Oregon Investment Council

March 4, 2015 - 9:00 AM

PERS Headquarters
11410 S.W. 68th Parkway
Tigard, OR 97223

Katy Durant
Vice Chair

John Skjervem
Chief Investment Officer

Ted Wheeler
State Treasurer

OREGON INVESTMENT COUNCIL

Agenda

March 4, 2015
9:00 AM

PERS Headquarters
11410 S.W. 68th Parkway
Tigard, OR 97223

Time	A. Action Items	Presenter	Tab
9:00-9:05	**1. Review & Approval of Minutes** February 4, 2015 Regular Meeting	**Katy Durant** *OIC Vice Chair*	**1**
	Committee Reports	**John Skjervem** *Chief Investment Officer*	
9:05-9:15	**2. OIC Board Elections** *OIC Policy 4.00.02*	**Katy Durant**	**2**
9:15-10:45	**3. OPERF Asset/Liability Study & Strategic Asset Allocation Recommendation**	**Jim Callahan** **Janet Becker-Wold** **Jason Ellement** **Gene Podkaminer** *Callan Associates*	**3**
10:45-11:00	**-------------------- BREAK --------------------**		
11:00-11:15	**4. HiED Endowment Review and Update**	**Mike Mueller** *Deputy Chief Investment Officer*	**4**
11:15-11:20	**5. Opportunity Portfolio Procedure Clarification**	**John Hershey** *Director of Alternative Investments*	**5**
11:20-11:30	**6. Real Estate Portfolio Policy Waiver Request**	**Anthony Breault** *Senior Investment Officer, Real Estate*	**6**

B. Information Items

11:30-11:50	**7. OPERF Q4 Performance & Risk Report**	**Jim Callahan** **Janet Becker-Wold** *Callan Associates*	**7**
11:50-12pm	**8. BlackRock Solutions Update**	**Darren Bond** *Deputy State Treasurer*	**8**
12pm-12:10	**9. Asset Allocations & NAV Updates** a. Oregon Public Employees Retirement Fund b. SAIF Corporation c. Common School Fund d. HiEd Pooled Endowment Fund	**John Skjervem**	**9**
	10. Calendar — Future Agenda Items		**10**
	11. Other Items	**Council** **Staff** **Consultants**	

C. Public Comment Invited

15 Minutes

JOHN D. SKJERVEM
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OREGON INVESTMENT COUNCIL
FEBRUARY 4, 2015
MEETING MINUTES

Members Present:	Rukaiyah Adams, Katy Durant, Keith Larson, Steve Rodeman, Dick Solomon, Ted Wheeler
Staff Present:	Darren Bond, Tony Breault, Austin Carmichael, Karl Cheng, Michael Cox, Garrett Cudahey, Sam Green, Andy Hayes, John Hershey, Julie Jackson, Perrin Lim, Tom Lofton, Ben Mahon, Mike Mueller, Paola Nealon, Tom Rinehart, Priyanka Shukla, John Skjervem, Michael Viteri
Consultants Present:	David Fann and Tom Martin (TorreyCove); Allan Emkin, Christy Fields, David Glickman, John Linder and Dillon Lorda (PCA); Janet Becker-Wold, Jim Callahan, and Uvan Tseng (Callan)
Legal Counsel Present:	Keith Kutler and Deena Bothello, Oregon Department of Justice

The February 4, 2015 OIC meeting was called to order at 9:00 am by Dick Solomon, Chair.

I. **9:00 am Review and Approval of Minutes**
MOTION: Ms. Adams moved approval of the December 3, 2014 meeting minutes. Ms. Durant seconded the motion, which then passed by a 5/0 vote.

COMMITTEE REPORTS

John Skjervem, OST Chief Investment Officer gave an update on the following committee actions taken since the December 3, 2014 OIC meeting:

Private Equity Committee:

December 19, 2014	Endeavour Capital Fund VI, L.P.	$100 million
January 23, 2015	KSL Capital Partners IV, L.P.	$150 million
January 23, 2015	OCM Opportunities Fund X, L.P.	$50 million
January 23, 2015	OCM Opportunities Fund X (B), L.P.	$100 million
January 23, 2015	Rhone Partners V, L.P.	$200 million
January 23, 2015	TPG Growth III (A), L.P.	$200 million

Alternatives Portfolio Committee:

NONE

Opportunity Portfolio Committee:

December 4, 2014	Lone Star Residential Mortgage Fund I, L.P.	$100 million
December 4, 2014	OrbiMed Royalty Opps Fund II, L.P.	up to $50 million

Real Estate Committee:

December 4, 2014	Harrison Street Real Estate Partners V, L.P.	$150 million

II. 9:02 am OPERF Private Equity Review

Sam Green, Private Equity Investment Officer and David Fann and Tom Martin with TorreyCove presented the OPERF Private Equity Review and 2015 Plan, highlights of which included the following:

- Authorized commitments during 2014 totaled $2.9 billion versus $1.8 billion in 2013;
- 2014 commitments were made to a diversified set of existing managers operating across multiple investment strategies and supplemented with a limited number of high quality new manager relationships; and
- OPERF's private equity program has outperformed the Cambridge Associates median IRR benchmark in 21 of the past 28 vintage years.

III. 10:12 am OPERF Fixed Income Review

Perrin Lim, Director of Capital Markets and Tom Lofton, Investment Officer presented the OPERF Fixed Income Review and 2015 Plan. OPERF's fixed income portfolio is invested in three actively managed strategies. By policy, two of these strategies (Short Term High Quality and Core) comprise approximately 80% of the total portfolio and focus on investment grade market sectors. The third strategy (Strategic Credit) invests in bank loans and below investment grade (i.e., high yield) securities.

Each sector of the fixed income market has distinct performance attributes which are driven by economic, business cycle and supply/demand conditions. In general, active management strategies attempt to anticipate sector performance trends and identify relative value opportunities within, between and among sectors. Specifically, active fixed income managers a) rotate among sectors and securities based on relative value considerations, b) make duration bets in the form of both rate level and yield curve forecasts, and c) balance portfolio yield and convexity attributes. This process involves both "top down" macro-economic analysis as well as "bottom up" sector and security analysis.

10:35 am: Treasurer Wheeler withdrew from the meeting.

Over a market cycle of three to five years and on a net-of-fee basis, the OPERF fixed income performance objective is a portfolio return of at least 35 basis points above OPERF's custom policy benchmark. The OPERF fixed income portfolio has exceeded this performance objective in each of the past five consecutive, calendar years and cumulatively (as measured by average annual returns) for the past 1-, 3-, 5-, 7- and 10-year periods ending December 31, 2014.

IV. 10:48 am Annual Placement Agent Report

John Skjervem, Chief Investment Officer presented the annual placement agent report for the calendar year ending December 31, 2014.

V. **<u>10:49 am Asset Allocation & NAV Updates</u>**

Mr. Skjervem reviewed asset allocations and NAVs across OST-managed accounts for the period ended December 31, 2014.

VI. **<u>10:50 am Calendar-Future Agenda Items</u>**

Mr. Skjervem presented a revised schedule of future OIC meetings and associated agenda topics.

VII. **<u>10:52 am Other Items</u>**

Ms. Adams requested an update on the BlackRock Solutions project at the next OIC meeting.

<u>10:53 am Public Comments</u>

Bill Parish, an independent Registered Investment Advisor, addressed the Council regarding its private equity and hedge fund investments. He specifically requested that the Council post OPERF's KKR refund following that firm's recent SEC settlement. Mr. Parish also suggested that the OIC's recent investment in drug royalty payments raises important public policy questions given that the revenue support for that type of strategy originates primarily from Medicare and Medicaid reimbursements.

Mr. Solomon adjourned the meeting at 10:55 am.

Respectfully submitted,

Julie Jackson

Julie Jackson
Executive Support Specialist

FUNCTION: **O.I.C. Section**
ACTIVITY: **Oregon Investment Council (OIC) and Staff Duties**

POLICY: **The Oregon Investment Council formulates broad policies for the investment and reinvestment of moneys in the investment funds and the acquisition, retention, management and disposition of investments of the investment Funds (Fund or Funds). The Council includes the State Treasurer and four appointees of the Governor. Additionally, the PERS Director sits with the Council, but may not vote. The members of the Council biennially elect a chair and a vice chair from among the four Governor appointed, voting members. The vice chair functions as the chair in the event the chair is unable to fulfill the duties. OIC meetings are conducted according to the rules set forth in sample Form A.**

The OIC is responsible for approving and revising policies. The Chief Investment Officer, working with investment division staff, is responsible for approving and revising procedures.

PROCEDURES:

1. **Staff and Research Support.** Should the OIC wish to investigate or research a matter related to current or potential investment activities, OST Investment Division staff shall provide support and assistance as required.

2. **Record, Transcribe, and Distribute Minutes of OIC Meetings.** A member of the Investment Division staff records and distributes minutes for OIC meetings. Approved minutes, except those taken during executive session, are posted to OST's website. In addition, meetings shall be recorded by audio file.

3. **Draft OIC Resolutions.** The Chief Investment Officer or staff may draft policies or resolutions for OIC action upon request. All advisors of the Council, including but not limited to private investment advisors, staff members of the OST and legal counsel, when practicable, shall submit to the Council for its consideration written recommendations, whenever the advisor provides information to the Council which the advisor believes may require action by the Council. From the written recommendations, OST staff shall have prepared for the Council's consideration appropriate forms of motion. Whenever practicable, OST staff shall review and advise the Council in writing whether proposed Council action concerning investments falls within or outside of existing investment policies and, if within, shall state the policy that is applicable.

4. **Council Elections.** The Council shall select one of its members as chair, for a term and with powers and duties necessary for the performance of the functions of the office as the council determines (ORS 293.711(3)). The Council shall biennially elect a chair, and vice chair, at the last regular meeting of the Council in each odd-numbered calendar year. A person may not serve as chair of the Council for more than four years in any 12-year period (ORS 293.711(4)). Between biennial elections, with at least one week's notice, a majority of the Council may request a special election, to be held at the next meeting of the Council, to select officers for

the unexpired term. In the event that a chair or vice chair resigns or is removed, or whose service on the Council ends, the Council, at its next regular meeting, shall elect a replacement.

SAMPLE FORMS, DOCUMENTS, OR REPORTS (Attached)

Sample Form A — Rules of Conduct for OIC Meetings

Sample Form A

Rules for Conduct for Oregon Investment Council Meetings

Applicability of Rules

1. These rules are applicable to convened business meetings, regular and special, of the Oregon Investment Council.

2. Meetings will be called from time-to-time by the Chairman:

    a. Regular meetings will generally be held eight times per year;

    b. Special meetings and informal meetings will be held as needed;

    c. Meetings may also be held by telephone; and

    d. Meetings in Executive Session shall be held according to Oregon Revised Statutes.

3. **Chair**: The Chair is responsible for coordinating with the CIO to set the agenda of the OIC, in accordance with Policy 4.00.01. Additionally, the Chair shall preside over all regular and special meetings of the OIC. The primary role of the Chair is to help ensure OIC meetings are as efficient and productive as possible, and to facilitate communication among OIC members and between the OIC and the Office of the State Treasurer.

4. Notice of meetings will be given in compliance with Oregon Revised Statutes 192.610-690 and cases applicable thereto.

5. **Agenda**: Notice of the meeting shall also contain a copy of the agenda for the meeting setting forth, with reasonable clarity, the matters to be discussed.

6. **Quorum:** Three members are a quorum to take action.

7. **Majority Vote**: An affirmative vote of three members of the Council is required for the Council to approve resolutions.

8. **Conflict of Interest**: Notice of conflict of interest, as defined in Oregon Revised Statutes 244.120 and rules promulgated by the Oregon Government Ethics Commission and this Council, shall be announced prior to taking an action on an issue. Announced conflicts should be recorded as provided in Oregon Revised Statutes 244.130 (See also: 4.00.03). "Take action" means to vote, debate, recommend or discuss.

9. **Voting**: Members, when present, shall vote either aye or nay on an issue, except in the case of a potential conflict of interest. If such a potential conflict of interest exists, the member shall make a declaration of that conflict and may be excused from voting by the body.

10. **Record of Votes:** Roll call votes shall be tallied by the Chief Investment Officer through an oral roll call.

11. **Recess or Adjournment:** A quorum being present, any meeting of the Council may be recessed or adjourned by a majority vote of the Council or by the Chair of the meeting.

OPERF Strategic Asset Allocation Recommendation

Purpose

This memo summarizes recent discussions among senior OST investment division staff and consultants Callan and PCA regarding a strategic asset allocation recommendation developed by Callan as part of that firm's recent OPERF Asset-Liability Study.

Recommendation

Staff believes the current strategic asset allocation targets originally approved by the OIC in June, 2013 remain appropriate. With the application of Callan's updated capital market assumptions, these current targets produce an estimated 7.5% expected median annual return with estimated 14.4% expected median annual volatility over the forthcoming 10-year forecast period.

Summary

Starting in October, 2014, senior OST investment staff participated in a series of meetings with consultants Callan and PCA. Given Callan's still new tenure with Oregon, these discussions were designed specifically to evaluate OPERF's current asset allocation targets with "fresh eyes" as well as build a constructive working relationship among staff, Callan and PCA. On both counts the exercise was successful. The cumulative duration of these discussions resulted in a thorough examination of OPERF's liability profile as well as a detailed review of the OIC's strategic asset allocation (SAA) targets. Equally important, the discussions were lively, candid and enjoyed broad participant engagement.

Callan staff began their work with an independent examination of PERS' liabilities. They then compared the magnitude and timing of OPERF cash flow obligations (i.e., the liabilities) to *ex ante* projections of OPERF portfolio performance (i.e., the assets) to assess both current and future funding levels. Importantly, these performance projections incorporated Callan's recently updated capital market expectations which include estimates of future returns, volatility and pair-wise correlations by and between individual asset classes. Relative to the OIC's last A-L/SAA study in 2013, Callan's updated capital market expectations reflect still further declines in long-term interest rates and lower return contributions from risk-based investments.

As described in the attached presentation and summarized below, Callan is recommending a new set of SAA targets which, relative to current targets, are expected to produce a marginally better risk-adjusted return:

Asset Class	Current Allocation (%)	Current Target (%)	Callan Recommendation (%)
Global Equity	40.5	37.5	37.5
Private Equity	21.6	20.0	17.5
Fixed Income	21.0	20.0	20.0
Real Assets[1]	15.9	20.0	20.0
Diversifying Assets[2]	1.0	2.5	5.0
Expected Return	7.5%	7.5%	7.4%
Expected Volatility	14.8%	14.4%	14.0%
Sharpe Ratio	0.35	0.36	0.37

1 Using current OST/OIC nomenclature, *Real Assets* is synonymous with Real Estate (current target = 12.5%) plus the illiquid elements of Alternatives (current target = 7.5%).

2 Using current OST/OIC nomenclature, *Diversifying Assets* is synonymous with the liquid elements of Alternatives (current target = 2.5%).

As seen, the Callan recommendation does not represent a major change from OIC's current SAA targets; moreover, senior OST staff is both comfortable with and supportive of the Callan recommendation given its consistency with staff's on-going objective of effecting improved diversification by pursuing multiple sources of return premia. Staff's only hesitation with the Callan recommendation is simply timing and implementation feasibility given the investment division's current resource and operating constraints. Accordingly, staff considers the Callan recommendation directionally sound and well-supported, but at this time aspirational.

Callan

March 4, 2015

Oregon Investment Council

2015 Asset-Liability Study

Jim Callahan, CFA
Executive Vice President
San Francisco Consulting

Uvan Tseng, CFA
Vice President
San Francisco Consulting

Eugene Podkaminer, CFA
Senior Vice President
Capital Markets Research

Janet Becker-Wold, CFA
Senior Vice President
Denver Consulting

Jason Ellement, CFA, FSA, MAAA
Senior Vice President
Capital Markets Research

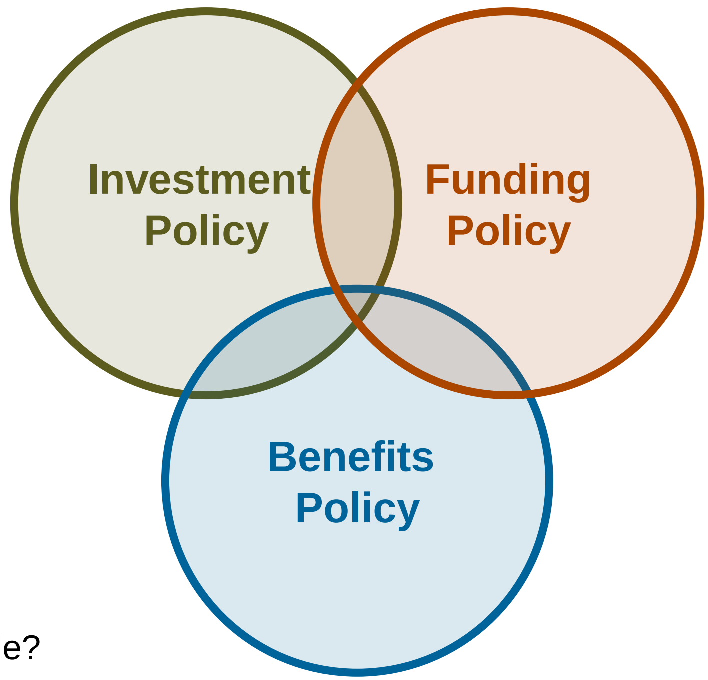
Goal of the Asset-Liability Study

- The goal of an asset-liability study is to establish a long-term strategic asset allocation target
- An appropriate asset allocation will depend on the Plan Sponsor’s investment objectives:
  - Minimize costs over the long run (long-term goal)
    - *How much return generation (from beta and alpha) is necessary to lower contributions and/or improve funded status?*
  - Minimize funded status volatility (short-term goal)
    - *How much risk reduction to reduce contribution/funded status volatility?*
- The strategic asset allocation target should be an optimal balance between sustainable funded status volatility and minimization of contributions over the long run
- The strategic asset allocation will vary by the unique circumstances of the Plan Sponsor
  - No “one-size-fits-all” solution exists

Where Does Asset Allocation Fit In?

Evaluating the interaction of the three key policies that govern a defined benefit plan with the goal of establishing the best investment policy

Investment Policy
- How will the assets supporting the benefits be invested?
- What risk/return objectives?
- How to manage cash flows?

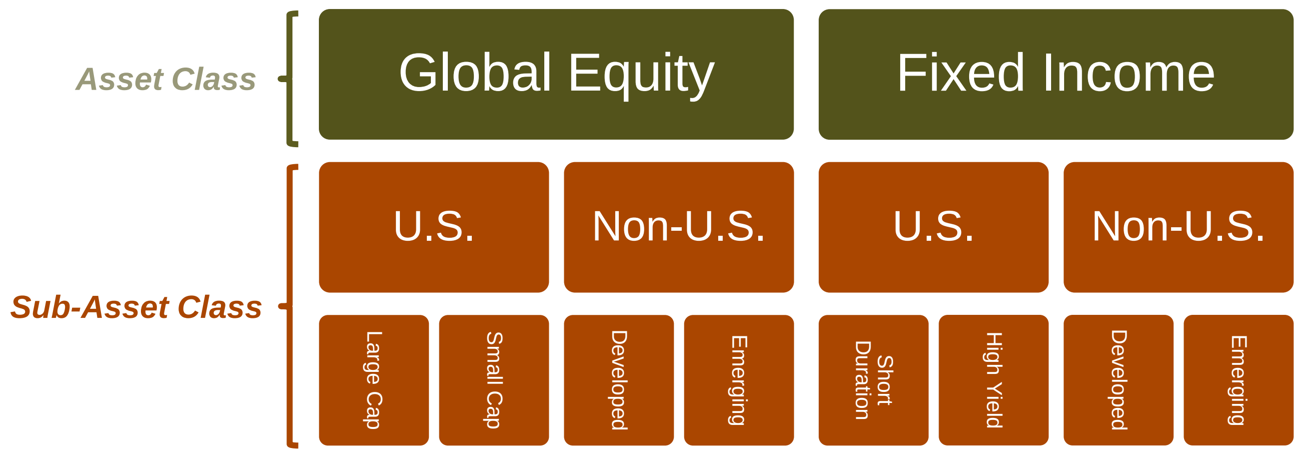


Funding Policy
- How will the benefits be funded?
- What assumed investment return?
- How are deficits amortized?
- What actuarial methodologies are applied to dampen contribution volatility?

Benefits Policy
- What type/kind of benefits?
- What level of benefit?
- When and to whom are they payable?

The Focus is on Broad Asset Classes

- Breakdowns between investment styles (capitalization, growth vs. value) and sub-asset classes are best addressed in a manager structure analysis of each broad asset class
- This asset-liability study focuses on five key building blocks:
  1. Global Equity
  2. Private Equity
  3. Fixed Income
  4. Real Assets
  5. Diversifying Assets



Callan 2015 – 2024 Capital Market Expectations

Asset Class	Index	Expected Return[1]	Risk Measure: Observed Volatility	Risk Measure: OIC Risk	Risk Measure: Callan Risk
Equities					
Global Equity	MSCI ACWI IMI	7.80%	19.60%	19.60%	19.60%
Private Equity	OIC Private Equity	9.50%	17.00%	24.00%	33.05%
Fixed Income					
Fixed Income	BC Aggregate	3.00%	3.75%	3.75%	3.75%
Inflation Sensitive					
Real Assets	OIC Real Assets	7.00%	10.00%	15.00%	16.50%
Other					
Diversifying Assets	60/40 portfolio	6.40%	11.00%	11.00%	11.00%
Inflation	CPI-U	2.25%	1.50%	1.50%	1.50%

1 - 10-year annualized return

- Three different measures of risk are shown above:
  - Observed volatility reflects subjective asset valuation and pricing lags; it may not capture all risks associated with the asset class (e.g. illiquidity risk, implementation risk, leverage risk).
  - Callan's standard measure of risk reflects illiquidity risk, typical amounts of leverage, and manager implementation risk
  - OIC risk is a customized measure of risk based on OIC's long-term history for private equity and real assets; this measure of risk is used throughout the asset-liability study
- Capital market returns represent passive exposure to the capital markets, net of fees, with the exception of private equity and real assets

Considerations in Asset Allocation

- Callan's capital market expectations are intended to guide strategic planning
  - We acknowledge humbleness in our forecasts, our projections will not precisely equal realizations
  - We realize that our estimations are not perfectly accurate – our aim is a set of internally consistent expectations leading to realistic portfolios
  - The relative spreads among asset class expectations, rather than the absolute levels, is key to modeling
- The awareness of the Fund's liabilities and how they impact asset allocation choices is significant, even if a liability-matching approach is not used
  - The Fund's overall risk tolerance is largely influenced by an understanding of how assets and liabilities interact
  - Risk tolerance is both the ability and willingness to take risk

Goal Based Investing

Growth (69%)

Equities
- Global equity (38%)
- Private equity (20%)
- Alternative beta
- Opportunistic real estate (4%)

Credit Sensitive
- High yield (7%)
- Emerging debt
- Bank loans
- Long credit
- Private debt

Risk Mitigation (14%)

Income Producing
- Short duration (7%)
- US fixed income (7%)
- Non-US fixed income

Rising Rate Protection
- Cash equivalents
- Short duration (7%)
- Floating rate securities

Flight to Quality
- Long Treasury

Real Assets (16%)

Short/Intermediate Hedge
- Inflation-linked debt
- Commodities (2.5%)

Growth-Oriented
- REITs
- MLPs
- Nat. res. eq. (2.5%)
- Core real estate (6%)
- Value-add real estate (2.5%)
- Infrastructure (2.5%)
- Timber
- Agriculture

Diversifying Assets (2.5%)

- Diversifying risk premiums
- Multi-asset class
- Risk parity

- Percentages in parentheses represent approximate capital allocation of the current target
- Current OIC portfolio is growth-oriented which is suitable for a long-term investor

Grouping Asset Classes by Economic Roles

Economic Growth

Inflation

Low Growth / High Inflation — 6%	High Growth / High Inflation — 16%
Inflation Linked Bonds Commodities Infrastructure	Real Assets: Real Estate, Timberland, Farmland, Energy
Low Growth / Low Inflation (Deflation) — 14%	**High Growth / Low Inflation — 65%**
Cash Government Bonds	Equity Corporate Debt

- Investors seek economic diversification to a range of scenarios like - high inflation, deflation, stagflation, and growth given uncertainty in the capital markets going forward
  - Scenarios (quadrants) are not equally likely and the graph does not imply 25% of assets should be dedicated to each bucket
  - Asset classes may not perform well in scenario indicated above (no guarantees)
  - No distinction is made between unexpected or expected inflation which can have ramifications for how an asset class performs.
- Percentages in **red** represent approximate capital allocation of current target. Current target is growth-oriented but has meaningful capital exposure to each scenario

Alternative Long-Term Targets

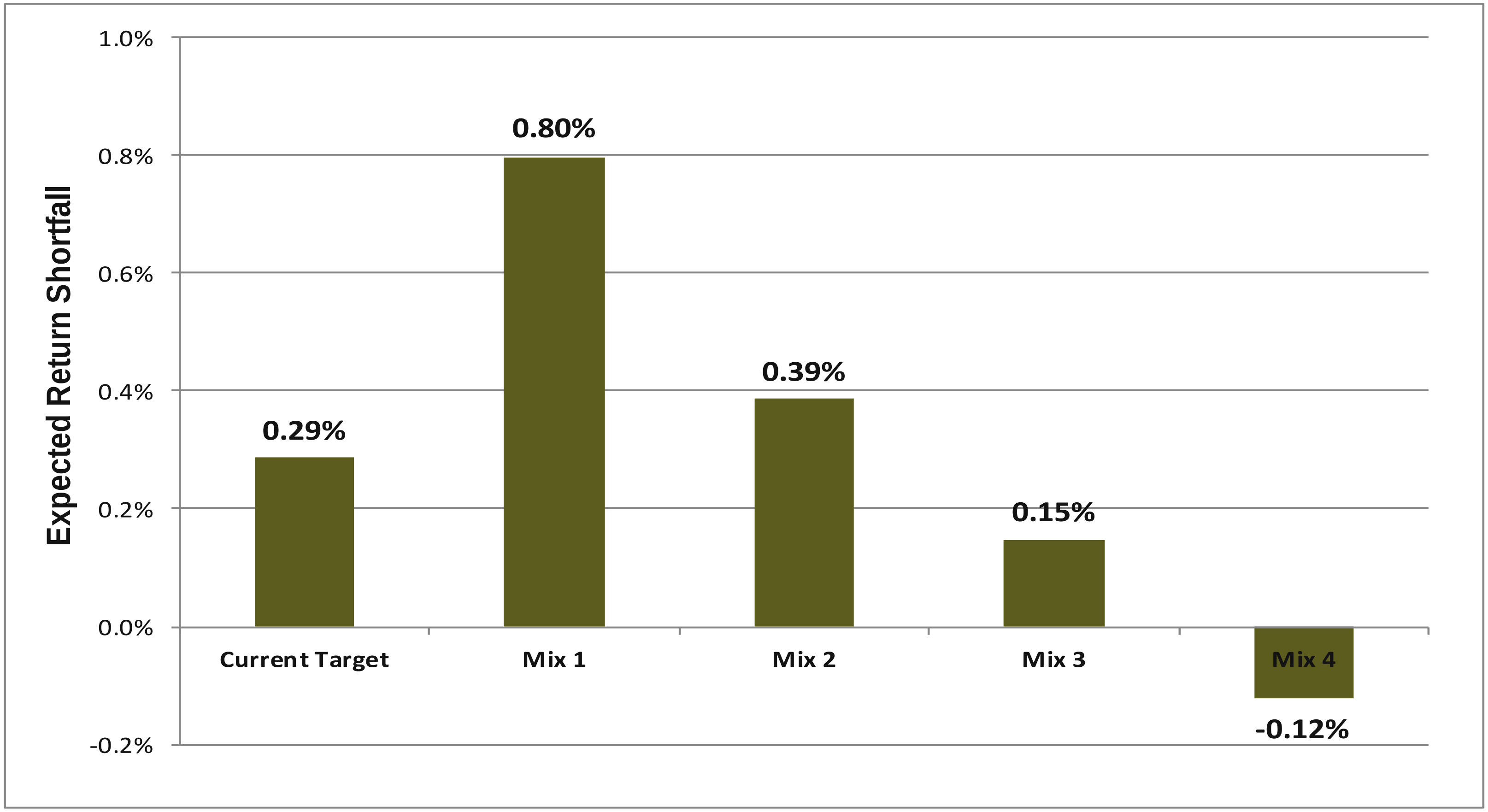
			Alternative Long-Term Targets[2]			
Asset Class	Current Allocation	Current Target	Mix 1	Mix 2	Mix 3	Mix 4
Global Equity	40.5%	37.5%	35%	35%	35%	50%
Private Equity	21.6%	20.0%	15%	17.5%	20%	20%
Fixed Income	21.0%	20.0%	30%	20%	15%	10%
Real Assets	15.9%	20.0%	15%	17.5%	20%	15%
Diversifying Assets	1.0%	2.5%	5%	10%	10%	5%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Expected Return	7.5%	7.5%	7.0%	7.4%	7.6%	7.9%
OIC Risk	14.8%	14.4%	12.3%	13.4%	14.3%	16.4%
Sharpe Ratio	0.35	0.36	0.38	0.38	0.37	0.34
Probability (Return > 7.75%)	48%	47%	42%	46%	49%	51%
Worse-Case Annual Return[1]	-16%	-16%	-13%	-15%	-15%	-19%

1 - Two-standard deviation event. 2.5% probability of this return or worse.

