

Real Estate Program Review Real Assets

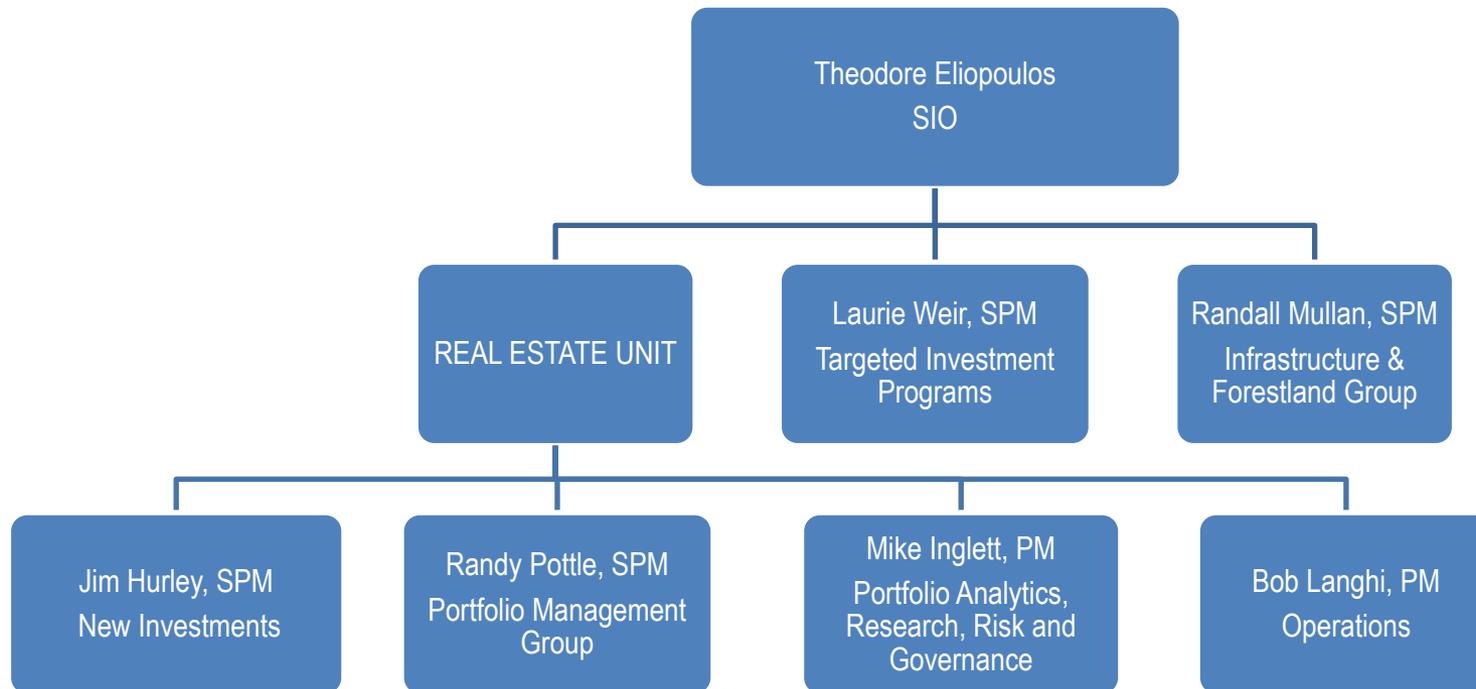
November 18, 2013

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I. REAL ASSETS OVERVIEW

Real Assets Overview



- Real Assets 1-year net return as of the 3/31/13 Real Estate Quarterly Performance Report (QPR) is 10.9% compared to the Real Assets Benchmark return of 9.7% for an excess return of 1.2%.
- Real Assets NAV increased by \$1.56 billion during the past 12 months as of the 3/31/13 QPR.
- Infrastructure and Forestland Group (IFG) joined Real Assets on 7/1/2011.

II. INVESTMENT REVIEW REAL ESTATE PROGRAM

Program Role - Real Estate

- The role of Real Estate in the CalPERS portfolio is to have ownership risk in real property with stable cash yields. The major driver of our returns is income of which the majority is cash yield.
- Real Estate also provides a partial inflation hedge. The portfolio strives for moderate leverage, low risk, and low correlation to equities.

Investment Beliefs

Investment Belief 1: Liabilities must influence the asset structure.

- Seventy-five percent of the program is targeted for high quality stabilized assets with stable cash flows (Base Portfolio).

Investment Belief 2: A long time investment horizon is a responsibility and an advantage.

- Base Portfolio assets are large high quality assets with long hold periods (20 years plus).

Investment Belief 4: Long-term value creation requires effective management of three forms of capital: financial, physical and human.

- Real Estate Unit (REU) utilizes Alignment of Interest Principles in partnership documents to maximize alignment.
- Key sustainability initiatives include ULI Greenprint membership, the Responsible Contractor Program (RCP), and the Emerging Manager Program.

Investment Belief 5: CalPERS must articulate its investment goals and performance measures and ensure clear accountability for their execution.

- REU utilizes a top down planning approach which includes strategic planning, and tactical planning for each sector of the portfolio.
- The REU's separate account structure provides flexibility to change tactics, adjust allocations, and remove underperforming managers.

