Oregon Investment Council

September 19, 2012 - 9:00 AM

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

Keith Larson
Chair

Office of the State Treasurer
Ted Wheeler
State Treasurer

Michael Mueller
Interim Chief Investment Officer

OREGON INVESTMENT COUNCIL

2012 Meeting Schedule

Meetings Begin at 9:00 am
at
PERS Headquarters Building
11410 SW 68th Parkway
Tigard, OR 97223

January 25, 2012

January 25, 2012 Workshop

February 29, 2012

April 25, 2012

May 30, 2012

July 25, 2012

July 25, 2012 Public Equity Symposium

August 21, 2012 Private Equity Workshop

September 19, 2012

October 31, 2012

December 5, 2012

OREGON INVESTMENT COUNCIL

Agenda
September 19, 2012
9:00 AM

PERS Headquarters
11410 S.W. 68th Parkway
Tigard, Oregon

Time	A. Action Items	Presenter	Tab
9:00-9:05	**1. Review & Approval of Minutes / 2013 Meeting Calendar** July 25, 2012 Regular Meeting	**Mike Mueller** *Interim CIO*	**1**
9:05-9:40	**2. Public Pension Capital** *OPERF Private Equity*	**Jay Fewel** *Senior Investment Officer* **Perry Golkin** **Mike Tokarz** *Co-Founders* **David Fann** *TorreyCove Capital Partners*	**2**
9:40-10:15	**3. Talmage Real Estate** *OPERF Real Estate*	**Tony Breault** *Interim Senior Investment Officer* **Ed Shugrue** *CEO, Talmage* **Nori Gerardo Lietz** *Areté Capital*	**3**
10:15-10:25	**----------BREAK----------**		
10:25-10:35	**4. Fixed Income Internal Management** *Policy 4.03.02*	**Tom Lofton** *Investment Officer*	**4**
	B. Information Items		
10:35-11:30	**5. Capital Market Return Expectations** *OPERF*	**John Meier** *Strategic Investment Solutions* **Allan Emkin** *Pension Consulting Alliance*	**5**

Keith Larson Chair	Richard Solomon Vice-Chair	Ted Wheeler State Treasurer	Harry Demorest Member	Katy Durant Member	Paul Cleary PERS Director (Ex-officio)

6. Asset Allocations & NAV Updates	**Mike Mueller**	**6**
a. Oregon Public Employees Retirement Fund		
b. SAIF Corporation		
c. Common School Fund		
d. HIED Pooled Endowment Fund		
7. Calendar—Future Agenda Items		**7**
8. Other Items	**Council** **Staff** **Consultants**	

E. Public Comment Invited

15 Minutes

TAB 1 –

REVIEW & APPROVAL OF MINUTES, July 25, 2012

2013 MEETING CALENDAR

MICHAEL MUELLER, CFA, CPA
INTERIM CHIEF INVESTMENT OFFICER
INVESTMENT DIVISION

PHONE 503-378-4111
FAX 503-378-6772

STATE OF OREGON
OFFICE OF THE STATE TREASURER
350 WINTER STREET NE, SUITE 100
SALEM, OREGON 97301-3896

OREGON INVESTMENT COUNCIL
JULY 25, 2012
MEETING MINUTES

Members Present:	Paul Cleary, Harry Demorest, Katy Durant, Keith Larson, Dick Solomon, Ted Wheeler
Staff Present:	Darren Bond, Tony Breault, Karl Cheng, Sam Green, John Hershey, Julie Jackson, Perrin Lim, Ben Mahon, Mike Mueller, Michael Viteri, Byron Williams
Consultants Present:	Deborah Gallegos and John Meier (SIS), Alan Emkin, John Linder and Mike Moy (PCA), David Fann, Kenn Lee, Tom Martin (TorreyCove), Nori Gerardo Lietz (Arete Capital)
Legal Counsel Present:	Dee Carlson, Oregon Department of Justice Deena Bothello, Oregon Department of Justice

The OIC meeting was called to order at 9:00 am by Keith Larson, Chair.

I. 9:00 a.m.: Review and Approval of Minutes

MOTION: Treasurer Wheeler moved approval of the May 30, 2012 minutes. Ms. Durant seconded the motion. The minutes were approved unanimously by a vote of 5/0.

Mike Mueller, Interim CIO gave an update of recent Private Equity Committee actions:

June 27, 2012	Court Square Capital Partners Fund III, LP	($75 Million)
June 27, 2012	Crescent Mezzanine Partners Fund VI, LP	($75 Million)
June 27, 2012	Mayfield XIV, LP	($25 million)

II. 9:01 a.m.: RK Mine Finance Fund II - *OPERF Alternatives Portfolio*

John Hershey, Sr. Alternatives Investment Officer gave a brief introduction then introduced Oskar Lewnowski, CIO and Portfolio Manager and Chris von Strasser, Senior Vice President of Red Kite Group.

Red Kite targets a high percent gross IRR by providing off-take-backed completion financing to junior mining companies (generally small cap publicly traded companies). Off-take agreements are long-term contracts in which a mine is obligated to sell a percent of its future production at an agreed upon margin to the off-take provider. The off-take linked financing is generally in the form of debt with a current pay coupon and a payment in kind (PIK), often secured by the assets of the mining company, or structured equity with significant warrant coverage. In addition to providing debt, equity, and off-take agreements, Red Kite expects to invest in royalty streams based on the revenue and/or profit of a mine. Of the total expected return, approximately 30% each should come from debt and royalties, with the remaining approximately 40% coming from structured equity (converts, warrants) and the off-take agreements.

Red Kite offers one of the few experienced managers with a realized track record of successful investing as a principal in the metals and mining sector. Furthermore, as an asset class, natural resources are a valuable hedge against inflation with long-lived real assets to match with a pension plan's liabilities.

Staff and TorreyCove recommended a commitment of $75 million to RK Mine Finance Fund II, L.P., subject to the negotiation of requisite legal documents with Staff working in concert with DOJ.

There was a brief question and answer period following the presentation.

MOTION: Mr. Demorest moved approval of the staff recommendation. Mr. Solomon seconded the motion. The motion was passed by a vote of 5/0

III. 9:35 a.m.: Avista Capital Partners III - *OPERF Private Equity*

Sam Green, Private Equity Investment Officer gave a brief overview and then introduced Tom Dean and Steven Webster, Co-Managing Partners from Avista Capital.

At its inception in 2005, Avista was exclusively focused on investing in three sectors – healthcare, energy and media, with approximately equal weighting to each. Due to the rapid recent digitalization of media, it is expected that this sector will play a significantly smaller role in Fund III than in prior funds. It is expected that approximately two-thirds of the Fund will be allocated to energy and healthcare, while the remaining third will be allocated, opportunistically, to investments in the consumer discretionary, industrials and media sectors.

Avista will always seek board rights, regardless of their investment stake. The average investment size will be between $50 - $300 million. The Fund will be targeting companies with an enterprise value of $100 million - $2 billion, with the flexibility to pursue larger companies. These are all very consistent with Fund II's strategy.

There was a brief question and answer period following the presentation.

Staff and TorreyCove recommended that the OIC authorize a $100 million commitment to Avista Capital Partners III, L.P. subject to the satisfactory negotiation of terms and conditions, and completion of the requisite legal documents by DOJ legal counsel working in concert with OST staff.

MOTION: Mr. Demorest moved approval of the staff recommendation. Ms. Durant seconded the motion. The motion was passed by a vote of 5/0

****V. 10:27 a.m.: OPERF Public Equity Annual Review (taken out of order)**

Michael Viteri, Sr. Equity Investment Officer and John Meier with SIS gave an update on the OPERF Public Equity Portfolio.

2011 PUBLIC EQUITY MONITORING & MANAGEMENT HIGHLIGHTS:

Open Door Meetings - Staff continually scans the marketplace for promising investment managers. The most efficient venue is through visits with prospective managers in OST offices. In calendar year 2011, public equity staff conducted over 109 in-person meetings.

Quarterly Conference Calls – Staff performs conference calls with all OPERF managers on a quarterly basis as part of its portfolio monitoring process. It is a formal, documented process that allows staff to understand how a manager is expressing their views through the portfolio, and to test conviction in their portfolio holdings.

On-Site Visits – Per OIC Policy and Procedure 04.05.01- Strategic Role of Public Equity Securities within OPERF, staff is required to conduct annual site visits with all OPERF equity managers. On-site visits generally take anywhere from 2-4 hours and involve meetings with portfolio managers, analysts, traders, and compliance personnel. In calendar year 2011, public equity staff conducted 34 on-site visits with current and prospective OPERF equity managers.

Cash Raises –The process of raising cash can have unintended effects on the public equity portfolio's exposure to style, capitalization range, and geography. As a result, cash raises end up being complex project management exercises that require sophisticated analytics and the combined efforts of staff, custody bank, asset managers, and transition managers. In calendar year 2011, the Public Equity portfolio raised $1.4 billion in cash for pension payments and capital calls. Since July of 2007, Public Equity has raised over $13 billion to satisfy the on-going needs of the plan.

ACTION: Keith Larson, Chair, requested that a workshop on risk management be held in the future

****IV. 11:20 a.m. Real Estate Annual Review (taken out of order):**

Tony Breault, Interim Senior Real Estate Investment Officer provided a review and update of the OPERF real estate portfolio, and Nori Gerardo Lietz of Arete Capital provided her opinion on the global real estate markets.

Real estate investments are being managed with the objective of earning at least 75 basis points in annualized net excess returns above the NCREIF Index over moving five-year periods. Because 80 percent of the real estate investments are traded infrequently, risk budget concepts are not applicable.

Mr. Breault and Ms. Gerardo Lietz presented a twelve month action plan for the Real Estate Portfolio, including:

1. Review the REIT portfolio, both US and non-US.
2. Reduce the allocation to RREEF, and transfer proceeds to another core manager.
3. Refine Core, Value Add and Opportunistic definitions; explore alternative benchmarks for Value Add and Opportunistic portfolios.
4. Explore the disposition of LP stakes in underperforming managers.

Ms. Gerardo Lietz shared a management overview by sub-asset class.

Staff recommended the Oregon Higher Education Fund commit $2 - $3 million to the Prime Property Fund, a diversified core, open end real estate fund managed by Morgan Stanley.

MOTION: Mr. Solomon moved approval of the staff recommendation. Mr. Demorest seconded the motion. The motion passed by a vote of 4/0 (Ms. Durant abstained due to a potential conflict of interest).

VI. 12:06 p.m. Asset Allocation and NAV Updates:

Mr. Mueller reviewed the Asset Allocations and NAV's for the period ending June 30, 2012.

VII. 12:07 p.m. Calendar – Future Agenda Items:

Mr. Mueller highlighted future agenda topics.

VIII. 12:07 p.m. Other Business:

None

12:07 p.m. Public Comments:

There were no public comments.

The meeting adjourned at 12:07 p.m.

Respectfully submitted,

Julie Jackson

Julie Jackson
Executive Support Specialist

OREGON INVESTMENT COUNCIL

PROPOSED 2013 Meeting Schedule

Meetings Begin at 9:00 am
at
PERS Headquarters Building
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Tigard, OR 97223

January 23, 2013

February 20, 2013

April 17, 2013

May 29, 2013

July 31, 2013

September 25, 2013

October 30, 2013

December 4, 2013

TAB 2 – PUBLIC PENSION CAPITAL

OPERF Private Equity

Public Pension Capital, L.P.

Purpose

Staff is recommending a conditional commitment of $100 million to Public Pension Capital, L.P. (the "Fund"), a $500 million target, evergreen fund, to pursue control and minority equity investments in small-to-middle-market companies operating in the financial services, energy, specialty chemicals, consumer, industrial, and healthcare industries. This would be a new relationship for OPERF and the OIC.

Background/Opportunity

As noted by one of the panelists at the OIC Private Equity Workshop on August 21, 2012, the private equity industry is currently undergoing the most transformative period of its relatively short existence. Successful general partners (GP's) are trying new business models, launching new investment products and efforts, and exploring different capital formation structures, including permanent capital arrangements, partial sales, and even "going public." Limited partners (LP's) are also exploring different investment models, including partial ownership of general partners, strategic relationships, and large separate accounts. Most of these efforts by LP's have been driven by the desire to more quickly increase private equity allocations, reduce fees, better align GP-LP interests, and improve the level of GP-LP interaction and influence to that of a "true partnership."

Public Pension Capital Management ("PPC"), a newly established entity formed in 2012 by two former KKR senior investment professionals, proposes an innovative private equity investment model which aims to better serve both GP's and LP's. The founders, Perry Golkin and Michael Tokarz, have met individually with most OIC members to discuss this concept. In this memo, Staff will summarize key elements of this opportunity. The TorreyCove Investment Analysis should be referred to for specific details, opportunities and risks.

The Fund will be an "evergreen" structure (explained further below) limited partnership, initially targeted at $500 million, and will be marketed solely to public pension funds. PPC is initially targeting $100 million each from five prominent public pension funds. The initial closing is targeted for March 31, 2013. Each March 31 thereafter, the Fund will have an opening to allow new investors to join and allow additional commitments from existing investors. After a three-year lockup, on each March 31, investors may also elect to cancel their undrawn commitments if they choose not to continue. A withdrawn LP's invested capital would then be distributed as realizations occur over time. After the initial close, an Advisory Board will be formed, consisting of representatives of the founding investors. This Advisory Board will have substantially enhanced governance rights, including the authority to: terminate and replace the Chief Executive Officer of PPC (Mr. Golkin); set and approve the annual operating budget of PPC for budgeted management fee purposes; approve potential new investors to the Fund; approve additional members of the Advisory Committee. The Fund will have highly preferential economic terms. Management fees will be budget based, as opposed to a straight percentage charge. As the size of the

Fund increases due to additional commitments and new investors, PPC projects management fees will scale down. Management fees will be paid back prior to PPC's receiving carried interest. Transaction and other fees will offset the management fee 100 percent. The Fund will have a preferred return of 4 percent. Carried interest payable to PPC will be 5 percent for an annually compounded rate of return between 4 percent and 8 percent. If the rate of return is over 8 percent, carried interest will be 10 percent.

Staff views this model and proposed structure as innovative, and a highly attractive business model, which provides benefits to both PPC and investors. PPC would have a concentrated, stable base of LP's, and would be relieved of the burden and distraction of lengthy fundraising campaigns every three to five years. LP's would receive very attractive economic terms, greatly enhanced governance rights, and better alignment of interests with both PPC and fellow investors.

Strategy/Team

The founders both had long, successful careers with KKR. Following his retirement from KKR in 2002, Mr. Tokarz took over the leadership of MVC Capital, and transformed its strategy to focus on smaller private equity and mezzanine transactions. MVC has invested $260 million in 30 transactions since then. Seven senior investment professionals from MVC Capital will initially round out the PPC investment team. While the team is expected to grow moderately over time, it appears PPC will start out with a strong and experienced leadership core.

Similar to MVC Capital, PPC will pursue a generalist strategy, with no more than 20 percent of the Fund invested in any particular industry. Team members have substantial investment experience in six distinct industries, and PPC expects most transactions will be in these industries: financial services, energy, specialty chemicals, consumer, industrial, and healthcare. PPC intends to be a proactive owner, with specific value creation objectives identified, and agreed upon with company management before an investment is made. PPC expects most value creation strategies will include the following elements:

- Sales growth
- Operating efficiencies
- Systems and process improvements
- Cost reductions

Track Record

Traditional track record analysis of this opportunity is difficult for several reasons. Attribution of specific deals at KKR is difficult as each investment is a team process. Additionally, the transaction sizes at KKR were much larger, and at MVC much smaller, than the transactions PPC will target. Please see the TorreyCove Investment Analysis for a deeper analysis of the team's track records. It is fair to say that

the founders and team have extensive private equity experience, and have led or participated in many successful investments. It is also fair to say that there is greater than usual start-up and execution risk with this opportunity, as this newly formed team will breaking some new ground.

Portfolio Fit and Commitment Sizing

OPERF's portfolio is already well populated with successful relationships that target the transaction sizes and industries PPC is targeting. While this opportunity is not particularly additive from a portfolio construction standpoint, it has the potential to provide ancillary benefits to OPERF's private equity program. First, the economics are compelling. Second, in an industry that is searching for alternate models, this could provide an example, and refresh OPERF's reputation as an innovator and thought leader. And third, this is a model that could enhance the cohesiveness and cooperation of public funds to work together on common goals.

Staff's recommendation of a $100 million commitment is consistent with the 2012 Private Equity Plan discussed with the OIC in early 2012.

Placement Agents

Staff has had no contact with any placement agent regarding this potential commitment.

Private Partnership Investment Principles

OPERF Principles were designed for application to traditional limited partnerships, and are not particularly applicable to this opportunity. This Fund is a new model, with different economics, structure, and governance. However, when viewed in the "spirit" of the Principles, this Fund ranks very favorably.

Recommendation

Staff recommends that the OIC authorize a $100 million conditional commitment to Public Pension Capital, L.P., on behalf of OPERF, subject to:

1. The Fund closing on at least $500 million in commitments, including OPERF, within 12 months of OPERF's conditional commitment.