2 - Asset Mixes are pre-specified.

- The 10-year expected return of the Current Target is 7.5%
- Current Investment Return Assumption is 7.75%
  - PERS Board considering lowering to 7.5% or 7.25% later this year
- Mixes 1 through 4 are alternative long-term targets for consideration
  - Transition to these new targets would likely take several years
  - An implementation study should be conducted following approval of Mixes 1, 2, 3, or 4 or variation thereof

How to Meet 7.75%?



- How to meet 7.75% over the next 10 years?
  1. Take on more beta risk, if possible
  2. Rely on active management (alpha). Of course, alpha, net of fees, could be negative which would detract from meeting the 7.75% return target
  3. Hope that markets are better than expected; expected return is a 50/50 outcome

Current Financial Position and Key Actuarial Assumptions

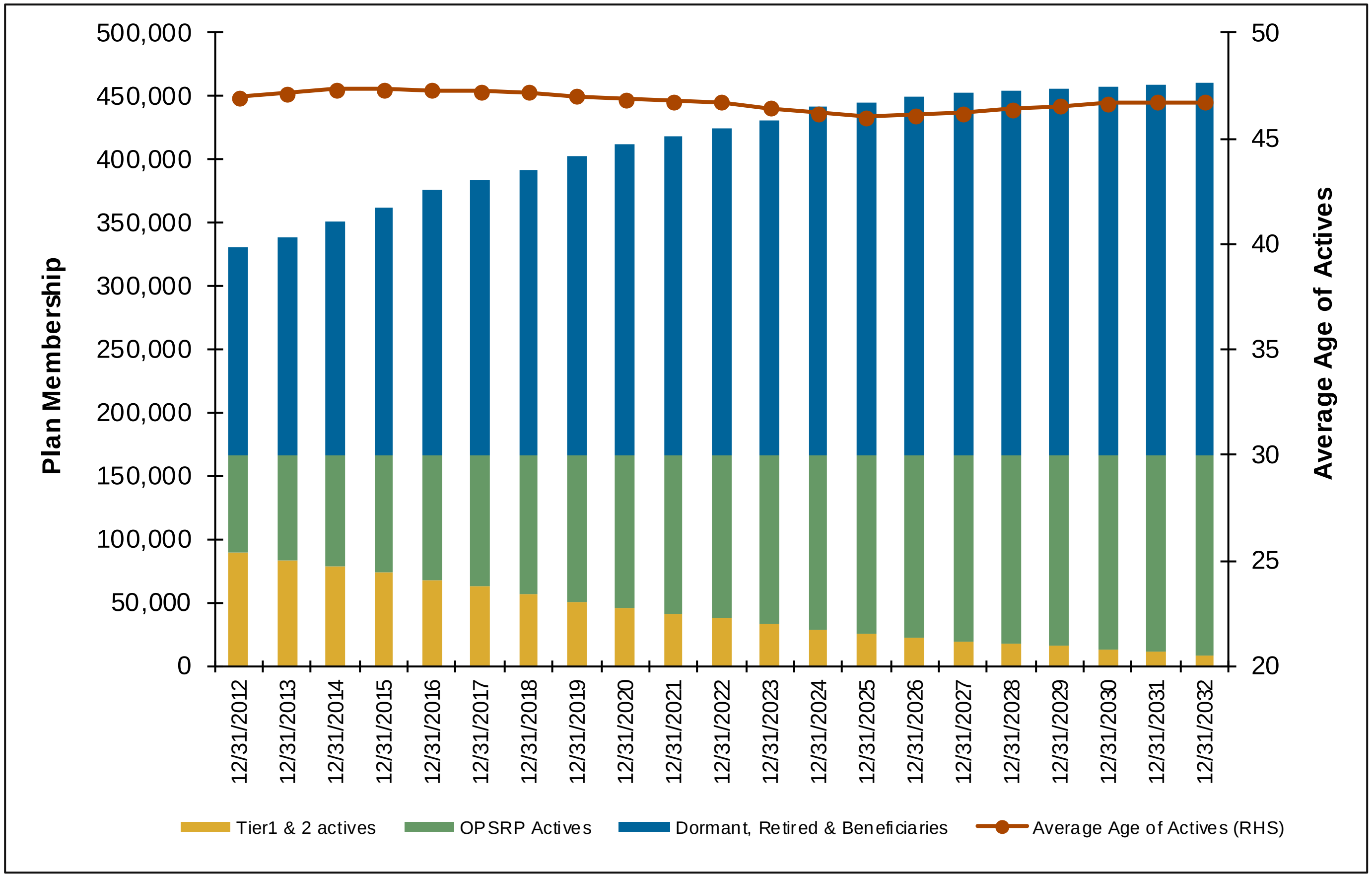
Tier 1 / Tier 2 & OPSRP (Excluding Retiree Health Care, IAP)	12/31/2013
Actuarial Accrued Liability (AL)	$62.6B
Assets	$54.1B
Funded Status (Assets / AL)	86%
Side Accounts	$5.9B
Funded Status w/ Side Accounts	96%
July 2015 – June 2017 Collared Net Rate*	10.61%

** Does not include IAP contribution, debt service on POBs or retiree health care*

Key Actuarial Assumptions	Description
Investment Return	7.75%
Price Inflation	2.75%
Payroll Growth	3.75%

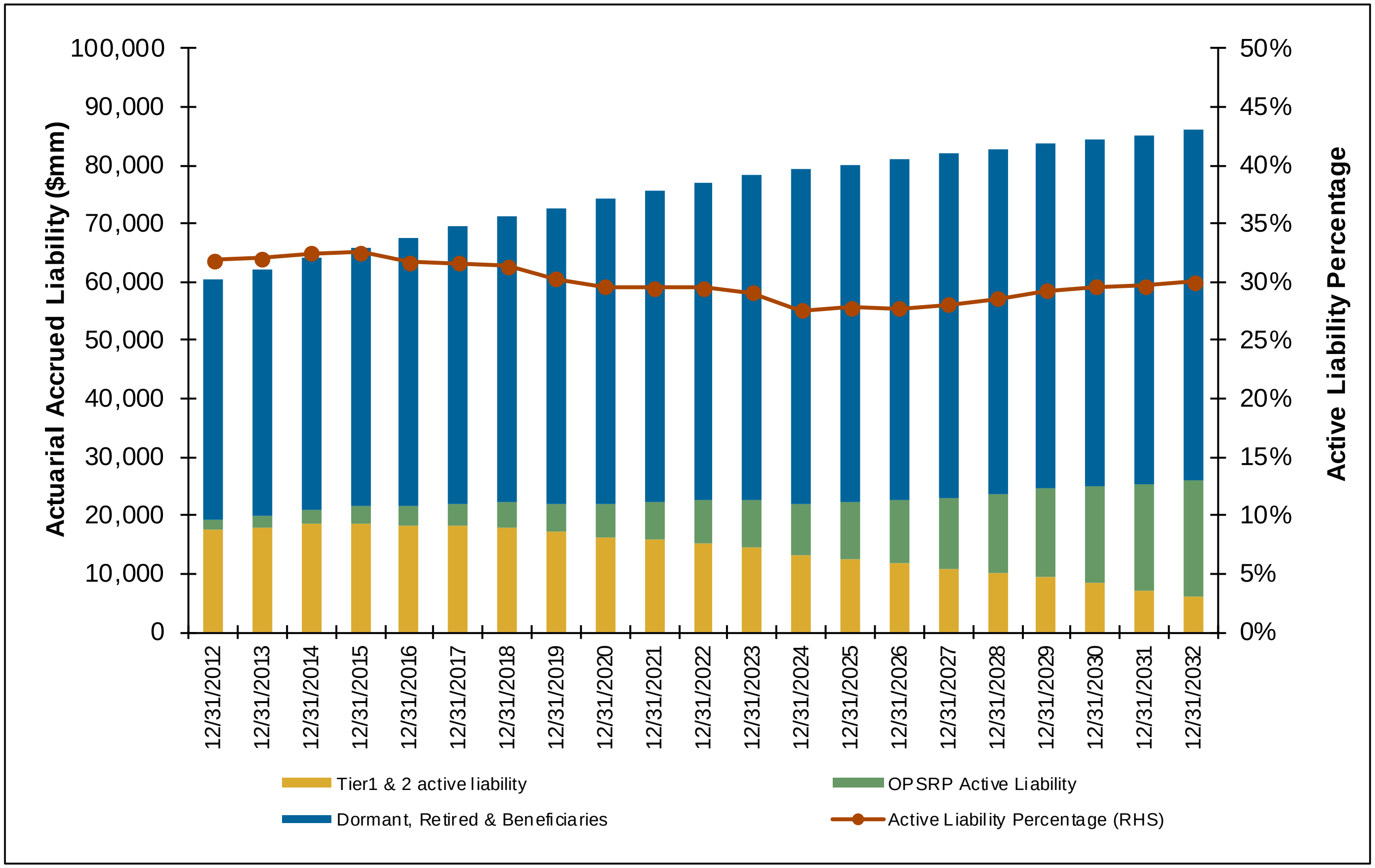
- For the purpose of setting investment policy, Callan built an actuarial liability model for Tier 1 / Tier 2 and OPSRP
  - Liabilities were matched within 5% and scaled to match the Plan actuary's results exactly
  - Similarly, normal cost was matched within 8% and scaled to match exactly
  - Liability model was based on the 2012 actuarial report, 2013 actuarial report, and November 21, 2014 financial modelling projections completed by Milliman
- Side accounts are combined with assets for projecting funded status and contributions
- The min/max corridor methodology, 18-month lag and 2-year rate setting cycle were not applied to contribution projections in this asset-liability study

Plan Membership



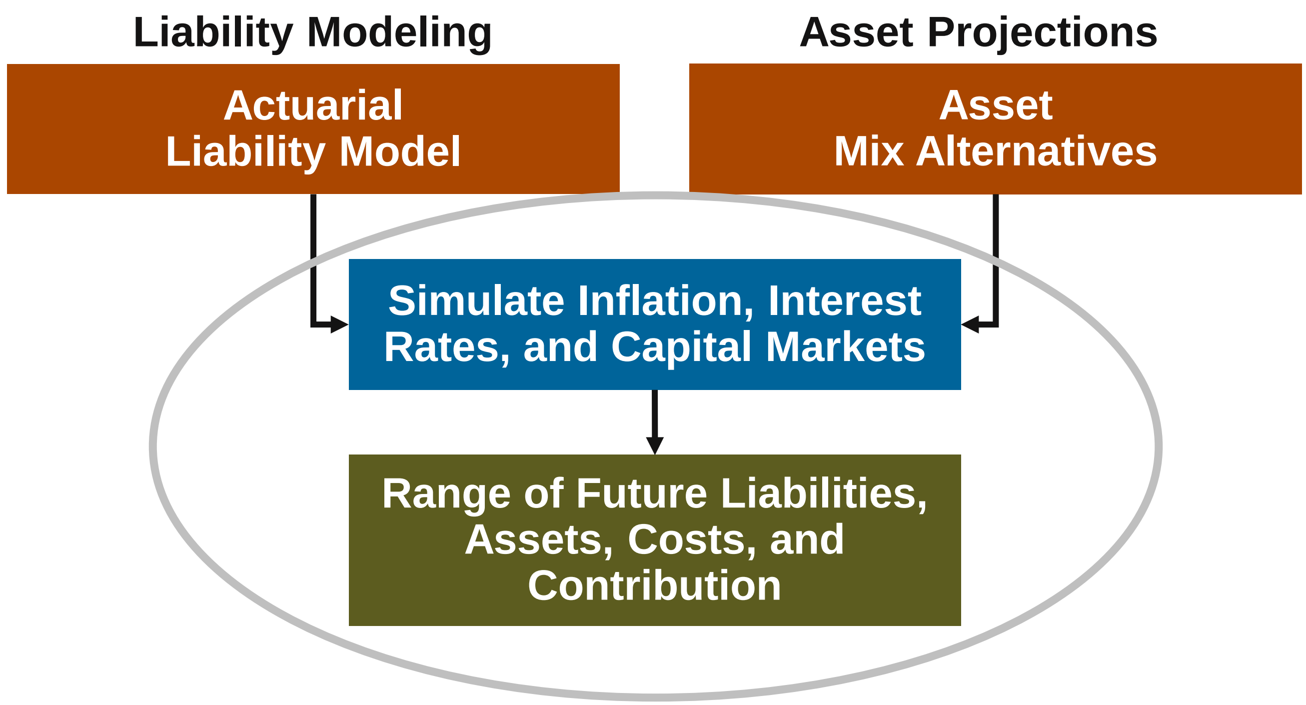
- Tier 1/ 2 decrements - retirement, death, disability, and withdrawal – are replaced by future hires which enter the OPSRP Plan. (Tier 1/ 2 is closed to new entrants)
  - Active membership is constant (implies 0% workforce growth)
- Average age of active members is level at age 47

Baseline Liability Projection



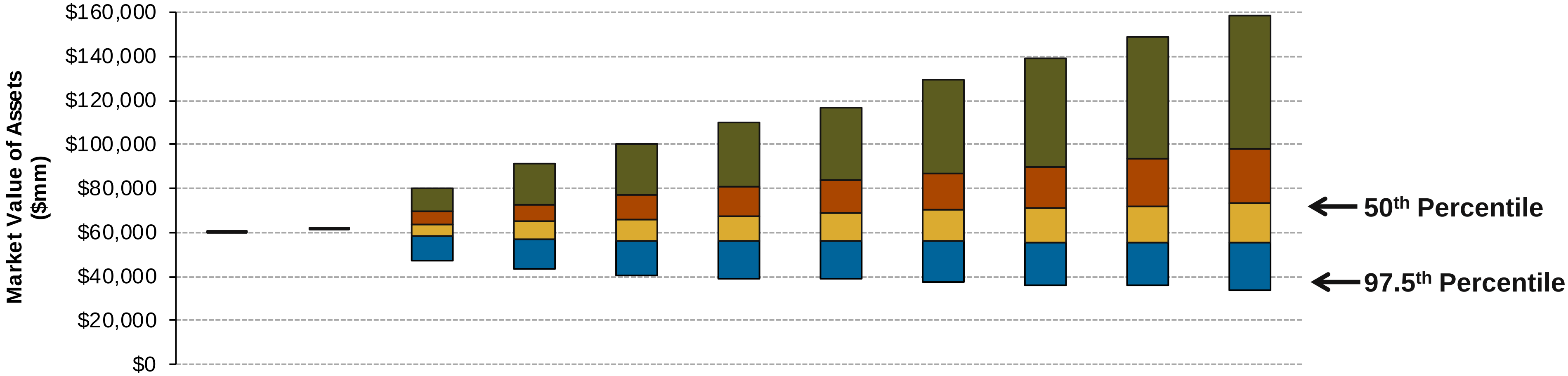
- Plan liabilities continue to rise over the next 20 years
  - Active liability, as a % of total liability, is level (~30%)
- Based on Callan's 10-year capital market expectations, the liability return is 7.6%
  - The liabilities are not growing at the full interest cost of 7.75% since Callan's inflation expectation of 2.25% is lower than the actuary's assumed inflation of 2.75%

Simulate Financial Condition



- Generate 2,000 simulations per year, per asset mix to capture possible future economic scenarios and their effect on the portfolio
- The simulation results were then ranked from highest to lowest to develop probability distributions
- Actual investment performance for 2013 and 2014 (15.8% and 7.3%) is reflected in projections

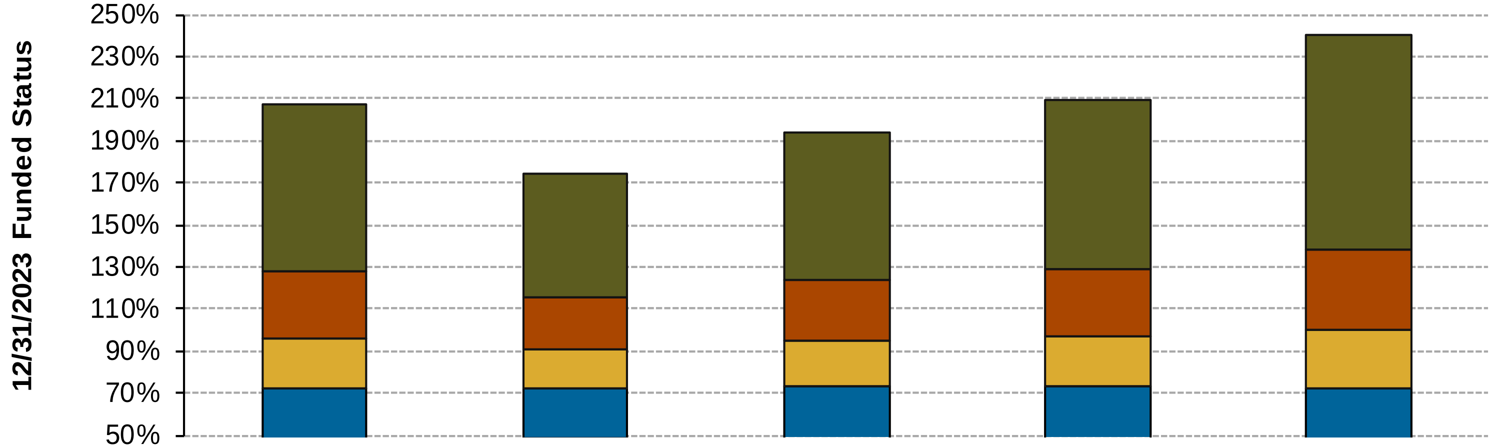
Market Value of Assets for Current Target Mix



Year Ending	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
2.5th	$60,000	$61,743	$80,273	$91,166	$99,881	$109,860	$116,976	$129,075	$139,221	$148,781	$158,810
25th	60,000	61,743	69,439	72,894	76,706	80,434	83,701	87,007	89,809	93,642	97,795
50th	60,000	61,743	63,771	65,075	66,088	67,567	68,742	70,189	70,985	72,165	73,249
75th	60,000	61,743	58,169	56,669	56,044	56,386	56,266	55,982	55,564	55,315	55,123
97.5th	60,000	61,743	47,126	43,086	40,789	39,216	38,965	37,289	35,694	35,693	33,935
Range	0	0	33,147	48,080	59,091	70,643	78,011	91,787	103,527	113,088	124,875

- The expected outcome is the 50th percentile, a 50/50 chance of occurrence
- The worse case scenario is the 97.5th percentile; a 1 in 40 chance of occurrence
  - For example, there is a 1 in 40 chance (2.5% probability) that the 12/31/2023 market value of assets for Tier 1/ 2 and OPSRP will be $33.935B or less

12/31/2023 Funded Status



Percentile	Target	Mix 1	Mix 2	Mix 3	Mix 4
2.5th	207%	174%	194%	209%	240%
25th	128%	116%	123%	129%	138%
50th	96%	91%	95%	97%	100%
75th	72%	72%	73%	73%	72%
97.5th	45%	49%	47%	46%	42%
Expected Return	7.5%	7.0%	7.4%	7.6%	7.9%
Expected Risk	14.4%	12.3%	13.4%	14.3%	16.4%

- Funded Status = Assets + Side Accounts / Actuarial Accrued Liability
- More aggressive mixes are ***expected*** to have a higher funded status at the end of 10 years but will have a lower funded status in a worse-case scenario (97.5th percentile)

Projected Contributions (% of Pay)

Mix 1	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
2.5%	10.7%	10.6%	10.6%	4%	5%	5%	6%	6%	6%	7%
25%	10.7%	10.6%	10.6%	10%	9%	8%	7%	6%	6%	7%
50%	10.7%	10.6%	10.6%	13%	13%	14%	15%	15%	15%	15%
75%	10.7%	10.6%	10.6%	19%	20%	21%	22%	23%	23%	24%
97.5%	10.7%	10.6%	10.6%	27%	29%	30%	31%	34%	35%	35%

Mix 2	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
2.5%	10.7%	10.6%	10.6%	4%	5%	5%	6%	6%	6%	7%
25%	10.7%	10.6%	10.6%	9%	7%	6%	6%	6%	6%	7%
50%	10.7%	10.6%	10.6%	13%	13%	14%	14%	14%	14%	14%
75%	10.7%	10.6%	10.6%	19%	20%	20%	21%	22%	23%	24%
97.5%	10.7%	10.6%	10.6%	27%	30%	31%	32%	34%	36%	36%

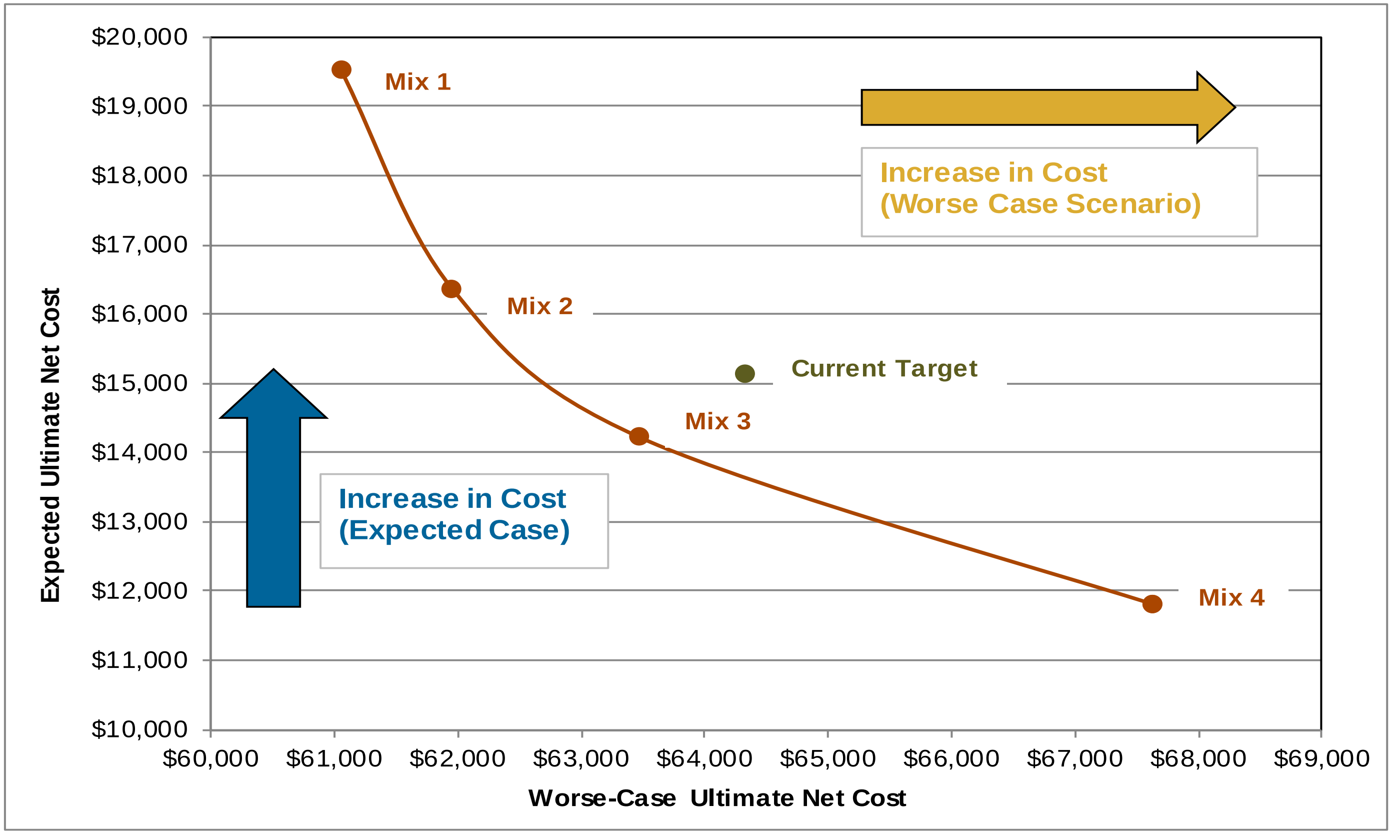
Target Mix	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
2.5%	10.7%	10.6%	10.6%	4%	4%	4%	5%	5%	5%	5%
25%	10.7%	10.6%	10.6%	8%	6%	4%	5%	5%	5%	5%
50%	10.7%	10.6%	10.6%	12%	12%	12%	12%	13%	12%	12%
75%	10.7%	10.6%	10.6%	18%	19%	20%	21%	21%	22%	23%
97.5%	10.7%	10.6%	10.6%	27%	30%	31%	32%	34%	36%	37%

Mix 3	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
2.5%	10.7%	10.6%	10.6%	4%	5%	5%	6%	6%	6%	7%
25%	10.7%	10.6%	10.6%	8%	7%	5%	6%	6%	6%	7%
50%	10.7%	10.6%	10.6%	12%	12%	13%	13%	13%	13%	13%
75%	10.7%	10.6%	10.6%	19%	20%	21%	21%	22%	23%	24%
97.5%	10.7%	10.6%	10.6%	28%	30%	32%	33%	35%	37%	37%

Mix 4	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
2.5%	10.7%	10.6%	10.6%	4%	5%	5%	6%	6%	6%	7%
25%	10.7%	10.6%	10.6%	7%	5%	5%	6%	6%	6%	7%
50%	10.7%	10.6%	10.6%	11%	12%	12%	12%	12%	12%	12%
75%	10.7%	10.6%	10.6%	20%	20%	21%	22%	23%	24%	24%
97.5%	10.7%	10.6%	10.6%	30%	33%	34%	35%	37%	39%	39%

- 2014 – 2016 contribution rates are already determined by Plan actuary
- The min/max corridor methodology, 18-month lag and 2-year rate setting cycle were not applied to these contribution projections from 2017 onwards
- More aggressive mixes are ***expected*** to have lower contributions but slightly higher contributions in a worse-case scenario
- Thus, aggressive mixes have contributed slightly more but still have a lower funded status in the worse-case scenario

Ultimate Net Cost



	Mix 1	Chg	Mix 2	Chg	Target	Chg	Mix 3	Chg	Mix 4
Expected Return	7.0%	0.4%	7.4%	0.1%	7.5%	0.1%	7.6%	0.3%	7.9%
Expected Risk	12.3%	1.2%	13.4%	1.0%	14.4%	-0.1%	14.3%	2.1%	16.4%
Expected UNC	19,504	(3,151)	16,353	(1,231)	15,122	(911)	14,211	(2,404)	11,807
Worse Case UNC	61,060	901	61,961	2,378	64,339	(855)	63,484	4,150	67,633

- Ultimate Net Cost (UNC) = 10 year cumulative contributions (2013 - 2023) + 12/31/2023 Unfunded Liability
  - What you paid over 10 years + what you owe at the end of 10 years

Asset Allocation Recommendation

Asset Class	Current Allocation	Current Target	Chg from Target	Mix 2A
Global Equity	40.5%	37.5%	0.0%	37.5%
Private Equity	21.6%	20.0%	-2.5%	17.5%
Fixed Income	21.0%	20.0%	0.0%	20.0%
Real Assets	15.9%	20.0%	0.0%	20.0%
Diversifying Assets	1.0%	2.5%	2.5%	5.0%
Total	100.0%	100.0%	0.0%	100.0%
Expected Return	7.5%	7.5%	-0.1%	7.4%
OIC Risk	14.8%	14.4%	-0.4%	14.0%
Sharpe Ratio	0.35	0.36	0.01	0.37
Probability (Return > 7.75%)	48%	47%	-0.7%	47%
Worse-Case Annual Return[1]	-16.4%	-15.6%	0.4%	-15.2%

1 - Two-standard deviation event. 2.5% probability of this return or worse.

