

Real Assets Annual Program Review

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December 14, 2015

Executive Summary

- Real Assets
 - Focus on scalable and repeatable strategies and business models.
 - Reduce overall number of managers.
 - Continued integration of ESG elements for sustainable investments as they evolve.
 - Real Estate
 - Continue to acquire high quality, income producing core assets.
 - Overall performance has exceeded the policy benchmark for the 1 and 3 year periods.
 - Infrastructure
 - Goal is increasing deployment, reviewing business model, and continuing strong performance.
 - Forestland
 - Review of program and fit inside of Real Assets.
- Strategic Plan will be presented in spring 2016 to cover all of Real Assets.

Real Assets Annual Program Review

Review Outline

Section	Pages Real Assets	Pages Real Estate	Pages Infras	Pages Forest	Investment Beliefs Map										
					1	2	3	4	5	6	7	8	9	10	
Executive Summary	2														
Review Outline	3														
Investment Beliefs Key	4														
I. Program Overview	5-9														
Program Roles	6				Yellow	Green									
Program Investment Philosophy	7				Yellow	Green						Yellow			
Policy Benchmarks	8								Yellow						
Program Characteristics	9									Yellow	Yellow		Yellow		
II. Investment Review		10-18	19-27	28-36											
ALM Assumptions Validation		11	20	29	Yellow					Yellow	Yellow				
Past Year Environment Review		12	21	30							Yellow	Yellow			
Program Performance		13-14	22-23	31-32	Yellow						Yellow		Yellow		
Volatility Profile		15	24	33							Yellow		Yellow		
Program Characteristics/Positioning		16-18	25-27	34-36	Yellow						Yellow			Yellow	
III. Business Review	37-49														
Investment Decision Process	38														Green
Functional Organizational Chart	39														Green
Staffing Overview	40														Green
Strategic Plans/Projects Update	41-42														Green
ESG	43-44					Green	Green	Yellow							
Emerging Manager Program	45						Green								Green
Program Expenses		46-47	48-49	49						Yellow			Yellow		
Conclusion	50														

- 1 Liabilities
- 2 Long-Term Horizon
- 3 Stakeholders
- 4 Three Forms of Capital
- 5 Accountability
- 6 Strategic Allocation
- 7 Risk Reward
- 8 Costs Matter
- 9 Multi-faceted Risk
- 10 Resources/Process ↑

Investment Beliefs Key

	Short Name	Investment Belief
1	Liabilities	Liabilities must influence the asset structure.
2	Long-Term Horizon	A long time investment horizon is a responsibility and an advantage.
3	Stakeholders	CalPERS investment decisions may reflect wider stakeholder views.
4	Three Forms of Capital	Long-term value creation requires effective management of three forms of capital: financial, physical, and human.
5	Accountability	CalPERS must articulate its investment goals and performance measure and ensure clear accountability for their execution.
6	Strategic Allocation	Strategic asset allocation is the dominant determinant of portfolio risk and return.
7	Risk Reward	CalPERS will take risk only where we have a strong belief we will be rewarded.
8	Costs Matter	Costs matter and need to be effectively managed.
9	Multi-faceted Risk	Risk of CalPERS is multi-faceted and not fully captured through measures such as volatility or tracking error.
10	Resources / Process	Strong processes and teamwork and deep resources are needed to achieve CalPERS' goals and objectives.

I. Program Overview

Program Roles

As defined through the Asset Liability Management (ALM) Process:

Real Estate

The role of Real Estate is to have ownership risk in real property with stable cash yield and act as an economic diversifier to equity risk. Capital appreciation is an added, but lower source of return. Real Estate is also a partial inflation hedge.

Infrastructure

The role of Infrastructure is to have ownership risk in essential infrastructure assets and provide predictable returns with moderate long-term inflation protection. Infrastructure also acts as an economic diversifier to equity risk.

Forestland

The role of Forestland is to have ownership risk in forestland properties, enhance long-term inflation protection and provide moderate cash yield.

Program Investment Philosophy

- A majority of the program (75-90%) to be invested in high quality well located assets, held through business cycles.
- Core assets with durable cash flow.
- Separate accounts with highly reputable, market-leading managers.
- Strong governance with focus on economic alignment, transparency, and cost efficiency.
- Movement toward fewer and larger external manager relationships.

Policy Benchmarks

Real Assets Policy Benchmark

83.34% Real Estate Benchmark + 8.33% Infrastructure Benchmark + 8.33% Forestland Benchmark

Real Estate Policy Benchmark

National Council of Real Estate Investment Fiduciaries Open-End Diversified Core Fund Index (NCREIF ODCE)

Infrastructure Policy Benchmark

Consumer Price Index + 4% lagged one quarter

Forestland Policy Benchmark

National Council of Real Estate Investment Fiduciaries (NCREIF) Timberland Index

Program Characteristics – Real Assets

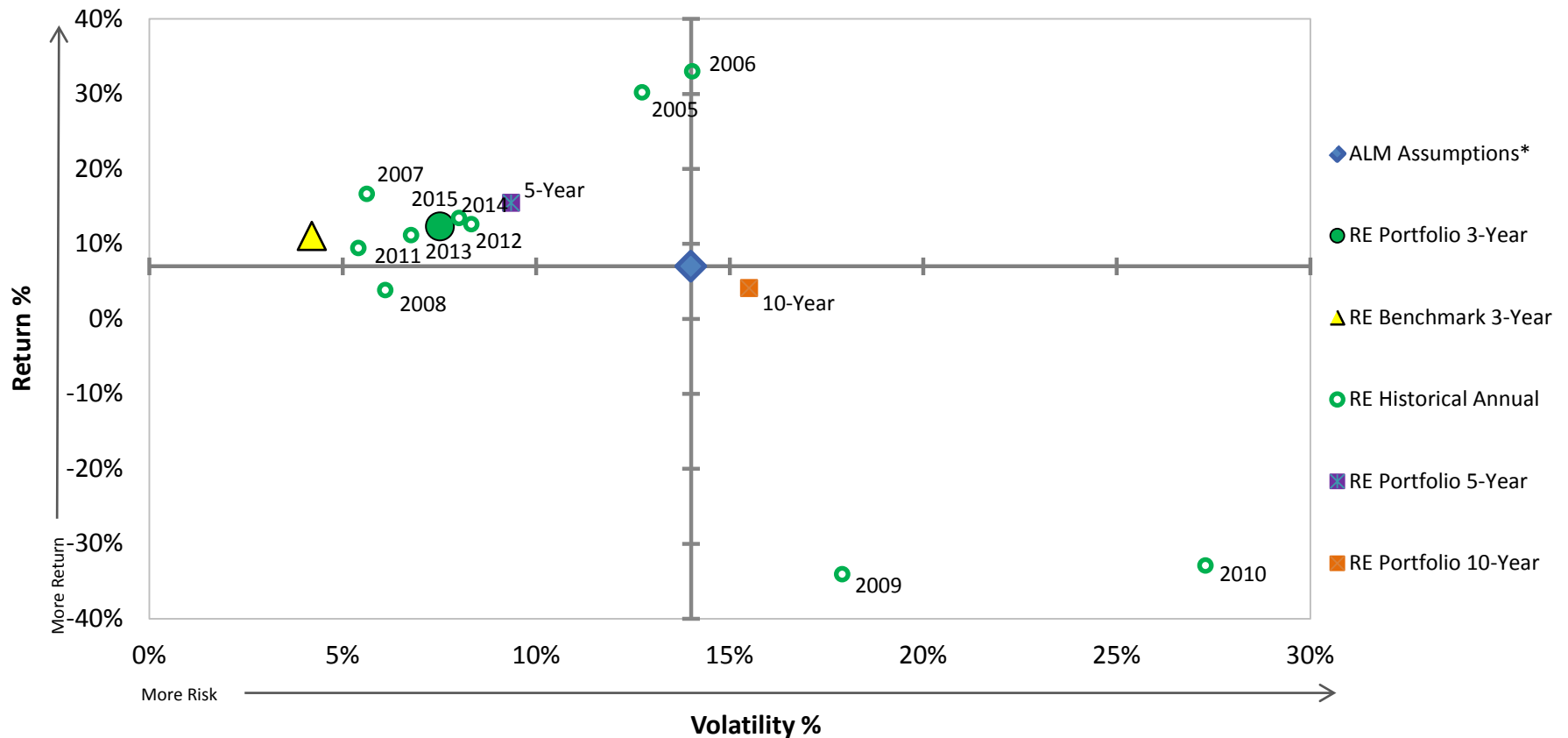
- **Total Net Asset Value (NAV):** \$31.8 billion
 - Real Assets accounts for 10.5% of the Total Fund NAV.
- **Unfunded:** \$11.4 billion.
- **Structure:**
 - 58 external managers.
 - 60 Commingled Funds, 45 Separate Accounts, 2 Operating Companies, 2 Direct Investments.
- **Geographic Exposure:**
 - 86% U.S. and 14% International.
 - 24% of the Program NAV is invested in California.