Investment Beliefs (Continued)

Investment Belief 7: CalPERS will take risk only where we have a strong belief that we will be rewarded for it.

- REU policy clearly defines and provides limits for the three risk categories; core, value-add, and opportunistic.
- REU policy limits the amount and type of debt in the portfolio.
- REU partnership agreements define the type of assets (including risk level) a partner is allowed to acquire.

Investment Belief 8: Costs matter and need to be effectively managed.

- REU forecasts the cost of each proposed partnership as a percentage of the return and compares it to the benchmark cost.
- REU primarily utilizes a separate account structure which has reasonable costs.

Investment Belief 10: Strong processes, teamwork and deep resources are needed to achieve CalPERS goals and objectives.

- REU has clear policies, procedures, and plans in place.
- REU draws on the diverse talents of its staff, which includes a broad range of experiences, education and perspectives, to manage the portfolio.

Real Estate Strategic Plan

The current Real Estate Strategic Plan was adopted by the Investment Committee in February 2011. Real Estate Program Policy requires staff to:

- Develop and present a new Strategic Plan every five years (2016); and,
- Review the program’s current Strategic Plan annually and report to the Investment Committee.

Staff recommends continuing with the current Strategic Plan:

- The role of Real Estate is unchanged in the current Asset Liability study.
- Structuring of the new portfolio was substantially complete in 2012. Pacing of the strategic portfolio is on track to meet interim and final policy targets.

Policy Targets

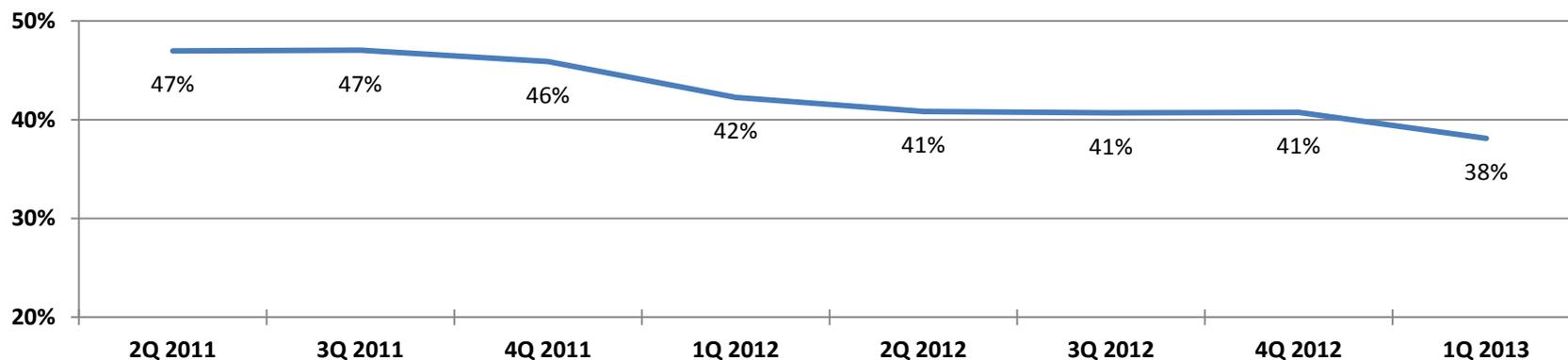
Current 3/31/13

Investment Parameters	Interim (thru 6/30/15) Range/Limit as % of Total	Interim (thru 6/30/17) Range/Limit as % of Total	Long-Term Range/Limit as % of Total	NAV %	Compliance Interim (thru 6/30/15)	Compliance Interim (thru 6/30/17)	Compliance Long-Term
Strategy							
Strategic	n/a	n/a	n/a	71.8%	n/a	n/a	n/a
Base	0 - 100%	25 - 100%	60 - 100%	19.5%	✓	✗	✗
Domestic Tactical	0 - 100%	0 - 60%	0 - 30%	67.8%	✓	✗	✗
International Tactical	0 - 30%	0 - 25%	0 - 15%	12.7%	✓	✓	✓
Legacy	n/a	n/a	n/a	28.2%	n/a	n/a	n/a
Risk Classification							
Core	20 - 100%	50 - 100%	75 - 100%	43.5%	✓	✗	✗
Value Add	0 - 50%	0 - 40%	0 - 25%	19.9%	✓	✓	✓
Opportunistic	0 - 60%	0 - 40%	0 - 25%	36.5%	✓	✓	✗
REITS	0 - 10%	0 - 7.5%	0 - 5%	0.0%	✓	✓	✓
Property Type							
Office	45%	45%	45%	15.9%	✓	✓	✓
Industrial	45%	45%	45%	16.8%	✓	✓	✓
Retail	45%	45%	45%	21.6%	✓	✓	✓
Multifamily	45%	45%	45%	15.1%	✓	✓	✓
For Sale Residential & Land Dev.	15%	10%	10%	12.9%	✓	✗	✗
Hotels	10%	10%	10%	5.2%	✓	✓	✓
Mixed-Use	10%	10%	10%	3.1%	✓	✓	✓
Other Property Types	15%	10%	10%	9.4%	✓	✓	✓
Geography							
Developed Markets	75 - 100%	75 - 100%	75 - 100%	89.8%	✓	✓	✓
Developed - US	60 - 100%	70 - 100%	85 - 100%	90.6%	✓	✓	✓
Developed - ex US	0 - 25%	0 - 25%	0 - 25%	9.4%	✓	✓	✓
Emerging Markets	0 - 15%	0 - 15%	0 - 15%	10.1%	✓	✓	✓
Frontier Markets	0 - 5%	0 - 5%	0 - 5%	0.1%	✓	✓	✓
REAL ESTATE PROGRAM	7 - 13%	7 - 13%	7 - 13%	8.7%	✓	✓	✓

