	**0.76% +**	**(0.07%)**	**0.69%**

* Current Quarter Target = 35.0% Barclays Aggregate Index, 22.0% Russell 1000 Index, 20.0% MSCI EAFE, 10.0% NDSIB Legacy DRA Weighted Benchmark, 8.0% Russell 2000 Index and 5.0% NCREIF Total Index.

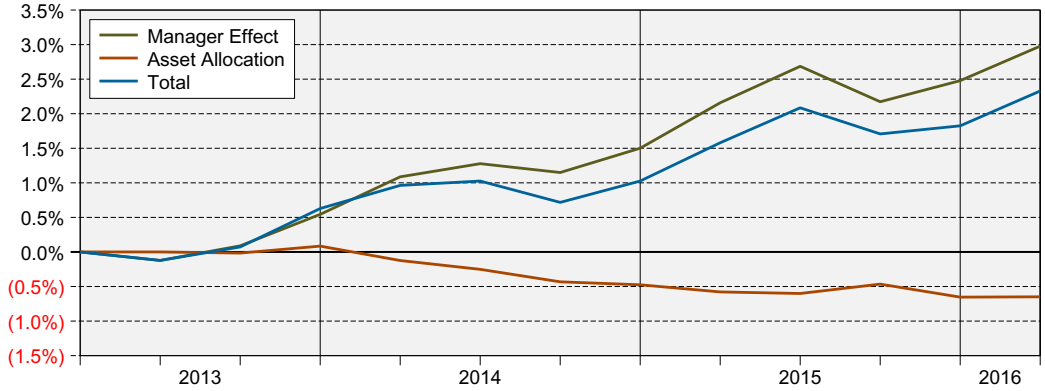
Cumulative Total Fund Relative Attribution - March 31, 2016

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

Three Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Three Year Annualized Relative Attribution Effects

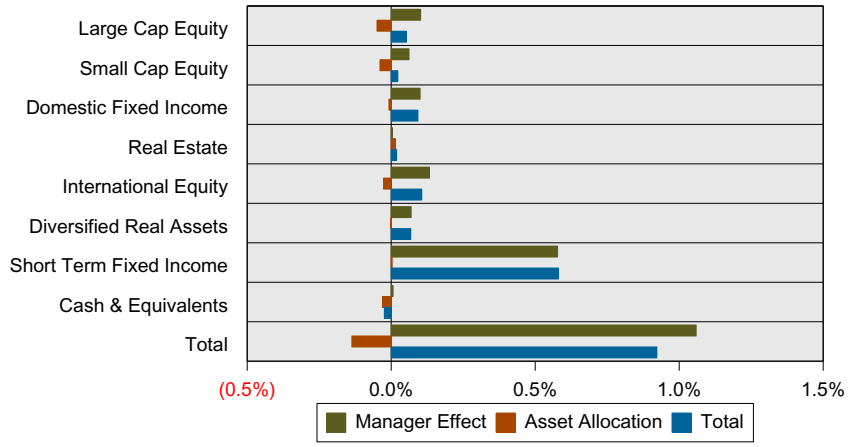
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap Equity	16%	16%	-	-	0.15%	(0.07%)	0.08%
Small Cap Equity	6%	6%	-	-	0.09%	(0.06%)	0.03%
Domestic Fixed Income	24%	24%	-	-	0.15%	(0.01%)	0.14%
Real Estate	4%	4%	-	-	0.01%	0.02%	0.03%
International Equity	14%	14%	-	-	0.20%	(0.04%)	0.16%
Diversified Real Assets	5%	5%	-	-	0.10%	(0.00%)	0.10%
Short Term Fixed Income	31%	32%	-	-	0.23%	0.01%	0.23%
Cash & Equivalents	1%	0%	0.04%	0.04%	0.00%	(0.05%)	(0.05%)
Total			**3.21% =**	**2.48% +**	**0.94% +**	**(0.21%)**	**0.73%**

* Current Quarter Target = 35.0% Barclays Aggregate Index, 22.0% Russell 1000 Index, 20.0% MSCI EAFE, 10.0% NDSIB Legacy DRA Weighted Benchmark, 8.0% Russell 2000 Index and 5.0% NCREIF Total Index.

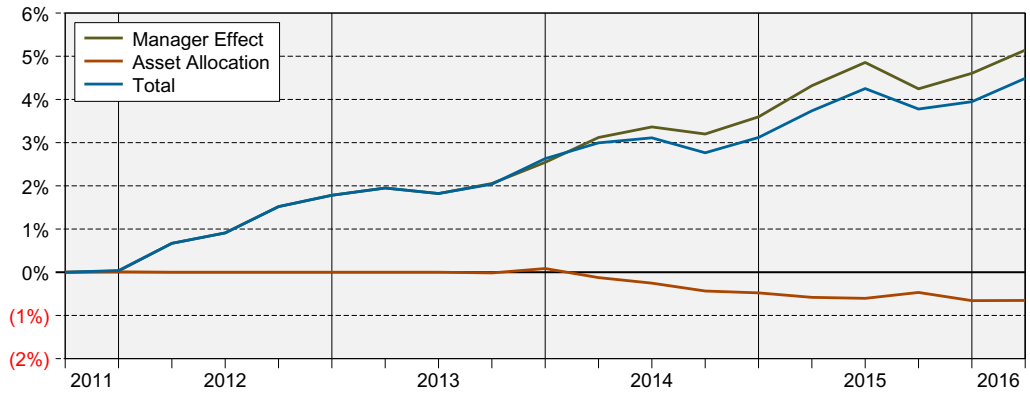
Cumulative Total Fund Relative Attribution - March 31, 2016

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

Four and One-Half Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Four and One-Half Year Annualized Relative Attribution Effects

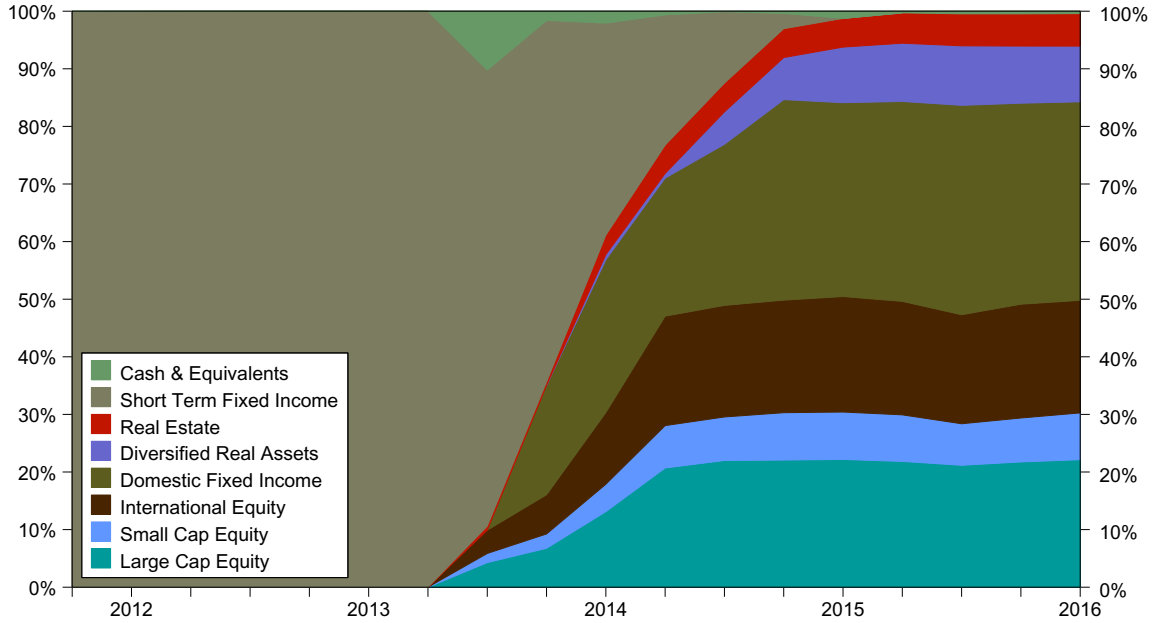
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap Equity	10%	10%	-	-	0.10%	(0.05%)	0.05%
Small Cap Equity	4%	4%	-	-	0.06%	(0.04%)	0.02%
Domestic Fixed Income	16%	16%	-	-	0.10%	(0.01%)	0.09%
Real Estate	3%	2%	-	-	0.00%	0.01%	0.02%
International Equity	9%	10%	-	-	0.13%	(0.03%)	0.11%
Diversified Real Assets	3%	3%	-	-	0.07%	(0.00%)	0.07%
Short Term Fixed Income	50%	51%	-	-	0.58%	0.00%	0.58%
Cash & Equivalents	5%	4%	0.10%	0.09%	0.01%	(0.03%)	(0.02%)
Total			**2.72%** =	**1.80%** +	**1.06%** +	**(0.14%)**	**0.92%**

* Current Quarter Target = 35.0% Barclays Aggregate Index, 22.0% Russell 1000 Index, 20.0% MSCI EAFE, 10.0% NDSIB Legacy DRA Weighted Benchmark, 8.0% Russell 2000 Index and 5.0% NCREIF Total Index.

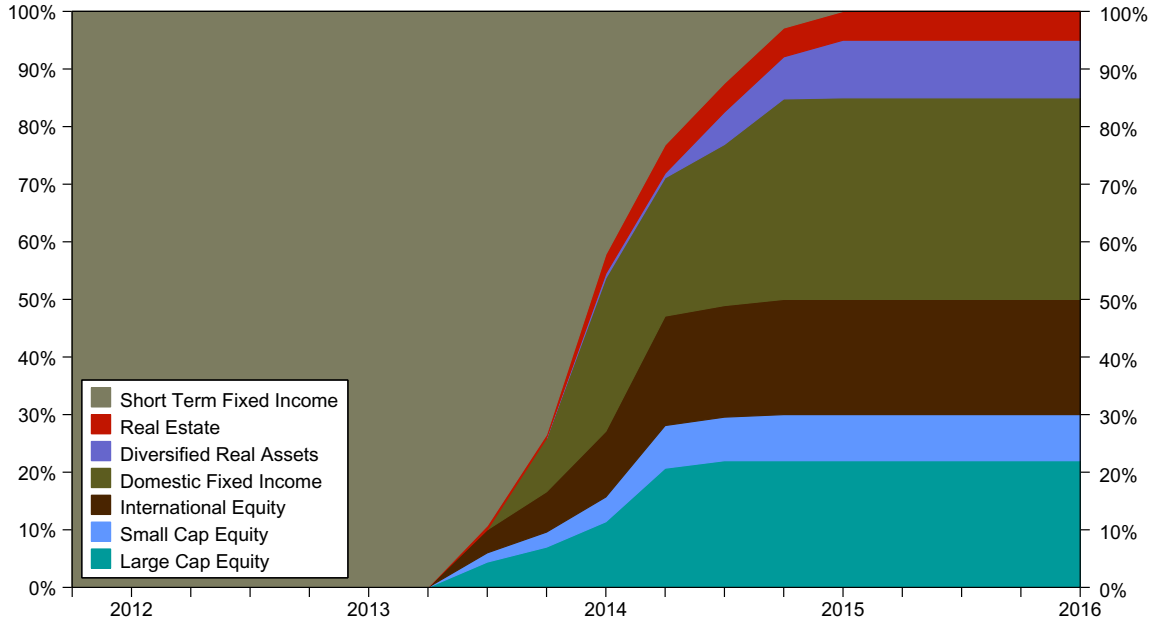
Actual vs Target Historical Asset Allocation

The Historical asset allocation for a fund is by far the largest factor explaining its performance. The charts below show the fund's historical actual asset allocation, and the fund's historical target asset allocation.

Actual Historical Asset Allocation



Target Historical Asset Allocation

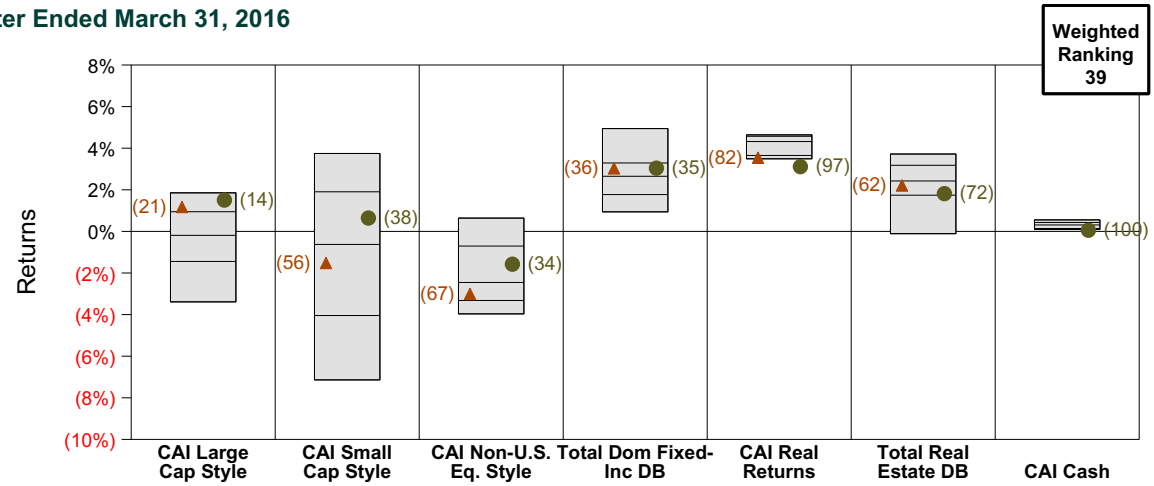


* Current Quarter Target = 35.0% Barclays Aggregate Index, 22.0% Russell 1000 Index, 20.0% MSCI EAFE, 10.0% NDSIB Legacy DRA Weighted Benchmark, 8.0% Russell 2000 Index and 5.0% NCREIF Total Index.

Asset Class Rankings

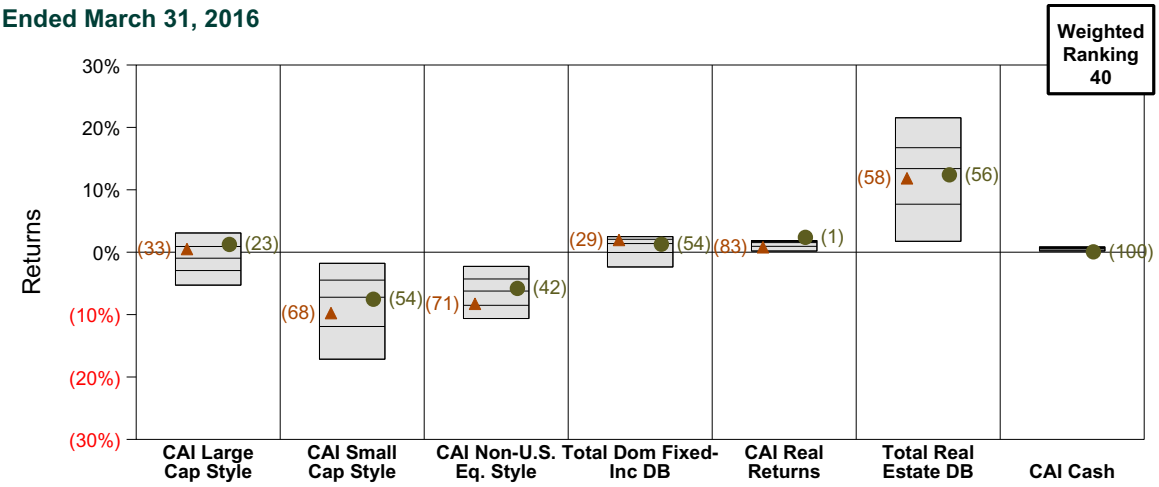
The charts below show the rankings of each asset class component of the Total Fund relative to appropriate comparative databases. In the upper right corner of each graph is the weighted average of the rankings across the different asset classes. The weights of the fund's actual asset allocation are used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

Total Asset Class Performance
One Quarter Ended March 31, 2016



	CAI Large Cap Style	CAI Small Cap Style	CAI Non-U.S. Eq. Style	Total Dom Fixed-Inc DB	CAI Real Returns	Total Real Estate DB	CAI Cash
10th Percentile	1.85	3.75	0.64	4.94	4.64	3.72	0.55
25th Percentile	0.95	1.90	(0.70)	3.29	4.57	3.18	0.43
Median	(0.19)	(0.63)	(2.46)	2.65	4.32	2.42	0.31
75th Percentile	(1.45)	(4.04)	(3.32)	1.77	3.65	1.74	0.14
90th Percentile	(3.39)	(7.14)	(3.97)	0.94	3.49	(0.11)	0.09
Asset Class Composite ●	1.51	0.64	(1.58)	3.04	3.11	1.82	0.06
Composite Benchmark ▲	1.17	(1.52)	(3.01)	3.03	3.54	2.21	-

Total Asset Class Performance
One Year Ended March 31, 2016



	CAI Large Cap Style	CAI Small Cap Style	CAI Non-U.S. Eq. Style	Total Dom Fixed-Inc DB	CAI Real Returns	Total Real Estate DB	CAI Cash
10th Percentile	3.08	(1.78)	(2.27)	2.50	1.87	21.54	0.85
25th Percentile	0.92	(4.47)	(4.29)	2.07	1.71	16.75	0.75
Median	(0.96)	(7.22)	(6.23)	1.38	1.54	13.40	0.59
75th Percentile	(2.94)	(11.91)	(8.51)	(0.04)	0.94	7.69	0.35
90th Percentile	(5.28)	(17.15)	(10.63)	(2.37)	0.18	1.75	0.19
Asset Class Composite ●	1.24	(7.54)	(5.80)	1.28	2.38	12.40	0.06
Composite Benchmark ▲	0.50	(9.76)	(8.27)	1.96	0.79	11.84	-

* Current Quarter Target = 35.0% Barclays Aggregate Index, 22.0% Russell 1000 Index, 20.0% MSCI EAFE, 10.0% NDSIB Legacy DRA Weighted Benchmark, 8.0% Russell 2000 Index and 5.0% NCREIF Total Index.

Asset Class Allocation

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

Asset Class Allocation

	March 31, 2016				December 31, 2015	
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
Domestic Equity	**$1,111,690,341**	**30.26%**	**$58,583,238**	**$18,354,733**	**$1,034,752,370**	**29.38%**
Large Cap Equity	**$813,339,179**	**22.14%**	**$33,157,164**	**$14,196,181**	**$765,985,833**	**21.75%**
L.A. Capital Enhanced	163,074,445	4.44%	6,444,581	3,963,516	152,666,348	4.33%
L.A. Capital Large Cap Growth	246,773,667	6.72%	8,879,542	5,724,257	232,169,867	6.59%
Parametric Clifton Large Cap	162,258,139	4.42%	6,000,000	3,065,022	153,193,117	4.35%
LSV Large Cap Value	241,232,928	6.57%	11,833,041	1,443,385	227,956,501	6.47%
Small Cap Equity	**$298,351,163**	**8.12%**	**$25,426,074**	**$4,158,552**	**$268,766,536**	**7.63%**
Parametric Clifton SmallCap	160,881,430	4.38%	0	(1,518,349)	162,399,779	4.61%
PIMCO RAE	137,469,733	3.74%	25,426,074	5,676,901	106,366,757	3.02%
International Equity	**$718,091,837**	**19.55%**	**$32,464,962**	**$(10,219,698)**	**$695,846,572**	**19.75%**
Capital Group	262,835,185	7.15%	(258,612)	(1,913,369)	265,007,166	7.52%
DFA Intl SmallCap Value	70,267,128	1.91%	0	(573,541)	70,840,669	2.01%
LSV Intl Value	314,550,448	8.56%	32,723,574	(6,290,925)	288,117,799	8.18%
Vanguard Intl Explorer Fund	70,439,075	1.92%	0	(1,441,863)	71,880,938	2.04%
Domestic Fixed Income	**$1,266,161,631**	**34.47%**	**$(447,080)**	**$37,365,549**	**$1,229,243,162**	**34.90%**
Declaration Total Return	101,097,015	2.75%	(36,241)	199,380	100,933,876	2.87%
Prudential	140,972,022	3.84%	(93,190)	4,856,714	136,208,497	3.87%
SSgA US Govt Credit Bd Idx	177,414,470	4.83%	(14,918)	5,946,186	171,483,201	4.87%
Wells Capital	391,563,219	10.66%	(171,237)	14,105,222	377,629,234	10.72%
Western Asset Management	393,153,177	10.70%	(131,495)	11,522,150	381,762,522	10.84%
Pooled Fixed Income(1)	61,961,730	1.69%	0	735,898	61,225,832	1.74%
Diversified Real Assets	**$355,003,627**	**9.66%**	**$(5,145,382)**	**$10,798,581**	**$349,350,428**	**9.92%**
Western TIPS	261,414,825	7.12%	(86,887)	10,926,155	250,575,556	7.11%
JP Morgan Infrastructure	79,056,295	2.15%	(221,061)	266,874	79,010,482	2.24%
Grosvenor Cust. Infrastructure	14,532,507	0.40%	(4,837,434)	(394,448)	19,764,389	0.56%
Real Estate	**$207,321,154**	**5.64%**	**$6,608,968**	**$3,693,613**	**$197,018,572**	**5.59%**
Invesco Core Real Estate	113,455,613	3.09%	6,901,101	1,648,507	104,906,004	2.98%
JP Morgan RE Inc & Growth	93,865,541	2.56%	(292,133)	2,045,106	92,112,568	2.61%
Cash & Equivalents	**$15,448,681**	**0.42%**	**$(825,497)**	**$9,146**	**$16,265,032**	**0.46%**
Securities Lending Income	**$0**	**0.00%**	**$(127,361)**	**$127,361**	**-**	**-**
Total Fund	**$3,673,717,271**	**100.0%**	**$91,111,848**	**$60,129,287**	**$3,522,476,136**	**100.0%**

(1) Comprised of PIMCO DiSCO II and PIMCO Bravo II.

Investment Manager Returns

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

Returns for Periods Ended March 31, 2016

	Last Quarter	Last Year	Last 3 Years	Last 4-1/2 Years
Domestic Equity				
Gross	1.30%	(1.12%)	-	-
Net	1.26%	(1.37%)	-	-
Large Cap Equity				
Gross	1.51%	1.24%	-	-
Net	1.46%	1.05%	-	-
Russell 1000 Index	1.17%	0.50%	11.52%	16.70%
L.A. Capital Enhanced - Gross	2.28%	2.50%	-	-
L.A. Capital Enhanced - Net	2.24%	2.35%	-	-
Russell 1000 Index	1.17%	0.50%	11.52%	16.70%
L.A. Capital LargeCap Growth - Gross	2.14%	3.62%	-	-
L.A. Capital LargeCap Growth - Net	2.09%	3.40%	-	-
Russell 1000 Growth Index	0.74%	2.52%	13.61%	17.27%
Parametric Clifton Large Cap - Gross	1.74%	2.54%	-	-
Parametric Clifton Large Cap - Net	1.74%	2.47%	-	-
S&P 500 Index	1.35%	1.78%	11.82%	16.73%
LSV Large Cap Value - Gross	0.14%	(2.82%)	-	-
LSV Large Cap Value - Net	0.06%	(3.10%)	-	-
Russell 1000 Value Index	1.64%	(1.54%)	9.38%	16.04%
Small Cap Equity				
Gross	0.64%	(7.54%)	-	-
Net	0.61%	(7.93%)	-	-
Russell 2000 Index	(1.52%)	(9.76%)	6.84%	14.53%
Parametric Clifton Small Cap - Gross	(0.93%)	(8.58%)	-	-
Parametric Clifton Small Cap - Net	(0.93%)	(9.02%)	-	-
Russell 2000 Index	(1.52%)	(9.76%)	6.84%	14.53%
PIMCO RAE - Gross	2.60%	(6.36%)	-	-
PIMCO RAE - Net	2.52%	(6.63%)	-	-
Russell 2000 Index	(1.52%)	(9.76%)	6.84%	14.53%
International Equity				
Gross	(1.58%)	(5.80%)	-	-
Net	(1.66%)	(6.09%)	-	-
MSCI EAFE Index	(3.01%)	(8.27%)	2.23%	7.10%
Capital Group - Gross	(0.71%)	(8.05%)	-	-
Capital Group - Net	(0.82%)	(8.40%)	-	-
MSCI EAFE Index	(3.01%)	(8.27%)	2.23%	7.10%
DFA Intl Small Cap Value	(0.81%)	(1.46%)	-	-
World ex US SC Va	1.18%	(1.39%)	4.36%	8.99%
LSV Intl Value - Gross	(2.32%)	(5.71%)	-	-
LSV Intl Value - Net	(2.42%)	(6.08%)	-	-
MSCI EAFE Index	(3.01%)	(8.27%)	2.23%	7.10%
Vanguard Intl Explorer Fund	(2.01%)	(0.80%)	-	-
BMI, EPAC, <$2 B	0.08%	3.03%	6.29%	9.66%

Investment Manager Returns

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

Returns for Periods Ended March 31, 2016

	Last Quarter	Last Year	Last 3 Years	Last 4-1/2 Years
Domestic Fixed Income				
Gross	3.04%	1.28%	-	-
Net	3.01%	1.15%	-	-
Barclays Aggregate Index	3.03%	1.96%	2.50%	2.82%
Declaration Total Return - Net	0.20%	0.64%	-	-
Libor-3 Month	0.16%	0.40%	0.30%	0.34%
Prudential - Gross	3.57%	2.02%	-	-
Prudential - Net	3.50%	1.76%	-	-
Barclays Aggregate Index	3.03%	1.96%	2.50%	2.82%
Wells Capital - Gross	3.74%	(0.28%)	-	-
Wells Capital - Net	3.69%	(0.46%)	-	-
Barclays Baa Credit 3% In	4.32%	(0.84%)	2.54%	4.71%
Western Asset - Gross	3.02%	1.86%	-	-
Western Asset - Net	2.98%	1.72%	-	-
Barclays Aggregate Index	3.03%	1.96%	2.50%	2.82%
SSgA US Govt Credit Bd Idx - Gross	3.47%	1.75%	-	-
SSgA US Govt Credit Bd Idx - Net	3.46%	1.72%	-	-
Barclays Govt/Credit Bd	3.47%	1.75%	2.42%	2.90%
Pooled Fixed Income - Net(1)	1.20%	5.71%	-	-
Barclays Aggregate Index	3.03%	1.96%	2.50%	2.82%
Diversified Real Assets				
Gross	3.11%	2.38%	-	-
Net	3.03%	2.12%	-	-
Weighted Benchmark	3.54%	0.79%	-	-
Western Asset TIPS - Gross	4.36%	0.99%	-	-
Western Asset TIPS - Net	4.33%	0.86%	-	-
Barclays Glbl Inftn-Lnked	4.70%	1.04%	0.18%	2.19%
JP Morgan Infrastructure - Gross	0.34%	6.26%	-	-
JP Morgan Infrastructure - Net	0.10%	5.55%	-	-
CPI-W	0.61%	0.50%	0.42%	0.83%
Grosvenor Cust. Infrastructure - Net	(2.25%)	(0.84%)	-	-
CPI-W	0.61%	0.50%	0.42%	0.83%
Real Estate				
Gross	1.82%	12.40%	-	-
Net	1.65%	11.81%	-	-
NCREIF Total Index	2.21%	11.84%	11.91%	11.56%
Invesco Core Real Estate - Gross	1.47%	12.70%	-	-
Invesco Core Real Estate - Net	1.38%	12.33%	-	-
NCREIF Total Index	2.21%	11.84%	11.91%	11.56%
JP Morgan RE Inc & Growth - Gross	2.22%	12.12%	-	-
JP Morgan RE Inc & Growth - Net	1.96%	11.30%	-	-
NCREIF Total Index	2.21%	11.84%	11.91%	11.56%
Cash & Equivalents - Net	**0.06%**	**0.06%**	**0.04%**	**0.10%**
90 Day Treasury Bills	0.07%	0.12%	0.07%	0.08%
Total Fund				
Gross	1.61%	(0.09%)	3.21%	2.72%
Net	1.55%	(0.33%)	3.01%	2.57%
Target*	1.16%	(0.79%)	2.48%	1.80%

* Current Quarter Target = 35.0% Barclays Aggregate Index, 22.0% Russell 1000 Index, 20.0% MSCI EAFE, 10.0% NDSIB Legacy DRA Weighted Benchmark, 8.0% Russell 2000 Index and 5.0% NCREIF Total Index.
(1) Comprised of PIMCO DiSCO II and PIMCO Bravo II.

Parametric Clifton Large Cap
Period Ended March 31, 2016

Investment Philosophy

Parametric Clifton utilizes equity futures to gain benchmark exposure in constructing the portfolio it believes provides the greatest likelihood of outperforming the index. In this construction the underlying cash portfolio is invested in a liquid, high quality short duration fixed income portfolio. Over market cycles excess return generated by the short duration portfolio, when added to the performance of futures is expected to allow the strategy to achieve 0.50% to 1.00% of gross excess annual performance.

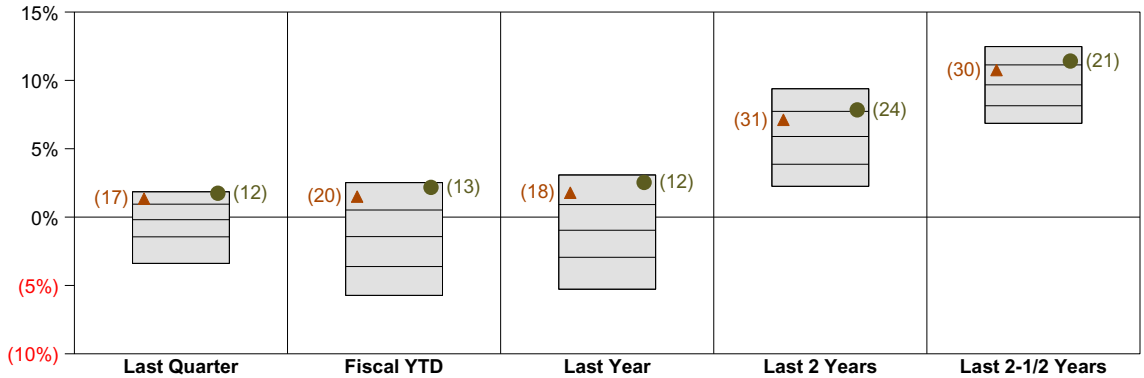
Quarterly Summary and Highlights

- Parametric Clifton Large Cap's portfolio posted a 1.74% return for the quarter placing it in the 12 percentile of the CAI Large Capitalization Style group for the quarter and in the 12 percentile for the last year.
- Parametric Clifton Large Cap's portfolio outperformed the S&P 500 Index by 0.40% for the quarter and outperformed the S&P 500 Index for the year by 0.75%.

Quarterly Asset Growth

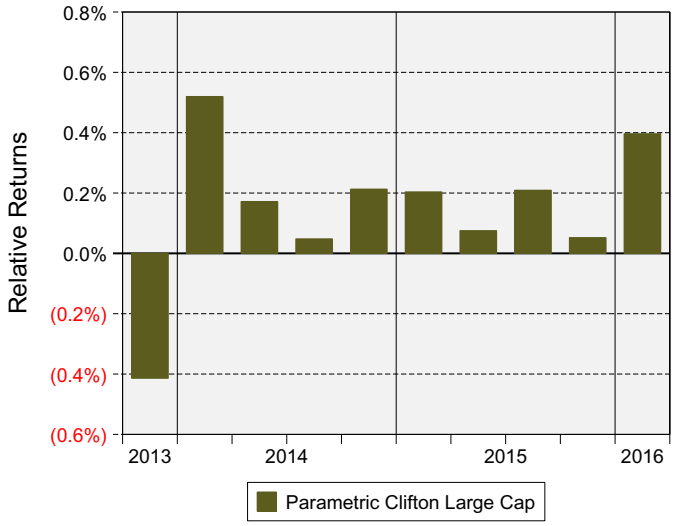
Beginning Market Value	$153,193,117
Net New Investment	$6,000,000
Investment Gains/(Losses)	$3,065,022
Ending Market Value	$162,258,139

Performance vs CAI Large Capitalization Style (Gross)

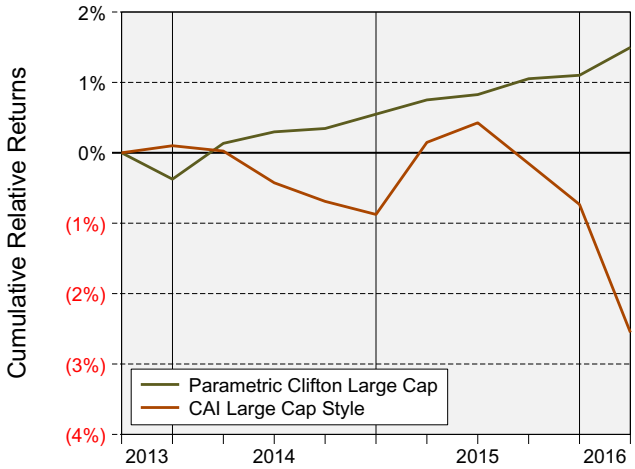


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 2-1/2 Years
10th Percentile	1.85	2.52	3.08	9.39	12.47
25th Percentile	0.95	0.52	0.92	7.73	11.13
Median	(0.19)	(1.43)	(0.96)	5.90	9.68
75th Percentile	(1.45)	(3.62)	(2.94)	3.87	8.14
90th Percentile	(3.39)	(5.73)	(5.28)	2.25	6.86
Parametric Clifton Large Cap ●	1.74	2.17	2.54	7.84	11.42
S&P 500 Index ▲	1.35	1.50	1.78	7.12	10.76

Relative Return vs S&P 500 Index



Cumulative Returns vs S&P 500 Index



L.A. Capital
Period Ended March 31, 2016

Investment Philosophy

The LA Capital Structured portfolio is a large growth portfolio benchmarked to the Russell 1000 Growth Index. It is an active assignment meaning that it targets a 2% alpha and constrains its risk budget (tracking error) to 4% relative to the benchmark. LA Capital believes that investment results are driven by Investor Preferences and thus recognize that when preferences shift a different posture related to that factor is warranted.

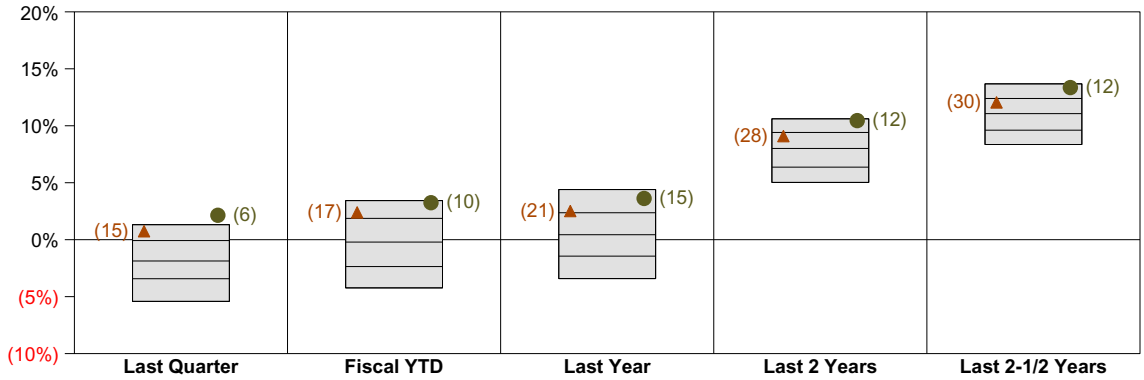
Quarterly Summary and Highlights

- L.A. Capital Large Cap Growth's portfolio posted a 2.14% return for the quarter placing it in the 6 percentile of the CAI Large Cap Growth Style group for the quarter and in the 15 percentile for the last year.
- L.A. Capital Large Cap Growth's portfolio outperformed the Russell 1000 Growth Index by 1.40% for the quarter and outperformed the Russell 1000 Growth Index for the year by 1.10%.

Quarterly Asset Growth

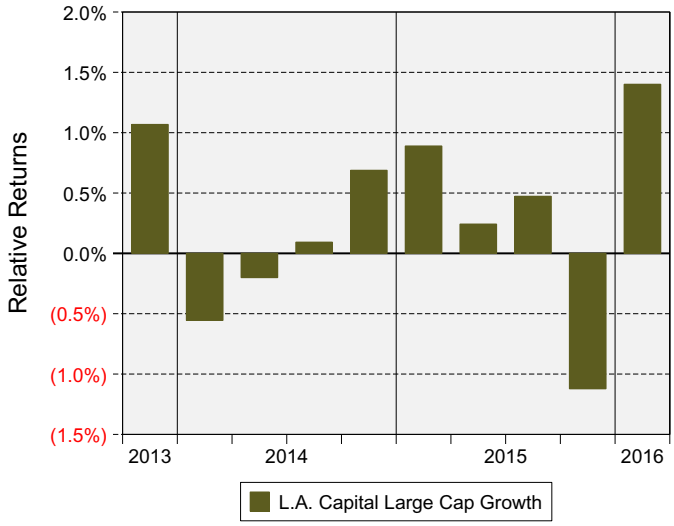
Beginning Market Value	$232,169,867
Net New Investment	$8,879,542
Investment Gains/(Losses)	$5,724,257
Ending Market Value	$246,773,667

Performance vs CAI Large Cap Growth Style (Gross)

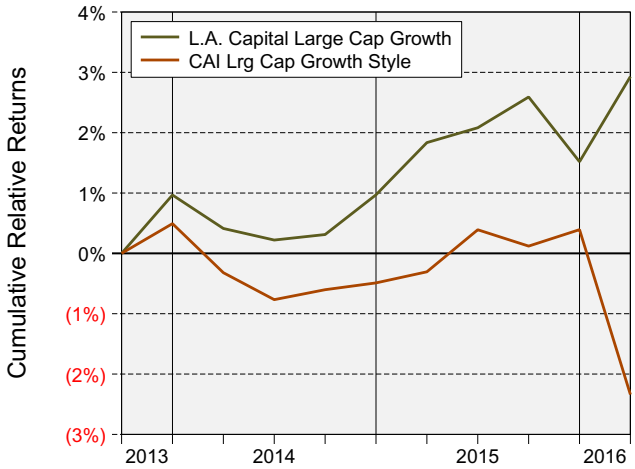


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 2-1/2 Years
10th Percentile	1.32	3.43	4.40	10.61	13.68
25th Percentile	(0.08)	1.87	2.37	9.41	12.40
Median	(1.87)	(0.21)	0.44	8.01	11.06
75th Percentile	(3.43)	(2.36)	(1.45)	6.37	9.61
90th Percentile	(5.42)	(4.23)	(3.42)	5.03	8.35
L.A. Capital Large Cap Growth ●	2.14	3.24	3.62	10.45	13.35
Russell 1000 Growth Index ▲	0.74	2.39	2.52	9.09	12.05

Relative Return vs Russell 1000 Growth Index



Cumulative Returns vs Russell 1000 Growth Index



L.A. Capital Enhanced
Period Ended March 31, 2016

Investment Philosophy

The LA Capital Enhanced portfolio is a large core portfolio benchmarked to the Russell 1000 Index. Characterized as an enhanced index assignment, its objective is to track the benchmark with lower variability. The pension portfolio began in August of 2000 and the insurance portfolio was initiated in April of 2004. Since October of 2006 a small portion of each of the two core accounts was allocated into the Large Cap Alpha Fund with intent to add incremental alpha to the assignment given that the information ratio was expected to be higher.

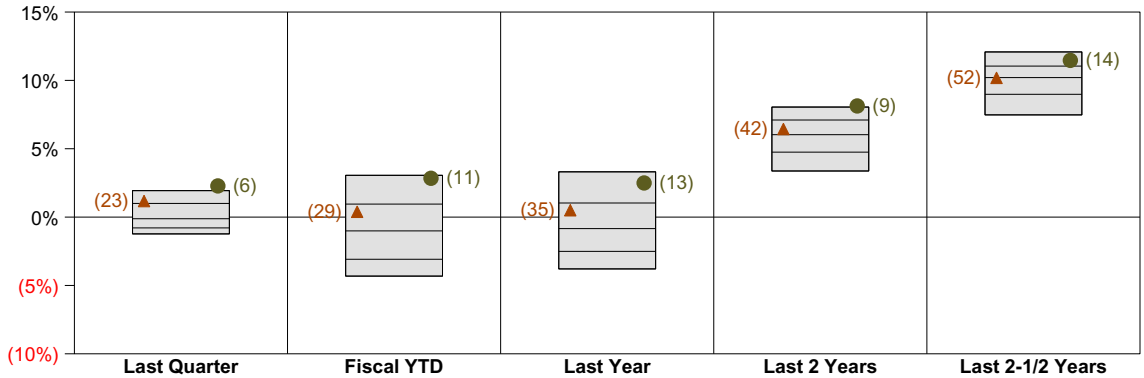
Quarterly Summary and Highlights

- L.A. Capital Enhanced's portfolio posted a 2.28% return for the quarter placing it in the 6 percentile of the CAI Large Cap Core Style group for the quarter and in the 13 percentile for the last year.
- L.A. Capital Enhanced's portfolio outperformed the Russell 1000 Index by 1.10% for the quarter and outperformed the Russell 1000 Index for the year by 1.99%.