II. Investment Review

- a. **Real Estate**
- b. Infrastructure
- c. Forestland

ALM Assumptions Validation – Real Estate

Volatility vs. Return



*Capital Market Assumptions used in the 2013 ALM Workshop. Data Sources: State Street Bank, ALM Assumptions

Past Year Environment Review – Real Estate

- Capital Markets
 - Markets are competitive and pricing is robust.
 - More equity heavy than debt.
 - Cap rates at historic lows but spread to 10-year Treasury is above historic average.
- Property Fundamentals
 - Muted new supply across all sectors except apartments.
 - Net Operating Income (NOI)* growth across property sectors is positive.
 - Vacancy rates are down given better macroeconomic backdrop in the U.S.

Program Performance Review – Real Estate

As of June 30, 2015	1-YR	3-YR	5-YR	10-YR	20-YR
	Net Return	Net Return	Net Return	Net Return	Net Return
REAL ESTATE	13.5%	13.1%	13.1%	1.7%	7.2%
POLICY INDEX	12.4%	11.8%	13.6%	9.4%	10.2%
Excess Return	1.1%	1.3%	(0.5%)	(7.7%)	(3.0%)

Total Portfolio

- The 13.5% one year total return after fee exceeds the policy index of 12.4%. The 3/31 quarterly appreciation provided a boost to the annual return and outperformance.
- The \$27.4 Billion NAV grew \$1.5 Billion from the prior year due to net appreciation and income

Strategic Portfolio

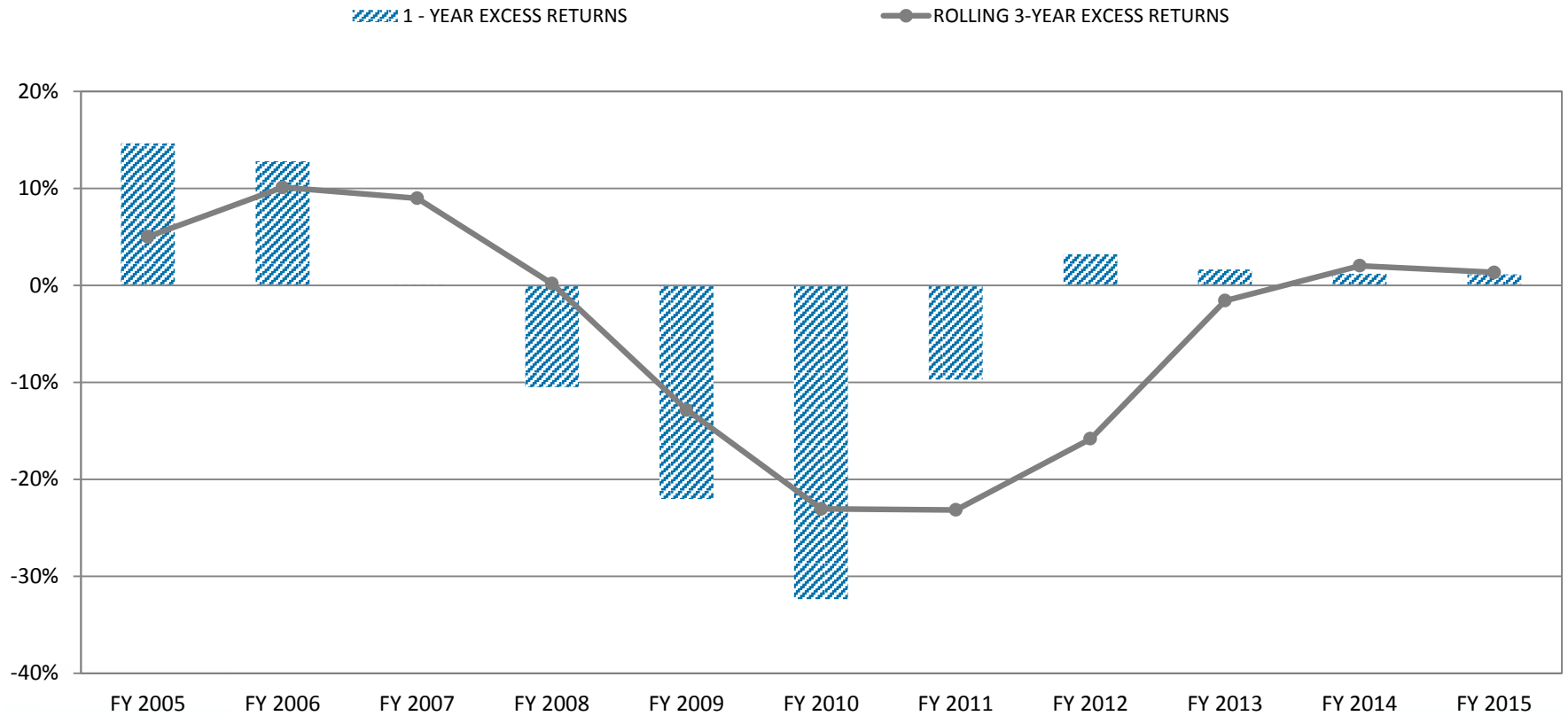
- The 15.9% one year total return after fee exceeds the policy index of 12.4%.
- The \$22.1 Billion NAV represents a 16.6% growth from the prior year

Legacy Portfolio

- The 5.1% one year total return after fee did not meet the policy index of 12.4%
- The \$5.3 Billion NAV represents a -23.3% decline from the prior year. The NAV decline was driven by \$1.9 Billion in distributions.

Program Performance Review – Real Estate (Cont'd)

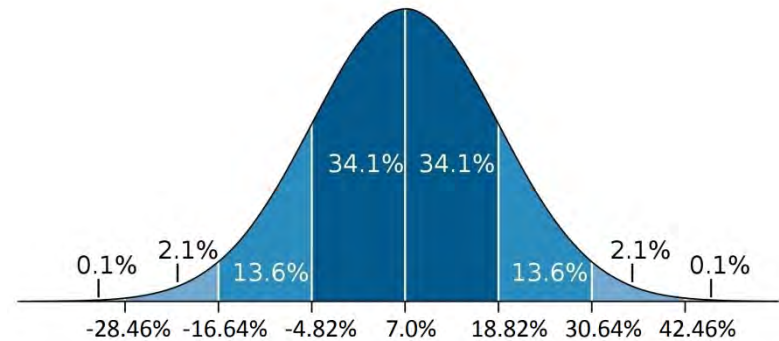
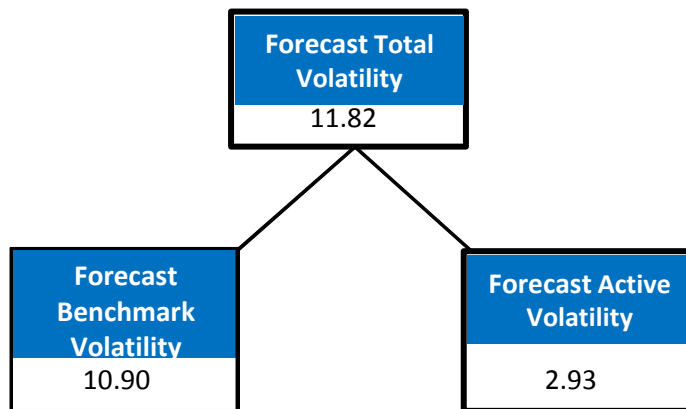
3-Year Rolling Excess Return