2. If at any time, active capital commitments to the Fund fall below $500 million, OPERF's obligation to fund management fees, investments, or other capital calls is automatically suspended until a new budget is approved by a majority in interest of the Fund's Advisory Board, of which OPERF will be a voting member. If such an event is triggered, OPERF may at its discretion, elect to withdraw without penalty from future capital calls for the Fund.

3. Satisfactory negotiation of terms and conditions, and completion of the requisite legal documents by DOJ legal counsel working in concert with OST staff.

TORREYCOVE
CAPITAL PARTNERS

MEMORANDUM

TO: Oregon Public Employees Retirement Fund ("OPERF")

FROM: TorreyCove Capital Partners ("TorreyCove")

DATE: September 5, 2012

RE: Public Pension Capital L.P. (the "Fund")

Strategy:

The Fund will make both control and minority equity investments in lower and middle market companies across a broad spectrum of industries including Financial Services, Energy, Specialty Chemicals, Consumer, General Industrial, and Healthcare. The Fund will target 10 to 20 equity investments in its first five years of operation of between $25 and $100 million in companies generally valued below $500 million. Geographically, the Fund will invest exclusively in the United States and Canada.

Please see attached investment memorandum for further detail on the investment opportunity.

Allocation:

A new commitment to the Fund would be allocated 100% to the Medium Corporate Finance investment sub-sector and will further be categorized as a Domestic investment. As of March 31, 2012, OPERF's allocation to Medium Corporate Finance is listed in the table below. It is important to note that since allocation is based on fair market value, a commitment to the Fund would not have an immediate impact on OPERF's current portfolio allocation. Commitments to the Fund are complementary to OPERF's existing fund commitments and provide the overall portfolio with a further degree of diversification.

As of March 31, 2012	Target	FMV	FMV + Unfunded
Medium Corporate Finance	5-25%	21.6%	21.5%

Conclusion:

The Fund offers OPERF an opportunity to participate in a differentiated portfolio of private equity investments with relatively attractive overall terms. TorreyCove's review of the General Partner and the proposed Fund indicates that the potential returns available justify the risks associated with an investment in the Fund. TorreyCove recommends that OPERF consider a commitment of $100 million to the Fund. TorreyCove's recommendation is contingent upon the following:

1) Acceptable implementation of the verbally agreed upon changes to terms (To be developed and implemented by OPERF's Legal Counsel in conjunction with Staff and TorreyCove):
   a) The Fund will repay Management Fees or other Limited Partner-funded expenses before calculating any prospective carried interest.
   b) The General Partner agrees that, if at any time, active Capital Commitments for the Fund fall below $500 million, OPERF's obligation to fund Management Fees, investments, or other Capital Commitments is automatically suspended until a new budget is unanimously approved by the Fund's Board of Investors, of which OPERF will be a voting member. OPERF may immediately elect to withdraw without penalty from future capital calls for the Fund if such an event is triggered.

TorreyCove
CAPITAL PARTNERS

2) OPERF will only close on its Capital Commitment if Limited Partners other than OPERF or affiliated with the General Partner have arranged for at least $400.0 million of Capital Commitments (either previously or simultaneously with OPERF's formal closing) for the Fund.

3) The General Partner will have one year from the date of OPERF's conditional commitment (expected to be September 19, 2012) to raise the capital detailed in item (2) above. Otherwise, OPERF will automatically be fully released from its commitment to the Fund.

4) Satisfactory negotiation or clarification of other certain terms of the investment;

5) Satisfactory completion of legal documents;

6) Satisfactory continuation and finalization of due diligence;

7) No material changes to the investment opportunity as presented; and

8) Confidentiality maintained regarding the commitment of OPERF to the Partnership until such time as all the preceding conditions are met.

TAB 3 – TALMAGE REAL ESTATE

OPERF Real Estate

Talmage Separate Account

Purpose

Staff is recommending a commitment of $125 million for OPERF to the Talmage Separate Account (the "Separate Account"). This will be the continuation of an existing relationship and additional allocation to the pre-existing Core Separate Account. OPERF previously committed $300 million to the Separate Account in 2008 and has a pre-existing relationship with their prior Funds series I, II, and III.

Background

Talmage, as a core team of eight professionals, was originally formed in 2003, and has operated and managed all investments via Guggenheim Structured Real Estate Advisors (GSREA), LLC, a wholly-owned entity of Ed Shugrue III and his management team. GSREA was previously in a joint-venture with Guggenheim Partners, from 2003 to 2011, in which GSREA independently managed all the investment sourcing, underwriting, reporting and accounting while directly benefiting from being able to co-market their product with Guggenheim (i.e., the prior fund names of Guggenheim Structured Real Estate Fund I, II, & III, each of which OPERF has invested with). In January 2012, Guggenheim and GSREA terminated their joint-venture as the companies were seeking growth in other areas. The GSREA management team rebranded their platform as Talmage, LLC.

Talmage, LLC currently operates three complementary business lines within the Commercial Mortgage Backed Securities (CMBS) market. The investment management entity consists of six vehicles with approximately $1.7 billion in assets under management, including OPERF's Separate Account as well as the Guggenheim Structured Real Estate Funds. The Advisory Services entity covers approximately $40 billion of transactions and specializes in restructurings, loan recapitalizations and bankruptcies, while the Special Servicing business line is a rated agency and handles approximately $10 billion of loans.

Ed Shugrue, as the Chief Executive Officer of Talmage, LLC, established the company in 2003. Prior to forming GSREA, now Talmage, Mr. Shugrue partnered in building one of the largest dedicated commercial real estate mezzanine investment platforms in the country while working at Capital Trust, Inc. While Mr. Shugrue leads the firm, most of the seven other Talmage professionals have been working together since 2003, or shortly thereafter, with the team experiencing very little turnover in the previous ten years. Talmage, LLC is headquartered in New York.

Strategy and Performance

Since its inception in 2008, the Talmage Separate Account has been an unlevered account investing solely in commercial real estate debt. This separate account was established as both a diversifier and a strategy featuring greater liquidity to the remaining equity investment mandates within the core real estate portfolio. The Separate Account had the goal of achieving equity-like returns at a lower level of risk. This additional allocation will not modify the existing Separate Account investment parameters and will continue to invest in only real estate related debt instruments such as whole loans, bank loans, bank debt, mezzanine loans, CMBS and CDOs.

Over the past four years since its inception, the Separate Account has called a total of $722.9 million and has returned a total of $499.9 million. If the current portfolio holdings were liquidated into the debt markets, it is estimated the current spot value at the time of this writing to be approximately $350.3 million. This would represent an additional $53.3 million in undistributed profits and would result in a since inception net IRR of 11.5 percent and a 1.4 net equity multiple. However, given the Talmage team, track record, and execution capabilities, it is anticipated the portfolio securities will be held to either their respective maturities or anticipated repayment date. This is projected to result in a net portfolio IRR of 12.1 percent and a net 1.7 equity multiple over the next four year holding period.

The Separate Account has been fully invested since late 2011 and, as Talmage and staff have continued to monitor the debt markets following the economic recession, there have been many subsequent opportunities the Separate Account has not been able to capitalize on without an additional capital allocation. Since inception, the Separate Account has accomplished its intended objective and return expectations, creating accretive returns to the OPERF portfolio at a substantially lower risk-adjusted profile and with much greater liquidity then traditional core equity investments. With the pending debt market maturities coming due in the near future from the vintage year lending and the subsequent equity losses during 2005-2008, it is anticipated the strategy employed by the Separate Account is well positioned to capitalize, in the short to medium term, on attractive debt opportunities and continue to achieve accretive returns.

Issues to Consider

Debt vs. Equity Market Returns

The debt markets currently outperform the traditional equity markets, on a risk adjusted basis, as part of the continued market cycle and anticipated slow recovery following the economic recession. However, debt investments do not traditionally outperform equity investments over the long term. Hence, Talmage, staff and consultant will continue to monitor the debt and equity markets to determine timing considerations for potentially liquidating the Separate Account should these returns not be sustainable in the existing debt markets. The ability to liquidate, or unwind, the portfolio holdings is documented within the Separate Account terms.

Management Fees

The Separate Account was originally structured with management fees to be the lesser of: (i) 25 bps on the gross asset value, or; (ii) 50 bps on the invested equity. However, following the credit crisis and debt volatility experienced in late 2008, staff and Talmage mutually agreed to keep the Separate Account fully unlevered instead of employing the 50 percent leverage allowance as originally intended. Hence, with the value of the assets being the same as equity, the fee has remained unmodified at 25 bps, since inception. The revised fee structure, should the additional $125 million recommended allocation be approved, will be managed at 50 bps on the entire $425 million. While management fee increases are generally not viewed favorably, staff and consultant agree that 50 bps is well below market and in-line with the initial intent of the original Separate Account terms for maintaining platform stability and appropriate cost coverage. There will continue to be no carried interest or other fees associated with this Separate Account.

Aggregate OPERF-Talmage Relationship

OPERF has made commitments to the Guggenheim Structured Real Estate Debt Funds I ($50 million), II ($100 million) and III ($150 million), each before the global economic recession and debt market collapse experienced in 2008. While Fund I met expectations with an 18 percent gross / 13 percent net IRR, Funds II and III experienced substantial challenges after the debt market collapse of 2008, with Fund II experiencing a complete loss of invested capital due a margin call on the Fund's debt . Fund III is anticipated to deliver a 4.0 percent gross / 5 percent net IRR. However, Talmage, in the best interest and with the complete agreement of the Fund III investors, took action to distribute those securities not held in the collateral pool, back to the investors. While this resulted in an overall Fund III loss of 5 percent, it served to completely delever Fund III and protect investors against future margin calls. Had this not occurred, investor losses could have been much more severe. Additionally, by distributing the securities back to the investors, Talmage lost all future rights to fees on income from the assets. Furthermore, Talmage voluntarily lowered management fees by 60 bps to 90 bps. Lastly, Talmage's returns with the original $300 million Separate Account on behalf of OPERF, has enabled OPERF to recoup all prior losses for Funds II and III, in only a four year period.

Portfolio Fit and Sizing

This commitment will be allocated to the Core Portfolio. With a 30 percent target allocation to Core, as of March 31, 2012, OPERF's actual allocation based on net asset value was 26.5 percent. The real estate portfolio was 11.5 percent of the OPERF account, with an 11 percent target and allowable bandwidth range of plus or minus 3 percent.

Placement Agents

Due to the existing relationship between OPERF and Talmage, no placement agent was used by Talmage and OST staff was not contacted by a placement agent in relation to this additional allocation request.

Private Partnership Investment Principles

We have reviewed the Separate Account's compliance with OPERF's Private Partnership Principles. As a Separate Account vehicle wholly owned by OPERF, without an advisory board and without carried interest payments, many of the Principle assessments were not applicable and accordingly left blank.

Recommendation

Staff recommends that the OIC authorize a $125 million commitment to the Talmage Separate Account, on behalf of OPERF, subject to the satisfactory negotiation of terms and conditions and completion of the requisite legal documents by DOJ legal counsel working in concert with OST staff.

TAB 4 – FIXED INCOME INTERNAL MANAGEMENT

OST Fixed Income Internal Management

OIC Policy 4.03.02 Revisions

Purpose

This presentation has two parts: (1) To propose revisions to OIC Policy 4.03.02 governing internal fixed-income portfolio investments for state agencies, and; (2)To inform the OIC of changes made to Investment Policy Statements for certain Department of Consumer & Business Services Funds (DCBS).

Background

Policy 4.03.02 Revisions

OST Policy 4.03.02 establishes a set of procedures and guidelines under which OST investment staff may invest state agency funds. Staff believes that Policy 4.03.02 requires revision to update for increased state agency investment options and to clarify the hierarchy of the investment guidelines established within it.

Investment Options

Although the OIC has approved the Oregon Intermediate Term Pool (OITP), Policy 4.03.02 does not specifically allow OITP as an investment for state agencies. Proposed revisions add OITP, and securities eligible for the OITP, to permitted investments in section D.

Guideline Hierarchy

Policy 4.03.02 allows for revisions in investment objectives, strategies, permitted holdings, and diversification requirements by state agency Investment Policy Statements (IPS). Policy 4.03.02 does not define "IPS" nor does it clarify the hierarchy of Policy 4.03.02 guidelines versus "IPS" guidelines. Section I is added to address two issues: (1) define "IPS" as Investment Policy Statement and defines how an IPS can be created; (2) clarify certain guidelines as minimum and to require Council approval for IPS with less restrictive guidelines.

DCBS Investment Policy Revisions

The following discussion provides notification of IPS revisions for two funds managed for the Department of Consumer and Business Services (DCBS): (1) The DCBS Fund, and; 2) The DCBS Workers' Benefit Fund. These IPS revisions have been reviewed and approved by the DCBS Investment Council.

As a part of the annual portfolio review process between OST staff and the DCBS Investment Council, discussions were centered on ways to improve fund returns and manage risks. Consequently, revisions were made to DCBS Fund guidelines to: (1) provide DCBS funds with access to the Oregon Intermediate Term Fund (OITP) and; (2) to improve diversification in monies not invested in OITP.

Key revisions:

- Refocused and clarified objectives section.

- Added the following investments as permitted investments:
    - Oregon Intermediate Term Pool;
    - US Agency Mortgage-backed Securities (MBS). Agency Mortgage-backed Securities includes both pass-through securities and Collateralized Mortgage Obligations (CMO);
    - Commercial Mortgage-backed Securities (CMBS) rated AAA;
    - Asset-backed securities (ABS) rated AAA.
- Tightened minimum ratings for municipal debt investments to A3/A- from Baa3/BBB-.
- Added the following investment exposure limits:
    - Specifically excluded OSTF and OITP investments from 5% limitation on any single investment;
    - Limited the par value of all MBS investments to 20% of the portfolio;
    - Limited the par value of all ABS investment to 15% of the portfolio;
    - Limited the par value of all CMBS investments to 15% of the portfolio.
- Added the following to investments specifically excluded (not allowed):
    - Alt-A; non-agency; sub-prime; limited documentation; or other "sub-prime" residential mortgage pools or related securities;
    - CDOs, CLOs, and Z-tranche ABS investments.

In staff's opinion, all guidelines in the revised IPS for both funds fall within the broad guidelines established by Policy 4.03.02.

The following attachments are provided with this memorandum:

1. A red-lined version of suggested revisions to Policy 4.03.02.
2. Prior version of DCBS Fund Investment Policy Statement;
3. Revised DCBS Fund Investment Policy Statement;
4. Prior version of DCBS Workers' Benefit Fund Investment Policy Statement;
5. Revised DCBS Workers' Benefit Fund Investment Policy Statement.

Recommendation

Staff requests that Council approve revisions to Policy 4.03.02. Presented revisions to the IPS for the DCBS Fund and the DCBS Workers' Benefit Fund are for informational purposes only.

Attachment #1

FUNCTION: **Fixed-Income Investments**
ACTIVITY: **Internal Fixed-Income Portfolio Investments**

POLICY: **Only State Agency funds meeting the minimum requirements will be considered eligible for discreet investment management. All internal fixed income investments shall be authorized by a fixed income investment officer, authorization shall be documented, and shall be in accordance with portfolio guidelines established by the Oregon Investment Council**.

PROCEDURES:

A. PURPOSE

The purpose of this Fixed Income Investment Policy is to (1) determine what funds are eligible for discreet investment management, and (2) to define the role of fixed income within the Investment Council's general investment policies for internally managed state agency funds; to set forth specific short-term and long-term policy objectives for the state agency funds, and to outline the strategies for implementing the Investment Council's fixed income investment policies.

B. ELIGIBILITY

1. Funds eligible for discreet investment management must meet the following requirements:
   a) The fund's enabling statutes must evidence legislative contemplation of discreet investment activity. Language containing the word "invest" in some form will suffice as evidence.
   b) The minimum projected balance for the subject funds must be at least $10 million for investment only in U.S. Treasury and Government-Sponsored Enterprise securities and at least $40 million for inclusion of corporate bonds.

2. Agency must meet the following requirements:

   a) Agency Head makes a written request for discreet investment management which includes an affirmative statement of the agency's ability to comply with the agency requirements contained in the Interagency Agreement for Fixed Income Investments.
   b) Agency will enter into an Interagency Investment Agreement with the Office of the State Treasurer (OST).

3. Final determination on the eligibility of any fund for discreet investing will be made solely by the Office of the State Treasurer.

4. Exceptions to eligibility must be approved by the Deputy State Treasurer.

C. OVERALL POLICY OBJECTIVES & STRATEGIES ~~(except as noted in specific IPS)~~

1. Achieve a stable and predictable yield on investments and preservation of principal while providing sufficient liquidity to the agencies to allow for cash needs.
2. Maintain a well-diversified bond portfolio, managed to maximize yield, *not total return*, ~~or as stipulated in specific agency Investment Policy Statement (IPS)~~.
3. Maintain periodic meetings with agencies to review portfolio objectives and liquidity needs which shall be documented in IPS for each respective agency (see attached).
4. Invest opportunistically, using innovative investment approaches within a controlled and defined portfolio allocation.
5. Maintain average credit quality of A/A~~, or as stipulated in specific agency IPS.~~.
6. Maintain communication with agencies during periods of unique market environments (e.g., volatile credit cycles, low interest rate scenarios, etc.) and discuss possible IPS impacts in that environment.