- Recommend increased diversification of the portfolio and more liquidity
  - Accomplished by re-allocating 2.5% from Private Equity to Diversifying Assets
  - Transition to Mix 2A may take several years; an implementation study should be conducted following approval of Mix 2A to provide a cost effective and diligent transition to the new target mix
- Relative to the current Target Mix, adopting Mix 2A is expected to be a slightly lower return / risk portfolio, more liquid and with slightly better risk-adjusted performance (more return per unit of risk)

Asset Allocation Recommendation (Continued)

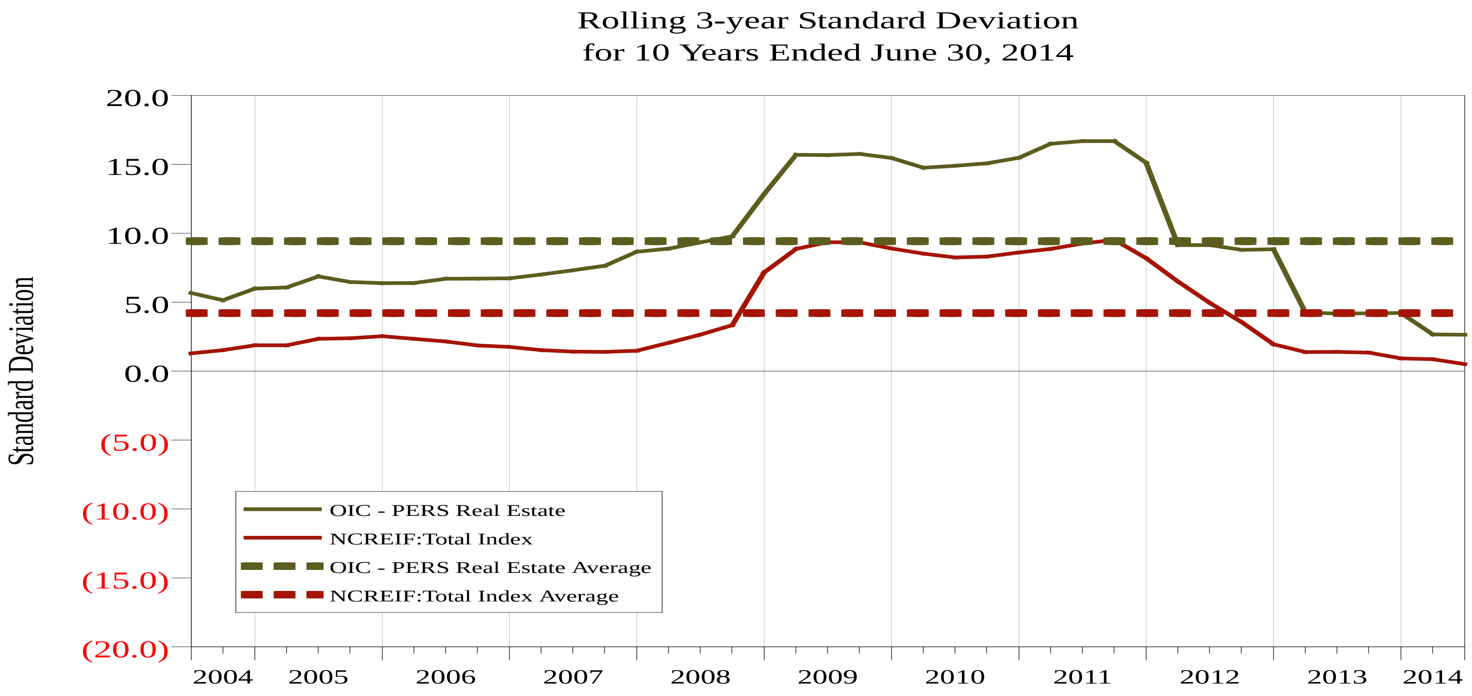
- Implementation of the Diversifying Assets category is critical to the success of Mix 2A and offers opportunity for enhanced return or increased downside protection relative to the assumptions used in this study (6.4% expected return and 11.0% expected risk)
- The current target of 40% in illiquid investments is high for a mature open Plan with increasing benefit payments. Liquidity needs should be manageable over the next 10 years but we advise curtailing the target for illiquid investments to 37.5%. In determining the 37.5% target, Callan acknowledges that a portion of the real assets portfolio could be very liquid (e.g. REITs, listed infrastructure, commodities)
- A growth-oriented portfolio is suitable for an open Plan with ongoing liabilities. However, Callan recommends growth assets be lowered slightly to better diversify across various economic scenarios. We recommend that 20% be maintained in fixed income as this asset class can offer a deflationary hedge and flight to quality protection
- It is important to note that a more conservative mix reduces contribution volatility AND results in a higher funded status in extreme negative scenarios. Both variables should be considered together, which Ultimate Net Cost does
  - Mix 2 and Mix 3 both have a favorable ultimate net cost trade-off relative to the current target mix (slide 17)
  - Mix 2 is expected to be slightly more expensive over the long run but reduces risk significantly
  - Mix 3 is expected to reduce the cost of the Plan over the next 10 years but is more illiquid and growth-oriented than Mix 2. Also, fixed income is reduced from 20% to 15%
  - Mix 2 appears attractive but the implementation issues of allocating 10% to Diversifying Assets is daunting. A smaller and easier step forward would be 5%

How to Meet 7.75%?

- The expected return of Mix 2A is 7.4% which is a 35 bps short of the 7.75% assumed investment return
- The liability return is 7.6% based on Callan's inflation expectation of 2.25%. Thus, the shortfall may be closer to 20 bps
- The 7.75% return can be met through two sources of return – beta (passive exposure to the capital markets) and alpha (return in excess of the benchmark)
  - Achieving positive alpha, net of fees, for the overall portfolio is challenging but Mix 2A enables ample opportunity to achieve this goal
- The 7.4% return expectation is mostly derived from beta with the exception of OIC private equity and OIC real assets
  - Assumed S&P500 + 2% for private equity which is a 2% return premium over large cap equity; however, OIC private equity has beat the S&P500 by 660 bps over the last 14 years
  - Real Assets has a 0.85% return premium relative to a core real estate program benchmarked to NCREIF, the return premium may be exceeded given current implementation (i.e. significant investment in opportunistic/value add real estate which is higher return/risk than core real estate).
  - Global equity, fixed income and diversifying assets are pure beta return expectations

Appendix

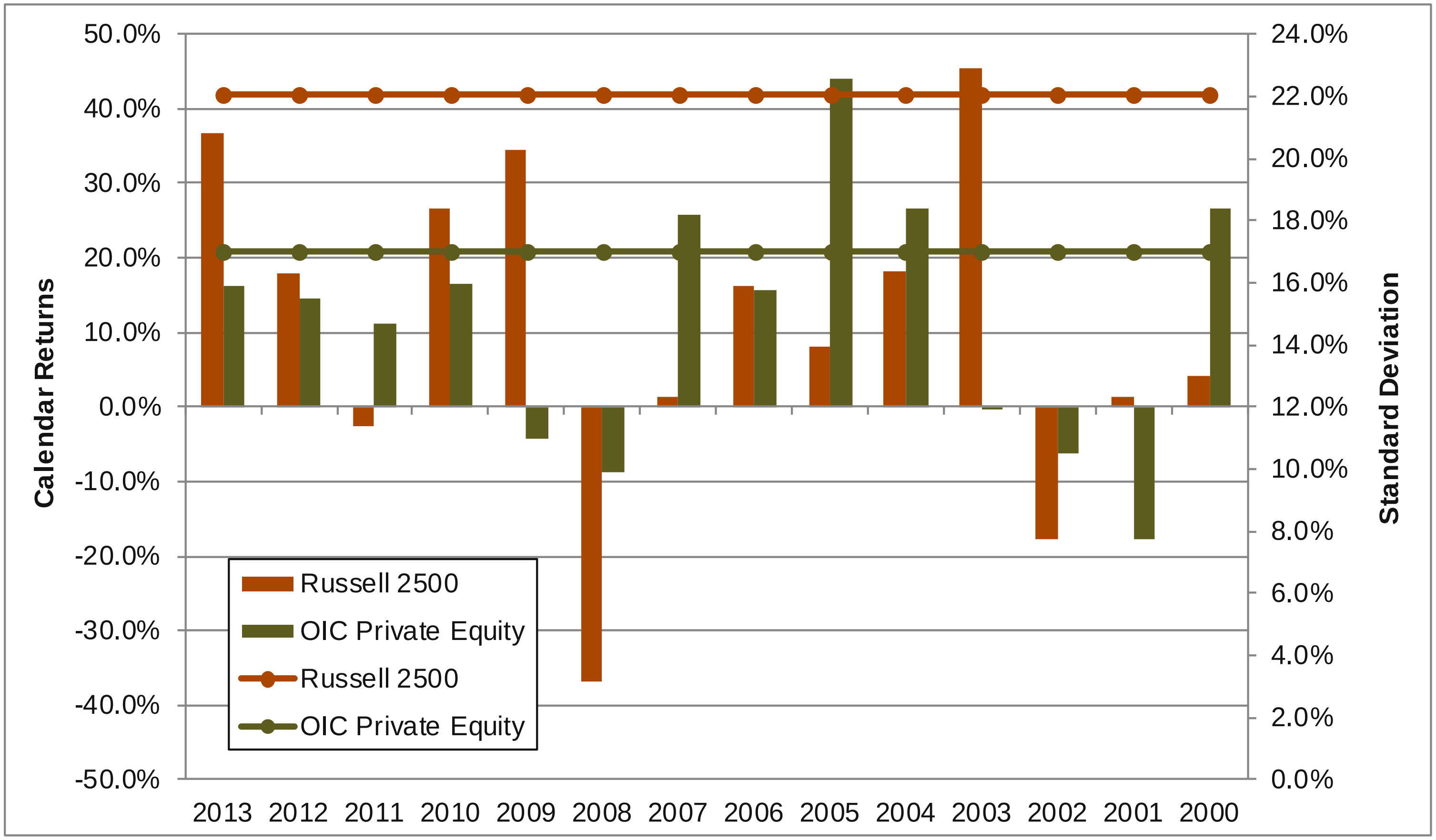
OIC Real Assets Risk



- The OIC real assets program has double the risk of NCREIF due to investment in value-added real estate, opportunistic real estate and REITs
- 10-Year average standard deviation is 10%, however, this is an underestimate of risk due to appraisal smoothing (subjective asset valuation and pricing lags)
  - Empirical research indicates that removing appraisal smoothing from private core real estate returns adds 3.4% to volatility*

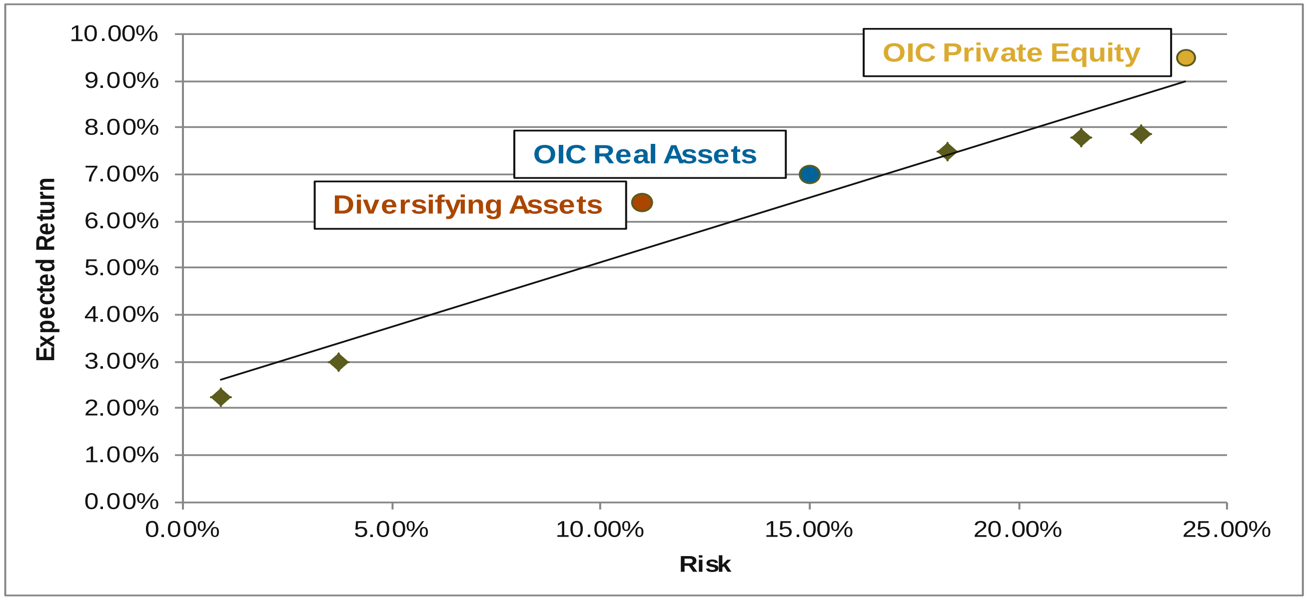
** - Public v. Private Real Estate Equities: A More-Refined Long-Term Comparison by Pagliara, Scherer and Monopoli*

OIC Private Equity Returns



- For private equity, the average 14 year standard deviation was 17%. Again, appraisal smoothing masks many risks that are important to recognize when investing in private equity – illiquidity risk, leverage, and implementation risk
- Over the 14 year period, the annualized return for private equity and the S&P 500 was 10.2% and 3.6%, respectively; a premium over large cap U.S. equity of 6.6%

Sharpe Ratio



	Risk	Return	Sharpe
Cash Equivalents	0.90%	2.25%	
Large Cap US Equity	18.30%	7.50%	0.29
Small/Mid Cap US Equity	22.95%	7.85%	0.24
Global ex-US Equity	21.50%	7.80%	0.26
US Fixed Income	3.75%	3.00%	0.20
Diversifying Assets	11.00%	6.40%	0.38
OIC Real Assets	15.00%	7.00%	0.32
OIC Private Equity	24.00%	9.50%	0.30

- Based on the premise that alternative investments and diversifying assets will deliver superior risk-adjusted performance relative to the public markets over the long run, one can infer a measure of risk for a given level of return
- Alternative investments and diversifying assets have the highest Sharpe ratios in the 0.3 - 0.38 range

Strategic Planning Horizons

- Callan believes that 10 years is the appropriate planning horizon for many strategic decisions including asset allocation
  - 10 years allows for a complete business cycle
- Shorter periods are more tactical, and much longer periods (e.g. 30 years) rely on mean-reversion to elevate projections; we find that 10 years is largely appropriate
  - The focus of strategic planning should be on understanding the short term while positioning the fund for success in the long term
- Callan's capital market projection process is based on equilibrium relationships but also incorporates current valuations, which is where the expected returns path starts
  - For each asset class projection we articulate a unique path complete with macroeconomic factor forecasts which connect observed asset prices with what we believe are equilibria expectations; this path determines the expected return

Capital Market Projections in Context

		2014 Expected Return (Geometric)				
Asset Class	***Callan***	***Consultant A***	***Consultant B***	***Consultant C***	***Consultant D***	***Consultant E***
U.S. Equity	7.60%		7.20%	7.20%		6.80%
U.S. LC Equity	*7.50%*	*6.25%*			*6.30%*	
U.S. SC Equity	*7.85%*	*6.25%*			*6.90%*	
Global ex-U.S. Equity	7.80%			7.20%		
Non-U.S. Developed Equity	*7.50%*	*7.25%*			*8.00%*	*8.10%*
Emerging Markets Equity	*7.90%*	*9.50%*	*9.00%*		*9.60%*	*9.80%*
U.S. Fixed Income	3.00%	2.53%	3.00%	3.00%	2.00%	3.70%
Private Real Estate	6.15%	6.25%	7.30%	5.90%	5.60%	6.30%
Private Equity	8.50%	8.75%	9.40%	8.90%	9.90%	9.00%
Hedge Funds	5.25%	5.50%	5.10%		5.40%	6.10%
Inflation	2.25%	3.00%	2.10%	3.00%	2.60%	
Time Horizon	*10 Year*	*5-7 Year*	*10 Year*	*10 Year*	*10 Year*	*10 Year*

Comparing Forecasts to Historical Returns

- We examine Callan's 10-year capital market projections from 2000 through 2004 and compare with realized historical results
  - In addition to broad asset classes we also assemble a portfolio with 20% allocations to each asset class
- All historical results fit within ±1 forecast standard deviation

Callan Forecast (Geometric Return)

Asset Class	2004	2003	2002	2001	2000
U.S. Equity	9.00%	9.00%	9.30%	9.20%	9.20%
International Equity	9.30%	9.60%	9.90%	9.80%	9.75%
U.S. Fixed Income	4.75%	4.75%	5.75%	6.45%	6.70%
Private Real Estate	7.60%	7.60%	8.00%	8.30%	8.30%
Private Equity	12.00%	12.00%	12.25%	12.00%	11.50%
Portfolio Return	8.53%	8.59%	9.04%	9.15%	9.09%

10-Year Historical Returns

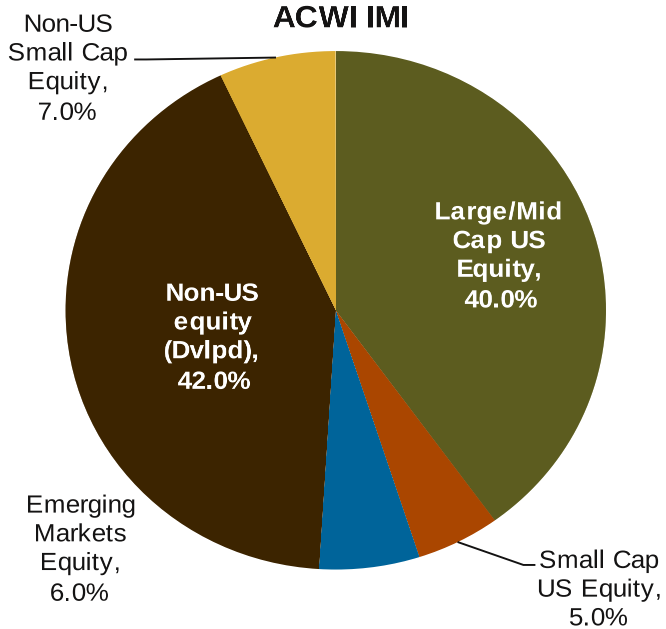
Asset Class	2004-2014	2003-2013	2002-2012	2001-2011	2000-2010
U.S. Equity	7.94%	7.88%	7.68%	3.51%	2.16%
International Equity	4.43%	6.91%	8.21%	4.67%	3.50%
U.S. Fixed Income	4.71%	4.55%	5.18%	5.78%	5.83%
Private Real Estate	5.76%	5.74%	6.50%	6.10%	5.47%
Private Equity	3.42%	6.98%	9.57%	3.48%	0.77%
Portfolio Return	5.25%	6.41%	7.43%	4.71%	3.55%

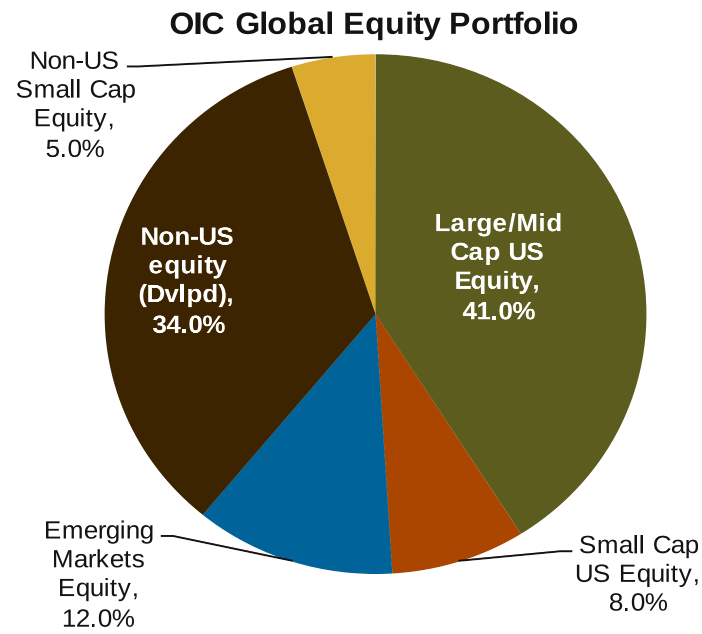
Callan 2014 – 2023 Correlation Projections

	Global Equity	Pvt Equity	Fixed Income	Diversifying Assets	Real Assets
Global Equity	1.00	0.85	-0.12	0.46	0.67
Private Equity	0.85	1.00	-0.11	0.45	0.72
Fixed Income	-0.12	-0.11	1.00	0.10	-0.02
Diversifying Assets	0.46	0.45	0.10	1.00	0.15
Real Assets	0.67	0.72	-0.02	0.15	1.00

- Relationships between asset classes are as important, or more important, than the levels of individual asset class assumptions
- These relationships will have a large impact on the generation of efficient asset mixes using mean-variance optimization

OIC Global Equity



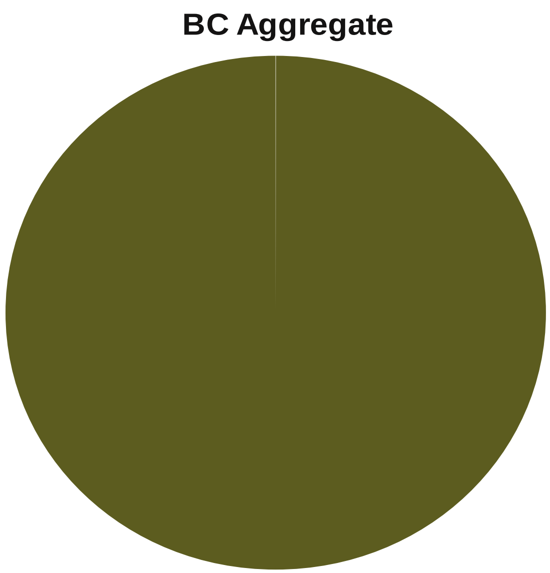


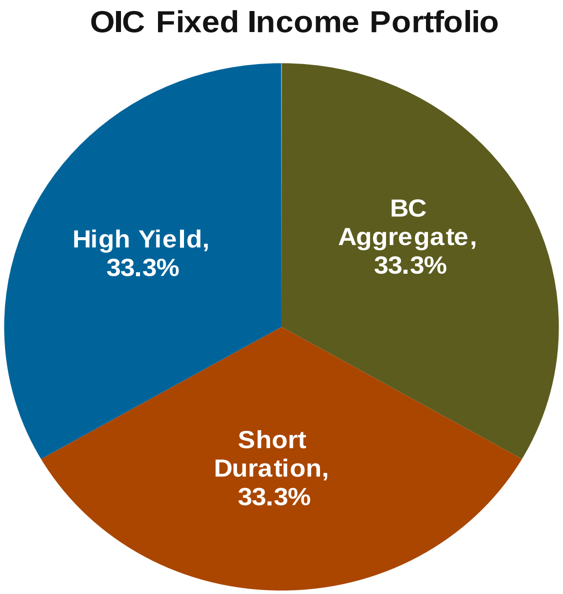
Expected Return: 7.9%
Expected Risk: 19.8%

Expected Return: 7.9%
Expected Risk: 20.1%

- The OIC Global Equity portfolio has a similar risk/return profile as the ACWI IMI despite slight overweight to small cap US equity and emerging markets equity

OIC Fixed Income





Expected Return: 3.0%
Expected Risk: 3.75%

Expected Return: 3.75%
Expected Risk: 4.5%

- The OIC fixed income portfolio is a higher return-risk portfolio relative to the BC Aggregate
  - High yield volatility outweighs short duration volatility and increases the correlation with equities

OIC Implementation

Asset Class	Current Allocation	Current Target	Alternative Long-Term Targets[2] Mix 1	Mix 2	Mix 3	Mix 4
Global Equity	40.5%	37.5%	35%	35%	35%	50%
Private Equity	21.6%	20.0%	15%	17.5%	20%	20%
Fixed Income	21.0%	20.0%	30%	20%	15%	10%
Real Assets	15.9%	20.0%	15%	17.5%	20%	15%
Diversifying Assets	1.0%	2.5%	5%	10%	10%	5%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Strategic Asset Allocation						
Expected Return	7.5%	7.5%	7.0%	7.4%	7.6%	7.9%
OIC Risk	14.8%	14.4%	12.3%	13.4%	14.3%	16.4%
Implemented						
Expected Return	7.6%	7.6%	7.1%	7.5%	7.7%	7.9%
OIC Risk	15.5%	15.1%	13.2%	14.1%	14.8%	16.8%
Delta						
Expected Return	0.1%	0.1%	0.2%	0.1%	0.1%	0.1%
OIC Risk	0.7%	0.6%	0.9%	0.6%	0.5%	0.4%

1 - Two-standard deviation event. 2.5% probability of this return or worse.

2 - Asset Mixes are pre-specified.

- OIC global equity and OIC fixed income are currently implemented differently than the asset classes modeled in this study, the above table quantifies the difference in implementation
- An implementation study should be conducted following approval of Mixes 1, 2, 3, or 4

Plan Characteristics

	Tier 1 / Tier 2	OPSRP
Eligibility	• Tier 1: Hired prior to 1996 • Tier 2: Hired after 1995 and before August 29, 2003 • These tiers are closed to new hires that don't have former Tier 1/Tier 2 service	• Hired after August 28, 2003 • Open Plan
Actuarial Cost Method	• Entry Age Normal as a % of payroll	• Same
Contribution Rate Stabilization Method	• Collar-based approach to improve rate stability from year to year • Not modeled	• Same
UAL Amortization	• December 31, 2013 UAL amortized over closed **20** years as a % of combined payroll • Gains/losses in odd subsequent years amortized over **20** years as a % of combined payroll	• December 31, 2007 UAL amortized over closed **16** years as a % of combined payroll • Gains/losses in odd subsequent years amortized over **16** years as a % of combined payroll
Normal Retirement Allowance	• Greater of Full Formula, Money Match, or Formula Plus Annuity benefit	• Final Average Salary
Percentage of Final Average Salary	• **2.0%** for Police, Fire, and Legislators • **1.67%** for all other members • This is the "Full Formulae"	• **1.8%** for Police and Fire • **1.5%** for all other members
COLA	• For 2014 onward, 1.25% on first $60,000 of annual benefit and 0.15% above $60,000 • Ad hoc adjustments may be granted from time to time	• Same

Higher Education Pooled Endowment Fund
Investment Update
Year Ended December 31, 2014

Purpose
To provide the OIC an annual review of the HIED Pooled Endowment Fund ("the Fund") performance. Additionally, to provide the OIC an update on the dissolution of the Oregon University System and associated portfolio liquidation for distribution to the various universities.

Discussion
The Fund returned 7.9 percent for the year ended December 31, 2014. This performance was 100 basis points ahead of the Fund's passive policy benchmark return of 6.9 percent. Over the trailing three and five years, the Fund generated annual returns of 12.4 percent and 10.4 percent, respectively.

The TUCS Universe comparisons, for endowment plans with less than $100 million in assets, were favorable for periods ending December 31, 2014. For the one, three, five and seven year periods, the fund ranked in the top-quartile (or better).

As of January 31, 2015 the fund was essentially on target for all its asset allocation ranges:

HIED	Policy	Target	$ Thousands	Actual
Domestic Equities	20-30%	25%	$11,577	25.8%
International Equities	20-30%	25%	10,898	24.3%
Private Equity	0-15%	10%	4,093	9.1%
Growth Assets	**50-75%**	**60%**	**26,568**	**59.1%**
Real Estate	0-10%	7.5%	961	2.1%
TIPS	0-10%	7.5%	4,665	10.4%
Inflation Hedging	**7-20%**	**15%**	**5,626**	**12.5%**
Fixed Income	20-30%	25%	10,756	23.9%
Cash	0-3%	0%	1,988	4.4%
Diversifying Assets	**20-30`%**	**25%**	**12,744**	**28.4%**
TOTAL HIED			**$44,938**	**100.0%**

OUS Dissolution

The Oregon University System expects to end operations on June 30, 2015 and have all endowment assets distributed to each respective university, expect for perhaps Southern Oregon University. The University of Oregon and Portland State University exited the Fund last fall. The remaining participants and corresponding endowment amounts are summarized here:

	Pooled Endowment Fund Summary - % owned by university as of 12/31/14			
		Market Value	**% Allocation**	**Anticipated Transfer Dates**
1	OSU	37,198,208.86	82.48%	pending OSU Board/Foundation IM agreement
2	WOU	77,441.60	0.17%	likely to WOU Foundation prior to 6/15/15
2	SOU	2,173,534.57	4.82%	undecided - likely to remain with OST
2	EOU	1,564,552.28	3.47%	likely to EOU Foundation prior to 6/15/15
2	OIT	296,881.43	0.66%	likely to OIT Foundation prior to 6/15/15
2	CO	3,787,478.58	8.40%	see below
3	Sasakawa Foundation Endowment	2,369,181.13		to UO Foundation - likely 4/1/15
	Bell/Bork Endowments	1,326,987.84		to Oregon Community Foundation - pending
	Dillian/Holloway Endowments	91,309.61		transferred January 2015
	Grand Total	45,098,097.32	100.00%	
1	OSU Board meeting 3/15/15 to review			
2	Meeting scheduled with regional universities and Chancellor's Office for update on investment manager elections 2/26/15			
3	awaiting confirmation from Sasakawa and legal counsel			

Staff continues to work with the underlying managers to liquidate assets as necessary, or to transfer ownership interests, in the case of private market assets.

Recommendation

Staff is seeking OIC approval for the following contingency:

Staff may revise and adjust the current asset class policy targets and/or manager allocations such that any remaining OST/OIC managed accounts would conform to the following asset allocation:

Global Equities	**70%**
Fixed Income	**30%**

Opportunity Portfolio Procedures Update

Purpose

This memo summarizes a change to the Procedures section of the OPERF Opportunity Portfolio Standards & Procedures document.