Volatility Profile – Real Estate

As of June 30, 2015

- Real Estate Forecast Volatility is 11.82%
- Forecast Tracking Error is 2.93%

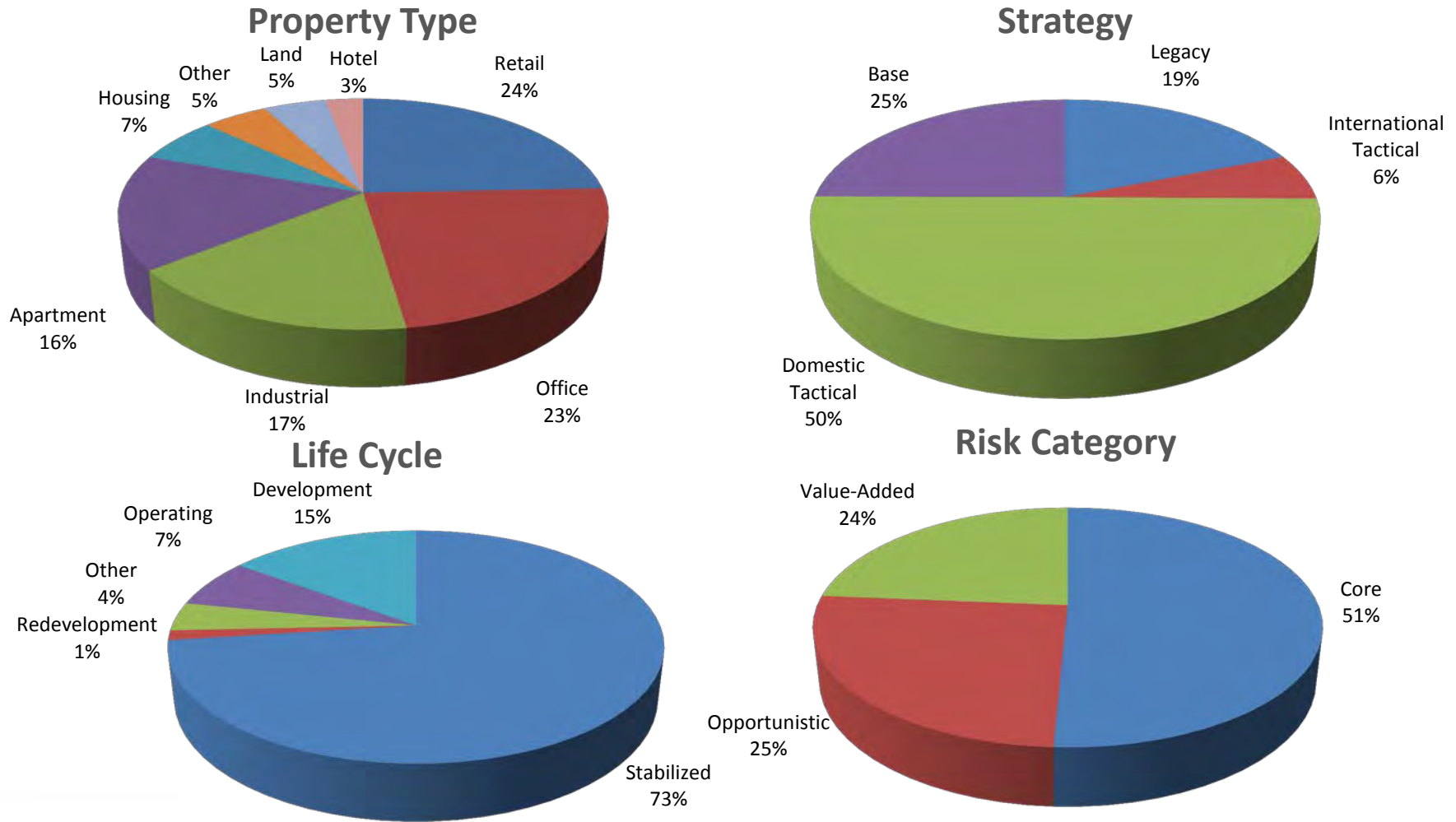


• Based on Expected Returns from 2013 ALM Workshop of 7.0%.

Program Characteristics – Real Estate

- **Total NAV:** \$27.5 billion.
 - Program NAV is 9.1% of Total Fund, versus 10% target.
 - Real Estate NAV is 80.6% Strategic and 19.4% Legacy.
- **Unfunded:** \$9.2 billion.
- **Structure:**
 - 50 External Managers.
 - 52 Commingled Funds, 40 Separate Accounts, and 2 Operating Companies.
 - NAV Basis: 17.2% in Commingled Funds, 69.8% in Separate Accounts, 13.0% in Operating Companies.
- **Geographic Exposure:**
 - 88% U.S. and 4% in other Developed Countries, 8% in Emerging Countries.
 - 27% of the Program NAV is invested in California.

Program Characteristics – Real Estate by NAV^(a)



(a) Period ending March 31, 2015 with total property level NAV amounting to \$27.1 billion

Portfolio Positioning – Real Estate

Interim Program Target as % of Total Fund	Interim Program Range/Limit as % of Total Fund	Interim Program Target based on Total Fund Value	Actual Investment as % of Total Fund	Actual Investment (NAV in Millions)
10.0%	7 - 13%	\$30,198	9.1%	\$27,451

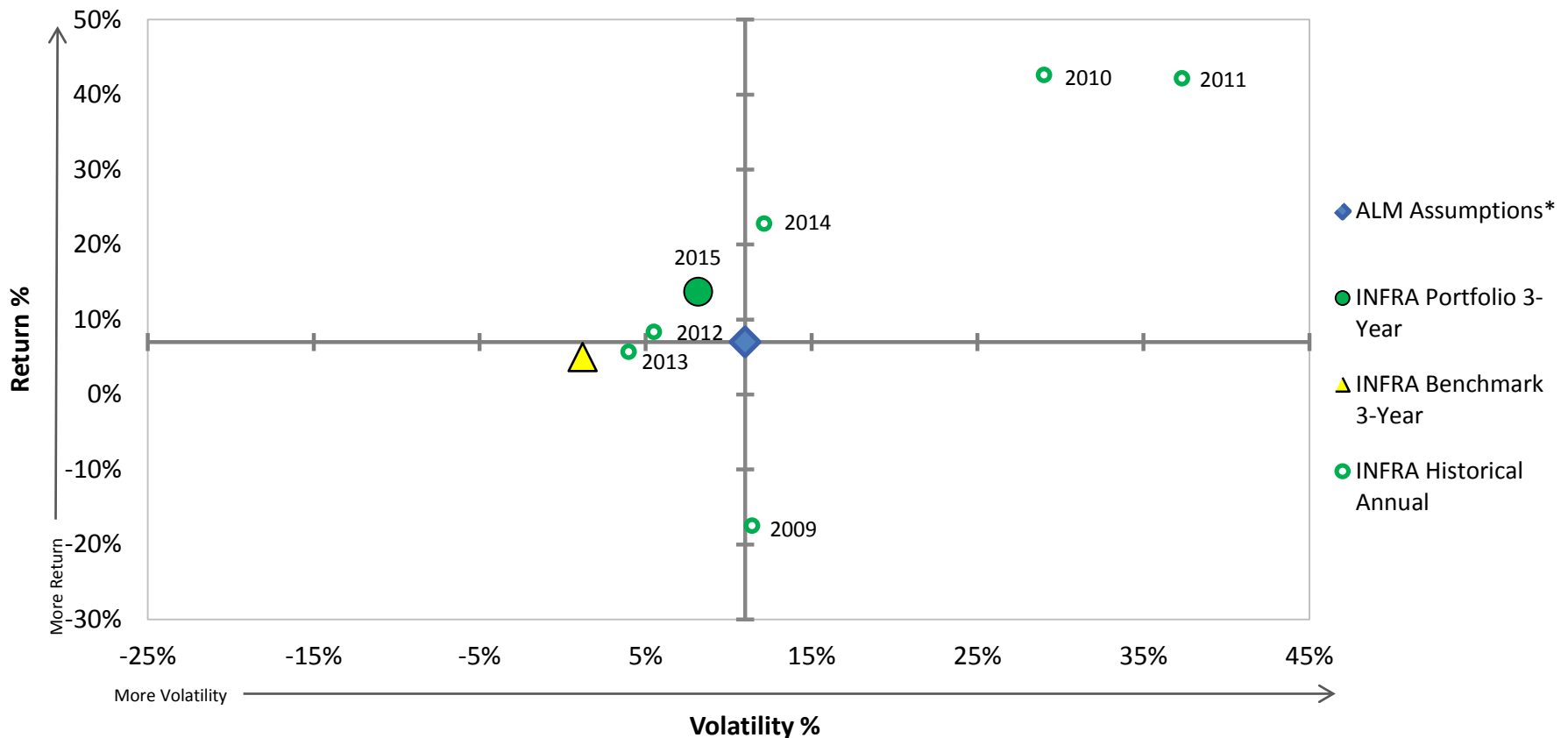
Investment Parameters (Asset Level)	Current - 6/30/15			7/1/15 - 6/30/17		7/1/17 forward	
	NAV%	Range/Limit	Compliance	Range/Limit	Compliance	Range/Limit	Compliance
Strategy							
Strategic	81.0%	n/a	n/a	n/a	n/a	n/a	n/a
Base	30.7%	0 - 100%	✓	25 - 100%	✓	60 - 100%	✗
Domestic Tactical	61.6%	0 - 100%	✓	0 - 60%	✓	0 - 30%	✗
International Tactical	7.7%	0 - 30%	✓	0 - 25%	✓	0 - 15%	✓
Legacy	19.0%	n/a	n/a	n/a	n/a	n/a	n/a
Risk Classification							
Core	50.7%	20 - 100%	✓	50 - 100%	✓	75 - 100%	✗
Value Add	23.7%	0 - 50%	✓	0 - 40%	✓	0 - 25%	✓
Opportunistic	25.6%	0 - 60%	✓	0 - 40%	✓	0 - 25%	✗
REITS	0.0%	0 - 10%	✓	0 - 7.5%	✓	0 - 5%	✓
Property Type							
Office	23.3%	45%	✓	45%	✓	45%	✓
Industrial	16.7%	45%	✓	45%	✓	45%	✓
Retail	24.4%	45%	✓	45%	✓	45%	✓
Multifamily	16.1%	45%	✓	45%	✓	45%	✓
For Sale Residential & Land Dev.	11.0%	15%	✓	15%	✓	10%	✗
Hotels	3.0%	10%	✓	10%	✓	10%	✓
Mixed-Use	1.8%	10%	✓	10%	✓	10%	✓
Other Property Types	3.7%	15%	✓	15%	✓	10%	✓
Geography							
Developed Markets	92.0%	75 - 100%	✓	75 - 100%	✓	75 - 100%	✓
Developed - US	96.3%	60 - 100%	✓	70 - 100%	✓	85 - 100%	✓
Developed - ex US	3.7%	0 - 25%	✓	0 - 25%	✓	0 - 25%	✓
Emerging Markets	8.0%	0 - 15%	✓	0 - 15%	✓	0 - 15%	✓
Frontier Markets	0.0%	0 - 5%	✓	0 - 5%	✓	0 - 5%	✓