Quarterly Asset Growth

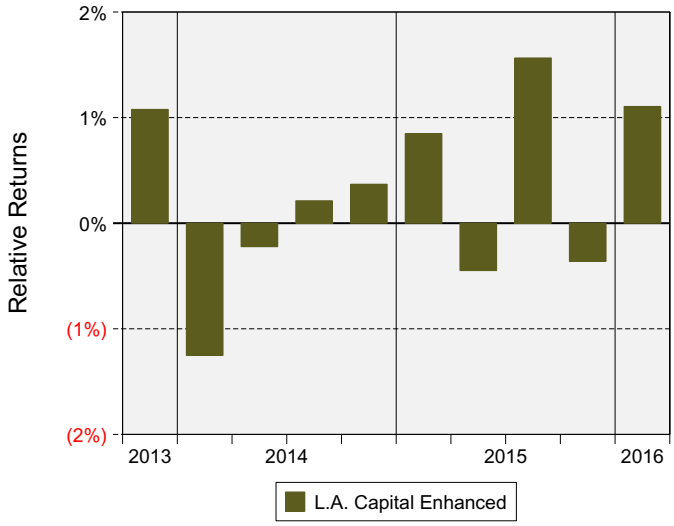
Beginning Market Value	$152,666,348
Net New Investment	$6,444,581
Investment Gains/(Losses)	$3,963,516
Ending Market Value	$163,074,445

Performance vs CAI Large Cap Core Style (Gross)

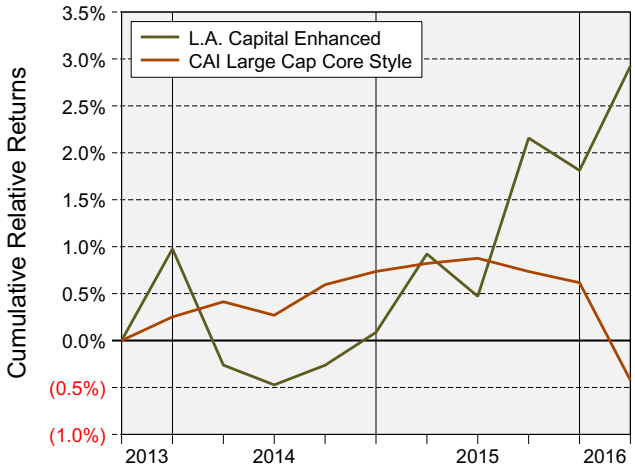


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 2-1/2 Years
10th Percentile	1.94	3.06	3.31	8.05	12.08
25th Percentile	1.00	0.95	1.03	7.10	11.05
Median	(0.12)	(1.01)	(0.84)	6.03	10.20
75th Percentile	(0.79)	(3.09)	(2.51)	4.75	8.98
90th Percentile	(1.23)	(4.32)	(3.79)	3.37	7.48
L.A. Capital Enhanced ●	2.28	2.84	2.50	8.13	11.46
Russell 1000 Index ▲	1.17	0.39	0.50	6.44	10.19

Relative Return vs Russell 1000 Index



Cumulative Returns vs Russell 1000 Index



LSV Asset Management
Period Ended March 31, 2016

Investment Philosophy

The objective of LSV Asset Management's Large Cap Value Equity (U.S.) strategy is to outperform the Russell 1000 Value by at least 200 basis points (gross of fees) per annum over a 3-5 year period with a tracking error of approximately 4%. Their stock selection process is a quantitative approach that ranks a broad universe of stocks on a combination of value and momentum factors and seeks to invest approximately 100 stocks in the most attractive securities possible within strict risk parameters to control the portfolio's tracking error relative to the benchmark. The resulting portfolio is broadly diversified across industry groups and fully invested.

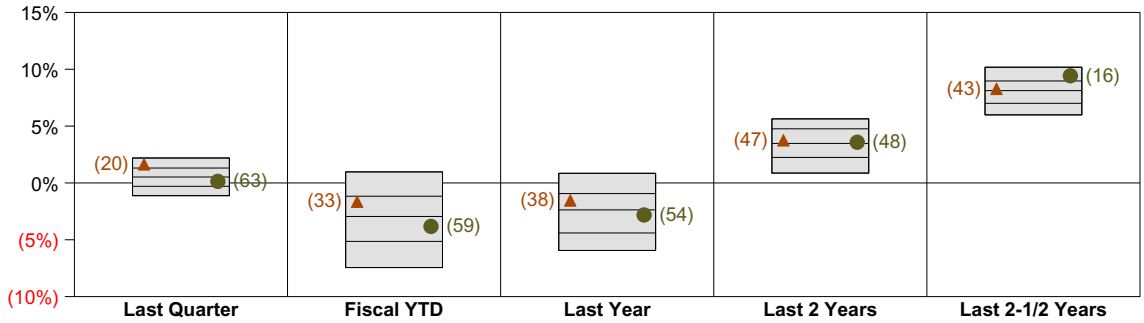
Quarterly Summary and Highlights

- LSV Large Cap Value's portfolio posted a 0.14% return for the quarter placing it in the 63 percentile of the CAI Large Cap Value Style group for the quarter and in the 54 percentile for the last year.
- LSV Large Cap Value's portfolio underperformed the Russell 1000 Value Index by 1.50% for the quarter and underperformed the Russell 1000 Value Index for the year by 1.28%.

Quarterly Asset Growth

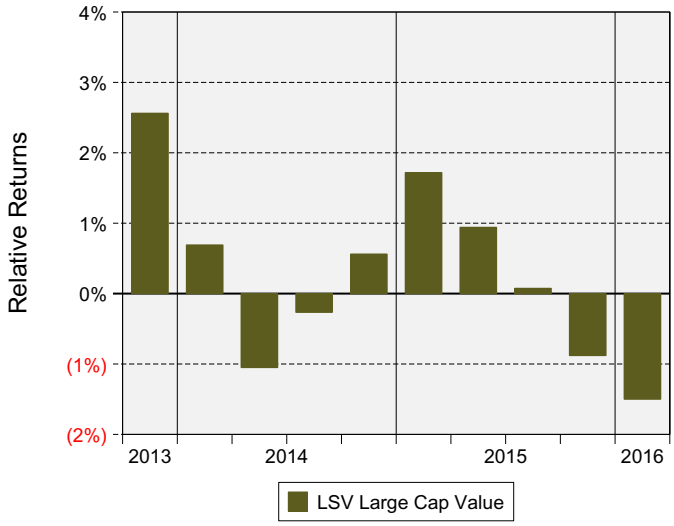
Beginning Market Value	$227,956,501
Net New Investment	$11,833,041
Investment Gains/(Losses)	$1,443,385
Ending Market Value	$241,232,928

Performance vs CAI Large Cap Value Style (Gross)

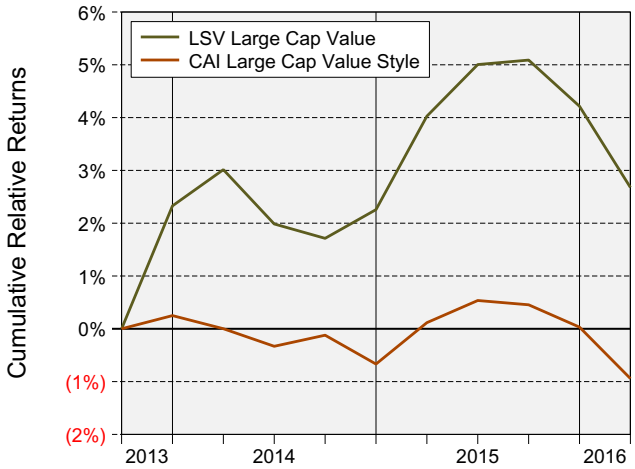


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 2-1/2 Years
10th Percentile	2.19	0.97	0.85	5.64	10.18
25th Percentile	1.31	(1.17)	(0.94)	4.76	8.97
Median	0.52	(2.95)	(2.37)	3.48	8.12
75th Percentile	(0.30)	(5.14)	(4.40)	2.24	7.00
90th Percentile	(1.12)	(7.44)	(5.94)	0.86	5.99
LSV Large Cap Value ●	0.14	(3.83)	(2.82)	3.58	9.43
Russell 1000 Value Index ▲	1.64	(1.65)	(1.54)	3.75	8.28

Relative Return vs Russell 1000 Value Index



Cumulative Returns vs Russell 1000 Value Index



Parametric Clifton Small Cap
Period Ended March 31, 2016

Investment Philosophy

Parametric Clifton utilizes equity futures to gain benchmark exposure in constructing the portfolio it believes provides the greatest likelihood of outperforming the index. In this construction the underlying cash portfolio is invested in a liquid, high quality short duration fixed income portfolio. Over market cycles excess return generated by the short duration portfolio, when added to the performance of futures is expected to allow the strategy to achieve 0.50% to 1.00% of gross excess annual performance.

Quarterly Summary and Highlights

- Parametric Clifton Small Cap's portfolio posted a (0.93)% return for the quarter placing it in the 52 percentile of the CAI Small Capitalization Style group for the quarter and in the 64 percentile for the last year.
- Parametric Clifton Small Cap's portfolio outperformed the Russell 2000 Index by 0.58% for the quarter and outperformed the Russell 2000 Index for the year by 1.18%.

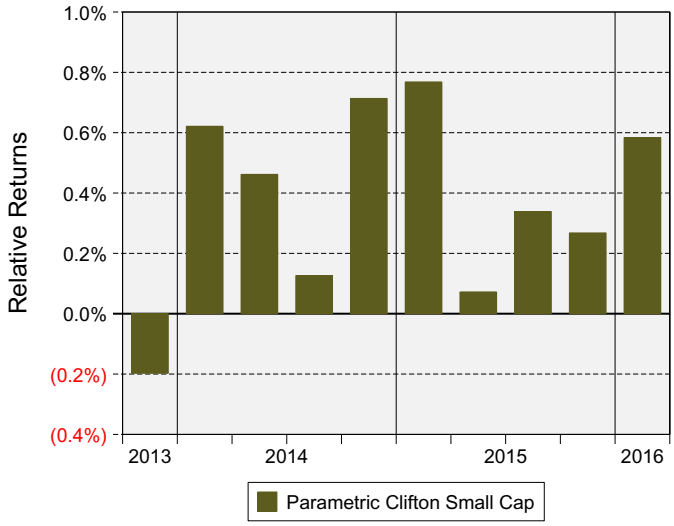
Quarterly Asset Growth

Beginning Market Value	$162,399,779
Net New Investment	$0
Investment Gains/(Losses)	$-1,518,349
Ending Market Value	$160,881,430

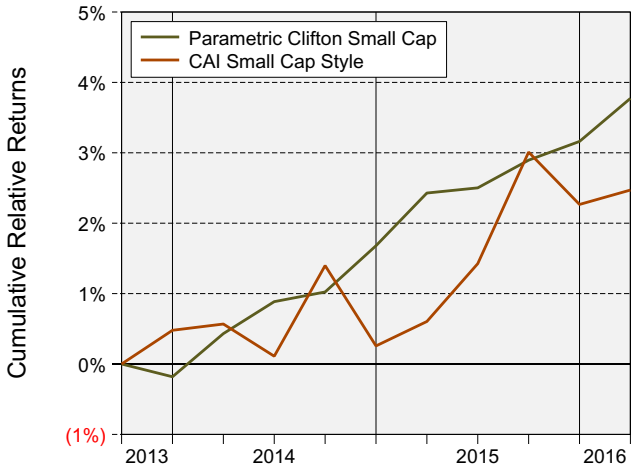
Performance vs CAI Small Capitalization Style (Gross)

	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 2-1/2 Years
10th Percentile	3.75	(2.31)	(1.78)	4.45	8.57
25th Percentile	1.90	(4.76)	(4.47)	2.35	6.40
Median	(0.63)	(7.67)	(7.22)	0.57	4.77
75th Percentile	(4.04)	(12.92)	(11.91)	(2.91)	1.39
90th Percentile	(7.14)	(18.80)	(17.15)	(6.14)	(1.77)
Parametric Clifton Small Cap ●	(0.93)	(9.02)	(8.58)	0.45	4.41
Russell 2000 Index ▲	(1.52)	(10.14)	(9.76)	(1.18)	2.88

Relative Return vs Russell 2000 Index



Cumulative Returns vs Russell 2000 Index



PIMCO RAE
Period Ended March 31, 2016

Investment Philosophy

Small company value equity portfolio utilizing the index strategy and philosophy described as the Enhanced RAFI US Small strategy which relies on portfolio weights derived from firm fundamentals (free cash flow, book equity value, total sales and gross dividend), instead of market capitalization. Additionally, the enhanced portfolio strategy uses a quality of earnings screening and a financial distress screening to augment portfolio returns and reduce portfolio volatility.

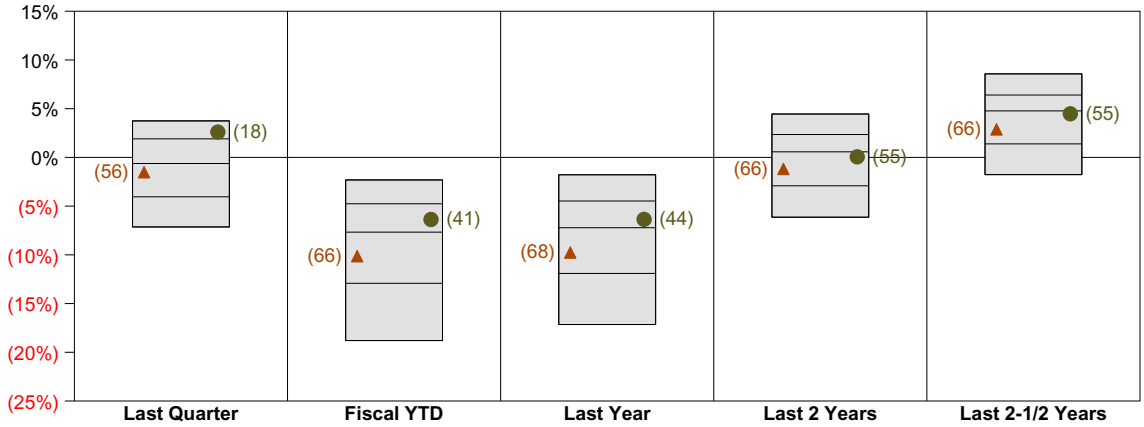
Quarterly Summary and Highlights

- PIMCO RAE's portfolio posted a 2.60% return for the quarter placing it in the 18 percentile of the CAI Small Capitalization Style group for the quarter and in the 44 percentile for the last year.
- PIMCO RAE's portfolio outperformed the Russell 2000 Index by 4.12% for the quarter and outperformed the Russell 2000 Index for the year by 3.40%.

Quarterly Asset Growth

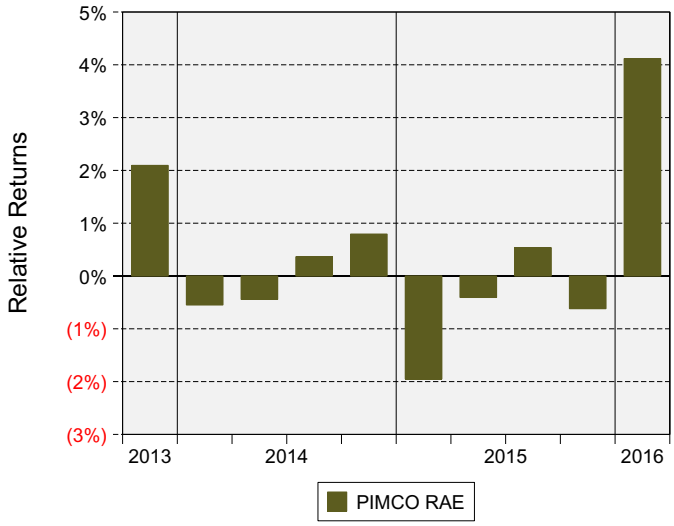
Beginning Market Value	$106,366,757
Net New Investment	$25,426,074
Investment Gains/(Losses)	$5,676,901
Ending Market Value	$137,469,733

Performance vs CAI Small Capitalization Style (Gross)

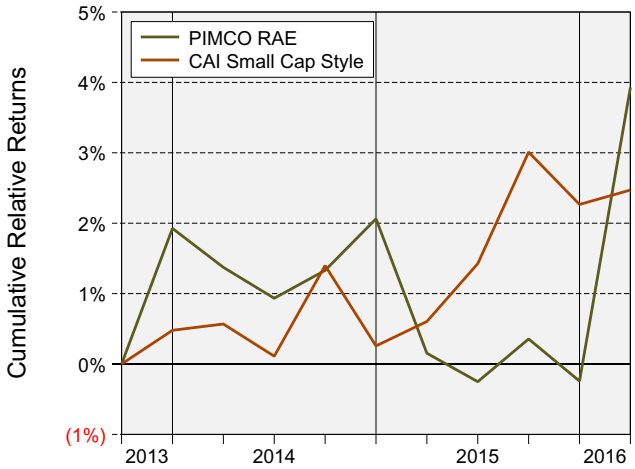


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 2-1/2 Years
10th Percentile	3.75	(2.31)	(1.78)	4.45	8.57
25th Percentile	1.90	(4.76)	(4.47)	2.35	6.40
Median	(0.63)	(7.67)	(7.22)	0.57	4.77
75th Percentile	(4.04)	(12.92)	(11.91)	(2.91)	1.39
90th Percentile	(7.14)	(18.80)	(17.15)	(6.14)	(1.77)
PIMCO RAE ●	2.60	(6.37)	(6.36)	0.05	4.48
Russell 2000 Index ▲	(1.52)	(10.14)	(9.76)	(1.18)	2.88

Relative Return vs Russell 2000 Index



Cumulative Returns vs Russell 2000 Index



Capital Group
Period Ended March 31, 2016

Investment Philosophy

The Portfolio will invest primarily in equity or equity type securities of companies in developed countries excluding the U.S. These equity securities will be listed on a stock exchange or traded in another recognized market and include, but are not limited to, common and preferred stocks, securities convertible or exchangeable into common or preferred stock, warrants, rights and depository arrangements.

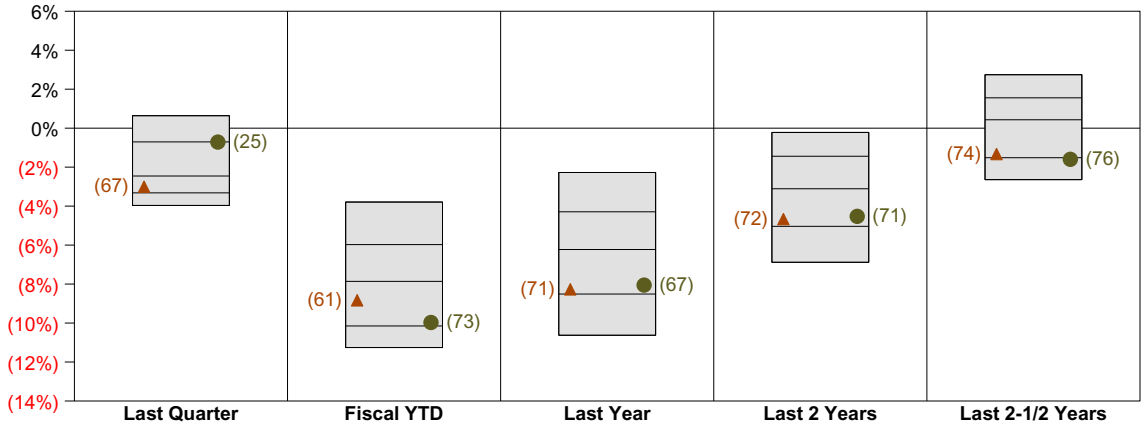
Quarterly Summary and Highlights

- Capital Group's portfolio posted a (0.71)% return for the quarter placing it in the 25 percentile of the CAI Non-U.S. Equity Style group for the quarter and in the 67 percentile for the last year.
- Capital Group's portfolio outperformed the MSCI EAFE by 2.29% for the quarter and outperformed the MSCI EAFE for the year by 0.22%.

Quarterly Asset Growth

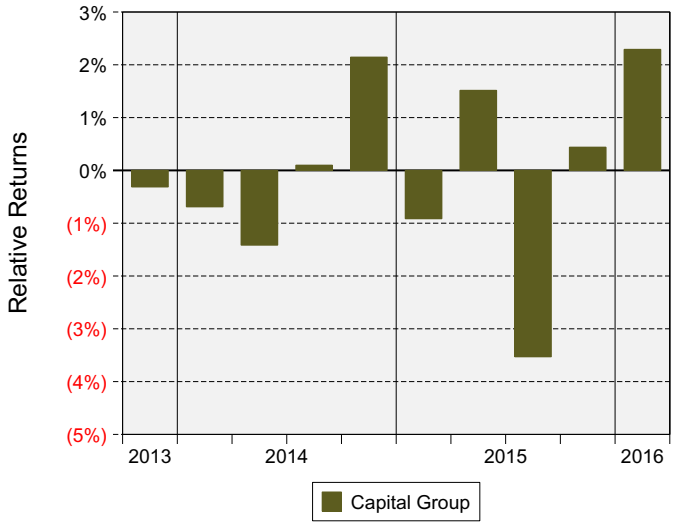
Beginning Market Value	$265,007,166
Net New Investment	$-258,612
Investment Gains/(Losses)	$-1,913,369
Ending Market Value	$262,835,185

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

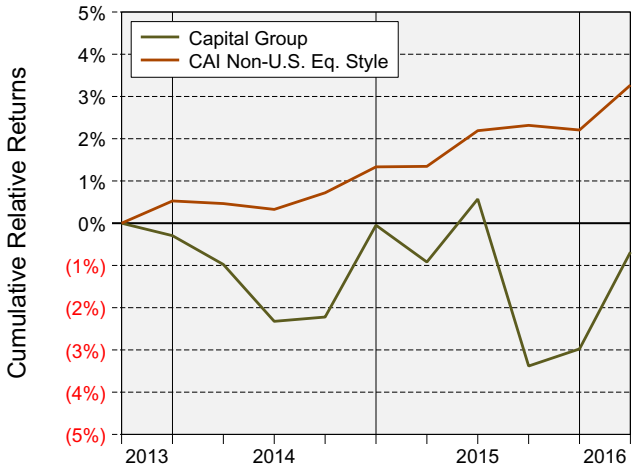


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 2-1/2 Years
10th Percentile	0.64	(3.79)	(2.27)	(0.22)	2.74
25th Percentile	(0.70)	(5.97)	(4.29)	(1.44)	1.56
Median	(2.46)	(7.86)	(6.23)	(3.11)	0.43
75th Percentile	(3.32)	(10.15)	(8.51)	(5.04)	(1.52)
90th Percentile	(3.97)	(11.26)	(10.63)	(6.88)	(2.64)
Capital Group ●	(0.71)	(9.97)	(8.05)	(4.53)	(1.60)
MSCI EAFE ▲	(3.01)	(8.83)	(8.27)	(4.67)	(1.33)

Relative Return vs MSCI EAFE



Cumulative Returns vs MSCI EAFE



DFA Intl Small Cap Value
Period Ended March 31, 2016

Investment Philosophy

The International Small Cap Value Portfolio invests in the stocks of small, non-US developed markets companies that Dimensional believes to be value stocks at the time of purchase. Specifically, it looks at companies that fall within the smallest 8-10% of each country's market capitalization, and who's shares have a high book value in relation to their market value (BtM). It does not invest in emerging markets.

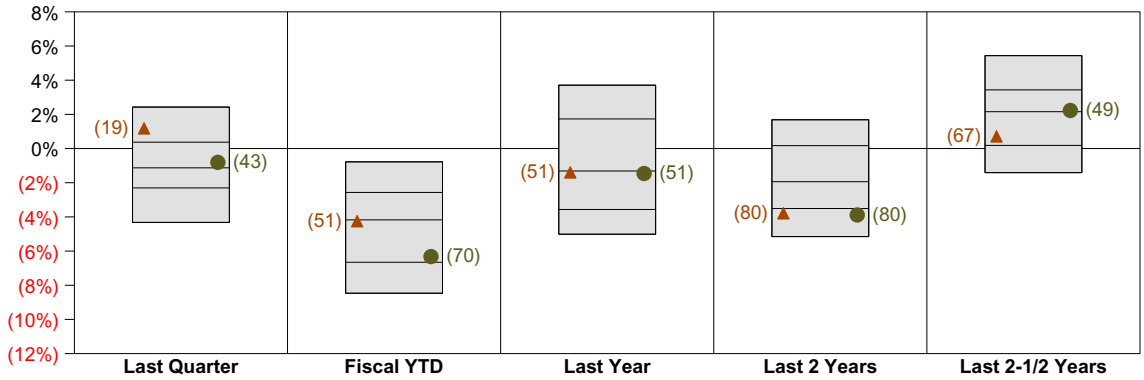
Quarterly Summary and Highlights

- DFA Intl Small Cap Value's portfolio posted a (0.81)% return for the quarter placing it in the 43 percentile of the Lipper: International Small Cap Obj group for the quarter and in the 51 percentile for the last year.
- DFA Intl Small Cap Value's portfolio underperformed the World ex US SC Value by 1.99% for the quarter and underperformed the World ex US SC Value for the year by 0.07%.

Quarterly Asset Growth

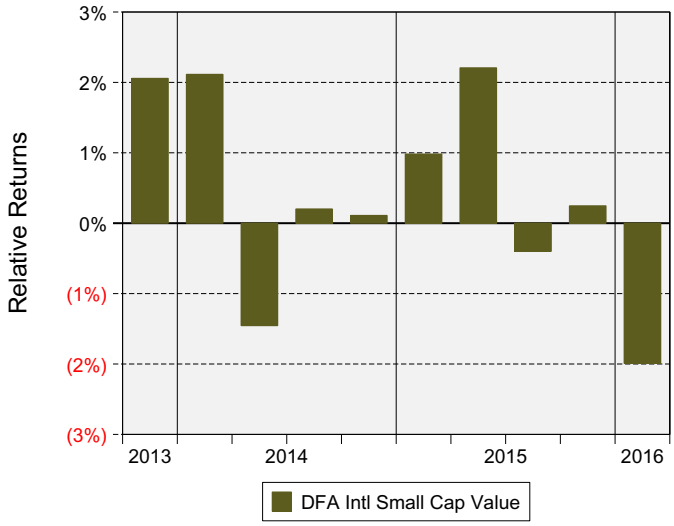
Beginning Market Value	$70,840,669
Net New Investment	$0
Investment Gains/(Losses)	$-573,541
Ending Market Value	$70,267,128

Performance vs Lipper: International Small Cap Obj (Net)

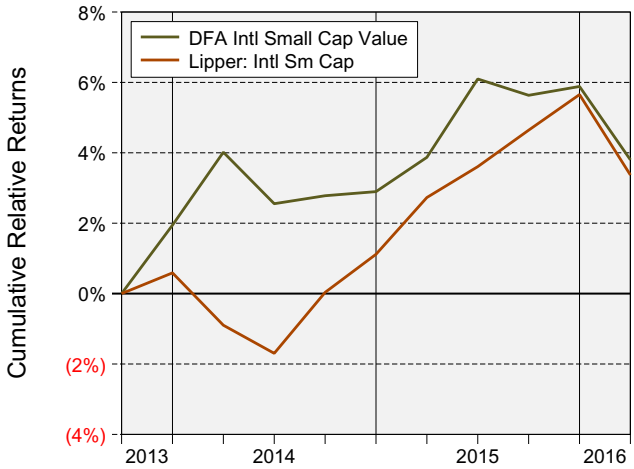


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 2-1/2 Years
10th Percentile	2.43	(0.78)	3.71	1.68	5.44
25th Percentile	0.37	(2.57)	1.73	0.17	3.43
Median	(1.13)	(4.17)	(1.31)	(1.94)	2.15
75th Percentile	(2.30)	(6.66)	(3.56)	(3.51)	0.19
90th Percentile	(4.32)	(8.47)	(5.01)	(5.15)	(1.41)
DFA Intl Small Cap Value ●	(0.81)	(6.32)	(1.46)	(3.89)	2.23
World ex US SC Value ▲	1.18	(4.25)	(1.39)	(3.79)	0.71

Relative Return vs World ex US SC Value



Cumulative Returns vs World ex US SC Value



LSV Intl Value
Period Ended March 31, 2016

Investment Philosophy

The objective of LSV Asset Management's International Large Cap Value strategy is to outperform the MSCI EAFE Index by at least 250 basis points (gross of fees) per annum over an annualized 3-5 year period with a tracking error of approximately 5-6%. Their stock selection process is a quantitative approach that ranks a broad universe of stocks on a combination of value and momentum factors and seeks to invest approximately 150 stocks in the most attractive securities possible within strict risk parameters to control the portfolio's tracking error relative to the benchmark. The resulting portfolio is broadly diversified across industry groups and fully invested. LSV weights countries at a neutral weight relative to the benchmark country weights. 50% of the portfolio is US dollar hedged.

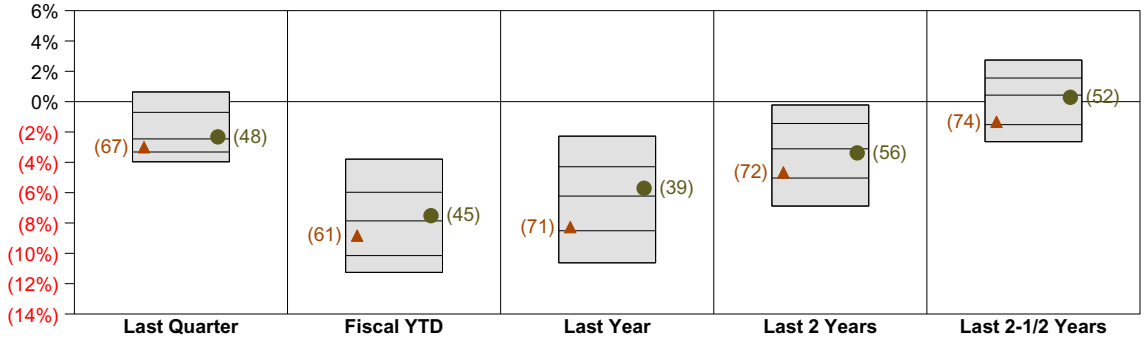
Quarterly Summary and Highlights

- LSV Intl Value's portfolio posted a (2.32)% return for the quarter placing it in the 48 percentile of the CAI Non-U.S. Equity Style group for the quarter and in the 39 percentile for the last year.
- LSV Intl Value's portfolio outperformed the MSCI EAFE by 0.68% for the quarter and outperformed the MSCI EAFE for the year by 2.56%.

Quarterly Asset Growth

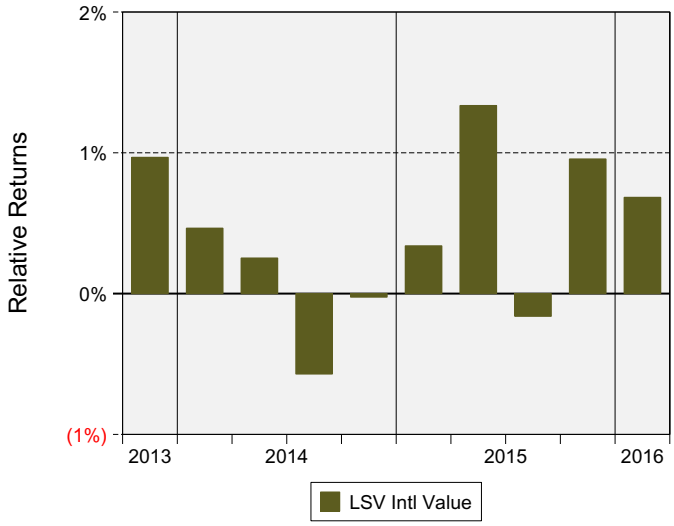
Beginning Market Value	$288,117,799
Net New Investment	$32,723,574
Investment Gains/(Losses)	$-6,290,925
Ending Market Value	$314,550,448

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

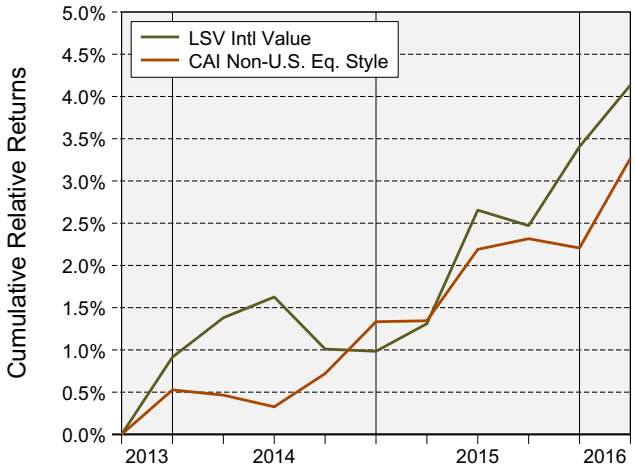


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 2-1/2 Years
10th Percentile	0.64	(3.79)	(2.27)	(0.22)	2.74
25th Percentile	(0.70)	(5.97)	(4.29)	(1.44)	1.56
Median	(2.46)	(7.86)	(6.23)	(3.11)	0.43
75th Percentile	(3.32)	(10.15)	(8.51)	(5.04)	(1.52)
90th Percentile	(3.97)	(11.26)	(10.63)	(6.88)	(2.64)
LSV Intl Value ●	(2.32)	(7.52)	(5.71)	(3.38)	0.29
MSCI EAFE ▲	(3.01)	(8.83)	(8.27)	(4.67)	(1.33)

Relative Return vs MSCI EAFE



Cumulative Returns vs MSCI EAFE



Vanguard Intl Explorer Fund
Period Ended March 31, 2016

Investment Philosophy

Vanguard International Explorer Fund invests primarily in the equity securities of small-capitalization companies located outside the United States that the advisor believes offer the potential for long-term capital appreciation. The advisor considers, among other things, whether a company is likely to have above-average earnings growth, whether the company's securities are attractively valued, and whether the company has any proprietary advantages.

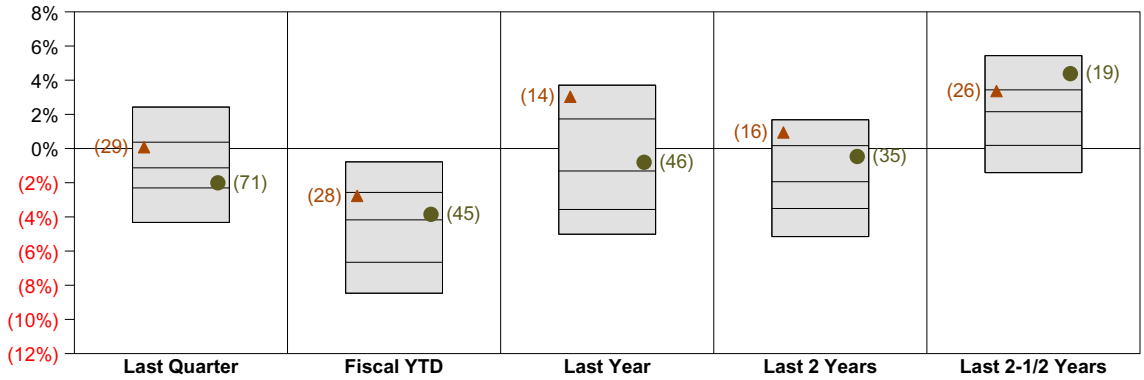
Quarterly Summary and Highlights

- Vanguard Intl Explorer Fund's portfolio posted a (2.01)% return for the quarter placing it in the 71 percentile of the Lipper: International Small Cap Obj group for the quarter and in the 46 percentile for the last year.
- Vanguard Intl Explorer Fund's portfolio underperformed the S&P BMI EPAC <$2 B by 2.09% for the quarter and underperformed the S&P BMI EPAC <$2 B for the year by 3.84%.

Quarterly Asset Growth

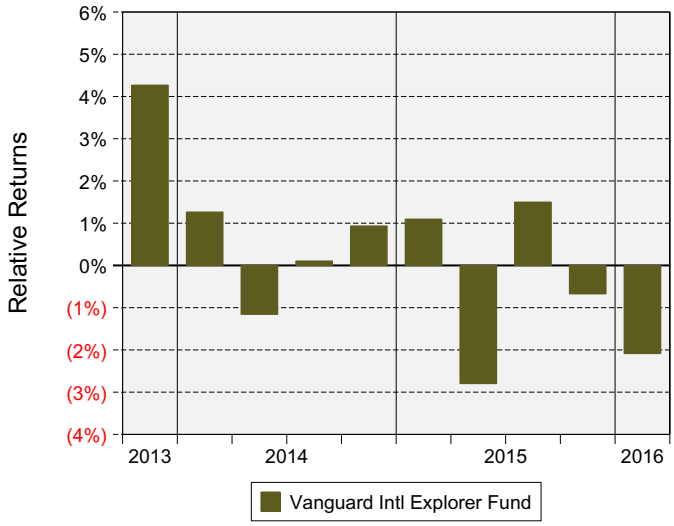
Beginning Market Value	$71,880,938
Net New Investment	$0
Investment Gains/(Losses)	$-1,441,863
Ending Market Value	$70,439,075

Performance vs Lipper: International Small Cap Obj (Net)

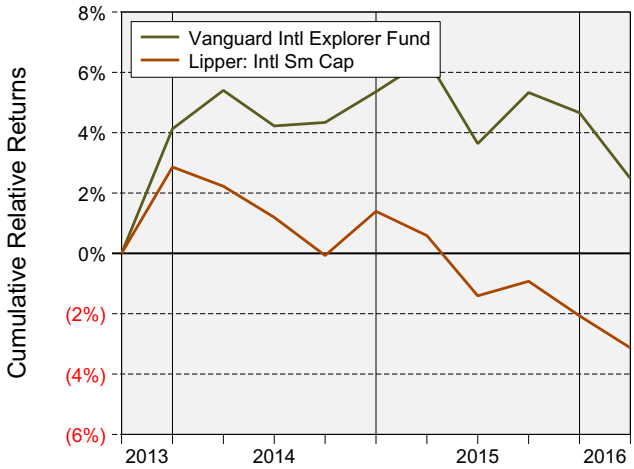


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 2-1/2 Years
10th Percentile	2.43	(0.78)	3.71	1.68	5.44
25th Percentile	0.37	(2.57)	1.73	0.17	3.43
Median	(1.13)	(4.17)	(1.31)	(1.94)	2.15
75th Percentile	(2.30)	(6.66)	(3.56)	(3.51)	0.19
90th Percentile	(4.32)	(8.47)	(5.01)	(5.15)	(1.41)
Vanguard Intl Explorer Fund ●	(2.01)	(3.85)	(0.80)	(0.47)	4.38
S&P BMI EPAC <$2 B ▲	0.08	(2.77)	3.03	0.94	3.36

Relative Return vs S&P BMI EPAC <$2 B



Cumulative Returns vs S&P BMI EPAC <$2 B



Declaration Total Return
Period Ended March 31, 2016

Investment Philosophy

The Fund's portfolio holdings consist primarily of RMBS issued by private sector companies (Non-Agency RMBS) and government agencies (Agency MBS) and CMBS issued by private sector companies. Agency MBS includes securities issued by the Federal National Mortgage Association (Fannie Mae), the Federal Home Loan Mortgage Corporation (Freddie Mac) and the Government National Mortgage Association (Ginnie Mae). Portfolio holdings may range from short tenure senior classes to stressed issues or subordinated securities with substantial risk of non-payment and correspondingly higher yields. Smaller portfolio allocations may include consumer asset-backed securities (ABS), or other structured credit securities and corporate bonds. As a diversification strategy and a potential hedge to credit risk, the Fund may invest in securities which tend to benefit from slow mortgage prepayments and economic growth, such as interest only (IO) MBS.

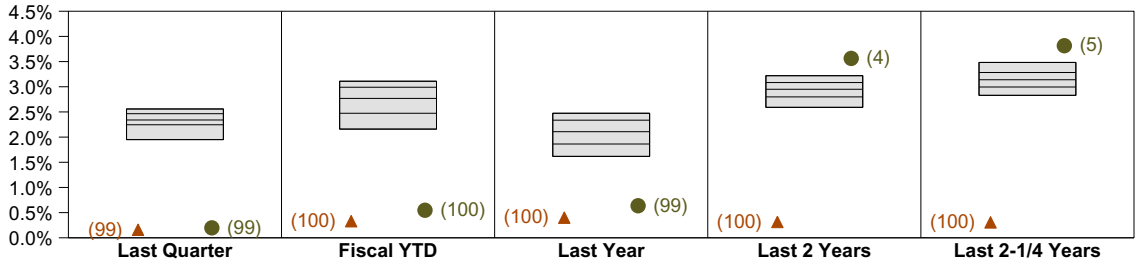
Quarterly Summary and Highlights

- Declaration Total Return's portfolio posted a 0.20% return for the quarter placing it in the 99 percentile of the CAI Intermediate Fixed-Inc Style group for the quarter and in the 99 percentile for the last year.
- Declaration Total Return's portfolio outperformed the Libor-3 Month by 0.04% for the quarter and outperformed the Libor-3 Month for the year by 0.24%.

Quarterly Asset Growth

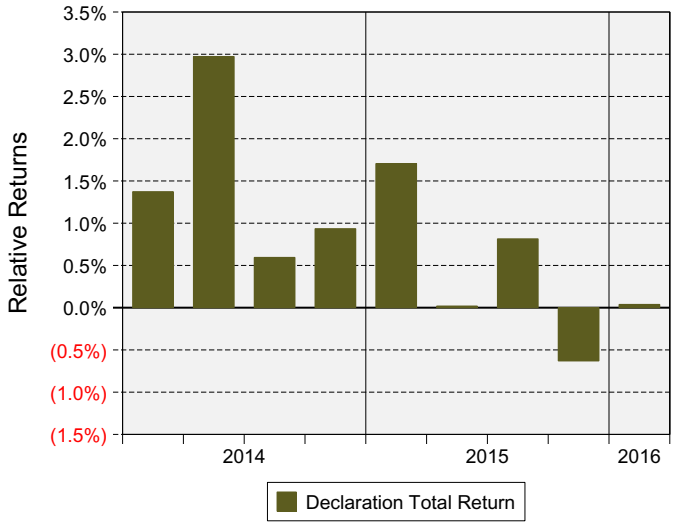
Beginning Market Value	$100,933,876
Net New Investment	$-36,241
Investment Gains/(Losses)	$199,380
Ending Market Value	$101,097,015

Performance vs CAI Intermediate Fixed-Inc Style (Gross)

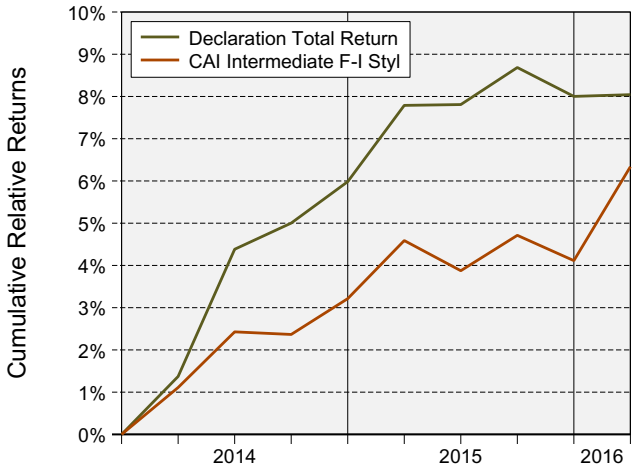


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 2-1/4 Years
10th Percentile	2.56	3.11	2.47	3.22	3.48
25th Percentile	2.46	2.99	2.34	3.08	3.28
Median	2.34	2.77	2.11	2.95	3.14
75th Percentile	2.24	2.47	1.86	2.80	3.00
90th Percentile	1.95	2.16	1.62	2.59	2.83
Declaration Total Return ●	0.20	0.55	0.64	3.56	3.82
Libor-3 Month ▲	0.16	0.33	0.40	0.31	0.31

Relative Return vs Libor-3 Month



Cumulative Returns vs Libor-3 Month



Prudential
Period Ended March 31, 2016

Investment Philosophy

The core plus fixed income account is a multi-sector strategy that is diversified across a broad range of fixed income sectors, including Treasuries, agencies, mortgage-backed securities, structured product (asset-backed securities, commercial mortgage-backed securities), investment grade corporate bonds, high yield bonds, bank loans and international debt. The primary sources of excess return are sector allocation and security selection, with duration and yield curve less of a focus.