Background

The Policies and Procedures sections of the Private Equity, Alternatives, and Real Estate programs all contain an "OST Staff Authority" section. In contrast, the OPERF Opportunity Portfolio Policies and Procedures document does not contain such a section. Staff recommends adding such a section to the OPERF Opportunity Portfolio Standards & Procedures document to mirror the same language that exists in the Private Equity, Alternatives, and Real Estate Policies and Procedures documents. The following exhibit marks the changed language in red.

Normally, staff would propose such a change at the annual "spring clean-up" of existing policies and procedures in April. However, staff is currently negotiating a small sale of an LP interest within the Opportunity Portfolio, which it hopes to close in mid-March. Thus staff seeks this change now.

FUNCTION: **Private Equity & Alternative Investments**

ACTIVITY: **OPERF Opportunity Portfolio Standards & Procedures**

POLICY:

The Oregon State Treasurer ("OST"), to accomplish the prudent and efficient implementation of investment policies established by the Oregon Investment Council ("OIC" or "Council"), has created the Opportunity Portfolio (or, "Program") as an investment strategy within the Oregon Public Employees Retirement Fund ("OPERF" or the "Fund"). The Program may be populated with investment approaches across a wide range of investment opportunities with no limitation on asset classes or strategies employed. The Opportunity Portfolio investment program seeks to achieve its investment objective by investing in strategies that fall outside the OIC's previously identified asset classes (i.e., public equities, fixed income, real estate, private equity, alternative investments and cash) because of the expected time horizon, tactical nature of the investment, or some other unique aspect(s) which must be clearly defined in the written recommendation provided to the OIC.

A. PROCEDURES

PURPOSE

The purpose of these Opportunity Portfolio Investment Policies & Procedures is to define the strategic role of the Program within the OIC's general investment policies for OPERF, to set forth specific policy objectives for this segment of OPERF's investment portfolio, and to outline the strategies for implementing the Program.

STRATEGIC ROLE

The Program should provide enhanced risk adjusted returns and diversification to OPERF. Investments are expected to be a combination of both shorter-term (1-3 years) and longer-term holdings, which may include inflation-oriented and real return-oriented strategies. The Program may comprise an allocation of up to 3.0% of total Fund assets. This allocation will not result in any of the Fund's previously established strategic asset allocation targets falling outside their ranges. No strategic target is established for the Program.

DUE DILIGENCE

1. Oregon State Treasury Investment Division staff (Staff) will screen available investments and designate those that meet the Program's general strategy, selection criteria and performance goals. Staff will coordinate the evaluation of investment proposals received by Staff and the OIC. Staff may reject such proposed investments if they do not meet Program criteria.

2. An independent consultant retained by the OIC, working in conjunction with Staff, will review the documents pertinent to an investment opportunity, including the offering memorandum (if applicable), and identify possible issues. The consultant and Staff may meet with the managers or sponsors to discuss the investment opportunity.

3. Staff will select those investment opportunities upon which the consultant will conduct full due diligence. Upon completion of its due diligence, the consultant will provide a written report containing a summary of the proposed investment including: a description of the manager's background, historical performance, and organization; the proposed investment strategy; the proposed terms of the investment; the expected rate of return; the merits of the investment; issues and concerns surrounding the investment and how they might be resolved; and issues and provisions that should be subject to negotiation.

4. The consultant and Staff will discuss the investment opportunity and whether an investment recommendation by Staff is likely, under the circumstances. Presentations and meetings between Staff and the managers or sponsors will be arranged as necessary to address issues or questions. Unattractive investment opportunities, as determined by Staff, will not normally be given further consideration, subject to review by the OST.

5. Staff will prepare and submit to the OIC a written recommendation of favorably reviewed proposed investments, and include any recommended contingencies to final investment, unless the proposed investment is process through the “Opportunity Portfolio Committee” as outline below. The OIC will also receive a copy of the consultant’s final due diligence report for reference.

6. The Oregon Attorney General's office (DOJ) will be furnished investment management documents for those investments selected by Staff and approved by the OIC, or process through the Opportunity Portfolio Committee. Legal counsel will identify any legal issues and discuss these with Staff.

OPPORTUNITY PORTFOLIO COMMITTEE

1. The "Opportunity Portfolio Committee" or “Committee” is a committee of the OST and acts on behalf of, and subject to the review of the OST. The Opportunity Portfolio Committee is comprised of the Deputy State Treasurer, the Chief Investment Officer (CIO) and an OIC member invited by the OST to participate on the Committee. The OST will consider input from the Council in extending such invitations, from time to time.

2. The OST, through the Committee, may invest OPERF amounts up to and including $150 million per investment for new relationships, and an amount up to and including $250 million for existing relationships, consistent with OIC policies (See Appendix A). If a particular investment opportunity considered urgent, the CIO may seek OIC approval for the Committee to consider that particular investment opportunity.

3. The Committee will only exercise its investment authority by unanimous vote and acting upon a favorable due diligence determination by an independent consultant. Proposed investments may only be considered by the Opportunity Portfolio

Committee if agreement exists between the consultant and Staff that the proposed investment is consistent with Program standards including, but not limited to, the applicable sector plan and strategy. Investment opportunities and proposed Committee commitments are subject to review by the OST, who may choose to refer such opportunities or cancel and refer such proposed commitments to the OIC for review and consideration.

4. Any favorable due diligence determination by the Committee, including the underlying rationale, market conditions and Program impact, shall be furnished to both the OST and the OIC as soon as practicable and at least two weeks prior to any commitment. Prior to commitment, if the OST objects to the proposed investment or is advised by any Council member that he or she objects to the proposed investment, the OST will cancel the proposed commitment and determine whether or not, alternatively, to have Staff bring the previously recommended investment to the Council as an agenda item at a subsequent OIC meeting.

5. Any investment commitment made by the Opportunity Portfolio Committee shall be reported by Staff to the OIC at a subsequent meeting of the OIC. Staff shall not unreasonably delay any such notice.

OST STAFF AUTHORITY

Subject to his or her review right, the OST delegates to the CIO, upon a favorable recommendation from both the Director of Alternative Investments and the Advisor authority to accomplish the following:

1. Approve OST administrative activities and guideline exceptions if a plan is established to conform the [project/investment/fund] exception to applicable guidelines within a reasonable period of time;

2. Approve purchase or sale of fund interests, if such authority lies with the OST by statue or by delegation from the OIC, and review and approve other activities as necessary to further the interests of the Program consistent with its standards; and

3. Approve up to an additional $25 million to an existing investment fund for the following purposes: (1) to recapitalize the fund with additional equity; (2) to acquire all or part of another limited partner's ("LP's") position in an existing investment fund; or (3) to co-invest with the investment fund in a portfolio investment. Such additional commitments shall be on terms equal to or better than the existing investment fund terms.

Any of the foregoing activities exercised by Staff shall be reported to the OIC at an upcoming meeting, and Staff shall not unreasonable delay such report.

B. INVESTMENT OBJECTIVES

1. The Fund's primary return objective and benchmark is 7.75%, net of fees. The return target for the Program is 9.00%, net of fees.

2. The Program's secondary benchmark is defined as the Consumer Price Index (CPI), plus 500 basis points, over a trailing three-year period.

C. STRATEGIES

1. The Program is non-diversified, meaning that it may concentrate its investments. However, the Program's allocation to a particular investment will not exceed 25% of the maximum allowable 3% of total Fund assets (i.e., 0.75% of OPERF), with the exception of cash, at the time of investment. Minimum investment size will be $25 million.

2. Investment ideas for the Program may be offered by the OIC, its consultant(s) or Staff.

3. Program assets will be allocated according to recommendations made to the OIC by Staff and the OIC's consultant(s) based upon consideration given to various quantitative and qualitative data relating to various economic and financial market trends and conditions.

4. Every investment presented to the OIC must have an economic rationale for inclusion in the Program, and will only be considered within the context of the Prudent Investor Standard, reducing the possibility that investments will be considered for other than return enhancement and overall portfolio diversification. Additionally, investment opportunities where a comparative analysis can be performed will be preferred.

5. The OIC has the flexibility to reallocate assets among any or all of the permissible investments based upon its ongoing analyses of the public equity, fixed income, real estate, private equity, alternative investments, and cash markets.

6. Investments shall be monitored on an on-going basis and reviewed no less than annually with the OIC.

7. The Program may use passive investment management when deemed prudent and appropriate.

8. Certain investments may be allocated to the Program for incubation purposes and, if successful, may be recommended into one of the primary OPERF asset classes.

9. The Program's aggregate risk should be equal to or less than the expected risk of the publicly traded component of the OPERF portfolio. The Program risk should be well

diversified, relative to the total Fund, due to the expected low correlation of strategies with existing holdings.

D. IMPLEMENTATION

1. CONSULTANT AND OPERF REQUIREMENTS

The OST, consistent with OIC policies, has elected to manage the Program under a lean-staff/outsourced model. A qualified, independent consultant may be retained by the OIC to facilitate Program investing, and may be delegated substantial duties for performing due diligence on investment opportunities, monitoring of Program investments, Program analytics, valuation analyses and performance reporting. Staff retains the primary responsibility to ensure that Program investments and prospective investments receive appropriate due diligence, monitoring and valuation analyses. While some of these duties may be delegated to the consultant, Staff will conduct and document sufficient reviews and tests of the consultant’s work as necessary to conclude that such delegated duties are being consistently and appropriately performed by the consultant.

2. LEGAL COUNSEL

Relevant legal services will be obtained from the DOJ. However, due to the complex nature of the Program’s investments, collaboration with expert outside legal counsel will be recommended to the DOJ when deemed necessary or appropriate by Staff, OST, or the OIC.

3. CONTRACT EXECUTION

a) Managers of relevant investment funds will be informed by Staff of the Council's or Committee’s approved commitment reasonably, if not immediately, following the Council or Committee meeting at which the approved commitment is given. All commitments are conditional and subject to the execution of investment documents satisfactory to DOJ, applicable law, and other terms and conditions that may be identified.

b) With the possible exception of legally privileged materials, Staff will provide the consultant with OIC and Committee meeting materials.

c) Staff will provide DOJ, in advance, with OIC and Committee meeting materials and will timely provide DOJ with verification of investment commitments in conjunction with proposed partnership documentation.

d) The OIC’s authorized signatory, the CIO (or designee in accordance with OST policy), will ensure legal sufficiency approval has been provided by DOJ, prior to the execution of investment documents.

4. INVESTMENT FUNDING

a) For all existing and future relationships, each manager shall submit a complete listing of the bank account(s) to which OST may wire funds on behalf of the manager. This list may be included as an exhibit to the investment management agreement, and OST shall not deviate from these pre-established instructions unless the manager authorizes such a change in writing.

b) All requests for funding (e.g., capital calls) must be made pursuant to established OST practices.

c) Staff shall regularly monitor investments, through the consultant or other contracted service providers to ensure that aggregate Program investment commitments do not exceed the maximum amount authorized by the OIC or the Committee. In monitoring these funding commitments, the consultant or other contracted service provider will consider the effect of partnership recycling, temporary bridge financing and similar provisions impacting overall funding levels.

d) Prior to funding any particular Program investment, Staff shall verify that written funding requests are executed by an authorized individual or via confirmation on a manager's secure website.

5. MONITORING

a) REPORTS
Reports on Program activity and performance prepared by an independent advisor, if applicable, will be furnished by it to Staff at least quarterly and annually in an expanded format. Staff will present an annual Program review to the OIC.

b) ADHERENCE TO STRATEGY
The actual strategy employed by managers will be judged relative to stated objectives, strategies and industry standards. Staff will interact with managers periodically and as necessary to verify adherence.

c) ADVISORY BOARDS
To the extent practicable, Staff will serve on and participate in limited partner committee reviews or advisory boards and/or approvals of limited partnership valuations.

6. REVIEW AND MODIFICATION OF INVESTMENT POLICY STATEMENT

The OIC and OST may review Program policies from time to time to determine if modifications are necessary or desirable.

E. PERFORMANCE MEASUREMENT REPORTING

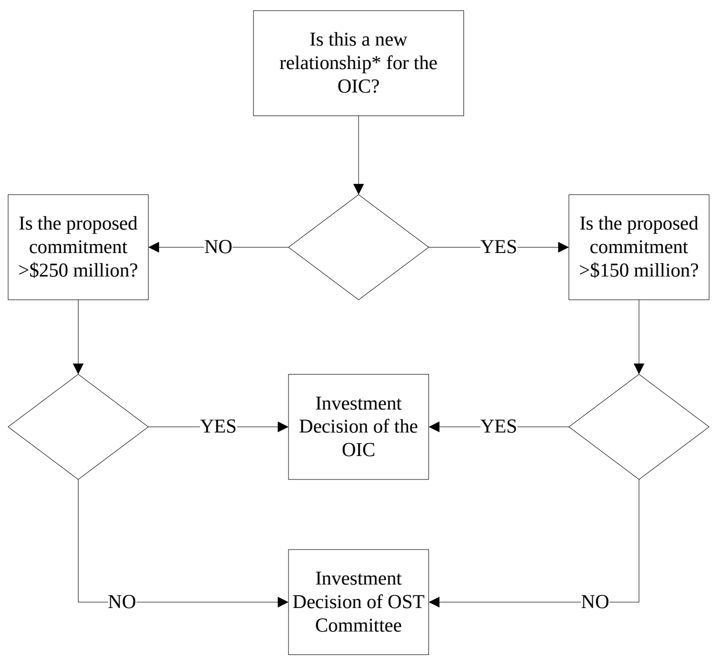
Consistent with the regular quarterly reporting on the Total Fund and the respective asset classes, Staff and advisors will provide an update on the performance of the Opportunity Portfolio, compared to the Investment Objectives enumerated above.

SAMPLE FORMS, DOCUMENTS OR REPORTS (Attached):

Appendix A – OIC/OST Alternative Investments Authority (Decision Tree)

Appendix A
OIC/OST Alternative Investments Authority

The OST, through Committees, may invest OPERF amounts up to and including $150 million per investment for new relationships, and an amount up to and including $250 million for existing relationships.



NOTE: If consideration of a particular investment opportunity is urgent, the CIO may seek OIC approval for Committee consideration of that particular investment opportunity.

* A new relationship is defined as a general partner or management team with which the OIC has no existing or committed investment exposure.

Real Estate Portfolio Policy Variance Request

Purpose

Staff is requesting OIC approval for a policy variance in order to bring Lone Star Real Estate Fund IV to the Real Estate Committee in March.

Background

Current policy limits the Real Estate Committee to new capital commitments of up to $250 million for an existing manager. At this time, Staff is negotiating a $300 million commitment to Lone Star Real Estate Fund IV ("LSREF IV" or the "Fund") in order to achieve improved economics via both a discounted management fee and higher preferred return hurdle. The first close for LSREF IV is currently scheduled to occur on April 14, 2015, more than two weeks prior to the April OIC meeting. The Fund is expected to be oversubscribed, and limited partners that do not commit prior to the first close will likely receive a reduced allocation given the Fund's already established $5 billion hard cap.

Staff is seeking OIC approval for a variance request regarding the Real Estate Committee's $250 million commitment limitation to accommodate a first close commitment to LSREF IV. With such an approval, Staff will convene the Real Estate Committee in March in order to secure a full subscription commitment and preferred "first close" economic terms. Note this variance request applies only to the currently contemplated investment in LSREF IV.

Callan
FORTY YEARS

March 4, 2015

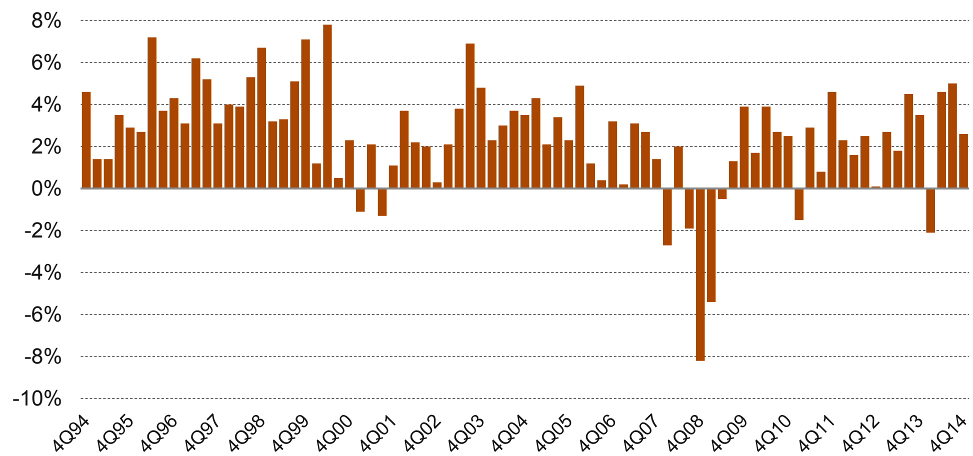
Oregon Investment Council

Fourth Quarter 2014
Performance Review

Economic Commentary

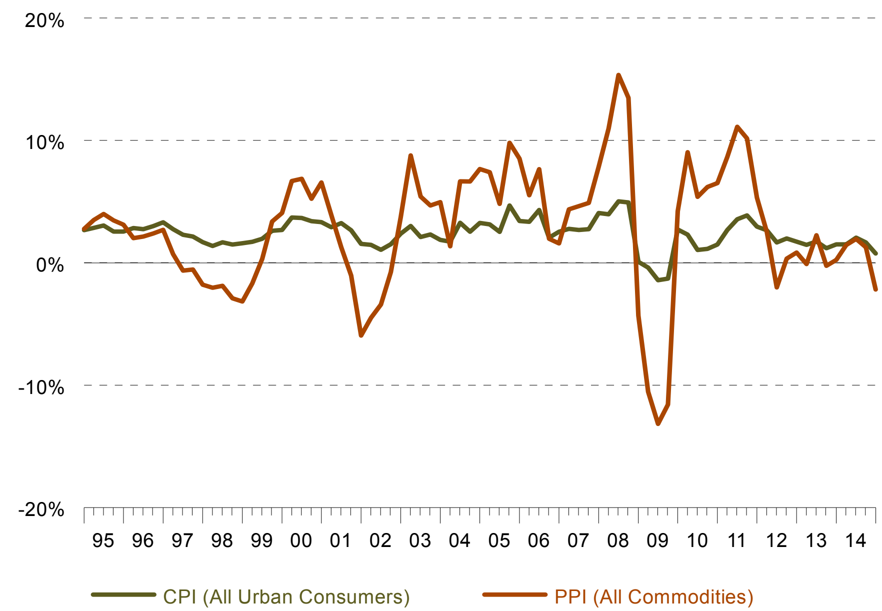
Fourth Quarter 2014

Quarterly Real GDP Growth (20 Years)



Source: Bureau of Economic Analysis

Inflation Year-Over-Year



- GDP gained an unexpectedly moderate 2.6%, perhaps an inevitable downshift to a more sustainable rate of growth. Oil prices plunged, and the windfall to consumers began showing up in fourth-quarter spending.
- The unemployment rate fell below 6% in the fourth quarter, once the target rate for the Federal Reserve's policy on monetary easing. Job growth has contributed to the decline in unemployment, but a persistent and troubling decline in labor force participation has been part of the reason as well.
- Inflation remained benign. Core CPI (excluding food and energy) read 1.7% for the 12-months ended November 30, while headline CPI was pushed lower by the oil slide and was 1.3% for the same period.

Market Summary - Fourth Quarter 2014

Index	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years	Last 15 Years
U.S. Equity:						
Russell:3000 Index	5.24	12.56	20.51	15.63	7.94	4.82
S&P:500	4.93	13.69	20.41	15.45	7.67	4.24
Russell:1000 Index	4.88	13.24	20.62	15.64	7.96	4.62
Russell:1000 Growth	4.78	13.05	20.26	15.81	8.49	2.21
Russell:1000 Value	4.98	13.45	20.89	15.42	7.30	6.62
Russell:Midcap Index	5.94	13.22	21.40	17.19	9.56	8.90
Russell:Midcap Growth	5.84	11.90	20.71	16.94	9.43	4.99
Russell:Midcap Value	6.05	14.75	21.98	17.43	9.43	10.76
Russell:2000 Index	9.73	4.89	19.21	15.55	7.77	7.38
Russell:2000 Growth	10.06	5.60	20.14	16.80	8.54	4.34
Russell:2000 Value	9.40	4.22	18.29	14.26	6.89	10.23
U.S. Fixed Income:						
Barclays:Aggregate Index	1.79	5.97	2.66	4.45	4.71	5.70
Barclays:Gov/Credit Bond	1.82	6.01	2.76	4.69	4.70	5.79
Barclays:Gov/Credit Long	5.60	19.31	5.77	9.81	7.36	8.39
Barclays:Gov/Credit 1-3	0.17	0.77	0.89	1.41	2.85	3.70
Barclays:Credit	1.76	7.53	4.84	6.25	5.46	6.50
Barclays:Mortgage Idx	1.79	6.08	2.37	3.73	4.75	5.54
Barclays:High Yld Corp	(1.00)	2.45	8.43	9.03	7.74	7.48
Barclays:US Universal Idx	1.34	5.55	3.19	4.81	4.91	5.89
Real Estate:						
NCREIF:Total Index	3.04	11.82	11.11	12.13	8.38	8.89
NAREIT Composite Idx	12.27	27.23	15.95	16.37	7.29	12.15
Global Equity:						
MSCI:ACWI	0.52	4.71	14.72	9.74	6.65	3.76
MSCI:AC WORLD IMI	0.59	3.84	14.30	9.48	6.37	3.69
Non-U.S. Equity:						
MSCI:EAFE US$	(3.57)	(4.90)	11.06	5.33	4.43	2.54
MSCI:EAFE LC(Net)	1.77	5.92	16.40	7.75	5.33	1.80
MSCI:ACWI ex US	(3.81)	(3.44)	9.49	4.89	5.59	3.70
MSCI:AC Wld Net x US LC	1.14	6.05	13.99	6.96	6.12	2.72
MSCI:ACWI SC ex US	(3.98)	(4.03)	10.84	6.80	6.87	6.61
MSCI:Emer Markets	(4.44)	(1.82)	4.41	2.11	8.78	7.38
Other:						
3 Month T-Bill	0.00	0.03	0.07	0.09	1.54	2.01
US DOL:CPI All Urban Cons	(1.35)	0.76	1.33	1.69	2.12	2.24

- An unexpectedly moderate fourth quarter gain of 2.6% capped off a wild 2014 for the U.S. economy which started with negative GDP for the first quarter followed by sharp climbs in subsequent periods.
- The Eurozone exhibited an anemic 0.6% growth rate albeit better than Japan's contraction of 1.4%.
- Central Bank policies also diverged as the Fed ended its quantitative easing program whereas the ECB and BoJ recently announced initiatives to stimulate growth and fight deflation.
- This environment has fostered significant strengthening of the dollar relative to the euro and yen while setting the stage for developed markets in 2015.
- U.S. labor reports were solid at year end with the unemployment rate falling to 5.6%, a decline of 1.1% since last year. Although headline numbers were impressive, the labor force participation rate decreased to 62.7% and wages remained static.
- Low inflation persisted in December as the annualized figure decelerated to 0.8%, largely due to the drop in energy prices. Excluding food and energy, inflation rose 1.6% for the year.
- Oil prices collapsed in the fourth quarter as a glut of supply overwhelmed tepid demand. OPEC refused to curb output, certain they are better positioned to outlast U.S. shale producers in this low price atmosphere.

Market Summary

Fourth Quarter 2014

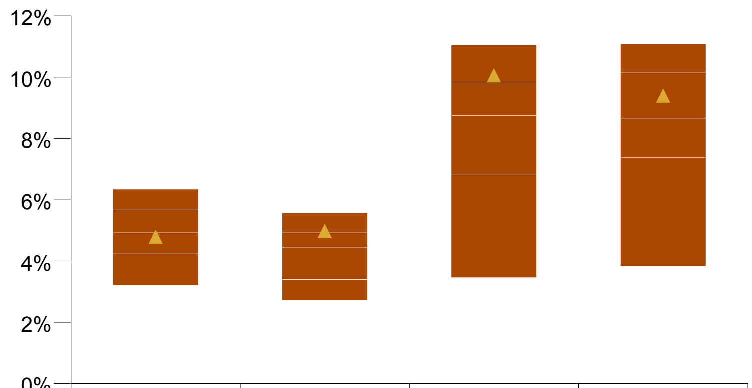
Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Russell:2000 Index 9.7%	S&P:500 13.7%	DJ:US Total Mkt Ix 20.4%	DJ:US Total Mkt Ix 15.7%	MSCI:Emer Markets 8.8%
DJ:US Total Mkt Ix 5.2%	NFI-ODCE Val Gross 12.5%	S&P:500 20.4%	Russell:2000 Index 15.5%	DJ:US Total Mkt Ix 8.1%
S&P:500 4.9%	DJ:US Total Mkt Ix 12.5%	Russell:2000 Index 19.2%	S&P:500 15.5%	Russell:2000 Index 7.8%
NFI-ODCE Val Gross 3.3%	Barclays:Aggregate Index 6.0%	NFI-ODCE Val Gross 12.5%	NFI-ODCE Val Gross 13.9%	S&P:500 7.7%
Barclays:Aggregate Index 1.8%	Russell:2000 Index 4.9%	MSCI:ACWI x US (Net) 9.0%	ML:High Yield CP Idx 8.9%	ML:High Yield CP Idx 7.5%
3 Month T-Bill 0.0%	ML:High Yield CP Idx 2.4%	ML:High Yield CP Idx 8.3%	Barclays:Aggregate Index 4.4%	NFI-ODCE Val Gross 7.1%
ML:High Yield CP Idx (1.1%)	3 Month T-Bill 0.0%	MSCI:Emer Markets 4.4%	MSCI:ACWI x US (Net) 4.4%	MSCI:ACWI x US (Net) 5.1%
MSCI:ACWI x US (Net) (3.9%)	MSCI:Emer Markets (1.8%)	Barclays:Aggregate Index 2.7%	MSCI:Emer Markets 2.1%	Barclays:Aggregate Index 4.7%
MSCI:Emer Markets (4.4%)	MSCI:ACWI x US (Net) (3.9%)	3 Month T-Bill 0.1%	3 Month T-Bill 0.1%	3 Month T-Bill 1.5%

US Equity

Fourth Quarter 2014

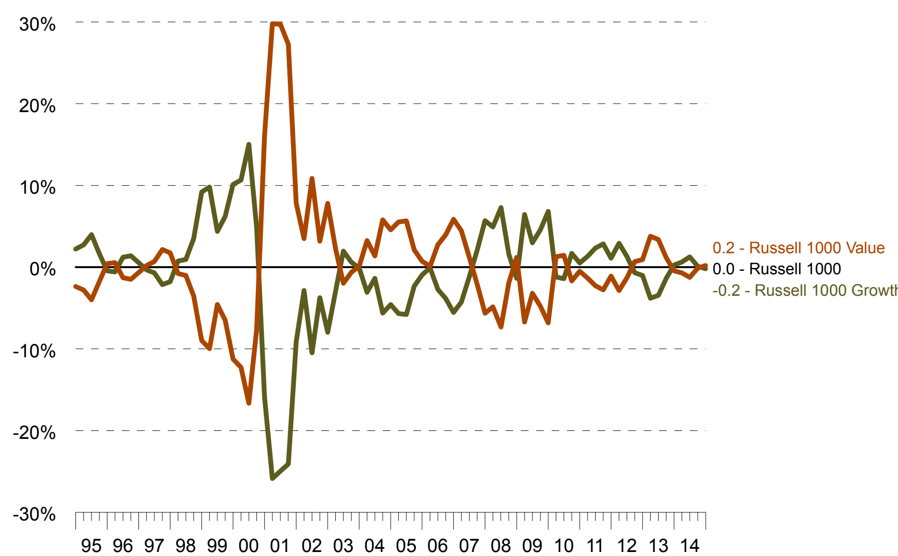
- U.S. large and mid-capitalization equities dominated global equity performance in 2014 with returns in excess of 12% for the year (Russell 3000: +12.6%; Russell Midcap: +13.2%).
- Small and micro caps led equity market results in the 4th quarter (Russell 2000: +9.7%, Russell Micro: +11.2%). Large and mid caps also enjoyed solid gains (Russell Top 200: +4.4%, Russell Midcap: +5.9%). Style produced little differentiation as growth and value moved together in the quarter across capitalization.