Policy Targets

Investment Parameters	Interim (thru 6/30/15) Range/Limit as % of Total	Interim (thru 6/30/17) Range/Limit as % of Total	Long-Term Range/Limit as % of Total	Actuals	Compliance Interim (thru 6/30/15)	Compliance Interim (thru 6/30/17)	Compliance Long-Term
Loan to Value (LTV)							
Total Portfolio	60%	55%	50%	38.1%	✓	✓	✓
Core	50%	50%	50%	39.2%	✓	✓	✓
Value Add	65%	60%	50%	19.8%	✓	✓	✓
Opportunistic	75%	65%	50%	41.5%	✓	✓	✓
Debt Service Coverage Ratio							
Total Strategic Portfolio	n/a	≥ 1.0	≥ 1.5	n/a	n/a	n/a	n/a
Strategic Core	≥ 1.5	≥ 1.75	≥ 2.0	2.42	✓	✓	✓
Recourse Debt							
Total Permitted Amount	10% of lower of current NAV or Target NAV			2.5%	✓	✓	✓

Total Portfolio LTV Time Series



Statements of Investment Policy Review

Staff has reviewed the Statements of Investment Policy for the Program and has found that:

- No changes are needed at this time
- All policies are still applicable

The Real Assets Policy was recently revised in April 2013 to extend interim range/targets by two years.

Investment Activity

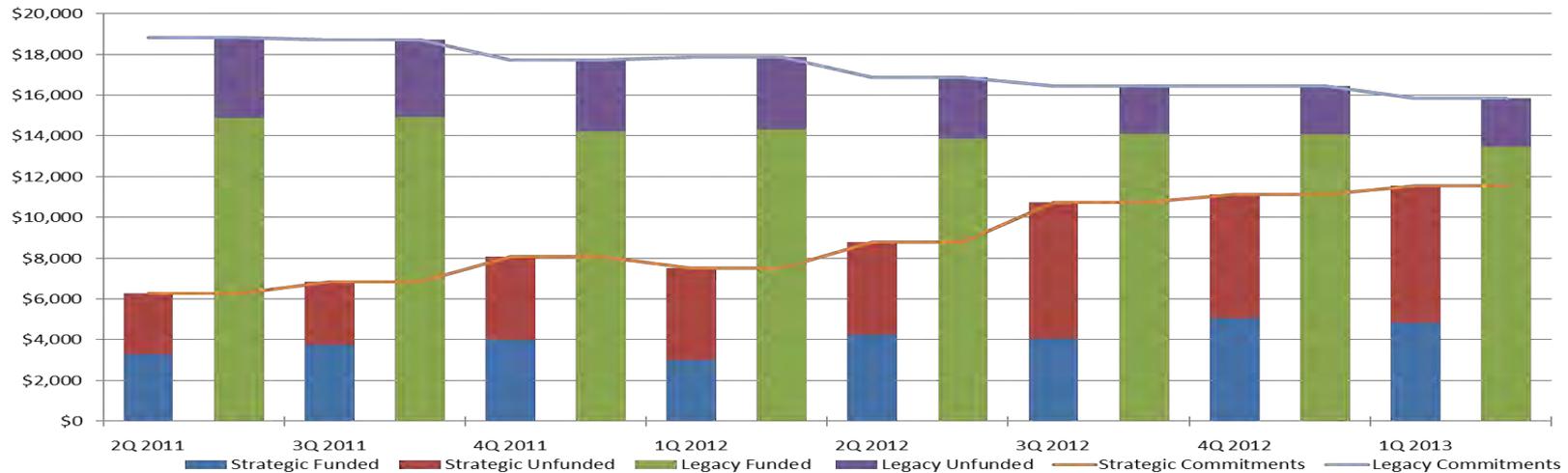
2013-2014 Current Fiscal Year

- Investment Strategy Group allocated REU \$7.5B of capital.
- REU allocated \$5.7B to Strategic Partners.

2012-2013 Last Fiscal Year

- Investment Strategy Group allocated REU \$6.0B of capital.
- REU allocated \$4B to Strategic Partners, of which \$3.2B was invested in Strategic assets
- Total distributions of \$4.8B, of which \$2.0B was for sale of assets and \$1.3B for liquidation of the Real Estate Investment Trusts (REIT) portfolio.