D. PERMITTED HOLDINGS ~~(except as noted in specific IPS)~~

1. Obligations issued or guaranteed by the U.S. Federal Government, U.S. Federal agencies or U.S. government-sponsored corporations and agencies.
2. Obligations of U.S. and non-U.S. corporations, commercial paper, certificates of deposit and bankers acceptances issued by industrial, utility, finance, commercial banking or bank holding company organizations.
3. Mortgage-backed and asset-backed securities.
4. Obligations denominated in U.S. dollars only.
5. Obligations issued or guaranteed by U.S. local, city and state governments and agencies.
6. Securities defined under Rule 144A and Commercial Paper defined under Section 4(2) of the Securities Act of 1933.
7. Yankee Bonds (dollar denominated sovereign and corporate debt).
8. The Oregon Short-Term Fund (OSTF) and securities eligible for the OSTF.
~~8.~~9. The Oregon Intermediate Term Pool (OITP) and securities eligible for the OITP.

E. DIVERSIFICATION ~~(except as noted in specific IPS)~~

The portfolio should be adequately diversified to minimize various risks. The following specific limitations reflect, in part, the OIC's current investment philosophy regarding diversification:

1. Obligations issued or guaranteed by the US government, US agencies or government sponsored enterprises are eligible, without limit.
2. Private mortgage-backed and asset-backed securities are limited to 10% per issuer, unless the collateral is credit-independent of the issuer and the security's credit enhancement is generated internally, in which case the limit is 25% per issuer.
3. Obligations of other issuers are subject to a 3% per issuer limit.

F. ABSOLUTE RESTRICTIONS

The Internal Fixed Income Section may not purchase the following investments or types of investments without the specific advanced approval of the Chief Investment Officer and the Oregon Investment Council:

1. Short sales of securities.
2. Margin purchases or other use of lending or borrowing money or leverage to create positions greater than 100% of the market value of assets under management.
3. Commodities or common stocks.
4. Non-U.S. dollar denominated fixed income securities issued by entities incorporated or chartered outside of the United States.
5. Fixed income securities which may optionally be converted into equity securities.
6. Investments categorized to be equity real estate or within the equity asset class (investments categorized to be within the short-term asset class are specifically permitted, however).
7. Other securities which may not be categorized as fixed income securities.
8. Other securities as stipulated in specific agency IPS.

From time to time, the Oregon Investment Council may add items to, or remove investments from this list.

G. ASSURANCE OF COMPLIANCE

The Senior Fixed Income Investment Officer and the Fixed Income Investment Officer(s) regularly review portfolio holdings for investments which are prohibited and when one or more types of investments are added to or removed from the list of those prohibited. Complete portfolio listings are provided to the OIC and OST staff annually.

H. INVESTMENT TRANSACTION AUTHORIZATION

All trades are entered on the Bloomberg Trading System, and are authorized by the signature of either the Senior Fixed Income Investment Officer or the Investment Officer(s). The Senior Fixed Income Investment Officer and the Investment Officer(s) shall act in accordance with established procedures and internal controls for the operation of the investment program consistent with this policy. The Senior Fixed Income Investment Officer or the Chief Investment Officer reviews transactions initiated by the Investment Officer. The Chief Investment Officer reviews transactions initiated by the Senior Fixed Income Investment Officer. Trades are transferred to the custodian bank and copies are forwarded to Investment Accounting.

I. INVESTMENT POLICY STATEMENTS (IPS)

Investment policy statements (IPS) governing eligible discreet agency funds may be created and agreed upon between the Oregon State Treasury and a state agency via the written consent of the Deputy State Treasurer and the Chief Investment Officer (CIO). The guidelines established in this policy in sections C, D, E, F and, G are minimum guidelines. State Agency IPS may differ from this policy to address the specific investments needs of eligible state agencies. Agency IPS guidelines which are less restrictive than this policy must be approved by the Oregon Investment Council (OIC).

SAMPLE FORMS, DOCUMENTS, OR REPORTS (Attached):

Attachment #1

A. DCBS Fund IPS
B. DCBS Worker's Benefit Fund IPS
C. DAS Risk Management Insurance Fund IPS
D. ODOT Fund IPS
E. ODVA VET's Bond Sinking Fund IPS
F. OUS IPS

Attachment #2

Prior Version
Investment Policy Statement
DCBS Fund

A. Objectives

1. Return Requirements: Current Income
    i. Maximization of yield in a well-diversified fixed income portfolio; the emphasis is not on total return.
2. Risk Tolerance: DCBS has a low tolerance for interest rate and credit risk
3. Maintain communication with the agency; document discussion in the IPS.
4. Presentation to the DCBS Board annually.

B. Constraints:

1. Liquidity
    i. Cash flows are determined by the agency on an annual basis and are subject to revision.
    ii. Maintain a minimum cash balance of $6,500,000 as amended by the DCBS Board (May 16, 2008).
2. Time Horizon
    i. Limit the average maturity of the portfolio to 0-5 years.
    ii. The maximum maturity of any single fixed income security purchase will be 10 years, unless approved by the agency.
3. Eligible Security Types
    i. Acceptable securities are US Treasury and government agency bonds, notes and bills, state and municipal bonds, corporate bonds, MBS, ABS, and the Oregon Short Term Fund (OSTF), including securities eligible for the OSTF.
    ii. Securities denominated in US dollars only.
4. Credit Quality
    i. Maintain average credit quality of AA.
    ii. Limit corporate issuer exposure to 5% of total portfolio market value unless approved by the agency.
    iii. Minimum credit rating of investment grade (BBB-/Baa3) for corporate bond purchases.
    iv. Securities that are downgraded below the minimum credit rating do not have to be liquidated unless warranted by staff credit research analysis.

C. Guidelines:

1. Limit fund investments to US Treasury and government agency bonds, notes and bills, state and municipal bonds of the four highest ratings, corporate bonds, and the OSTF. Generally, investment grade will be a rating at or above Baa (Moody's investors Service) or BBB (Standard & Poor's).

2. Maintain liquid assets at a level required to prudently manage the daily cash needs of the department, while minimizing occasions of short-duration illiquidity .

Attachment #2

Prior Version

3. Maintain an average investment quality of AA.

4. Limit the amount of investment in any one company to 5 percent of the fund's total par value.

5. Exclude the following types of investments from the department's portfolio:

   - Zero coupons
   - Interest only securities
   - Principal only securities
   - Structured notes such as index-amortizing notes, dual-index notes, deleveraged bonds, range bonds and inverse floaters
   - Securities tied to foreign currencies or their indices

Attachment #3

Revised

Department of Consumer and Business Services
Consumer and Business Services Fund Investment Guidelines

A. Investment Objectives

The primary objectives, in priority order, of investment activities shall be:

1. Preservation of Invested Capital

Investments shall be undertaken in a manner that seeks to ensure the preservation of capital in the overall portfolio. The goal is to mitigate credit risk and interest rate risk. The fund has a low tolerance for interest rate risk and credit risk.

2. Liquidity

The investment portfolio shall remain sufficiently liquid to meet all reasonably anticipated cash needs of the fund. The portfolio should consist of securities with active secondary or resale markets. Minimum cash needs are determined by the agency on an annual basis.

3. Return

The investment portfolio shall be designed with the objective of attaining a market rate of return throughout budgetary and economic cycles, taking into consideration the safety and liquidity needs of the portfolio. Although return consists of both principal return (gains and losses due to market value fluctuations) and income return (yield), this policy discourages active trading and turnover of investments. Investments should generally be held to maturity.

B. Investment Constraints

1. Permitted Investments

- **i.** The Oregon Short Term Fund (OSTF)
- **ii.** Oregon Intermediate Term Pool (OITP)
- **iii.** US Treasury debt
- **iv.** Government agency debt
- **v.** Municipal debt with long term ratings of A3 or A-, or better, or are rated in the two highest categories for short-term debt by Standard & Poor's, Moody's Investors Services, or Fitch Ratings, respectively, at the time of purchase
- **vi.** Corporate debt with long term ratings at or above Baa3 or BBB- or are rated in the two highest categories for short-term debt by Standard & Poor's, Moody's Investors Services, or Fitch Ratings, respectively, at the time of purchase.
- **vii.** US Agency Mortgage-backed Securities (MBS). Agency Mortgage-backed Securities includes both pass-through securities and Collateralized Mortgage Obligations (CMO)
- **viii.** Commercial Mortgage-backed Securities (CMBS) rated AAA
- **ix.** Asset-backed securities (ABS) rated AAA

2. Credit Quality

- **i.** Maintain an average portfolio investment quality of AA/Aa2

Attachment #3

Revised

3. Maturity

- **i.** Limit the average maturity of the portfolio to 5 years or less.
- **ii.** The maximum maturity of any US Treasury, agency, municipal, or corporate bond investment should be 10 years or less based upon stated maturity
- **iii.** The maximum weighted average life/maturity of any MBS, CMBS, or ABS should be 5 years or less

4. Diversification

- **i.** Limit the par value of any single investment to 5 percent of the portfolio, excluding OSTF or OITP investments
- **ii.** Limit the par value of all MBS investments to 20% of the portfolio.
- **iii.** Limit the par value of all ABS investment to 15% of the portfolio
- **iv.** Limit the par value of all CMBS investments to 15% of the portfolio

5. Exclude the following types of investments from the portfolio

- **i.** Zero coupons
- **ii.** Interest only securities
- **iii.** Principal only securities
- **iv.** Structured notes such as index-amortizing notes, dual-index notes, deleveraged bonds, range bonds and inverse floaters
- **v.** Securities tied to foreign currencies or indices based on foreign currencies
- **vi.** Alt-A; non-agency; sub-prime; limited documentation; or other “sub-prime” residential mortgage pools or related securities
- **vii.** CDOs, CLOs, and Z-tranche ABS investments

6. Currency

- **i.** Investments should be restricted to US dollar denominated securities only

C. Investment Compliance and Reporting

1. Securities that are downgraded below the minimum credit rating do not have to be liquidated unless warranted by OST staff credit research analysis.
2. Exposure limitations should be enforced at the time of purchase. Investment exposures that go over maximum limits as a result of maturities or sales should not be liquidated.
3. The agency will communicate the desired minimum cash balance at least annually.
4. OST investment staff will present an update on the portfolio at least annually.

Attachment #4

Prior Version
Investment Policy Statement
DCBS Workers Benefit Fund

A. Objectives:

1. Return Requirements: Current Income
    i. Maximization of yield in a well-diversified fixed income portfolio; the emphasis is not on total return.
2. Risk Tolerance: Workers Benefit Fund (WBF) has a moderate tolerance for credit risk and a low tolerance for interest rate risk.
3. Maintain communication with the agency; document discussion in the IPS.
4. Presentation to the DCBS Board annually.

B. Constraints:

1. Liquidity
    i. Cash flows are determined by the agency on an annual basis and are subject to revision
    ii. Maintain a minimum cash balance of $9,000,000 as amended by the DCBS Board (April 28, 2003).
2. Time Horizon
    i. Limit the average maturity of the portfolio to 0-5 years.
    ii. The maximum maturity of any single fixed income security purchase will be 10 years, unless approved by the agency.
3. Eligible Security Types
    i. Acceptable securities are US Treasury and government agency bonds, notes and bills, state and municipal bonds, corporate bonds, MBS, ABS, and the Oregon Short Term Fund (OSTF), including securities eligible for the OSTF.
    ii. Securities denominated in US dollars only.
4. Credit Quality
    i. Maintain average credit quality of A.
    ii. Limit corporate issuer exposure to 5% of total portfolio market value unless approved by the agency.
    iii. Minimum credit rating of investment grade (BBB-/Baa3) for corporate bond purchases.
    iv. Securities that are downgraded below the minimum credit rating do not have to be liquidated unless warranted by staff credit research analysis.

C. Guidelines:

1. Limit fund investments to US Treasury and government agency bonds, notes and bills, state and municipal bonds of the four highest ratings, corporate bonds, and the OSTF. Generally, investment grade will be a rating at or above Baa (Moody's Investors Service) or BBB (Standard & Poor's) with up to 10 percent in issues less than BBB (S&P).

2. Maintain liquid assets at a level required to prudently manage the daily cash needs of the department, while minimizing occasions of short-duration illiquidity.

Attachment #4

Prior Version

3. Maintain an average investment quality of A.

4. Limit the amount of investment in any one company to 5 percent of the fund's total par value.

5. Exclude the following types of investments from the department's portfolio:

   - Zero coupons
   - Interest only securities
   - Principal only securities
   - Structured notes such as index-amortizing notes, dual-index notes, deleveraged bonds, range bonds and inverse floaters
   - Securities tied to foreign currencies or their indices

Attachment #5

Revised

Department of Consumer and Business Services
Workers' Benefit Fund Investment Guidelines

A. Investment Objectives

The primary objectives, in priority order, of investment activities shall be:

1. Preservation of Invested Capital

Investments shall be undertaken in a manner that seeks to ensure the preservation of capital in the overall portfolio. The goal is to mitigate credit risk and interest rate risk. The fund has a low tolerance for interest rate risk and credit risk.

2. Liquidity

The investment portfolio shall remain sufficiently liquid to meet all reasonably anticipated cash needs of the fund. The portfolio should consist of securities with active secondary or resale markets. Minimum cash needs are determined by the agency on an annual basis.

3. Return

The investment portfolio shall be designed with the objective of attaining a market rate of return throughout budgetary and economic cycles, taking into consideration the safety and liquidity needs of the portfolio. Although return consists of both principal return (gains and losses due to market value fluctuations) and income return (yield), this policy discourages active trading and turnover of investments. Investments should generally be held to maturity.

B. Investment Constraints

1. Permitted Investments

- **i.** The Oregon Short Term Fund (OSTF)
- **ii.** Oregon Intermediate Term Pool (OITP)
- **iii.** US Treasury debt
- **iv.** Government agency debt
- **v.** Municipal debt with long term ratings of A3 or A-, or better, or are rated in the two highest categories for short-term debt by Standard & Poor's, Moody's Investors Services, or Fitch Ratings, respectively, at the time of purchase
- **vi.** Corporate debt with long term ratings at or above Baa3 or BBB- or are rated in the two highest categories for short-term debt by Standard & Poor's, Moody's Investors Services, or Fitch Ratings, respectively, at the time of purchase.
- **vii.** US Agency Mortgage-backed Securities (MBS). Agency Mortgage-backed Securities includes both pass-through securities and Collateralized Mortgage Obligations (CMO)
- **viii.** Commercial Mortgage-backed Securities (CMBS) rated AAA
- **ix.** Asset-backed securities (ABS) rated AAA

2. Credit Quality

- **i.** Maintain an average portfolio investment quality of A/A2

Attachment #5

Revised

3. Maturity

- **i.** Limit the average maturity of the portfolio to 5 years or less.
- **ii.** The maximum maturity of any US Treasury, agency, municipal, or corporate bond investment should be 10 years or less based upon stated maturity
- **iii.** The maximum weighted average life/maturity of any MBS, CMBS, or ABS should be 5 years or less

4. Diversification

- **i.** Limit the par value of any single investment to 5 percent of the portfolio, excluding OSTF or OITP investments
- **ii.** Limit the par value of all MBS investments to 20% of the portfolio.
- **iii.** Limit the par value of all ABS investment to 15% of the portfolio
- **iv.** Limit the par value of all CMBS investments to 15% of the portfolio

5. Exclude the following types of investments from the portfolio

- **i.** Zero coupons
- **ii.** Interest only securities
- **iii.** Principal only securities
- **iv.** Structured notes such as index-amortizing notes, dual-index notes, deleveraged bonds, range bonds and inverse floaters
- **v.** Securities tied to foreign currencies or indices based on foreign currencies
- **vi.** Alt-A; non-agency; sub-prime; limited documentation; or other “sub-prime” residential mortgage pools or related securities
- **vii.** CDOs, CLOs, and Z-tranche ABS investments

6. Currency

- **i.** Investments should be restricted to US dollar denominated securities only

C. Investment Compliance and Reporting

1. Securities that are downgraded below the minimum credit rating do not have to be liquidated unless warranted by OST staff credit research analysis.
2. Exposure limitations should be enforced at the time of purchase. Investment exposures that go over maximum limits as a result of maturities or sales should not be liquidated.
3. The agency will communicate the desired minimum cash balance at least annually.
4. OST investment staff will present an update on the portfolio at least annually.

TAB 5 – CAPITAL MARKET RETURN EXPECTATIONS

Capital Market Return Expectations

Purpose

The purpose of this topic is to review the OIC's intermediate asset class return assumptions and the potential impact on OPERF's expected return, by modeling both the existing policy targets and actual portfolio weights. As a prelude to the upcoming asset/liability study for OPERF, the OIC will need to agree on the capital market return expectations (as well as correlations and standard deviations) to be used in the modeling to calculate portfolio expected returns and risks.

Background and Discussion

The Council regularly assesses the continued suitability of the approved investment objectives and policies and initiates changes as necessary. *OPERF's Statement of Investment Objectives and Policy Framework* identifies a return objective of exceeding the actuarial discount rate (ADR) over moving 20-year periods. The current ADR is eight percent.