Callan Style Group Quarterly Returns



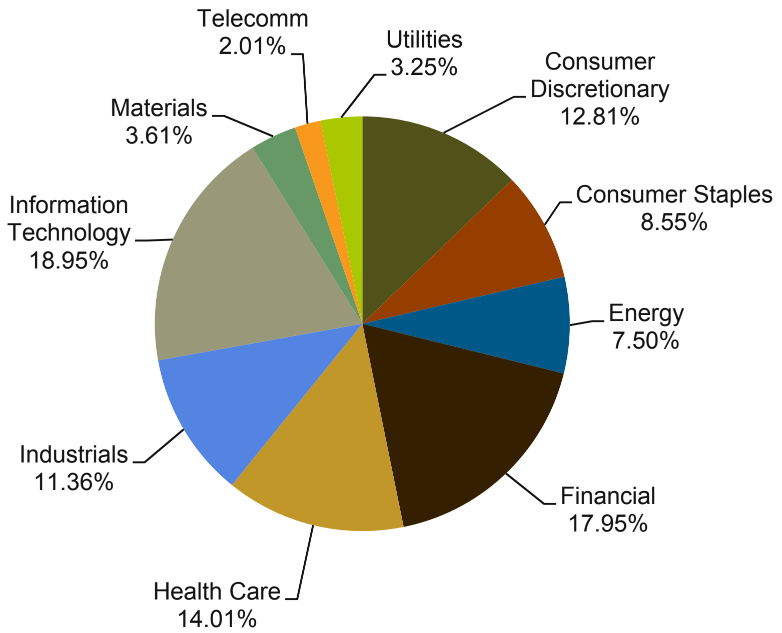
	Large Cap Growth Style vs. R1000 Growth	Large Cap Value Style vs. R1000 Value	Small Cap Growth Style vs. R2000 Growth	Small Cap Value Style vs. R2000 Value
10th Percentile	6.33	5.56	11.04	11.07
25th Percentile	5.67	4.94	9.78	10.17
Median	4.92	4.45	8.75	8.64
75th Percentile	4.26	3.40	6.84	7.39
90th Percentile	3.22	2.73	3.47	3.85
Benchmark ▲	4.78	4.98	10.06	9.40

Rolling One-Year Relative Returns (versus Russell 1000 Index)

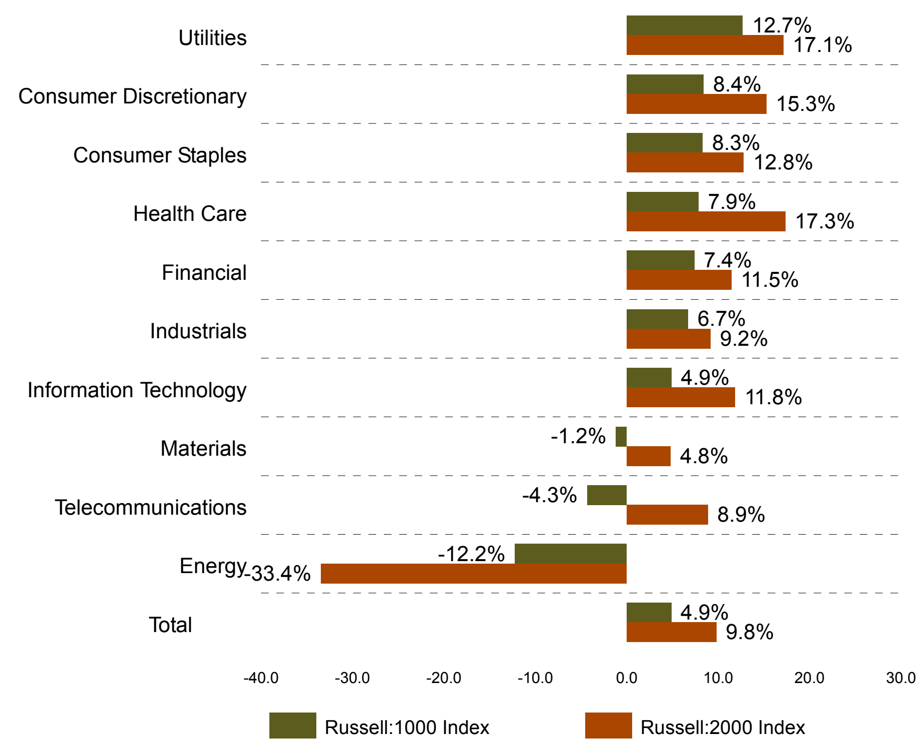


US Equity Overview

Fourth Quarter 2014



Source: Russell Investment Group



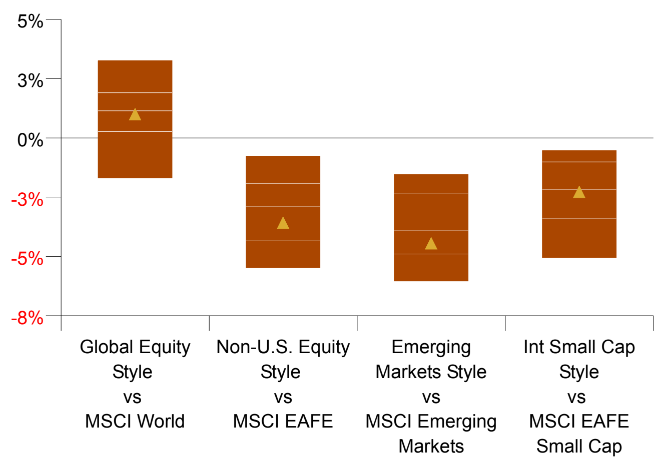
- Within the Russell 3000, the Energy sector suffered notably with falling oil and natural gas prices and was the worst performing sector.

Non-US Equity

Fourth Quarter 2014

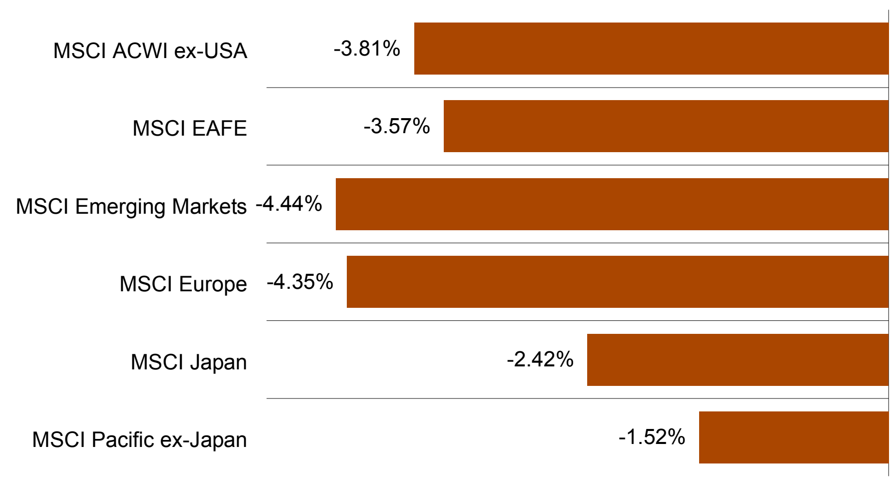
- Relatively attractive yields offered in the US and expectations for higher rates in the fourth quarter, propelled the dollar higher versus most currencies.
- The dollar advanced 4% versus the euro and 9% versus the yen and appreciated versus most emerging markets currencies as well. This major strength in the US dollar pushed non-US equity returns well into negative territory.
- Broadly representing both developed and emerging stocks, the MSCI ACWI ex-US declined 3.8%.

Callan Style Group Quarterly Returns



	Global Equity Style vs MSCI World	Non-U.S. Equity Style vs MSCI EAFE	Emerging Markets Style vs MSCI Emerging Markets	Int Small Cap Style vs MSCI EAFE Small Cap
10th Percentile	3.26	-0.77	-1.53	-0.53
25th Percentile	1.91	-1.92	-2.33	-1.01
Median	1.15	-2.88	-3.92	-2.16
75th Percentile	0.27	-4.34	-4.90	-3.38
90th Percentile	-1.68	-5.47	-6.03	-5.04
Benchmark ▲	1.01	-3.57	-4.44	-2.27

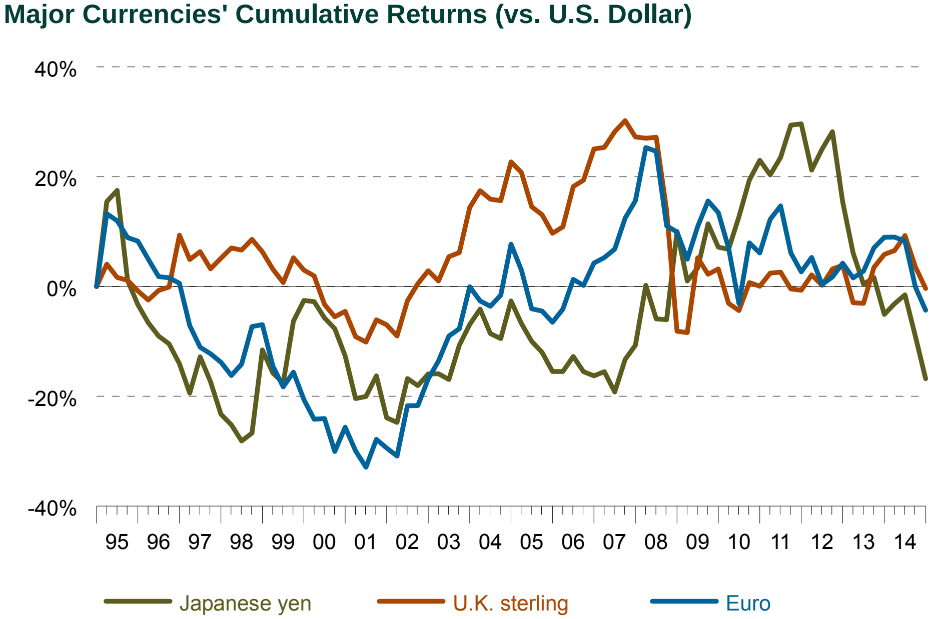
Regional Quarterly Performance (US Dollar)



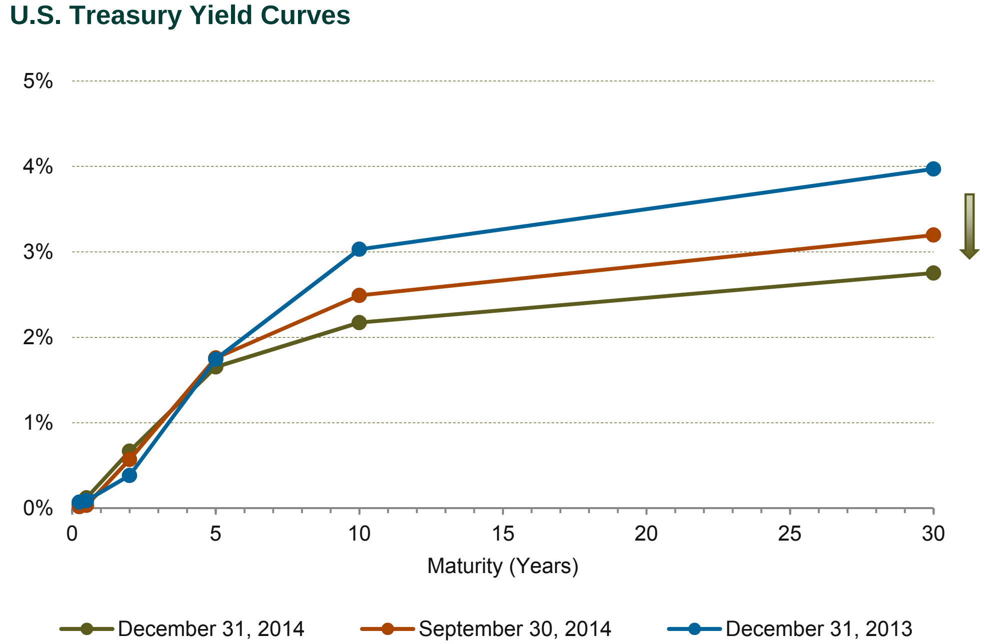
Source: MSCI

Currency and Yield Curve

Fourth Quarter 2014



*Euro returns from 1Q99. German mark prior to 1Q99.
Source: MSCI



Source: Bloomberg

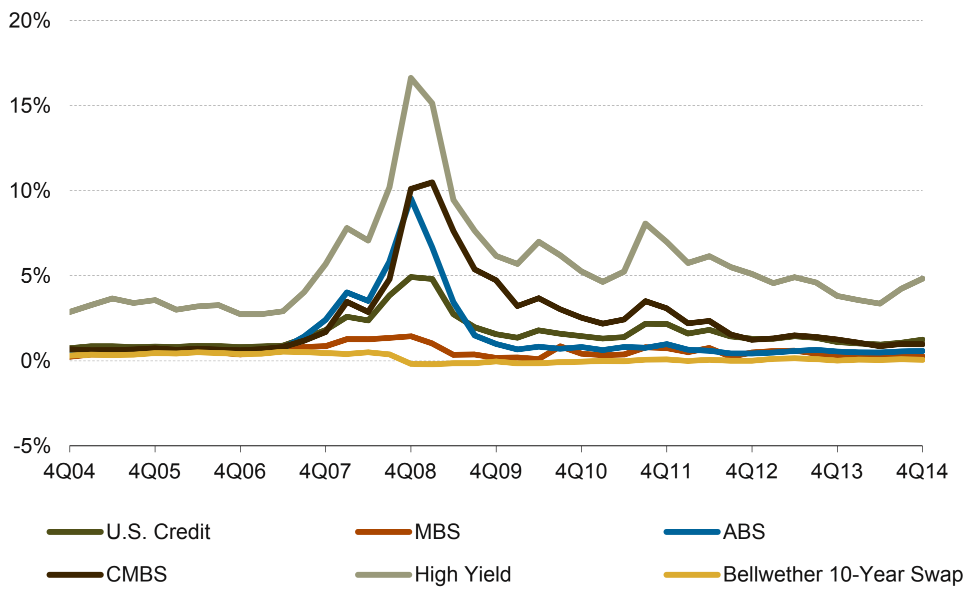
- The U.S. dollar rose against the currencies of most of its trading partners as prospects for growth faded in the developed markets and the euro zone embarked on another round of quantitative easing.
- The 10-year U.S. Treasury finished the year at 2.17%, 35 bps lower than it was at the end of the last quarter and 87 bps lower than it was a year ago.

Fixed Income

Fourth Quarter 2014

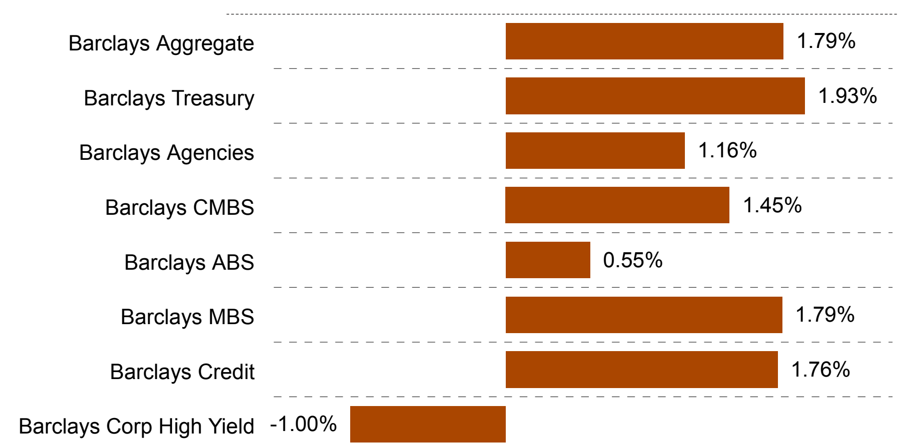
- Yield spreads widened considerably in both the investment grade and high yield corporate sectors. The Barclays Aggregate Index climbed 1.79% during the quarter.
- High yield corporate bonds were impacted most by the drop in oil prices (the energy complex makes up 15% of the index). High yield bonds lagged against investment-grade corporates, with BB-rated bonds performing better than lower-rated credits. The Barclays Corporate High Yield Index fell 1.00%.

Effective Yield Over Treasuries



Source: Barclays

Absolute Returns for Quarter ended December 31, 2014



Source: Barclays

OPERF Total Regular Account

Performance Summary for the Fourth Quarter 2014

Total Fund:

For the fourth quarter of 2014, the Total Regular Account advanced 1.18% (+1.12% net of fees) and ranked in the 60th percentile of the $10B+ public fund peer group. For the 12 months ended December 31, 2014, the Account gained 7.55% (+7.29% net of fees), trailing the Policy Target return of 8.24%, and ranked in the 23rd percentile of Callan's $10B+ public fund peer group.

Asset Classes:

- **U.S. Equity**: The U.S. Equity Portfolio rose 5.41% (+5.36% net of fees) for the quarter versus an advance of 5.24% for the Russell 3000 Index. This return ranked the Portfolio in the 39th percentile of Callan's Public Fund: $10B+ Domestic Equity (gross) peer group. On a trailing year basis, the Portfolio rose 10.07% (+9.85% net of fees) versus a gain of 12.56% for the benchmark, and ranked in the 95th percentile of the peer group. 10 year results are slightly ahead of the benchmark and rank favorably versus peers.

- **International Equity:** The International Equity Portfolio retreated 2.88% (-2.98% net of fees) for the quarter, protecting against the 3.88% decline in the MSCI ACWI ex-U.S. IMI Index. This return ranked the Portfolio in the 41st percentile of Callan's Public Fund: $10B+ International Equity (gross) peer group. For the trailing year, the Portfolio lost 2.52% (-2.88% net of fees), holding up far better than the 3.89% decline in the benchmark, and ranked in the 23rd percentile of the peer group. 10 year results are well ahead of the benchmark and rank in the top quartile of the peer group.

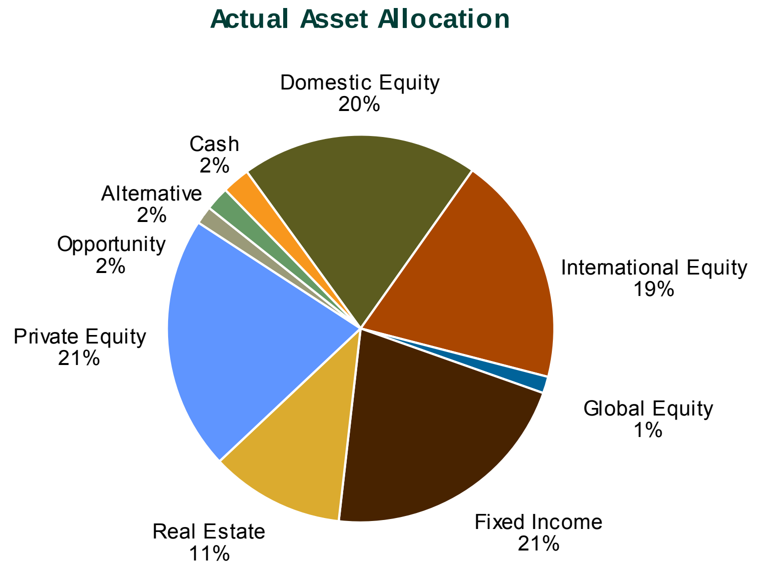
- **Fixed Income:** The Fixed Income Portfolio gained 0.53% (+0.47% net of fees) in the quarter, trailing the 0.66% return of the Custom Benchmark. This return ranked the Portfolio in the 88th percentile of Callan's Large Public Funds >$10B – Domestic Fixed (Gross) peer group. For the trailing year, the Portfolio returned 3.73% (3.52% net of fees) versus 3.04% for the benchmark. This return ranked the Portfolio in the 91st percentile of the peer group. 10 year results remain favorable versus both the benchmark and peer group.

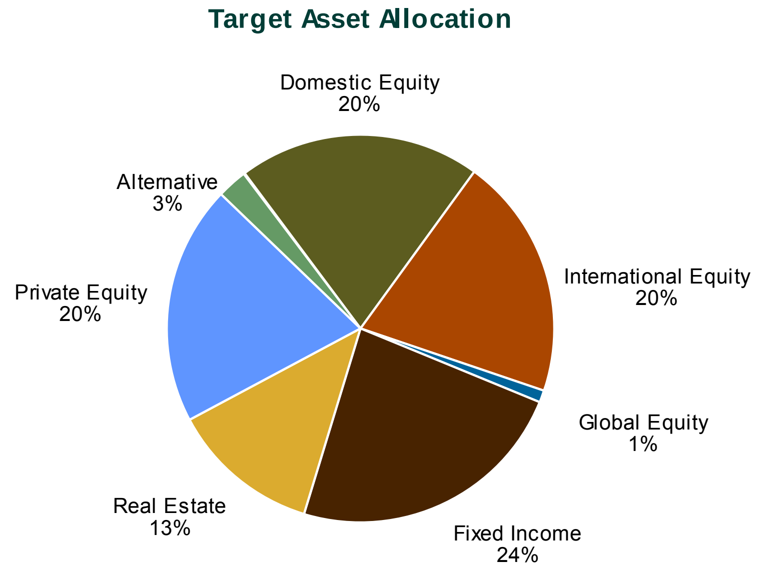
- **Private Equity:** The Private Equity Portfolio has performed very well over the last decade, with trailing 10 year net results well ahead of the benchmark (13.81% vs. 12.11%).

- **Real Estate:** The Real Estate Portfolio has enjoyed solid returns over the last 10 years with the Portfolio rising 9.12% net versus the benchmark return of 8.55% over the same time period.

OPERF Total Regular Account

Asset Allocation as of December 31, 2014





Asset Class	$000s Actual	Weight Actual	Target	Percent Difference	$000s Difference
Domestic Equity	13,714,422	19.8%	20.2%	(0.4%)	(310,060)
International Equity	13,311,086	19.2%	20.2%	(1.0%)	(713,395)
Global Equity	975,024	1.4%	1.0%	0.4%	282,457
Fixed Income	14,816,529	21.4%	23.5%	(2.1%)	(1,458,795)
Real Estate	7,741,804	11.2%	12.5%	(1.3%)	(915,283)
Private Equity	14,709,784	21.2%	20.0%	1.2%	858,444
Opportunity	1,049,655	1.5%	0.0%	1.5%	1,049,655
Alternative	1,363,285	2.0%	2.5%	(0.5%)	(368,133)
Cash	1,575,110	2.3%	0.0%	2.3%	1,575,110
Total	69,256,698	100.0%	100.0%		

OPERF Total Regular Account

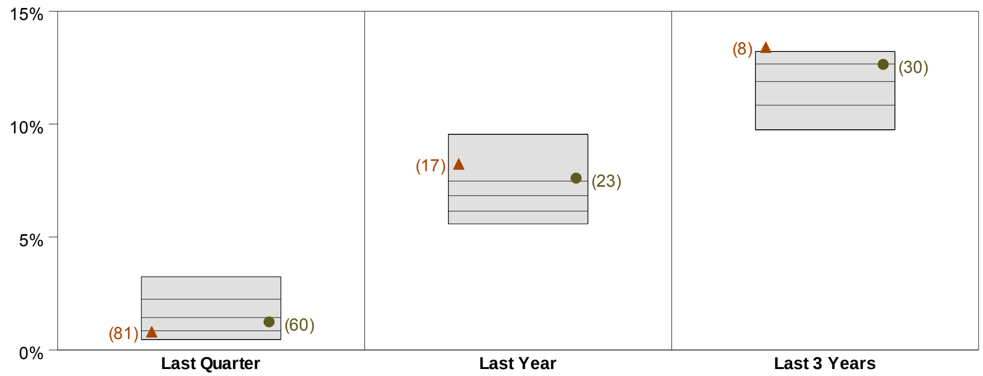
Net Performance by Asset Class as of December 31, 2014

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Total Public Equity	**1.13%**	**3.31%**	**15.42%**	**10.30%**	**6.40%**
MSCI ACWI IMI Net	0.59%	3.84%	14.30%	9.48%	6.37%
CAI Global Equity Broad Style	1.11%	4.10%	16.35%	10.47%	7.25%
Domestic Equity	**5.36%**	**9.85%**	**20.04%**	**15.36%**	**7.76%**
Russell 3000 Index	5.24%	12.56%	20.51%	15.63%	7.94%
CAI Pub Fund:10+ Dom Eq	5.51%	12.44%	20.31%	15.91%	8.05%
International Equity	**(2.98%)**	**(2.88%)**	**11.06%**	**6.24%**	**6.60%**
MSCI ACWI ex-US IMI Index	(3.88%)	(3.89%)	9.22%	4.71%	5.52%
CAI Pub Fund:10+ Intl Eq	(3.45%)	(3.22%)	9.95%	5.42%	5.61%
Total Fixed Income	**0.47%**	**3.52%**	**4.89%**	**6.29%**	**5.87%**
Custom FI Benchmark	0.66%	3.04%	3.92%	4.72%	4.86%
CAI Pub Fund: 10+ US FI	1.52%	6.50%	3.79%	5.49%	5.23%
Total Real Estate	**4.17%**	**14.16%**	**13.54%**	**10.45%**	**9.12%**
Total Real Estate ex REITs	2.58%	12.01%	12.83%	8.90%	9.46%
NCREIF Property Index Qtr Lag	2.63%	11.26%	11.09%	10.99%	8.55%
Public Plan - Real Estate	3.83%	12.91%	12.14%	12.41%	6.97%
Total Private Equity	**0.50%**	**15.90%**	**15.50%**	**14.78%**	**13.81%**
Russell 3000 + 300 BPS Qtr Lag	0.75%	21.24%	26.71%	19.21%	12.11%
Total Alternative	**(1.81%)**	**4.44%**	**3.16%**	**-**	**-**
CPI + 4%	(0.78%)	4.33%	5.15%	5.67%	6.15%
Opportunity Portfolio	**1.65%**	**8.81%**	**14.01%**	**11.07%**	**-**
Russell 3000 Index	5.24%	12.56%	20.51%	15.63%	7.94%
CPI + 5%	(0.52%)	5.33%	6.15%	6.67%	7.15%
Total Regular Account	**1.12%**	**7.29%**	**12.33%**	**10.28%**	**7.37%**
Total Regular Account ex-Overlay	1.11%	7.28%	12.27%	10.19%	7.41%
OPERF Policy Benchmark*	0.81%	8.24%	13.41%	10.36%	7.33%

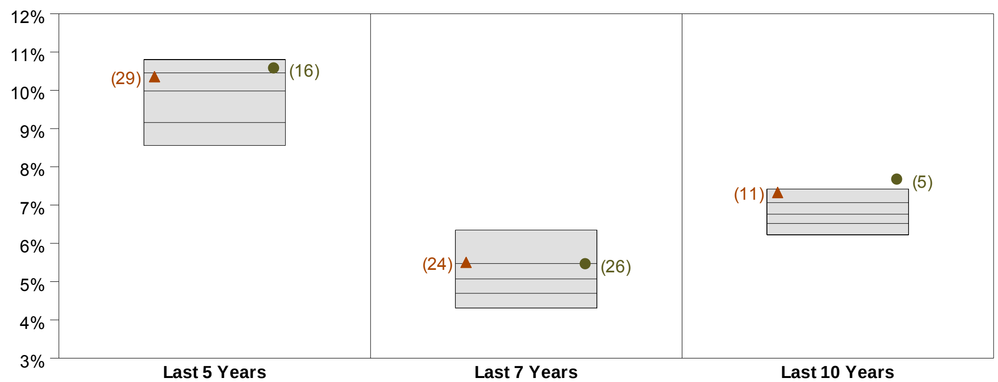
*Policy Benchmark = 41.5% MSCI ACWI-net, 23.5% Custom FI Benchmark, 20.0% Russell 3000 + 300 BPS Qtr Lag, 12.5% NCREIF Property Index Qtr Lag, 2.5% CPI + 400 bps

OPERF Total Regular Account

Performance and Peer Group Rankings (Gross)* as of December 31, 2014



	Last Quarter	Last Year	Last 3 Years
10th Percentile	3.24	9.56	13.22
25th Percentile	2.25	7.48	12.67
Median	1.43	6.83	11.88
75th Percentile	0.85	6.15	10.84
90th Percentile	0.46	5.58	9.76
Total Regular Account ●	1.18	7.55	12.59
Policy Target ▲	0.81	8.24	13.41



	Last 5 Years	Last 7 Years	Last 10 Years
10th Percentile	10.80	6.35	7.42
25th Percentile	10.46	5.47	7.06
Median	9.98	5.07	6.76
75th Percentile	9.16	4.70	6.52
90th Percentile	8.56	4.31	6.22
Total Regular Account ●	10.55	5.43	7.65
Policy Target ▲	10.36	5.50	7.33

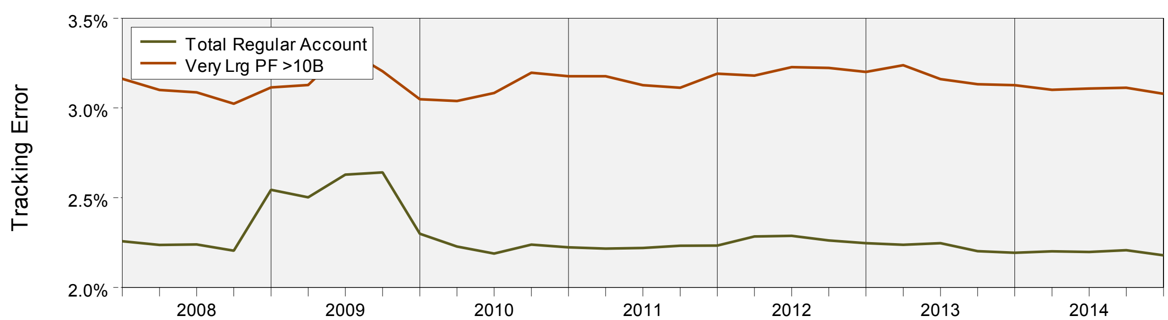
*Versus Callan's Very Large Public Funds (> $10 billion) Peer Group