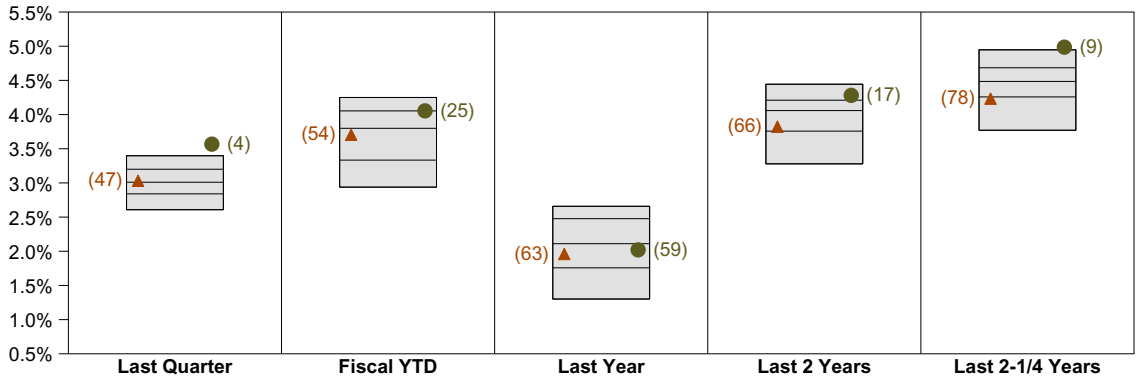
Quarterly Summary and Highlights

- Prudential's portfolio posted a 3.57% return for the quarter placing it in the 4 percentile of the CAI Core Bond Fixed-Inc Style group for the quarter and in the 59 percentile for the last year.
- Prudential's portfolio outperformed the Barclays Aggregate Index by 0.54% for the quarter and outperformed the Barclays Aggregate Index for the year by 0.06%.

Quarterly Asset Growth

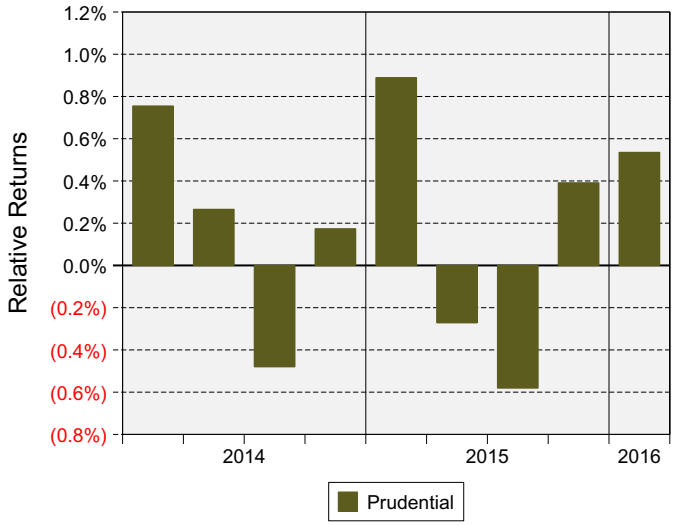
Beginning Market Value	$136,208,497
Net New Investment	$-93,190
Investment Gains/(Losses)	$4,856,714
Ending Market Value	$140,972,022

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

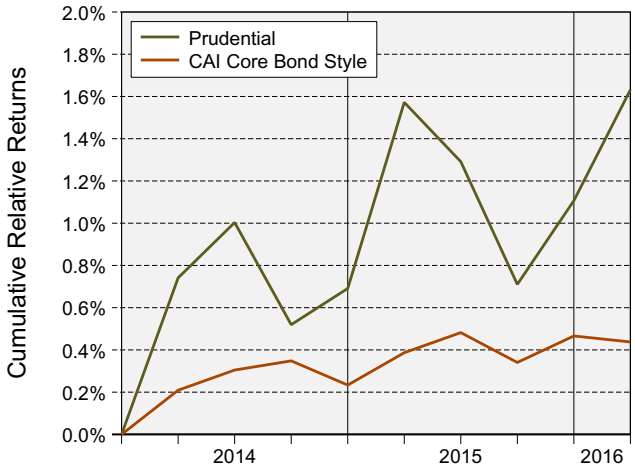


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 2-1/4 Years
10th Percentile	3.40	4.25	2.66	4.44	4.95
25th Percentile	3.20	4.05	2.48	4.21	4.68
Median	3.01	3.80	2.11	4.06	4.48
75th Percentile	2.84	3.33	1.76	3.76	4.26
90th Percentile	2.61	2.94	1.30	3.28	3.77
Prudential ●	3.57	4.05	2.02	4.28	4.99
Barclays Aggregate Index ▲	3.03	3.71	1.96	3.82	4.23

Relative Return vs Barclays Aggregate Index



Cumulative Returns vs Barclays Aggregate Index



SSgA US Govt Credit Bd Idx
Period Ended March 31, 2016

Investment Philosophy

The Fund seeks an investment return that approximates as closely as practicable, before expenses, the performance of the Barclays Capital U.S. Government/Credit Bond Index over the long term.

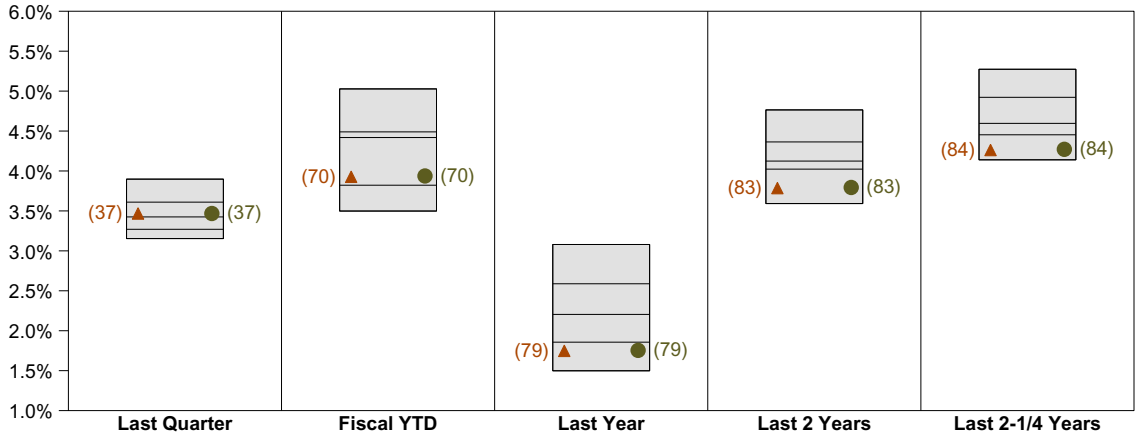
Quarterly Summary and Highlights

- SSgA US Govt Credit Bd Idx's portfolio posted a 3.47% return for the quarter placing it in the 37 percentile of the CAI Govt/Credit Fixed-Income Style group for the quarter and in the 79 percentile for the last year.
- SSgA US Govt Credit Bd Idx's portfolio underperformed the Barclays Govt/Credit Bd by 0.00% for the quarter and outperformed the Barclays Govt/Credit Bd for the year by 0.01%.

Quarterly Asset Growth

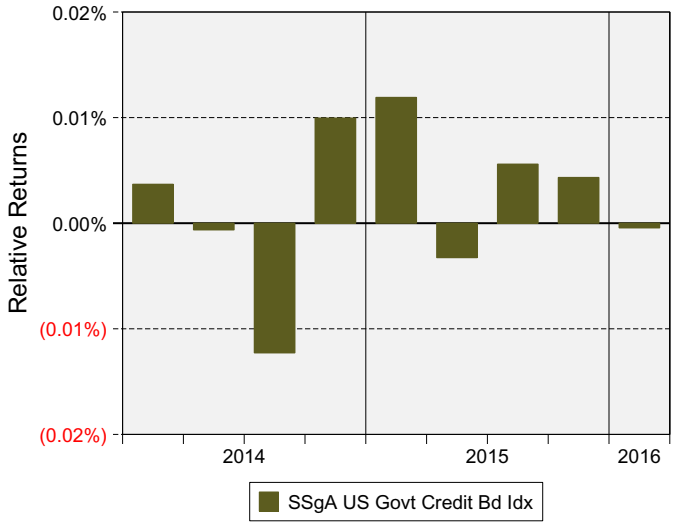
Beginning Market Value	$171,483,201
Net New Investment	$-14,918
Investment Gains/(Losses)	$5,946,186
Ending Market Value	$177,414,470

Performance vs CAI Govt/Credit Fixed-Income Style (Gross)

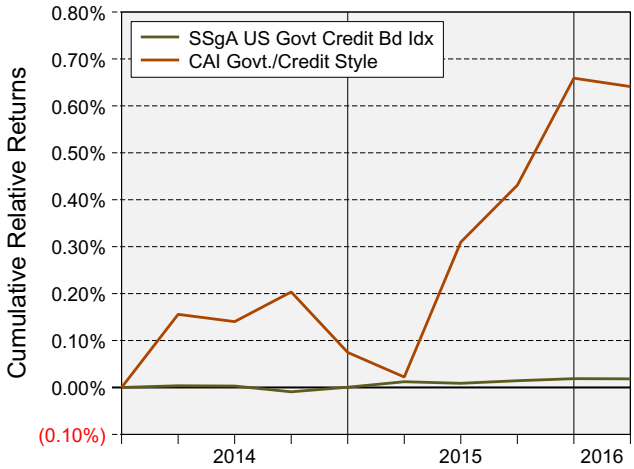


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 2-1/4 Years
10th Percentile	3.90	5.03	3.08	4.76	5.27
25th Percentile	3.61	4.49	2.59	4.36	4.92
Median	3.42	4.42	2.20	4.12	4.60
75th Percentile	3.27	3.82	1.86	4.02	4.45
90th Percentile	3.15	3.50	1.50	3.59	4.14
SSgA US Govt Credit Bd Idx ●	3.47	3.94	1.75	3.79	4.27
Barclays Govt/Credit Bd ▲	3.47	3.93	1.75	3.79	4.26

Relative Return vs Barclays Govt/Credit Bd



Cumulative Returns vs Barclays Govt/Credit Bd



Wells Capital
Period Ended March 31, 2016

Investment Philosophy

The Medium Quality Credit fixed income strategy is designed to maximize total return from the high-grade corporate bond market while maintaining a strategic allocation to the BBB portion of the high yield market. The investment process for this fund starts with a "top-down" strategy. Security selection is determined by in-depth credit research, holding that in-depth knowledge of industries, companies, and their management teams can help identify credit trends that can lead to investment opportunities. Furthermore, a disciplined relative value framework is applied to help determine the optimal position to invest within an industry and within an individual issuer's capital structure.

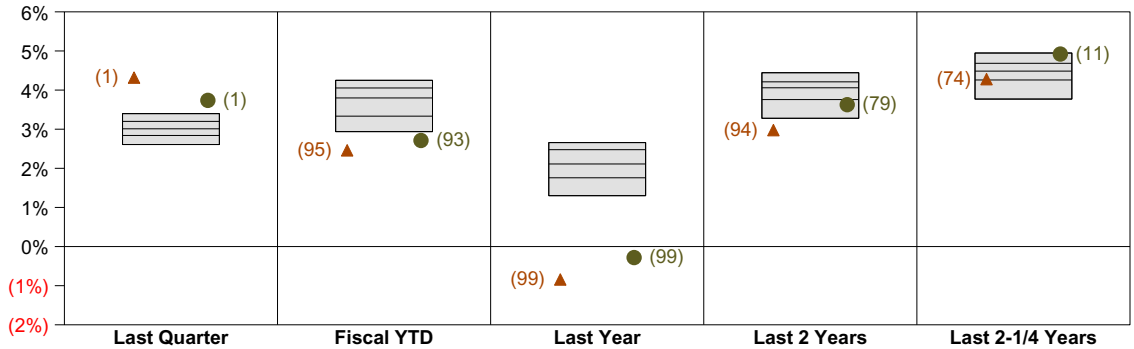
Quarterly Summary and Highlights

- Wells Capital's portfolio posted a 3.74% return for the quarter placing it in the 1 percentile of the CAI Core Bond Fixed-Inc Style group for the quarter and in the 99 percentile for the last year.
- Wells Capital's portfolio underperformed the Barclays Baa Credit 3% In by 0.58% for the quarter and outperformed the Barclays Baa Credit 3% In for the year by 0.56%.

Quarterly Asset Growth

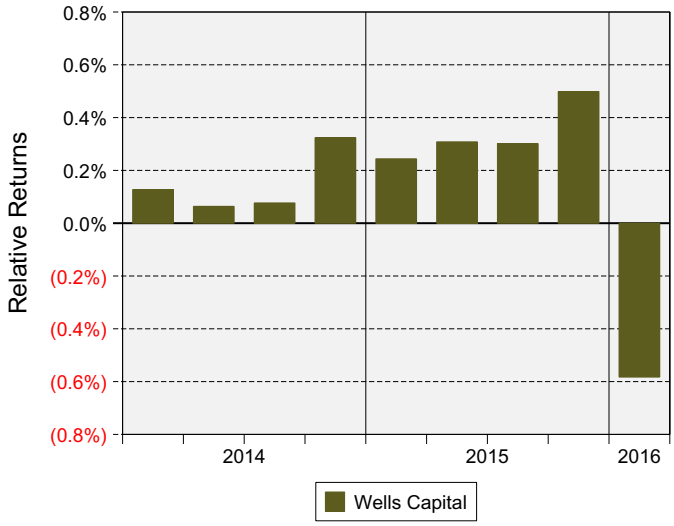
Beginning Market Value	$377,629,234
Net New Investment	$-171,237
Investment Gains/(Losses)	$14,105,222
Ending Market Value	$391,563,219

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

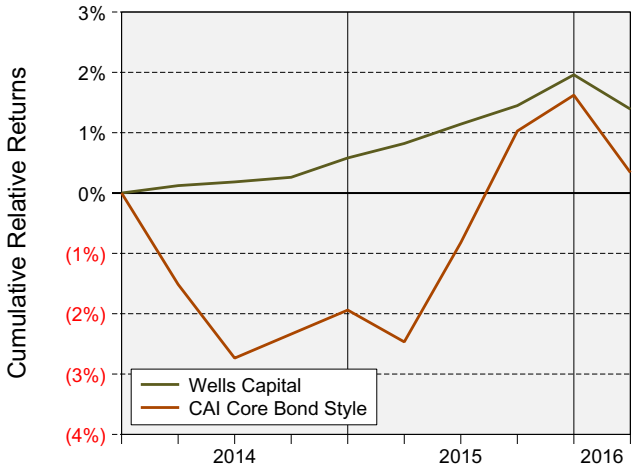


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 2-1/4 Years
10th Percentile	3.40	4.25	2.66	4.44	4.95
25th Percentile	3.20	4.05	2.48	4.21	4.68
Median	3.01	3.80	2.11	4.06	4.48
75th Percentile	2.84	3.33	1.76	3.76	4.26
90th Percentile	2.61	2.94	1.30	3.28	3.77
Wells Capital ●	3.74	2.71	(0.28)	3.63	4.92
Barclays Baa Credit 3% In ▲	4.32	2.46	(0.84)	2.98	4.28

Relative Return vs Barclays Baa Credit 3% In



Cumulative Returns vs Barclays Baa Credit 3% In



Western Asset Management Company
Period Ended March 31, 2016

Investment Philosophy

Western Asset designs this portfolio using all major fixed-income sectors with a bias towards non-Treasuries, especially corporate, mortgage-backed and asset-backed securities. Value can be added through sector rotation, issue selection, duration and term structure weighting.

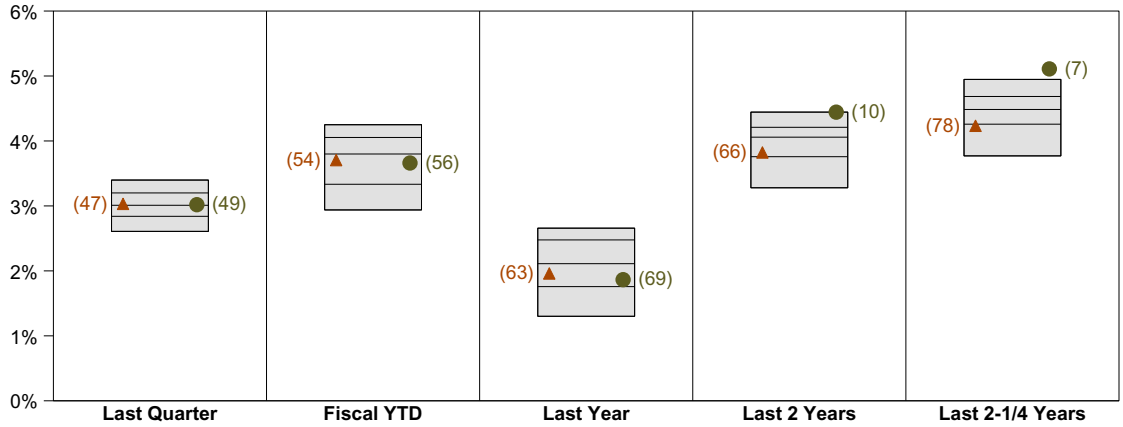
Quarterly Summary and Highlights

- Western Asset's portfolio posted a 3.02% return for the quarter placing it in the 49 percentile of the CAI Core Bond Fixed-Inc Style group for the quarter and in the 69 percentile for the last year.
- Western Asset's portfolio underperformed the Barclays Aggregate Index by 0.01% for the quarter and underperformed the Barclays Aggregate Index for the year by 0.10%.

Quarterly Asset Growth

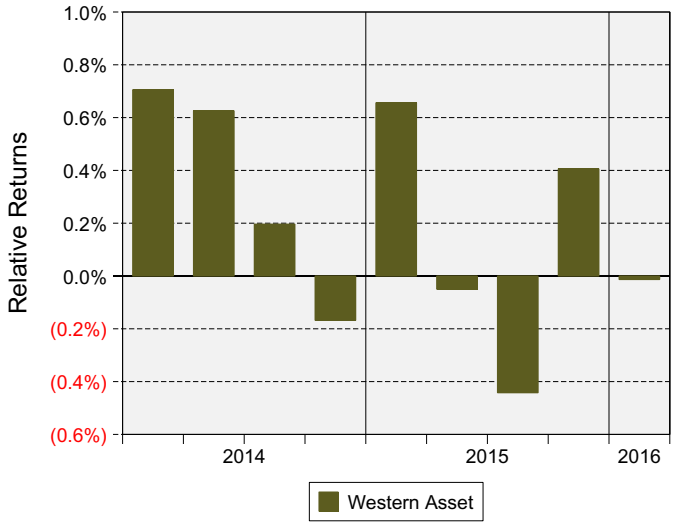
Beginning Market Value	$381,762,522
Net New Investment	$-131,495
Investment Gains/(Losses)	$11,522,150
Ending Market Value	$393,153,177

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

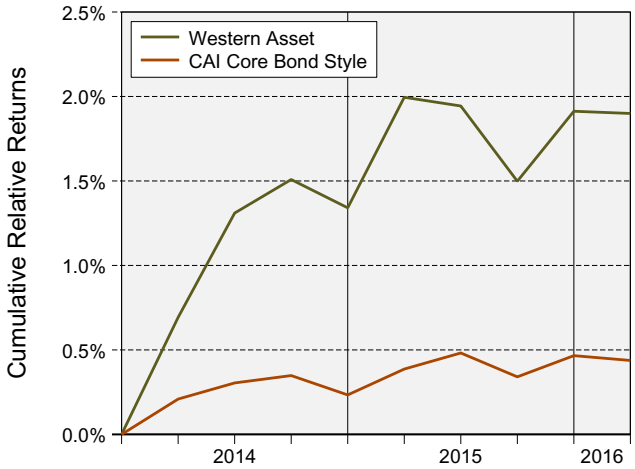


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 2-1/4 Years
10th Percentile	3.40	4.25	2.66	4.44	4.95
25th Percentile	3.20	4.05	2.48	4.21	4.68
Median	3.01	3.80	2.11	4.06	4.48
75th Percentile	2.84	3.33	1.76	3.76	4.26
90th Percentile	2.61	2.94	1.30	3.28	3.77
Western Asset ●	3.02	3.66	1.86	4.44	5.11
Barclays Aggregate Index ▲	3.03	3.71	1.96	3.82	4.23

Relative Return vs Barclays Aggregate Index



Cumulative Returns vs Barclays Aggregate Index



Western Asset TIPS
Period Ended March 31, 2016

Investment Philosophy

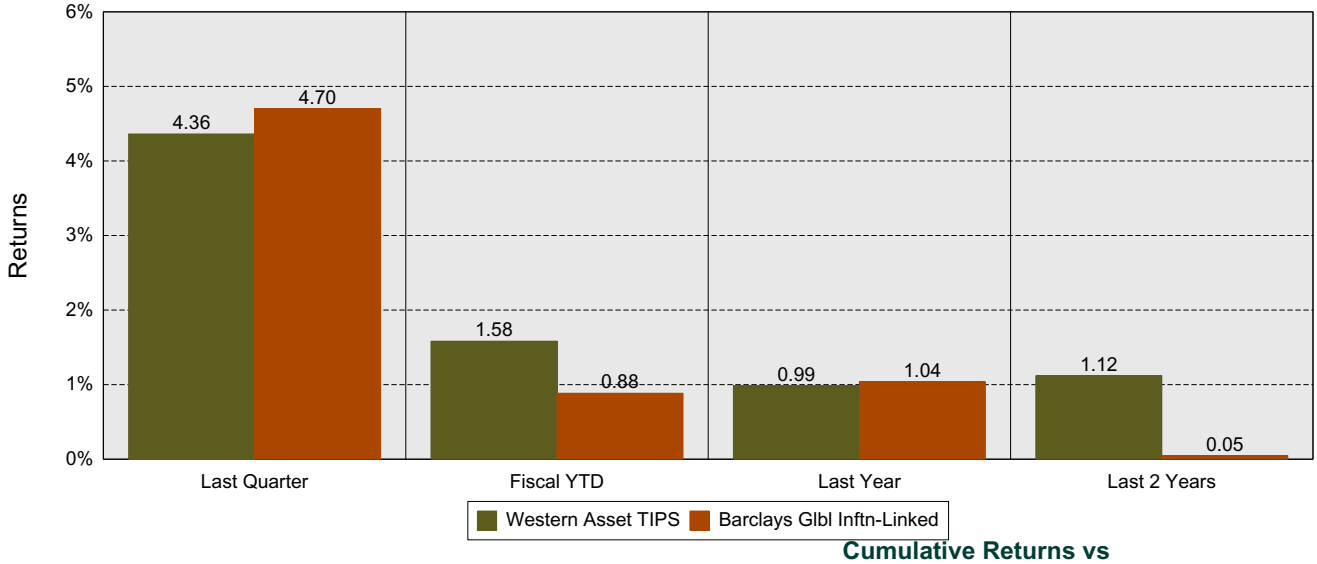
Western Asset's Global Inflation-Linked composite includes portfolios that employ an active, team-managed investment approach around a long-term, value-oriented investment philosophy. Constructed primarily of inflation-indexed securities, these portfolios use diversified strategies in seeking to add value while minimizing risk. Value can be added through country selection, term structure, issue selection, duration management and currency management.

Quarterly Summary and Highlights

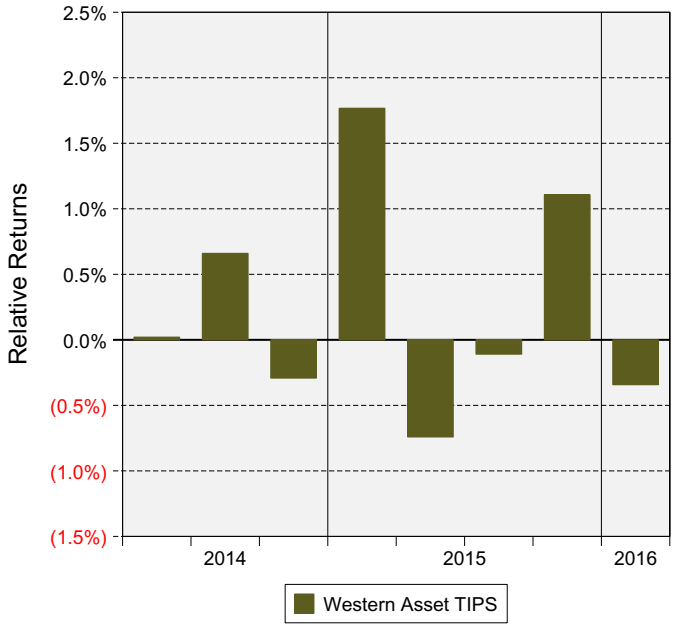
- Western Asset TIPS's portfolio underperformed the Barclays Glbl Inftn-Linked by 0.34% for the quarter and underperformed the Barclays Glbl Inftn-Linked for the year by 0.05%.

Quarterly Asset Growth

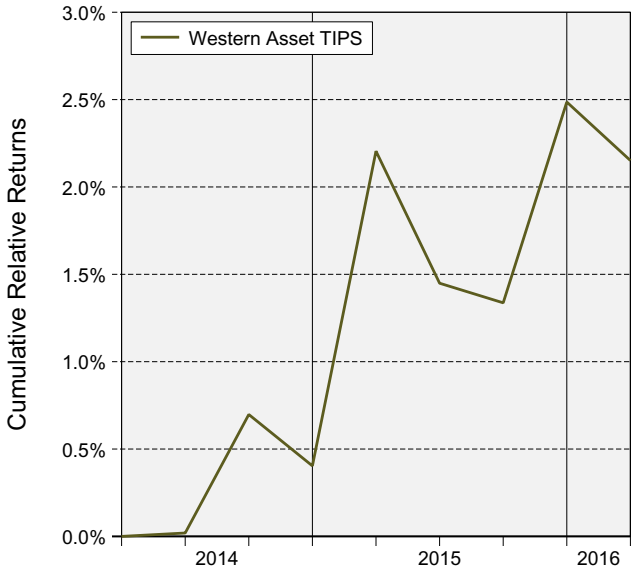
Beginning Market Value	$250,575,556
Net New Investment	$-86,887
Investment Gains/(Losses)	$10,926,155
Ending Market Value	$261,414,825



Relative Return vs Barclays Glbl Inftn-Linked



Cumulative Returns vs Barclays Glbl Inftn-Linked



JP Morgan Infrastructure
Period Ended March 31, 2016

Investment Philosophy

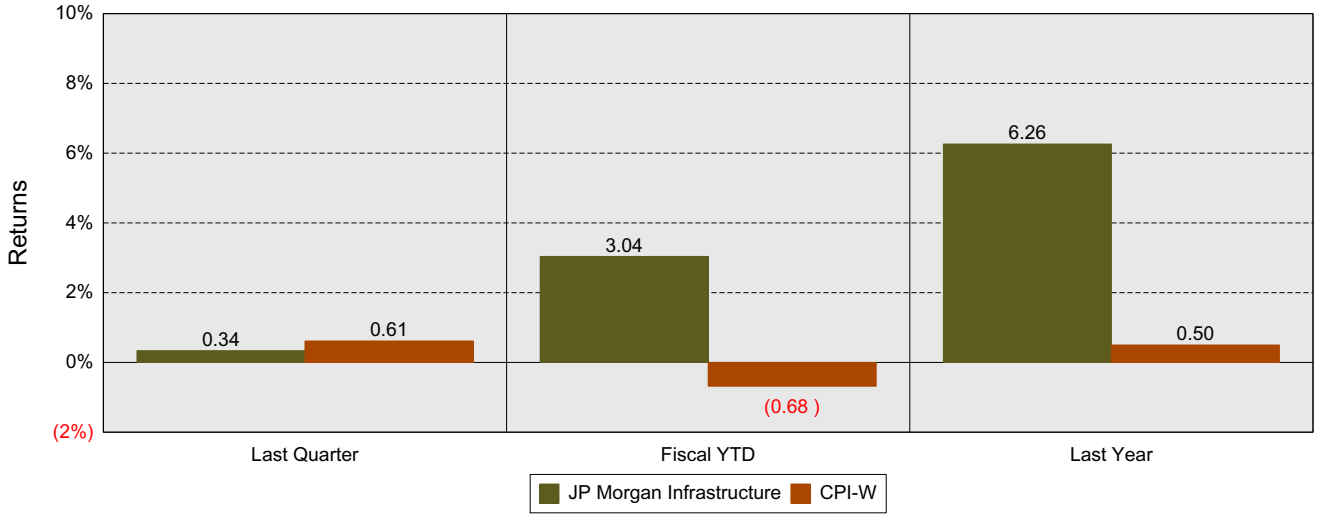
The only open-ended private commingled infrastructure fund in the U.S, the JPMorgan Infrastructure Investments Fund invests in stabilized assets in OECD countries with selected value-added opportunities, across infrastructure industry sub-sectors, including: toll roads, bridges and tunnels; oil and gas pipelines; electricity transmission and distribution facilities; contracted power generation assets; water distribution; waste-water collection and processing; railway lines and rapid rail links; and seaports and airports.

Quarterly Summary and Highlights

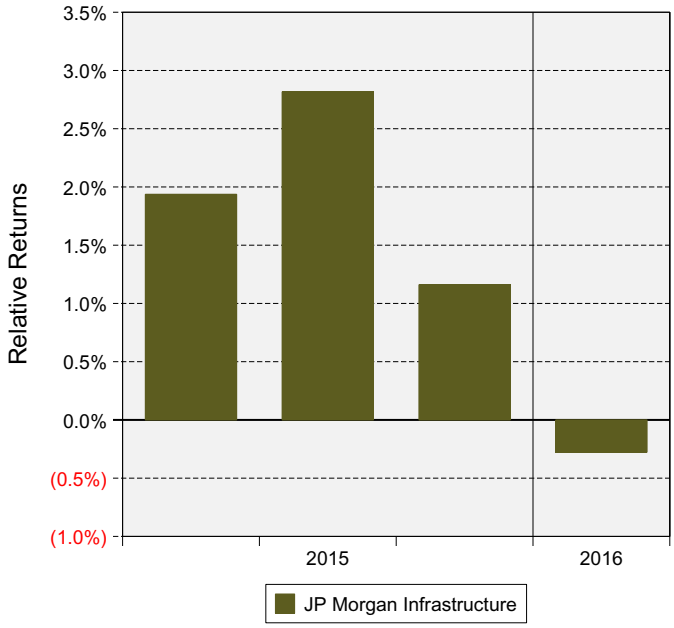
- JP Morgan Infrastructure's portfolio underperformed the CPI-W by 0.28% for the quarter and outperformed the CPI-W for the year by 5.76%.

Quarterly Asset Growth

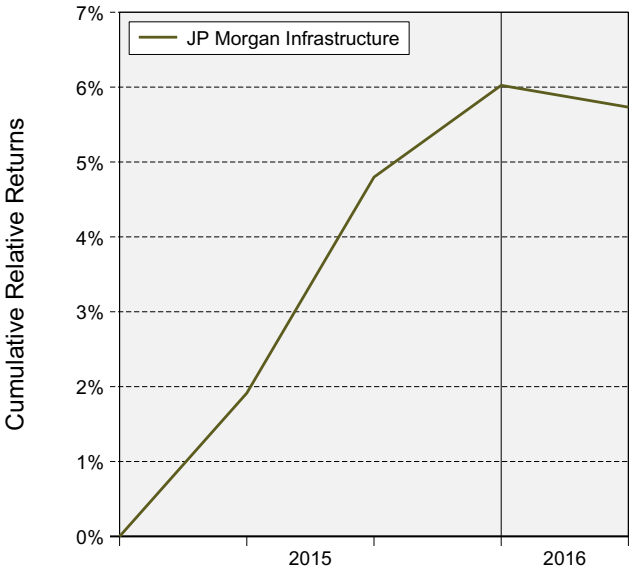
Beginning Market Value	$79,010,482
Net New Investment	$-221,061
Investment Gains/(Losses)	$266,874
Ending Market Value	$79,056,295



Relative Return vs CPI-W



Cumulative Returns vs CPI-W



Grosvenor Cust. Infrastructure
Period Ended March 31, 2016

Investment Philosophy

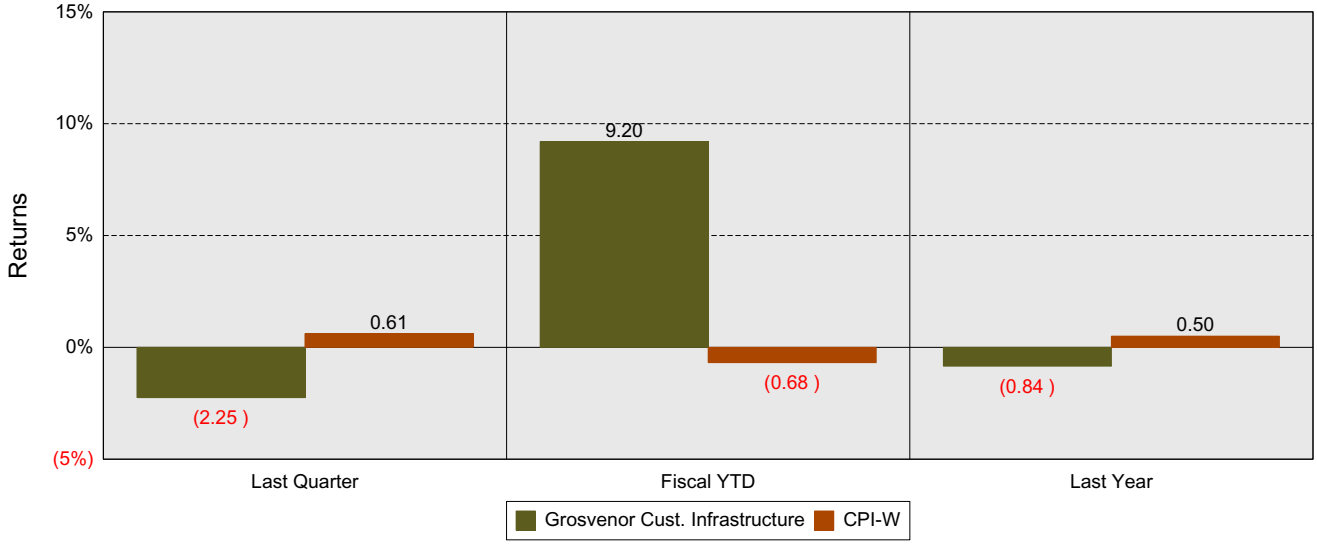
The Customized Infrastructure Strategies LP is a commingled fund focused on providing a comprehensive, diversified solution for investors looking to access the infrastructure asset class. The Fund seeks to generate stable, long-term yield and attractive risk-adjusted returns by investing in a diversified portfolio of primary core and core plus infrastructure funds (30%), co-investments (40%) and opportunistic secondary fund purchases (30%).

Quarterly Summary and Highlights

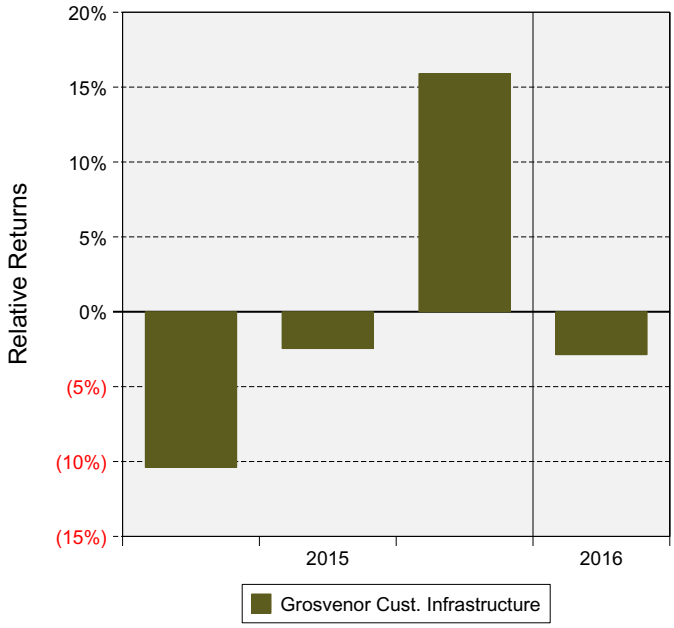
- Grosvenor Cust. Infrastructure's portfolio underperformed the CPI-W by 2.86% for the quarter and underperformed the CPI-W for the year by 1.34%.

Quarterly Asset Growth

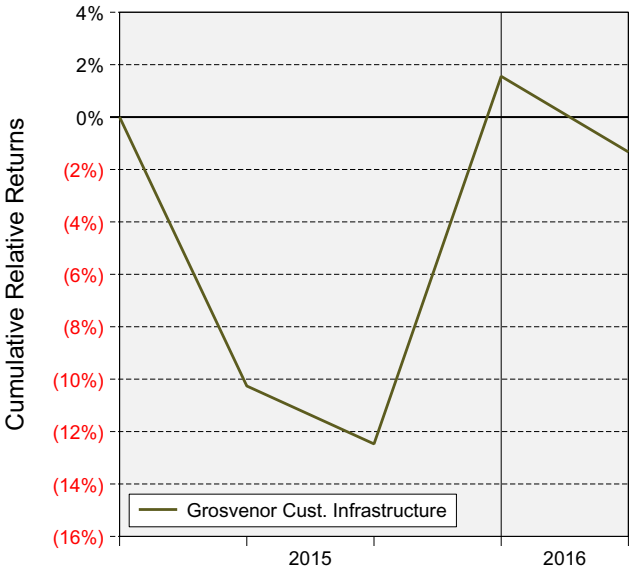
Beginning Market Value	$19,764,389
Net New Investment	$-4,837,434
Investment Gains/(Losses)	$-394,448
Ending Market Value	$14,532,507



Relative Return vs CPI-W



Cumulative Returns vs CPI-W



Invesco Core Real Estate
Period Ended March 31, 2016

Investment Philosophy

IRE's investment philosophy is comprised of two fundamental principles: (1) maximize the predictability and consistency of investment returns and (2) minimize the risk of capital loss. This philosophy forms the cornerstone of the company's real estate investment philosophy.

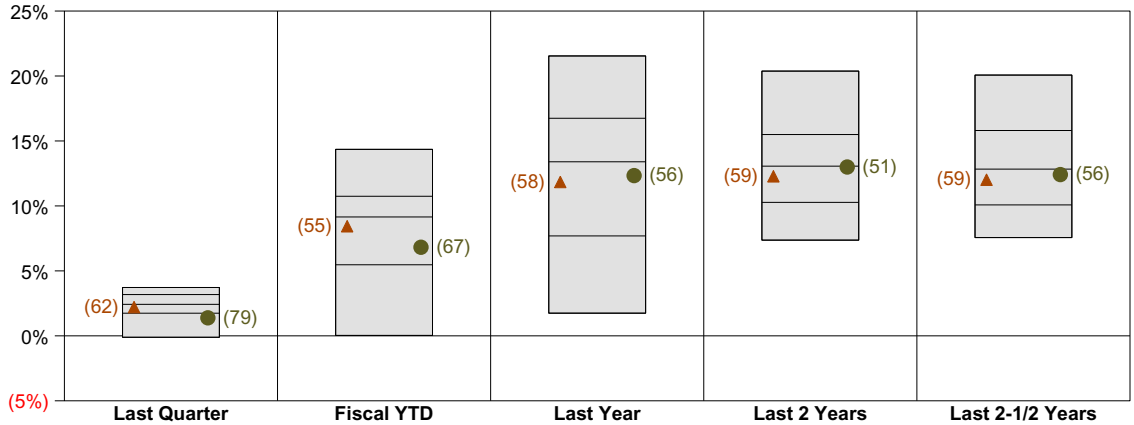
Quarterly Summary and Highlights

- Invesco Core Real Estate's portfolio posted a 1.38% return for the quarter placing it in the 79 percentile of the Total Real Estate DB group for the quarter and in the 56 percentile for the last year.
- Invesco Core Real Estate's portfolio underperformed the NCREIF Total Index by 0.83% for the quarter and outperformed the NCREIF Total Index for the year by 0.49%.

Quarterly Asset Growth

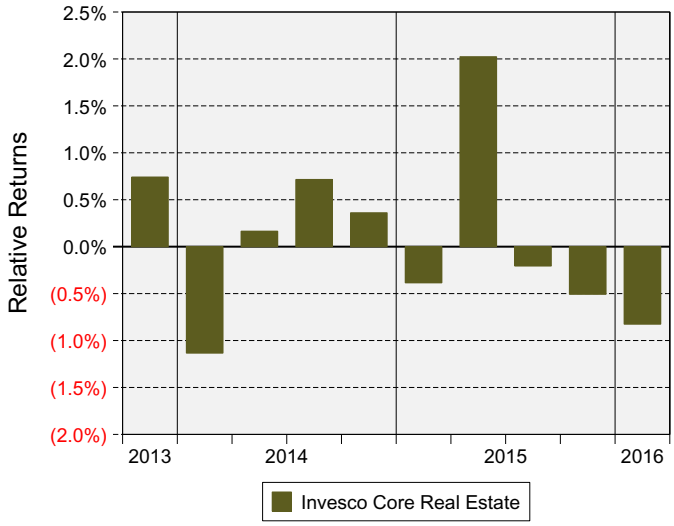
Beginning Market Value	$104,906,004
Net New Investment	$7,000,000
Investment Gains/(Losses)	$1,549,609
Ending Market Value	$113,455,613

Performance vs Total Real Estate DB (Net)

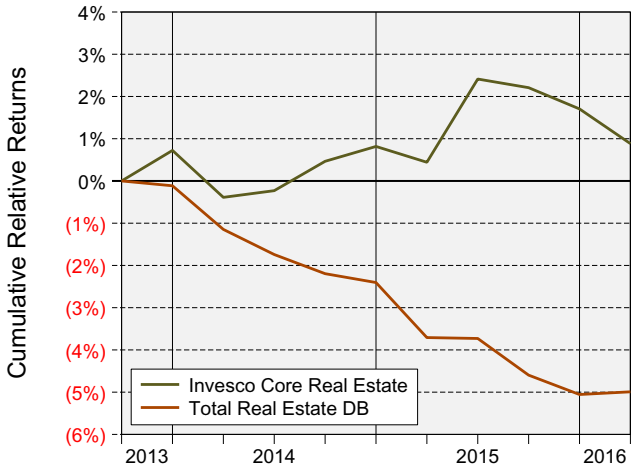


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 2-1/2 Years
10th Percentile	3.72	14.35	21.54	20.38	20.07
25th Percentile	3.18	10.74	16.75	15.49	15.80
Median	2.42	9.15	13.40	13.06	12.83
75th Percentile	1.74	5.47	7.69	10.27	10.08
90th Percentile	(0.11)	0.03	1.75	7.37	7.56
Invesco Core Real Estate ●	1.38	6.82	12.33	12.99	12.41
NCREIF Total Index ▲	2.21	8.44	11.84	12.28	12.02

Relative Return vs NCREIF Total Index



Cumulative Returns vs NCREIF Total Index



JP Morgan RE Inc & Growth
Period Ended March 31, 2016

Investment Philosophy

The J.P. Morgan U.S. Real Estate Income and Growth Fund seeks to construct and opportunistically manage a portfolio of core direct real estate investments, complemented by other real estate and real estate-related assets. The Fund pursues a broadly diversified absolute-return strategy and pursues all property investments on an opportunistic basis. The majority of the Fund's investments will be in direct core properties in the office, industrial, retail and residential sectors.