It is critical to note that the planning horizon is looking into the reasonably, foreseeable future with the intent of understanding the impact of longer term (approximately 10 years) return assumptions on funded ratios and contribution requirements. This shorter timeframe does not reflect the duration of pension plan liabilities. Actuaries select earnings assumption rates based on a long-term horizon of 20 years, or more.

Consultant models generally build upon historical relationships between various assets, beginning with current interest rate levels, as well as giving consideration to current fundamental measures. For example, equities should deliver a return premium to bonds (how much, is subject to debate). However, almost across the board, return expectations have diminished. Both PCA and SIS are consistent in their respective messages: "With generational lows in interest rates around the world, achieving returns similar to those achieved historically will be challenging," and "Future returns expected to be less robust than long term historical averages." Below is a summary, compiled by staff (Ben Mahon), of average return expectations from approximately a dozen consulting firms (including both SIS and PCA), comparing 2010 with 2012:

	Average Expected Returns		
	2010	**2012**	*Change*
U.S. Equity	7.78%	**7.14%**	*-0.64%*
Non-U.S. Equity	7.78%	**7.23%**	*-0.55%*
Emerging Markets	8.08%	**8.25%**	*0.17%*
Global Equity	7.83%	**7.38%**	*-0.45%*
Core Fixed Income	4.32%	**3.01%**	*-1.31%*
High Yield Bonds	7.32%	**5.93%**	*-1.40%*
TIPS	4.47%	**2.67%**	*-1.81%*
Cash	3.05%	**2.14%**	*-0.91%*
Non-U.S. Bonds	4.01%	**2.62%**	*-1.39%*
Core Real Estate	6.97%	**6.54%**	*-0.42%*
Private Equity	10.19%	**9.59%**	*-0.61%*
Commodities	5.47%	**4.70%**	*-0.77%*
Hedge Funds	6.80%	**6.01%**	*-0.79%*
Inflation	2.62%	**2.49%**	*-0.13%*

Additionally, behind the presentations prepared by SIS and PCA is a chart of current return expectations, including other consulting firms, surveyed by staff. The goal is to provide the OIC with a gauge of the variability of expected returns, beyond those provided by SIS and PCA.

Summary of PCA/SIS Results

	POLICY WEIGHT	ACTUAL WEIGHT	PCA RETURN	SIS RETURN	POLICY PCA CONTR.	POLICY SIS CONTR.	ACTUAL PCA CONTR.	ACTUAL SIS CONTR.
FIXED INCOME	25.0%	25.7%	3.0	3.8	0.8%	1.0%	0.8%	1.0%
PUBLIC EQUITY	43.0%	35.1%	8.0	8.1	3.4%	3.5%	2.8%	2.8%
OPPORTUNITY PORT.	0.0%	1.6%	5.9	9.0	0.0%	0.0%	0.1%	0.1%
ALTERNATIVES	5.0%	0.7%	5.9	7.7	0.3%	0.4%	0.0%	0.1%
REAL ESTATE	11.0%	11.8%	6.5	7.5	0.7%	0.8%	0.8%	0.9%
PRIVATE EQUITY	16.0%	25.1%	9.6	10.5	1.5%	1.7%	2.4%	2.6%
WEIGHTED RETURN					6.7%	7.3%	6.9%	7.5%
DIVERSIFICATION/REBALANCE RETURN					0.5%	0.8%	0.6%	0.8%
TOTAL ESTIMATED COMPOUND RETURN					7.2%	8.1%	7.5%	8.3%
STANDARD DEVIATION					12.8%	14.0%	13.8%	14.6%

Note that the above returns do not make any assumptions about potentially higher returns from finding alpha.

Recommendations

This is an information item. SIS and PCA will walk the OIC through a discussion of this topic. No action is required at this time.

OREGON INVESTMENT COUNCIL

ASSET/LIABILITY DISCUSSION: ASSET CLASS EXPECTATIONS AND PRELIMINARY MIXES

SEPTEMBER 19, 2012

STRATEGIC INVESTMENT SOLUTIONS, INC.

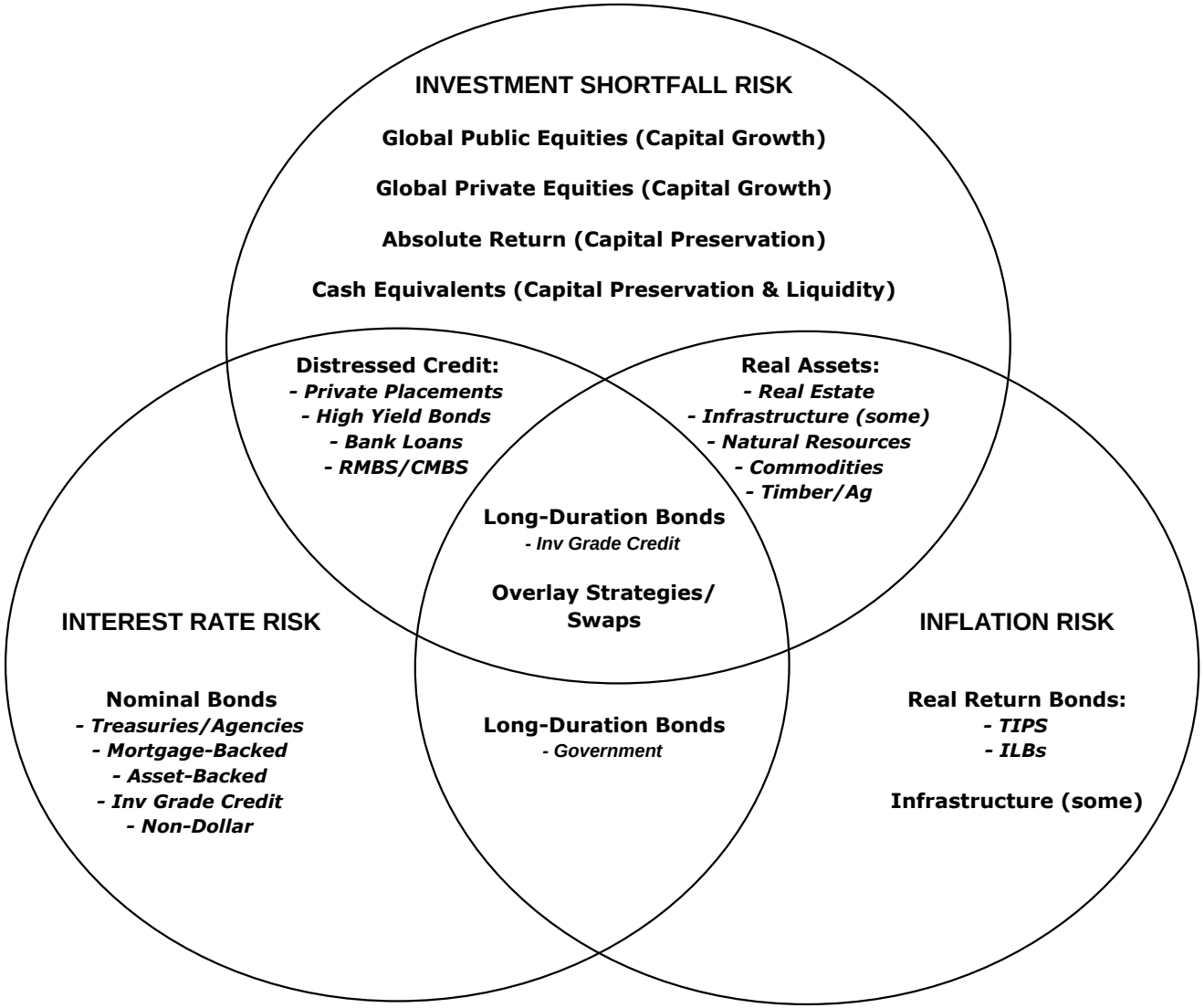
333 Bush Street, Suite 2000
San Francisco, CA 94104
(415) 362-3484

John P. Meier, CFA
Managing Director

Current Investment Climate

- Deterioration in pension plan funded status
- Volatile capital markets
- Future returns expected to be less robust than long term historical averages

Asset Allocation: Role in Hedging Risks



“Asset-Only Space” Allocation Strategy

- The **Return Enhancement** portfolios allow us to create wealth by maximizing total return. These must have expected returns that meet or exceed the Total Fund return objective.
  - Public Equity
  - Private Equity
  - Opportunistic Real Estate
  - High Yield / Distressed Debt
  - Real Return Equity
- The Risk Reduction portfolios allow us to **preserve wealth** during weak market conditions. These must have expected returns with a relatively **low or negative correlation** with the Return Enhancement portfolios.
  - Core Fixed Income
  - Core Real Estate and Other Income Oriented Real Return Strategies
  - Absolute Return Strategies
  - Cash Equivalents
- **Problem:** Asset Only optimization only deals explicitly with the first of these three risks (Investment Shortfall Risk). We also need to capture the Inflation Risks imbedded in the liabilities.

SIS Capital Market Assumptions

- Strategic Purpose - Horizon = 2 to 3 Market Cycles
- Based on Capital Asset Pricing Model (CAPM*) — Investor Must Be Compensated for Taking Higher Risk
- Economic Growth Forecasts
- Stay Within Long-Term Real Return Corridors, Combined with Mean Reversion*
- Qualitative Overlay — Expectations Must Produce Reasonable Portfolios and a "Stable Frontier"
- Data Sources/Return
  - Complete Monthly Return History
  - Blue Chip Economic Forecast (Inflation, GDP Growth Estimates)
  - Wall Street Forecasts
  - Global Manager Forecasts
  - CAPM (For "Difficult" Asset Classes)
- Correlations* — Most Stable (90-Month Half-Life, 1985 to Present)
- Risks — Fairly Stable (Two Factor Model*; Historical 1976 to present, Half-Life 1985 to Present)

** See Appendix for Glossary of Terms*

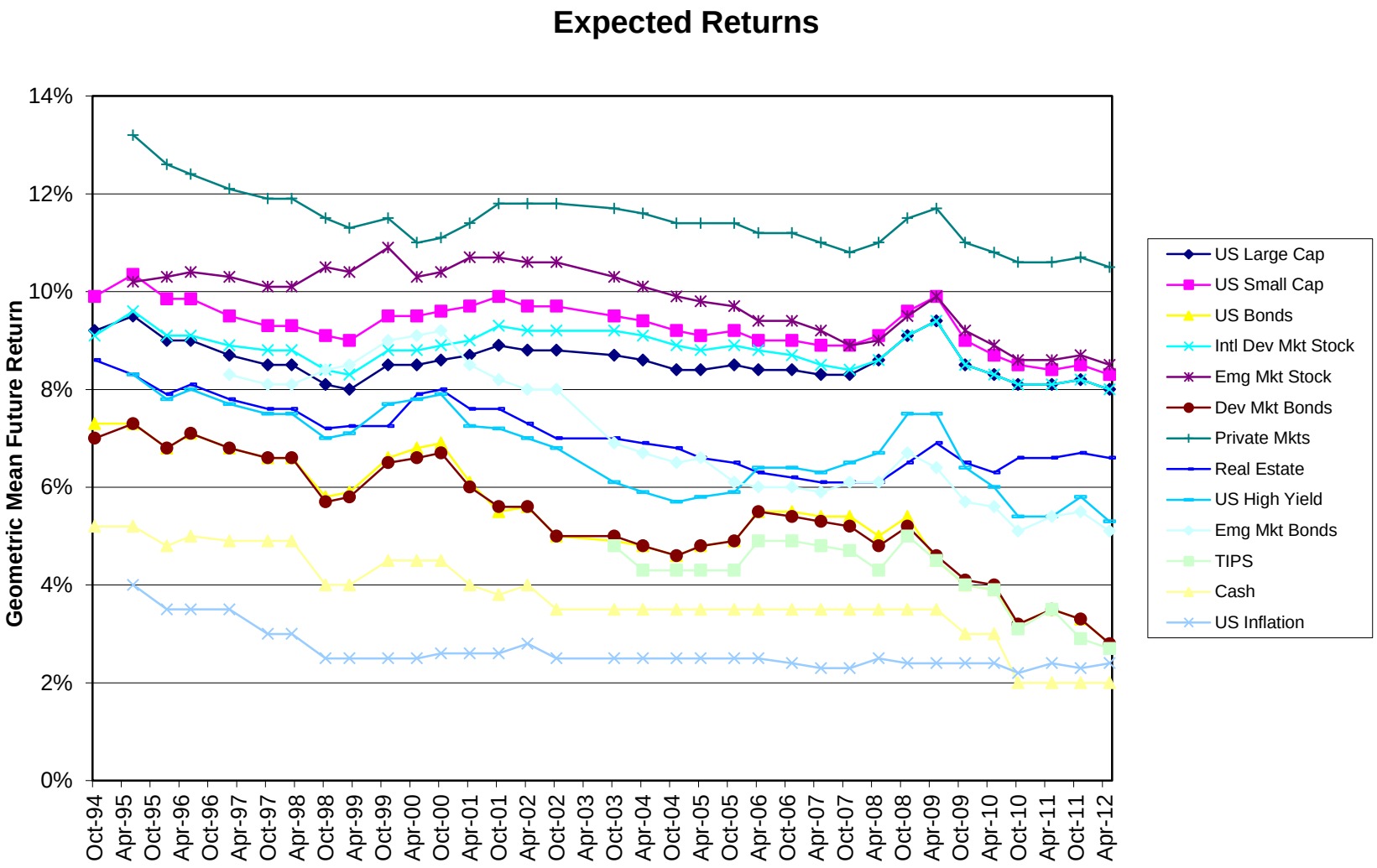
Building Block Approach to Assumptions

Inflation	Consensus of economists' forecasts, Nominal Treasury Bonds and TIPS implied breakeven
Cash	Inflation + 0.5% to 1% premium (currently a negative "premium")
US Large Cap	CAPM, 3% to 6% equity premium, macroeconomic DDM
US Small Cap	CAPM, (beta of ~1.2)
Private Equity	CAPM, (beta of ~1.6)
US Fixed	Yield to Worst on Aggregate Index (compare to historic bond risk premium); adjusted for client's duration target and unique sector allocations
International Equity	Weighted sum of local market premium + local risk free rate
International Bond	US fixed return, adjusted for Quality and Duration (currency effects based on PPP)
Real Estate	Historical behavior of equity REITs; current appraisal cap rates; CAPM; adjusted for client's portfolio structure and leverage (core/value added/opportunistic)
Hedge Funds	Expected net premium to LIBOR (3-4%); 0.40 Sharpe Ratio
High Yield	Historical ratio: spread of High Yield over US Fixed Income divided by spread of Large Cap over US Fixed Income
Real Assets	Based on a portfolio consisting 20% Timberland and Farmland, 40% Industrial Commodity producers (Energy, Metals and Mining), 20% Infrastructure (UBS Index) and 20% direct investing represented by spot (not futures based) commodity price movements.