II. Investment Review

- a. Real Estate
- b. Infrastructure**
- c. Forestland

ALM Assumptions Validation – Infrastructure

Volatility vs. Return



* Capital Market Assumptions used in the 2013 ALM Workshop. Data Sources: State Street Bank, ALM Assumptions

Past Year Environment Review – Infrastructure

- Fierce competition for new investments
- Supportive credit markets
- Sector opportunities (power, transportation, water, etc.) differ by region
- U.S. public 'Infrastructure Gap'
- Global transition to clean power
- Australian privatizations
- Closed-end fund divestitures

Program Performance Review – Infrastructure

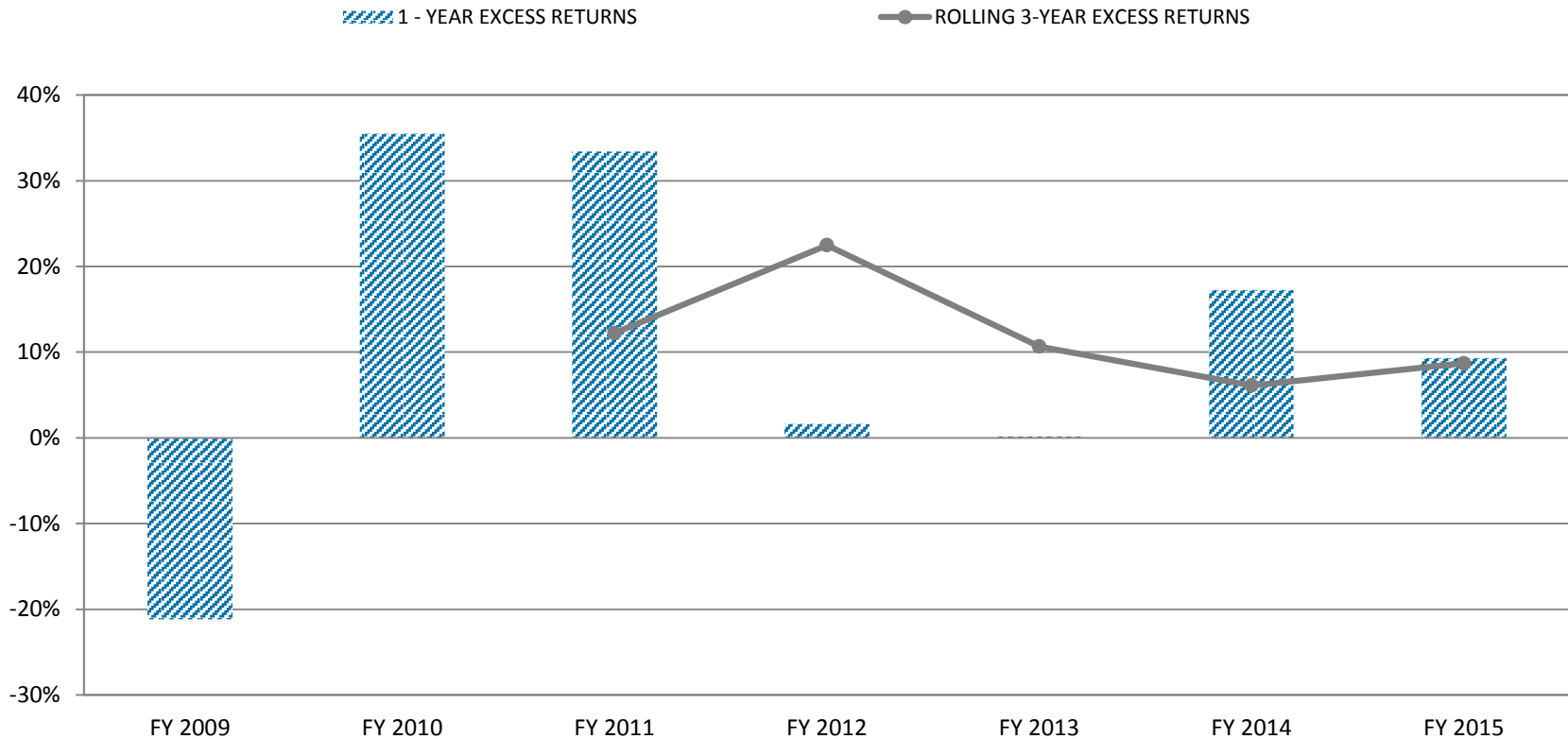
- The Infrastructure Program has outperformed across all measured periods.

As of June 30, 2015	1-YR	3-YR	5-YR
	Net Return	Net Return	Net Return
INFRASTRUCTURE	13.2%	13.7%	17.8%
POLICY INDEX	3.9%	5.0%	6.1%
Excess Return	9.3%	8.7%	11.7%

- Strong performance was driven by the program’s direct investments and commingled funds.
- NAV grew 23% from \$1.8 billion to \$2.2 billion.

Program Performance Review – Infrastructure (Cont'd)

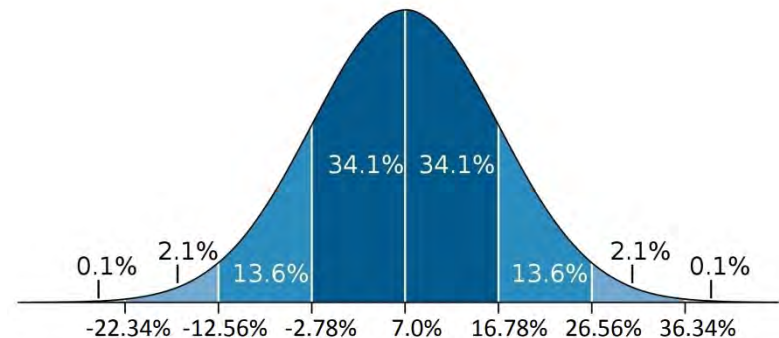
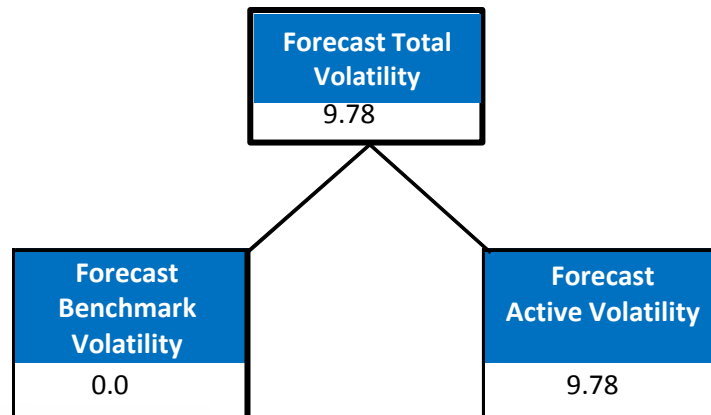
3-Year Rolling Excess Return