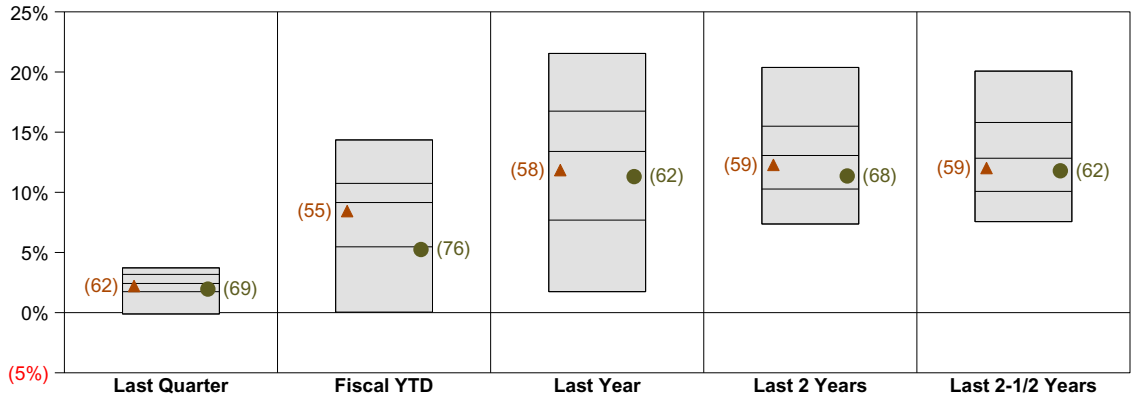
Quarterly Summary and Highlights

- JP Morgan RE Inc & Growth's portfolio posted a 1.96% return for the quarter placing it in the 69 percentile of the Total Real Estate DB group for the quarter and in the 62 percentile for the last year.
- JP Morgan RE Inc & Growth's portfolio underperformed the NCREIF Total Index by 0.25% for the quarter and underperformed the NCREIF Total Index for the year by 0.54%.

Quarterly Asset Growth

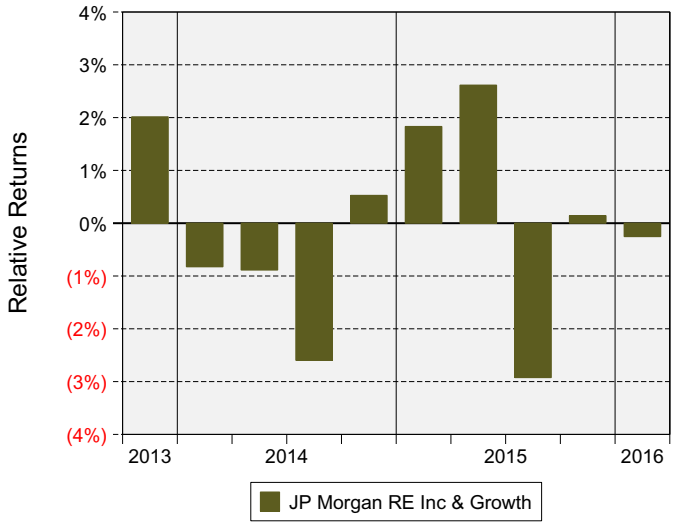
Beginning Market Value	$92,112,568
Net New Investment	$-49,824
Investment Gains/(Losses)	$1,802,797
Ending Market Value	$93,865,541

Performance vs Total Real Estate DB (Net)

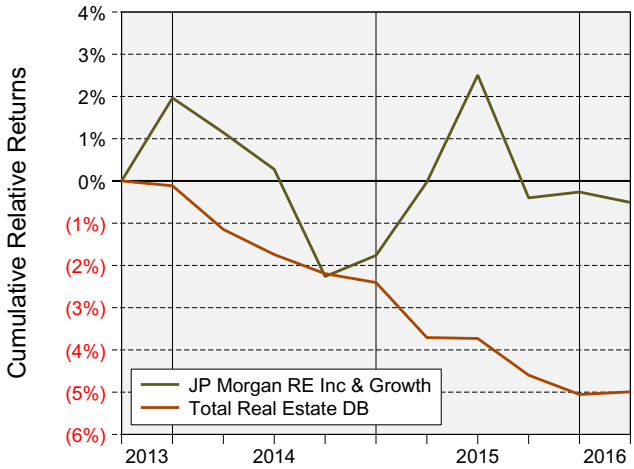


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 2-1/2 Years
10th Percentile	3.72	14.35	21.54	20.38	20.07
25th Percentile	3.18	10.74	16.75	15.49	15.80
Median	2.42	9.15	13.40	13.06	12.83
75th Percentile	1.74	5.47	7.69	10.27	10.08
90th Percentile	(0.11)	0.03	1.75	7.37	7.56
JP Morgan RE Inc & Growth ●	1.96	5.25	11.30	11.36	11.79
NCREIF Total Index ▲	2.21	8.44	11.84	12.28	12.02

Relative Return vs NCREIF Total Index



Cumulative Returns vs NCREIF Total Index



Callan

CALLAN
INVESTMENTS
INSTITUTE

1st Quarter 2016

Education

Research and Educational Programs

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

Recent Research

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

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

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

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

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

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

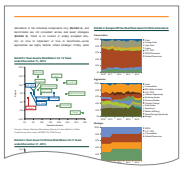
October Regional Workshop Summary We reviewed real assets and the implementation implications of building out a robust real assets allocation in portfolios.

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

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

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

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



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

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

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

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

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

Events

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

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

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

For more information about events, please contact Barb Gerraty: 415.974.5060 / institute@callan.com

The Center for Investment Training Educational Sessions

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

Introduction to Investments

San Francisco, CA, July 19–20, 2016
Chicago, IL, October 18–19, 2016

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

Customized Sessions

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

Learn more at https://www.callan.com/education/college/ or contact Kathleen Cunnie: 415.274.3029 / cunnie@callan.com

Education: By the Numbers

500	Attendees (on average) of the Institute's annual National Conference	**50+**	Unique pieces of research the Institute generates each year
3,300	Total attendees of the "Callan College" since 1994	**1980**	Year the Callan Investments Institute was founded

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

Ron Peyton, Chairman and CEO

Callan

Quarterly List as of March 31, 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
13D Management
1607 Capital Partners, LLC
Aberdeen Asset Management PLC
Acadian Asset Management LLC
AEGON USA Investment Management
Affiliated Managers Group, Inc.
AllianceBernstein
Allianz Global Investors
Allianz Life Insurance Company of North America
AlphaOne Investment Services
American Century Investment Management
Amundi Smith Breeden LLC
Analytic Investors
Angelo, Gordon & Co.
Apollo Global Management
AQR Capital Management
Ares Management LLC
Ariel Investments, LLC
Aristotle Capital Management, LLC
Artisan Holdings
Atlanta Capital Management Co., LLC
Aviva Investors Americas
AXA Investment Managers
Babson Capital Management
Baillie Gifford Overseas Limited
Baird Advisors
Bank of America
Baring Asset Management
Baron Capital Management, Inc.
Barrow, Hanley, Mewhinney & Strauss, LLC
BlackRock
BMO Asset Management, Corp.
BNP Paribas Investment Partners
BNY Mellon Asset Management
Boston Partners
Brandes Investment Partners, L.P.
Brandywine Global Investment Management, LLC

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

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

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

AGENDA ITEM III.D.

BOARD ACCEPTANCE REQUESTED

TO: State Investment Board

FROM: Dave Hunter and Darren Schulz

DATE: May 23, 2016

SUBJECT: **BND Match Loan Certificate of Deposit Program (CD Program)**

Recommendation:

RIO recommends the CD Program be transferred from the Budget Stabilization Fund (BSF) to the Legacy Fund prior to a portion of this "rainy day fund" being used to offset expected budget shortfalls. RIO's recommendation is contingent upon BND guaranteeing a minimum 1.75% return noting that current 5-year Treasury rates (upon which the CD rates are based) were 1.37% as of May 23, 2016. The minimum return requirement will be reviewed periodically to ensure the Legacy Fund will be able to maintain its' long-term expected rate of return of approximately 6.4% per annum. If this investment is not transferred to the Legacy Fund, the future of the BND CD Program is uncertain from a SIB perspective.

The Legacy Funds' current asset allocation is 50% equity, 35% fixed income and 15% real assets. **RIO can incorporate the CD program within the fixed income allocation of the Legacy Fund without materially impacting its' overall return (6.4%) and risk (12.7%) profile as long the CD Program size is limited to the lesser of $200 million or 5% (of the Legacy Fund) and a minimum 1.75% return requirement is maintained for this AA rated investment.** RIO will discuss this investment goal recommendation with the Legacy Fund Advisory Board (Board) at the next Advisory Board meeting on June 15, 2016. If the Board concurs, RIO will notify the SIB on or before our next SIB meeting on July 22, 2016.

BASE CASE 50% Equity / 35% Fixed and 15% Real Assets	Asset Allocation (a)	Projected Return (b)	(a) * (b)
Equity (50%)	**50%**	**7.5%**	**3.8%**
Fixed Income (35%):			
- U.S. (Barclays Agg.)	35%	3.0%	1.1%
Real Assets (15%):			
- Real Estate	5%	6.0%	0.3%
- TIPS	10%	3.0%	0.3%
	100%		5.4%
Excess Return Expectation (50 bps)			*0.5%*
Long Term Return Adjustment			0.5%
	PROJECTED RETURN		**6.4%**

Optional Example: - Up to 5% BND CD's	Asset Allocation (a)	Projected Return (b)	(a) * (b)
Equity (50%)	50%	7.5%	3.8%
Fixed Income (35%):			
- U.S. (Barclays Agg.)	13%	3.0%	0.4%
- U.S. (Securitized)	3%	3.0%	0.1%
- U.S. (Bar. Gov/Cred)	5%	3.5%	0.2%
- U.S. (Bar. Cred. Baa)	9%	4.0%	0.4%
- BND CD's (Min. 2%)	**5%**	**1.8%**	**0.1%**
Real Assets (15%):			
- Real Estate	5%	6.0%	0.3%
- TIPS	10%	3.0%	0.3%
	100%		5.5%
Excess Return Expectation (50 bps)			*0.5%*
Long Term Return Adjustment			0.5%
	PROJECTED RETURN		**6.5%**

BND Match Loan CD Program Background:

BND has a strong desire to maintain the CD Program which provides reduced cost financing to companies seeking to develop new businesses in North Dakota. RIO notes this economic development program has been in place for over 20 years although the funding source has migrated among various funds overseen by the SIB. **Given the nature and size of the $3.7 billion Legacy Fund, RIO views the Legacy Fund as a better funding alternative given that one can make a case that both programs are intended to create or preserve intergenerational wealth for North Dakota's citizens.** In contrast, the BSF serves as a reserve fund with a greater demand for increased liquidity during periods of economic stress.

There are $84 million of CD's outstanding within the $580 million BSF as of May 20, 2016.

	NOTE NUMBER	APP DATE	COMMIT DATE	DATE FUNDED	CURRENT RATE	MATURITY DATE	TOTAL BND LOAN AMOUNT	CURRENT BND CD BALANCE	RATE STRUCTURE	TOTAL PROJECT
1	131000010000			02/08/93	PAID	06/01/03	$4,500,000	$0	PAID	$5,000,000
2	131000200000			02/23/94	PAID	02/23/09	$12,000,000	$0	PAID	$14,500,000
3	131000300000			12/27/96	PAID	01/01/12	$6,600,000	$0	PAID	$20,000,000
4	131000040000			01/29/98	PAID	02/01/13	$3,200,000	$0	PAID	$7,500,000
5	131000500000			07/29/98	PAID	09/30/08	$12,000,000	$0	PAID	$20,492,000
6	131000600000			06/28/99	PAID	06/15/11	$18,000,000	$0	PAID	$18,000,000
7	131000700000	03/02/01	03/27/01	05/16/01	PAID	05/16/11	$4,000,000	$0	PAID	$14,500,000
8	120000860000	11/14/01	11/21/01	12/13/01	PAID	12/01/06	$406,000	$0	PAID	$406,000
9	**131000900000**	**05/14/01**	**05/24/01**	**01/17/02**	**5.43%**	**01/31/17**	**$4,600,000**	**$306,667**	**15 YR.FIXED**	**$4,600,000**
10	131001000000	09/19/01	11/21/01	05/13/02	PAID	04/10/15	$3,300,000	$0	PAID	$3,250,000
11	131001100000	03/22/00	04/05/00	12/03/02	PAID	12/03/22	$5,310,000	$0	PAID	$10,100,000
12	**131000901000**	**03/13/03**	**03/26/03**	**10/01/03**	**4.55%**	**10/01/18**	**$825,000**	**$165,000**	**15 YR.FIXED**	**$825,000**
13	**131000902001**	**04/05/04**	**04/23/04**	**05/10/04**	**4.65%**	**09/15/19**	**$5,000,000**	**$1,333,333**	**15 YR.FIXED**	**$5,000,000**
14	**131001200000**	**06/28/04**	**07/15/04**	**07/19/04**	**5.03%**	**07/01/19**	**$15,000,000**	**$4,000,000**	**15 YR.FIXED**	**$15,000,000**
15	**131001300000**	**09/06/05**	**09/30/05**	**01/13/06**	**4.60%**	**05/01/21**	**$2,500,000**	**$833,333**	**15 YR.FIXED**	**$12,000,000**
16	131001400000	01/09/06	01/20/06	04/13/06	PAID	04/13/16	$17,115,000	$0	PAID	$40,000,000
17	**131000903000**	**05/22/06**	**05/22/06**	**06/20/06**	**5.13%**	**06/20/17**	**$5,000,000**	**$909,095**	**11 YR.FIXED**	**$7,000,000**
18	**131001500000**	**08/01/06**	**08/17/06**	**09/15/06**	**4.80%**	**09/30/17**	**$7,100,000**	**$1,290,905**	**11 YR.FIXED**	**$7,443,383**
19	**131001600000**	**02/12/07**	**03/20/07**	**05/30/07**	**5.07%**	**06/01/27**	**$25,000,000**	**$15,000,000**	**20 YR FIXED**	**$100,000,000**
20	**131001601000**	**03/06/08**	**03/25/08**	**10/17/08**	**4.42%**	**12/10/28**	**$15,000,000**	**$9,750,000**	**20 YR FIXED**	**$20,500,000**
21	**131000904000**	**03/11/08**	**04/20/08**	**06/18/08**	**4.20%**	**06/18/18**	**$2,300,000**	**$690,000**	**10 YR FIXED**	**$2,300,000**
22	**131001700000**	**04/11/08**	**05/22/08**	**09/12/08**	**1.7100%**	**07/01/23**	**$25,000,000**	**$13,333,333**	**5 YR FIXED**	**$287,000,000**
23	**131001800000**	**05/24/12**	**05/24/12**	**05/31/12**	**0.7600%**	**05/31/27**	**$15,000,000**	**$12,000,000**	**5 YR FIXED**	**$61,300,000**
24	**131001900000**	**01/01/13**	**02/20/13**	**04/22/13**	**0.71%**	**04/28/23**	**$30,000,000**	**$21,000,000**	**5 YR FIXED**	**$300,000,000**
25	**131002000000**	**01/08/13**	**01/30/13**	**06/25/14**	**1.7200%**	**06/25/29**	**$4,000,000**	**$3,733,333**	**5 YR FIXED**	**$12,800,000**
			Wtd. Average Rate		**2.59%**		**$242,756,000**	**$84,344,999**		**$989,516,383**

BND has issued 25 CD's over the past 20 years in connection with nearly $1 billion of "Total Project" developments. Although the rates and terms have varied considerably since inception, BND has generally issued 5-year fixed rate CD's post 2008 with the average interest rate declining materially during this time period.

Advisory Board Background:

The Legacy and Budget Stabilization Funds Advisory Board (Advisory Board) is charged by law under Section 21-10-11 with the responsibility of recommending policies on investment goals and asset allocation of the legacy and budget stabilization funds. The SIB is charged with implementing policies and asset allocation and investing the assets of both funds.

BND CD Program Performance within the Budget Stabilization Fund – March 31, 2016:

The BND CD Program has been the best performing investment within the BSF over the last five years generating a 3.33% return while the Short Term Fixed Income portfolio posted a 1.46% return during this same period. BND's strong performance is due to most of the CD rates being set at a fixed rate during a period of higher rates. As a result, the BND CD Program locked in rates several years ago when they were above current market rates.

Five Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
BND CDs	22%	19%	3.33%	0.87%	0.54%	0.13%	0.67%
Short Term Fixed Income	75%	70%	1.46%	0.48%	0.75%	(0.09%)	0.65%
Cash & Equivalents	3%	12%	0.13%	0.08%	0.00%	0.00%	0.00%
Total			**1.92%** =	**0.59%** +	**1.29%** +	**0.04%**	**1.33%**

During the past year, the CD Program has continued to outperform other Short-Term Fixed Income investments although the level of the outperformance has declined as older CD's bearing higher interest rates have been replaced with CD's bearing lower interest rates given the current rate environment.

One Year Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
BND CDs	16%	16%	2.63%	1.97%	0.11%	(0.00%)	0.11%
Short Term Fixed Income	82%	82%	1.30%	0.93%	0.31%	(0.00%)	0.31%
Cash & Equivalents	2%	2%	0.06%	0.12%	(0.00%)	(0.00%)	(0.00%)
Total			**1.49%** =	**1.08%** +	**0.41%** +	**(0.00%)**	**0.41%**

Note: The following 12 pages contain supporting documentation and reference materials including S&P's "Research Update" for BND, North Dakota Century Code Chapter 21-10 (on the State Investment Board) and the current Legacy Fund Investment Policy Statement.

Legacy Fund's Expected Risk Profile:

BASE CASE 50% Equity / 35% Fixed and 15% Real Assets	Asset Allocation (a)	Projected Risk (b)	(a) * (b)
Equity	50%	20%	10.0%
Fixed Income (35%):			
- U.S. (Barclays Agg.)	35%	3.8%	1.3%
Real Assets:			
- Real Estate	5%	16.5%	0.8%
- TIPS	10%	5.3%	0.5%
	EXPECTED RISK		**12.7%**

Optional Example: - Up to 5% BND CD's	Asset Allocation (a)	Projected Risk (b)	(a) * (b)
Equity	50%	20%	10.0%
Fixed Income:			
- U.S. (Barclays Agg.)	13%	3.8%	0.5%
- U.S. (Securitized)	3%	3.0%	0.1%
- U.S. (Bar. Gov/Cred)	5%	4.3%	0.2%
- U.S. (Bar. Cred. Baa)	9%	5.5%	0.5%
- BND CD's (Min. 2%)	5%	3.5%	0.2%
Real Assets:			
- Real Estate	5%	16.5%	0.8%
- TIPS	10%	5.3%	0.5%
	EXPECTED RISK		**12.8%**

Research Update:

Bank of North Dakota Ratings Lowered To 'A+/A-1' Following The Recent Downgrade Of The State; Outlook Stable

Overview

- On Feb. 18, 2016, Standard & Poor's Ratings Services downgraded the state of North Dakota to 'AA+' from 'AAA' based on increased volatility in the state's economy and projected revenue shortfall for the 2015-2017 biennium. The outlook on the state is stable.
- Given the links between the state and the bank, we are lowering our issuer credit ratings on the Bank of North Dakota (BND) to 'A+/A-1' from 'AA-/A-1+' and our deposit rating to 'AA' from 'AA+' as per our government-related entities (GRE) criteria. We also affirmed our short-term deposit rating at 'A-1+'.
- We maintained our stand-alone credit profile on the bank at 'a', primarily reflecting our expectation that, although asset quality could deteriorate somewhat from very robust levels, BND's very strong capital base continues to serve as a bulwark against the uncertainties related to the energy and agricultural sectors.
- The rating outlook is stable, reflecting the link between the bank and the current ratings on the state of North Dakota.

Rating Action

On Feb. 19, 2016, Standard & Poor's Ratings Services lowered its issuer credit ratings on the Bank of North Dakota to 'A+/A-1' from 'AA-/A-1+' and its deposit rating to 'AA' from 'AA+'. The rating outlook is stable.

We also affirmed our short-term deposit rating at 'A-1+', and we maintained our stand-alone credit profile (SACP) at 'a'.

Rationale

The rating action on BND follows the recent downgrade of the state of North Dakota to 'AA+' from 'AAA' (see "North Dakota Issuer Credit Rating Lowered To 'AA+' On Economic Volatility, Projected Revenue Shortfall," published Feb. 18, 2016, on RatingsDirect). As a state-run financial institution, the bank participates in activities that broadly promote commerce, agriculture, and industry in North Dakota. Our ratings on the bank reflect our assessment of the likelihood of extraordinary support from the state to the bank, which we view as high based on our assessment of a very strong link and important role. As a result of the lower rating on the state, we now include only one notch of

uplift from the bank's 'a' SACP.

On Sept. 22, 2015, we lowered our SACP on BND to 'a', reflecting our view of BND's relatively high direct and indirect exposures to the inherent volatility of commodities prices because of the company's attachment to the North Dakota economy. More specifically, we believe the weaknesses in the energy sector could hurt the bank's operating conditions over the next few years, particularly if oil prices were to remain low for a prolonged period of time. We continue to monitor the interdependencies with the state, including the bank's deposit inflows, capital position, asset quality, liquidity, and profitability.

The downgrade of the state also affected the deposit rating, which benefits from a statutory guarantee provided by the state. Our deposit rating incorporates our view of a very strong link between the state and the bank's deposits and their critical role, resulting in an extremely high likelihood of support (for more details, see "Bank of North Dakota," published on Oct. 14, 2015). Our 'AA' rating on the bank's deposits now includes three notches of uplift from the SACP.

Outlook

The stable outlook reflects Standard & Poor's view that the link between the bank and the current ratings on the state of North Dakota support the issuer credit and deposit ratings on BND. Given these linkages, a two-notch reduction in the SACP would still not affect the issuer credit ratings or the deposit ratings (refer to table 10 of the GRE criteria for more details).

We could lower the SACP if the state's economy weakens further than we anticipated, if capital appropriations by the state increase by more than we currently expect--enough to impair BND's capital profile such that the risk-adjusted capital ratio remains below the 15% threshold on a consistent basis--or if the bank's asset quality deteriorates significantly. We are unlikely to raise the SACP in the near term given the cyclicality of the state's revenue base and the interdependencies between the state and BND.

We could lower the ratings on the bank's deposits if we lowered the state rating by one notch to 'AA', and we could lower the issuer credit ratings should we downgrade the state by more than two notches.

Ratings Score Snapshot

Issuer Credit Rating	A+/Stable/A-1
SACP	a

Anchor	bbb+
Business Position	Adequate (0)
Capital and Earnings	Very Strong (+2)
Risk Position	Adequate (0)
Funding and Liquidity	Above Average and Adequate (0)
Support	+1
GRE Support	+1
Group Support	0
Sovereign Support	0
Additional Factors	0

Related Criteria And Research

Related Criteria

- Rating Government-Related Entities: Methodology And Assumptions, March 25, 2015
- Bank Hybrid Capital And Nondeferrable Subordinated Debt Methodology And Assumptions, Jan. 29, 2015
- Group Rating Methodology, Nov. 19, 2013
- Quantitative Metrics For Rating Banks Globally: Methodology And Assumptions, July 17, 2013
- Methodology For Linking Short-Term And Long-Term Ratings For Corporate, Insurance, And Sovereign Issuers, May 7, 2013
- Revised Market Risk Charges For Banks In Our Risk-Adjusted Capital Framework, June 22, 2012
- Banking Industry Country Risk Assessment Methodology And Assumptions, Nov. 9, 2011
- Banks: Rating Methodology And Assumptions, Nov. 9, 2011
- Bank Capital Methodology And Assumptions, Dec. 6, 2010
- Commercial Paper I: Banks, March 23, 2004

Related Research

- North Dakota Issuer Credit Rating Lowered To 'AA+' On Economic Volatility, Projected Revenue Shortfall, Feb. 18, 2016

Ratings List

Downgraded

	To	From
Bank of North Dakota		
Issuer Credit Rating	A+/Stable/A-1	AA-/Stable/A-1+
Certificate Of Deposit	AA/A-1+	AA+/A-1+

Certain terms used in this report, particularly certain adjectives used to

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express our view on rating relevant factors, have specific meanings ascribed to them in our criteria, and should therefore be read in conjunction with such criteria. Please see Ratings Criteria at www.standardandpoors.com for further information. Complete ratings information is available to subscribers of RatingsDirect at www.globalcreditportal.com and at www.spcapitaliq.com. All ratings affected by this rating action can be found on Standard & Poor's public Web site at www.standardandpoors.com. Use the Ratings search box located in the left column.

CHAPTER 21-10
STATE INVESTMENT BOARD

21-10-01. State investment board - Membership - Term - Compensation - Advisory council.

1. The North Dakota state investment board consists of the governor, the state treasurer, the commissioner of university and school lands, the director of workforce safety and insurance, the insurance commissioner, three members of the teachers' fund for retirement board or the board's designees who need not be members of the fund as selected by that board, two of the elected members of the public employees retirement system board as selected by that board, and one member of the public employees retirement system board as selected by that board. The director of workforce safety and insurance may appoint a designee, subject to approval by the workforce safety and insurance board of directors, to attend the meetings, participate, and vote when the director is unable to attend. The teachers' fund for retirement board may appoint an alternate designee with full voting privileges to attend meetings of the state investment board when a selected member is unable to attend. The public employees retirement system board may appoint an alternate designee with full voting privileges from the public employees retirement system board to attend meetings of the state investment board when a selected member is unable to attend. The members of the state investment board, except elected and appointed officials and the director of workforce safety and insurance or the director's designee, are entitled to receive as compensation one hundred forty-eight dollars per day and necessary mileage and travel expenses as provided in sections 44-08-04 and 54-06-09 for attending meetings of the state investment board.
2. The state investment board may establish an advisory council composed of individuals who are experienced and knowledgeable in the field of investments. The state investment board shall determine the responsibilities of the advisory council. Members of the advisory council are entitled to receive the same compensation as provided the members of the advisory board of the Bank of North Dakota and necessary mileage and travel expenses as provided in sections 44-08-04 and 54-06-09.

21-10-02. Board - Powers and duties.

The board is charged with the investment of the funds enumerated in section 21-10-06. It shall approve general types of securities for investment by these funds and set policies and procedures regulating securities transactions on behalf of the various funds. Representatives of the funds enumerated in section 21-10-06 may make recommendations to the board in regard to investments. The board or its designated agents must be custodian of securities purchased on behalf of funds under the management of the board. The board may appoint an investment director or advisory service, or both, who must be experienced in, and hold considerable knowledge of, the field of investments. The investment director or advisory service shall serve at the pleasure of the board. The investment director or advisory service may be an individual, corporation, limited liability company, partnership, or any legal entity which meets the qualifications established herein. The board may authorize the investment director to lend securities held by the funds. These securities must be collateralized as directed by the board. The board may create investment fund pools in which the funds identified in section 21-10-06 may invest.

21-10-02.1. Board - Policies on investment goals and objectives and asset allocation.

1. The governing body of each fund enumerated in section 21-10-06 shall establish policies on investment goals and objectives and asset allocation for each respective fund. The policies must provide for:
   a. The definition and assignment of duties and responsibilities to advisory services and persons employed by the board.

b. Rate of return objectives, including liquidity requirements and acceptable levels of risk.
c. Long-range asset allocation goals.
d. Guidelines for the selection and redemption of investments.
e. Investment diversification, investment quality, qualification of advisory services, and amounts to be invested by advisory services.
f. The type of reports and procedures to be used in evaluating performance.

2. The asset allocation and any subsequent allocation changes for each fund must be approved by the governing body of that fund and the state investment board. The governing body of each fund shall use the staff and consultants of the retirement and investment office in developing asset allocation and investment policies.

21-10-03. Cooperation with Bank of North Dakota.
Repealed by S.L. 1987, ch. 190, § 14.

21-10-04. Board - Meetings.
The state investment board shall select one of its members to serve as chair, one to serve as vice chair, and shall meet at the call of the chair or upon written notice signed by two members of the board.

21-10-05. Investment director - Powers and duties.
Subject to the limitations contained in the law or the policymaking regulations or resolutions adopted by the board, the investment director may sign and execute all contracts and agreements to make purchases, sales, exchanges, investments, and reinvestments relating to the funds under the management of the board. This section is a continuing appropriation of all moneys required for the making of investments of funds under the management of the board. The investment director shall see that moneys invested are at all times handled in the best interests of the funds. Securities or investments may be sold or exchanged for other securities or investments.

The investment director shall formulate and recommend to the investment board for approval investment regulations or resolutions pertaining to the kind or nature of investments and limitations, conditions, and restrictions upon the methods, practices, or procedures for investment, reinvestment, purchase, sale, or exchange transactions that should govern the investment of funds under this chapter.

21-10-06. Funds under management of board - Accounts.

1. Subject to the provisions of section 21-10-02, the board shall invest the following funds:
   a. State bonding fund.
   b. Teachers' fund for retirement.
   c. State fire and tornado fund.
   d. Workforce safety and insurance fund.
   e. Public employees retirement system.
   f. Insurance regulatory trust fund.
   g. State risk management fund.
   h. Budget stabilization fund.
   i. Health care trust fund.
   j. Cultural endowment fund.
   k. Petroleum tank release compensation fund.
   l. Legacy fund.
   m. A fund under contract with the board pursuant to subsection 3.
2. Separate accounting must be maintained for each of the funds listed in subsection 1. The moneys of the individual funds may be commingled for investment purposes when determined advantageous.

3. The state investment board may provide investment services to, and manage the money of, any agency, institution, or political subdivision of the state, subject to agreement with the industrial commission. The scope of services to be provided by the state investment board to the agency, institution, or political subdivision must be specified in a written contract. The state investment board may charge a fee for providing investment services and any revenue collected must be deposited in the state retirement and investment fund.

21-10-06.1. Board - Investment reports.

The board shall annually prepare reports on the investment performance of each fund under its control. The reports must be uniform and must include:

1. A list of the advisory services managing investments for the board.
2. A list of investments at market value, compared to previous reporting period, of each fund managed by each advisory service.
3. Earnings, percentage earned, and change in market value of each fund's investments.
4. Comparison of the performance of each fund managed by each advisory service to other funds under the board's control and to generally accepted market indicators.

21-10-06.2. Investment costs.

The amounts necessary to pay for investment costs, such as investment counseling fees, trustee fees, custodial fees, performance measurement fees, expenses associated with money manager searches, expenses associated with onsite audits and reviews of investment managers, and asset allocation expenses, incurred by the state investment board are hereby appropriated and must be paid directly out of the funds listed in section 21-10-06 by the fund incurring the expense.

21-10-07. Legal investments.

The state investment board shall apply the prudent investor rule in investing for funds under its supervision. The "prudent investor rule" means that in making investments the fiduciaries shall exercise the judgment and care, under the circumstances then prevailing, that an institutional investor of ordinary prudence, discretion, and intelligence exercises in the management of large investments entrusted to it, not in regard to speculation but in regard to the permanent disposition of funds, considering probable safety of capital as well as probable income. The retirement funds belonging to the teachers' fund for retirement and the public employees retirement system must be invested exclusively for the benefit of their members and in accordance with the respective funds' investment goals and objectives.

21-10-08. Reserves - Percentage limitations.

In order to meet claims and liabilities, reserves must be established and maintained in each of the funds in accordance with the investment policy and asset allocation established for each fund.

21-10-09. Personal profit prohibited - Penalty.

No member, officer, agent, or employee of the state investment board may profit in any manner from transactions on behalf of the funds. Any person violating any of the provisions of this section is guilty of a class A misdemeanor.

21-10-10. State investment board fund - Cost of operation of board.

Repealed by S.L. 1989, ch. 667, § 13.

21-10-11. Legacy and budget stabilization fund advisory board.

The legacy and budget stabilization fund advisory board is created to develop recommendations for the investment of funds in the legacy fund and the budget stabilization fund to present to the state investment board. The goal of investment for the legacy fund is principal preservation while maximizing total return. The board consists of two members of the

senate appointed by the senate majority leader, two members of the house of representatives appointed by the house majority leader, the director of the office of management and budget or designee, the president of the Bank of North Dakota or designee, and the tax commissioner or designee. The board shall select a chairman and must meet at the call of the chairman. The board shall report at least semiannually to the budget section. Legislative members are entitled to receive compensation and expense reimbursement as provided under section 54-03-20 and reimbursement for mileage as provided by law for state officers. The legislative council shall pay the compensation and expense reimbursement for the legislative members. The legislative council shall provide staff services to the legacy and budget stabilization fund advisory board. The staff and consultants of the state retirement and investment office shall advise the board in developing asset allocation and investment policies.

21-10-12. Legacy fund - Earnings defined.

For the purposes of section 26 of article X of the Constitution of North Dakota, the term "earnings" means net income in accordance with generally accepted accounting principles, excluding any unrealized gains or losses.

NORTH DAKOTA LEGACY FUND

INVESTMENT POLICY STATEMENT

1. PLAN CHARACTERISTICS AND FUND CONSTRAINTS

The North Dakota legacy fund was created in 2010 when the voters of North Dakota approved a constitutional amendment--now Article X, Section 26, of the Constitution of North Dakota--to provide that 30 percent of oil and gas gross production and oil extraction taxes on oil and gas produced after June 30, 2011, be transferred to the legacy fund. The principal and earnings of the legacy fund may not be spent until after June 30, 2017, and any expenditure of principal after that date requires a vote of at least two-thirds of the members elected to each house of the Legislative Assembly. Not more than 15 percent of the principal of the legacy fund may be spent during a biennium. The Legislative Assembly may transfer funds from any source to the legacy fund, and such transfers become part of the principal of the fund. The State Investment Board (SIB) is responsible for investment of the principal of the legacy fund. Interest earnings accruing after June 30, 2017, are transferred to the general fund at the end of each biennium. North Dakota Century Code Section 21-10-11 provides that the goal of investment for the legacy fund is principal preservation while maximizing total return.

2. FUND MISSION

The legacy fund was created, in part, due to the recognition that state revenue from the oil and gas industry will be derived over a finite timeframe. The legacy fund defers the recognition of 30 percent of this revenue for the benefit of future generations. The primary mission of the legacy fund is to preserve the real inflation-adjusted purchasing power of the money deposited into the fund while maximizing total return.

3. RESPONSIBILITIES AND DISCRETION OF THE STATE INVESTMENT BOARD

The Legacy and Budget Stabilization Fund Advisory Board (the board) is charged by law under Section 21-10-11 with the responsibility of recommending policies on investment goals and asset allocation of the legacy fund. The SIB is charged with implementing policies and asset allocation and investing the assets of the legacy fund in the manner provided in Section 21-10-07--the prudent institutional investor rule. The fiduciaries shall exercise the judgment and care, under the circumstances then prevailing, that an institutional investor of ordinary prudence, discretion, and intelligence exercises in the management of large investments entrusted to it, not in regard to speculation but in regard to the permanent disposition of funds, considering probable safety of capital as well as probable income.

Management responsibility for the investment program not assigned to the SIB in Chapter 21-10 is hereby delegated to the SIB, which must establish written policies for the operation of the investment program consistent with this investment policy.

The SIB may delegate investment responsibility to professional money managers, which are also required to employ investment strategies consistent with the investment policy. Where a money manager has been retained, the SIB's role in determining investment strategy and security selection is supervisory not advisory.

At the discretion of the SIB, the fund’s assets may be pooled with other funds. In pooling funds, the SIB may establish whatever asset class pools it deems necessary with specific quality, diversification, restrictions, and performance objectives appropriate to the prudent investor rule and the objectives of the funds participating in the pool.

The SIB is responsible for establishing criteria, procedures, and making decisions with respect to hiring, retaining, and terminating money managers. The SIB investment responsibility also includes selecting performance measurement services, consultants, report formats, and frequency of meetings with managers.

The SIB shall notify the board within 30 days of any substantial or notable changes in money managers; performance measurement services; and consultants, including hiring or terminating a money manager, performance measurement service, or a consultant.

The SIB, after consultation with the board, will implement necessary changes to this policy in an efficient and prudent manner.

4. RISK TOLERANCE

The board's risk tolerance with respect to the primary aspect of the legacy fund's mission is low. The board is unwilling to undertake investment strategies that might jeopardize the ability of the legacy fund to maintain principal value over time. The board recognizes that the plan will evolve as the legacy fund matures and economic conditions and opportunities change.

5. INVESTMENT OBJECTIVES

The board's investment objectives are expressed in terms of reward and risk expectations relative to investable, passive benchmarks. The legacy fund's policy benchmark is comprised of policy mix weights of appropriate asset class benchmarks as set by the SIB:

a. The legacy fund's rate of return, net of fees and expenses, should at least match that of the policy benchmark over a minimum evaluation period of five years.

b. The legacy fund's risk, measured by the standard deviation of net returns, should not exceed 115 percent of the policy benchmark over a minimum evaluation period of five years.

c. The risk-adjusted performance of the legacy fund, net of fees and expenses, should at least match that of the policy benchmark over a minimum evaluation period of five years.

6. POLICY ASSET MIX

After consideration of all the inputs and a discussion of its own collective risk tolerance, the board approves the following policy asset mix for the legacy fund as of April 2, 2013:

Asset Class	Policy Target Percentage
Broad US Equity	**30%**
Broad International Equity	**20%**
Fixed Income	**35%**
Core Real Estate	**5%**
Diversified Real Assets	**10%**

Rebalancing of the fund to this target will be done in accordance with the SIB's rebalancing policy, but not less than annually. The SIB approved an 18-month implementation strategy which began in August of 2013. The stated allocation is expected to be fully implemented in January of 2015.

7. RESTRICTIONS

While the SIB is responsible for establishing specific quality, diversification, restrictions, and performance objectives for the investment vehicles in which the legacy fund's assets will be invested, it is understood that:

a. Futures and options may be used to hedge or replicate underlying index exposure, but not for speculation.

b. Derivatives use will be monitored to ensure that undue risks are not taken by the money managers.

c. No transaction may be made that would threaten the tax-exempt status of the legacy fund.

d. All assets will be held in custody by the SIB's master custodian or such other custodians as are acceptable to the SIB.

e. No unhedged short sales or speculative margin purchases may be made.

f. Social investing is prohibited unless it meets the exclusive benefit rule, and it can be substantiated that the investment provides an equivalent or superior rate of return for a similar investment with a similar time horizon and similar risk. For the purpose of this document, social investing is defined as the consideration of socially responsible criteria in the investment or commitment of public fund money for the purpose of obtaining an effect other than a maximized return to the Fund.

g. Economically targeted investing is prohibited unless the investment meets the exclusive benefit rule.

For the purpose of this document, economically targeted investment is defined as an investment designed to produce a competitive rate of return commensurate with risk involved as well as to create collateral economic benefits for a targeted geographic area, group of people, or sector of the economy.

Also, for the purpose of this document, the exclusive benefit rule is met if the following four conditions are satisfied:

- **The cost does not exceed the fair market value at the time of investment.**
- **The investment provides the legacy fund with an equivalent or superior rate of return for a similar investment with a similar time horizon and similar risk.**
- **Sufficient liquidity is maintained in the legacy fund to permit distributions in accordance with the terms of the plan.**
- **The safeguards and diversity that a prudent investor would adhere to are present.**

Where investment characteristics, including yield, risk, and liquidity, are equivalent, the board's policy favors investments which will have a positive impact on the economy of North Dakota.

8. INTERNAL CONTROLS

A system of internal controls must be in place by the SIB to prevent losses of public funds arising from fraud or employee error. Such controls deemed most important are the separation of responsibilities for investment purchases from the recording of investment activity, custodial safekeeping, written confirmation of investment transactions, and established criteria for investment manager selection and monitoring. The annual financial audit must include a comprehensive review of the portfolio, accounting procedures for security transactions, and compliance with the investment policy.

9. EVALUATION AND REVIEW

Investment management of the legacy fund will be evaluated against the fund's investment objectives and investment performance standards. Emphasis will be placed on 5-year and 10-year results. Evaluation should include an assessment of the continued feasibility of achieving the investment objectives and the appropriateness of the investment policy statement for achieving those objectives.

Performance reports will be provided to the board periodically, but not less than quarterly. Such reports will include asset returns and allocation data. Additionally, not less than annually, reports will include information regarding all significant and/or material matters and changes pertaining to the investment of the legacy fund, including:

- Changes in asset class portfolio structures, tactical approaches, and market values.
- Loss of principal, if any.
- Management costs associated with various types of investments.
- All material legal or legislative proceedings affecting the SIB.
- Compliance with this investment policy statement.
- An evaluation of the national economic climate.
- A forecast of the expected economic opportunities and dangers.
- Management of risk by the SIB.

In addition to the quarterly and annual evaluation and review process, the SIB shall notify the board within 30 days of any substantial or notable deviation from the normal management of the legacy fund, including any anomalies, notable losses, gains, or liquidation of assets affecting the fund.

AGENDA ITEM IV.A.

MEMO

To: State Investment Board

From: Dave Hunter, Executive Director / CIO

Date: May 20, 2016

RE: SIB Audit Committee Charter

The SIB Audit Committee Ms. Becky Dorwart, Ms. Karol Riedman, Ms. Cindy Ternes, Mr. Mike Sandal, and Mr. Mike Gessner approved the attached SIB Audit Committee Charter at their May 19, 2016, meeting. Legal counsel, Ms. Jan Murtha, also reviewed the Charter.

I would like to thank the Audit Committee, Ms. Miller Bowley, and Ms. Murtha for their work on bringing this updated Charter before the SIB for their consideration and acceptance. Per SIB Governance Policy B-6 Standing Committees, the Audit Committee must operate under the terms of a charter approved by the board.