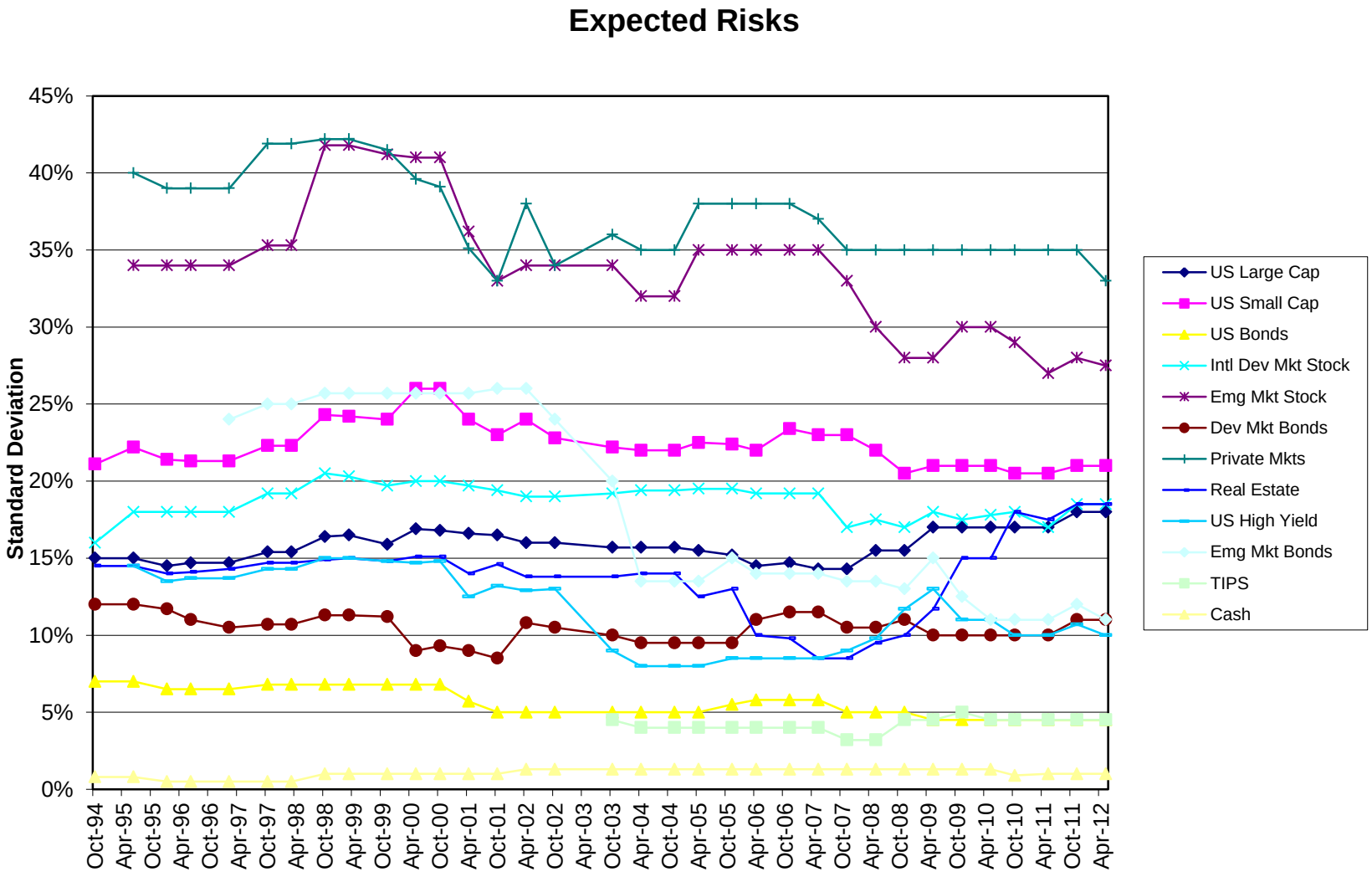
Current Capital Market Assumptions (May, 2012)

	Expected Return	Standard Deviation	Sharpe Ratio
U.S. Inflation	2.4%	----------	----------
U.S. Large Cap Stock	8.0%	18.0%	0.333
U.S. Small Cap Stock	8.3%	21.0%	0.300
U.S. Fixed Income	2.8%	4.5%	0.178
Int'l Develop Mkt Stock	8.0%	18.5%	0.324
Emerging Mkt Stock	8.5%	27.5%	0.236
Int'l Fixed Income	2.8%	11.0%	0.073
Private Markets	10.5%	33.0%	0.258
Real Estate	6.6%	18.5%	0.249
U.S. High Yield	5.3%	10.0%	0.330
Emerging Mkt Debt	5.1%	11.0%	0.282
U.S. TIPS	2.7%	4.5%	0.156
Int'l ILB	2.8%	4.0%	0.200
Floating Rate Bank Loans	4.8%	8.0%	0.350
Infrastructure	7.1%	25.0%	0.204
Hard Asset Equity	7.6%	28.0%	0.200
Commodities	4.3%	30.0%	0.077
Hedge Funds	5.3%	10.0%	0.330
Cash	2.0%	1.0%	0.000

History of Basic Assumptions

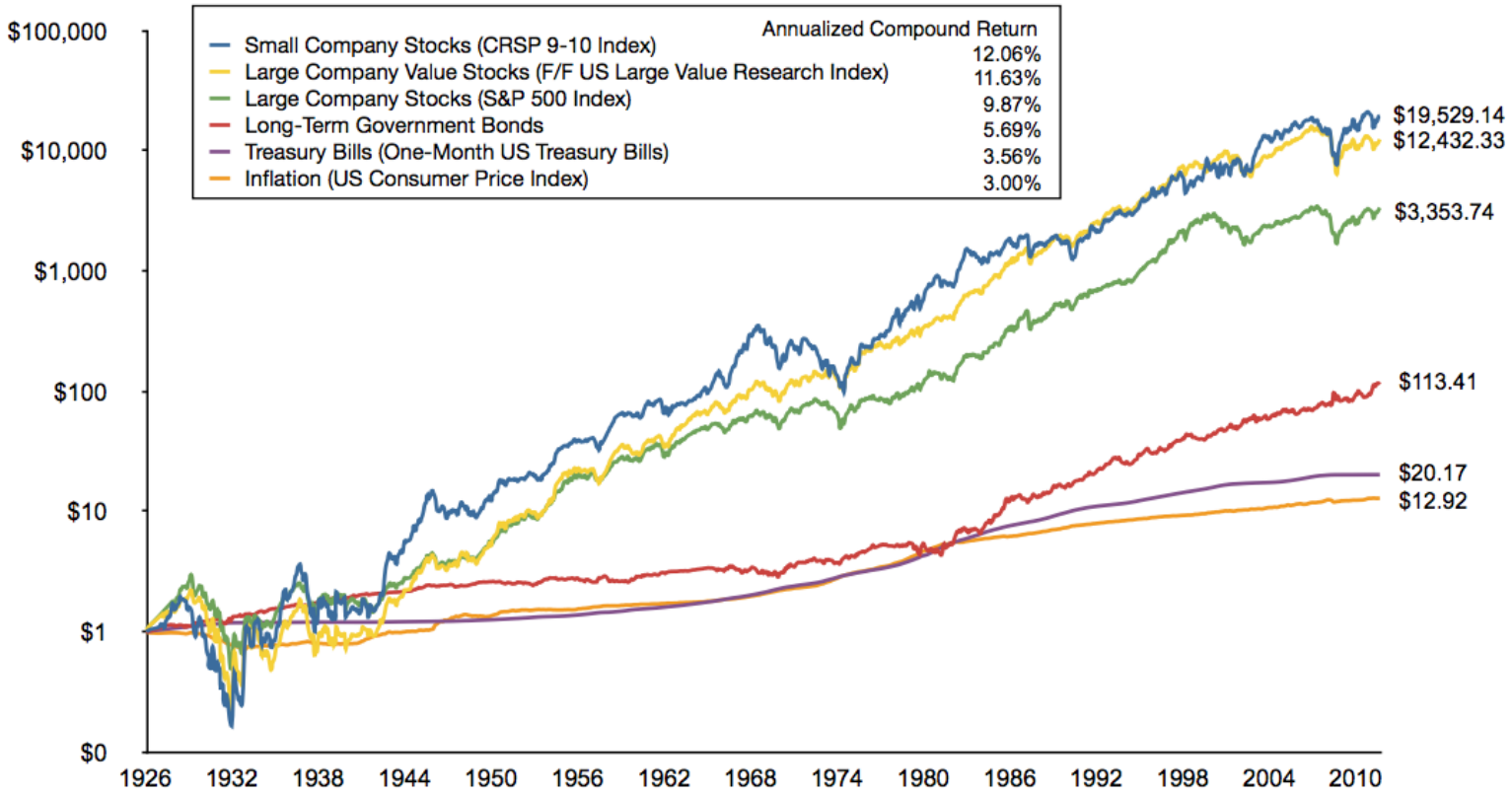


History of Basic Assumptions



Stocks, Bonds, Bills and Inflation Yearbook

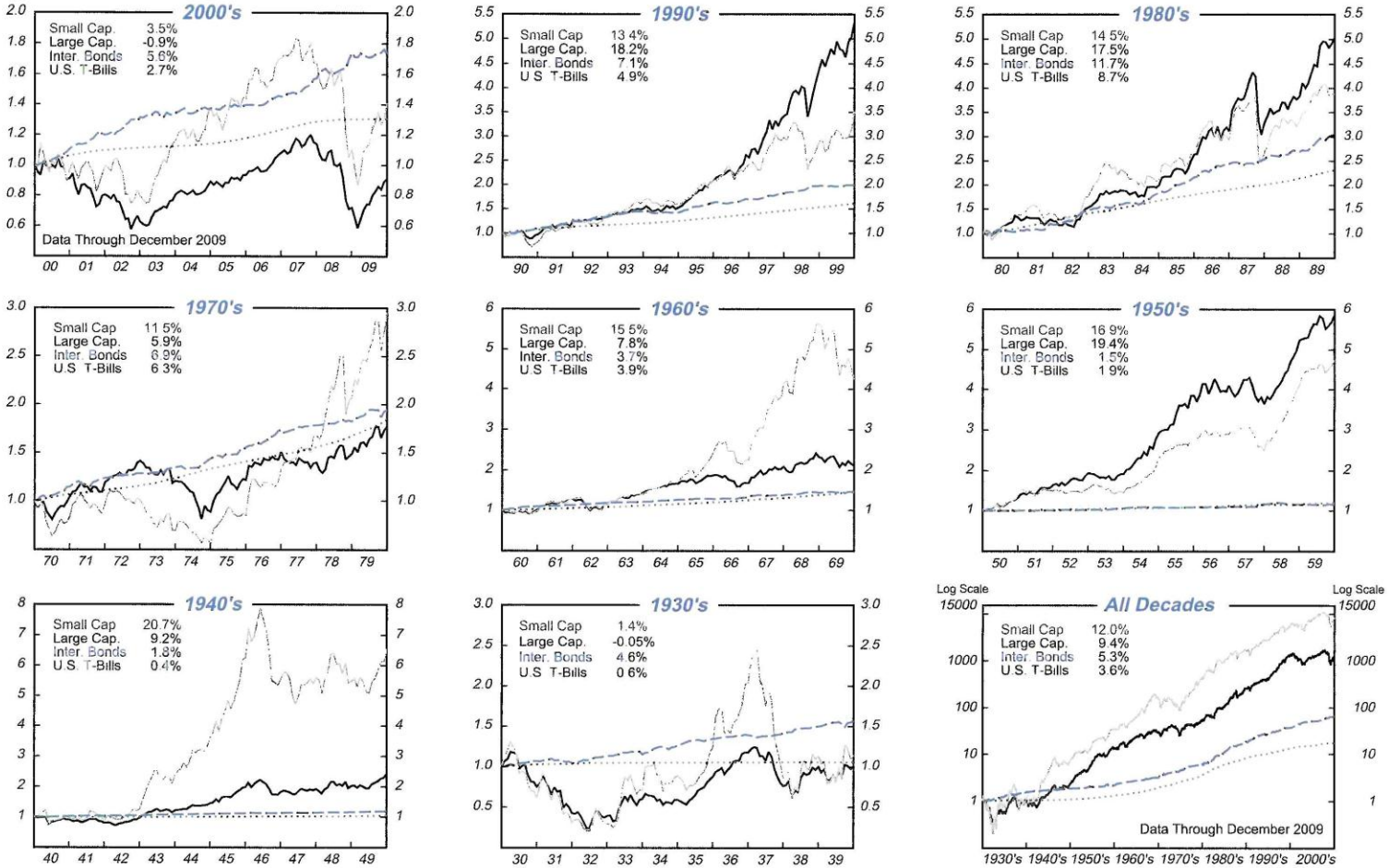
Growth of $1
July 1926 - February 2012



Sources: CRSP data provided by the Center for Research in Security Prices, University of Chicago; S&P data are provided by Standard &Poor's Index Services Group; Fama/French and multifactor data provided by Fama/French; US long-term bonds, bills, and inflation data © Stocks, Bonds, Bills, and Inflation Yearbook™, Ibbotson Associates, Chicago (annually updated work by Roger G, Ibbotson and Rex A Seinquefield).

Eight Decades of Wealth Indices

Total Return



Data is expressed as a Compound Annual Rate.

The graphs assume $1.00 is invested December 31st of the year prior to the beginning of the decade.

Sources: Standard & Poor's Corporation; Russell Investment Group; Ryan Labs, Inc.; Barclays Capital; Financial Analysts Research Foundation; © 2010 Crandall, Pierce & Company • All rights reserved.

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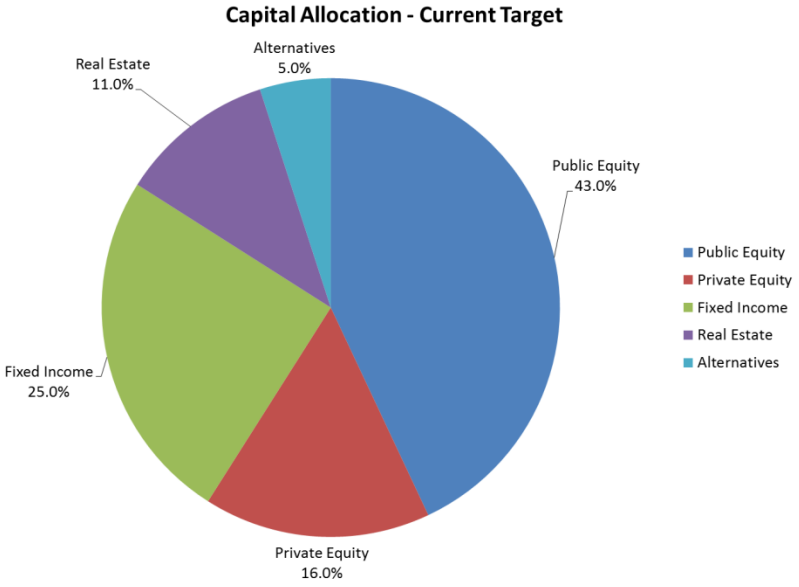
Adjustments from SIS Standard Expectations for Oregon

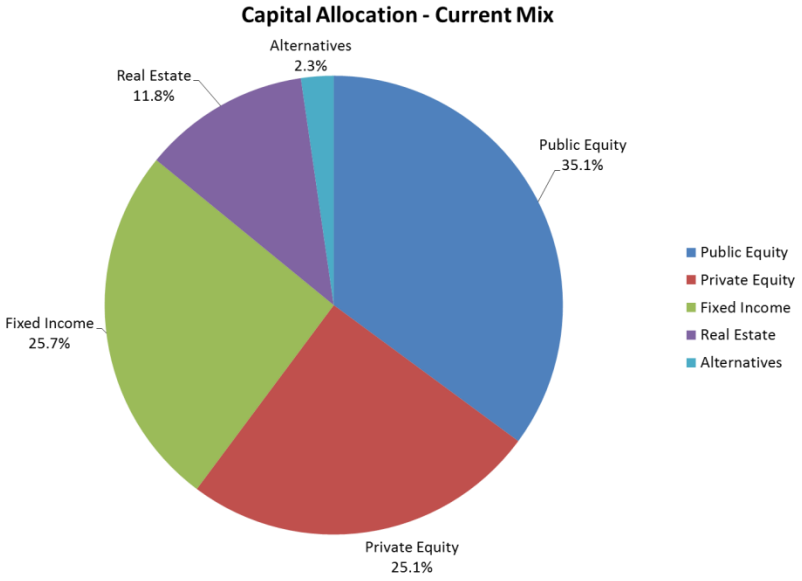
- Risk and Return of Real Estate increased to reflect portfolio structure (Core, REITs, Value Added and Opportunistic).
- Risk of Private Equity decreased to reflect Oregon's long term experience in the asset class.

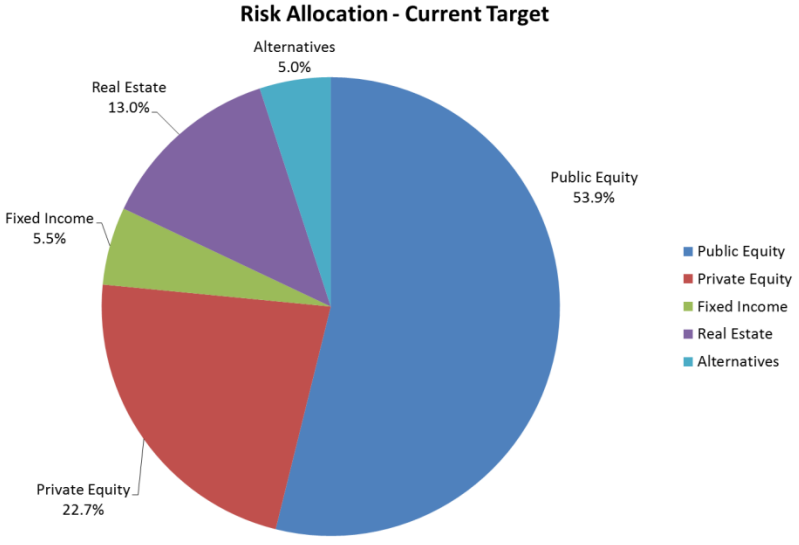
Long Term Benchmark Policy Class Assumptions (May 2012)

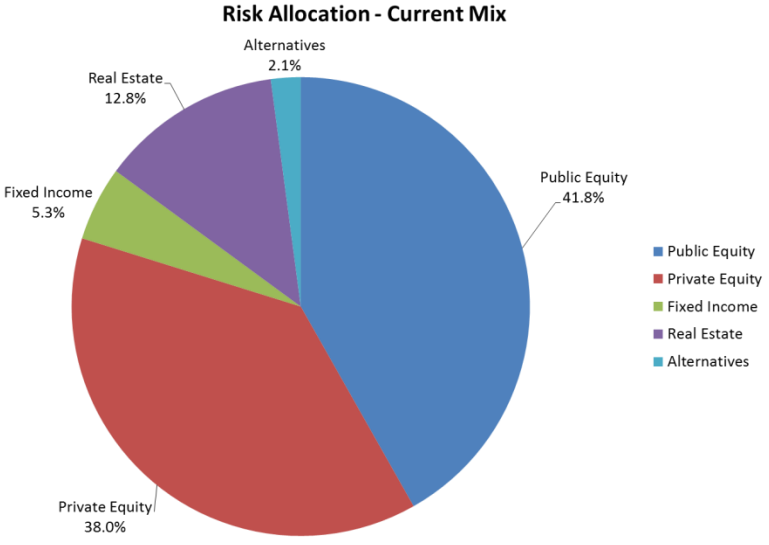
	RANGE	EXP. RETURN	EXP. RISK	CURRENT TARGET	CURRENT PORTFOLIO
PUBLIC EQUITY	38-48%	8.1%	17.6%	43%	35.1%
FIXED INCOME	20-30%	3.8%	4.7%	25%	25.7%
PRIVATE EQUITY	12-20%	10.5%	25.0%	16%	25.1%
REAL ESTATE	8-14%	7.5%	22.0%	11%	11.8%
ALTERNATIVES	0-8%	7.7%	20.1%	5%	0.7%
OPPORTUNISTIC	0-3%	9% Objective		0%	1.6%
CASH	0-3%	2.0%	1.0%	0%	0.0%
CURRENT TARGET		8.06%	14.0%		
CURRENT MIX		8.31%	14.6%		

Asset Allocation









Current Asset Class Optimization

	CURR TARGET	CURR MIX	MIX 1	MIX 2	MIX 3	MIX 4	MIX 5
PUBLIC EQUITY	43%	35.1%	27.5%	29.4%	31.6%	32.5%	39.6%
FIXED INCOME	25%	25.7%	48.7%	42.2%	35.4%	28.6%	20.4%
PRIVATE EQUITY	16%	25.1%	14.1%	16.5%	18.9%	21.9%	23.7%
REAL ESTATE	11%	11.8%	4.8%	6.9%	9.2%	12.0%	11.3%
ALTERNATIVES	5%	0.6%	5.0%	5.0%	5.0%	5.0%	5.0%
OPPORTUNISTIC	0%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%
EXP. RETURN	8.06%	8.31%	7.00%	7.37%	7.73%	8.11%	8.47%
EXPECTED RISK	14.0%	14.6%	11.1%	12.1%	13.0%	14.0%	15.0%
SHARPE RATIO	0.433	0.432	0.450	0.444	0.441	0.436	0.431

Alternatives constrained to a maximum of 5% of portfolio.