Volatility Profile – Infrastructure

As of June 30, 2015

- Infrastructure Forecast Volatility is 9.78%
- Forecast Tracking Error is 9.78%



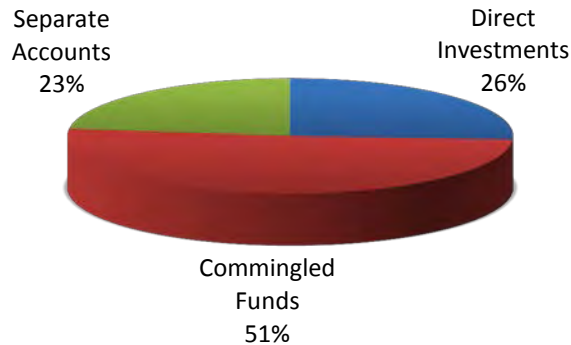
- Based on Expected Returns from 2013 ALM Workshop of 7.0%.

Program Characteristics – Infrastructure

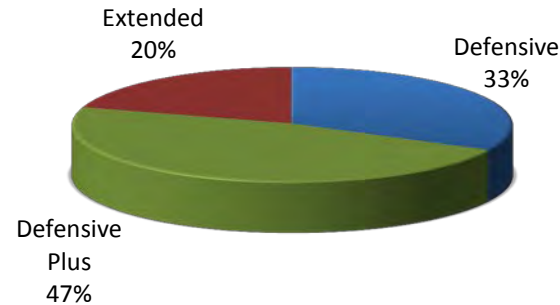
- **Total NAV:** \$2.2 billion.
 - Program NAV is 0.7% of Total Fund, versus 0 - 2% target range with a 1% interim target.
- **Unfunded:** \$2.2 billion.
- **Structure:**
 - 8 managers
 - 8 Commingled Funds, 2 Direct Investments, and 3 Separate Accounts.
 - NAV Basis: 51% in Commingled Funds, 26% in Direct Investments, 23% in Separate Accounts.
- **Geographic Exposure:**
 - 60% U.S., 38% in Developed OECD ex US Countries (primarily in the U.K. and Canada) and 2% in Less Developed Countries.
 - 6% of the Program NAV is invested in California.

Program Characteristics – Infrastructure by NAV

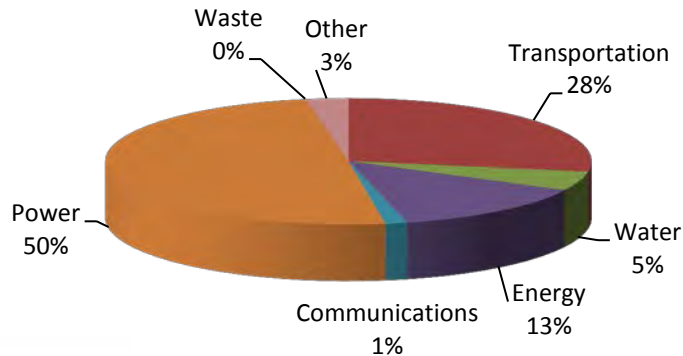
Investment Type



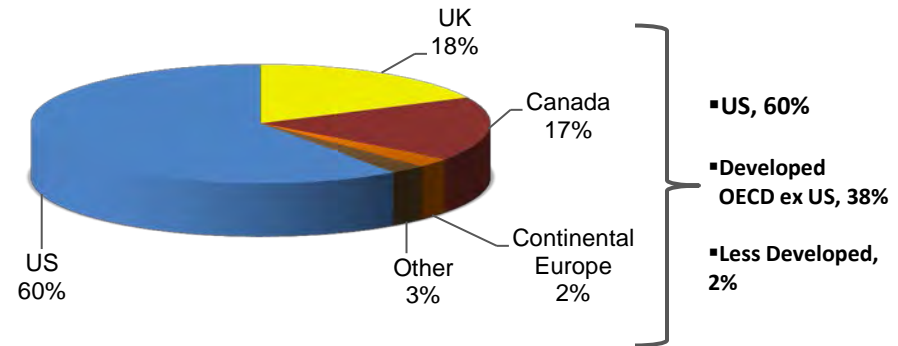
Risk Category



Sector



Geography



(a) Period ending March 31, 2015 with total NAV amounting to \$2.2 billion.

Portfolio Positioning – Infrastructure ^(b)

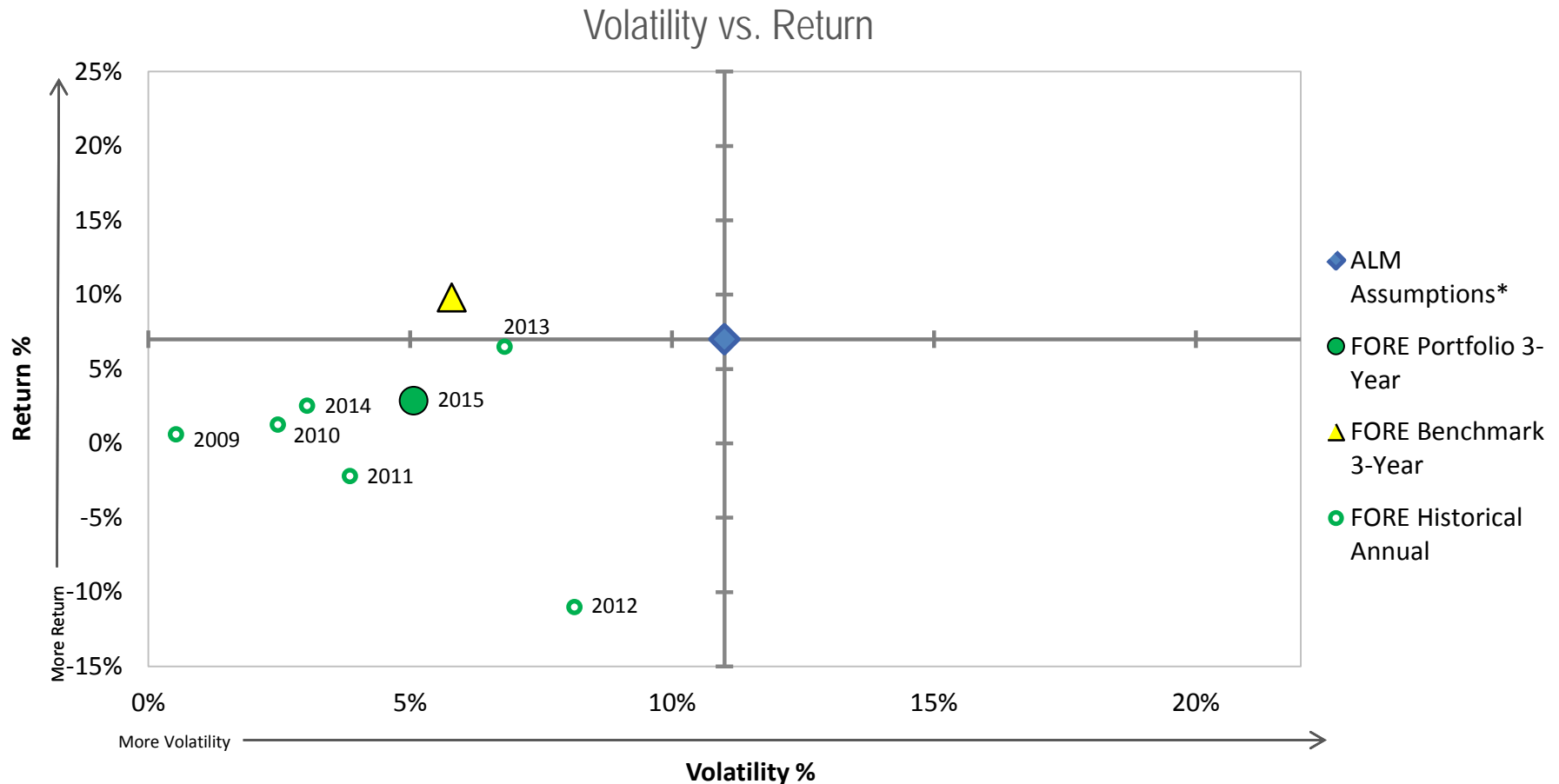
Program Target Policy as % of Total Fund	Interim Program Range/Limit as a % of Total Fund		Actual Investment as % of Total Fund
1.0%	0.0% - 2.0%		0.7%
Investment Parameters	Long Term Strategic Range/Limit		As % of Program NAV ^(a)
Risk			
Defensive	25% - 75%		33%
Defensive Plus	25% - 65%		47%
Extended	0% - 10%		20%
Region			
US	40% - 80%		60%
Dev OECD ex US	20% - 50%		38%
Less Developed	0% - 10%		2%
Concentration			
Equity Investments ^(c)	70% - 100%		100%
Debt Investments	0% - 30%		0%
Public Equity Securities	0% - 10%		0%
Other Investment Parameters	Long Term Strategic Range/Limit as % of Total Program	Actual as % of Total Fund Program	Compliance
Leverage			
Overall Portfolio LTV	65%	47%	✓