OPERF Total Regular Account

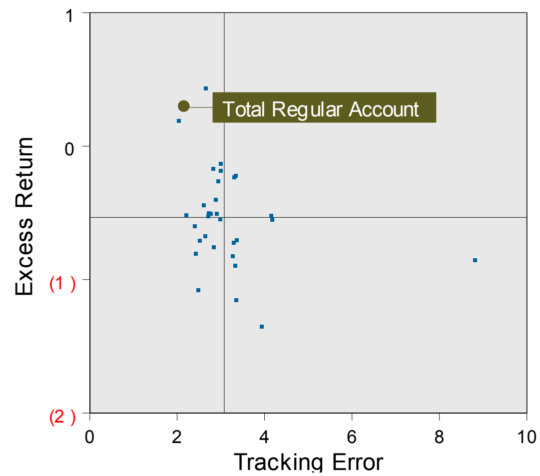
Risk Analysis vs. Very Large Public Funds (>10 billion)

Ten Years ended December 31, 2014

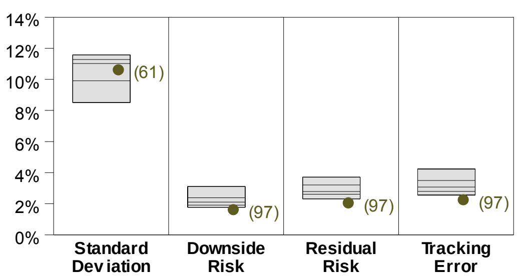
Rolling 40 Quarter Tracking Error vs Policy Target



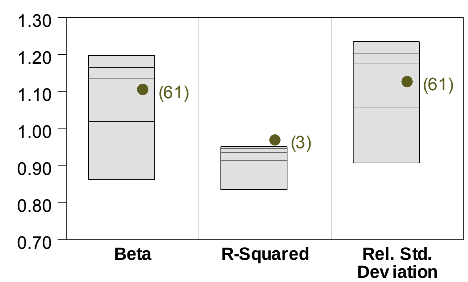
Risk Analysis vs Very Lrg Public Funds (>10B) (Gross)
Ten Years Ended December 31, 2014



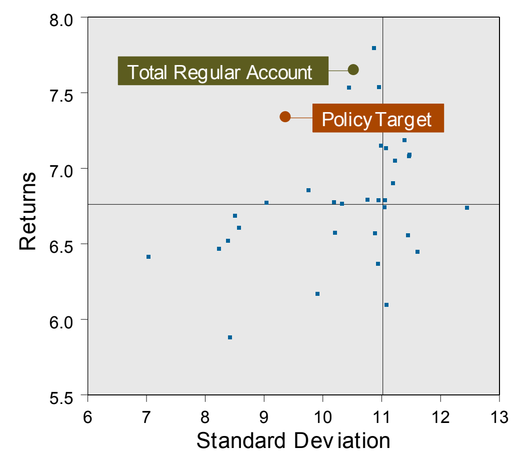
Risk Statistics Rankings vs Policy Target
Rankings Against Very Lrg Public Funds (>10B) (Gross)
Ten Years Ended December 31, 2014



	Standard Deviation	Downside Risk	Residual Risk	Tracking Error
10th Percentile	11.58	3.12	3.71	4.24
25th Percentile	11.28	2.39	3.21	3.50
Median	11.02	2.12	2.79	3.08
75th Percentile	9.90	1.92	2.61	2.80
90th Percentile	8.51	1.78	2.32	2.57
Total Regular Account ●	10.54	1.54	1.98	2.18



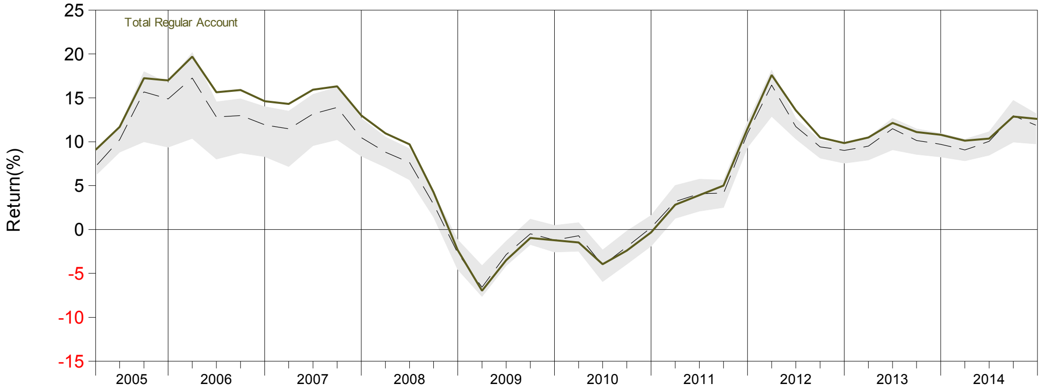
	Beta	R-Squared	Rel. Std. Deviation
10th Percentile	1.20	0.95	1.23
25th Percentile	1.17	0.95	1.20
Median	1.14	0.94	1.17
75th Percentile	1.02	0.91	1.06
90th Percentile	0.86	0.84	0.91
Total Regular Account ●	1.10	0.97	1.12



OPERF Total Regular Account

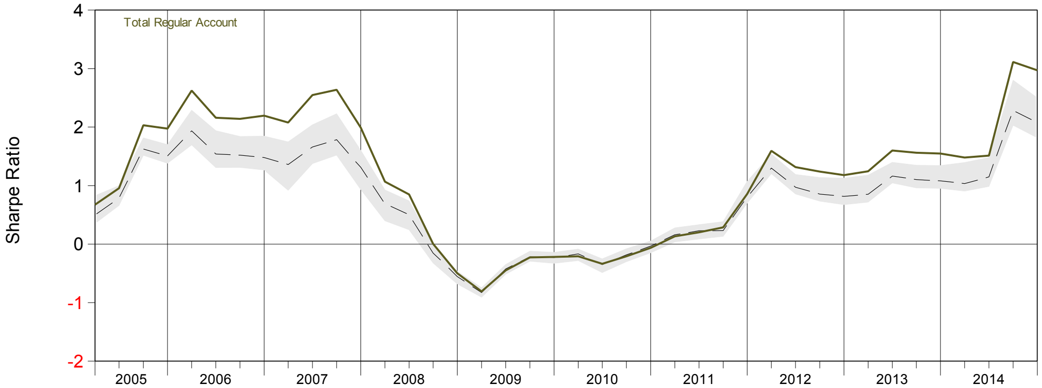
Historical Consistency Analysis vs. Very Large Public Funds (>10 billion)

Rolling Three Year Return(%) Relative to Policy Target
Ten Years Ended December 31, 2014



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Return(%)	7.62%	8.68%
% Positive Periods	80%	78%
Average Ranking	50	27

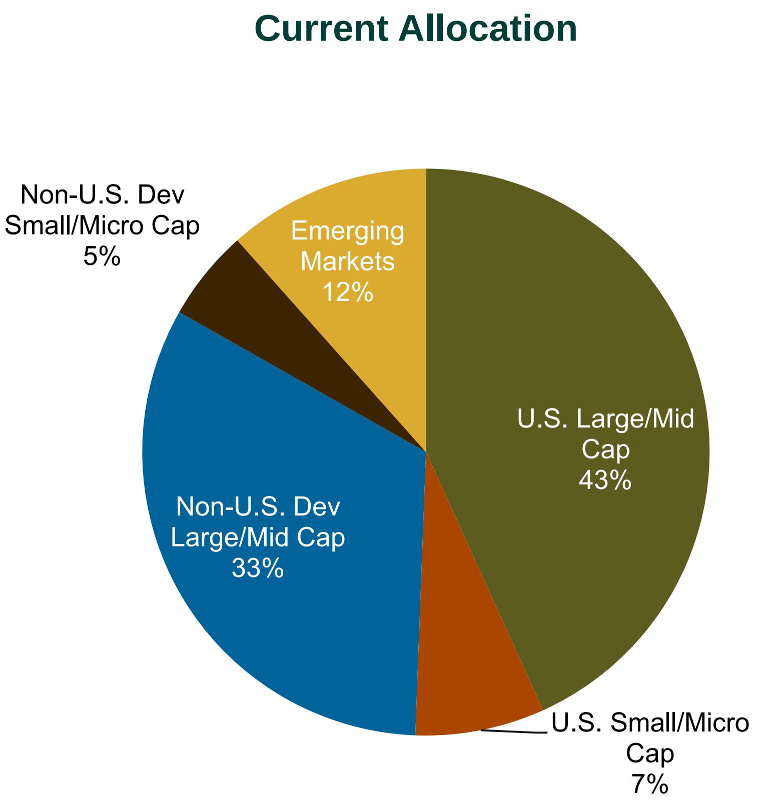
Rolling Three Year Sharpe Ratio Relative to Policy Target
Ten Years Ended December 31, 2014

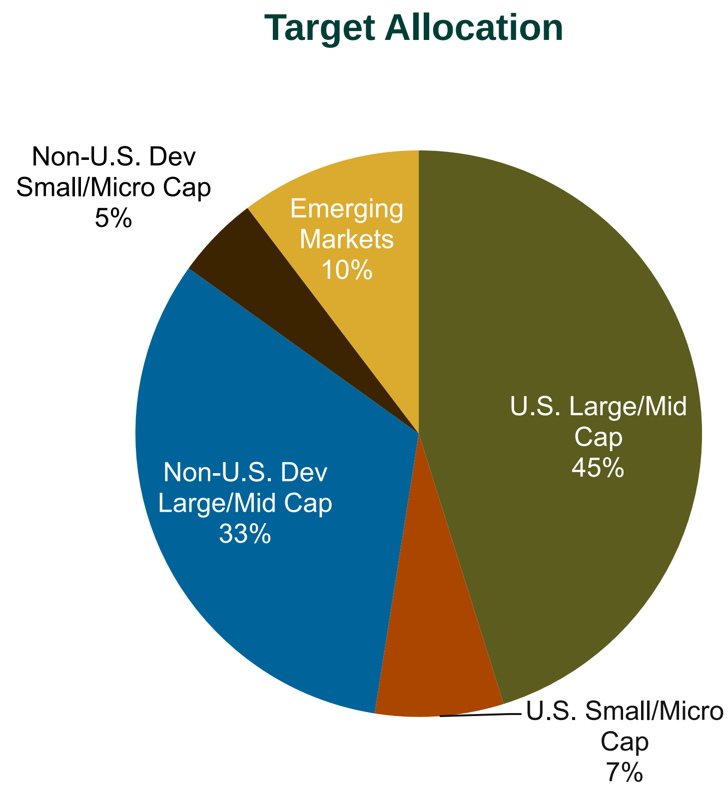


Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Sharpe Ratio	0.78%	1.12%
% Positive Periods	75%	78%
Average Ranking	50	19

OPERF Public Equity

Regional Style Allocation as of December 31, 2014





Percentages may not sum to 100% due to rounding

OPERF Public Equity

Style and Region Exposure as of December 31, 2014

Style Exposure Matrix
Holdings as of December 31, 2014

	Value	Core	Growth	Total
Large	20.8% (253) 24.0% (251)	19.4% (277) 22.2% (269)	21.8% (317) 23.5% (305)	**62.0% (847)** **69.8% (825)**
Mid	6.0% (426) 5.7% (481)	7.2% (494) 6.2% (534)	9.2% (585) 7.6% (657)	**22.4% (1505)** **19.5% (1672)**
Small	3.1% (846) 2.9% (1023)	4.3% (919) 3.2% (1256)	4.0% (715) 3.0% (1156)	**11.5% (2480)** **9.1% (3435)**
Micro	1.4% (2048) 0.6% (990)	1.6% (1476) 0.6% (879)	1.2% (724) 0.5% (706)	**4.2% (4248)** **1.7% (2575)**
Total	**31.4% (3573)** **33.2% (2745)**	**32.4% (3166)** **32.3% (2938)**	**36.2% (2341)** **34.6% (2824)**	**100.0% (9080)** **100.0% (8507)**

Style Exposure Matrix
Holdings as of December 31, 2014

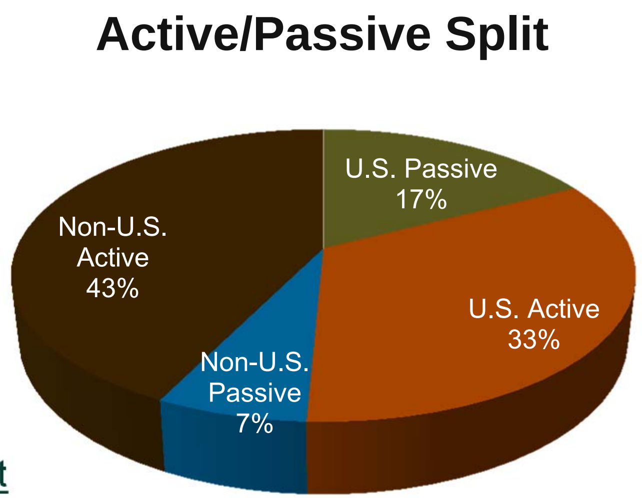
	Value	Core	Growth	Total
Europe/ Mid East	6.6% (461) 6.7% (421)	7.1% (457) 6.8% (490)	9.4% (408) 8.1% (499)	**23.1% (1326)** **21.5% (1410)**
N. America	18.3% (946) 19.2% (850)	18.0% (981) 18.2% (1048)	18.8% (766) 19.0% (934)	**55.1% (2693)** **56.3% (2832)**
Pacific	3.5% (828) 3.8% (579)	4.0% (462) 4.0% (578)	4.5% (356) 3.9% (557)	**12.0% (1646)** **11.7% (1714)**
Emerging	2.9% (1334) 3.5% (895)	3.2% (1259) 3.3% (822)	3.5% (806) 3.6% (834)	**9.7% (3399)** **10.5% (2551)**
Total	**31.4% (3569)** **33.2% (2745)**	**32.4% (3159)** **32.3% (2938)**	**36.2% (2336)** **34.6% (2824)**	**99.9% (9064)** **100.0% (8507)**

- **Public Equity**
- **MSCI ACWI IMI**

Percentages may not sum to 100% due to rounding

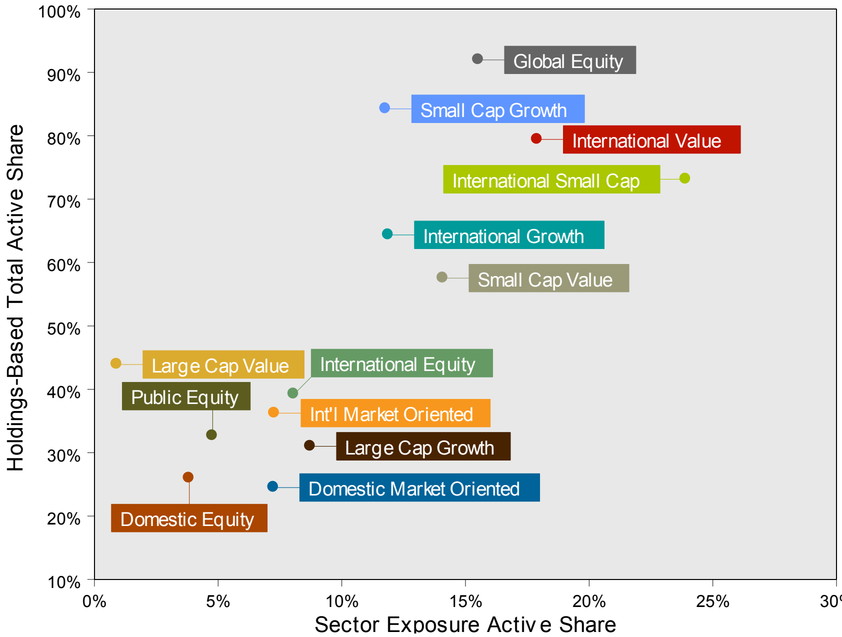
OPERF Public Equity

Public Market Allocation as of December 31, 2014



Target
Active: 75%
Passive: 25%

Active Share Analysis
Ended December 31, 2014



	Weigh %	Index	Total Act Share	Non-Idx Act Share	Sector Act Share	Number Securities	Security Diverse
*Public Equity	100.00%	AC WORLD IMI	32.66%	2.43%	4.78%	9419	331.79

OPERF Public Equity

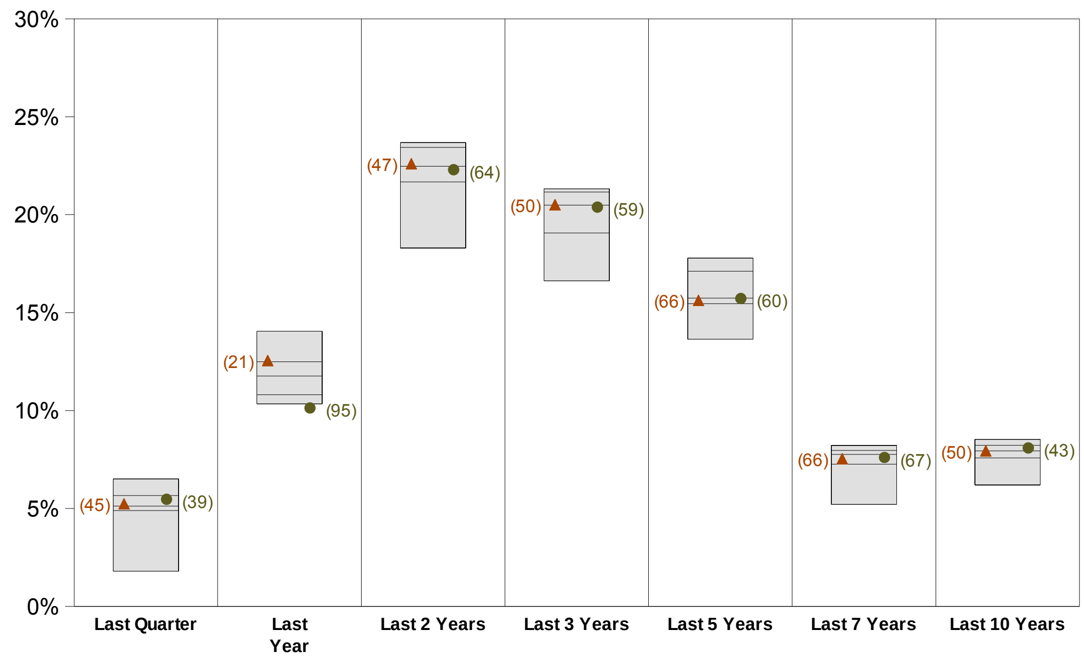
Asset Distribution as of December 31, 2014

	Market Values	% of Total Fund
Total Public Equity	$ 28,000,531,482	39.99%
Domestic Equity	$ 13,714,421,726	19.59%
Large Cap Growth	$ 2,128,085,627	3.04%
Large Cap Value	$ 2,075,637,748	2.96%
Small Cap Growth	$ 310,592,305	0.44%
Small Cap Value	$ 768,093,567	1.10%
Market Oriented	$ 8,383,665,305	11.97%
International Equity	$ 13,311,086,166	19.01%
International Market Oriented (Core)	$ 7,002,961,629	10.00%
International Value	$ 1,706,401,253	2.44%
International Growth	$ 1,369,872,932	1.96%
International Small Cap	$ 1,295,533,741	1.85%
Emerging Markets	$ 1,936,316,611	2.77%
Global Equity	$ 975,023,591	1.39%
Other	$ 48,347,174	0.07%

OPERF U.S. Equity

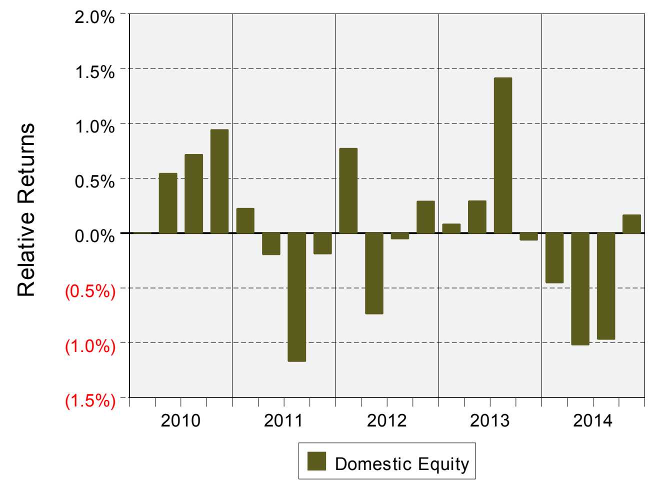
Performance Analysis as of December 31, 2014

Performance vs CAI Pub Fund:10+ Dom Eq (Gross)

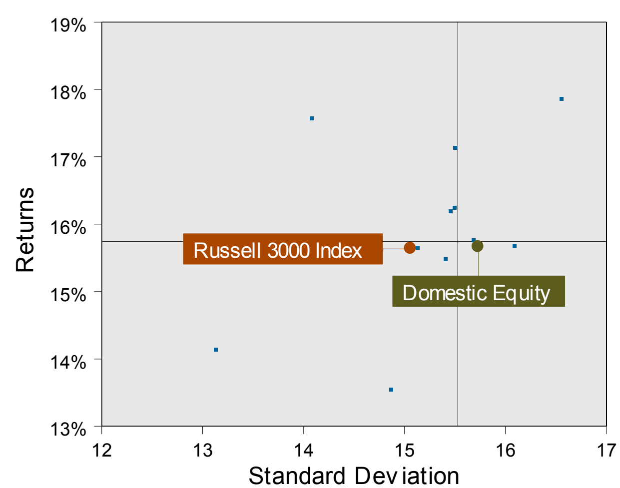


	Last Quarter	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years
10th Percentile	6.51	14.05	23.68	21.32	17.78	8.22	8.53
25th Percentile	5.66	12.49	23.44	21.16	17.12	7.97	8.22
Median	5.12	11.76	22.47	20.49	15.74	7.76	7.94
75th Percentile	4.89	10.81	21.67	19.06	15.46	7.27	7.58
90th Percentile	1.80	10.34	18.30	16.62	13.64	5.22	6.20
Domestic Equity ●	5.41	10.07	22.23	20.33	15.66	7.53	8.03
Russell 3000 Index ▲	5.24	12.56	22.61	20.51	15.63	7.54	7.94

Relative Return vs Russell 3000 Index



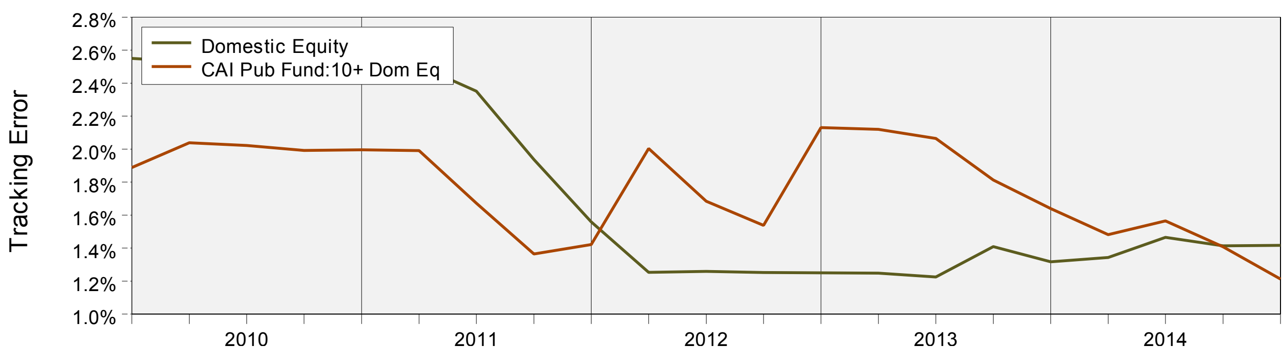
CAI Pub Fund:10+ Dom Eq (Gross)
Annualized Five Year Risk vs Return



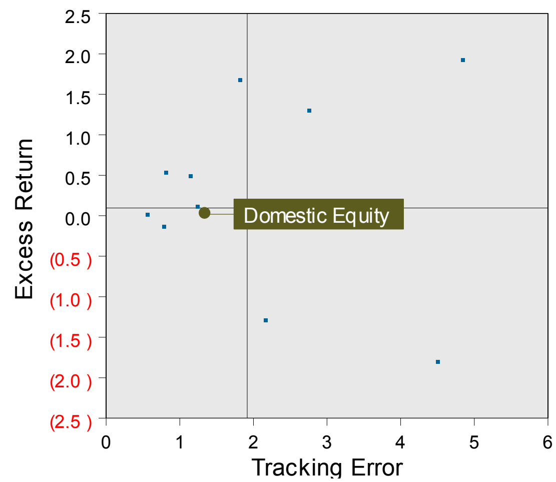
OPERF U.S. Equity

Risk Analysis as of December 31, 2014

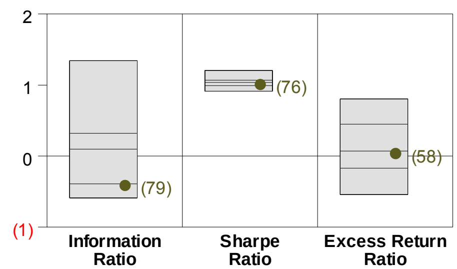
Rolling 12 Quarter Tracking Error vs Russell 3000 Index



Risk Analysis vs CAI Pub Fund:10+ Dom Eq (Gross)
Five Years Ended December 31, 2014

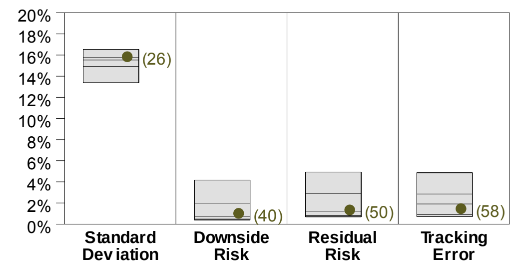


Risk Adjusted Return Measures vs Russell 3000 Index
Rankings Against CAI Pub Fund:10+ Dom Eq (Gross)
Five Years Ended December 31, 2014



	Information Ratio	Sharpe Ratio	Excess Return Ratio
10th Percentile	1.34	1.21	0.81
25th Percentile	0.32	1.07	0.45
Median	0.10	1.04	0.07
75th Percentile	(0.39)	0.99	(0.17)
90th Percentile	(0.59)	0.91	(0.54)
Domestic Equity ●	(0.43)	0.99	0.02

Risk Statistics Rankings vs Russell 3000 Index
Rankings Against CAI Pub Fund:10+ Dom Eq (Gross)
Five Years Ended December 31, 2014

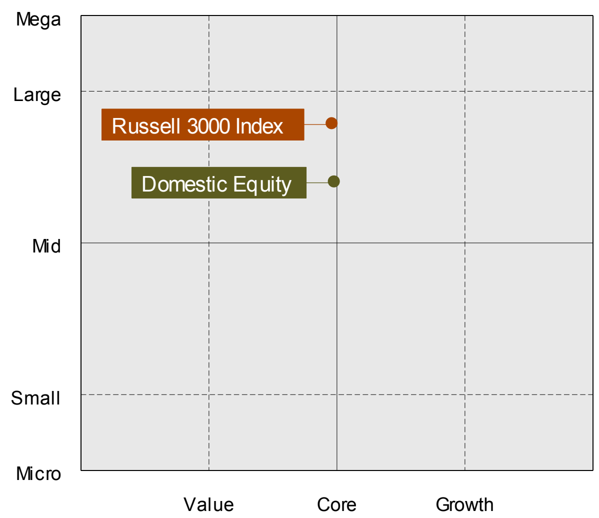


	Standard Deviation	Downside Risk	Residual Risk	Tracking Error
10th Percentile	16.53	4.17	4.93	4.87
25th Percentile	15.75	1.99	2.92	2.85
Median	15.53	0.74	1.23	1.91
75th Percentile	14.94	0.48	0.81	0.91
90th Percentile	13.39	0.39	0.69	0.70
Domestic Equity ●	15.74	0.91	1.23	1.35

OPERF U.S. Equity

Characteristics as of December 31, 2014

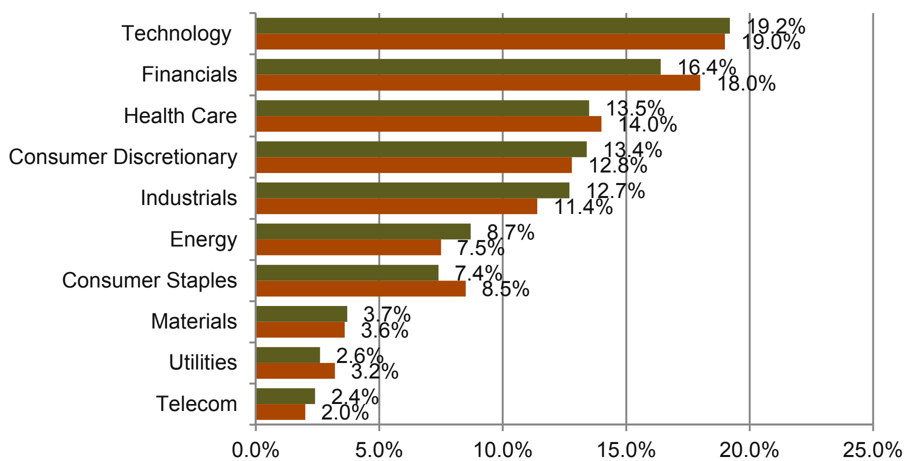
Style Map vs CAI Pub Fund:10+ Dom Eq
Holdings as of December 31, 2014