CHARTER OF THE
AUDIT COMMITTEE OF THE
NORTH DAKOTA STATE INVESTMENT BOARD

PURPOSE

The Audit Committee (the Committee) is a standing committee of the North Dakota State Investment Board (SIB) created to fulfill its fiduciary oversight responsibilities of the North Dakota Retirement and Investment Office (RIO) and to serve as a communications link among the SIB, the RIO's management and Audit Services staff, independent auditors, and others.

The Committee will assist with the integrity of the RIO's financial reporting process and system of internal controls, the RIO's compliance with legal and regulatory requirements, the performance of the RIO's Audit Services function and independent auditors, and the RIO's management of risks in the Committee's areas of responsibility.

AUTHORITY

The Committee is authorized to provide oversight to the Audit Services function and the independent audit for the RIO. These activities provide assurance that RIO's financial condition and results of operations are accomplished in accordance with the RIO's policies and procedures and legal and regulatory requirements. The Committee may investigate any activity of the RIO and may retain persons as necessary from within or outside the RIO having special competence to assist the Committee in the accomplishment of its responsibilities.

The RIO's Supervisor of Audit Services will be the staff member reporting administratively to the Executive Director/Chief Investment Officer and functionally to the Committee.

The RIO's management will supervise the administrative activities of the Audit Services function and independent audit activities such as securing contracts, paying fees, maintaining official reports, and other appropriate activities.

COMPOSITION

The Committee will consist of five members, selected by and approved by the SIB. Three members of the Committee will represent the three groups on the SIB: Teachers' Fund for Retirement (TFFR) Board, Public Employees Retirement System (PERS) Board, and elected and appointed officials, and two members selected from outside of the SIB and the RIO. The SIB should select committee members who are both independent and financially literate.

Membership on the Committee will be for one year or termination of term on the SIB. Vacancies will be filled by the SIB at the first scheduled meeting following the vacancy. There will be no limit to the number of terms served on the Committee.

The Committee will elect a Chair, a Vice Chair, and a liaison. The Chair will preside at all meetings of the Committee. In the absence of the Chair, the Vice Chair will perform the duties of

the Chair. The liaison will report annually to the SIB on the results of the independent audit and at least four times a year to the SIB and TFFR board on the activities of the Committee and other pertinent information.

The Committee may form, and delegate authority to, subcommittees when it deems appropriate.

MEETINGS

The Committee will meet generally four times a year, with authority to convene additional meetings, as circumstances require or to adequately fulfill all the obligations and duties as outlined in this charter.

Meeting agendas will be prepared by the Supervisor of Audit Services and approved by the Committee Chair, unless otherwise directed by the Committee and will be provided to the Committee members along with briefing materials before the scheduled committee meeting.

Committee members are expected to attend each meeting, in person or via tele- or video-conference. The RIO's executive management and Supervisor of Audit Services and others necessary to provide information and to conduct business will attend meetings. The Committee may invite staff of the RIO, auditors or others to attend meetings, as necessary. The Committee may meet separately with the staff of the RIO, auditors and others. The Committee may, at its discretion, elect to meet without the presence of the RIO's executive management and/or Supervisor of Audit Services or others. The Committee may hold executive sessions as allowed under state law.

The Committee will act only on the affirmative vote of three of the committee members at a meeting. To conduct business, a quorum will be three members of the Committee. Should a quorum not be present before a scheduled meeting or during a meeting, the Chair will announce the absence of a quorum and the members will disburse. Meetings unable to transact business for lack of a quorum are not considered meetings. Meeting minutes will be prepared by the RIO, or as otherwise directed by the Committee. Approved meeting minutes of the Committee will be submitted to the SIB.

RESPONSIBILITIES

The RIO's management is responsible for financial and other reporting, internal controls, and compliance with laws, regulations, and ethics. The Committee has the responsibility to provide oversight in the areas of:

- the reliability and integrity of financial and operating information;
- compliance with policies, plans, procedures, pertinent laws and regulations;
- compliance with the Code of Conduct applicable to the SIB, TFFR Board, and RIO employees;
- safeguarding of assets;
- economical and efficient use of resources; and
- effectiveness of achieving desired results from operations.

To this end, the Committee will:

Independent Audit

- Review the independent auditors' proposed audit scope and approach, including coordination of audit effort with RIO's Audit Services staff and any developments in accounting principles and auditing standards that may affect either the financial statements or the audit.

- Meet with the independent auditors to discuss any matters that the Committee or auditors believe should be discussed privately (out of the presence of RIO's management and/or Audit Services staff, as appropriate) and review any restrictions on the audit work.

- Inquire as to any proposed changes in accounting or financial reporting procedures and of any unusual events that could impact the financial statements.

- Review the results of the financial statements report with the independent auditors and the RIO's management, prior to the release of the financial statements report to the SIB and other officials. This review will include the following, as applicable:

    - Any major problems encountered by the independent auditors and the resolution thereof;
    - The effect on the audit of any developments;
    - Any unresolved differences between the independent auditors and the RIO's management;
    - Any other significant comments or recommendations of the independent auditors or the RIO's management;
    - The adequacy of the RIO's internal accounting controls and accounting policies, procedures, and practices; and
    - Understand the scope of independent auditors' review of internal control over financial reporting, and obtain reports on significant findings and recommendations, together with the RIO's management responses.

- Consider the effectiveness of the RIO's internal control system, including information technology security and control.

- Consider whether the financial statements are complete, consistent with information known to committee members, and reflect appropriate accounting principles. This will include the following, as applicable:

    - The accuracy and completeness of the information in other sections of the annual report and related regulatory filings;
    - The significant accounting and reporting issues, including complex or unusual transactions and highly judgmental areas, and recent professional and regulatory pronouncements, and understand their impact on the financial statements; and

- All matters required to be communicated to the Committee under generally accepted auditing standards with the RIO's management and the independent auditors.

- Review non-audit services, if any, performed for the RIO by the independent auditors.

Audit Services

- Consider the effectiveness of the Audit Services function, within The Institute of Internal Auditors' *International Professional Practices Framework for Internal Auditing* consisting of the *Definition of Internal Auditing, Code of Ethics and the Standards.*

- Review with the RIO's management and the Supervisor of Audit Services the audit charter, activities, staffing, and organizational structure of Audit Services.

- Review and approve the annual work plan and all major changes to the plan.

- Meet with the RIO's Supervisor of Audit Services to discuss any matters that the Committee or Audit Services believes should be discussed privately (out of the presence of RIO's management and/or the independent auditors, as appropriate) and review any restrictions on the audit work.

- Participate with RIO's management in the appointment and annual evaluation of the Supervisor of Audit Services. Work with RIO's management on any changes in staffing, including the addition, termination, or replacement of auditors, and the approval of salary increases and/or promotions other than those authorized by the legislature.

Compliance

- Review compliance by TFFR participating employers as it relates to TFFR laws, rules and policies through the receipt of employer audit results.

- Review staff compliance with federal and state laws and North Dakota administrative code as applicable to RIO, the SIB and TFFR Board programs, and the process for communicating the code of conduct to the RIO's staff, and for monitoring compliance through the receipt of the audit results.

- Obtain updates from the RIO's management and legal counsel regarding compliance matters, as deemed necessary.

Reporting Responsibilities

- Report to the SIB about the Committee's activities, issues, and related recommendations.

- Provide a written report annually to the SIB, describing the Committee's composition, responsibilities and how they were discharged, and any other information required.

Other Responsibilities

- Make recommendations to the North Dakota State Auditor's Office, when appropriate, as it relates to selection, evaluation, and termination of independent auditors.

- Obtain the information and training needed to enhance the committee members' understanding of the role of Audit Services and the independent auditor, the risk management process, internal controls, and a certain level of familiarity in financial reporting standards and processes so the Committee may adequately oversee.

- Serve as an open avenue of communication among the SIB, the RIO's management and Audit Services, the independent auditors, and others.

- Serve as an appropriate confidential body for individuals to provide information on potentially fraudulent financial reporting or breaches of internal control.

- Inquire of management and Audit Services regarding the procedures in place for the prevention of illegal payments, conflicts of interest, or other questionable practices.

- Meet with the RIO's management to discuss any matters that the Committee or management believes should be discussed privately (out of the presence of Audit Services staff and/or the independent auditors, as appropriate) and review any restrictions on the audit work.

- Perform other activities related to this charter as requested by the SIB.

- Institute and oversee special investigations as needed.

- Review any other reports the RIO issues that relates to the Committee's responsibilities.

- Review and assess the adequacy of the Committee charter annually, requesting the SIB approval for proposed changes.

- Confirm annually the review of all responsibilities outlined in this charter.

DATE OF CREATION OF COMMITTEE AMENDMENTS: December 14, 1993
DATE AUDIT COMMITTEE CHARTER ADOPTED AND APPROVED: June 24, 1994

REVISED: November 22, 1996, February 13, 1997, November 6, 2001, May 19, 2006, May 18, 2007, June 26, 2009, May 19, 2016.

Performance Evaluation
Mr. David Hunter, Executive Director/Chief Investment Officer
May 27, 2016

Pursuant to State Investment Board Governance Policy, a performance evaluation of the Executive Director/ Chief Investment Officer was conducted. The assessment consisted of a survey document involving all members of the State Investment Board (SIB). The survey encompassed an assessment of SIB Governance Ends Policy (D-3, D-4), Executive Limitation Policies (A-2, A-3, A-4, A-5, A-6, and A-7), and focused on 6 additional categories including board meetings, board relations, office operations, investment programs, public/legislative relations, and professional skills and development. The survey used a scale from 1-3 (1- Does Not Meet Expectations, 2- Meets Expectations, and 3- Exceeds Expectations). In addition to the survey, the performance evaluation included a review of the March 2016 Employee Opinion Survey conducted by Mr. Hunter and the 2016 Executive Director/CIO Effectiveness Survey conducted by the Retirement and Investment Office (RIO) Audit Services Division. Mr. Hunter also completed a self-assessment of his performance which was also considered.

The Executive Review Committee met on Wednesday, April 13 to review all surveys and discussed areas of strength and developmental opportunities for Mr. Hunter for the purpose of drafting a formal evaluation. The evaluation will be reviewed with Mr. Hunter and presented for final approval to the State Investment Board at the May 27, 2016 meeting.

Findings and Conclusions:

Of State Investment Board members completed the survey, a significant majority rated Mr. Hunter's performance as meeting or exceeding expectations in all categories of evaluation. Through Mr. Hunter's leadership, the RIO investment team continues to excel in their efforts to reduce investment fees. During the last two fiscal years, investment fees have been reduced from 65 basis points to 47 basis points resulting in over $17 million of ongoing annual savings. Through Mr. Hunter's leadership, and the prudent use of active management, the RIO investment team has generated over $100 million of incremental income over the past two years. The team's diligent monitoring of investment risk has resulted in positive excess returns in every pension trust portfolio for the 1, 2, and 3, year periods ending December 31, 2015 while adhering to prescribed risk levels as established by the SIB.

Mr. Hunter continues to provide the SIB with visionary and strategic recommendations as evidenced by the most recent review of the Board's timber and private equity mandates in addition to a thorough review of global equity and fixed income strategies. Through these efforts, Mr. Hunter has established a high degree of credibility with the SIB, Board Clients, the Legislature, and his integrity is apparent. Mr. Hunter effectively communicates complex issues in a manner that is easily understood, and he skillfully represents the SIB before the media and legislature.

The SIB acknowledges the efforts made by Mr. Hunter as it relates to office culture. As evidenced by the Effectiveness Survey conducted by the Audit Services Division, staff indicated confidence in Mr. Hunter and overwhelmingly agreed that he demonstrates integrity and sets an example for the team. Consistent with the prior year, Mr. Hunter received favorable responses in the area of valuing employees and that he shows genuine concern for the team and treats everyone with dignity and

respect. The survey also noted enhancements in communication within the Retirement and Investment Office.

Future Opportunities:

Mr. Hunter is encouraged to continue his efforts to develop staff relations within the Retirement and Investment Office. As evidenced by both the Effectiveness Survey and the Employee Opinion Survey, there have been significant advances in these areas. Mr. Hunter is encouraged to continue these efforts, focusing on organizational development, office culture, communication, and the development and professional growth of his team.

The State Investment Board, as fiduciaries of public funds, depends on the leadership and strategic vision of the Executive Director/CIO. Mr. Hunter should continue his established pattern of providing the SIB with independent analysis and recommendations from the RIO investment team. It is important to the SIB that in addition to the investment information and recommendations provided by consultants, that the analysis and recommendation of the SIB investment team also be considered.

Mr. Hunter should continue his enhanced efforts to provide SIB materials to members in advance of scheduled meetings. As fiduciaries it is important that board members have sufficient time to review materials in advance of meetings with timely updates when available.

Mr. Hunter is encouraged to continue his board education efforts. The SIB appreciates the training provided and looks forward to future opportunities focused on upcoming board decisions, self-assessment and individual needs.

Summary:

Mr. Hunter continues to provide the SIB with strong and trusted leadership and vision. Mr. Hunter has proven his ability to evaluate the needs of the SIB, board clients, and the NDRIO team, and he strives for continuous improvement in all areas. Mr. Hunter has the respect of his team, SIB, board clients, and the legislature. As importantly, Mr. Hunter continues to represent the SIB with unquestionable integrity. The SIB is very fortunate to have Mr. Hunter in the role of Executive Director/CIO.

Mr. David Hunter, State Investment Board ED/CIO — May 16, 2016 Date

Mr. Michael Sandal, Executive Review Committee Chair — 5/16/16 Date

Agenda Item IV.C.

SIB Meeting for May 27, 2016
Informational Only

Retirement and Investment Office: Investment Climate Update

Employee Benefits Program Committee

April 28, 2016

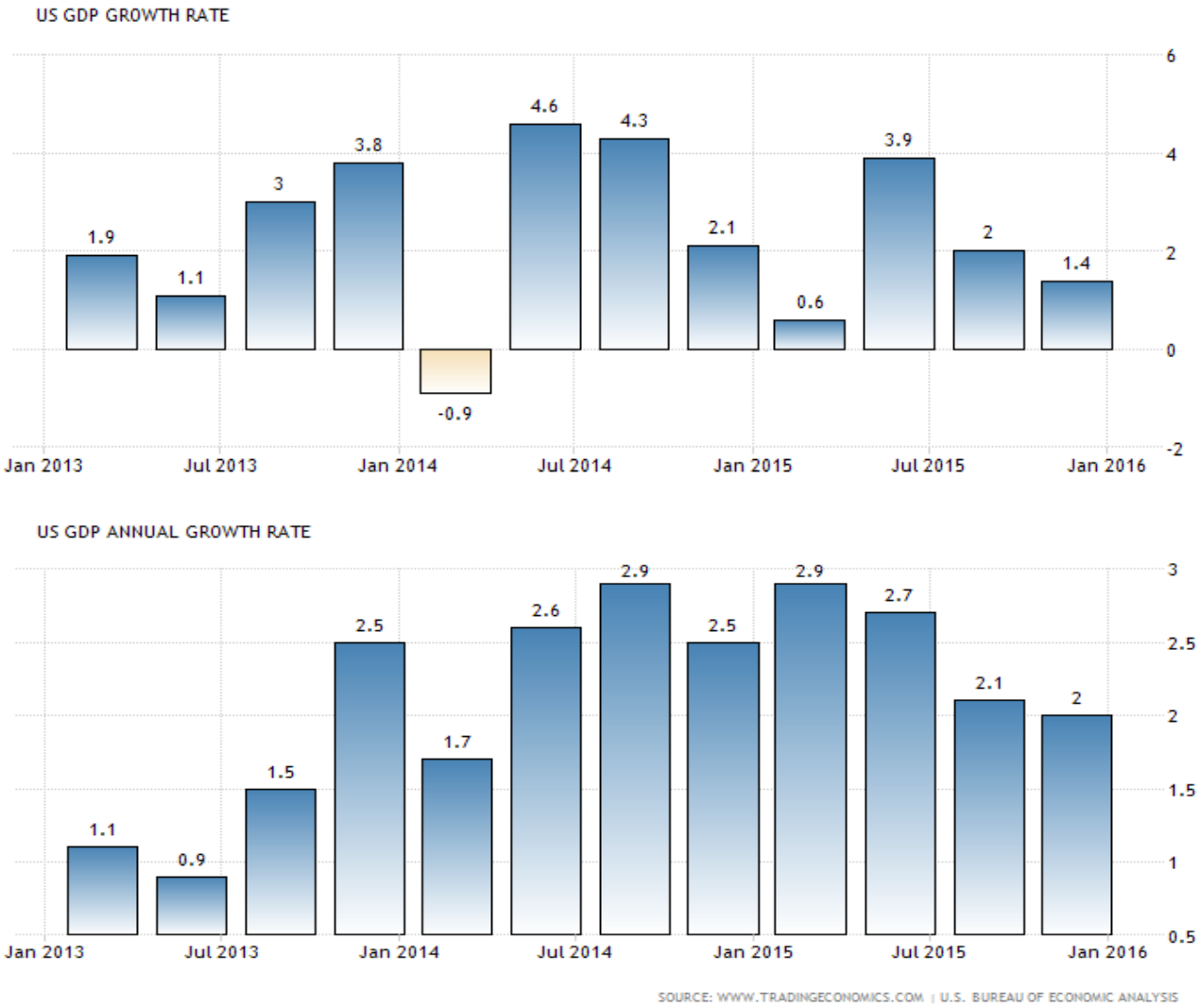
Darren Schulz, Deputy Chief Investment Officer

Dave Hunter, Executive Director / CIO

ND Retirement & Investment Office (RIO)

State Investment Board (SIB)

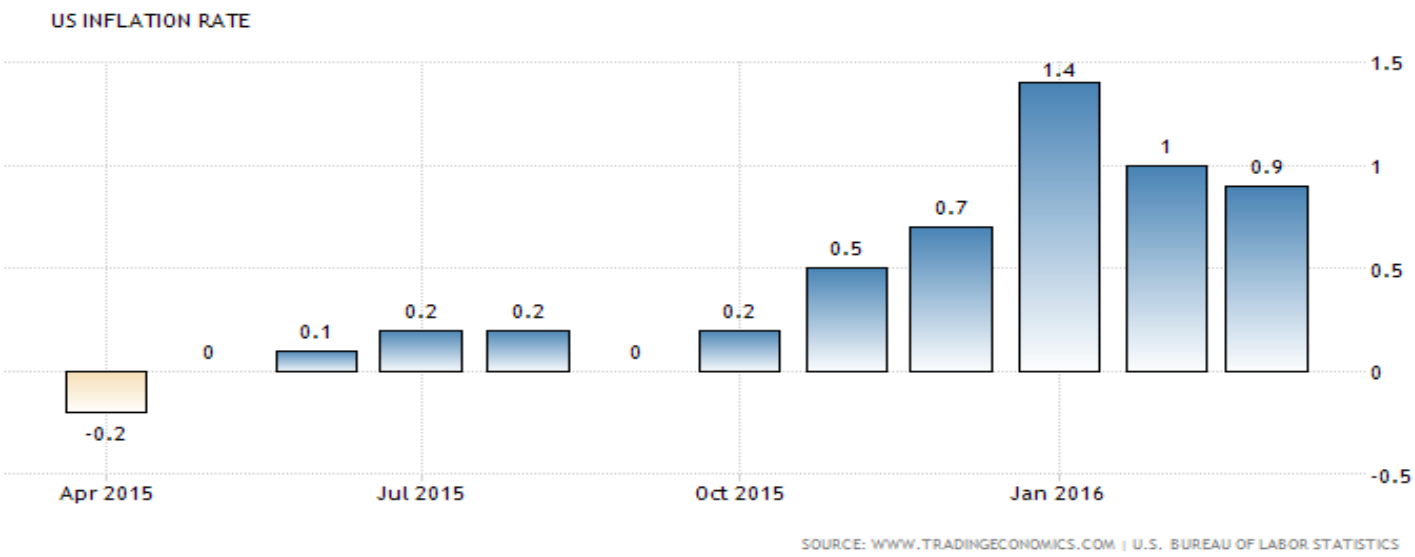
U.S. GDP "Annual" Growth Rates are Modest at 2%



- Quarterly GDP Growth Rates (top chart) have been volatile as evidenced by low or negative growth rates in the 1st quarter of recent years largely attributed to poor weather conditions.
- Annual GDP Growth Rates (bottom chart) minimize the impact of seasonal weather conditions and display a more consistent and moderate growth rate of about 2% over the past year.

Note: A recession is defined as two consecutive quarters of negative GDP growth.

U.S. Core Inflation Rates are Generally Trending Up



U.S. Core Inflation:

The U.S. core inflation rate (top chart) tracks changes in prices that consumers pay for a basket of goods which excludes volatile food and fuel costs.

U.S. Inflation Rate:

The unadjusted U.S. Consumer Price Index for All Urban Consumers (bottom chart) is based on the prices of a market basket of: food (14%), energy (9.3%), commodities (19.4%) and services (57.3%).

U.S Labor Market Conditions are Generally Improving

Overview:

U.S. Labor Market conditions have been steadily improving since the unemployment rate peaked at 10% in October of 2009 (as shown in the top 10-year chart).

As shown in the bottom chart, U.S. Unemployment Rate has trended downward over the past 15 months, although it did increase from 4.9% to 5.0% last month.

Global GDP Growth Rates are Modest

	Actual 2012-2014	Actual 2015	Forecast 2016	Projected 2016-2020	Trend 2021-2025
United States	**2.0**	**2.4**	**2.0**	**2.0**	**1.6**
Europe*	0.4	1.8	1.9	2.1	1.7
of which: Euro Area	*-0.2*	*1.5*	*1.7*	*1.9*	*1.5*
Japan	1.1	0.6	1.0	1.4	1.6
Other mature**	2.6	1.9	2.1	3.2	2.7
Mature Economies	**1.4**	**1.9**	**1.9**	**2.1**	**1.8**
China	4.1	3.7	3.7	4.5	3.6
India	6.0	7.0	6.3	6.0	5.5
Other developing Asia	5.2	4.5	4.2	4.6	4.2
Latin America	1.8	−0.8	−0.4	2.5	2.4
of which: Brazil	*1.2*	*−3.7*	*−3.0*	*2.2*	*2.3*
of which: Mexico	*2.5*	*2.5*	*2.5*	*2.7*	*2.5*
Middle East & North Africa	2.3	2.9	2.2	2.3	2.2
Sub-Saharan Africa	4.6	3.2	3.7	5.0	5.2
Russia, Central Asia and Southeast Europe***	2.6	−0.7	0.4	2.4	2.3
Emerging & Developing	**3.8**	**2.9**	**3.0**	**4.0**	**3.6**
World Total	**2.6**	**2.4**	**2.5**	**3.1**	**2.8**

- Global GDP Growth Rates have declined from:
  - 2.6% in 2012-to-2014 to
  - 2.4% in 2015, but increase to
  - 3.1% in 2016 to 2020 and fall to
  - 2.8% in 2021 to 2025.
- Global GDP Growth in the Emerging and Developing Economies (3% to 4%) is expected to outpace the U.S. and Mature Economies (2%) over the next decade.

<u>Key Take-Away</u>: World GDP growth rates continue to show positive trends (+2.5% to 3.1%) albeit at slower rates than in prior decades.

Source: The Conference Board is a global, independent business membership and research association based in NYC.

* Europe includes all 28 members of the European Union, as well as Iceland, Switzerland and Norway.

** Other advanced economies are Australia, Canada, Israel, Hong Kong, South Korea, New Zealand, Singapore, and Taiwan Province of China.

*** Southeast Europe includes Albania, Bosnia and Herzegovina, Macedonia, Serbia and Montenegro, and Turkey.

Historical Asset Class Returns – As of 12/31/2015 and 3/31/2016

		Period Ended December 31, 2015			
Asset Class	**Benchmark**	**1-Year**	**3-Years**	**5-Years**	**10-Years**
Broad Market Index	S&P 500	**1.38%**	15.13%	12.57%	7.31%
Large Cap US Stocks	Russell 1000	**0.92%**	15.01%	12.44%	7.40%
Small Cap US Stocks	Russell 2000	**-4.41%**	11.65%	9.19%	6.80%
Non-US Stocks (Developed)	MSCI EAFE	**-0.81%**	5.01%	3.60%	3.03%
Non-US Stocks (Emerging)	MSCI Emerging Markets	**-14.60%**	-6.42%	-4.47%	3.95%
US Bonds	Barclays Aggregate	**0.55%**	1.44%	3.25%	4.51%
High Yield Bonds	Barclays Corporate High Yield	-4.47%	1.69%	5.04%	6.96%
Non-US Debt	Citi Non-US World Govt	**-5.54%**	-4.27%	-1.30%	3.05%
Energy Sector	Alerian MLP	-32.59%	-3.40%	1.47%	8.74%
Real Estate	NCREIF	**13.33%**	12.04%	12.18%	7.76%

		March	Period Ended March 31, 2016			
Asset Class	**Benchmark**	**2016**	**1-Year**	**3-Years**	**5-Years**	**10-Years**
Broad Market Index	S&P 500	**6.78%**	**1.78%**	11.82%	11.58%	7.01%
Large Cap US Stocks	Russell 1000	**6.97%**	**0.50%**	11.52%	11.35%	7.06%
Small Cap US Stocks	Russell 2000	**7.98%**	**-9.76%**	6.84%	7.20%	5.26%
Non-US Stocks (Developed)	MSCI EAFE	**6.51%**	**-8.27%**	2.23%	2.29%	1.80%
Non-US Stocks (Emerging)	MSCI Emerging Markets	**13.23%**	**-12.03%**	-4.50%	-4.13%	3.02%
US Bonds	Barclays Aggregate	0.92%	**1.96%**	2.50%	3.78%	4.90%
High Yield Bonds	Barclays Corporate High Yield	**4.44%**	-3.69%	1.84%	4.93%	7.01%
Energy Sector	Alerian MLP	**8.32%**	-31.83%	-10.31%	-0.55%	7.67%

Year Ended 12/31/15 and 3/31/16:

Slowing global growth rates in the developed & emerging economies (including China which is the world's 2nd largest economy behind the U.S.) have put downward pressure on the global investment climate over the past year. Given this backdrop, investment returns have been disappointing for the year ended Dec. 31, 2015 and March 31, 2016, with U.S. Stocks & Bonds earning less than 2%, while International Equity and Bond returns were negative (grey shading). Real Estate was the best performing sector in 2015 (up 13.3%).

March Update:

Investment returns improved sharply in March with most major indices reporting impressive gains (blue shading in bottom chart) ranging from 6% to 8% for U.S. and International Equities and 13% in the Emerging Markets.

High Yield Bonds and the Energy Sector also improved posting gains of over 4% and 8%, respectively, in March.

Retirement and Investment Office: Current Status of PERS & TFFR Investments

Employee Benefits Program Committee

April 28, 2016

Darren Schulz, Deputy Chief Investment Officer

Dave Hunter, Executive Director / CIO

ND Retirement & Investment Office (RIO)

State Investment Board (SIB)

Executive Summary: PERS and TFFR Investment Overview

PERS and TFFR net returns were 0.53% and 0.64%, respectively, for the year ended December 31, 2015.

- Real estate and timber were the best performing sectors in the past year generating returns of 15% and 5%, respectively. U.S. equity and fixed income generated modest returns of 1.6% and 0.4%, respectively, while international equity (down 1%), international debt (down 7%) and private equity (down 8%) were the three worst performing sectors for the PERS and TFFR portfolios.
- Asset allocation decisions are generally the # 1 driver of investment returns although active management is important and has generated $20 million of income for TFFR and PERS in 2015. Active management has enhanced TFFR and PERS returns by over $90 million in the last 5-years.

PERS and TFFR's net investment returns have generally outperformed most other U.S. public pension plans.

- Despite the disappointing results, PERS and TFFR net returns were ranked in the 33rd and 34th percentile, respectively, for the 5-years ended December 31, 2015. This peer group comparison is based on Callan's U.S. Public Pension Database for plans which reported net investment results.

Portfolio volatility (or risk), as measured by standard deviation, has declined significantly in recent years.

- The standard deviation of the PERS & TFFR portfolios has declined during the past decade and resides in the 3rd quartile as of Dec. 31, 2015 (noting that a lower standard deviation is preferred). The plans have been able to generate above average returns while employing less risk than most other plans .

RIO regularly meets with our investment advisors to ensure we obtain competent and prudent professional investment services at a competitive price.

- Investment fees as a % of assets declined by 10% in the Pension Trust during the last fiscal year.

Investment returns are deemed to be materially accurate, but are unaudited and subject to change.

PERS & TFFR – December 2015 Performance Update

	1 Yr Ended 12/31/2015	3 Yrs Ended 12/31/2015	5 Yrs Ended 12/31/2015	Risk 5 Yrs Ended 12/31/2015
PERS (Main Plan)				
Total Fund Return - Net	**0.53%**	7.49%	**6.93%**	7.83%
Policy Benchmark Return	**0.06%**	6.66%	**6.51%**	7.43%
Excess Return	**0.47%**	0.83%	**0.42%**	**105%**
TFFR				
Total Fund Return - Net	**0.64%**	7.60%	**6.90%**	8.3%
Policy Benchmark Return	**0.15%**	6.74%	**6.22%**	8.0%
Excess Return	**0.49%**	**0.86%**	**0.69%**	**105%**

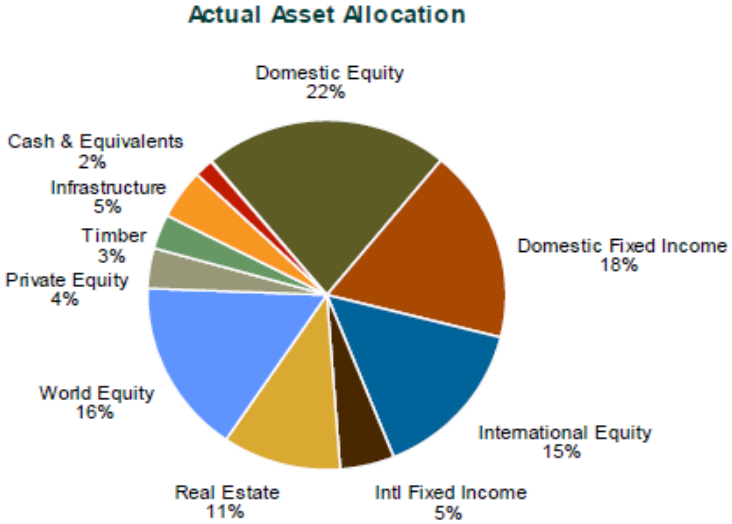
Pension Trust:

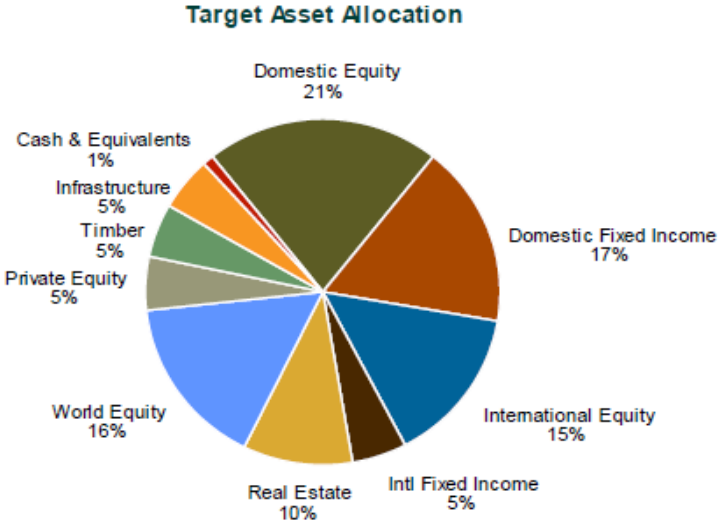
- **"Excess Return"** is defined as the actual investment return (after deducting investment fees) over the expected return of the underlying investment policy or benchmark (i.e. a passive index).
- **Active management has generated over $20 million of incremental income** (after fees) **for PERS & TFFR last year**. This is based on $4.4 billion of assets and **Excess Return of 0.47%** ($4.4 billion x 0.47% = $20.7 million).
- These strong returns have been achieved while reducing overall investment risk, as measured by standard deviation, during the past 10 years. Standard deviation measures the amount of variation or dispersion from the average.

Note: Data as of 12/31/2015 is unaudited and subject to change.

PERS - Actual Asset Allocations within 1% to 2% of Targets

As of December 31, 2015





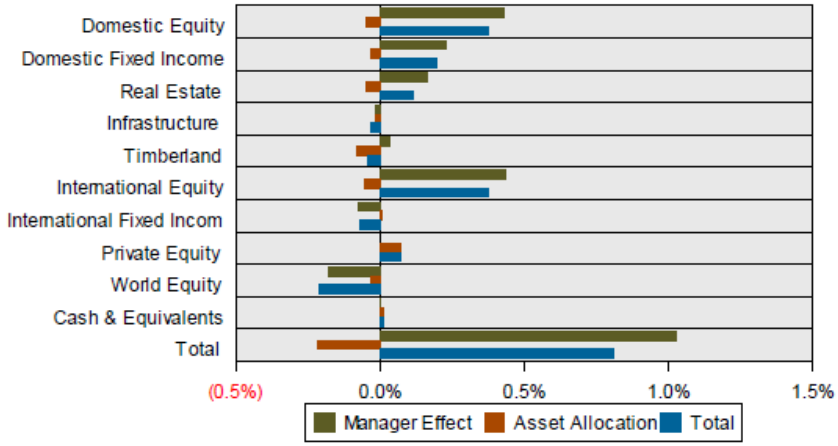
Source: Callan Associates

Asset Class	$000s Actual	Weight Actual	Target	Percent Difference	$000s Difference
Domestic Equity	525,261	22.1%	21.4%	0.7%	17,777
Domestic Fixed Income	424,168	17.9%	17.0%	0.9%	21,027
International Equity	355,949	15.0%	14.6%	0.4%	9,722
Intl Fixed Income	115,049	4.9%	5.0%	(0.1%)	(3,522)
Real Estate	254,893	10.7%	10.0%	0.7%	17,751
World Equity	381,946	16.1%	16.0%	0.1%	2,519
Private Equity	88,043	3.7%	5.0%	(1.3%)	(30,528)
Timber	76,247	3.2%	5.0%	(1.8%)	(42,323)
Infrastructure	109,140	4.6%	5.0%	(0.4%)	(9,431)
Cash & Equivalents	40,723	1.7%	1.0%	0.7%	17,009
Total	2,371,419	100.0%	100.0%		

PERS Performance and Attribution

As of December 31, 2015

One Year Relative Attribution Effects



Performance Overview:

U.S. Equity and Fixed Income returns were modest at 1.6% and 0.4%, respectively, while International Debt and Equity Returns along with Private Equity were down 1.4%, 7.2% and 8.2%, respectively.

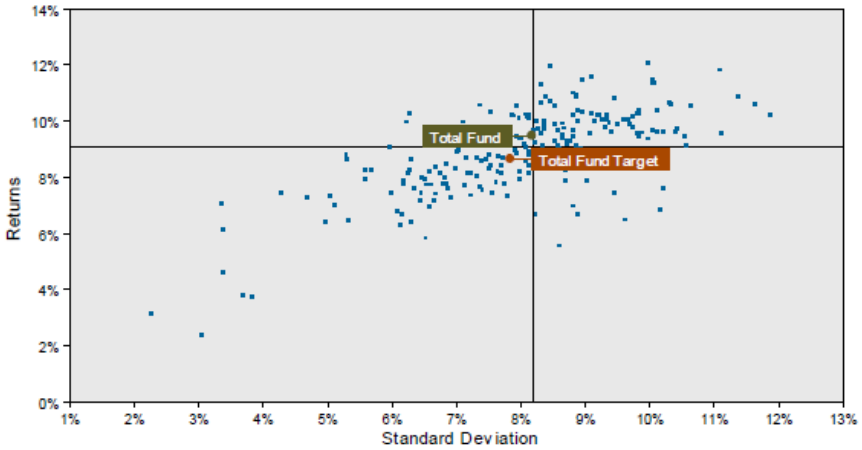
One Year Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	23%	21%	1.62%	(0.25%)	0.43%	(0.05%)	0.38%
Domestic Fixed Income	18%	17%	0.41%	(0.89%)	0.23%	(0.03%)	0.20%
Real Estate	10%	10%	15.26%	13.33%	0.16%	(0.05%)	0.12%
Infrastructure	4%	5%	(0.02%)	0.38%	(0.01%)	(0.02%)	(0.03%)
Timberland	4%	5%	5.68%	4.97%	0.04%	(0.08%)	(0.04%)
International Equity	15%	15%	(1.43%)	(4.28%)	0.43%	(0.06%)	0.38%
International Fixed Incom	5%	5%	(7.24%)	(6.02%)	(0.08%)	0.01%	(0.07%)
Private Equity	4%	5%	(8.23%)	(8.23%)	0.00%	0.07%	0.07%
World Equity	16%	16%	(1.97%)	(0.87%)	(0.18%)	(0.03%)	(0.21%)
Cash & Equivalents	1%	1%	0.11%	0.05%	0.00%	0.01%	0.01%
Total			**0.85%** =	**0.04%** +	**1.03%** +	**(0.22%)**	**0.81%**

PERS Performance and Attribution

As of December 31, 2015

Five and One-Half Year Annualized Risk vs Return



Squares represent membership of the Public Fund Sponsor Database

Performance Overview:

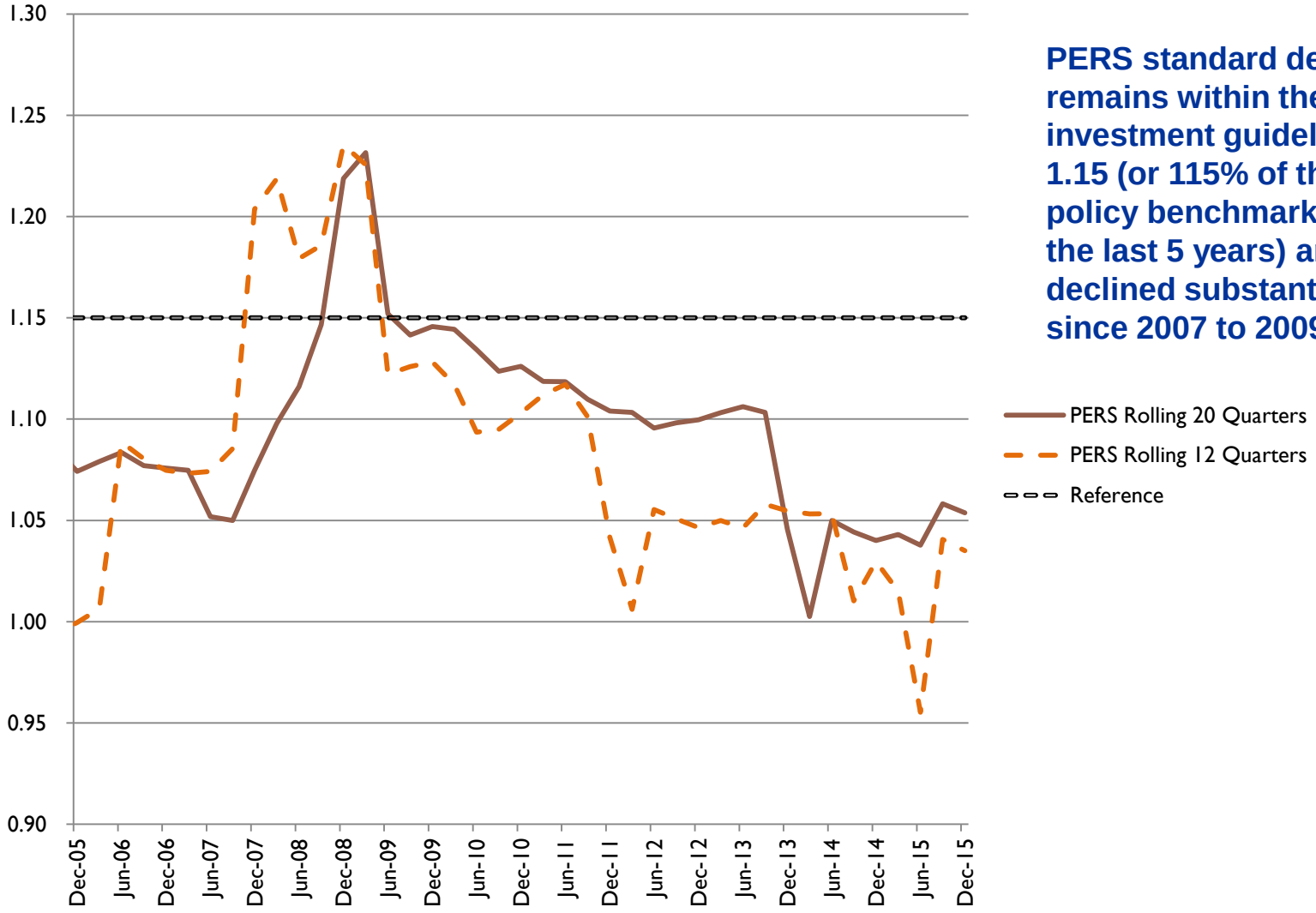
During the last 5-1/2 years, PERS generated a Callan "Actual Return" of 9.46% which exceeded the "Target Return" of the investment benchmarks by a meaningful amount (0.82%).

Five and One-Half Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	28%	27%	15.81%	15.23%	0.08%	0.11%	0.18%
Domestic Fixed Income	20%	20%	5.81%	4.13%	0.28%	(0.05%)	0.23%
Real Estate	9%	9%	15.65%	12.70%	0.21%	0.01%	0.23%
Timber	4%	4%	-	-	(0.27%)	(0.06%)	(0.33%)
Infrastructure	3%	4%	-	-	0.16%	0.09%	0.25%
Intemtional Equity	16%	16%	7.09%	4.88%	0.33%	(0.07%)	0.27%
Intemational Fixed Incom	5%	5%	2.84%	0.87%	0.11%	(0.01%)	0.10%
Private Equity	5%	5%	3.76%	3.76%	0.00%	(0.05%)	(0.05%)
World Equity	10%	10%	-	-	0.01%	(0.05%)	(0.03%)
Cash & Equivalents	1%	1%	0.09%	0.08%	0.00%	(0.02%)	(0.02%)
Total			**9.46%** =	**8.64%** +	**0.91%** +	**(0.09%)**	**0.82%**

* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World Index, 13.2% Barclays Aggregate Index, 11.0% MSCI EAFE Index, 9.7% NCREIF Total Index, 4.9% CPI-W, 4.9% Russell 2000 Index, 4.9% NDSIB PEN - Private Equity, 4.9% Barclays HY Corp 2% Issue, 4.9% Global Agg ex USD, 4.9% NCREIF Timberland Index, 3.1% MSCI Emerging Mkts - Net and 1.0% 3-month Treasury Bill.