(a) Data presented reflects the investment partnerships financial statements for the period ending of March 31, 2015 (b) Per the new Infrastructure Policy effective as of August 15, 2011, as stated in Section V.F.2, the requirement to meet the risk and region investment parameters will be applicable for the Infrastructure Program in dollar terms and only when the NAV exceeds \$3 billion. (c) One commingled fund acquired prior to program inception exceeds the concentration limits for new investments.

II. Investment Review

- a. Real Estate
- b. Infrastructure
- c. **Forestland**

ALM Assumptions Validation – Forestland



* Capital Market Assumptions used in the 2013 ALM Workshop. Data Sources: State Street Bank, ALM Assumptions. FORE is Forestland.

Past Year Environment Review – Forestland

- U.S. Housing starts from July 1, 2014 to June 30, 2015 have increased from 1.1 million to 1.2 million.
- Prices for sawlogs and pulp in the US South continued a slow recovery but remain below pre-financial crisis price levels
- The U.S. South region has seen significant capital investments in sawmills.

Program Performance Review – Forestland

- **Forestland Program (NAV of \$2.2 billion)**

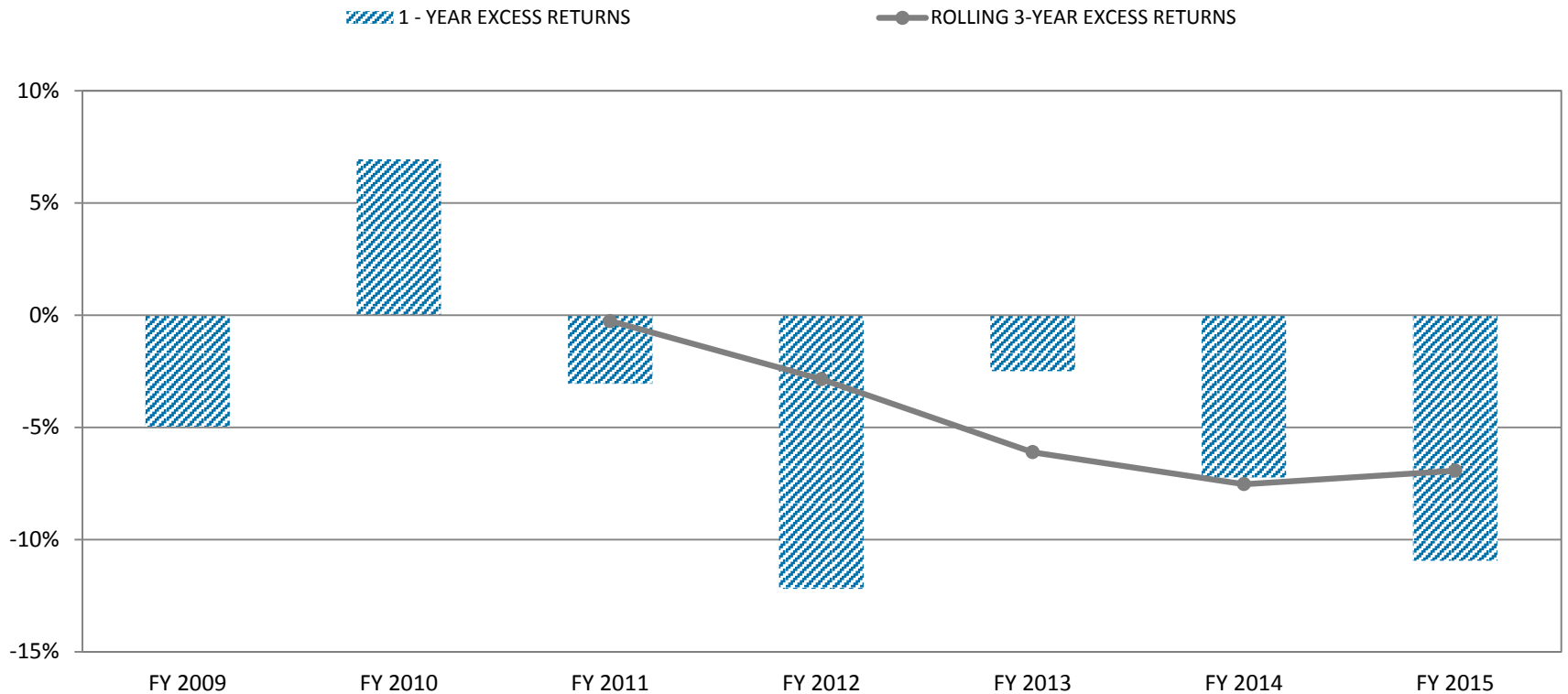
- The Forestland Program reported a -0.3% return for the 1-year period.
- The Program has underperformed relative to its benchmark for all measurement periods.

As of June 30, 2015	1-YR	3-YR	5-YR
	Net Return	Net Return	Net Return
FORESTLAND	(0.3%)	2.9%	(1.1%)
POLICY INDEX	10.6%	9.8%	6.2%
Excess Return	(10.9%)	(6.9%)	(7.3%)

- The Domestic Portfolio (NAV of \$1.8 billion) **underperformed** the benchmark across all periods.
- The International Portfolio (NAV \$0.4 billion) **underperformed** the benchmark across all periods.

Program Performance Review – Forestland (Cont'd)

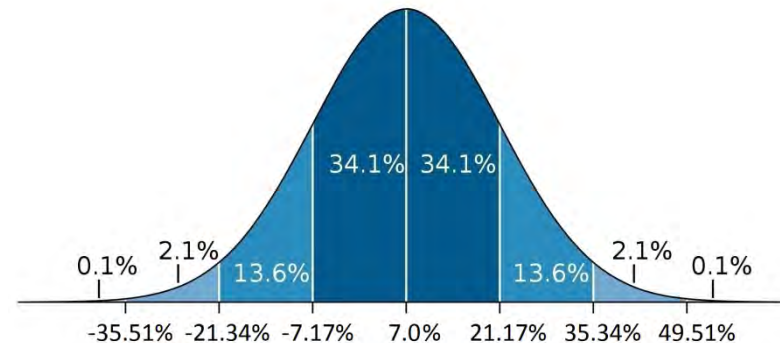
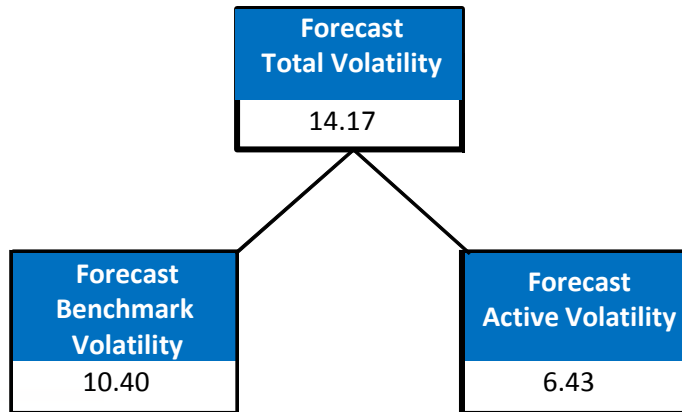
3-Year Rolling Excess Return