Next Steps

- Model liabilities
- Integrate liabilities with assets
- Present results December 2012 meeting

APPENDIX

Defining Risk

- The basic definition of investment risk is variability of return. The alternative policies, or “asset mixes,” examined here are built to minimize this variability given an expected level of return over a long period of time. These mixes we call efficient. The method used to build them is an improved version of standard mean-variance optimization. The probabilities of continuously compounded returns to each asset class are assumed to approximate a bell shaped curve, or normal distribution. In other words, returns are random, and returns near the expected average are more likely than extreme returns. The likelihood of extreme returns is expressed as standard deviation. The probability of a particular asset-class return depends on the returns provided by every other asset class; this interdependence is expressed as correlation. Thus asset-class return expectations are commonly presented as three sets of numbers: mean returns, standard deviations, and correlations.

Definitions

STRATEGIC ASSET ALLOCATION

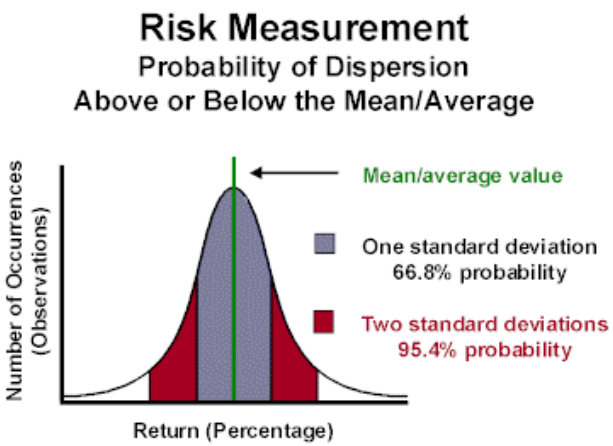
The discipline used to determine which assets and what proportion among those assets meet an investor's cash flow requirements, planning horizon, and attitude toward risk.

EXPECTED RATE OF RETURN

The expected value or mean of a probability distribution of returns. In our case, the expected return is the compounded annual return which is the same as the geometric mean. After tax expected return nets out the expected income and capital gains taxes paid by the trust.

STANDARD DEVIATION

A statistical measure of the degree to which an individual value in a probability distribution tends to vary from the mean of the distribution. The square root of the **variance**. When returns are normally distributed, an individual return will fall within one standard deviation of the mean about two-thirds of the time. For example, if a portfolio had an expected return of 5% and an expected risk (standard deviation) of 13, then:

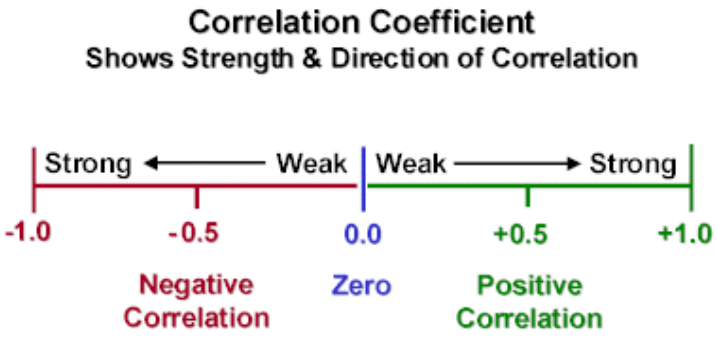


One Standard Deviation	68% of the time, returns can be expected to fall between –8.0% and +18%
Two Standard Deviations	95% of the time, returns can be expected to fall between -21% and +31%

Standard deviation is a useful historical measure of the variability of return earned by an investment portfolio. In performance measurement, it is generally assumed that a larger degree of dispersion implies that greater risk was taken to achieve the return.

Definitions

CORRELATION COEFFICIENT



Correlation coefficient (r) is a measure of the degree of **correlation** between two quantities or variables, such as the rates of return on stocks and on bonds. A negative coefficient of correlation indicates an inverse or negative relationship, whereas a positive value indicates a direct or positive relationship. The range of values is from -1 to +1 inclusive. A zero (0) value indicates that no correlation exists. Correlation coefficients are useful in **asset class** identification and portfolio **diversification**.

Current Capital Market Assumptions (May, 2012)

	US LC	US SC	US FI	Intl Stock	EM Stock	Int'l FI	Real Est	Priv Eqty	Abs Ret	High Yield	EM Debt	US TIPS	Commod	BK Loan	Infrast	Hard Asset	Intl ILB	Cash
US Large Cap Stock	1.00																	
US Small Cap Stock	0.86	1.00																
US Fiixed Income	0.18	0.10	1.00															
Int'l Stock	0.77	0.72	0.07	1.00														
Emerging Mkt Stock	0.58	0.65	-0.09	0.71	1.00													
Int'l Fixed Income	0.11	0.01	0.46	0.35	0.12	1.00												
Real Estate	0.63	0.61	0.17	0.58	0.52	0.00	1.00											
Private Equity	0.63	0.60	-0.07	0.58	0.57	0.01	0.31	1.00										
Absolute Return	0.64	0.57	0.22	0.66	0.54	0.14	0.46	0.46	1.00									
US High Yield	0.70	0.73	0.35	0.62	0.62	0.29	0.65	0.51	0.37	1.00								
Emerging Mkt Debt	0.52	0.52	0.34	0.46	0.56	0.13	0.47	0.43	0.61	0.49	1.00							
US TIPS	0.11	0.09	0.61	0.09	0.10	0.44	0.27	-0.08	0.24	0.32	0.40	1.00						
Commodities	0.27	0.28	-0.07	0.29	0.37	0.08	0.28	0.18	0.49	0.13	0.44	0.45	1.00					
FR Bank Loan	0.63	0.62	0.15	0.60	0.57	0.10	0.65	0.41	0.49	0.76	0.48	0.26	0.25	1.00				
Infrastructure	0.51	0.51	0.42	0.50	0.45	0.20	0.64	0.30	0.55	0.62	0.53	0.38	0.22	0.57	1.00			
Hard Asset	0.49	0.52	0.04	0.59	0.58	0.07	0.55	0.30	0.45	0.40	0.42	0.33	0.69	0.44	0.44	1.00		
Int'l ILB	0.45	0.35	0.59	0.46	0.20	0.49	0.26	0.26	0.38	0.41	0.33	0.52	0.17	0.34	0.17	0.31	1.00	
Cash	0.16	0.10	0.34	0.08	-0.02	0.04	-0.16	0.03	0.58	-0.16	0.18	0.08	0.18	-0.08	0.30	0.04	0.13	1.00

Digression on Portfolio Expected Return

- Portfolio Expected Return is NOT THE WEIGHTED SUM OF ASSET CLASS EXPECTATIONS
  - Current Target – Weighted Sum = 7.31%, Expected Return = 8.06%
  - Current Mix – Weighted Sum = 7.51%, Expected Return = 8.31%
- The "gift" of rebalancing
- Example – Two Fair Coins, Heads +25%, Tails -20%
  - Expected Return for each coin = 0% (1.25 * 0.8 = 1.0)
  - Rebalance to 50% of value on each coin after each flip
  - Four Possible Outcomes
    - Both Coins down 20%, Return = (50 * 0.8 + 50 *.8)/100 = -20%
    - Both Coins up 25%, Return = (50 * 1.25 + 50* 1.25)/100 = +25%
    - 2 times One Coin up 25%, One Coin down 20% (50 * 1.25 + 50 * 0.8)/100 = +2.5%
  - Expected Return on "Portfolio" = [(1.25) * (0.8) * (1.025) * (1.025)] ^ (1/4) = 1.25%
  - The more volatile and less correlated the asset classes, the greater the effect

Glossary of Terms

- **Asset Allocation** – (1) The way investments are distributed and weighted among different asset classes. (2) The distribution of investments among categories of assets, such as equities, fixed income, cash equivalents, and real estate.
- **CAPM** – Capital Asset Pricing Model. A system of equations that describes the way prices of individual assets are determined in efficient markets, that is, in markets where information is freely available and reflected instantaneously in asset prices. According to this model, prices are determined in such a way that risk premiums are proportional to systematic risk, measured by the beta coefficient, which cannot be eliminated by diversification. CAPM provides an explicit expression of the expected returns for all assets. Basically, the model holds that if investors are risk averse, high-risk stocks must have higher expected returns than low-risk stocks. CAPM maintains that the expected return of a security or a portfolio is equal to the rate on a risk-free investment plus a risk premium.
- **Correlation** – A relationship between two quantities, such that when one changes, the other does. A measure (ranging in value from 1.00 to -1.00) of the association between a dependent variable (fund, portfolio) and one or more independent variables (index). Correlation is a measure, not necessarily of causality, but rather of the strength of a relationship. A correlation coefficient of 1.00 implies that the variables move perfectly in lockstep; a correlation coefficient of -1.00 implies that they move inversely in lockstep; and a coefficient of 0.00 implies that the variables as calibrated are uncorrelated.
- **Efficient Frontier** – A set of optimal portfolios, one for each level of expected return, with minimum risk.
- **Expected Return** -- Estimate of the return of an investment or portfolio from a probability distribution curve of all possible rates of return; statistically, it is the mean (ether geometric mean or arithmetic mean) of the distribution or the "most likely" outcome.
- **Factor Model** – Regression-based mathematical calculation used to determine the extent to which macroeconomic factors or other explanatory variables affect the value or price movement of a specific security or portfolio.

Professional Biographies

- **JOHN P. MEIER, CFA**. *Managing Director and Head of Quantitative Services.* Highly experienced specialist in strategic planning, capital markets analysis, and quantitative investment strategies. A leading authority in the fields of performance benchmarking and portfolio performance attribution, whose ideas have been published in Pensions and Investments, Futures, Risk and Quantitative International Investing. Senior Product Manager at BARRA from 1988 to 1994, responsible for equity risk and valuation models and services. B.S. in Chem. Eng. From Michigan State, MBA in Finance from UC Berkeley.
- **MARC GESELL, CFA**. *Vice President.* Quantitative analysis, statistical research, and systems development specialist responsible for strategic planning. Seven years experience in software R&D, asset allocation modeling, and investment analysis. Most recently AVP and portfolio manager for First Interstate Bank (now Wells Fargo), responsible for managing $200 million in private client portfolios. Helped establish clients' strategic plans, investment objectives, asset allocation mixes, and portfolio structure. B.S. in Computational Mathematics, Arizona State University, MBA in Finance, San Francisco State University, Chartered Financial Analyst. Former Officer, United State Army.
- **LOUIS KINGSLAND, JR.** *Adviser and Chair, Investment Policy Committee.* Developed first commercially available asset allocation and liability simulation model and asset mix optimizer, both still widely used today. Most recently EVP of Mellon Capital Management. Graduate, Air Force Academy. MA in Engineering, CalTech. Served as Deputy Mission Director of The Viking Space Project, and received a Distinguished Service Medal from NASA.

Capital Market Expected Return Assumptions

Oregon Investment Council

Two Drivers of Long-Term Capital Market Returns

- Long-term drivers of real capital market returns (market risk premiums)

Real Yields on Bonds

- Today Treasury real yields are negative
- Past 30 years, falling
- Future level? Likely up

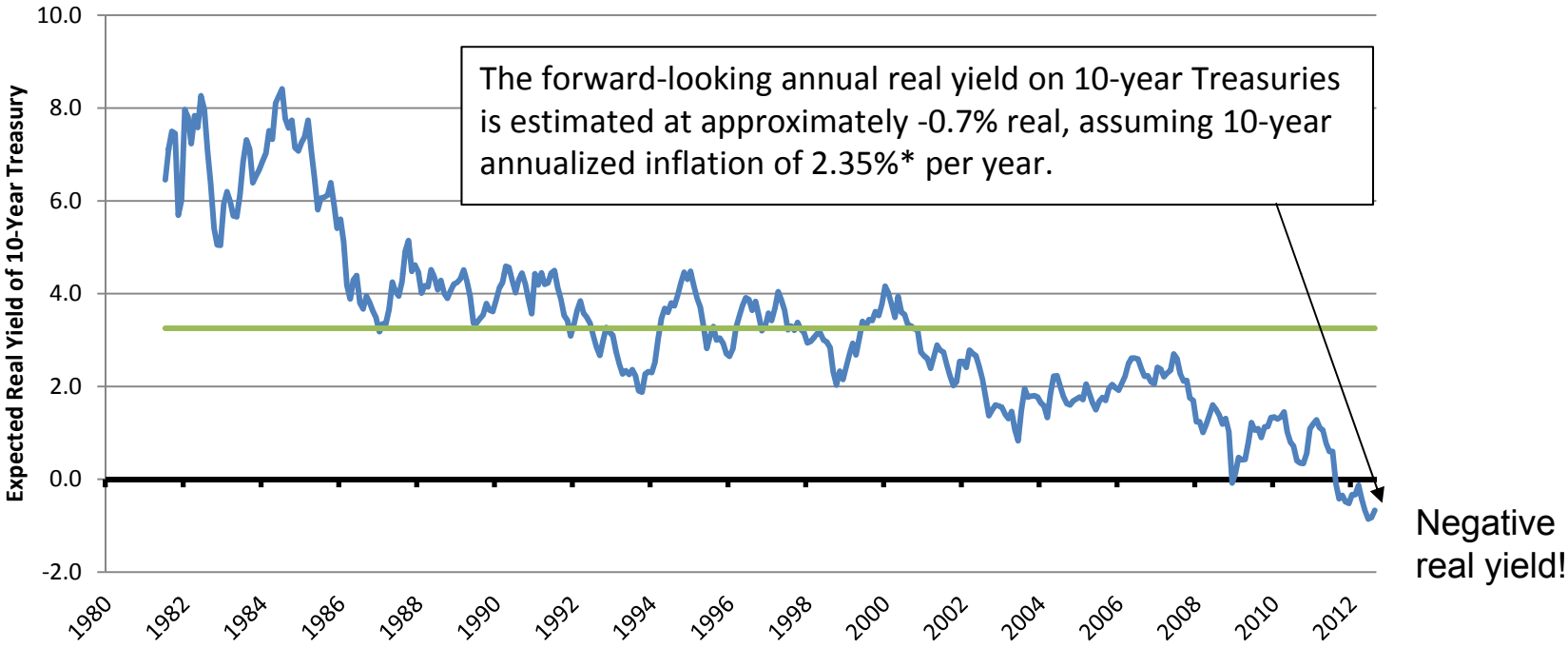
Earnings Yield on Equities

- Today Positive
- Premium is very volatile
- Future level? Unknown

- One of the two long-term drivers of capital market returns is historically low
- NOTE: Real Yield = bond yield less expected inflation
- Rising yields cause bond prices to fall