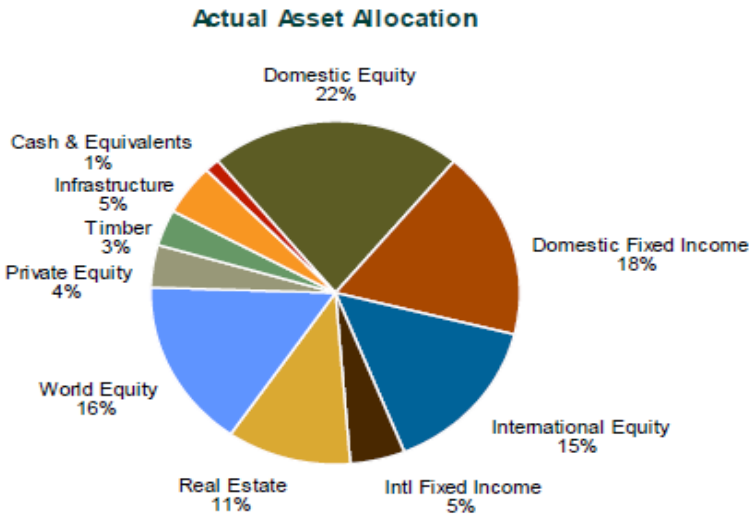
Relative Standard Deviation Relative to Policy Benchmark
10 Years Ended 12/31/2015

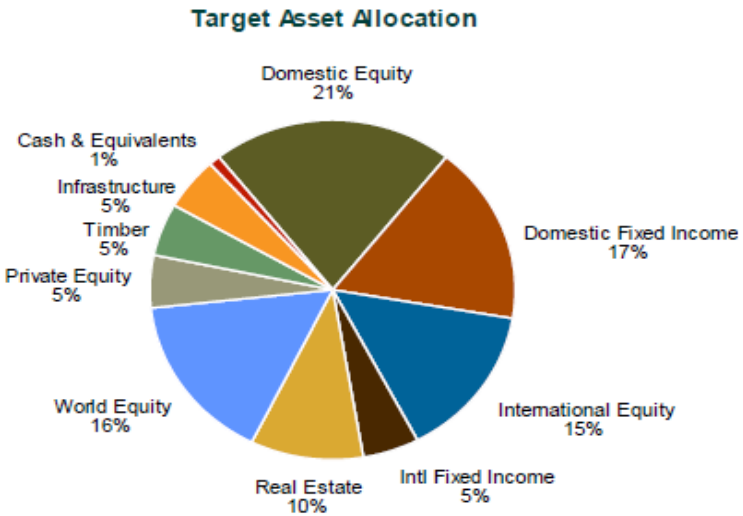


PERS standard deviation remains within the investment guidelines of 1.15 (or 115% of the policy benchmark over the last 5 years) and has declined substantially since 2007 to 2009.

TFFR - Actual Asset Allocations within 1% to 2% of Targets

As of December 31, 2015





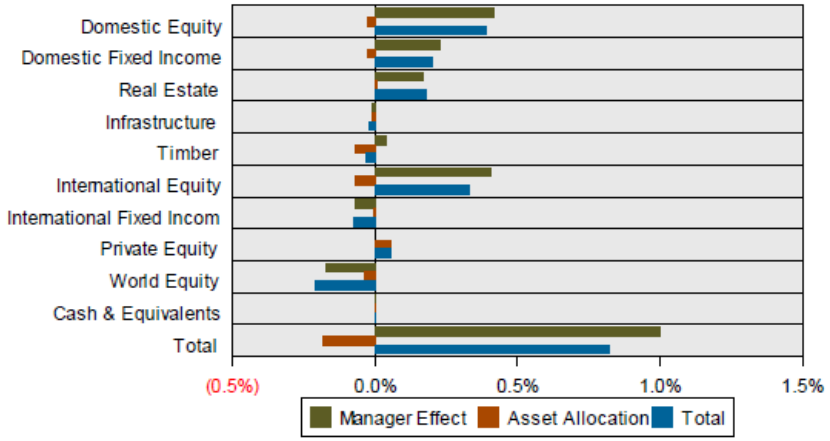
Source: Callan Associates

Asset Class	$000s Actual	Weight Actual	Target	Percent Difference	$000s Difference
Domestic Equity	451,887	22.2%	21.4%	0.8%	16,128
Domestic Fixed Income	361,670	17.8%	17.0%	0.8%	15,506
International Equity	304,547	15.0%	14.6%	0.4%	7,253
Intl Fixed Income	97,532	4.8%	5.0%	(0.2%)	(4,281)
Real Estate	222,901	10.9%	10.0%	0.9%	19,275
World Equity	324,514	15.9%	16.0%	(0.1%)	(1,287)
Private Equity	80,813	4.0%	5.0%	(1.0%)	(21,000)
Timber	69,159	3.4%	5.0%	(1.6%)	(32,654)
Infrastructure	97,718	4.8%	5.0%	(0.2%)	(4,095)
Cash & Equivalents	25,519	1.3%	1.0%	0.3%	5,156
Total	2,036,260	100.0%	100.0%		

TFFR Performance and Attribution

As of December 31, 2015

One Year Relative Attribution Effects



Performance Overview:

U.S. Equity and Fixed Income returns were modest at 1.6% and 0.4%, respectively, while International Debt and Equity Returns along with Private Equity were down 0.9%, 7.2% and 8.2%, respectively.

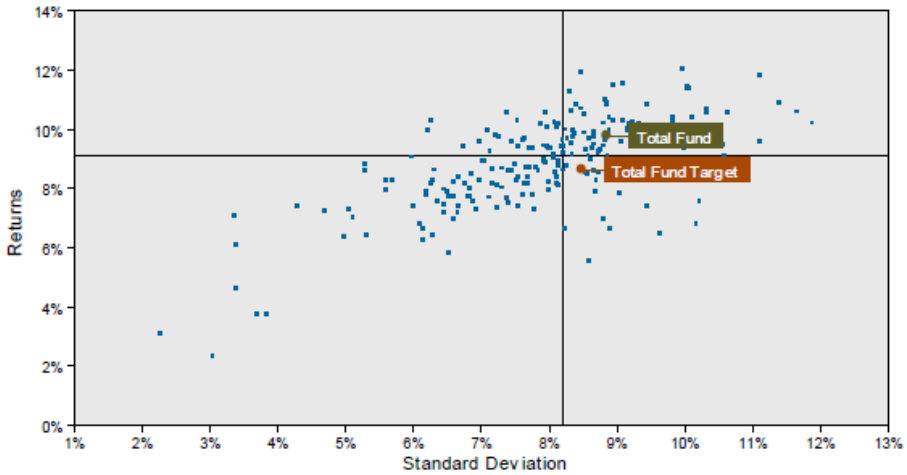
One Year Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	22%	21%	1.61%	(0.25%)	0.42%	(0.02%)	0.39%
Domestic Fixed Income	18%	17%	0.39%	(0.89%)	0.23%	(0.03%)	0.20%
Real Estate	10%	10%	15.26%	13.33%	0.17%	0.01%	0.18%
Infrastructure	5%	5%	(0.02%)	0.38%	(0.01%)	(0.01%)	(0.02%)
Timber	4%	5%	5.70%	4.97%	0.04%	(0.07%)	(0.03%)
International Equity	15%	15%	(0.94%)	(3.59%)	0.40%	(0.07%)	0.33%
International Fixed Incom	5%	5%	(7.24%)	(6.02%)	(0.07%)	(0.00%)	(0.07%)
Private Equity	4%	5%	(8.23%)	(8.23%)	0.00%	0.05%	0.05%
World Equity	16%	16%	(1.97%)	(0.87%)	(0.17%)	(0.04%)	(0.21%)
Cash & Equivalents	1%	1%	0.11%	0.05%	0.00%	0.00%	0.00%
Total			**0.96%** =	**0.14%** +	**1.00%** +	**(0.18%)**	**0.82%**

TFFR Performance and Attribution

As of December 31, 2015

Five and One-Half Year Annualized Risk vs Return



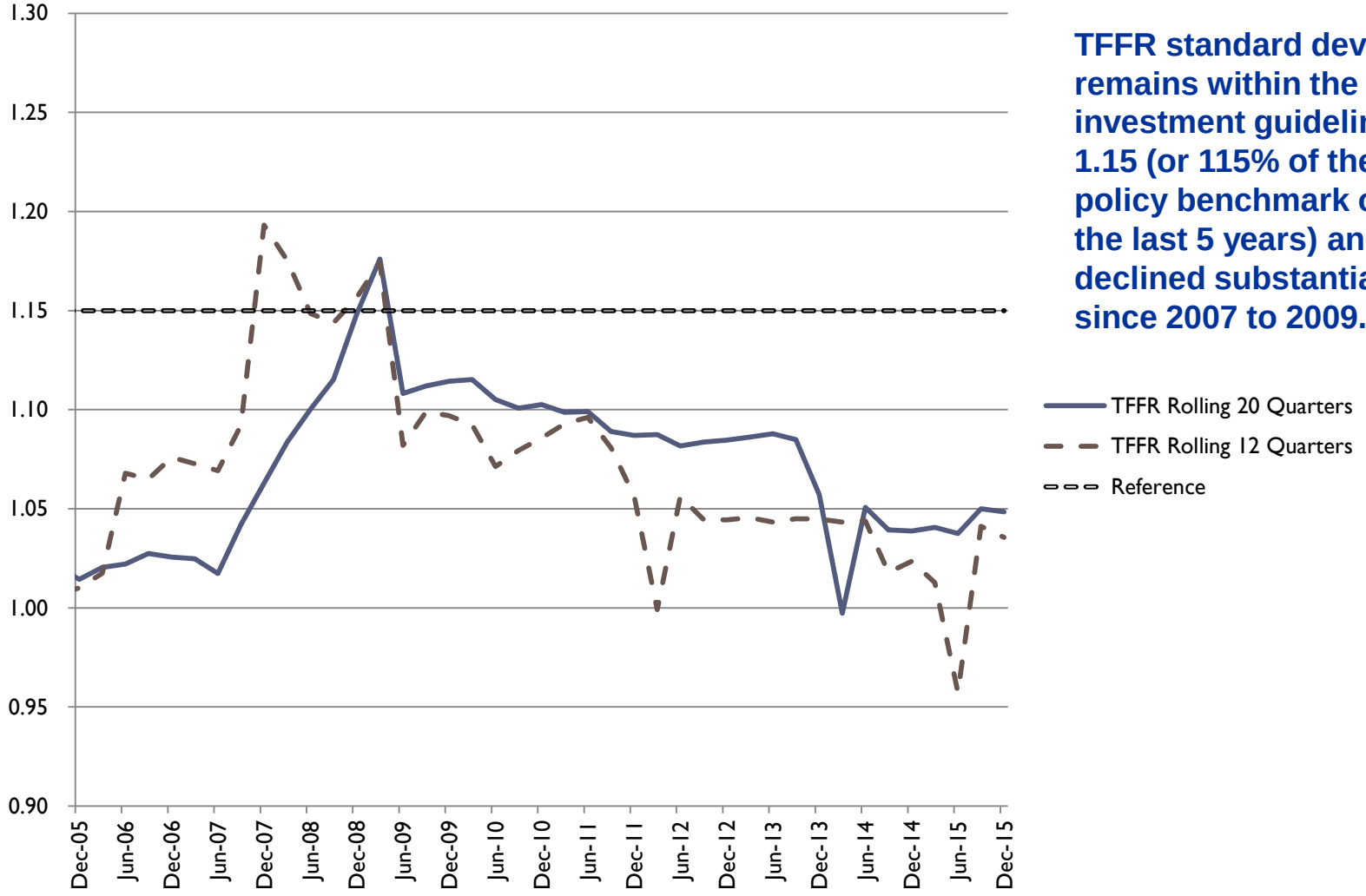
Performance Overview:

During the last 5-1/2 years, TFFR generated a Callan "Actual Return" of 9.77% which exceeded the "Target Return" of the investment benchmarks by a meaningful amount (1.15%).

Five and One-Half Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	28%	27%	15.82%	15.22%	0.09%	0.10%	0.18%
Domestic Fixed Income	18%	17%	5.83%	4.16%	0.29%	(0.03%)	0.26%
Real Estate	10%	10%	15.65%	12.70%	0.27%	0.03%	0.30%
Timber	4%	4%	-	-	(0.26%)	(0.01%)	(0.27%)
Infrastructure	3%	4%	-	-	0.16%	0.11%	0.28%
International Equity	18%	18%	7.33%	5.19%	0.40%	(0.03%)	0.38%
International Fixed Incom	5%	5%	2.84%	0.87%	0.11%	(0.01%)	0.10%
Private Equity	5%	5%	3.79%	3.79%	0.00%	(0.04%)	(0.04%)
World Equity	10%	10%	-	-	0.01%	(0.05%)	(0.03%)
Cash & Equivalents	1%	1%	0.09%	0.08%	0.00%	(0.01%)	(0.01%)
Total			**9.77%** =	**8.63%** +	**1.07%** +	**0.07%**	**1.15%**

Relative Standard Deviation Relative to Policy Benchmark
10 Years Ended 12/31/2015



TFFR standard deviation remains within the investment guidelines of 1.15 (or 115% of the policy benchmark over the last 5 years) and has declined substantially since 2007 to 2009.

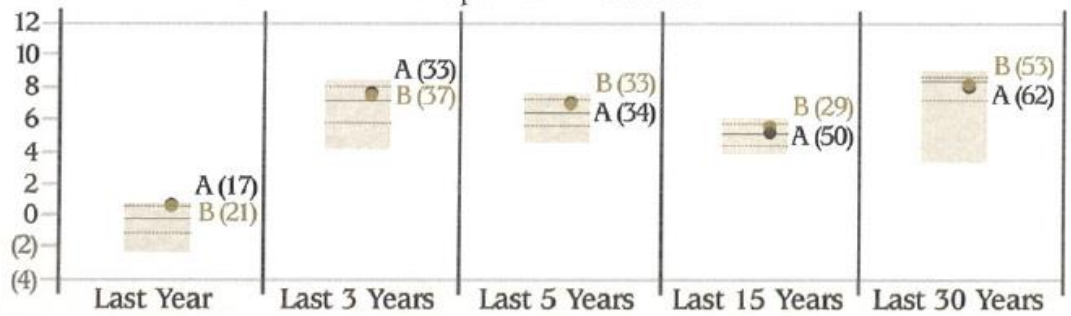
TFFR and PERS Peer Performance

TFFR and PERS net investment returns have outperformed most other U.S. public pension plans over the last 5-years.

TFFR and PERS net returns have generally outperformed other U.S. public pension plans for the 1, 3, and 5 year periods ended December 31, 2015. This peer group comparison is based on Callan's U.S. Public Pension Database for plans which report net investment returns. The bar chart highlights net investment returns of over 100 peers noting that TFFR (A) was ranked in the 34th percentile, while PERS (B) was ranked in the 33rd percentile, for the "Last 5 Years." As a result, TFFR and PERS net investment return outperformed 66% and 67% of the other public pension plans during this period. The SIB and RIO have historically placed greater emphasis on 5 year performance metrics as shorter time periods may be overly impacted by one or two quarters of abnormal returns which are not reflective of longer-term strategic return expectations. Please note that the "Member Count" of only 10 for the "Last 30 Years" makes it less meaningful than the other reporting periods in which the "Member Count" is 70 or more. The chart is based on unaudited valuations which are deemed to be materially accurate. RIO's financial results are audited annually with a June 30 fiscal year end.

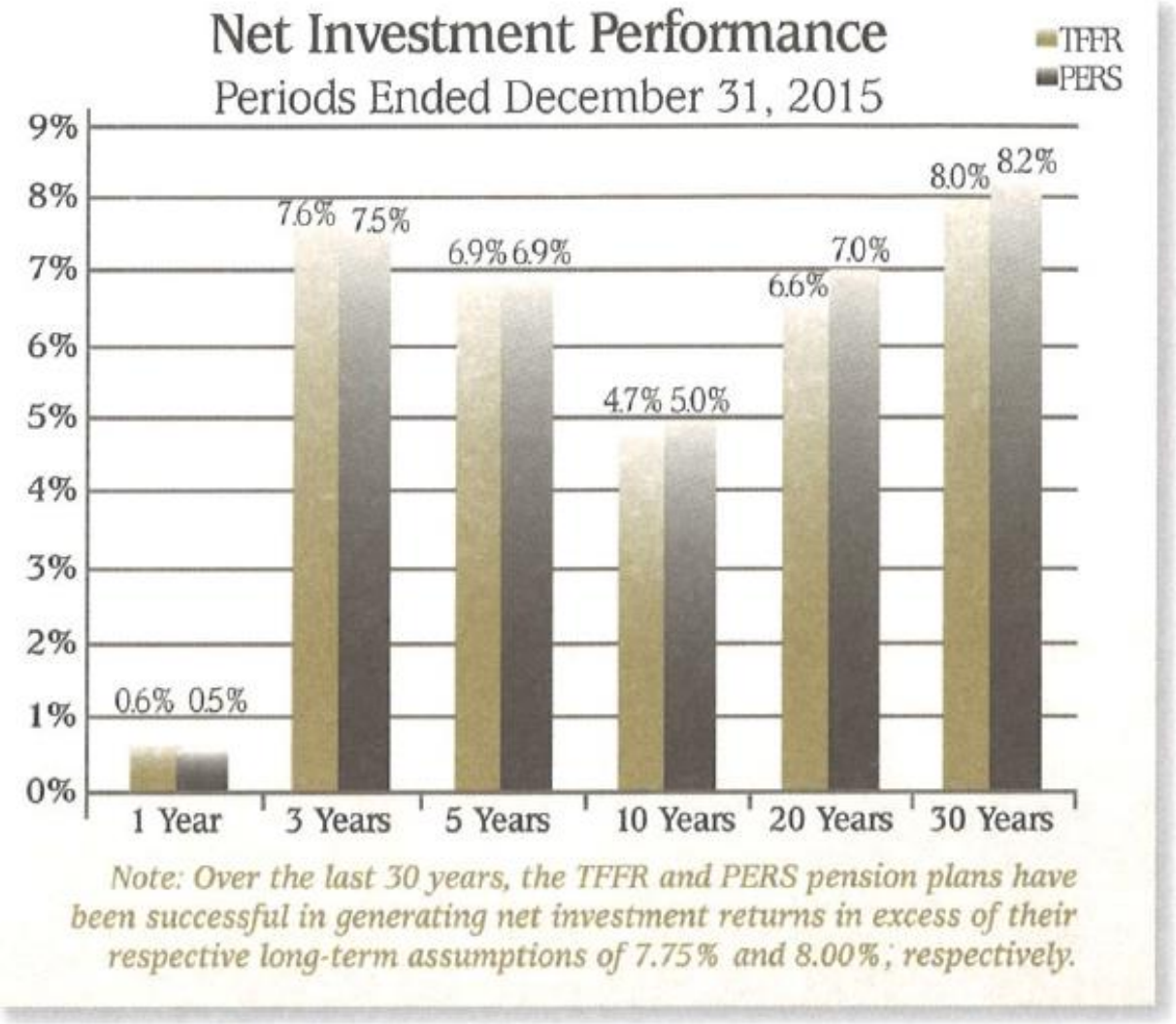
Net of Fee Returns for Periods Ended December 31, 2015

Callan Public Fund Sponsor Database



	Last Year	Last 3 Years	Last 5 Years	Last 15 Years	Last 30 Years
10th Percentile	0.8	8.4	7.6	6.2	9.1
25th Percentile	0.5	7.9	7.3	5.8	8.6
Median	(0.3)	7.0	6.4	5.1	8.3
75th Percentile	(1.1)	5.6	5.7	4.4	7.2
90th Percentile	(2.4)	4.1	4.5	3.8	3.4
Member Count	135	123	103	70	10
Total Fund-TFFR •A	**0.6**	**7.6**	**6.9**	**5.2**	**8.0**
Total Fund-PERS •B	**0.5**	**7.5**	**6.9**	**5.6**	**8.2**

TFFR and PERS net investment returns have exceeded their actuarial rate of return assumptions over the last 30 years.



Appendix – EBPC Presentation (April 2016)

- State Investment Board members
- Retirement and Investment Office - Background
- State Investment Board Process
- North Dakota Century Code 21-10 State Investment Board
- SIB Client Assets and Investment Performance – Dec. 31, 2015
- Listing of Consulting and Professional Service Firms
- Transparency Enhancement Update (RIO Website)
- Contact Information
- Current Fiscal YTD Returns for PERS and TFFR (Verbal Update)

Note: Land Board net investment returns for the 1-, 3- and 5-years ended Dec. 31, 2015, were approximately -4.6%, +4.2% and +5,2%, respectively. Investment return comparisons between state agencies is of limited value due to significantly different return and risk expectations and widely varying asset allocation targets.

State Investment Board Members – April 25, 2016

The SIB includes 11 members with Lieutenant Governor Drew Wrigley serving as Chairman and includes **State Treasurer Kelly Schmidt**, the **Commissioner of University and School Lands Lance Gaebe**, the **Director of Workforce Safety and Insurance designee Cindy Ternes**, the **Insurance Commissioner Adam Hamm**, plus three TFFR board members and three PERS board members.

The TFFR representatives include **Michael Gessner, Rob Lech** and **Mel Olson** noting that Mr. Lech also serves as the board parliamentarian.

The PERS representatives include **Mike Sandal, Tom Trenbeath** and **Yvonne Smith** noting that Mr. Sandal also serves as *Vice Chairman* of the SIB.

North Dakota Retirement & Investment Office – Background

RIO is an agency of the State of North Dakota. The agency was created by the 1989 Legislative Assembly to capture administrative and investment cost savings in the management of two important long-standing state programs – the retirement program of the Teachers' Fund for Retirement (TFFR) and the investment program of the State Investment Board (SIB).

The SIB is responsible for setting policies and procedures guiding the investment of over $10.7 billion in assets for seven pension funds and 16 other insurance-type funds. Their investments are divided into two investment trust funds and two individual investment accounts. Individual investment guidelines for each fund can be found in the Investment Section. These guidelines include goals and objectives, risk tolerance, liquidity constraints, asset allocation and portfolio restrictions specific to each fund's unique circumstances. When creating investment pools to implement the asset allocations for each client fund, the SIB takes all of these guidelines into consideration in order to best meet the objectives of each fund and safeguard fund assets.

The pension investment pool is made up of only qualified pension funds whose monies must be invested exclusively for the benefit of their participants. The insurance investment pool is made up of mainly insurance-type funds, but also includes other funds that do not qualify as pension funds and would like to benefit from the cost savings of being pooled with other funds' assets. All of these funds are invested in accordance with the "Prudent Investor Rule."

An important aspect of the prudent investor rule is that individual investments are considered not in isolation but in the context of the trust portfolio as a whole. Some new opportunities may appear risky when viewed alone. However, when part of a diversified mix of investments in stocks, bonds and other assets, they can increase returns often without increasing the overall portfolio risk and, in some cases, may help decrease the overall portfolio's risk.

North Dakota Retirement & Investment Office – Pools

The pension investment pool was created in July 1989 with the pooling of selected investments of TFFR and the Public Employees Retirement System (PERS). Assets from the City of Bismarck Employees and Police pension funds were added later that same fiscal year. In April 1994, Job Service of North Dakota made their initial contribution to the pool. The City of Fargo Employees pension plan joined the pension pool in December 2007 and the City of Grand Forks Employees pension plan in May 2009. Most recently, the Grand Forks Park District pension plan began participating in the pension pool in December 2009. The City of Fargo Employees pension plan withdrew the bulk of their assets from the SIB in December 2013. Their balance at June 30, 2015, represents residual cash needed to pay final expenses.

The insurance investment pool began in December 1993 with the pooling of the assets of the WSI, Fire and Tornado, Bonding, Insurance Regulatory, and Petroleum Tank Release funds.

Other additions to this pool have occurred as follows:

- The Risk Management Fund was added in October 1996.
- Two North Dakota Association of Counties (NDACo) funds were added during fiscal year 1999, in January and March.
- The City of Bismarck Deferred Sick Leave and PERS Group Insurance funds were both added in July 1999.
- The City of Fargo FargoDome Permanent Fund was added in October 2002.
- The Risk Management Workers Compensation Fund was added in October 2003.
- The Cultural Endowment Fund was added by the 2005 legislature and funded in July 2005.
- The Budget Stabilization Fund joined the pool in September 2005 upon reaching statutorily designated levels.
- The State Board of Medical Examiners Fund joined the pool in April, 2014.

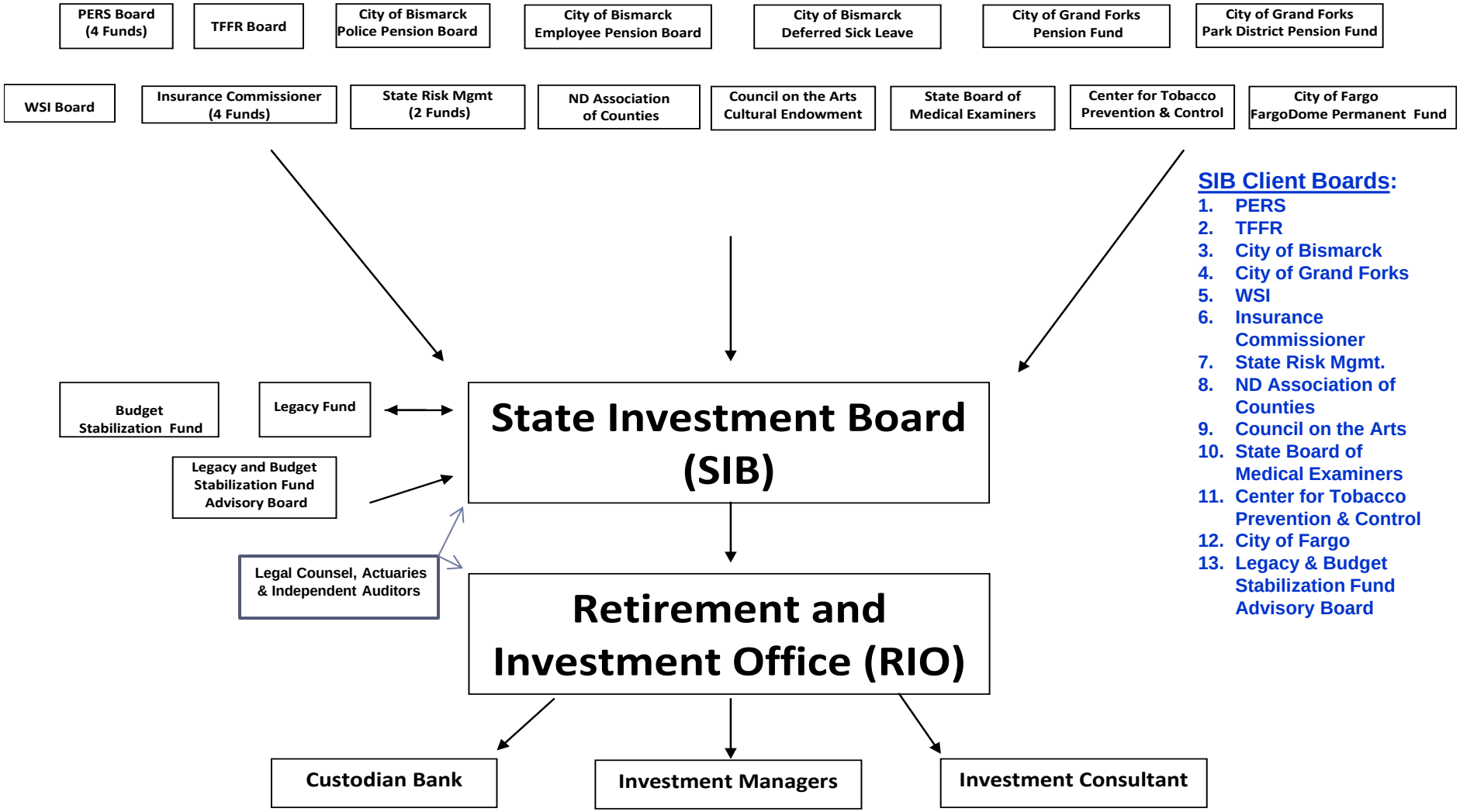
North Dakota Retirement & Investment Office – Awards

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to RIO for its comprehensive annual financial report for the fiscal year ended June 30, 2015. This was the eighteenth consecutive year that RIO has achieved this prestigious award. In order to be awarded a Certificate of Achievement, a government must publish an easily readable and efficiently organized comprehensive annual financial report. This report must satisfy both generally accepted accounting principles and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. We believe that our current comprehensive annual financial report continues to meet the Certificate of Achievement Program's requirements and we are submitting it to the GFOA to determine its eligibility for another certificate.

TFFR also received the 2015 Public Pension Standards Award for Funding and Administration from the Public Pension Coordinating Council. To receive the award, the retirement system must certify that it meets specific professional standards for a comprehensive benefit program, actuarial valuations, financial reporting, investments, communications to members, and funding adequacy.

State Investment Board Process



SIB Client Boards:

1. PERS
2. TFFR
3. City of Bismarck
4. City of Grand Forks
5. WSI
6. Insurance Commissioner
7. State Risk Mgmt.
8. ND Association of Counties
9. Council on the Arts
10. State Board of Medical Examiners
11. Center for Tobacco Prevention & Control
12. City of Fargo
13. Legacy & Budget Stabilization Fund Advisory Board

State Investment Board Process

Client Responsibilities: (Per NDCC 21-10-02.1) The governing body of each fund (client) shall establish policies on investment goals and objectives and asset allocation that must include:

- Acceptable rates of return, liquidity and levels of risk
- Long-range asset allocation goals

State Investment Board Responsibilities: (Per NDCC 21-10):

- Accept and implement client asset allocations
- Apply Prudent Investor Rule when investing for fund under its supervision
- Approve general types of securities for investment
- Set policies and procedures regulating securities transactions on behalf of the clients
- Select custodian servicer
- Select investment director and/or investment consulting service
- Create investment pools

State Investment Board Process

Retirement and Investment Office Staff Responsibilities (on behalf of SIB):

- Administer overall investment strategy
- Advise SIB on ways to maximize risk/return opportunities within each asset class
- Act as liaison between SIB and managers, consultant and custodian
- Monitor individual clients' investment guidelines and asset allocations
- Maintain separate accounting for client accounts

Investment Manager Responsibilities:

- Accept and implement specific mandates or "investment missions"
- Make buy/sell decisions based on investment guidelines
- Report to RIO Staff on regular basis
- Provide education to SIB

State Investment Board Process

Custodian Bank Responsibilities:

- Safe-keep assets
- Settle trades
- Record-keeper

Investment Consultant Responsibilities:

- Performance measurement of investment managers
- Manager search assistance
- Provide education to SIB

Special projects

Others Experts:

- Legal Counsel
- Independent Actuaries and Auditors
- Specialists in custody and fee reviews and/or transaction cost analyses

NDCC Chapter 21-10 State Investment Board

21-10-01. State investment board - Membership - Term - Compensation – Advisory council.

The North Dakota state investment board consists of the governor, the state treasurer, the commissioner of university and school lands, the director of workforce safety and insurance, the insurance commissioner, three members of the teachers' fund for retirement board or the board's designees who need not be members of the fund as selected by that board, two of the elected members of the public employees retirement system board as selected by that board, and one member of the public employees retirement system board as selected by that board**.** The director of workforce safety and insurance may appoint a designee, subject to approval by the workforce safety and insurance board of directors, to attend the meetings, participate, and vote when the director is unable to attend. The teachers' fund for retirement board may appoint an alternate designee with full voting privileges to attend meetings of the state investment board when a selected member is unable to attend. The public employees retirement system board may appoint an alternate designee with full voting privileges from the public employees retirement system board to attend meetings of the state investment board when a selected member is unable to attend. The members of the state investment board, except elected and appointed officials and the director of workforce safety and insurance or the director's designee, are entitled to receive as compensation one hundred forty-eight dollars per day and necessary mileage and travel expenses as provided in sections 44-08-04 and 54-06-09 for attending meetings of the state investment board.

The state investment board may establish an advisory council composed of individuals who are experienced and knowledgeable in the field of investments. The state investment board shall determine the responsibilities of the advisory council. Members of the advisory council are entitled to receive the same compensation as provided the members of the advisory board of the Bank of North Dakota and necessary mileage and travel expenses as provided in sections 44-08-04 and 54-06-09.

21-10-02. Board - Powers and duties.

The board is charged with the investment of the funds enumerated in section 21-10-06. It shall approve general types of securities for investment by these funds and set policies and procedures regulating securities transactions on behalf of the various funds. Representatives of the funds enumerated in section 21-10-06 may make recommendations to the board in regard to investments. The board or its designated agents must be custodian of securities purchased on behalf of funds under the management of the board. The board may appoint an investment director or advisory service, or both, who must be experienced in, and hold considerable knowledge of, the field of investments. The investment director or advisory service shall serve at the pleasure of the board. The investment director or advisory service may be an individual, corporation, limited liability company, partnership, or any legal entity which meets the qualifications established herein. The board may authorize the investment director to lend securities held by the funds. These securities must be collateralized as directed by the board. The board may create investment fund pools in which the funds identified in section 21-10-06 may invest.

NDCC Chapter 21-10 State Investment Board

21-10-02.1. Board - Policies on investment goals and objectives and asset allocation.

1. The governing body of each fund enumerated in section 21-10-06 shall establish policies on investment goals and objectives and asset allocation for each respective fund. The policies must provide for:
    a. The definition and assignment of duties and responsibilities to advisory services and persons employed by the board.
    b. Rate of return objectives, including liquidity requirements and acceptable levels of risk.
    c. Long-range asset allocation goals.
    d. Guidelines for the selection and redemption of investments.
    e. Investment diversification, investment quality, qualification of advisory services, and amounts to be invested by advisory services.
    f. The type of reports and procedures to be used in evaluating performance.
2. The asset allocation and any subsequent allocation changes for each fund must be approved by the governing body of that fund and the state investment board. The governing body of each fund shall use the staff and consultants of the retirement and investment office in developing asset allocation and investment policies.

21-10-03. Cooperation with Bank of North Dakota.

Repealed by S.L. 1987, ch. 190, § 14.

21-10-04. Board - Meetings.

The state investment board shall select one of its members to serve as chair, one to serve as vice chair, and shall meet at the call of the chair or upon written notice signed by two members of the board.

21-10-05. Investment director - Powers and duties.

Subject to the limitations contained in the law or the policymaking regulations or resolutions adopted by the board, the investment director may sign and execute all contracts and agreements to make purchases, sales, exchanges, investments, and reinvestments relating to the funds under the management of the board. This section is a continuing appropriation of all moneys required for the making of investments of funds under the management of the board. The investment director shall see that moneys invested are at all times handled in the best interests of the funds. Securities or investments may be sold or exchanged for other securities or investments.
The investment director shall formulate and recommend to the investment board for approval investment regulations or resolutions pertaining to the kind or nature of investments and limitations, conditions, and restrictions upon the methods, practices, or procedures for investment, reinvestment, purchase, sale, or exchange transactions that should govern the investment of funds under this chapter.

NDCC Chapter 21-10 State Investment Board

21-10-06. Funds under management of board - Accounts.

1. Subject to the provisions of section 21-10-02, the board shall invest the following funds:
    a. State bonding fund.
    b. Teachers' fund for retirement.
    c. State fire and tornado fund.
    d. Workforce safety and insurance fund.
    e. Public employees retirement system.
    f. Insurance regulatory trust fund.
    g. State risk management fund.
    h. Budget stabilization fund.
    i. Health care trust fund.
    j. Cultural endowment fund.
    k. Petroleum tank release compensation fund.
    l. Legacy fund.
    m. A fund under contract with the board pursuant to subsection 3.
2. Separate accounting must be maintained for each of the funds listed in subsection 1. The moneys of the individual funds may be commingled for investment purposes when determined advantageous.
3. The state investment board may provide investment services to, and manage the money of, any agency, institution, or political subdivision of the state, subject to agreement with the industrial commission. The scope of services to be provided by the state investment board to the agency, institution, or political subdivision must be specified in a written contract. The state investment board may charge a fee for providing investment services and any revenue collected must be deposited in the state retirement and investment fund.

21-10-06.1. Board - Investment reports.

The board shall annually prepare reports on the investment performance of each fund under its control. The reports must be uniform and must include:

1. A list of the advisory services managing investments for the board.
2. A list of investments at market value, compared to previous reporting period, of each fund managed by each advisory service.
3. Earnings, percentage earned, and change in market value of each fund's investments.
4. Comparison of the performance of each fund managed by each advisory service to other funds under the board's control and to generally accepted market indicators.

NDCC Chapter 21-10 State Investment Board

21-10-06.2. Investment costs.

The amounts necessary to pay for investment costs, such as investment counseling fees, trustee fees, custodial fees, performance measurement fees, expenses associated with money manager searches, expenses associated with onsite audits and reviews of investment managers, and asset allocation expenses, incurred by the state investment board are hereby appropriated and must be paid directly out of the funds listed in section 21-10-06 by the fund incurring the expense.

21-10-07. Legal investments.

The state investment board shall apply the prudent investor rule in investing for funds under its supervision. The "prudent investor rule" means that in making investments the fiduciaries shall exercise the judgment and care, under the circumstances then prevailing, that an institutional investor of ordinary prudence, discretion, and intelligence exercises in the management of large investments entrusted to it, not in regard to speculation but in regard to the permanent disposition of funds, considering probable safety of capital as well as probable income. The retirement funds belonging to the teachers' fund for retirement and the public employees retirement system must be invested exclusively for the benefit of their members and in accordance with the respective funds' investment goals and objectives.

21-10-08. Reserves - Percentage limitations.

In order to meet claims and liabilities, reserves must be established and maintained in each of the funds in accordance with the investment policy and asset allocation established for each fund.

21-10-09. Personal profit prohibited - Penalty.

No member, officer, agent, or employee of the state investment board may profit in any manner from transactions on behalf of the funds. Any person violating any of the provisions of this section is guilty of a class A misdemeanor.

21-10-10. State investment board fund - Cost of operation of board.

Repealed by S.L. 1989, ch. 667, § 13.

NDCC Chapter 21-10 State Investment Board

21-10-11. Legacy and budget stabilization fund advisory board.

The legacy and budget stabilization fund advisory board is created to develop recommendations for the investment of funds in the legacy fund and the budget stabilization fund to present to the state investment board. The goal of investment for the legacy fund is principal preservation while maximizing total return. The board consists of two members of the senate appointed by the senate majority leader, two members of the house of representatives appointed by the house majority leader, the director of the office of management and budget or designee, the president of the Bank of North Dakota or designee, and the tax commissioner or designee. The board shall select a chairman and must meet at the call of the chairman. The board shall report at least semiannually to the budget section. Legislative members are entitled to receive compensation and expense reimbursement as provided under section 54-03-20 and reimbursement for mileage as provided by law for state officers. The legislative council shall pay the compensation and expense reimbursement for the legislative members. The legislative council shall provide staff services to the legacy and budget stabilization fund advisory board. The staff and consultants of the state retirement and investment office shall advise the board in developing asset allocation and investment policies.

21-10-12. Legacy fund - Earnings defined.

For the purposes of section 26 of article X of the Constitution of North Dakota, the term "earnings" means net income in accordance with generally accepted accounting principles, excluding any unrealized gains or losses.

State Investment Board – Client Assets Under Management

Fund Name	Market Values as of 12/31/15 [1]	Market Values as of 12/31/14 [1]
Pension Trust Fund		
Public Employees Retirement System (PERS)	2,371,419,312	2,345,979,927
Teachers' Fund for Retirement (TFFR)	2,036,260,471	2,046,439,456
Job Service of North Dakota Pension	93,985,042	96,920,165
City of Bismarck Employees Pension	79,987,495	79,421,743
City of Grand Forks Employees Pension	55,321,141	56,347,332
City of Bismarck Police Pension	33,013,643	34,834,996
Grand Forks Park District	5,770,147	5,893,072
City of Fargo Employees Pension	1,512	9,656
Subtotal Pension Trust Fund	**4,675,758,763**	**4,665,846,347**
Insurance Trust Fund		
Legacy Fund		2,900,880,837
Workforce Safety & Insurance (WSI)	1,746,807,452	1,710,647,794
Budget Stabilization Fund	573,743,813	589,598,047
ND Tobacco Prevention and Control Trust Fund	46,438,466	
City of Fargo FargoDome Permanent Fund	38,489,674	40,651,973
PERS Group Insurance Account	38,411,033	42,705,101
State Fire and Tornado Fund	23,169,406	25,065,765
Petroleum Tank Release Compensation Fund	6,931,840	7,152,822
State Risk Management Fund	6,213,232	6,771,080
State Risk Management Workers Comp Fund	5,723,481	6,141,008
ND Association of Counties (NDACo) Fund	3,895,582	3,481,321
State Bonding Fund	3,187,067	3,299,303
ND Board of Medical Examiners	2,156,260	2,131,999
Insurance Regulatory Trust Fund	1,057,824	646,335
Bismarck Deferred Sick Leave Account	615,610	859,648
Cultural Endowment Fund	372,713	373,276
Subtotal Insurance Trust Fund	**2,497,213,453**	**5,340,406,309**
Legacy Trust Fund		
Legacy Fund	3,522,475,430	
PERS Retiree Insurance Credit Fund	96,046,927	93,282,939
Total Assets Under SIB Management	**10,791,494,573**	**10,099,535,595**

[1] *12/31/15 market values are unaudited and subject to change.*

- SIB Client Assets Under Management grew by approximately 6.9% or $692 million in the last year.
- The Pension Trust posted a net return of 0.56%, while the Insurance Trust generated a 1.03% net return in the last year. Investments were responsible for gains of $26 million for the Pension Trust and gains of $25 million for the Insurance Trust excluding Legacy Fund assets.
- Legacy assets increased by 21% (or $622 million) primarily due to tax collections, although net returns were 0.91% for the year ended December 31, 2015.
- SIB client assets totaled $10.8 billion based on unaudited valuations as of December 31, 2015.
- ND Tobacco Prevention and Control Trust Fund joined the NDSIB platform on September 30, 2015.