Volatility Profile – Forestland

As of June 30, 2015

- Forestland Forecast Volatility is 14.17%
- Forecast Tracking Error is 6.43%



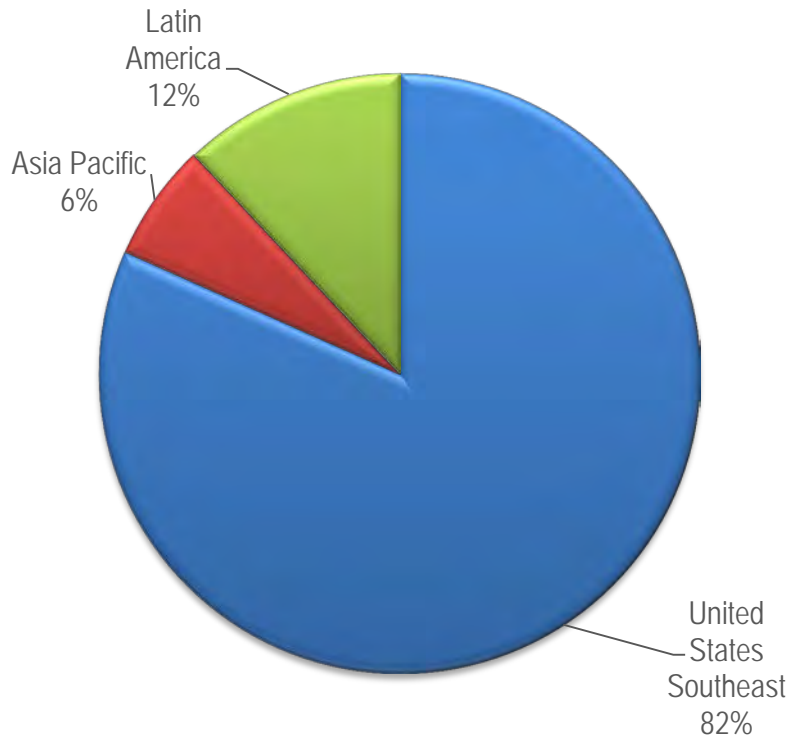
- Based on Expected Returns from 2013 ALM Workshop of 7.0%.

Program Characteristics – Forestland

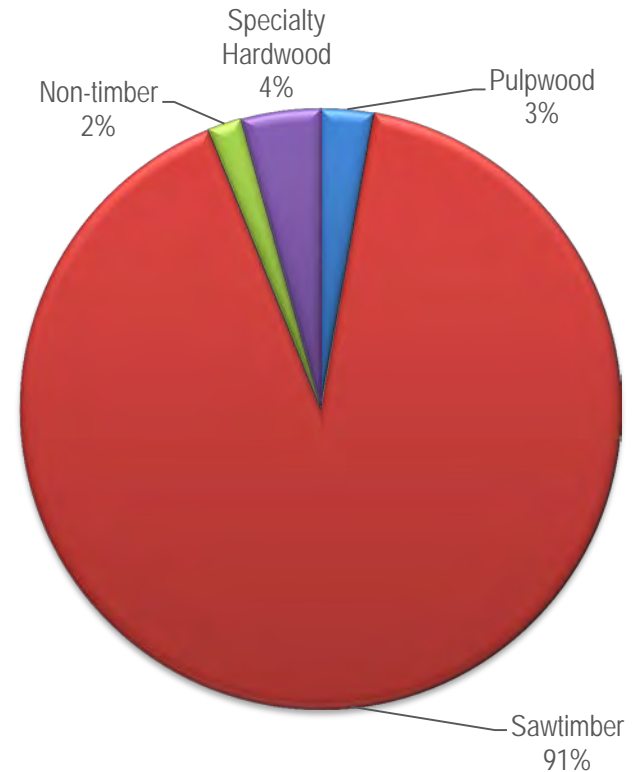
- **Total NAV:** \$2.2 billion.
 - Program NAV is 0.7% versus 1% target allocation of Total Fund.
- **Unfunded:** \$0.
- **Structure:**
 - 2 managers
 - 1 domestic separate account: Lincoln Timber, L.P. includes two distinct portfolios in the U.S. south.
 - 1 international separate account: Sylvanus LLC, includes properties in Brazil, Guatemala, and Australia.
- **Geographic Exposure:**
 - The portfolio maintains overweights to the US South and International geographies relative to the NCREIF Timberland Index (which includes only U.S. regions).

Portfolio Characteristics – Forestland by NAV^(a)

Geography



Primary Product



(a) Period ending March 31, 2015 with total NAV amounting to \$2.2 billion.

Portfolio Positioning – Forestland

- Program is currently under review.
- LTV ratio is limited to 40%, current LTV is 21.2%.
- There are no specific targets for region and type, however there is a general requirement stated for diversification.

III. Business Review

Real Assets Investment Decision Process

Real Assets Investment Committee (RAIC):

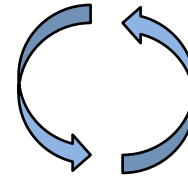
- All investment decisions are reviewed by RAIC

Members:

- Chair MID
- 7 voting members (MID/3 IDs/3 IMs)

Strategic and Tactical Planning

- Strategic Plan approved by Investment Committee
- Sector Plans outline tactical plans for each product type



Sourcing

- Active searches based on needs determined by planning process.
- Emerging Manager proposals referred to mentor program.
- Unsolicited proposals



Screening and Due Diligence

- All proposals are tracked in the Investment Submittal Portal (ISP) an INVO wide web-based system
- Staff scores each proposal utilizing a two part standardized manager assessment tool and/or assesses using standardized filters

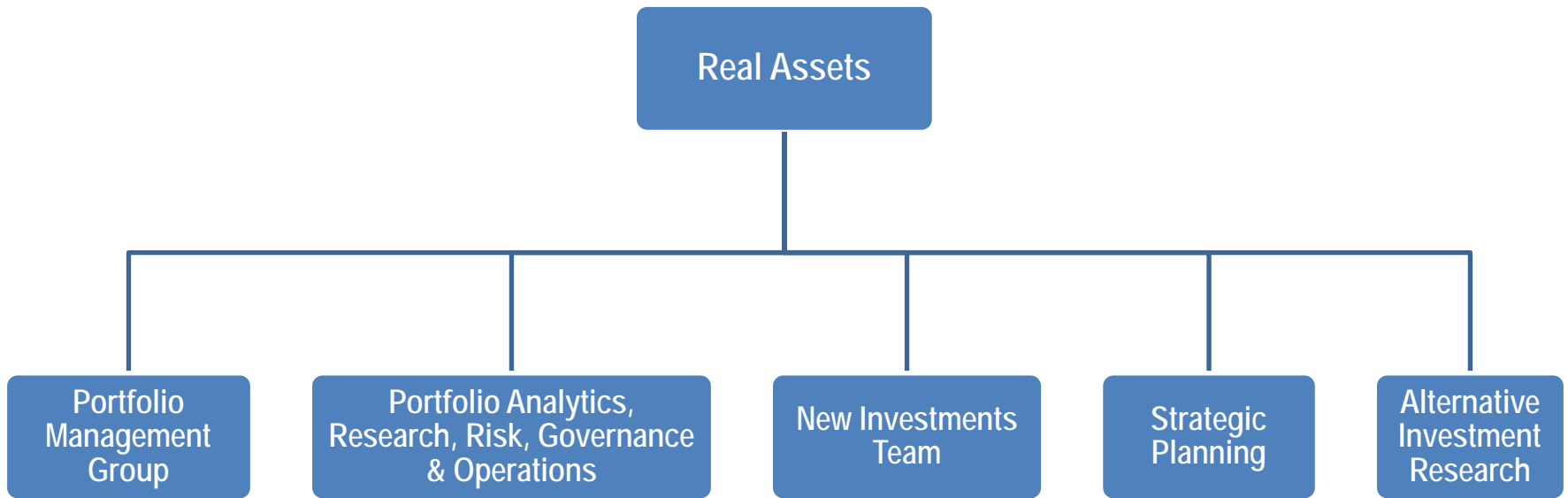


Real Assets Investment Committee (RAIC)

- Committee of seven staff chaired by Managing Investment Director (MID)
- Pension Consulting Alliance (PCA) and/or Stepstone attend all meetings

• In fiscal year 2014-2015, RAIC made investment decisions representing \$17.4 billion of investment, disposition, and debt decisions.