Negative Expected Real Yield on 10-Year Treasury

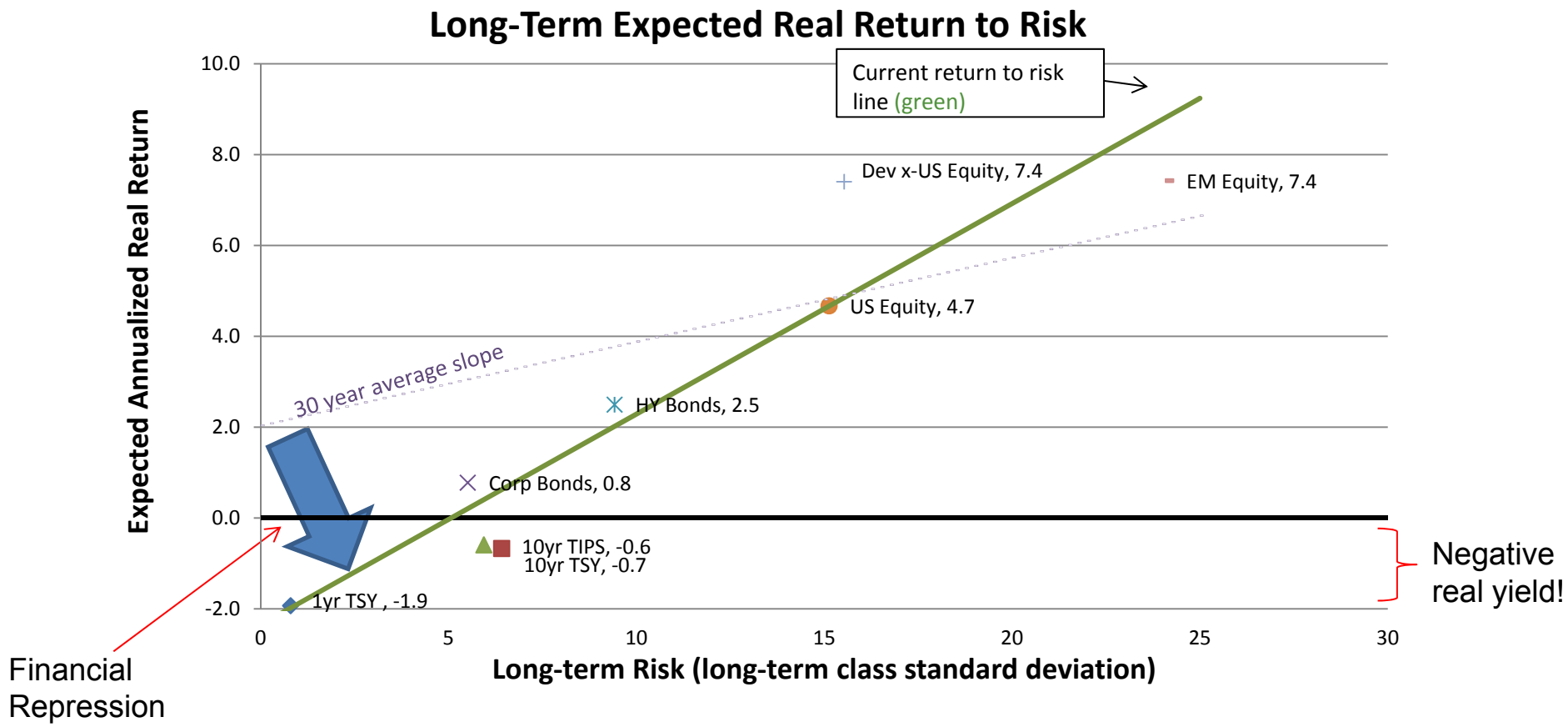
Estimate of 10-Year Treasury Forward-Looking Real Yield



Sources: www.ustreas.gov for 10-year constant maturity rates
*Federal Reserve Bank of Philadelphia survey of professional forecasts for inflation estimates

- After inflation, expect to lose purchasing power holding a Treasury
- Currently quoted TIPS real yield is negative up to 20 years (inflation minus for 20 years!)

Negative Real Yields are Propping-Up Risk Assets



- Financial repression is driving up risk asset prices relative to cash
- "Artificial" support for asset prices is inherently unstable
- Policy mistake, political brinksmanship, could wreak havoc.

PCA's Investment Class Assumptions

Classes Applicable to OPERF

PCA Asset Class Assumptions (10 years)	Compound Return	Volatility (Std Dev)
Inflation	3.00	2.00
Cash	3.00	2.00
OPERF Fixed Income	3.00	4.50
Global Equity	8.00	18.50
Alternative Return	5.90	8.00
Real Estate	6.50	10.00
Private Equity	9.60	26.00

- Cash returns are 10-year expectations. Assumes rising inflation and cash rates in out years.
- 10-year inflation expectations are equal to expected 10-year fixed income returns.
- Traditional fixed income (BC Aggregate) yields only 1.75% today.
- OPERF Fixed Income takes into account OPERF's higher return / risk fixed income class.
- PCA's general capital market assumptions are utilized for the remainder of classes assume:
  - No alpha in excess of class return expectations
  - Private equity returns = public market returns +300 bps, which would be top quartile

Policy Portfolio versus Current Allocation Risk and Return

OIC Portfolio Allocation	Policy Target
Cash	0%
OPERF Fixed Income	25%
Global Equity	43%
Alternative Return	5%
Real Estate	11%
Private Equity	16%

OIC Portfolio Allocation	Actual Allocation
Cash	0%
OPERF Fixed Income	26%
Global Equity	35%
Alternative Return	1%
Real Estate	12%
Private Equity	26%

Policy Portfolio Returns Expectations*	
Portfolio Compound Return	7.2%
Portfolio Arithmetic Return	8.0%
Portfolio Standard Deviation	12.8%

Current Allocation Portfolio Attributes*	
Portfolio Compound Return	7.5%
Portfolio Arithmetic Return	8.3%
Portfolio Standard Deviation	13.8%

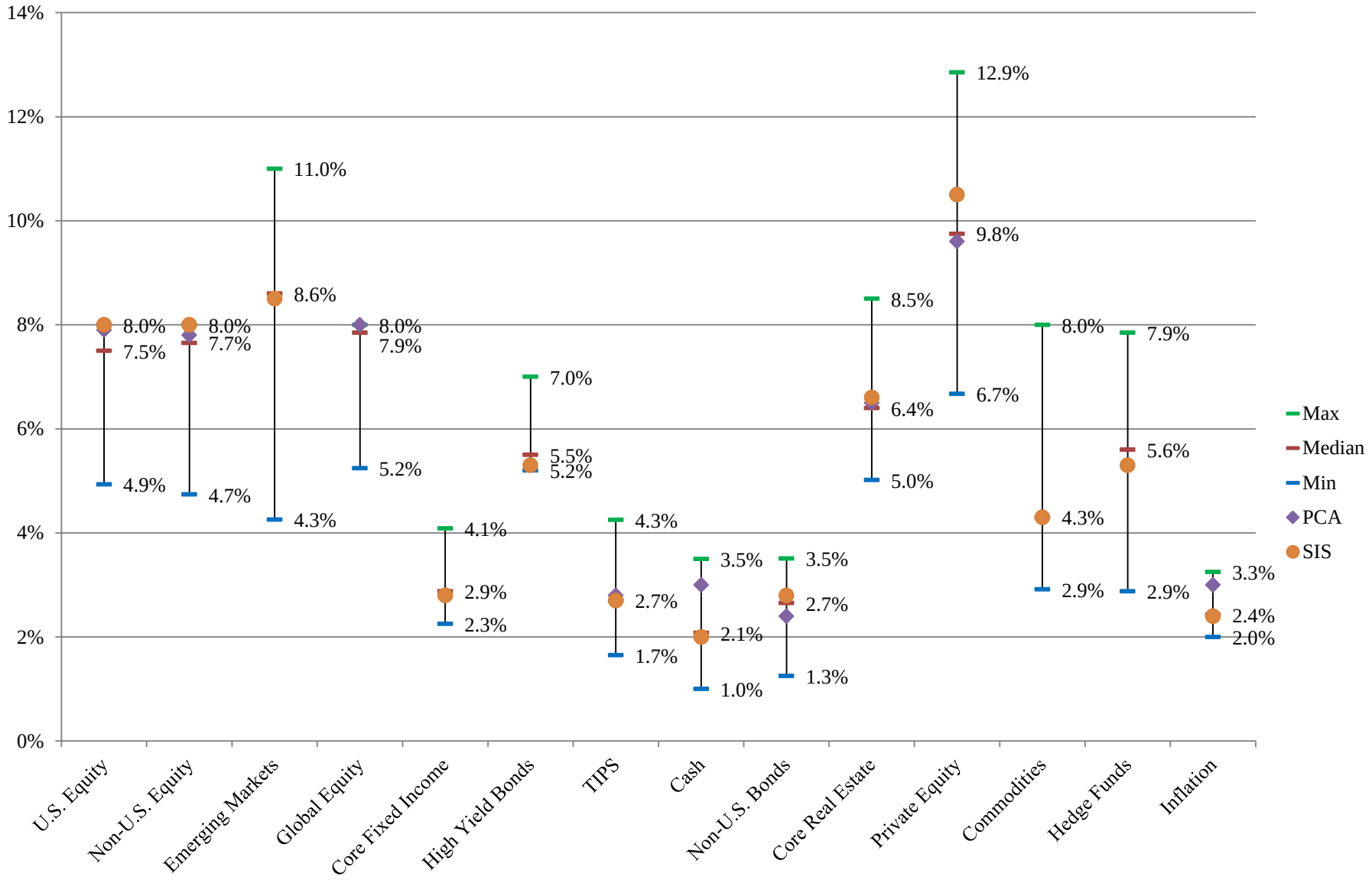
	GlblEq	ORfixed	PrivEq	RealEst	AltRet
GlblEq	1	0.43	0.85	0.4	0.25
ORfixed	0.43	1	0.3	0	0.3
PrivEq	0.85	0.3	1	0.4	0.25
RealEst	0.4	0	0.4	1	0.25
AltRet	0.25	0.3	0.25	0.25	1

*Source: PCA Calculations based on PCA Investment Class Assumptions

Takeaways

- With generational lows in interest rates around the world, achieving returns similar to those achieved historically will be challenging.
- Financial repression is an inherently unstable state of affairs.
- The current OPERF risk profile at the high end of that envisioned by policy.
- Attempts to increase portfolio returns should focus on diversification, (accessing different risk), not adding more growth focused risk.

2012 Expected Returns by Asset Class



Source: OST survey of 2012 capital market assumptions from 11 investment consultants. Returns are geometric.

TAB 6 – ASSET ALLOCATIONS & NAV UPDATES

Asset Allocations at August 31, 2012

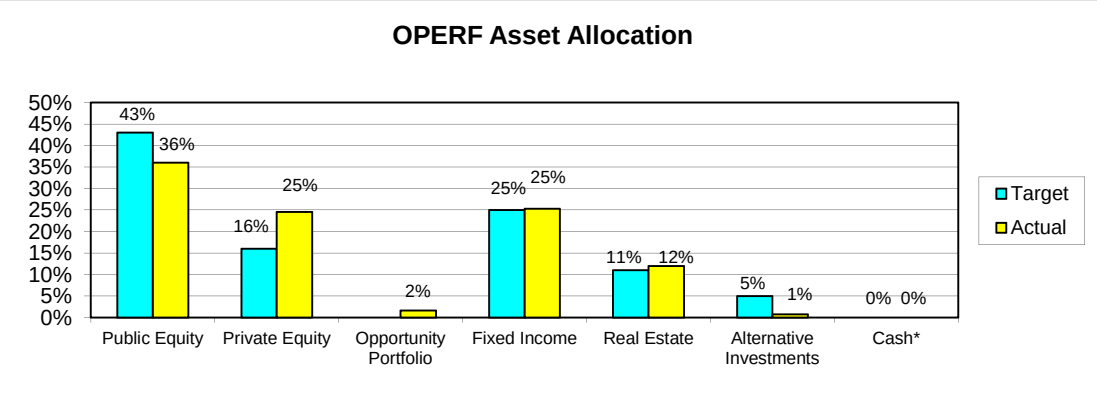
OPERF	Policy	Target	$ Thousands	Pre-Overlay	Overlay	Net Position	Actual	$ Thousands	$ Thousands
			Regular Account					Variable Fund	Total Fund
Public Equity	38-48%	43%	20,762,992	35.9%	59,800	20,822,792	36.0%	774,387	21,597,179
Private Equity	12-20%	16%	14,178,432	24.5%		14,178,432	24.5%		14,178,432
Total Equity	**54-64%**	**59%**	**34,941,424**	**60.4%**	**59,800**	**35,001,224**	**60.5%**		**35,775,611**
Opportunity Portfolio			922,398	1.6%		922,398	1.6%		922,398
Fixed Income	**20-30%**	**25%**	**13,850,743**	**23.9%**	**769,708**	**14,620,451**	25.3%		**14,620,451**
Real Estate	**8-14%**	**11%**	**6,906,456**	**11.9%**	**(6,300)**	**6,900,156**	11.9%		**6,900,156**
Alternative Investments	**0-8%**	**5%**	**399,882**	**0.7%**		**399,882**	0.7%		**399,882**
Cash*	**0-3%**	**0%**	**823,208**	**1.4%**	**(823,208)**	**-**	0.0%	8,173	**8,173**
TOTAL OPERF		**100%**	**$ 57,844,111**	**100.0%**	**$ -**	**$ 57,844,111**	**100.0%**	**$ 782,560**	**$ 58,626,671**

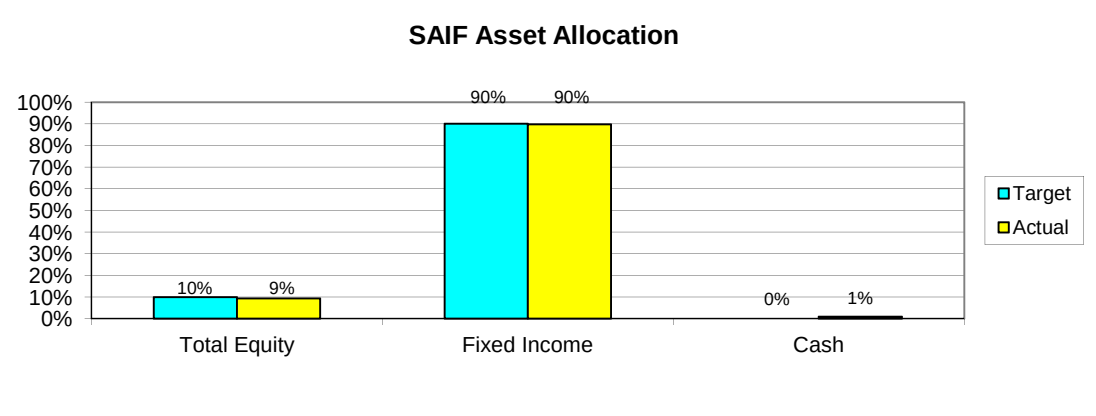
*Includes cash held in the policy implementation overlay program.