ND RETIREMENT AND INVESTMENT OFFICE
ND STATE INVESTMENT BOARD
INVESTMENT PERFORMANCE SUMMARY
AS OF DECEMBER 31, 2015

		Investment Performance (net of fees)																
		Quarter Ended					Fiscal Years ended June 30					Periods ended 6/30/15 (annualized)						
Fund Name	Market Values as of 12/31/15	9/30/15	12/31/15	3/31/16	6/30/16	FYTD 2016	2015	2014	2013	2012	2011	3 Years	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
Pension Trust Fund																		
Teachers' Fund for Retirement (TFFR)	2,036,260,471	-4.98%	2.72%			-2.40%	3.52%	16.53%	13.57%	-1.12%	24.05%	11.06%	10.94%	5.87%	4.99%	7.23%	7.80%	8.37%
Public Employees Retirement System (PERS)	2,371,419,312	-5.04%	2.71%			-2.47%	3.53%	16.38%	13.44%	-0.12%	21.27%	10.98%	10.61%	5.98%	5.54%	7.65%	8.01%	8.68%
City of Bismarck Employees Pension	79,987,495	-4.25%	2.17%			-2.17%	3.69%	14.56%	12.41%	1.57%	20.32%	10.12%	10.29%	6.00%	5.65%	7.52%	8.38%	*
City of Bismarck Police Pension	33,013,643	-4.76%	2.34%			-2.53%	3.56%	15.27%	13.03%	1.31%	21.10%	10.50%	10.61%	6.01%	5.48%	7.40%	8.25%	*
Job Service of North Dakota Pension	93,985,042	-3.12%	3.38%			0.15%	3.30%	13.54%	11.71%	3.09%	16.39%	9.42%	9.47%	6.16%	5.52%	8.47%	*	*
City of Fargo Employees Pension	1,512	0.03%	0.04%			0.07%	0.06%	8.42%	13.90%	0.97%	21.58%	7.31%	8.69%	*	*	*	*	*
City of Grand Forks Employees Pension	55,321,141	-5.32%	2.80%			-2.67%	3.53%	16.33%	14.01%	1.09%	21.64%	11.15%	11.04%	*	*	*	*	*
Park District of the City of Grand Forks Pension	5,770,147	-4.89%	3.32%			-1.73%	4.22%	16.44%	14.43%	0.86%	20.98%	11.57%	11.12%	*	*	*	*	*
Subtotal Pension Trust Fund	4,675,758,762																	
Insurance Trust Fund																		
Workforce Safety & Insurance (WSI)	1,746,807,452	-1.92%	1.18%			-0.77%	3.26%	11.71%	8.31%	6.17%	13.23%	7.71%	8.48%	5.65%	5.43%	7.08%	7.62%	*
State Fire and Tornado Fund	23,169,406	-2.89%	1.76%			-1.19%	3.16%	12.78%	10.59%	4.93%	14.52%	8.76%	9.11%	6.14%	5.49%	6.62%	6.91%	*
State Bonding Fund	3,187,067	0.21%	-0.11%			0.11%	1.25%	4.06%	2.96%	5.31%	5.01%	2.75%	3.71%	2.25%	3.04%	4.77%	5.46%	*
Petroleum Tank Release Compensation Fund	6,931,840	0.20%	-0.10%			0.09%	1.13%	3.68%	2.47%	4.84%	4.97%	2.42%	3.41%	2.06%	2.70%	4.71%	*	*
Insurance Regulatory Trust Fund	1,057,824	-2.58%	1.53%			-1.09%	2.04%	9.88%	8.49%	2.82%	11.61%	6.75%	6.90%	5.06%	4.69%	6.06%	6.01%	*
State Risk Management Fund	6,213,232	-2.08%	1.50%			-0.61%	4.08%	12.29%	10.19%	7.63%	14.36%	8.80%	9.65%	6.37%	5.57%	*	*	*
State Risk Management Workers Comp Fund	5,723,481	-2.65%	1.90%			-0.80%	4.57%	13.68%	11.61%	7.40%	16.23%	9.88%	10.62%	6.64%	*	*	*	*
Cultural Endowment Fund	372,713	-4.39%	3.00%			-1.52%	5.22%	16.94%	15.58%	4.65%	21.33%	12.46%	12.55%	6.75%	*	*	*	*
Budget Stabilization Fund	573,743,813	0.27%	-0.34%			-0.07%	1.86%	1.94%	1.87%	2.03%	3.73%	1.89%	2.28%	*	*	*	*	*
ND Association of Counties (NDACo) Fund	3,895,582	-2.50%	1.49%			-1.04%	2.77%	11.61%	9.46%	1.69%	17.73%	7.88%	8.49%	5.09%	4.61%	*	*	*
Bismarck Deferred Sick Leave Account	615,610	-2.48%	1.47%			-1.05%	2.95%	12.32%	9.83%	5.69%	13.80%	8.29%	8.84%	6.19%	5.76%	*	*	*
City of Fargo FargoDome Permanent Fund	38,489,674	-4.50%	2.40%			-2.21%	3.38%	16.34%	13.46%	3.14%	19.16%	10.92%	10.89%	6.41%	*	*	*	*
State Board of Medicine Fund	2,156,260	-1.66%	0.88%			-0.79%	2.70%	*	*	*	*	*	*	*	*	*	*	*
PERS Group Insurance Account	38,411,033	0.00%	-0.08%			-0.07%	0.01%	0.06%	0.27%	0.24%	0.31%	0.11%	0.18%	1.55%	1.92%	*	*	*
Subtotal Insurance Trust Fund	2,450,774,987																	
Legacy Fund	3,522,475,430	-4.42%	2.46%			-2.07%	3.31%	6.64%	1.15%	*	*	3.69%	*	*	*	*	*	*
Tobacco Control and Prevention Fund	46,438,466	*	0.28%			*	*	*	*	*	*	*	*	*	*	*	*	*
PERS Retiree Insurance Credit Fund	96,046,927	-5.59%	2.82%			-2.93%	3.06%	16.53%	14.80%	2.62%	21.65%	11.30%	11.47%	6.11%	4.75%	7.27%	7.53%	*
Total Assets Under SIB Management	10,745,056,107																	

* These funds do not have the specified periods of history under SIB management.

Note: Asset allocation largely drives investment performance. Each fund has a unique allocation that takes into consideration return objectives, risk tolerance, liquidity constraints, and unique circumstances. Such considerations must be taken into account when comparing investment returns. **All figures are preliminary and subject to revision.**

NDRIO – Consulting and Professional Services (June 30, 2015)

Actuary

The Segal Company
Chicago, Illinois

Auditor

CliftonLarsonAllen LLP
Baltimore, Maryland

Legal Counsel

North Dakota Attorney General's Office
Bismarck, North Dakota

Ice Miller
Chicago, Illinois

K&L Gates
Boston, Massachusetts

Information Technology

Advent Software, Inc.
San Francisco, CA

CPAS Systems Inc.
Toronto, Ontario

Master Custodian

The Northern Trust Company
Chicago, Illinois

Investment Consultant and Performance Measurement

Callan Associates Inc.
San Francisco, California

Investment Consulting (Fee Analysis)

Novarca North America LLC
Palo Alto, California

Investment Consulting (Private Equity Monitoring)

Adams Street Partners, LLC
Chicago, Illinois

Investment Managers

Adams Street Partners, LLC
Chicago, Illinois

Axiom International Investors
Greenwich, Connecticut

Babson Capital Management LLC
Boston, Massachusetts

Brandywine Asset Management
Wilmington, Delaware

Callan Associates
San Francisco, California

Capital Group
Los Angeles, California

Corsair Capital
New York, New York

Declaration Mgmt & Research, LLC
McLean, Virginia

Dimensional Fund Advisors
Chicago, Illinois

EIG Energy Partners
Los Angeles, California

Epoch Investment Partners, Inc.
New York, New York

Goldman Sachs Asset Mgmt
New York, New York

Investment Managers (cont.)

Grosvenor Capital Management
New York, NY

Hearthstone Homebuilding Investors, LLC
Encino, California

INVESCO Realty Advisors
Dallas, Texas

InvestAmerica L&C, LLC
Cedar Rapids, Iowa

J.P. Morgan Invest. Mgmt, Inc.
New York, New York

Loomis Sayles & Company
Boston, Massachusetts

Los Angeles Capital Management
Los Angeles, California

LSV Asset Management
Chicago, Illinois

Matlin Patterson Global Advisers LLC
New York, New York

Northern Trust Asset Management
Chicago, Illinois

Parametric Portfolio Associates
DBA The Clifton Group
Minneapolis, Minnesota

PIMCO
Newport Beach, California

Prudential Investment Management
Newark, New Jersey

Quantum Energy Partners
Houston, Texas

Investment Managers (cont.)

Quantum Resources Mgmt, LLC
Denver, Colorado

Research Affiliates, LLC
Newport Beach, California

SEI Investments Management Co.
Oaks, Pennsylvania

State Street Global Advisors
Boston, Massachusetts

Timberland Investment Resources, LLC
Atlanta, Georgia

UBS Global Asset Management
Chicago, Illinois

The Vanguard Group
Valley Forge, Pennsylvania

Wellington Trust Company, NA
Boston, Massachusetts

Wells Capital Management, Inc.
Menomonee Falls, Wisconsin

Western Asset Management Co.
Pasadena, California

Transparency Enhancement Update – January 15, 2016

Strategic Investment Belief / Goal:

Although SIB meetings are open to the public and RIO is committed to adhering to all applicable open records laws, a transparency enhancement initiative was commenced in mid-2015 in order to make it easier for interested parties to gain access to information on RIO's website. RIO believes these actions support our desire to foster trust, understanding and support within our community.

RIO's Stated Action Plan (as stated in our SIB Meeting Materials for August of 2015):

1) Enhance public access to our SIB Governance Manual by adding a new hyperlink on our RIO website (hyperlink accessed by clicking on "SIB Governance Manual" under the "SIB / Board" section); http://www.nd.gov/rio/SIB/Board/GovernanceManual/default.htm
2) Enhance public access to our SIB Meeting Materials by adding a new hyperlink on our RIO website (hyperlink accessed by clicking on "Meeting Materials" under the "SIB / Board" section); http://www.nd.gov/rio/SIB/Board/SIB%20Meeting%20Materials/default.htm
3) Enhance public access to our SIB's Audit Committee Charter and Meeting Materials by adding a new hyperlink on our RIO website (hyperlinks accessed by clicking on "SIB Audit Charter" or "Meeting Materials" under the "SIB Audit" section). http://www.nd.gov/rio/SIB%20Audit/Board/default.htm

Update: RIO's Supervisor of Information Systems, Rich Nagel, was instrumental in updating RIO's website to achieve these "Transparency Enhancements" in a timely and diligent manner.

Contact Information

- **Phone:**

  701-328-9889 or

  1-800-952-2970 (outside Bismarck/Mandan)

- **Mailing Address**

  ND Retirement and Investment Office

  1930 Burnt Boat Drive, P.O. Box 7100

  Bismarck, ND 58507-7100

- **E-mail Address:**

  rio@nd.gov or djhunter@nd.gov

- **Website Address:**

  www.nd.gov/rio

INFORMATIONAL ONLY

TO: State Investment Board

FROM: Dave Hunter

DATE: May 20, 2016

SUBJECT: **RIO Administrative Manual – Code of Conduct and Ethics**

RIO staff reviews their Administrative Manual on a regular basis. During the next six months, RIO intends to streamline its Administrative Manual by incorporating OMB's Human Resources Policy Manual by reference wherever deemed appropriate. **During the past month, RIO reviewed its existing Code of Conduct and Ethics policy for reasonableness and completeness. As a result of this review, RIO is adding clarifying language with regards to incidental business expenses and the timely reporting of suspected acts of fraud**. **The addition of this new language is intended to reinforce RIO's existing policies and practices.**

Due Diligence Business Expense Log:

RIO notes that NDCC 54-05.1-03.2 establishes an expense reporting threshold of $60.00 for lobbyists as highlighted in the following excerpt, "*The report must include a statement as to each expenditure* ***of sixty dollars or more expended on any single occasion on any individual****, including the spouse or other family member of a member of the legislative assembly or the governor, in carrying out the lobbyists work*". In the past, RIO has maintained an internal due diligence expense log with regards to incidental business expenses. (See Code of Conduct policy 10 k).

Fraud Reporting:

OMB Policy states "*that employees with a reasonable basis for believing that fraudulent acts have occurred in the workplace have a responsibility to report the suspected act in a timely manner".* **Although the spirit of this policy exists within RIO's existing Code of Conduct, RIO believes the addition of OMB's policy language provides greater clarity with regards to our obligation to report fraudulent acts in a timely manner.** (See Code of Conduct policy 13).

Summary:

RIO's Code of Conduct is attached for informational purposes noting that the clarifying language has been highlighted in **blue boldfaced** text.

POLICY TYPE: ADMINISTRATIVE

POLICY TITLE: *CODE OF CONDUCT*

Employees of RIO are expected to maintain a proper standard of conduct at all times. The following is the RIO Code of Conduct and Ethical Responsibility.

1. **RIO employees owe a duty to conduct themselves so as to inspire the confidence, respect, and trust of clients and the general public to strive to avoid not only professional impropriety but also the appearance of impropriety.**

2. **RIO employees should perform their duties impartially and diligently. RIO employees are expected to fulfill their responsibilities in accord with the intent of all applicable laws and to refrain from any form of dishonest or unethical conduct. RIO employees should be un-swayed by partisan interest, public sentiment, or fear of criticism.**

3. **Conflicts of interest and the appearance of impropriety shall be avoided by RIO employees.** RIO employees must not allow their family, social, professional, or other relationships to influence their judgment in discharging their responsibilities. RIO employees must refrain from financial and business dealings that tend to reflect adversely on their impartiality or interfere with the proper performance of their duties. If a conflict of interest unavoidably arises, the employee shall immediately disclose the conflict to the Executive Director. Conflicts of interest to be avoided include, but are not limited to: receiving consideration for advice given to a person concerning any matter over which the RIO employee has any direct or indirect control, acting as an agent or attorney for a person in a transaction involving RIO, and participation in any transaction for which the RIO employee has acquired information unavailable to the general public, through employment with RIO. "Conflict of Interest" means a situation in which a staff member has a direct and substantial personal or financial interest in a matter which also involves the staff member's job responsibility.

4. RIO employees should not unnecessarily retain consultants. The hiring of consultants shall be based on merit, avoiding nepotism and preference based upon considerations other than merit that may occur for any reason, including prior working relationships. The compensation of such consultants shall not exceed the fair value of services rendered.

5. **RIO employees must abide by North Dakota Century Code 21-10-09, which reads: "No member, officer, agent, or employee of the state investment board shall profit in any manner from transactions on behalf of the funds. Any person violating any of the provisions of this section shall be guilty of a Class A misdemeanor."**

6. Political contributions are regulated under North Dakota Century Code 16.1-08-03 and are not restricted under this ethics policy.

7. **All Activities and transactions performed on behalf of the public pension funds must be for the exclusive purpose of providing benefits to plan participants and defraying reasonable expenses of administering the plan.**

8. Prohibited transactions. Prohibited transactions are those involving self-dealing. Self-dealing refers to the RIO employee's use of plan assets or material, non-public information for personal gain; engaging in transactions on behalf of parties whose interests are adverse to the plan; or receiving personal consideration in connection with any planned transaction.

9. Use of agency information is limited to that which is required to perform assigned job duties and responsibilities. Accessing or transmitting information for other purposes is prohibited.

10. The following is a list of general expectations that all employees are expected to observe:
    a. To maintain the interests of the beneficiaries of RIO services and citizens of North Dakota.
    b. To understand and implement the TFFR retirement program and SIB investment program.
    c. To protect the confidentiality right of the beneficiaries.
    d. To maintain professional ethical standards and avoid the possibility of personal financial gain at the expense of RIO or its beneficiaries.
    e. To follow all laws, administrative rules, policies, procedures, and guidelines.
    f. To refrain from abusing working conditions and benefits received from employment.
    g. To work as part of a team, use courtesy and respect, and foster good working relationships with co-workers.
    h. To report facts clearly, accurately, and without prejudice.
    i. To carry out all assignments so that fellow staff members need not assume added responsibilities, except in times of emergency.
    j. To keep informed and to seek to improve work performance by making oneself aware of new ideas, standards, and methods of job performance through participation in available continuing education programs.
    k. To report gifts or meals of $60.00 or more on any single occasion on any individual. (New)

11. It is the RIO employee's responsibility to notify his/her supervisor if, while employed by RIO, employment outside of RIO is accepted or a personal business venture exists. An Outside Employment Agreement Form must be completed and submitted to the employee's supervisor for outside employment/business case. If there is a change in the outside employment/business status of the RIO employee or if a potential conflict of interest arises, a new agreement must be completed and submitted to the supervisor. If the outside employment/business is terminated, the supervisor must be notified in writing of the change. The supervisor will be responsible for the initial review of the situation and will make a recommendation to the Executive Director who will make the final determination as to whether a conflict of interest exists.

12. Listed below are some activities which may result in disciplinary action up to and including termination.
    a. Violation of the Code of Conduct rules listed above.
    b. Unlawful use of, possession of, reporting to work under the influence of, and manufacture or sale of drugs or alcohol in the workplace.
    c. Destruction, damage, or misuse of state property

d. Removal of state or another employee's property without prior consent.
e. Fighting on state property.
f. Carrying weapons or explosives on state property or any other violation of criminal laws.
g. Violation of health and safety rules, which could endanger lives.
h. Failure to carry out the directions of a supervisor (insubordination).
i. Falsification of records.
j. Disruptive or offensive behavior.
k. Excessive absenteeism.
l. Excessive tardiness.
m. Misuse of office computer systems, telephones, or other office equipment.
n. Violation of laws, rules, policies, procedures, and professional ethics.
o. Any other deviation from the standards of behavior an agency has a right to expect.

13. Report of Fraudulent/Significant Dishonest Acts (New)

Fraud is defined as intentional workplace deception; lying, cheating, and stealing or the use of one's position within RIO for personal enrichment through the deliberate use or misappropriation of RIO's resources or assets. An employee with a reasonable basis for believing that fraudulent or other significant dishonest acts have occurred in the workplace has a responsibility to report the suspected act in a timely manner. Reports should be made to the employee's immediate supervisor or manager, unless the employee suspects that the supervisor or manager has participated in or condoned the act. In that case, the employee should report the matter to the next highest level of supervision or management or directly to the Executive Director and/or Supervisor of Audit Services. This policy shall not prohibit prompt notification to appropriate authorities when an immediate threat to personal safety exists or other circumstances justify such notice. Upon discovery evidence of possible fraudulent or other significant dishonest acts, employees should not confront individuals suspected of wrongdoing or initiate fraud investigations on their own because such actions may compromise any ensuing investigation. Employees shall not make false statements or disclosures knowing they are false or in reckless disregard of the truth.

The "Code of Conduct" policy 10 (k) and 13 were added on May 20, 2016

POLICY TYPE: ADMINISTRATIVE

POLICY TITLE: *TRAVEL*

GENERAL POLICIES

1. All travel arrangements are to be coordinated by Administrative Services. Prior to the arrangement of travel, a Travel Instructions form must be completed.

2. Travel expenses will be reimbursed for one day prior to the conference or meeting and one day following as flight connections are generally not available same day. However, if it can be determined that traveling one day earlier or later actually results in a cost savings (decreased flight cost is greater than meals, lodging and other travel related expenses for the extra day) the extra day will be reimbursed. Expenses charged at a weekly or multiple-day rate will be pro-rated to actual travel days allowed.

3. Requests for reimbursement for travel expenses shall be submitted as permitted under the policy of OMB. In addition to the OMB travel policies, the following RIO travel reimbursement requirements must be met:
    a. An official agenda of the conference or meetings attended or written confirmation of the meeting date, time, and place must accompany travel reimbursement requests. If no agenda is provided, this must be indicated on reimbursement request.
    b. If a meal is shown on the agenda as being provided but the traveler makes a claim for reimbursement for that meal, a written explanation of the reason for not attending the provided meal must be included with the reimbursement request.
    c. In the event an SIB client or vendor offers a meal in conjunction with a business meeting, the traveler is not permitted to make a claim for reimbursement of that meal unless a written explanation is included with the reimbursement request. (New)
    d. A copy of airline itinerary (or boarding passes if flights changed during travel) must accompany travel reimbursement requests.
    e. Travel status will be considered to begin one hour before initial flight departure time and end one hour after final flight arrival time.

4. Individuals may use travel advances if travel cost become a burden. Advances are to be processed at least one week in advance of the actual travel.

5. Telephone cards may be issued to individuals who travel frequently. Individuals who travel infrequently may check out a telephone credit card from the Supervisor of Administrative Services. The card is to be checked in upon return to the office.

6. Telephone calls made while on travel status may be reimbursed based on the policy titled “Office Phones”.

7. The Executive Director may refuse reimbursement of any travel expenses if these policies are not followed or may waive these policies in emergency situations.

8. RIO travel policies are a supplement to OMB's travel policies. When a conflict between any of these policies and state law or state policies exists, the RIO policy in question is void.

IN-STATE TRAVEL

1. For all in-state travel, staff will, when feasible, use the service of the state Motor Pool. Use of personal vehicles for office travel must be approved by the Supervisor.

2. When the North Dakota Department of Transportation or Highway Patrol has issued a "No Travel" advisory, RIO staff is not required to travel.

3. Lodging arrangements for overnight trips are to be coordinated by Administrative Services. When possible, motels shall be selected from the published list of the state Tourism Office. Reimbursement for in-state travel is limited to the amount allowed by N.D.C.C. 44-08-04.

OUT-OF-STATE TRAVEL

1. Individuals flying by commercial air shall maintain a frequent flyer account record. Home addresses shall be used for corresponding with airlines in regard to the frequent flyer program. All free tickets earned through a frequent flyer program shall be the property of the individual.

2. Individuals are encouraged to utilize supersaver tickets when traveling on commercial airlines. Weekend travel is encouraged if savings can be realized after payment of additional lodging and meals are considered.

3. Any charges resulting from changes in travel plans that are not due to office business or personal emergency are the responsibility of the person traveling. If changes are made, Administrative Services will document the reason for the change, and if necessary, send written confirmation to the traveler indicating any charges that must be reimbursed and/or time frames in which credits must be utilized before being lost. This information must also be provided to Fiscal Management for review.

4. Airline charges for checked bags will be reimbursed for the first bag, standard weight/size charge. Any charges above that rate may be reimbursed depending on the circumstances but must be pre-approved.

5. Everyone planning travel out of state will be provided copies of all pertinent State and RIO travel policies prior to the booking of any airline or hotel reservations. By signing the Travel Instruction's form provided to them with the policies, the traveler agrees to abide by all such policies. Therefore, the traveler should be certain that they will be able to commit to the dates indicated and acknowledges the possibility that they may be responsible to reimburse RIO for charges incurred in the event of a change of plans. *Travel policy 3.c. was added on May 20, 2016.*

The "Oracle of Omaha" went on an epic rant against Wall Street this weekend.

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QUOTES IN THE ARTICLE

American Business Corp ARBU	0.0342 ▼	-0.0008 -2.21%
Berkshire Hathaway Inc BRK.A	209,930.00 ▼	-2,099.35 -0.99%
Oracle Corp ORCL	38.61 ▼	-0.86 -2.18%

Just before lunch at the Berkshire Hathaway Inc. annual meeting on Saturday, Warren Buffett unloaded what he called a "sermon" about hedge funds and investment consultants, arguing that they are usually a "huge minus" for anyone who follows their advice.

The Berkshire chairman has long argued that most investors are better off sticking their money in a low-fee S&P 500 index fund instead of trying to beat the market by employing professional stockpickers. He used the annual meeting to update the tens of thousands in attendance---and others watching via a webcast--about his multi-year bet with hedge fund Protege Partners. The bet, initiated by the New York fund back in 2006, was that over a decade, the cumulative returns of five fund-of-funds picked by Protege would outperform a Vanguard S&P 500 index fund, even when including fees.

Mr. Buffett showed a chart comparing the cumulative returns of the two sides of the bet since 2008. As of the end of 2015, the S&P 500 index fund had a cumulative return of 65.7%, outdoing the hedge fund teams's 21.9% return. The S&P has outperformed in six of the eight individual years of the bet too.

The chart was preamble to the real point Mr. Buffett wanted to make: that passive investors can do better than "hyperactive" investments handled by consultants and managers who charge high fees.

"It seems so elementary, but I will guarantee you that no endowment fund, no public pension fund, no extremely rich person" wants to believe it, he said. "They just can't believe that because they have billions of dollars to invest that they can't go out and hire somebody who will do better than average. I hear from them all the time."

But he was just getting started.

"Supposedly sophisticated people, generally richer people, hire consultants, and no consultant in the world is going to tell you 'just buy an S&P index fund and sit for the next 50 years.' You don't get to be a consultant that way. And you certainly don't get an annual fee that way. So the consultant has every motivation in the world to tell you, 'this year I think we should concentrate more on international stocks,' or 'this manager is particularly good on the short side,' and so they come in and they talk for hours, and you pay them a large fee, and they always suggest something other than just sitting on your rear end and participating in the American business without cost. And then those consultant, after they get their fees, they in turn recommend to you other people who charge fees, which... cumulatively eat up capital like crazy."

Mr. Buffett said he's had a hard time convincing people of this case.

"I've talked to huge pension funds, and I've taken them through the math, and when I leave, they go out and hire a bunch of consultants and pay them a lot of money," he said, earning a laugh from the crowd. "It's just unbelievable."

"And the consultants always change their recommendations a little bit from year to year. They can't change them 100% because then it would look like they didn't know what they were doing the year before. So they tweak them from year to year and they come in and they have lots of charts and PowerPoint presentations and they recommend people who are in turn going to charge a lot of money and they say, 'well you can only get the best talent by paying 2-and-20,' or something of the sort, and the flow of money from the 'hyperactive' to what I call the 'helpers' is dramatic."

A passive investor whose money is in an S&P 500 index fund "absolutely gets the record of American industry," he said. "For the population as a whole, American business has done wonderfully. And the net result of hiring professional management is a huge minus."

Mr. Buffett has long had a testy relationship with Wall Street, and he's positioned himself for decades as an outsider to the world of New York finance. In addition to repeatedly attacking the fees charged by hedge funds and investment professionals, he's criticized the tactics of activist shareholders, the danger of derivatives and the heavy use of debt by private-equity firms.

The antipathy can run in the opposite direction as well. As our Anupreeta Das noted in an article last year, many on Wall Street believe the Berkshire chairman to be a hypocrite, hiding behind the image of a folksy, benevolent investor while pursuing some of the tactics that are the targets of his attacks.

On Saturday, Mr. Buffett worked in a fresh plug for a book he's been recommending for decades, "Where Are the Customers' Yachts?," by Fred Schwed. The title comes from the story of a visitor to New York who was admiring all the nice boats in the harbor, and was told that they belonged to Wall Street bankers. He naively asked where the bankers' clients kept their boats. The answer: They couldn't afford them.

"All the commercial push is behind telling you that you ought to think about doing something today that's different than you did yesterday," Mr. Buffett told his shareholders. "You don't have to do that. You just have to sit back and let American industry do its job for you."

Berkshire Vice Chairman Charlie Munger jumped in to offer a counterpoint, of a sort:

"You're talking to a bunch of people who have solved their problem by buying Berkshire Hathaway," he said. "That worked even better."

From 1965 through the end of last year, Berkshire shares have risen 1,598,284%, compared to the 11,355% return on the S&P 500.

"There have been a few of these managers who have actually succeeded," Mr. Munger said. "But it's a tiny group of people. It's like looking for a needle in a haystack."

Mr. Buffett conceded that point, but concluded the first half of the day's proceedings by saying that Wall Street was better at salesmanship than investing.

"There's been far, far, far more money made by people in Wall Street through salesmanship abilities than through investment abilities," he said. "There are a few people out there that are going to have an outstanding investment record. But very few of them. And the people you pay to help identify them don't know how to identify them. They do know how to sell you."

"That's my message. We'll come back at one o'clock."

The Wall Street Journal.
Erik Holm
5/2/2016

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Another Large Pension Puts Hedge Funds on Chopping Block

By Tim Sturrock May 24, 2016

The $19.2 billion New Mexico State Investment Council (SIC) is set to vote on a plan to overhaul its $1.2 billion absolute return portfolio. New Mexico is the latest in a line of state funds to re-examine its commitments to hedge funds due to fees and performance.

Under the plan, recommended by the fund's hedge fund consultant Aksia, the state fund will redeem money managed by 22 managers and keep 14 managers based on the type of strategies they manage. The council declined to name which managers could be terminated.

The current portfolio is overexposed to equity and credit strategies, and the redeemed funds would be replaced by as many as 11 new high-conviction managers who would take on fixed income arbitrage, long/short credit, quantitative, global macro and managed futures mandates, according to a presentation by Aksia.

Driving the changes at the council is the need for diversification in the portfolio, but also the same concerns about performance and high-fees that have caused other pensions to examine their portfolios, says **Charles Wollmann**, director of communications for the council.

The board is scheduled to vote on the matter today and consistently takes recommendations from its consultants, he says.

"We don't live in a vacuum. We definitely look at what our peers are doing and whether it makes sense for us," he says.

Only last month, the New York City Employees' Retirement System cited fees and poor performance when its board decided to dump its $1.5 billion hedge fund program. And Illinois State Board of Investment this year began reducing its hedge fund exposure to 3% from 10%.

Additionally, in 2015, the $291 billion California Public Employees' Retirement System (CalPERS) began dumping its $4 billion hedge fund portfolio over complexity and fees.

Since hedge funds require long lock-up periods, the redemptions could take some time if approved, says Wollman. The overall 8% allocation to hedge funds will not change.

The reshaping of the portfolio represents another step in the evolution of the council's hedge fund investments which started in 2005 with funds of funds that covered hundreds of underlying managers, he says.

Last year, the fund terminated its fund of fund managers and took over the underlying investments.

New Mexico's focus is now on avoiding any diversification that approximates indexing whether it be in hedge funds or in other asset class, he says.

"There is such a thing as being over-diversified. I think at one point certainly we were. Today we're trying to narrow that down into something that's more manageable," he says.

The change may be short-lived since the fund has an asset allocation study planned for next year, he says.

"This is an interim step and we'll decide if hedge funds are for us or not," he says.

The council is also not alone in consolidating managers. Last week, CalPERS announced that it had eliminated 25% of its manager roster over the previous year, as reported.

CalPERS is still cutting its manager roster to include only 100 external "strategic managers."

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The AMBACHTSHEER Letter
Sustainable Pension Design • Effective Pension Management

January 2016

'ACTIVE INVESTING'…….THREE POSSIBLE PATHS

"We find that the Canadian Coalition for Good Governance's private engagements influence the adoption of shareholder democracy measures, say-on-pay advisory votes, and improve compensation structure and disclosure…"

"Can Institutional Investors Improve Corporate Governance through Collective Action?"
Doidge, Dyck, Mahmudi, and Virani (2015)

"We document outperformance following environmental, social, and governance (ESG) engagements by a UK institutional investor. After successful engagements, companies experience improvements in operating performance, profitability, efficiency, and governance."

"Active Ownership"
Dimson, Karakas, and Li (2012)

"Our strategy incorporates ESG factors holistically within a fundamental financial framework. Our high 'due diligence' focus, combined with the desire to maintain an active corporate oversight role with limited resources, leads to a concentrated portfolio…… but our 'active ownership' approach outweighs the risks embedded in this concentration…."

"Really Investing for the Long-Term: A Case Study"
van der Velden, van Buul (2012)

Rethinking 'Active Investing'

Our December *Letter* titled "Professor Fama's Folly: "Financial Markets Are Efficient" argued that while it may be impossible for 'beauty contest' investors to consistently outperform the market in the short-term, this is not the case for investors who focus on wealth-creation in the long-term. This *Letter* continues that theme by identifying concrete, practical pathways open to asset owners and institutional investors if they truly want to be wealth-creating long-term investors.

Specifically, we interpret the findings of published studies in three mutually-supportive contexts:

1. A collective action approach with limited objectives, supported by a large group of like-minded asset owners and institutional investors.
2. An individual 'change agent' approach on specific issues, with a single entity acting on behalf of a number of asset owners and institutional investors.
3. An integrative investment approach, with a single entity empowered to implement a comprehensive long-term investment program on behalf of one or more asset owners.

Why is identifying concrete, practical pathways to successful long-term investing so important? Because a survey of 81 institutional investor we conducted for the *Focusing Capital on the Long-Term* initiative in 2014 clearly showed a material aspiration gap: survey respondents said they understood the value of long-term investing, but offered a list

of barriers that stood in the way of actually investing that way.[i] These barriers included a lack of resources qualified to operate actively in the long-term investing arena, dysfunction in how 'performance' is measured, perverse incentives, and ineffective collective action strategies.

A 'Large Group' Collective Action Approach

The 2015 study by Doidge et al. cited above sets out the accomplishments of the Canadian Coalition for Good Governance (CCGG) over the course of its first 11 years of existence (2002-2013). CCGG has been globally lauded as an effective initiative to raise the quality of corporate governance. The study lists four reasons for this:

- CCGG membership is restricted to Canadian asset owners and institutional investors, increasing the likelihood of positive responses to CCGG proposals. However, care was taken to ensure that the membership included different types of asset owners and institutional investors, eliminating the prospect for accusations of bias. CCGG members collectively hold material stakes in all major publicly-listed Canadian corporations. There were 50 members at the time the study was conducted.
- A collective choice was made to pursue activism through private CCGG persuasion rather than through more adversarial public shareholder proposals or proxy fights. This meant activism through targeting specific firms with letter writing campaigns, phone calls, and meetings with independent directors.
- CCGG would limit its activism to broad governance 'best practices' issues, rather than on issues such as business strategy, financial policy, or leadership at specific corporations.
- Corporate governance practices in Canada are largely guidelines- rather than rules-based, with a comply-or-explain requirement. There were no regulatory changes during the observation period.

A key success ingredient in the study itself was that CCGG made its private records available to the researchers, so that they could form a complete picture of its activism efforts. This in turn allowed them to construct tests that measure the impact of these efforts on corporate governance practices.

During the observation period, CCGG engaged firms on three major governance issues: 1. Majority Voting, 2. Say-on-Pay, and 3. Compensation Policies. Quoting from the study findings on the adoption of CCGG proposals in these three areas, the researchers found "in each case, we find that CCGG engagement is associated with a statistically significant and economically meaningful increase in the likelihood of adoption". The researchers conclude that 'large group' collective action strategies can be highly effective, if careful thought is given to organizational composition and structure, social context, and devising simple, well-understood implementation protocols.

An Individual 'Change Agent' Approach

The 2012 study by Dimson et al. cited above is also based on access to a unique proprietary database. The focus here is individual corporate engagements related to environmental, social, and governance (ESG) issues. The database was provided by a large UK-based institutional investor with a long history of actively engaging corporations in which it, and/or its clients, are shareholders. It engages with over 3000 target companies around the world via letters, emails, telephone conversations, and direct dialogue with senior management. The focus for the study is 2152 engagement events at 613 U.S. public companies over the 1999-2009 period.

The study produced the following key findings:

- The engagement success rate was 18% attained over a median timeframe of one year.
- Successful engagements produced an average cumulative abnormal return of 4.4% in the year after success was achieved. There was no market reaction to unsuccessful engagements.
- Successful engagements related to governance and climate change issues were most successful, producing cumulative abnormal returns of 7.1% and 10.6% respectively.
- Successful engagements on non-governance themes generated 5.9% in cumulative abnormal returns.
- The return on assets, profit margin, asset turnover, and sales/employee ratios improve significantly one year after successful engagements, as compared to unsuccessful ones.

- Shareholdings by activist investors increase, and stock return volatility decreases one year after successful engagements.
- Corporate governance quality (as measured by the Gompers and Bebchuk indexes) improves in the targeted firms two years after successful engagements.

These findings lead Dimson et al. to conclude that this kind of activism lengthens the time horizon in which corporate managers frame strategic decisions, which in turn creates incremental value for all corporate stakeholders, including shareholders.

Related studies by Bauer, Clark, Moers, and Viehs extend the study by Dimson et al. to include public shareholder proposals as another form of activist engagement. They note that 20% of these public proposals are withdrawn before they come to a vote, and that these withdrawn proposals tend to be filed by large institutional investors. They point out that this effectively transforms public proposals into private corporation-investor negotiations, indicating that the public and private engagement routes are closely connected.

An Integrative Long-Term Investment Approach

The logical extension of the two activist approaches set out above is to empower a single entity to manage a comprehensive, integrated, long-term investment program on behalf of one or more asset owners. In the cited 2012 article, van der Velden and van Buul set out the key success drivers for the design and implementation of such a program. They had been managing such a program at a large Dutch fiduciary manager since 2008 at the time they wrote the article, and became principals of *Ownership Capital* (*OC*) at its founding in late 2012. *OC* has employed the same integrative long-term investment approach described in the article since its inception. Five key success drivers are:

- Start with the fundamental belief that 'sustainability pays': corporations which live by that belief will naturally frame their strategies in horizons that stretch beyond tomorrow into the 'long-term'. This in turn will drive superior value-creation over time. For research backing, they reference the same Eccles et al. study we did in our February 2015 *Letter*. The study found that the return of a portfolio of high-sustainability firms was 4.8%/yr. higher than the return of a portfolio of low-sustainability firms over a 17-year period.
- Integrate ESG factors holistically within a fundamental financial framework: such integration recognizes that true corporate sustainability requires paying equal attention to the financial and non-financial drivers of corporate performance. 'Due diligence' doesn't just involve thorough financial analysis and valuation, but also plant visits and conversations with management, customers, suppliers, competitors, unions, and NGOs.
- Be able and willing to add 'active ownership' activities in the mix if needed: such initiatives require in-depth knowledge of, and strong relationships with investee companies. This requires being a 'top 20' investor in investee companies with understandable business models and balance sheets. The average holding period for each investment is expected to be many years. Most engagements over time have been positive and constructive. However, sometimes an investee corporation will stray from its sustainability path, and if efforts to return it to that path fail, the exit option must be exercised.
- Conviction investing means holding a concentrated portfolio: this means holdings in the 20-25 range rather 200-250. However, such concentration does not necessarily mean greater risk exposure. Portfolio risk is controlled through deep fundamental and ESG analysis, combined with 'active ownership' activities. The resulting portfolio has a beta under 1.0, and the same level of absolute return volatility as a broadly-based index fund.
- Align the 'sustainability pays' belief with manager compensation: while incentive structures can be designed with different specifics, they must recognize the long-term nature of this approach to investing. Also, HR policies must do more than just recognize the need for financial skills on the investment team. Broader business strategy and applied ESG skills and experience are also needed.

Does this kind of integrative, long-term approach to investing work as well in practice as to does in theory?

The cited study by Eccles et al. suggested an affirmative answer: the high-sustainability portfolio outperformed the low-sustainability one by almost 5%/yr. over a 17-year period. Interestingly, stringing the actual portfolio performance of the approach described above together over its combined five years of operation has also produced an outperformance result in the 5%/yr. area.[ii]

The cited December 2015 *Letter* "Professor Fama's Folly" provided additional evidence for the 'outperformance' proposition, both theoretical and empirical. For example, John Maynard Keynes made a clear theoretical distinction between short-term 'beauty contest' and long-term wealth-creating investing way back in 1936. Empirically, using the latter style, he managed the University of Cambridge endowment fund from 1921 to 1946, producing an excess return, once again, in the 5%/yr. area. As another example, the CEM Benchmarking Inc. database contains pension funds with long-term outperformance results in the 2%/yr. area. Common characteristics of many of these high-performance funds are that they are large, and that they have insourced most of their private markets investment activities, leading to materially lower cost structures and higher net returns.

Three Pathways to Active Investing

The goal of this *Letter* was to examine three pathways to active investing in some detail. Why is this important? Because active investing, properly defined and implemented, is a 'win-win' proposition. It leads to a more functional, sustainable form of capitalism, and at the same time, it produces excess returns for the investors who practice it effectively. Importantly, the three pathways mutually support each other.

In closing, some thoughts on the practical 'take-aways' of the three pathways studies:

- The leaderships of other national and international governance coalitions (e.g., CII, ACSI, Eumedion, ICGN) should have a close look at the findings from the Doidge et al. study on the CCGG. What are the lessons to be learned? Can the effectiveness of these coalitions be improved?
- The 18% success rate for engagements in the Dimson et al. study seems disappointingly low, especially given the apparent financial benefits attached to engagement success. Why is the success rate so low? What can be done to improve it?
- The van der Velden-van Buul study helps explain why integrative, active long-term investment approaches are still such a rarity in the institutional investing world. Their adoption requires a genuine shift away from the still-dominant short-term 'beauty contest' paradigm. It is one thing to say such a shift is needed, it is quite another to actually achieve it.

Given these thoughts, it seems appropriate to let Keynes have the final word: *"Worldly wisdom teaches that it is better for reputation to fail conventionally than to succeed unconventionally."*

Thus, we need to shift 'active investing' from an unconventional to a conventional strategy.

Endnotes:

i. *The study title is "How Effective Is Pension Fund Governance Today? and Do Pension Funds Invest for the Long-Term?" by Ambachtsheer and McLaughlin, January 2015. It can be accessed through the KPA Advisory Services website in Recent Publications.*

ii. *Based on information provided by Ownership Capital.*

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Published by KPA Advisory Services Ltd., 1 Bedford Road, Suite 2802, Toronto ON Canada M5R 2B5
416.925.7525. www.kpa-advisory.com

The AMBACHTSHEER Letter
Sustainable Pension Design • Effective Pension Management

February 2016

SOLVING THE 'ANNUITY PUZZLE':

IT'S ALL IN HOW YOU ASK THE QUESTION

"We conclude Dutch plan members generally welcome the partial lump sum option over full annuitization. Framing and default settings are capable of predictively steering annuity demand…..".

Bockweg, Ponds, Steenbeek, and Vonken (2015)

What is the 'Annuity Puzzle'?

Economists have long believed retirement savers should convert their retirement savings into a life-long stream of pension payments (i.e., annuitize) when they retire. Why? Because risk-aversion would push retirees to preferring safety over greater wealth accumulation with the looming uncertainty about how many years their pension pot would have to last. This logic is embedded in the design of traditional DB (defined benefit) plans, which automatically annuitize 100% of retirement savings over the course of participants' working lives.

Strangely, most retirement savers who have an option to annuitize don't seem to agree with the economists. Study after study has produced the same puzzling finding: the actual take-up of the annuity option in various forms of DC (defined contribution) plans is very low (under 10%). These findings have triggered the obvious question: why are retirement savers choosing not to annuitize when they have the option to do so?

Behavioral economists such as Daniel Kahneman suggest the answer lies in how you ask the question. Consumer preferences are strongly affected by how choice prospects and outcomes are framed.

So, for example, is an immediate annuity an investment product or a longevity insurance product? In fact, it has elements of both. From an investment perspective it appears unattractive because of the uncertainty of its return (e.g., what if I die tomorrow?). From a longevity insurance perspective it appears attractive because of its life-time payment certainty (e.g., I won't run out of money if I live past my life expectancy).

Why is Solving the Puzzle Important?