Capital Allocation



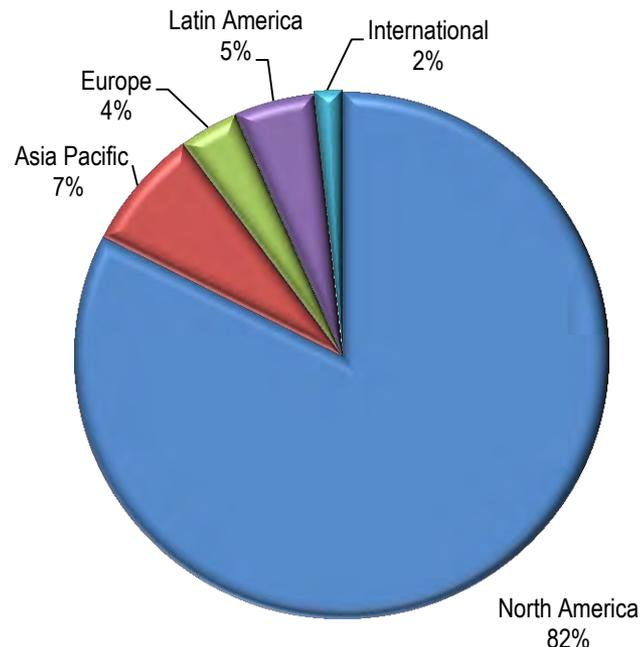
Allocation Category	2Q 2011	3Q 2011	4Q 2011	1Q 2012	2Q 2012	3Q 2012	4Q 2012	1Q 2013
Total - Commitments	25,102	25,574	25,809	25,365	25,657	27,172	27,584	27,413
Total - Net Funded	18,154	18,679	18,195	17,337	18,094	18,124	19,137	18,293
Total - Unfunded	6,948	6,894	7,613	8,028	7,563	9,048	8,448	9,120
Strategic - Commitments	6,279	6,844	8,091	7,505	8,788	10,719	11,137	11,566
Strategic - Net Funded	3,279	3,769	3,983	3,023	4,239	4,029	5,064	4,813
Strategic - Unfunded	3,000	3,075	4,107	4,482	4,550	6,690	6,072	6,753
Legacy - Commitments	18,823	18,730	17,718	17,861	16,869	16,453	16,448	15,848
Legacy - Net Funded	14,874	14,910	14,212	14,314	13,855	14,095	14,072	13,480
Legacy - Unfunded	3,949	3,819	3,506	3,547	3,013	2,358	2,375	2,367

Characteristics: Property Type & Region Allocation

By Property Type

Property Type	% of Total Portfolio	NFI-ODCE ¹	Difference
Apartment	15%	24%	-9%
Industrial	17%	17%	0%
Office	16%	36%	-20%
Retail	22%	18%	4%
Hotel	5%	2%	3%
Other ²	<u>25%</u>	<u>3%</u>	23%
	100%	100%	

By Global Region



¹ Benchmark: NCREIF Fund Index - Open-End Diversified Core Equity (NFI-ODCE)

² Property Type labeled "Other" includes: Entertainment, Healthcare Facilities, Housing, Land, Mixed Use, Senior Housing, etc.

Performance: Overview

*All performance reports reflects data from the investment partnership financial statements for the period ending March 31, 2013

Total Real Estate Portfolio

- The total Real Estate portfolio returns exceeded the benchmark for the 1-year period.

Strategic Portfolio

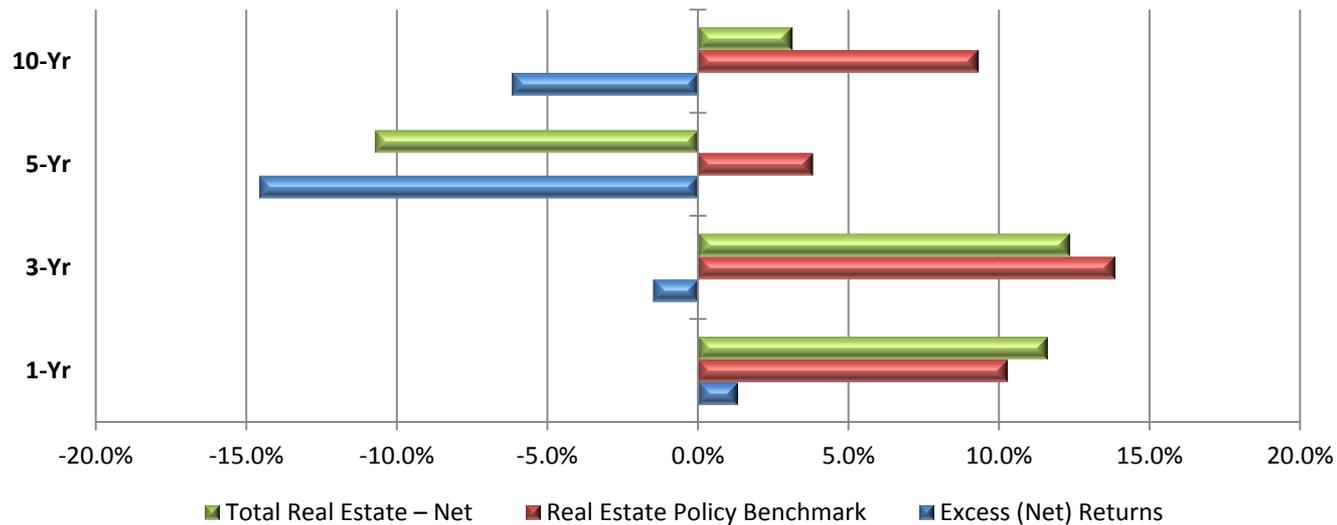
- The Strategic Portfolio, which represents 71% of the portfolio, outperformed the benchmark on the 1-year, 3-year, 10-year.