	Weighted Median Market Cap	Price/Fore-casted Earnings	Price/Book	Forecasted Earnings Growth	Dividend Yield	MSCI Combined Z-Score
Domestic Equity ●	29.80	16.72	2.52	12.20	1.69	0.00
Russell 3000 Index ▲	49.30	17.06	2.65	11.87	1.87	(0.01)

Style Exposure Matrix
Holdings as of December 31, 2014

	Value	Core	Growth	**Total**
Large	21.4% (91) 26.0% (91)	19.7% (105) 23.3% (102)	20.7% (113) 24.1% (108)	**61.9% (309)** **73.3% (301)**
Mid	6.8% (200) 5.8% (194)	7.3% (210) 5.8% (201)	8.0% (211) 6.3% (207)	**22.1% (621)** **17.9% (602)**
Small	3.1% (280) 2.3% (325)	4.9% (357) 3.2% (501)	3.5% (224) 2.2% (378)	**11.5% (861)** **7.7% (1204)**
Micro	1.3% (314) 0.4% (302)	1.9% (244) 0.4% (383)	1.3% (132) 0.3% (218)	**4.5% (690)** **1.1% (903)**
Total	**32.7% (885)** **34.4% (912)**	**33.9% (916)** **32.7% (1187)**	**33.4% (680)** **32.9% (911)**	**100.0% (2481)** **100.0% (3010)**



● **OPERF US Equity**
● **Russell 3000**

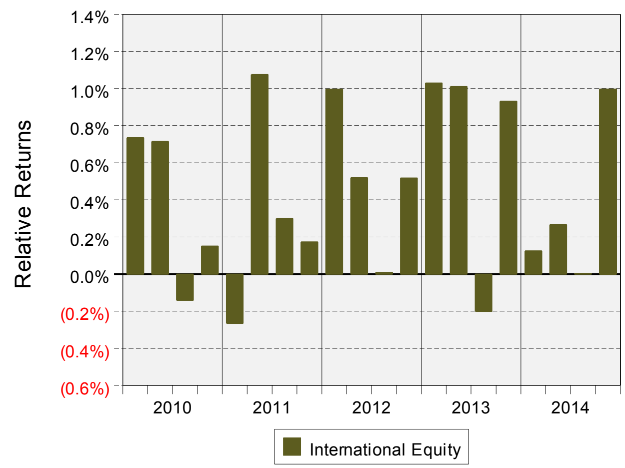
OPERF Non-US Equity

Performance Analysis as of December 31, 2014

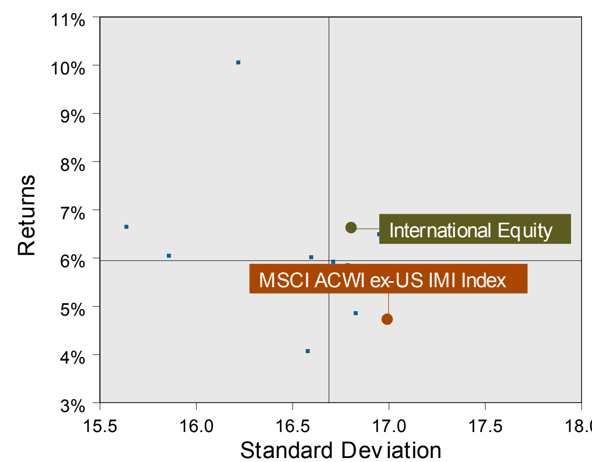
Performance vs CAI Pub Fund:10+ Intl Eq (Gross)

	Last Quarter	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years
10th Percentile	(2.40)	(1.05)	8.07	15.99	9.69	3.06	7.55
25th Percentile	(2.63)	(2.56)	7.54	11.37	6.51	1.03	6.83
Median	(3.15)	(3.06)	6.93	10.60	5.95	0.35	5.84
75th Percentile	(3.65)	(3.46)	6.04	9.88	5.56	(0.02)	5.50
90th Percentile	(3.75)	(3.69)	4.10	8.28	4.12	(0.86)	5.02
International Equity ●	(2.88)	(2.52)	7.71	11.46	6.61	1.52	6.97
MSCI ACWI ex-US IMI Index ▲	(3.88)	(3.89)	5.51	9.22	4.71	(0.34)	5.37

Relative Return vs MSCI ACWI ex-US IMI Index



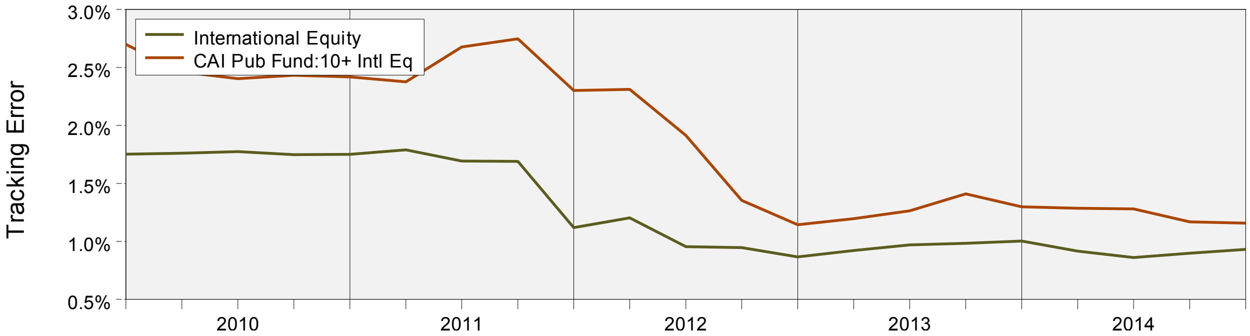
CAI Pub Fund:10+ Intl Eq (Gross)
Annualized Five Year Risk vs Return



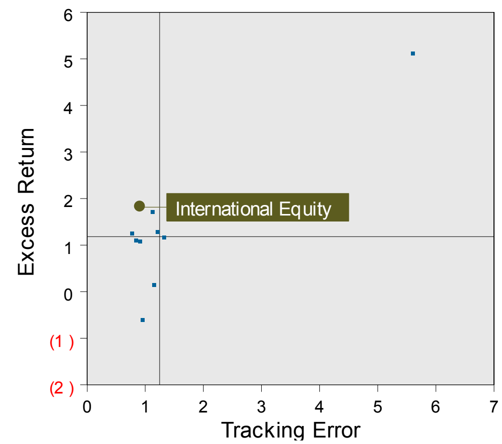
OPERF Non-US Equity

Risk Analysis as of December 31, 2014

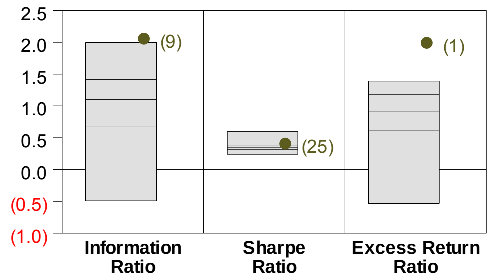
Rolling 12 Quarter Tracking Error vs MSCI ACWI ex-US IMI Index



Risk Analysis vs CAI Pub Fund:10+ Intl Eq (Gross)
Five Years Ended December 31, 2014

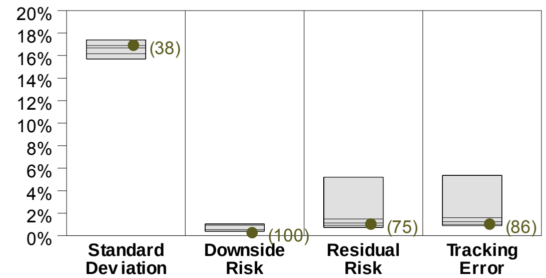


Risk Adjusted Return Measures vs MSCI ACWI ex-US IMI Index
Rankings Against CAI Pub Fund:10+ Intl Eq (Gross)
Five Years Ended December 31, 2014



	Information Ratio	Sharpe Ratio	Excess Return Ratio
10th Percentile	1.99	0.59	1.39
25th Percentile	1.42	0.39	1.18
Median	1.10	0.35	0.92
75th Percentile	0.67	0.32	0.62
90th Percentile	(0.49)	0.24	(0.53)
International Equity ●	2.04	0.39	1.97

Risk Statistics Rankings vs MSCI ACWI ex-US IMI Index
Rankings Against CAI Pub Fund:10+ Intl Eq (Gross)
Five Years Ended December 31, 2014



	Standard Deviation	Downside Risk	Residual Risk	Tracking Error
10th Percentile	17.39	1.06	5.21	5.36
25th Percentile	16.89	0.93	1.49	1.61
Median	16.69	0.53	1.14	1.25
75th Percentile	16.16	0.41	0.92	1.01
90th Percentile	15.69	0.38	0.73	0.89
International Equity ●	16.81	0.16	0.92	0.92

OPERF Non-US Equity

Characteristics as of December 31, 2014

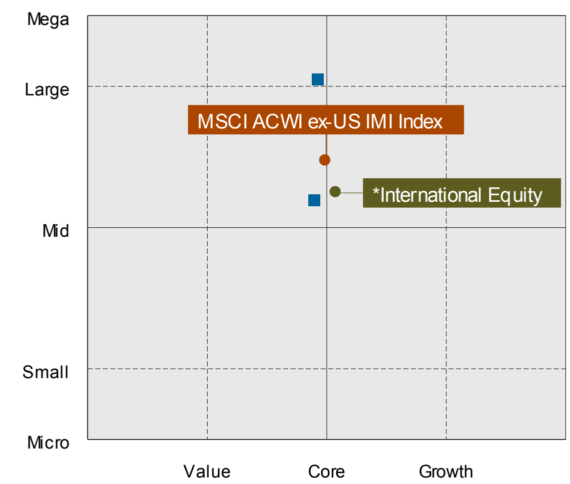
Style Exposure Matrix
Holdings as of December 31, 2014

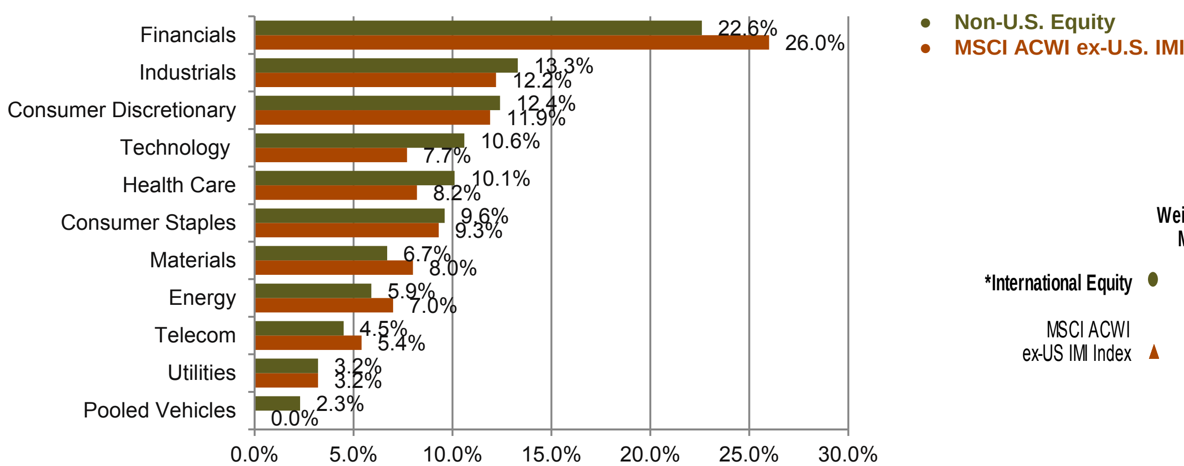
	Value	Core	Growth	Total
Large	18.0% (145) 21.0% (144)	17.7% (150) 20.9% (141)	20.7% (180) 20.3% (166)	**56.5% (475)** **62.2% (451)**
Mid	6.1% (242) 6.5% (300)	8.4% (289) 7.6% (329)	11.3% (368) 10.0% (436)	**25.8% (899)** **24.0% (1065)**
Small	3.9% (575) 3.7% (706)	4.8% (601) 3.7% (772)	5.0% (480) 3.7% (725)	**13.6% (1656)** **11.1% (2203)**
Micro	1.6% (1768) 1.0% (857)	1.2% (1243) 1.0% (699)	1.2% (587) 0.7% (544)	**4.1% (3598)** **2.7% (2100)**
Total	**29.6% (2730)** **32.2% (2007)**	**32.1% (2283)** **33.1% (1941)**	**38.2% (1615)** **34.6% (1871)**	**100.0% (6628)** **100.0% (5819)**

Style Exposure Matrix
Holdings as of December 31, 2014

	Value	Core	Growth	Total
Europe/ Mid East	14.0% (464) 14.0% (420)	14.7% (459) 14.1% (465)	19.5% (397) 16.8% (471)	**48.1% (1320)** **45.0% (1356)**
N. America	1.9% (97) 2.7% (122)	1.7% (85) 2.6% (107)	2.0% (72) 2.4% (99)	**5.6% (254)** **7.7% (328)**
Pacific	7.4% (831) 8.1% (579)	8.9% (467) 9.5% (556)	9.3% (347) 7.8% (525)	**25.6% (1645)** **25.4% (1660)**
Emerging	6.3% (1334) 7.5% (886)	6.7% (1265) 6.9% (813)	7.3% (794) 7.5% (776)	**20.4% (3393)** **21.9% (2475)**
Total	**29.6% (2726)** **32.2% (2007)**	**32.0% (2276)** **33.1% (1941)**	**38.2% (1610)** **34.6% (1871)**	**99.8% (6612)** **100.0% (5819)**

Style Map vs CAI Pub Fund:10+ Intl Eq
Holdings as of December 31, 2014



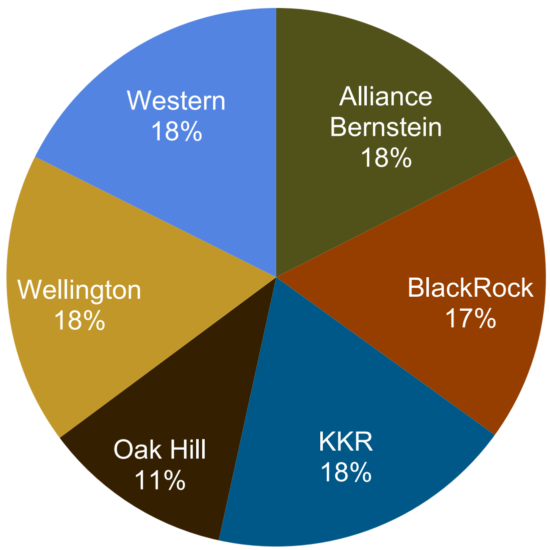


	Weighted Median Market Cap	Price/Fore-casted Earnings	Price/Book	Forecasted Earnings Growth	Dividend Yield	MSCI Combined Z-Score
*International Equity ●	16.81	13.47	1.59	11.28	2.56	0.07
MSCI ACWI ex-US IMI Index ▲	22.27	13.56	1.61	10.47	2.79	0.00

OPERF Total Fixed Income

Allocations as of December 31, 2014

Managers	Assets ($M)	% Allocation
AllianceBernstein	2,588,834	17.5%
BlackRock	2,581,782	17.4%
KKR Asset Mgmt	2,728,610	18.4%
Oak Hill	1,686,876	11.4%
Wellington	2,597,999	17.5%
Western Asset Mgmt	2,604,200	17.6%
Transitional Account	28,229	0.2%
Total	**$ 14,816,529**	**100.0%**

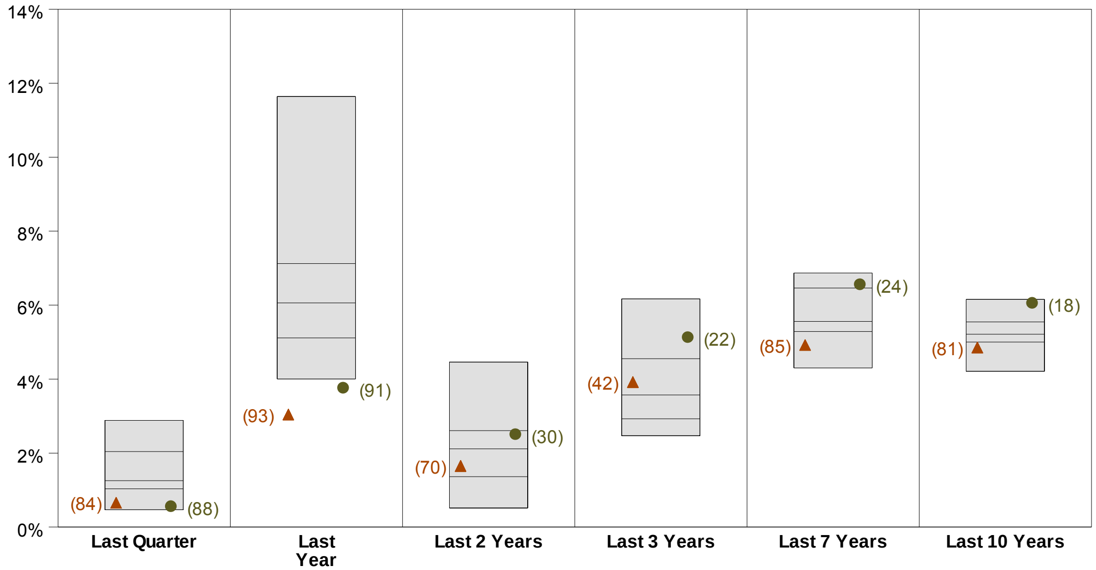


Percentages may not sum to 100% due to rounding

OPERF Total Fixed Income

Performance Analysis as of December 31, 2014

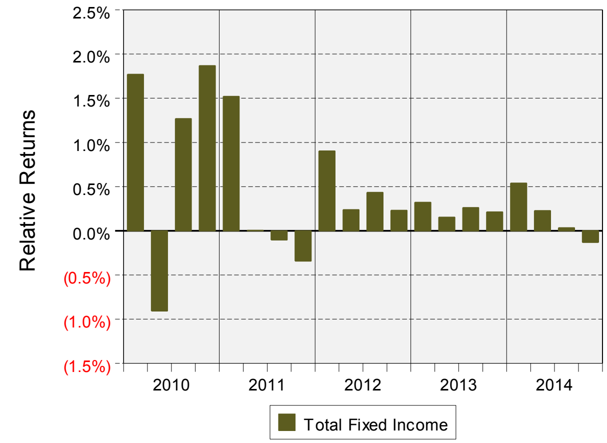
Performance vs Lg Public >10 B DF (Gross)



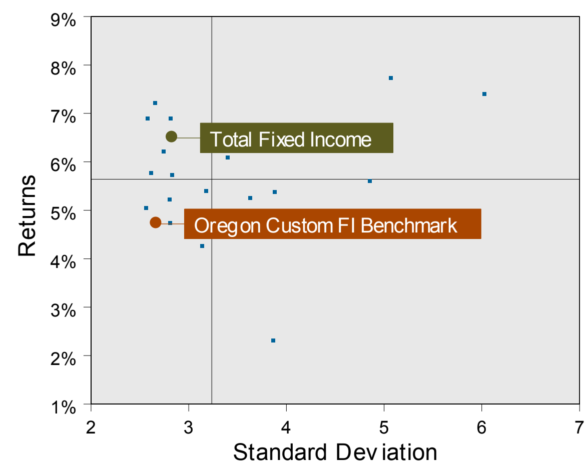
	Last Quarter	Last Year	Last 2 Years	Last 3 Years	Last 7 Years	Last 10 Years
10th Percentile	2.88	11.64	4.46	6.17	6.87	6.16
25th Percentile	2.04	7.12	2.61	4.55	6.46	5.55
Median	1.25	6.06	2.11	3.57	5.56	5.21
75th Percentile	1.03	5.11	1.36	2.92	5.29	5.00
90th Percentile	0.47	4.00	0.52	2.47	4.30	4.21
Total Fixed Income ●	0.53	3.73	2.48	5.10	6.53	6.03
Oregon Custom FI Benchmark ▲	0.66	3.04	1.65	3.92	4.92	4.86

Current Benchmark = 40% Barclays Capital U.S. Aggregate Bond, 40% Barclays Capital U.S. 1-3 Govt/Credit Bond Index, 15% S&P/LSTA Leveraged Loan Index, and 5% BofA ML High Yield Master II Index

Relative Returns vs Oregon Custom FI Benchmark



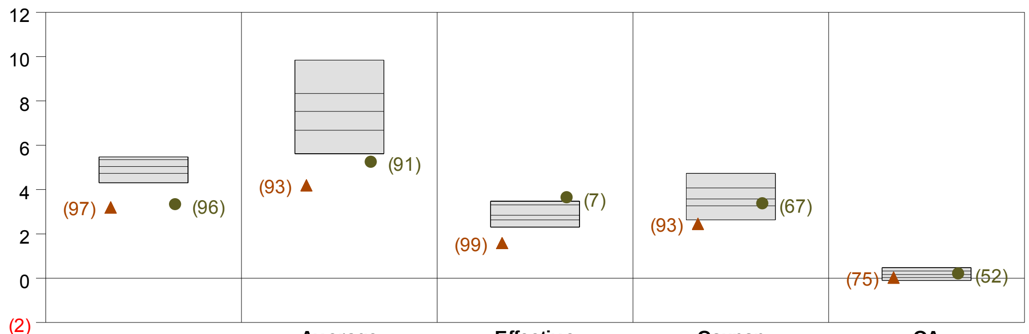
Lg Public >10 B DF (Gross) Annualized Five Year Risk vs Return



OPERF Total Fixed Income

Characteristics as of December 31, 2014

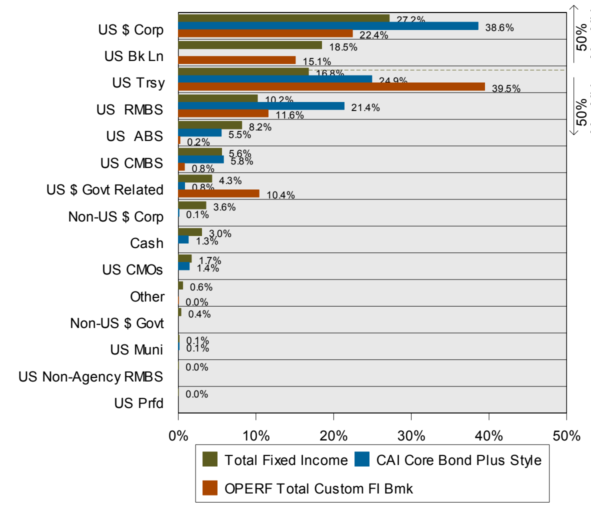
Fixed Income Portfolio Characteristics
Rankings Against CAI Core Bond Plus Style
as of December 31, 2014



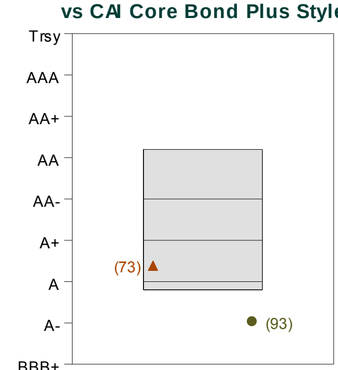
	Duration	Average Life	Effective Yield	Coupon Rate	OA Convexity
10th Percentile	5.47	9.85	3.48	4.73	0.47
25th Percentile	5.34	8.34	3.31	4.08	0.33
Median	5.03	7.53	2.84	3.58	0.17
75th Percentile	4.73	6.68	2.63	3.27	0.02
90th Percentile	4.31	5.62	2.31	2.63	(0.10)
Total Fixed Income ●	3.27	5.19	3.59	3.32	0.15
OPERF Total Custom FI Bmk ▲	3.19	4.19	1.58	2.46	0.03

Current Benchmark = 40% Barclays Capital U.S. Aggregate Bond, 40% Barclays Capital U.S. 1-3 Govt/Credit Bond Index, 15% S&P/LSTA Leveraged Loan Index, and 5% BofA ML High Yield Master II Index

Sector Allocation
December 31, 2014



Quality Ratings
vs CAI Core Bond Plus Style

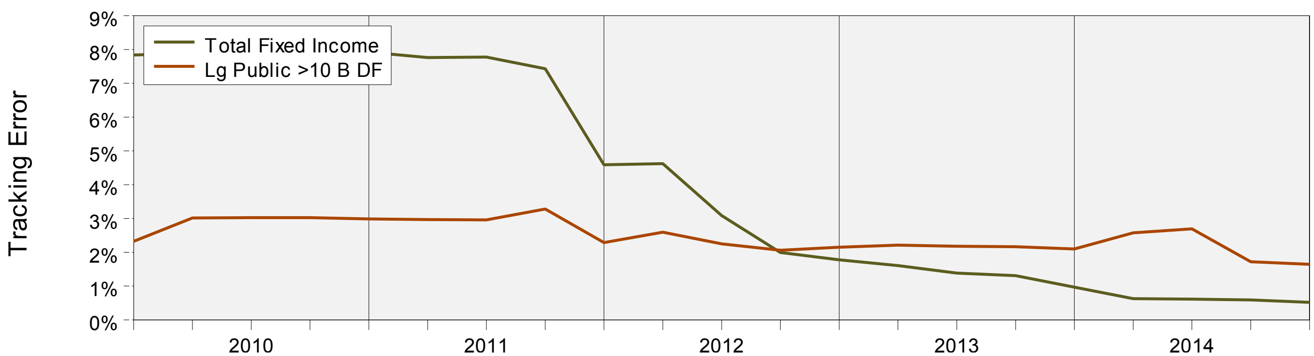


	Weighted Average Quality Rating
10th Percentile	AA
25th Percentile	AA-
Median	A+
75th Percentile	A
90th Percentile	A
Total Fixed Income ●	A-
OPERF Total Custom FI Bmk ▲	A

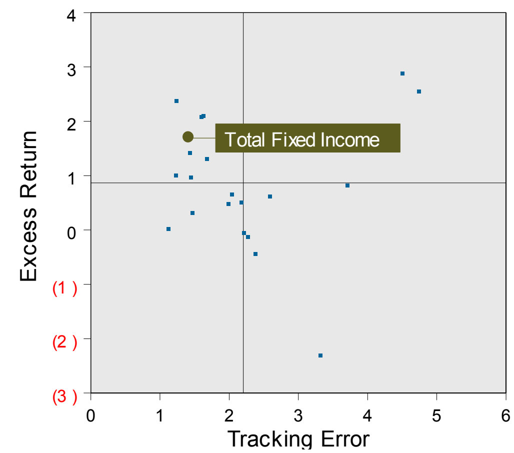
OPERF Total Fixed Income

Risk Analysis as of December 31, 2014

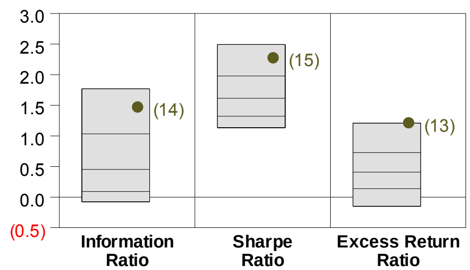
Rolling 12 Quarter Tracking Error vs Oregon Custom FI Benchmark



Risk Analysis vs Lg Public >10 B DF (Gross)
Five Years Ended December 31, 2014

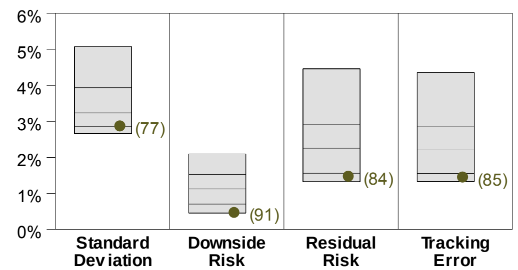


Risk Adjusted Return Measures vs Oregon Custom FI Benchmark
Rankings Against Lg Public >10 B DF (Gross)
Five Years Ended December 31, 2014



	Information Ratio	Sharpe Ratio	Excess Return Ratio
10th Percentile	1.77	2.50	1.21
25th Percentile	1.03	1.98	0.73
Median	0.45	1.62	0.41
75th Percentile	0.09	1.32	0.14
90th Percentile	(0.08)	1.13	(0.15)
Total Fixed Income ●	1.45	2.26	1.19

Risk Statistics Rankings vs Oregon Custom FI Benchmark
Rankings Against Lg Public >10 B DF (Gross)
Five Years Ended December 31, 2014



	Standard Deviation	Downside Risk	Residual Risk	Tracking Error
10th Percentile	5.08	2.09	4.46	4.36
25th Percentile	3.94	1.53	2.92	2.87
Median	3.24	1.13	2.25	2.21
75th Percentile	2.86	0.70	1.56	1.56
90th Percentile	2.66	0.45	1.33	1.33
Total Fixed Income ●	2.84	0.44	1.44	1.42

Current Benchmark = 40% Barclays Capital U.S. Aggregate Bond, 40% Barclays Capital U.S. 1-3 Govt/Credit Bond Index, 15% S&P/LSTA Leveraged Loan Index, and 5% BofA ML High Yield Master II Index

PROJECT NAME: BLACKROCK SOLUTIONS IMPLEMENTATION PROJECT

PROJECT DESCRIPTION

The BlackRock Solutions (BRS) implementation project (the "Project") is a strategic Oregon State Treasury (OST) initiative authorized by the Oregon Investment Council (OIC) to modernize the infrastructure supporting Oregon's $90 billion investment program. Featuring the BRS industry-leading Aladdin trading and operations platform, and combined with middle office and risk management services also provided by BRS, the Project will enable OST and the OIC to realize their joint, long-term vision and corresponding operating objectives. The project covers the following sets of activities:

- Establishment of a Risk Management framework and related reporting regimen;
- Implementation of the following front- and middle-office functions:
    - Identifying, analyzing and implementing needed changes to migrate to the target operating model;
    - Implementing investment compliance rules and related workflows;
    - Implementing processes for middle-office service monitoring and oversight;
    - Modifying OST infrastructure to support Aladdin; and
    - Configuring and validating Aladdin-hosted service functionality to meet OST needs.
- Development or modification of related operational policies, procedures and reference documents;
- Staff recruitment and training; and
- De-commissioning previous trading and analytics vendors such as Bloomberg AIM and BarraOne.