Solving the 'annuity puzzle' is not just an interesting academic exercise. A recent study by Willis Towers Watson places pension assets in seven major pension countries (Aus, Cda, Jpn, NL, Swit, UK, US) at $35T, almost evenly split between DB and DC arrangements. However, over the last 10 years, DC asset growth has out-stripped DB asset growth by 7.1%/yr. versus 3.4%/yr. The implication is that almost half of the retirement savings in these seven countries (i.e., the DC assets) do not automatically annuitize, and that proportion is likely to grow over time. Also, questions are being raised about the wisdom of automatic 100% annuitization in DB plans. Would participants choose this option if they were given a choice? A recent study involving over 4,000 members of a Dutch occupational pension plan addressed this question.

Testing the 'Framing' Hypothesis in Member Choice

The quote below the title of this *Letter* comes from that study. It was designed to test the importance of framing in member choice regarding annuitization.[i] Historically, the plan has required 100% annuitization with no member choice in the matter. The study involved a 2-step approach:

1. In order to establish a baseline for testing framing effects, present a neutrally-framed choice between 100% annuitization and 80% annuitization (i.e., subjects could choose to take up to 20% of their projected accrued capital as a lump-sum).
2. To assess the impact of framing and default settings, change the language to reflect either an investment context or a longevity insurance context. Also, in each of the two cases, set the default choice at 100% annuitization for one group , and at 90% annuitization for another group.

The implementation of the study design required splitting the total response universe into seven different groups. Here is a summary of the study findings:

- In the Step 1 neutral frame, 42% stayed with the 100% annuitization option. The other 52% chose a lump-sum distribution ranging from 5-20%, averaging 12%. The researchers note that the relatively high 100% annuitization take-up was likely impacted by the fact that this is currently the only legal option in the plan. Similar studies with DB plan participants in the USA have shown the same annuitization bias.
- The highest lump-sum takers were married males with above-average incomes, and ages below the median age of 58.
- Changing the framing to either investment or insurance contexts shifted lump-sum choices in the predicted directions (i.e., the investment context reduced annuitization, the insurance context increased it).
- The default choice settings also shifted lump-sum choices in the predicted directions (i.e., increasing the lump-sum percentage in the default option increased the actual percentage chosen).

The researchers concluded their findings place considerable responsibility on the shoulders of pension policy makers and pension professionals: annuitization decisions by retirement savers are materially impacted by whether these decisions are framed as investment or insurance decisions, and by how decision defaults are set. We would add that even in countries where 100% annuitization is the historical norm in workplace pension plans, there appears to be considerable participant demand for a partial lump-sum option, even when that option is neutrally presented.

Deriving a Neutral Framing/Default Option

So can we frame annuitization decisions 'neutrally'? An article by Don Ezra in the March/ April 2016 issue of the Financial Analysts Journal (FAJ) helps answer this question.[ii] He reminds us that the traditional immediate annuity is the sum of two parts: 1. a deferred annuity commencing at a specified date, and 2. a whole-life insurance policy with limited premiums effectively underwritten by the annuitant with the insurance company as beneficiary. He argues that Part 1. offers participants longevity insurance, and thus is a valuable component of any retirement income generation design. On the other hand, it is more difficult to see a useful role for the Part 2. in such a design.

This framing had already been the subject of an earlier FAJ article by Sexauer, Peskin, and Cassidy.[iii] In their article, they described an immediate annuity as a "capital transfer to an insurance company in an exchange for an uncertain income stream, with no chance of any return of capital". This leads them to the same conclusion Ezra reached: while the longevity risk insurance component of this package (i.e., Part 1.) is clearly valuable, the value of exchanging capital now for an uncertain series of payments up to the point where the deferred annuity (i.e., the longevity insurance) kicks in is less clear. Instead, the authors propose a simple risk-minimizing alternative to the traditional immediate annuity: a term-laddered series of high-quality bonds up to the plan participant's life expectancy, and a deferred life annuity thereafter. Let's call this the minimum risk income-for-life option (the MRIFL Option).

A Simplified Example

As a simplified example of the MRIFL Option, the authors show that with a $100K lump-sum and 30 September 2010 prices, it would have cost a 65-year-old $12K to buy a 21-year-deferred life annuity paying $7K/yr. Buying a laddered 20-year TIPS portfolio with the remaining $88K, it would generate a payment stream starting at $5K/yr. in Year 1, and ending at $7K/yr in Year 20, assuming a 2%/yr. inflation rate.

It seems to us that this simplified example shows how to answer the neutral framing/default design question in broad terms. The key is to divide plan participants' uncertain retirement period into two components, separated by the retiree's life expectancy at the retirement date:

- Acquire a deferred annuity as insurance against out-living the retiree's life-expectancy.
- Design a low-risk investment strategy to fund the period from retirement date to life-expectancy.

Such a MRIFL Option design clearly separates the investment and insurance components embedded in the standard immediate life annuity, and is thus neutrally-framed. Thus would serve as a good default option. However, it does not answer the question of how a plan participant transitions from accumulating retirement savings while working, to decumulating them while retired. The implication is that a default transition path from accumulation to decumulation is also needed.

Designing a Default Transition Path

The key transition risk to be hedged is 'draw-down' risk: the possibility that the accumulation-to-decumulation transition takes place at a bad time in the financial markets (e.g., during the Global Financial Crisis). The traditional 'draw-down' risk-mitigating strategy in DB plans involved some form of intergenerational risk-sharing, where in theory, surpluses generated in good times are saved to support pension payments in bad times. However, the reality has been that generated surpluses were largely spent in good times, not saved for bad times.

A recent study by Bonenkamp, Broer, and Westerhout confirms that intergenerational risk sharing has been over-rated as a risk-dampening device.[iv] The study concluded that when more realistic assumptions about financial market dynamics, about risk-sharing protocols, and about using smart DC (rather than plain-vanilla) plan design alternatives are made, the theoretical value-added potential of intergenerational risk-sharing effectively disappears. Indeed, collective schemes that expose all participants (whether young or old) to the same amount of balance sheet mismatch risk may well be value-reducing relative to the hybrid plan design developed in this *Letter*.

If intergenerational risk-sharing in workplace pension plans is not a reliable strategy to mitigate 'draw-down' risk, are there alternatives? Prior *Letters* have set out three mutually-supporting strategies, based on workplace pension plans having two goals: 1. Supplemental (to Pillar 1) pensions at affordable contribution rates by compounding high rates of return over long periods of time, and 2. Lifetime post-work income with reasonable predictability.

Invoking the Tinbergen Principle, achieving these two goals efficiently requires two instruments: one that focuses on long-term return generation, and another that focuses on life-time post-work income generation. Invoking the Samuelson-Merton Life-Cycle Model of personal finance, people accumulate retirement savings at the highest possible return while they work, and decumulate them with the highest possible degree of safety in the post-work period of their lives (e.g., through the MRIFL Option derived above).

In this context, three strategies to mitigate 'draw-down' (or 'sequencing') risk are:

1. <u>Control the price volatility of the LT Return-Generation (LTRG) Portfolio</u>: other things being equal, low volatility stocks should be favored over high-volatility stocks, and higher -yielding real estate and infrastructure investments should be favored over lower-yielding ones; factor-based diversification strategies should be used in addition to geographic- and asset class-based ones.[v]

2. Design a gradual exposure transition from the LTRG Portfolio to the MRIFL Option: for example, the default design of the transition mechanism for plan participants could gradually shift exposure from the LTRG Portfolio to the MRIFL Option over a 20-year period (e.g. between ages 50-70). Over this 20-year period, LTRG units are converted into MRIFL units. By design, this strategy naturally mitigates against concentrated draw-down risk.
3. Dynamic asset allocation: adjusting the default design of the transition mechanism from the LTRG Portfolio to the MRIFL Option based on financial markets pricing judgements. For example, simple arithmetic showed that the late-1990s was a good period to accelerate the transition process from equities to bonds. Similarly, in the post-GFC period, it was advantageous to slow the transition process from equities to bonds. Stating the obvious, managing these kinds of adjustment processes require steady nerves, great communication skills, and a high level of member trust.

Of course, the designs of the front-end LTRG Portfolio, the back-end MRIFL Option, and the transition path from one to the other does not exhaust the list of design features which could be embedded in state-of-the-art 21st Century workplace pension plans. For example, Fred Vettese's new book "The Essential Retirement Guide" offers fresh thinking on the amount of gross income it really takes for many people/couples to maintain their living standard post-work, and on how our willingness and ability to consume declines with old age.[vi]

From Saying to Doing

Is the global pension 'industry' ready to embrace the kind of rethinking of pension design and management set out in this *Letter*? There are hopeful signs here and there. One is in the growing number of thoughtful articles and books arguing for the need to rethink the many outmoded conventions which still continue to stifle innovation in the pensions world. Another is a new generation of leaders willing and able to take these 'better way' ideas, and put them into practice.
Carpe diem!

Endnotes:

i. *Bockweg, Ponds, Steenbeek, and Vonken (2015), "Framing and Pension Annuities: Experimental Evidence from a Dutch Pension Fund. Unpublished at this time of writing.*
ii. *Ezra (2016), "Most People Need Longevity Insurance Rather than an Immediate Annuity", Financial Analysts Journal, March/April.*
iii. *Sexauer, Peskin, and Cassidy (2015), "Making Retirement Income Last a Lifetime", Financial Analysts Journal, January/February.*
iv. *Bonenkamp, Broer, Westerhout (2014), "The Value of Collective Pension Contracts", Netspar.*
v. *See a new position paper titled "QSuper Investment Philosophy and Strategy" for an elaboration on these ideas. This Australian pension organization reports member behavior consistent with what was reported in the earlier-cited Dutch study. However, the framing is now DC rather than DB. Accordingly, 86% of active members use the life-cycle based, dynamically-managed, default option titled 'QSuper Lifetime'. On retirement, members can move their accumulated savings to a decumulation option titled 'Income'. Only 30% choose to do so, with half of this group also choosing to withdraw a lump sum averaging 15% of the total amount. QSuper is designing an income-for-life backend to the 'Income' option. An interesting question is how member behavior would change if, as suggested in this Letter, the default would be for retirement savings in 'QSuper Lifetime' to automatically transition into the 'Income' option. Likely, take-up of the 'Income' option would rise well above the current 30% experience.*
vi. *Vettese (2016), "The Essential Retirement Guide": A Contrarian's Perspective", Wiley.*

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The AMBACHTSHEER Letter
Sustainable Pension Design • Effective Pension Management

March 2016

THE FUTURE OF PENSION MANAGEMENT:

INTEGRATING DESIGN, GOVERNANCE, AND INVESTING

"No one has thought more about the issues related to managing pension money better or longer than Ambachtsheer. His writings are a must read for serious people with a desire to serve their beneficiaries well. This new book is destined to become a classic."

Britt Harris, CIO
Teachers Retirement System of Texas, USA

"Ambachtsheer's latest book is both substantial and timely, bringing together the latest thinking on the global pensions industry. He mobilises both its theoretical and creative aspects in what is seen as an increasingly necessary and even righteous cause."

Virginia Holmes, Board Chair
Universities Superannuation Scheme Investment Management, and
Board Chair, British Airways Pensions, UK

"Trustees of pension funds often decide on "how" before they decide "what" they should be doing. This book gets the order right: from objectives, to strategy, and then measuring outcomes. Keith has always been the leading voice of reason on pension fund design and management. This book is no exception."

Brad Holzberger, CIO
QSuper, Australia

"Providing adequate pensions is a key challenge for ageing societies. In this new book, Ambachtsheer proves again his unique ability to combine theory and practice in unscrambling the complex problems surrounding pension design, governance, and investing. It is compulsory reading for all pension professionals around the globe."

Klaas Knot, President
De Nederlandsche Bank, The Netherlands

"In his new book, Keith translates classic theory from famous economists into concrete solutions for pension funds. The result is essential reading for those who believe the future of pension management will start today."

Geraldine Leegwater, CEO
ABN AMRO Pensioenfonds, and Board Member, ABP Pensioenfonds, The Netherlands

"Once again, Keith translates academic insights into the real world of pensions. He starts with pension delivery, from which he works backwards to deduce plan design, governance and investment strategy – always with the objective to benefit plan members. Anyone with an interest in pensions will enjoy reading this book."

Carsten Stendevad, CEO
Danish Labour Market Supplementary Pension (ATP), Denmark

"In his new book, Ambachtsheer has successfully combined all of the essential elements of our industry - from plan design, to governance, to investment strategy. It is a must read for everyone in the pension industry, including policy makers, plan trustees, and investment managers."

Mark Wiseman, CEO
CPP Investment Board, Canada

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New Book Released!

I thought my third book on pension management, *PENSION REVOLUTION,* published by Wiley in 2007, would be my last. So what happened? Why is Wiley releasing book #4 *THE FUTURE OF PENSION MANAGEMENT* this month? It happened because I was a speaker at the CFA Institute's 2015 Annual Conference in Frankfurt last April, where Wiley put the book on display in its sales booth. Curiosity got the better of me. I decided watch and see whether anyone would actually buy this aging relic. To my surprise, there were buyers!

This got me thinking. A lot of things had happened in the pensions world since 2007, some foreseen in book #3, some not. The time was right for a thorough review and recalibration of the challenges facing the global pension, governance, and investing sectors. And so the idea of book #4 was born.

Pension Design

In pension design, the traditional DB (defined benefit) and DC (defined contribution) formulas are converging into hybrids with names such a 'Defined Ambition' (DA) and 'Target Benefit' (TB). The Netherlands and Australia offer good examples. The former country is transforming its traditional DB plans into DA plans, while the latter is transforming its traditional DC plans into TB plans. At the same time, workplace pension coverage is expanding. The United Kingdom is leading the way with its National Employment Savings Trust (NEST) initiative, while the United States and Canada are now busy designing their own expansion initiatives.

Pension Governance

In pension governance, the process of reconciling the opposable needs for boards of trustees to be both representative and strategic continues to slowly move in the right direction. There is a growing understanding that it is not a question of 'either-or', but of how to get both ingredients into board composition. Why both? Because pension boards need 'legitimacy' to be trusted, and at the same time, need to be strategic to produce 'value for money' outcomes for their stakeholders. This strategic mindset addresses tough issues such as organization design and culture, investment beliefs, incentives, and stakeholder communication and relations. Behind these governance imperatives lies the broader question of organizational autonomy. Unnecessary legal and regulatory constraints are increasingly seen as 'value for money' destroyers in pension organizations.

Pension Investing

Pension investing has been changing for the better too, starting with serious re-examinations of investment beliefs. There is growing evidence the leadership of the global pensions sector is beginning to see their job as transforming retirement savings into wealth-producing capital. There are a number of factors at play here. One is the simple reality that good investment returns are increasingly difficult to come by. Another is a growing understanding of the zero-sum nature of short-horizon active management. Yet another is that both logic and empirical evidence support the idea that long-horizon active management should, and actually does produce higher long-term returns than either short-horizon active, or passive management. However, saying is one thing, doing another. For many pension organizations, there is still a sizable aspiration/implementation gap to be closed.

Three 'Unreasonable' Men

So my 'Frankfurt moment' was to recognize that the significant 'pension revolution' developments since 2007 in pension design, governance, and investing should be chronicled in a coherent, integrated manner, and that I was well-placed to do that job. However, I would not be doing it alone. A good deal of

the necessary insight and inspiration to write this book would come from three 'unreasonable' men as defined by the Anglo-Irish playwright George Bernard Shaw:

> "*The reasonable man adapts himself to the world. The unreasonable one persists in trying to adapt the world to himself. Thus all progress depends on the unreasonable man….*"

My first 'unreasonable man' is the first Nobel Prize Laureate in Economics: Jan Tinbergen. His claim to fame was establishing the principle that the number of economic policy goals has to be matched by an equal number of instruments designed to achieve them. Applied to pension economics, the principle offers a way out of the long-standing 'affordability vs. safety' dilemma in pension design. The Tinbergen Principle is very clear: achieving these two goals effectively will require two instruments: one that focuses on affordability through long-term return compounding, and another that focuses providing payment safety for life. Yet, 'reasonable' people persist in beating their heads against the wall trying to achieve these two goals with one instrument. Some 'reasonable' people say that the 'right' instrument is a DB plan; others say it is a DC plan. Both are equally wrong.

My second 'unreasonable' man is the father of modern management principles and practices: Peter Drucker. In his 1976 book "The Unseen Revolution" Drucker asserted that pension organizations are not exempt from universal governance effectiveness dictates. Just like in any other organization, ineffective governance will produce poor outcomes for the pension organization's stakeholders. Effective pension organizations have clear missions, inspired governance, and great execution capabilities.

My third 'unreasonable' man is, arguably, the 20th Century's most influential economist: John Maynard Keynes. In the famous Chapter 12 of his 1936 opus "The General Theory of Employment, Interest, and Money", Keynes makes a clear distinction between the dysfunctional short-term 'beauty contest' investing practices of most institutional investors, and long-term investment processes that convert savings into wealth-producing capital. He noted that the latter seemed to be an unimportant, second-order activity for most institutional investors. He asserted that 'beauty contest' investing is a zero-sum game played for the enjoyment of professional investors, funded by the fees paid by their clients. This game has little do with 'real world' wealth-creation.

These three 'unreasonable' men and their ideas surface many times through the new book's 27 chapters.

Two More 'Unreasonable' Men

There are two more recent (still alive!) 'unreasonable' men who deserve mention as important contributors to the ideas and their implementation set out in book #4.

Nobel Prize Laureate George Akerlof's 'asymmetric information' insight figures prominently in my thinking about the design of pensions systems and organizations. Akerlof reminds us that the wonderful 'Adam Smith' outcomes from free competitive markets (e.g., fair pricing and efficient resource allocation) require that all market participants have the same information when they buy or sell goods or services in those markets. He also demonstrates that when that is not the case, the result is unfair pricing and inefficient resource allocation. Book #4 argues that in the market for pension management services, sellers generally know more about what they are selling than buyers know what they are buying. This will result in buyers paying too much for too little, unless steps are taken to level the informational playing field.

Former Dean of University of Toronto's Rotman School of Management Roger Martin's work on integrative thinking and the creative resolution of opposable ideas has also played an integral role in the structure and tone of book #4. On integrative thinking, logic tells us we lose a lot by being 'silo' thinkers.

Connecting the dots (e.g., between pension design, governance, and investing) leads to more holistic thinking and more thoughtful solutions. On resolving apparently opposable ideas, Martin persuasively sets out his argument in "The Opposable Mind". Three direct applications of resolving apparently opposable ideas in the pensions space are 1. The 'DB vs. DC' debate in pension design, 2. The 'Lay vs. Expert' debate in pension governance, and 3. The 'Active vs. Passive' debate in pension investing.

The book offers resolutions to all three apparent dilemmas.

Many More People

Many more people have contributed to book #4 in one way or another, including colleagues, clients, family, and friends. I thank you all, but mention only one by name. My wife and partner Virginia Atkin once again provided the inspiration and encouragement to write this new book, while also ensuring I was not consumed by it.

Launching the Book

Book #4 will see its first light of day in Richmond, Virginia on March 15 at a meeting of the Board of the Virginia Retirement System. After that, the action moves to the first official launch of the book at the Rotman School of Management, University of Toronto on April 5. From there, it will make appearances at events at Cambridge University, London, Amsterdam, Washington, Montreal, Boston, Hong Kong, Singapore, Sydney, and Brisbane over the course of the rest of the year. Let us know if you would more information about the events in any of those locations.

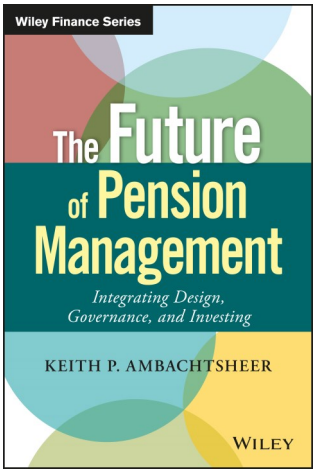
Quite separately, we will ensure that all KPA Advisory Services clients receive a complimentary 'house copy'. Thank you for your ongoing support for what we do! Additional copies can be ordered directly from Wiley….more information below.

Happy reading!

Keith Ambachtsheer

Endnotes

i. *For the record, book #1 was "Pension Funds and the Bottom Line" (1985), and book #2 (with Don Ezra) was "Pension Fund Excellence" (1997).*
ii. *Shaw (1903), "Man and Superman".*
iii. *Tinbergen shared the first Nobel Prize in Economics in 1969 with Ragnar Frisch.*
iv. *Akerlof was awarded the Nobel Prize in Economics in 2001. His most famous article on asymmetric information was "The Market for Lemons", which dates back to 1970. The context there was not pension services, but used cars. As proof that he continues to be a strong advocate for creating fair markets, see his recent book (with Robert Schiller) "Phishing for Phools" (2015). The key to leveling the informational playing field in pension services is 'fiduciary management' either directly through dedicated pension organizations, or indirectly through regulatory enforcement in the financial services industry.*
v. *Martin (2007), "The Opposable Mind".*
vi. *I am aware that way back in 1903 Shaw wrote "The reasonable man"…..and that the 'unreasonable' ones I cite here are in fact all male. That was the 20th Century. We will see far greater gender balance in the 21st Century.*



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The AMBACHTSHEER Letter
Sustainable Pension Design • Effective Pension Management

April 2016

FOCUSING CAPITAL ON THE LONG TERM:

FROM TALKING TO WALKING

The title of this Letter was also the title of a workshop for Dutch pension fund managers organized by Kempen Capital Management in Amsterdam this past March.

As the title suggests, the goal of the event was to move participants from talking about the merits of 'long-termism' to actually living it. The program started with two 'context' presentations, one by McKinsey's Dominic Barton about the ongoing 'short-termism cycle' that must be broken, and one by this author about what academia has to say about the 'short-termism' problem, and if shifting to 'long-termism' really increases investment return prospects.

This Letter summarizes the Barton message, and sets out mine in some detail.

The *FCLT* Initiative

The *Focusing Capital on the Long Term* initiative was kick-started by Dominic Barton and CPPIB's Mark Wiseman three years ago. Its stated goal is to break the 'short-termism' cycle that rotates from a perceived need by investors for short-term performance to a perceived need for continuously positive quarterly earnings guidance by corporate boards and senior management. The result is a systemic underinvestment in the kind of longer-term value-creation that retirement savers need to generate adequate, affordable post-work income streams.

In the Amsterdam workshop, Barton listed three steps needed to break this ongoing value-destroying 'short-termism' cycle:

1. Shift the focus of corporate boards to supporting long-term value-creating initiatives.
2. Shift the focus of institutional investors to investment strategies that recognize the importance of corporate long-term value-creating initiatives.
3. Create an environment of constructive dialogue and active engagement between the corporate and investment communities.

Barton pointed to a number of concrete steps the *FCLT* initiative has taken over the course of the last three years towards achieving these three outcomes.[i] The most recent initiative was the launch of the 250 stock S&P Long-Term Value-Creation Index earlier this year. Only companies with high sustainability and governance scores will be included in the LTVC Index.

Academic Insights?

What insights does academia have to offer on the 'investing for the long term' question? More specifically, does it <u>really</u> produce higher investment returns? It was my job to answer these questions. I started with the confession of never having completed the PhD (Economics) program I entered in 1968. I escaped in 1969 to join the investment department of an insurance company. So I am only a 'semi' academic, but with the comparative advantage of understanding both the theory and the 'real world' practice of institutional investing.

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One of the plusses of this duality was meeting John Maynard Keynes early in my career (only figuratively speaking, as he died in 1946). I was awed by the man's towering intellect, his wide range of interests, his willingness to go against academic orthodoxy, his focus on solving practical problems, and his interesting social life in English high society of the day. You will see that JMK and his ideas and actions are featured prominently as this *Letter* unfolds. But first, a few words about my 1969 entry into the institutional investment world.

My Institutional Investor Days

My institutional assignment was to answer the question: "Is portfolio theory useful in a 'real world' institutional investment department?" I don't pursue the answer to that question here, except to say that it can be, under the right set of circumstances.[ii] Here, I want to describe my entry into the strange world of institutional investing and what I learned.

I discovered that this world has an inside hierarchy made up of portfolio managers, research analysts, and traders, as well as an outside hierarchy made up of institutional brokerage sales people, research analysts, and traders. This unique 'inside/outside' world had its own currency called 'soft dollars'. The basic idea was that stock trading generated gross commissions which the broker divided into net commissions and a 'soft dollar' component which went into the investor's 'soft dollar' account. Most of these 'soft dollars' were spent on research. However, there were also trips, lunches, dinners, and other benefits.

In short, here is how 'institutional investing' seemed to work in a pensions context: employers offered pension plans to their employees, and hired investing institutions to manage pension assets for a fee. Brokers fed an ongoing stream of trading ideas to these institutions, which in turn placed buy (or sell) orders with the brokers that generated the trading idea. And what were the motivations in this game? To 'beat' the competition! Brokers competed with each other to sell the 'best' trading ideas. Institutional investors competed with each other to produce the 'best' investment returns. This was 'short-termism' in action!

Keynes: an Early Institutional Investor!

Sometime during my 1970s period of personal discovery I became aware Keynes had described this institutional investor behavior 40 years earlier in his opus "The General Theory of Employment, Interest, and Money". I dusted off my copy, and found that Chapter 12 reflected my own 1970s observations pretty accurately. Keynes dismissively called it "beauty contest investing", in contrast with the real purpose of investing: turning savings into value-producing capital. It is surely ironical that Keynes had already called for a *FCLT* initiative in 1936!

My rediscovery of Chapter 12 raised another question: how did Keynes know so much about the strange world of institutional investing? Much later, I would discover the answer: because as a sideline, he managed the King's College/Cambridge University Endowment Fund from 1921 to his death in 1946. Keynes was an early institutional investor himself!

How did that go for Keynes? Cambridge professors David Chambers and Elroy Dimson decided to find out by computerizing the Fund's 1921-1946 trading and valuation records. They found that he flailed about at first (i.e., behaving like a beauty contest investor). However, he learned from his early mistakes and by the 1930s he had become a low-turnover, high-conviction 'value' investor. In a 1938 speech, he said the best strategy *"….is to carefully select a few investments having regard to their intrinsic value for a period of years ahead…."*. And how did the Endowment Fund do over the 25-year period it was managed by Keynes? Chamber and Dimson estimate the Fund generated a net excess return of 8%/year over a passively-managed fund with the same risk characteristics.

Corroborating Evidence

Is there any corroborating evidence that this strategy of carefully selecting and holding investments with strong long-term value-creating prospects produces superior multi-decade returns? There is. About the same time as Keynes penned his famous Chapter 12, apparently unbeknown to him, two Columbia University professors named Benjamin Graham and David Dodd formalized Keynes' approach in their classic 1934 text "Security Analysis". Their most famous disciple was Warren Buffett. His estimated 1976-2011 (35-year) net excess return was 13%/year.[iii]

There is more. In the year 2000, Yale University's David Swenson wrote "Pioneering Portfolio Management: An Unconventional Approach to Institutional Investing". In this book, he integrates the Keynes and Buffett stories, and summarizes the five common success drivers as: 1. Long-term focus, 2. Equity-bias, 3. Contrarian 'value'/'bottom up' approach, 4. High-conviction, 5. Simple decision-making structure. Adding credibility to his 2000 Keynes-Buffett story, Swenson had already been applying these rules to managing the Yale Endowment for 14 years, as he continues to do to this day. The measured performance of the Yale Endowment Fund? A net excess return of 5%/year for the last 20 years.

New for this talk, I uncovered two more stories that fit the 'five common success drivers' theme, though with a more explicit focus on long-term sustainability and strong ESG scores. David Blood and Al Gore founded Generation Investment Management based on these principles in 2004. Alex van der Velden and his team began managing money this way for PGGM in 2007 and independently as Ownership Capital since 2013. Both organizations are generating net excess returns of 5%/year with equal or lower return volatility than their index comparator.

I noted earlier that *FCLT* and S&P have just launched that 250 stock S&P LTVC Index based on state-of-the-art Sustainability/ESG selection criteria. To that point, my February 2015 *Letter* reported the results of a study conducted by Eccles, Ioannou, and Serafeim titled "The Impact of Corporate Sustainability on Organizational Processes and Performance". The study matched up the investment performances of two 80-stock portfolios over the 1993-2010 period. One portfolio had high sustainability scores, the other low sustainability scores. The high-scoring portfolio outperformed the low-scoring one by 5%/year over the 17-year period, while exhibiting 20% lower return volatility. That same *Letter* turned the spotlight on the #1 sustainability company Unilever. It has outperformed its index comparator by 4%/year over the last 15 years with a beta of 0.7.

Finally, I wrote a 2014 article in support of the *FCLT* initiative titled "The Case for Long-Termism".[iv] There I document the cases of Mass Financial Services (MFS) and Ontario Teachers' Pension Plan (OTPP). Both organizations have generated a net excess return of 2%/year for 25 years using the principles of long-term investing set out above.

A Counter-Example from the IMF

A recent IMF study authored by Brad Jones titled "Institutionalizing Countercyclical Investing: A Framework for Long-Term Asset Owners" offers an interesting counter-example to this listing of long-term, high-performance track records. His findings are based on examining the investment behavior of a large, diverse group of institutional investors ($24 trillion) over a 25-year period.

Rather than finding the market-stabilizing, counter-cyclical behavior he had hoped for, he found the opposite to be true. Specifically, he found that, on average, institutional investors contribute to financial market instability in two equally-important ways: 1. Investors fail to rebalance after major market movements, and 2. Investors chase performance by doubling up so as to ride major market trends (i.e., they chase historical performance in the hope it will continue).

In short, the IMF study shows 'short-termism' is alive and well in the global institutional Investment community, and continues to adversely affect the behavior of financial markets. Jones concludes that changing this will require four things:

1. More effective institutional governance
2. Recognizing and addressing underlying principal/agent problems
3. Measuring the right things, including the longer-term risk of failure
4. Updating regulatory processes to promote counter-cyclical rather than pro-cyclical behaviour

Will this be enough to take us from talking to walking the 'long-termism' road?

Closing Thoughts

George Bernard Shaw and John Maynard Keynes would both say 'no' to that question:

Shaw: "*The reasonable man adapts himself to the world……..the unreasonable one persists in trying to adapt the world to himself…..thus all progress depends on the unreasonable man……"*

Keynes: *"Worldly wisdom teaches that it is better for reputation to fail conventionally than to succeed unconventionally…"*

I agree with them, and that leaves us with two possible paths to walking the 'long-termism' road:

1. Persuade more unreasonable, unconventional people like Keynes, Buffett, Swenson, Lamoureux, Bertram, Gore, Blood, van der Velden, Wiseman, and Barton to join the cause…..

and

2. Somehow turn long-term investing into a reasonable, conventional practice.

Fortunately, these two paths are not mutually exclusive. The more unreasonable, unconventional people start walking down the 'long-termism' road, the more it will seem like a reasonable and conventional thing to do.

Keith Ambachtsheer

Endnotes:

i. For example, my April 2015 Letter summarized the key recommendations in the FCLT's 54-page "Long-Term Portfolio Guide" related to investment beliefs, risk appetite, benchmarking, and incentive compensation. It is Chapter 22 in my just-released book "The Future of Pension Management".

ii. For a more complete answer, I refer curious readers to the 1979 FAJ article (with Jim Farrell) "Can Active Management Add Value?"

iii. Frazzini, Kabiller, Pederson (2013), "Buffett's Alpha", NBER Working Paper.

iv. Ambachtsheer (2014), "The Case for Long-Termism", Rotman International Journal of Pension Management, Fall 2014.

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The AMBACHTSHEER Letter
Sustainable Pension Design • Effective Pension Management

May 2016

WORKERS AND EFFICIENT RETIREMENT SAVING:

WHY 'FIDUCIARY RULES' ARE NOT ENOUGH

"There are some powerful interests aligned against the new Fiduciary Rule, who will insist the only good rule is no rule at all. If your business model rests on bilking people out of hard-earned money in retirement plan accounts…..you will not like this Rule……".

U.S. Labor Secretary Thomas Perez

"We show that conflicts of interest matter, but appear limited to a small fraction of advisors. Our estimates suggest that correcting advisors' misguided [investment] beliefs…..may reduce the cost of investment advice more…..".

Profs. Linnainmaa, Melzer, and Previtero

Fiduciary Rules vs. Investment Beliefs

Good work is being done around the world to create rules that ensure financial advisors act in their clients' best interest when providing and implementing investment advice. This *Letter* has long advocated these efforts, arguing that 'asymmetric information' between the buyers and sellers of investment advice creates the opportunity for advice sellers to take advantage of advice buyers by charging them more than the value of their advice is worth. Much of the developed world already has rules prohibiting this mis-selling in place. Recently, the USA followed suit with its Department of Labor 's 'Fiduciary Rule', which is to be fully implemented by January 1, 2018.[i] A similar rule-setting process towards reducing the impact of conflicting interests is underway in Canada.[ii]

A new paper by researchers from the University of Chicago, Northwestern University, and Western University ("Costly Financial Advice: Conflicts of Interest or Misguided Investment Beliefs?") sheds important new light on the 'value-of-financial-advice' question.[iii] Their study compared the investment behavior and results of a large sample of mutual fund investors and those of the investment advisors who advise them. The researchers found that while conflicts of interest do appear to impact the behavior of some advisors, there is a bigger problem.

They found that in most cases, there was a strong correlation between how advisors advised their clients to invest, and how they invested themselves. However, their own investment results were, on average, worse than their clients'. While their clients underperformed their passive benchmarks by an average 3%/yr., the advisors' own portfolios underperformed by an average 4%/yr. These findings lead the researchers to conclude that in too many cases, advisors are drawn into the industry with the misguided strong belief that the combination of high-fee funds and high turnover will improve investment performance.[iv] This suggests that most investment advisors know no more about successful investing than their clients do.

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How should public policy respond to this finding, which we believe reflects a seldom-discussed financial services industry reality? That is the question this *Letter* addresses in two parts: 1.Qualifications for investment advisors, and 2.The availability/accessibility of effective workplace pension plans to all workers.

Advisor Qualifications

The research study cited above highlights the importance of people advising or managing other peoples' money not only having a strong moral compass, but also having sensible, realistic investment beliefs. That is equally true at the wholesale (e.g., pension fund) and retail (e.g., financial advisor) levels of the financial services industry. To be clear, 'investment beliefs' are not about knowing the difference between a stock, a bond, and a derivative, or between income, capital gains, and estate taxes.

It is about having a clear understanding about how financial markets work (or sometimes fail to work). It is about having a deep understanding of the theory and practices of price discovery processes in public and private markets. It is about understanding the fundamental differences in the investment implications of a belief that the 'old' Efficient Markets Hypothesis reflects reality, or whether it is more accurately reflected in Adrew Lo's newer Adaptive Markets Hypothesis. It is about being aware of the role primary and translational research processes play in the validation or non-validation of these sometimes competing sets of investment beliefs. It is deep knowledge and understanding of these matters that should define 'qualification' for advising and managing other peoples' money.

This 'qualifications' topic received considerable airtime at a recent meeting of the CFA Institute's *Future of Finance Council*.[v] The Institute's CFA charter designation is deemed by many to be the closest thing the financial services industry has to the professional designations in the accounting, actuarial, and legal fields. This raises an interesting question: if accountants, actuaries, and lawyers need to go through rigorous certification processes to practice their profession, why not investment advisors/managers too? Surely this multi-billion dollar question should receive serious attention from governments , regulatory agencies , and investment services organizations around the world.

Effective Workplace Pension Plans

It should not be surprising that the countries with the strongest 'best interest' rules for financial advisors also have the strongest rules regarding workplace pension plan participation. The leap between understanding the 'asymmetric information' problem of retirement savers, and seeing required participation in an effective workplace pension plan as a logical solution to it, is not a great one. The Northern European countries and Singapore lead the way in understanding and implementing this solution, with the Australians and New Zealanders not far behind. The British have recently started on this journey, and the Canadians and Americans are actively debating possible designs for effective workplace plans, and how, and by who, they are best launched and managed.

In our view, there is little mystery in what a successful workplace pension plan looks like:

- Clear fiduciary mission and arms-length legal platform
- Plan design recognizes the dimensions of ambition, safety, and simplicity
- Capable of competing in the market place
- Competent, high-trust governance
- Sensible investment beliefs
- Right-scaled for cost effectiveness
- Ability to attract and retain requisite executive and professional talent
- Incentives based on 'value-for-money' outcomes
- Strong stakeholder communication/relations function

This is the deductive 'success' answer. Can it be confirmed by actual experience?

Actual Experience

It would be nice if there were 100 workplace plans that have operated with these nine success drivers for the last 25 years, and another 100 plans that have operated without them. However, that is not the case. In fact, there is only one plan we are aware of which has been a close fit with these nine 'success' criteria over the last 25 years. This one plan has remained fully funded over the period, and has indeed consistently delivered both its investment and benefit administration services at high 'value-for-money' levels.[vi]

Given the absence of large 'success drivers' and 'un-success drivers' samples over extended time periods, are there large samples over extended time periods which could act as proxies for 'success' and 'un-success' samples? Fortunately, the answer is 'yes'. As a reasonable approximation, the databases of CEM Benchmarking Inc. offer information on the investment performance of fiduciary principles-driven pension funds for extended periods of time. At the same time, the numerous academic studies of the investment performance of retail mutual funds over extended periods of time offer a reasonable proxy for the investment results for financial assets subject to decision-processes guided by factors materially different from the nine 'success' drivers listed above.

A recent CEM study, based on a sample of 6666 annual observations, indicated that the pension funds in its databases outperformed their investment benchmarks by an average of 0.58% per annum before costs, and 0.16% after costs during the 22 year period 1992-2013 ('t-value' +17.8). Bigger funds performed better than average on a net basis, primarily because of their economies of scale advantage. Net value added increased by 0.08% for every 10-fold increase in assets due to lower investment management costs ('t-value' +2.0). [vii]

This small (but statistically significant) positive average result of +0.16%/yr. for the fiduciary principles-driven funds over a 22-year period compares with a much more material (highly statistically-significant) negative average result of -3.2%/yr. versus benchmarks over a 14-year period in the Canadian retail mutual fund study cited above. As a comparator, in a recent Financial Analysts Journal article, Jack Bogle reports a -3.7%/yr. shortfall for U.S. mutual fund investors for the 15-year period ending June 30, 2013.[viii]

In short, empirical evidence confirms what logic predicts. As a result, fiduciary principles-driven funds will easily generate twice the pension per dollar of contribution than a dollar invested in the average retail mutual fund option.

The Challenge of Building Effective Workplace Pension Plans

None of this is meant to imply building new workplace pension plans is easy. Much can be learned from the British experience, where the identification of the need to offer workplace pension plans was followed by crafting the enabling legislation requiring employers to offer an effective workplace plan, and building the implementation infrastructure in the form of the National Employment Savings Trust (NEST). So far, the entire project seems to be unfolding according to plan, including encouraging the UK's financial sector to offer employers competing workplace plan alternatives.

In Canada, after many years of discussion and debate at the national level, it has fallen to the Province of Ontario to start the ball rolling. Legislation has been passed requiring all Ontario employers to offer an effective workplace pension plan, commencing in 2018. Work on building the Ontario Retirement Pension Plan (ORPP) has commenced. Legislation permitting employers to offer a 'comparable' plan to the ORPP has been passed, but it remains to be seen whether Canada's financial services industry is up to the challenge of creating and offering 'comparable' offerings to the ORPP.[ix] A new Canadian development is the election of a new Federal Government sympathetic to expanding the already-existing Canada Pension Plan (CPP) in some way. So in short, while the process of covering all Canadian workers with an effective, adequate workplace pension plans has begun, it remains to be seen what shape the ultimate solution will take.

The USA situation is not dissimilar from Canada's. After many years of discussion and debate at the national level, it has fallen to a number of states to start the workplace pension plan ball rolling (the current count of states actually doing something, or thinking about it has risen to 30!). A growing concern is the potential design disparity, and possible lack of portability between these various state efforts. On top of these specific concerns looms the larger question of whether, or under what conditions, state plan offerings will be subject to the restrictions and requirements of the Employee Retirement Income Security Act (ERISA). In all, the USA situation is one of potential exponential growth in complexity.

'Fiduciary Rules' Are Not Enough

Clear 'fiduciary rules' should guide the behavior of investment advisors around the world. However, such rules are not enough. Advisors should also have to demonstrate that their investment advice and decisions are based on investment beliefs that square with reality. Even better, all workers should be enrolled in pension plans equipped with the nine 'success' drivers set out in this *Letter*.

Keith Ambachtsheer

Endnotes:

i. *A May 6, 2016 study by InvestmentNews Research documents some of the likely impacts of the Fiduciary Rule on money shifts from high-cost to low-cost investment options and on advisory service business models (e.g., lower revenues and higher operating/compliance costs).*

ii. *An April 22, 2016 letter by the Canadian CFA institute Societies to the Investment Industry Regulatory Organization of Canada indicates material rules issues regarding advisor proficiency standards and commission direction continue to be debated in Canada.*

iii. *Linnainmaa, Melzer, and Previtera (2015), "Costly Financial Advice: Conflicts of Interest, or Misguided Investment Beliefs?", Working Paper. The study was based on a sample of some 500K Canadian mutual fund investors with collective assets of $20B, being advised by some 5K investment advisors.*

iv. *The client investment performance results reported in this study are consistent with those of prior studies of mutual fund performance performed over the course of the last 20 years. However, as far as I know, this is the first study to document that the average investment performance of the advisors' own portfolios was even worse than those of their clients'. The study's general findings are also consistent with a personal experience from some time ago. A 65-year-old just-retired friend wondered if I could have a look at her $300K retirement savings portfolio. It was made up of five high-fee equity mutual funds with no obvious connection to her age, risk tolerance, or her approaching need for supplemental retirement income. Her 'advisor' was shocked when she informed him that she was closing the account and moving to a lower-cost solution more suitable to her circumstances.*

v. *During the CFA Institute's Annual Conference held May 8-11 in Montreal. I am a member of the Future of Finance Council. Also, see Note ii above describing an intervention on advisor qualifications by the Canadian CFA Institute Societies.*

vi. *Please refer to the most recent Annual Report of the Ontario Teachers' Pension Plan for the details.*

vii. *For more details, see Beath (2015), "Value Added by Large Institution Investors Between 1992-2013", CEM Benchmarking Inc. website.*

viii. *For more details, see Bogle (2014), "The Arithmetic of 'All-In' Investment Expenses", Financial Analysts Journal, Jan-Feb.*

ix. *See Ambachtsheer and Waitzer (2016), "Effective Competition in Workplace Pensions: How the ORPP Can Foster Much-Needed Innovation", KPA Advisory Services website.*

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Published by KPA Advisory Services Ltd., 1 Bedford Road, Suite 2802, Toronto ON Canada M5R 2B5
416.925.7525. www.kpa-advisory.com