Legacy Portfolio

- The Legacy Portfolio, which represents 29% of the portfolio and the Public Real Estate Securities, underperformed the benchmark for all time periods.

Performance: Portfolio Returns

Nominal Returns	1-Yr	3-Yr	5-Yr	10-Yr
Total Real Estate – Net	11.6%	12.3%	-10.7%	3.1%
Real Estate Policy Benchmark	10.3%	13.8%	3.8%	9.3%
Excess (Net) Returns	1.3%	-1.5%	-14.6%	-6.2%



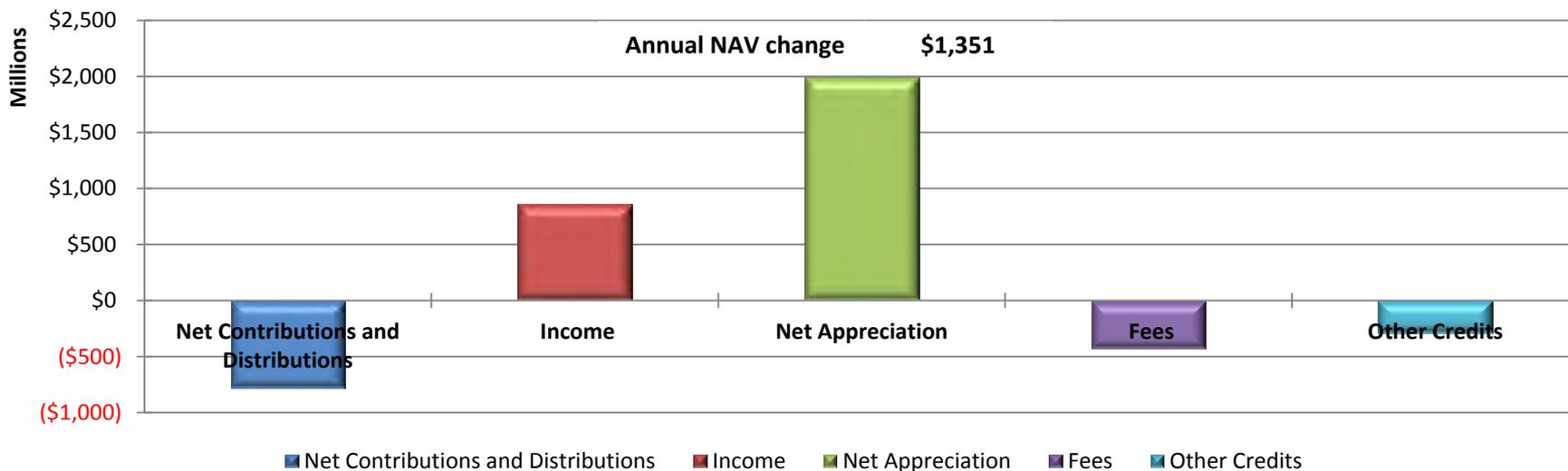
Performance: Net Returns by Strategy

Private Real Estate	1-Yr	3-Yr	5-Yr	10-Yr
Strategic	13.6%	17.4%	2.8%	15.3%
Legacy	6.9%	6.8%	-15.9%	-0.7%
Real Estate Policy Benchmark	10.3%	13.8%	3.8%	9.3%



Annual NAV Change Analysis (in millions)