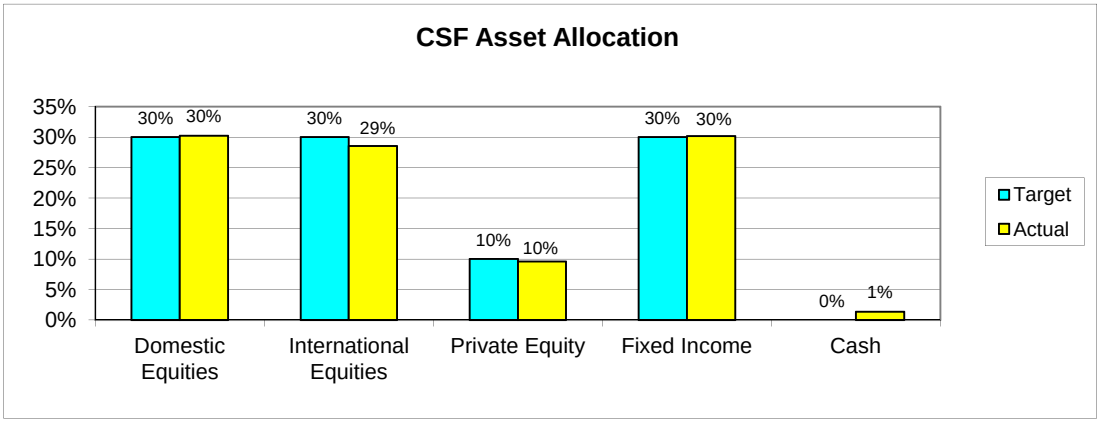
SAIF	Policy	Target	$ Thousands	Actual
Total Equity	**7-13%**	**10.0%**	**415,534**	**9.3%**
Fixed Income	**87-93%**	**90.0%**	**4,005,128**	**89.8%**
Cash	**0-3%**	**0%**	**38,866**	**0.9%**
TOTAL SAIF		**100%**	**$4,459,528**	**100.0%**

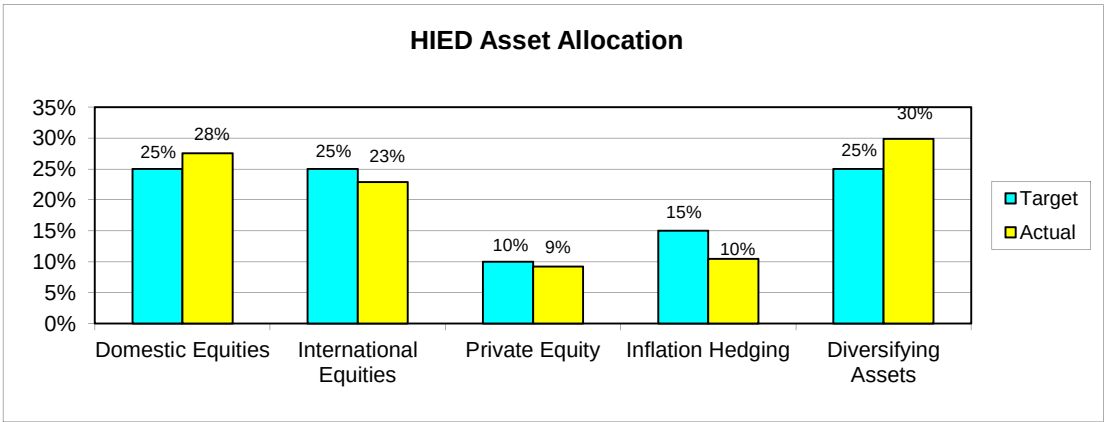
CSF	Policy	Target	$ Thousands	Actual
Domestic Equities	25-35%	30%	$338,341	30.2%
International Equities	25-35%	30%	319,682	28.6%
Private Equity	0-12%	10%	107,380	9.6%
Total Equity	**65-75%**	**70%**	**765,403**	**68.4%**
Fixed Income	**25-35%**	**30%**	**337,771**	**30.2%**
Cash	**0-3%**	**0%**	**15,440**	**1.4%**
TOTAL CSF			**$1,118,614**	**100.0%**

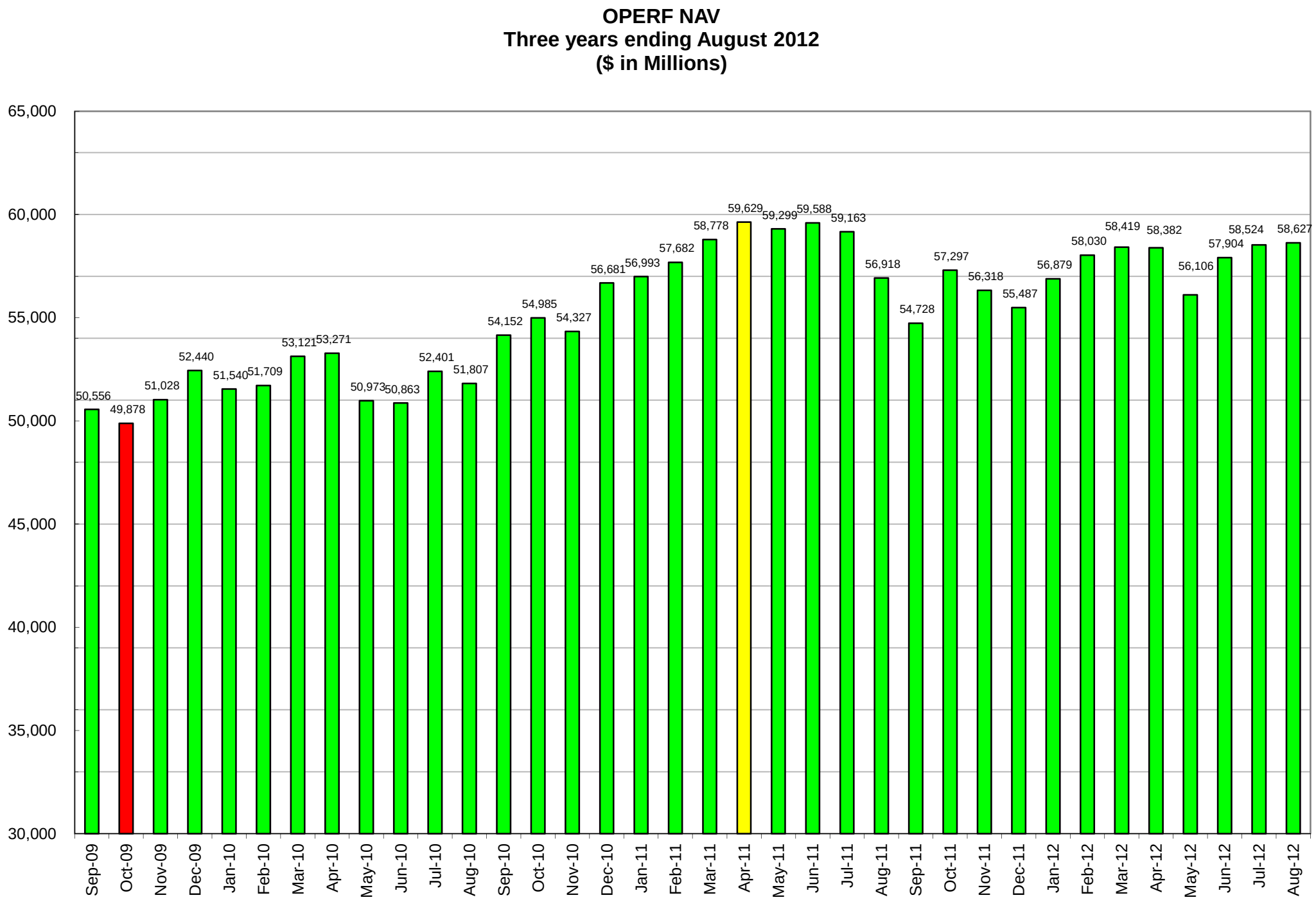
HIED	Policy	Target	$ Thousands	Actual
Domestic Equities	20-30%	25%	$18,270	27.5%
International Equities	20-30%	25%	15,195	22.9%
Private Equity	0-15%	10%	6,125	9.2%
Growth Assets	**50-75%**	**60%**	**39,590**	**59.7%**
Real Estate	0-10%	7.5%	1,730	2.6%
TIPS	0-10%	7.5%	5,229	7.9%
Inflation Hedging	**7-20%**	**15%**	**6,959**	**10.5%**
Fixed Income	20-30%	25%	18,605	28.0%
Cash	0-3%	0%	1,215	1.8%
Diversifying Assets	**20-30`%**	**25%**	**19,820**	**29.9%**
TOTAL HIED			**$66,369**	**100.0%**


OPERF Asset Allocation
50%
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
43%
36%
16%
25%
2%
25%
25%
11%
12%
5%
1%
0%
0%
Public Equity
Private Equity
Opportunity Portfolio
Fixed Income
Real Estate
Alternative Investments
Cash*
Target
Actual

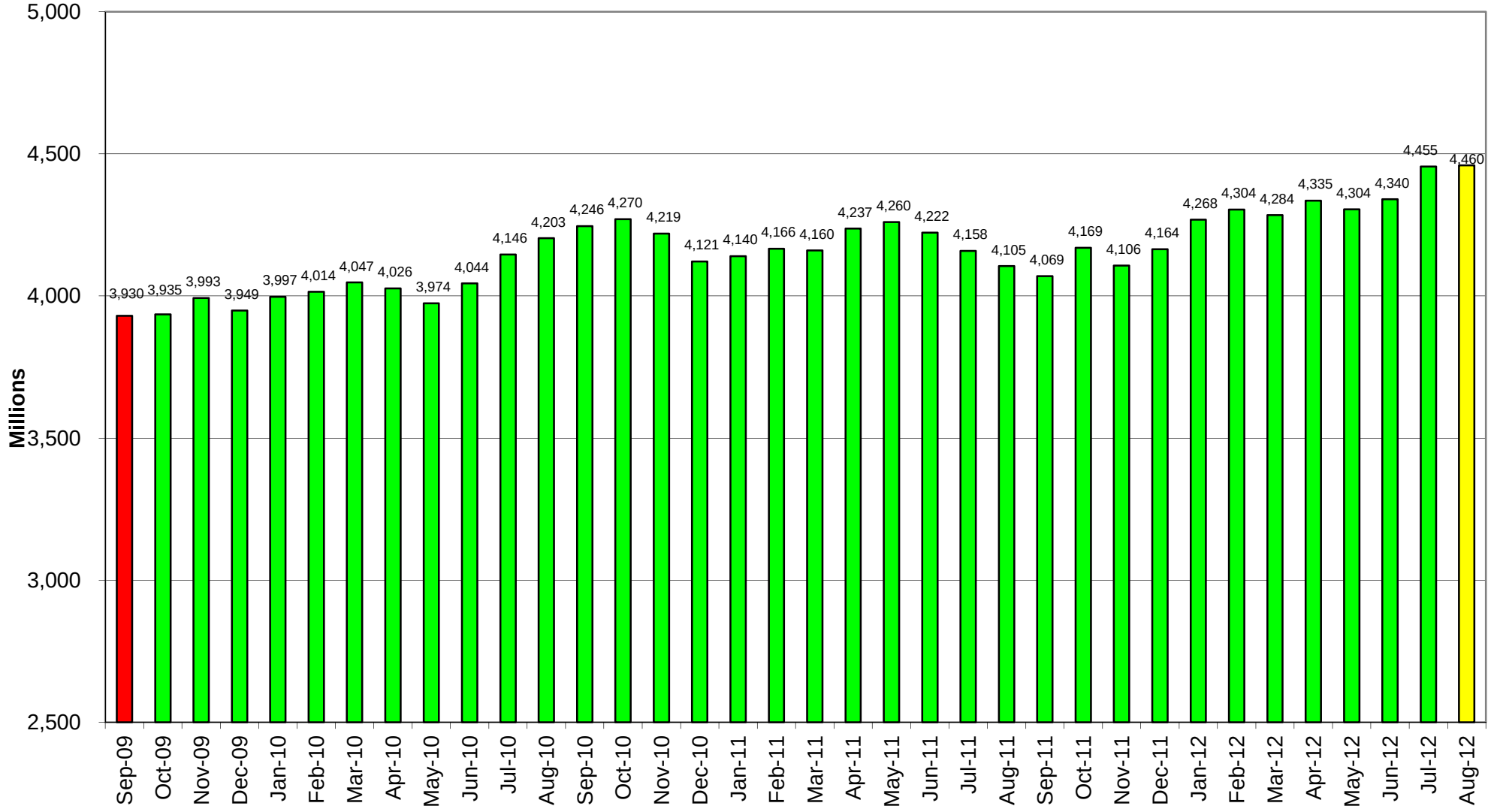

SAIF Asset Allocation
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
10%
9%
90%
90%
0%
1%
Total Equity
Fixed Income
Cash
Target
Actual

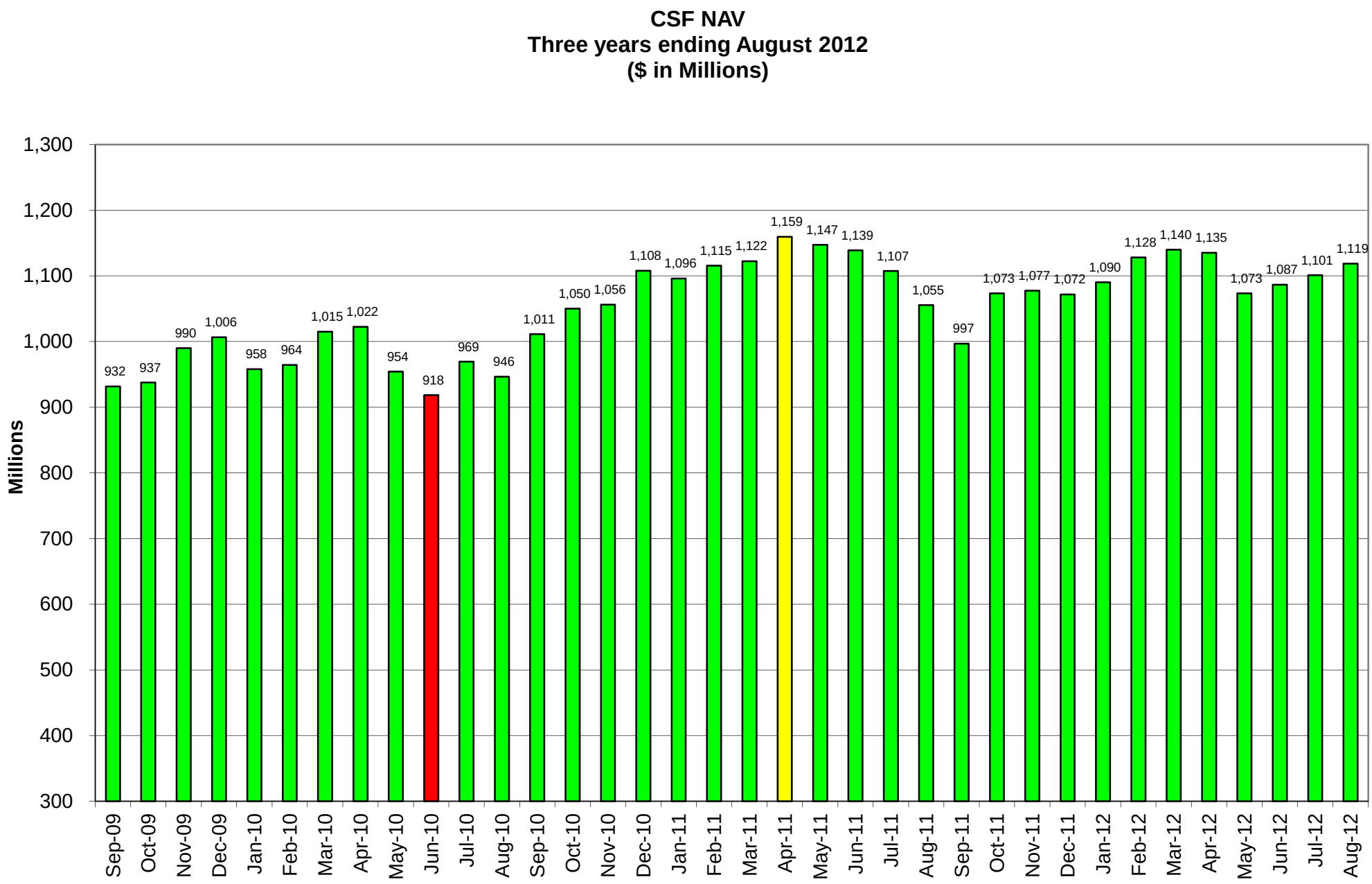

CSF Asset Allocation
35%
30%
25%
20%
15%
10%
5%
0%
30%
30%
30%
29%
10%
10%
30%
30%
0%
1%
Domestic Equities
International Equities
Private Equity
Fixed Income
Cash
Target
Actual


HIED Asset Allocation
35%
30%
25%
20%
15%
10%
5%
0%
25%
28%
25%
23%
10%
9%
15%
10%
25%
30%
Domestic Equities
International Equities
Private Equity
Inflation Hedging
Diversifying Assets
Target
Actual


OPERF NAV
Three years ending August 2012
($ in Millions)
65,000
60,000
55,000
50,000
45,000
40,000
35,000
30,000
50,556
49,878
51,028
52,440
51,540
51,709
53,121
53,271
50,973
50,863
52,401
51,807
54,152
54,985
54,327
56,681
56,993
57,682
58,778
59,629
59,299
59,588
59,163
56,918
54,728
57,297
56,318
55,487
56,879
58,030
58,419
58,382
56,106
57,904
58,524
58,627
Sep-09
Oct-09
Nov-09
Dec-09
Jan-10
Feb-10
Mar-10
Apr-10
May-10
Jun-10
Jul-10
Aug-10
Sep-10
Oct-10
Nov-10
Dec-10
Jan-11
Feb-11
Mar-11
Apr-11
May-11
Jun-11
Jul-11
Aug-11
Sep-11
Oct-11
Nov-11
Dec-11
Jan-12
Feb-12
Mar-12
Apr-12
May-12
Jun-12
Jul-12
Aug-12

SAIF NAV
Three years ending August 2012
($ in Millions)




CSF NAV
Three years ending August 2012
($ in Millions)
Millions
1,300
1,200
1,100
1,000
900
800
700
600
500
400
300
932
937
990
1,006
958
964
1,015
1,022
954
918
969
946
1,011
1,050
1,056
1,108
1,096
1,115
1,122
1,159
1,147
1,139
1,107
1,055
997
1,073
1,077
1,072
1,090
1,128
1,140
1,135
1,073
1,087
1,101
1,119
Sep-09
Oct-09
Nov-09
Dec-09
Jan-10
Feb-10
Mar-10
Apr-10
May-10
Jun-10
Jul-10
Aug-10
Sep-10
Oct-10
Nov-10
Dec-10
Jan-11
Feb-11
Mar-11
Apr-11
May-11
Jun-11
Jul-11
Aug-11
Sep-11
Oct-11
Nov-11
Dec-11
Jan-12
Feb-12
Mar-12
Apr-12
May-12
Jun-12
Jul-12
Aug-12

TAB 7 – CALENDAR – FUTURE AGENDA ITEMS

2012 OIC Forward Agenda Topics

October 31: **Woody Brock, SED**
CEM Benchmarking Annual Review
CSF Annual Review
OST Operational Review Report
Annual Audit Update
Private Equity Consultant Contract

December 5: OPERF Asset/Liability Study
Private Equity Managers (2)
OPERF 3rd Quarter Performance Review
OPERF Opportunity Portfolio Review
HIED Annual Review