Functional Organizational Chart



Staffing Overview

TOTAL PROGRAM ¹

- 58 total positions within Real Assets; the same number of positions in 2013-2014

STAFFING UPDATES ²

- Appointed 1 Managing Investment Director
- Appointed 3 Investment Managers
- Appointed 2 Investment Officers
- Transferred 2 Investment Officer positions to other INVO programs

CURRENT VACANCIES ³

- 1 Staff Services Analyst
- 1 Investment Director
- 1 Investment Manager

¹ From June 30, 2014 through June 30, 2015; 54 positions reported incorrectly for 2013-2014

² From June 30, 2014 through June 30, 2015

³ As of October 1, 2015

Strategic Plans

	Policy Requirement	Investment Committee Approval
Real Estate	Strategic Plan updated at a minimum every five years	Feb 2011
Infrastructure	Strategic Plan updated at a minimum every five years	April 2011
Forestland	Strategic Plan is part of Real Assets. It will be included in the updated strategic plan process.	

- Role of asset class and benchmark are inputs into strategic planning process provided by Asset Allocation framework.
- Soliciting input from various industry leaders. In developing plan, involving wide group of staff members.
- Proposing an integrated Real Assets Strategic Plan incorporating Forestland, Infrastructure and Real Estate;
 - Programs have similar roles, returns, volatility, and correlations
 - Approach consistent with Vision 2020 of reducing complexity
- Present draft of plan to IC in Spring of 2016.

Strategic Projects Update

Initiatives	
Real Assets Investment Committee Integration	<ul style="list-style-type: none"> • Integrated Real Estate and Infrastructure Investment Committee and revised charter effective July 1, 2015
Asset Class Staff	<ul style="list-style-type: none"> • Real Assets reorganized effective July 1, 2015 to integrate staff of Infrastructure, Forestland, and Real Estate and focus on Vision 20/20 priorities
New valuation procedures for Real Estate	<ul style="list-style-type: none"> • New quarterly valuation procedure for Real Estate began July 1, 2015. • Staff is reviewing current approach for Infrastructure and Forestland.
Strategic Plan Update	<ul style="list-style-type: none"> • Staff beginning planning process. Teams have been assigned to Domestic Core, International Core, Domestic Specialty, Leverage, and Business Model. • Round tables with industry leaders are ongoing.

ESG Integration Highlights within Real Assets

Existing Program

- **Manager Expectations Project**
 - Since June 2014, piloting Infrastructure Sustainable Investment Practice Draft Guidelines
 - 2 new Custom Account contracts incorporated Sustainable Investment requirements.
 - All new infrastructure investment opportunities at CalPERS discretion included ESG risk matrixes in their advanced due diligence review
- **ULI Greenprint Center for Building Performance**
 - CalPERS Core Real Estate managers are members of Greenprint and report energy consumption for underlying assets. Staff represents CalPERS on the Greenprint Board and Performance Committee
- **Responsible Contractor Program (RCP) Policy**
 - CalPERS continues to encourage fair wages and benefits to workers through its Responsible Contractor Program Policy, adopted in 1994.
 - RAU staff participated in the Targeted Investment Programs review of the proposed revisions to the Policy (the new RCP Policy became effective July 1, 2015).

ESG Integration Highlights within Real Assets

Enhancements

- **Manager Expectations Project**
 - Pilot launched in May 2015 for combined RAU Draft Sustainable Investment Practice Guidelines
 - Provides Real Assets' approach to sustainable investment in manager and asset selection and for identifying, measuring, monitoring, managing, and staying apprised of ESG-related risks and opportunities that may impact the performance of investments.
- **Global Real Estate Sustainability Benchmark (GRESB) - Infrastructure**
 - CalPERS became a founding member of the GRESB- Infrastructure, a new benchmark that will measure the sustainability performance of infrastructure investments. This tool will help bolster the Sustainable Investment practices of Real Assets by providing a monitoring and due diligence tool. Staff represents CalPERS on the GRESB Infrastructure Advisory Board
- **Responsible Contractor Program (RCP) Policy**
 - Effective July 1, 2015 with the revised RCP Policy, among other changes, Non-Core Managers became subject to heightened neutrality requirements for service contracts over \$100,000 with the newly revised RCP Policy.

Emerging Manager Program in Real Estate

FY 2014/15 SIGNIFICANT EVENTS

- *Canyon Catalyst Fund*, received an additional \$175 million allocation (total of \$375 million). Four realizations to date have resulted in IRR's of 26 – 44%.
- *AGI Resmark* received an additional \$50 million allocation (total of \$150 million). Two build-to-base-core multifamily assets in the San Francisco Bay Area are underway.

NEW PROGRAM

- Emerging Manager Transition Program parameters have been established and marketing of this new program is also underway.

CURRENT STATUS/UPDATE

- Third Year Completed of Innovative Mentoring Manager Model
- Continued Favorable Feedback to our Programmatic Joint Venture Structure
- Significant Progress in Five Emerging Managers Growing their Management Teams and Company Infrastructure

Program Expenses – Real Estate

	FY 2014-15			FY 2013-14		
	AUM (\$millions)	Fees (\$millions)	Fees ¹ (BPS)	AUM (\$millions)	Fees (\$millions)	Fees ¹ (BPS)
Internal Management	\$	\$ 7	3	\$	\$ 7	3
External Management ²	\$ 27,451	\$ 609	222	\$ 25,930	\$ 811	313
Asset Management Fee Paid	N/A	\$ 177	65	N/A	\$ 190	73
Profit Sharing Paid	N/A	\$ 8	3	N/A	\$ 87	34
Profit Sharing Accrued	N/A	\$ 424	154	N/A	\$ 534 ³	206
Consultants Expense	N/A	\$ 5	2	N/A	\$ 8	3
Technology & Operating Expense	N/A	\$ 9	3	N/A	\$ 9	3
Total Program*	\$ 27,451	\$ 630	229	\$ 25,930	\$ 834 ⁴	322

* Some totals may not reconcile due to rounding. Four quarters of data ending on 3/31/15 and 3/31/14 respectively.

¹ All BPS fees and expenses paid figures are calculated on Total Program AUM defined as NAV (Net Asset Value).

² External Management totals include asset management fees and profit sharing fees (paid and accrued).

³ Multiple years of profit sharing expense are included in the FY 2013-14 figure.

⁴ Last years FY 2013-14 APR reported \$825 million, which included four quarters of data ending on 6/30/2014.

Note: As of 6/30/15, total profit sharing liabilities equal \$1.1 billion.

Program Expenses – Real Estate

- Strategic (*domestic*) Core actual and forecasted asset management fees are below the ODCE benchmark
- Newly formed strategic (*domestic*) partnerships include caps on total fees (asset management and incentive) that are below the ODCE benchmark
- Fees, in basis points, are expected to further decline as legacy portfolios continue to liquidate
- Reevaluation of external fee models will take place in 2016 Strategic Plan.

Program Expenses – Infrastructure & Forestland

	FY 2014-15			FY 2013-14		
	AUM (\$millions)	Fees (\$millions)	Fees ¹ (BPS)	AUM (\$millions)	Fees (\$millions)	Fees ¹ (BPS)
Internal Management	\$	\$ 2	6	\$	\$ 3	7
External Management ²	\$ 4,385	\$ 63	144	\$ 4,028	\$ 56	138
Asset Management Fee Paid	N/A	\$ 22	51	N/A	\$ 17	42
Profit Sharing Paid	N/A	\$ 12	27	N/A	\$ 2	5
Profit Sharing Accrued	N/A	\$ 29	66	N/A	\$ 37	91
Consultants Expense	N/A	\$ 1	1	N/A	\$	1
Technology & Operating Expense	N/A	\$ 1	2	N/A	\$	1
Total Program*	\$ 4,385	\$ 67	153	\$ 4,028	\$ 59	146

* Some totals may not reconcile due to rounding. Four quarters of data ending on 3/31/15 and 3/31/14 respectively

¹ All BPS fees paid figures are calculated on Total Program AUM defined as NAV (Net Asset Value).

² External Management totals include asset management fees and profit sharing fees (paid and accrued).

Program Expenses – Infrastructure & Forestland

- Separate account strategic partnerships negotiated for the Infrastructure component carry better economic terms and governance than commingled funds.
- Separate accounts are anticipated to be the primary mode of new investment.
- Fees as a percentage of NAV are expected to decrease as the portfolio grows through new separate account vehicles.

Conclusion

- Real Assets
 - Focus on scalable and repeatable strategies and business models.
 - Reduce overall number of managers.
 - Continued integration of ESG elements for sustainable investments as they evolve.

- Real Estate
 - Continue to acquire high quality, income producing core assets.
 - Overall performance has exceeded the policy benchmark for the 1 and 3 year periods.

- Infrastructure
 - Goal is increasing deployment, reviewing business model, and continuing strong performance.

- Forestland
 - Review of program and fit inside of Real Assets.

- Strategic Plan will be presented in spring 2016 to cover all of Real Assets.