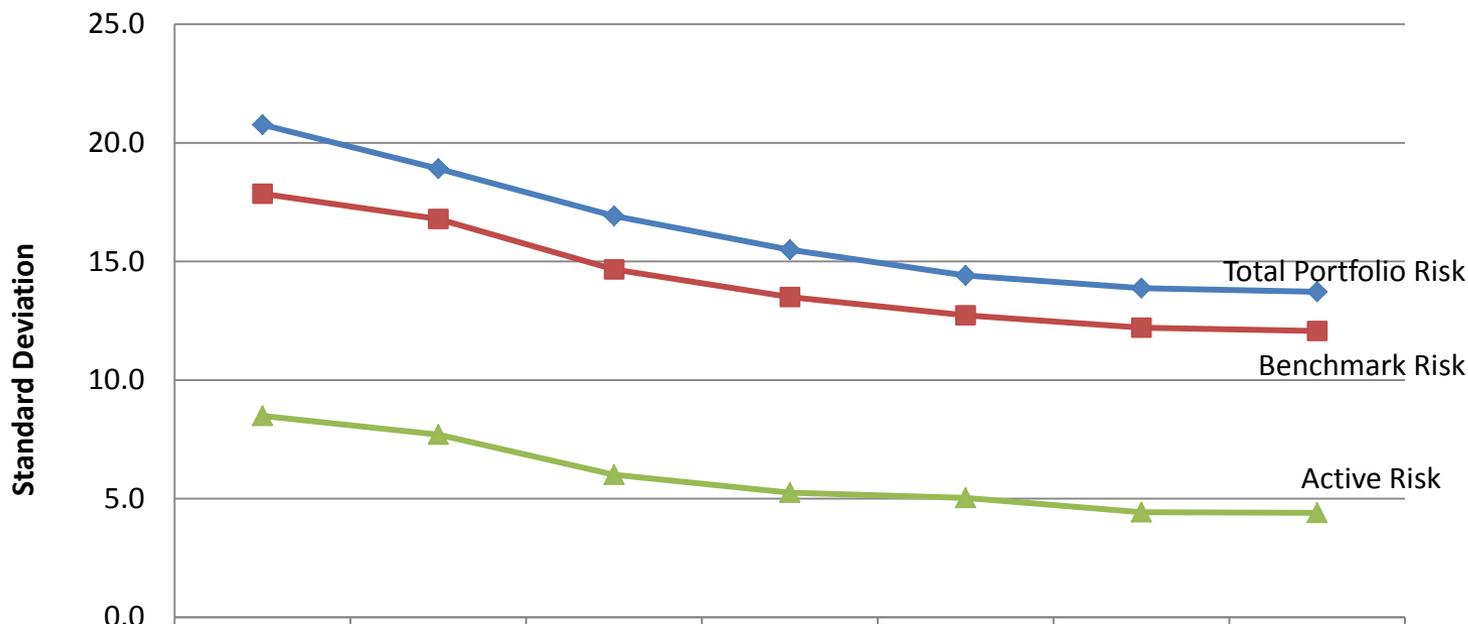
Date	(+) Beginning NAV	(+) Contribution	(-) Distribution	(+) Income	(+) Unrealized Appreciation	(+) Realized Appreciation	(-) Fees	(-) Other Credits	(-) Ending NAV
12 Months Ending 3/31/13	\$21,092	\$4,258	\$5,039	\$860	\$1,756	\$236	\$427	\$293	\$22,443



* Approximately \$1.348 billion in REIT liquidation (distribution) was realized between 9/20/12 – 3/4/13.

* \$3B of transfers made within the portfolio removed from contributions and distributions above.

Total Portfolio Risk Trending*



	3Q 2011	4Q 2011	1Q 2012	2Q 2012	3Q 2012	4Q 2012	1Q 2013
◆ Total Real Estate Portfolio Risk	20.8	18.9	16.9	15.5	14.4	13.9	13.7
■ RE Policy Benchmark Risk	17.9	16.8	14.7	13.5	12.7	12.2	12.1
▲ Active Risk	8.5	7.7	6.0	5.3	5.0	4.4	4.4

*Output from BarraOne Risk System based on RE 6/30/12 Values

Market Update - Commercial Real Estate

Real Estate Indicators(Current Data | Annual Trend | Long-Term Average)

	Apartment			Industrial			Office			Retail		
Cap Rates	5.0%		6.3%	5.8%		7.4%	5.1%		6.9%	5.7%		7.1%
Vacancy Rates	5.1%		5.5%	12.3%		9.2%	15.3%		15.3%	12.5%		9.8%
Net Absorption	18.4		41.3	62.8		32.0	4.0		11.5	7.6		9.2
Rent	\$1321		\$1236	\$5.09		\$5.28	\$27.54		\$22.21	\$18.56		\$17.21

Real Estate Comments

Chart above shows current quarter data in the first column, annual trend data in the second column and historical long-term average information in the third column for the four primary commercial real estate property types.

- Commercial Real Estate fundamentals and capital markets have improved over the past year.
- All property types have shown a slight valuation improvement due to lower cap rates over the past year.
- Vacancy rates declined on an annual basis in all sectors except Apartments which remained flat for the year.
- On an annual basis, all property types had positive product absorption. Other than Apartments, there has been minimal new inventory being built.
- On an annual basis, Apartment and Office had relatively modest gains. Industrial and Retail had flat rent growth.