STRATEGIC ALIGNMENT

OST and the OIC have a strategic goal to modernize the investment program and address currently acute operational risks. To achieve this goal, additional staffing, increased investment process oversight and legislative changes designed to improve program governance and risk management capabilities are all required. The Project will provide the operating platform and support services necessary for efficient trade processing and effective risk management.

BUSINESS ALIGNMENT

Primary Project objectives include the following:

- Address current deficiencies which include operating and risk management shortcomings;
- Build an investment management model based on leading industry practices and with sufficient flexibility to quickly and adequately respond to OIC or legislatively approved changes in strategic direction;
- Mitigate investment and operational risks that may lead to reputational damage and/or monetary losses;
- Enable transformational change to elevate Oregon's investment program to a level comparable to leading peer organizations and other successful, institutional-quality asset managers;
- Improve information transparency to support staff analysis and improve decision making; and
- Enhance the OIC's ability to fulfill its fiduciary responsibilities by providing timely and accurate data.

BACKGROUND

Following a series of internal audits and outside reviews, OST and the OIC determined that staffing, process and technology limitations have introduced unsustainable levels of investment and operating risk. These deficiencies endanger the preservation and productivity of the State's $90 billion investment program which includes the Oregon Public Employee Retirement System Fund, the Common School Fund, the State Accident Insurance Fund and several other state agency and local government funds invested either as separate accounts or through commingled participation in the Oregon Short Term Fund (OSTF) or Oregon Intermediate Term Pool (OITP).

OST proposed the Investment Modernization Act (IMA) as a legislative solution to the above-described operating deficiencies and constraints. The bill would create the Oregon Investment Department (OID) and grant the OIC operating authority commensurate with its fiduciary responsibilities. The OIC would properly resource the OID and establish and adopt for it investment, operating and risk management standards consistent with industry benchmarks and best practices. Unfortunately, the IMA failed in both the 2013 and 2014 legislative sessions. OST then retained consulting firm Cutter Associates (Cutter) to develop a future state operating model and supporting business case. To ensure that Cutter's work was sufficiently rigorous and independent, OST also retained consultants Deloitte and Wilshire Associates to simultaneously review OST investment operations and validate that all current assessments accurately capture key future state requirements on a systems-agnostic basis. This approach ensured that the recommended strategy and systems configuration would truly address all identified risks and operational gaps rather than become a "solution in search of a problem". In August 2014, the OIC formally approved OST's recommendation to pursue an integrated investment, operating and risk management solution using BlackRock and its Aladdin platform.

PROJECT MANAGEMENT

OST has identified all internal staff required to complete the Project. Where internal staff levels are deemed insufficient to discharge all responsibilities associated with both normal business activities and Project-related work, OST has engaged external vendors to assist with Project implementation efforts. In addition to its technical staff, BlackRock will contribute a project management team to guide and support these implementation efforts. Cutter will supply project management expertise too, primarily in the form of specific subject matter expertise at various phases of the implementation process. Finally, Deloitte will focus on the Project's compliance elements as well as provide overall Quality Assurance testing services.

KEY TARGETS

Planning start date:	12/01/2014	Desired "go live" date:	09/07/2015
Implementation start date:	03/02/2015	Desired completion date:	11/02/2015

Implementation Cost category/type	Vendor/Service Provider	Cost
Project Management, Investment Operations, Portfolio Management, Data Management, and Interface Development	Cutter Associates	$1,837,000
Vendor implementation support including Risk Management	BlackRock	$1,139,000
Quality Assurance, Compliance	Deloitte	$822,000
Total		**$3,798,000**

Ongoing Cost category/type	Vendor/Service Provider	Cost
Hardware & Infrastructure (incremental)	Various	Nominal
Front-office Solutions	BlackRock	$2,868,000
Middle-office Services	BlackRock	included in the above
Risk Management Services	BlackRock	$1,277,000
Market Data Licensing (incremental)	Various	$500,000 - $650,000
Total		**$4,645,000 – $4,795,000**

PROJECT GOVERNANCE STAFF

Role	Name(s)
Project Sponsor	Darren Bond & John Skjervem
Steering Committee	Darren Bond, John Skjervem, Perrin Lim & John Hershey

Asset Allocations at January 31, 2015

OPERF	Policy	Target[1]	Regular Account: $ Thousands	Pre-Overlay	Overlay	Net Position	Actual	Variable Fund: $ Thousands	Total Fund: $ Thousands
Public Equity	32.5-42.5%	37.5%	27,591,863	40.2%	(207,024)	27,384,839	39.9%	736,574	28,121,413
Private Equity	16-24%	20.0%	14,751,420	21.5%		14,751,420	21.5%		14,751,420
Total Equity	**52.5-62.5%**	**57.5%**	**42,343,283**	**61.7%**	**(207,024)**	**42,136,259**	**61.4%**		**42,872,833**
Opportunity Portfolio			1,055,375	1.5%		1,055,375	1.5%		1,055,375
Fixed Income	**15-25%**	**20.0%**	**14,957,729**	**21.8%**	**1,273,658**	**16,231,387**	23.7%		**16,231,387**
Real Estate	**9.5-15.5%**	**12.5%**	**7,766,371**	**11.3%**	**(4,500)**	**7,761,871**	11.3%		**7,761,871**
Alternative Investments	**0-10%**	**10.0%**	**1,400,662**	**2.0%**		**1,400,662**	2.0%		**1,400,662**
Cash*	**0-3%**	**0.0%**	**1,069,679**	**1.6%**	**(1,062,134)**	**7,545**	0.0%	12,381	**19,926**
TOTAL OPERF		**100%**	**$ 68,593,099**	**100.0%**	**$ -**	**$ 68,593,099**	**100.0%**	**$ 748,955**	**$ 69,342,054**

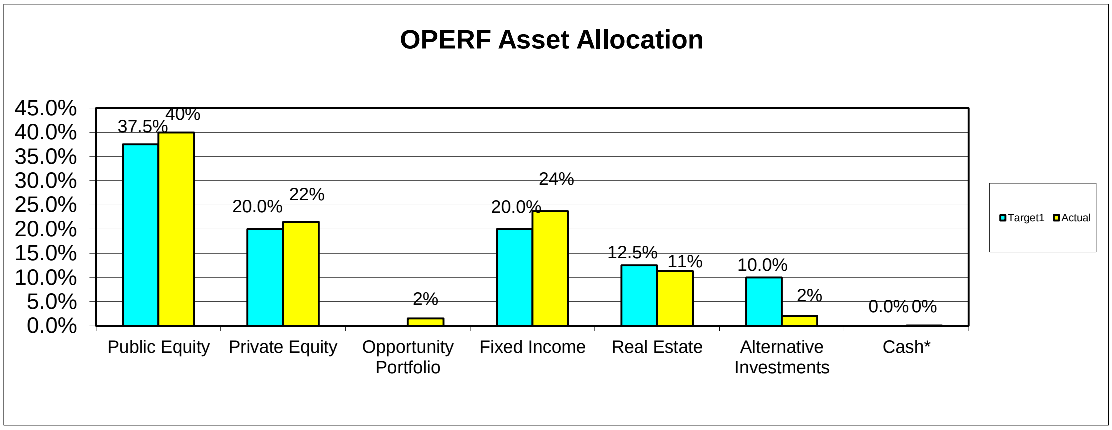
[1]Targets established in June 2013. Interim policy benchmark consists of: 41.5% MSCI ACWI Net, 23.5% Custom FI Benchmark, 20% Russell 3000+300bps (1 quarter lagged), 12.5% NCREIF (1 quarter lagged), & 2.5% CPI+400bps.

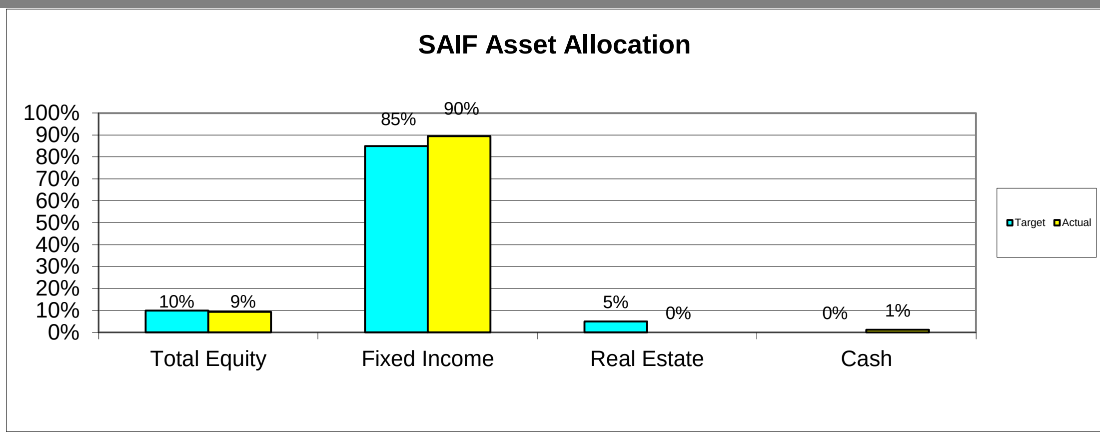
*Includes cash held in the policy implementation overlay program.

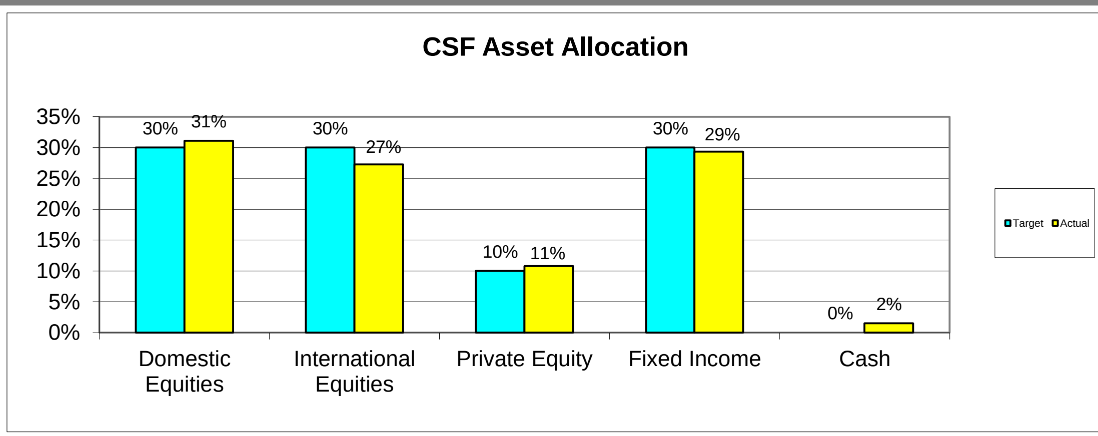
SAIF	Policy	Target	$ Thousands	Actual
Total Equity	**7-13%**	**10.0%**	**437,435**	**9.3%**
Fixed Income	**80-90%**	**85.0%**	**4,193,369**	**89.5%**
Real Estate	**0-7%**	**5.0%**	**0**	**0.0%**
Cash	**0-3%**	**0%**	**54,290**	**1.2%**
TOTAL SAIF			**$4,685,094**	**100.0%**

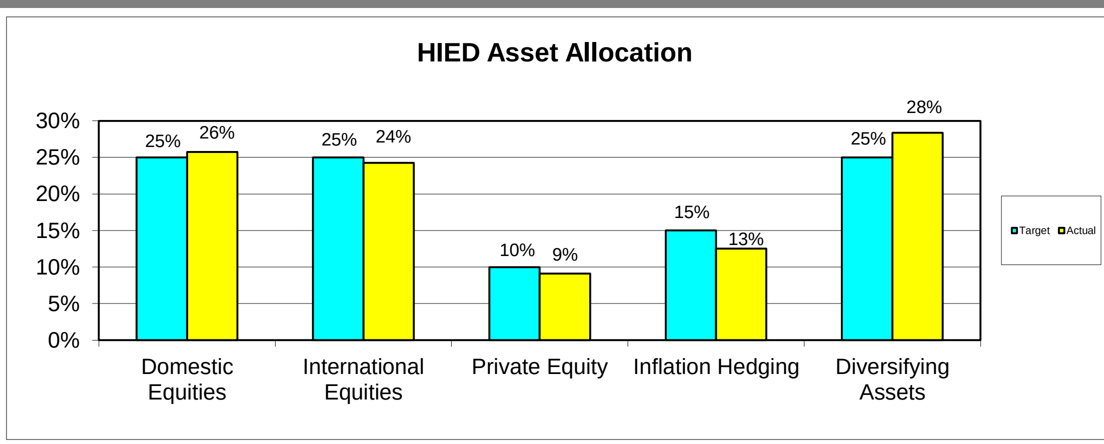
CSF	Policy	Target	$ Thousands	Actual
Domestic Equities	25-35%	30%	$443,393	31.1%
International Equities	25-35%	30%	388,758	27.3%
Private Equity	0-12%	10%	153,655	10.8%
Total Equity	**65-75%**	**70%**	**985,806**	**69.2%**
Fixed Income	**25-35%**	**30%**	**418,106**	**29.3%**
Cash	**0-3%**	**0%**	**21,596**	**1.5%**
TOTAL CSF			**$1,425,508**	**100.0%**

HIED	Policy	Target	$ Thousands	Actual
Domestic Equities	20-30%	25%	$11,577	25.8%
International Equities	20-30%	25%	10,898	24.3%
Private Equity	0-15%	10%	4,093	9.1%
Growth Assets	**50-75%**	**60%**	**26,568**	**59.1%**
Real Estate	0-10%	7.5%	961	2.1%
TIPS	0-10%	7.5%	4,665	10.4%
Inflation Hedging	**7-20%**	**15%**	**5,626**	**12.5%**
Fixed Income	20-30%	25%	10,756	23.9%
Cash	0-3%	0%	1,988	4.4%
Diversifying Assets	**20-30`%**	**25%**	**12,744**	**28.4%**
TOTAL HIED			**$44,938**	**100.0%**

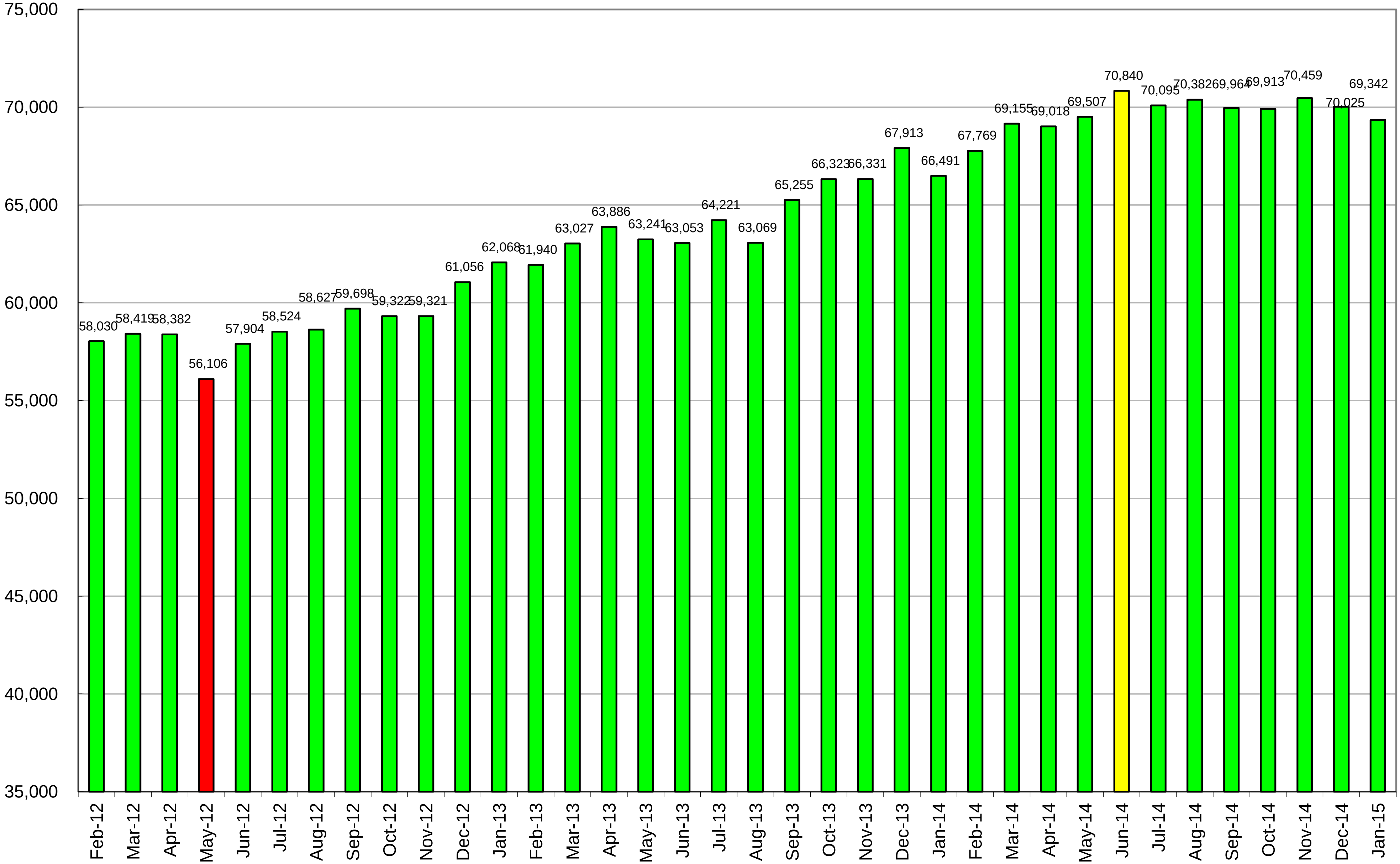

OPERF Asset Allocation
45.0%
40.0%
35.0%
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
37.5%
40%
20.0%
22%
2%
20.0%
24%
12.5%
11%
10.0%
2%
0.0%
0%
Public Equity
Private Equity
Opportunity Portfolio
Fixed Income
Real Estate
Alternative Investments
Cash*
Target1
Actual


SAIF Asset Allocation
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
10%
9%
85%
90%
5%
0%
0%
1%
Total Equity
Fixed Income
Real Estate
Cash
Target
Actual

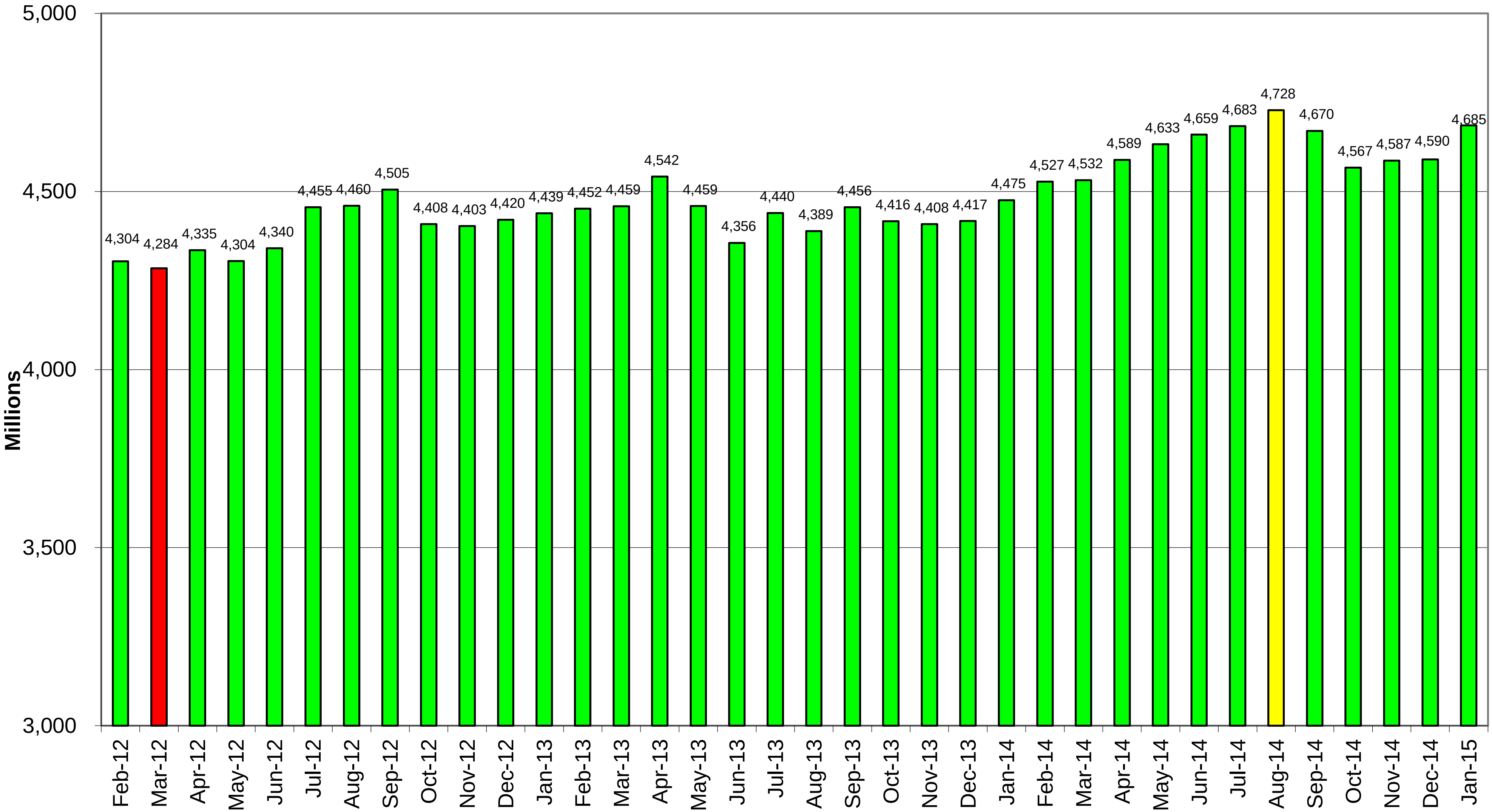

CSF Asset Allocation
35%
30%
25%
20%
15%
10%
5%
0%
30%
31%
30%
27%
10%
11%
30%
29%
0%
2%
Domestic Equities
International Equities
Private Equity
Fixed Income
Cash
Target
Actual


HIED Asset Allocation
30%
25%
20%
15%
10%
5%
0%
25%
26%
25%
24%
10%
9%
15%
13%
25%
28%
Domestic Equities
International Equities
Private Equity
Inflation Hedging
Diversifying Assets
Target
Actual

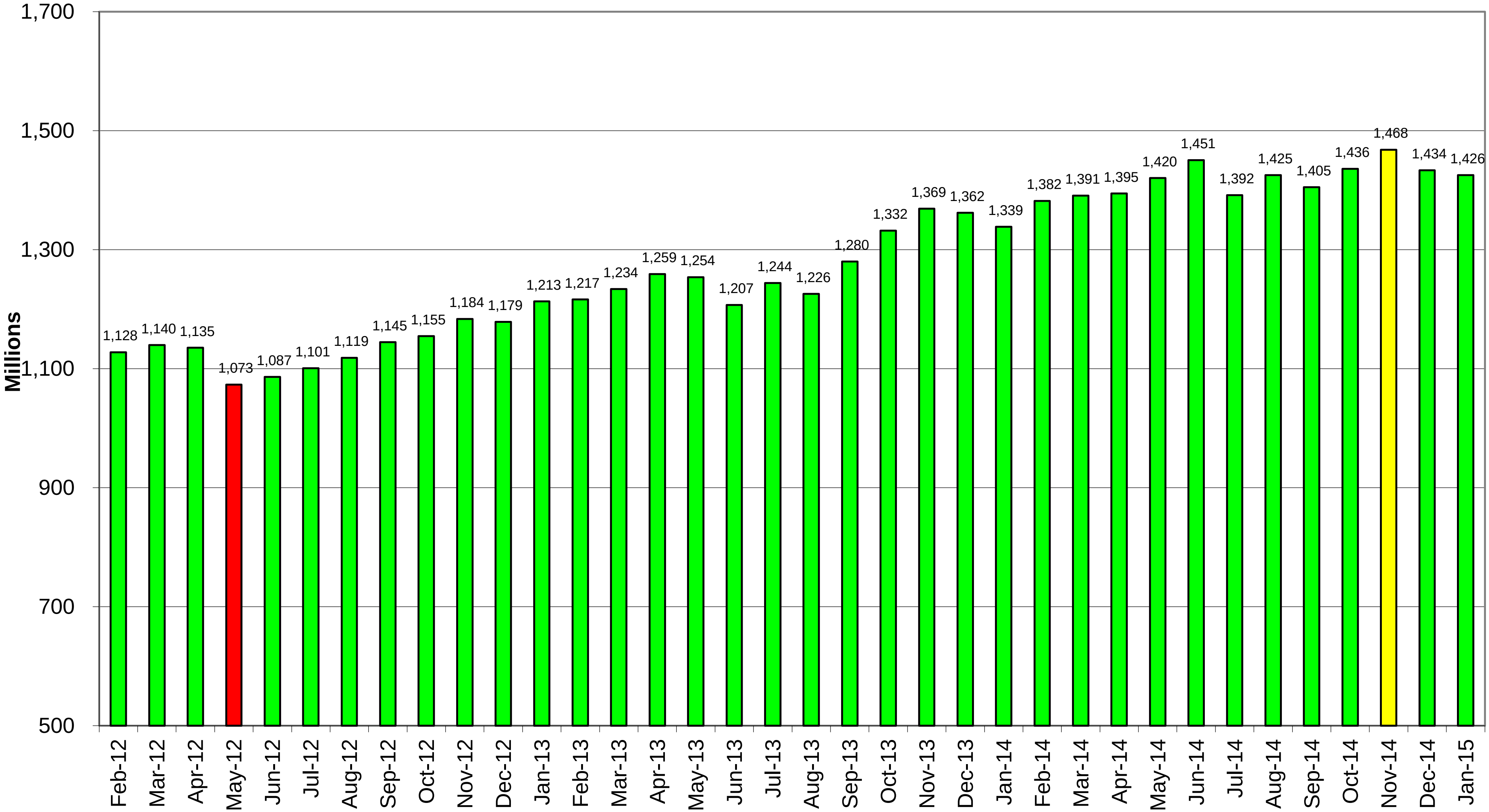
OPERF NAV
Three years ending January 2015
($ in Millions)



SAIF NAV
Three years ending January 2015
($ in Millions)



CSF NAV
Three years ending January 2015
($ in Millions)



2015 OIC Forward Agenda Topics

March 4:	Updated OPERF A/L Study & SAA Recommendation HIED Annual Review OPERF Q4 2014 Performance Report
April 29:	Updated OPERF SAA Implementation Recommendation OPERF Private Equity Manager Recommendation (2) OPERF Policy Implementation Overlay Review OPERF Securities Lending Update
June 3:	OITP Review OPERF Q1 2015 Performance Report Litigation Update
July 29:	OSGP Annual Update Private Equity Update Fixed Income Update
September 16:	OPERF Real Estate Review OIC Private Equity Consultant Recommendation OPERF Q2 2015 Performance
October 28:	OSTF Annual Review OPERF Public Equity Review OPERF Alternative Portfolio Review CEM Benchmarking Report Approve 2016 OIC Calendar
December 9:	OPERF Opportunity Portfolio Review SAIF Annual Review CSF Annual Review OIC Election of Chair/Vice-Chair OPERF Q3 2015 Performance Report