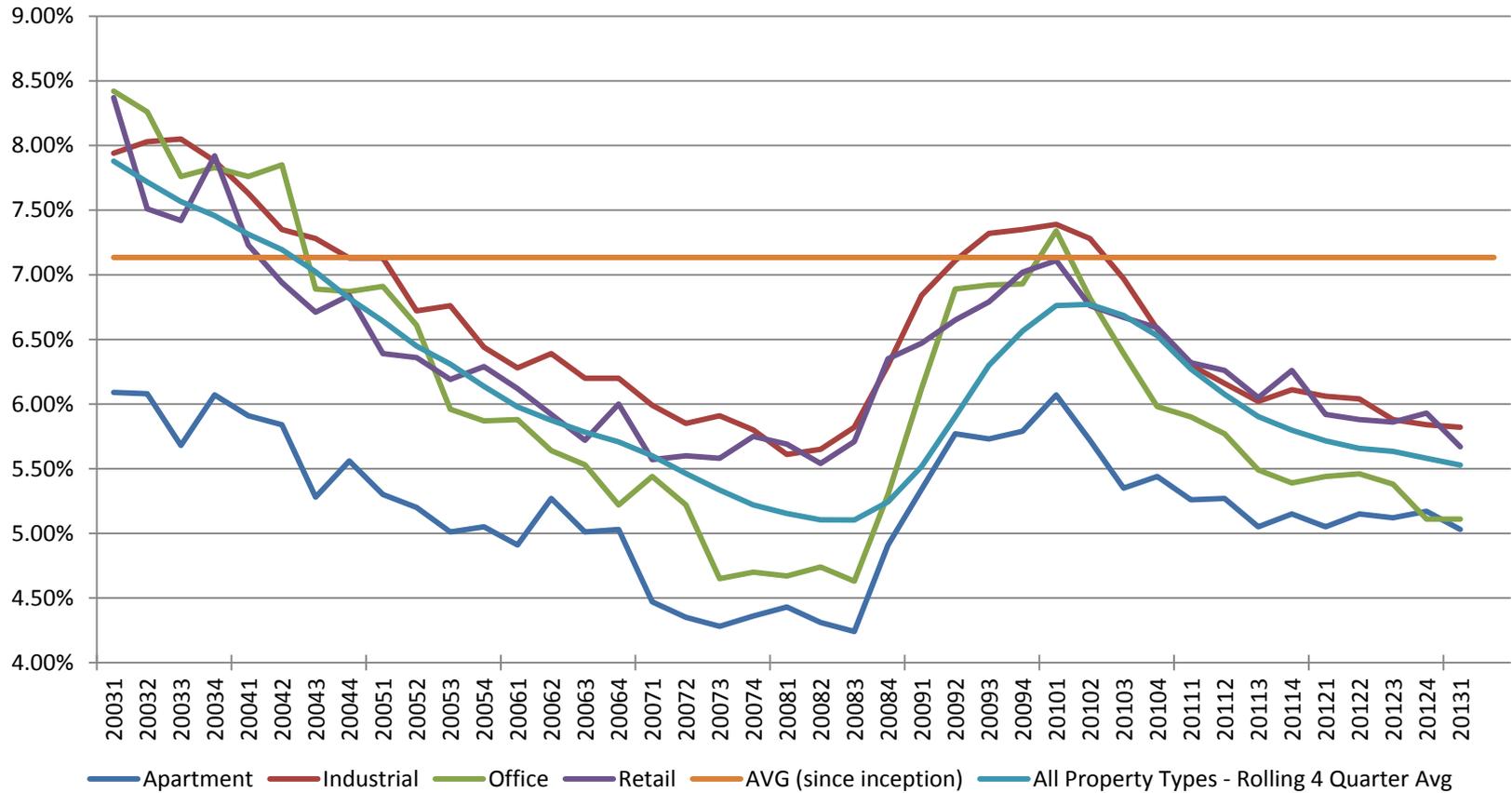
Significantly Improved Moderately Improved Flat / Little Change Moderately Worse Significantly Worse

Commercial Real Estate Indicator Notes: Data is the most current quarterly data, which lags the Program Update Quarter End date by one quarter. NCREIF Capitalization rates from properties that were revalued during the quarter. Vacancy Rates listed for Industrial and Retail are availability rates. Absorption for Apartments is in thousands of units, the other property types are listed in millions of square feet. Rent is dollars per square foot, except apartments which is per unit.

Economic and Real Estate Sources: Cap Rates from National Council of Real Estate Investment Fiduciaries (NCREIF), all other data from CBRE Econometric Advisors

NCREIF Property Index

Cap Rate Trends



III. BUSINESS REVIEW REAL ESTATE PROGRAM

Real Estate Staffing

Total of 43 positions within Real Estate

Hired 2 Portfolio Managers, 9 Investment Officers
and 6 support staff during FY 2012-13

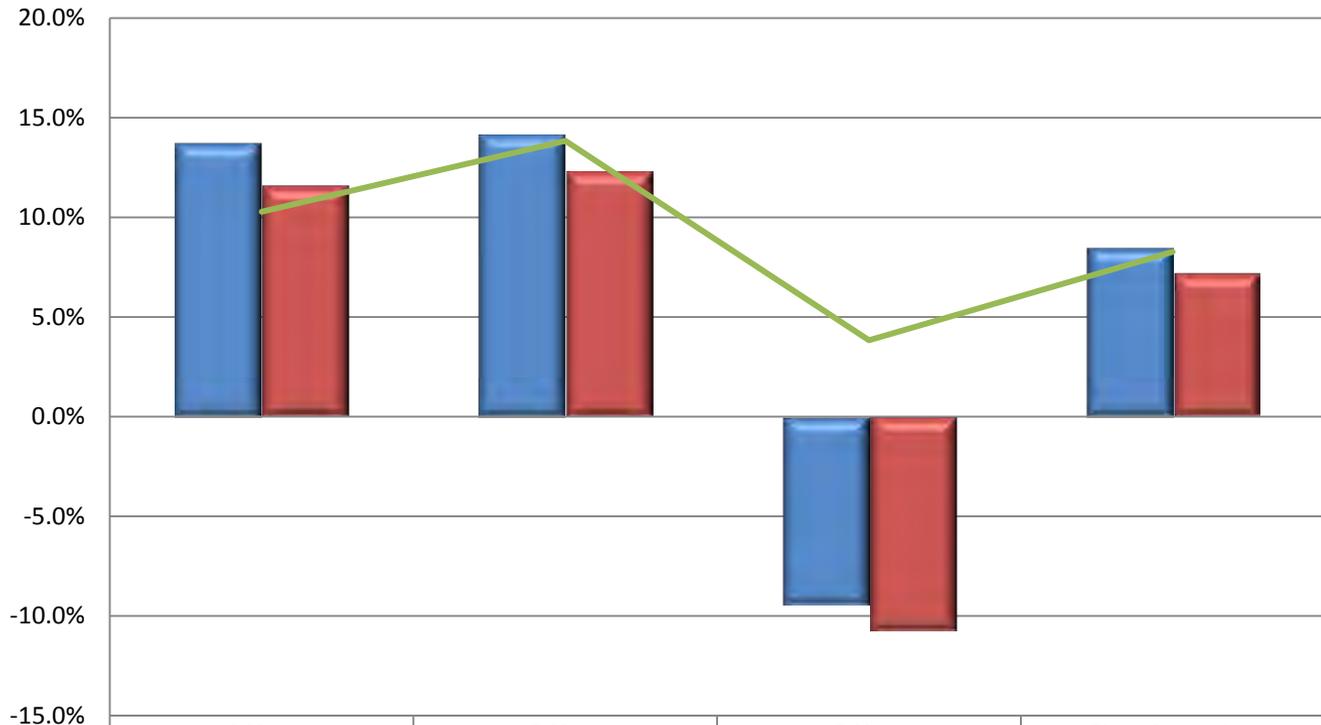
Current vacancies: 1 Investment Officer and 1
support staff

Costs: Program Expenses

- Real Estate portfolio management expenses* totaled \$33 million which is 15 basis points of the Real Estate portfolio total average NAV.
- Asset Management Fees (AMF) for the Private Real Estate Program totaled \$180 million, which is 86 basis points of the Private Real Estate portfolio total average NAV for the year ending 3/31/13.
 - **The Strategic Portfolio** AMF totaled \$92 million, which is 66 basis points of the Strategic Portfolio total average NAV.
 - **The Legacy Portfolio** AMF totaled \$88 million, which is 124 basis points of the Legacy Portfolio total average NAV.

*Expenses as of 6/30/13

Costs: Nominal Returns – Gross and Net of Fees



	1-Year	3-Year	5-Year	Since Inception
Total Real Estate - Gross	13.7%	14.2%	-9.4%	8.5%
Total Real Estate - Net	11.6%	12.3%	-10.7%	7.2%
Real Estate Benchmark	10.3%	13.8%	3.8%	8.3%

Cost Effectiveness

Cost Effectiveness Measurement

- Staff has developed a financial model to measure cost effectiveness of potential investments.
- The model projects gross returns, net returns, and cost of proposals.
- Staff utilizes the model extensively during negotiation process for objectively evaluating fees.

Future Cost Savings

- Staff closed on a number of strategic partnerships since the adoption of the Strategic Plan in 2011. The negotiated asset management fees for these partnerships are projected to be substantially below the benchmark, resulting in projected fee savings of \$62 million per year on average.
- The Real Estate Program also includes an incentive fee which is payable if the partner exceeds certain return hurdles at or above expected returns for the asset class.
- The projected asset management and incentive fees, as a percentage of returns, are estimated to be substantially less than the historic fee levels of the Real Estate Program.

FY 2012-13 Roadmap Accomplishments

Initiative	Accomplishment
Execute the RE Strategic Plan	<ul style="list-style-type: none"> • Sourced additional partners for Base Portfolio • Executed an operating agreement with the mentoring manager for the emerging manager platform and subsequently executed joint venture agreements with four emerging managers (one in each product type) and closed on its first asset.
Refine the asset acquisition process	<ul style="list-style-type: none"> • Revised the financial model used to analyze fees and returns of partnership transactions
Develop a common platform for portfolio analytics, allocation, compliance and operational requirements	<ul style="list-style-type: none"> • Completed top down analysis for AIP FY 2013-14 decision-making process
Develop tools for portfolio monitoring	<ul style="list-style-type: none"> • Completed the AIP project for June 2013 approval • Completed annual budget and quarterly budget vs. actual with attribution

2013-14 Roadmap Upcoming Activities

Initiative	Milestones
(People) Fully integrate the functional reorganization	<ul style="list-style-type: none"> Continue to perform quarterly and annual performance evaluations for staff and managers
(Plumbing) Fully integrate a quarterly monitoring process	<ul style="list-style-type: none"> Implement routine for coordinated Real Assets quarterly reporting and capital planning
(Performance) Meet Benchmarks for Investment Performance	<ul style="list-style-type: none"> Complete FY 2014-15 AIP project Present FY 2014-15 Capital Allocation Request for approval