

Public Agenda Item #6

Review and Discussion of
Investment Performance for Fourth Calendar Quarter of 2015

February 23, 2016

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ERS Trust Fund Dashboard

Performance

Fund	CYTD	FYTD
Performance:	1.6%	0.5%
Benchmark:	1.0%	0.9%
Excess Return:	0.6%	-0.4%

3-Yr Tracking error 1.06

Largest Contributors:

- International Equity Advisory Selection
- Directional Growth Outperformance
- Global Credit Outperformance

Largest Detractors:

- Overweight Public Equity 3Q 2015
- Underweight Rates 3Q 2015

Profile

Market Value at 12/31/15:

\$24.9 Billion

Actuarial Accrued Liability 8/31/15:

\$33.9 Billion

Retirees and Beneficiaries 8/31/15:

100,716

Retirement Payments Annually

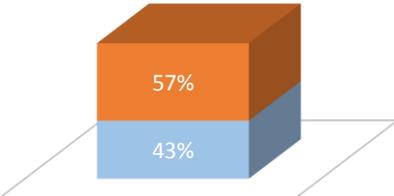
8/31/15:

Compliance

- Asset Allocation Compliance:** Yes
- Tracking Error Compliance:** Yes
- Investment Policy Compliance:** Yes

MANAGEMENT

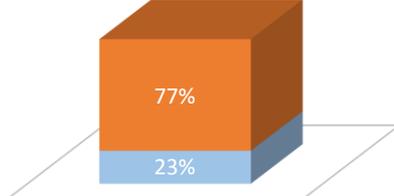
■ External ■ Internal



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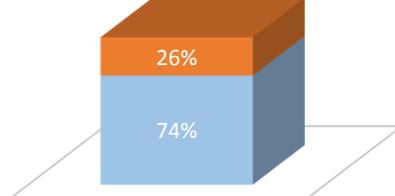
ALLOCATION

■ Risk Reducing ■ Return Seeking



LIQUIDITY

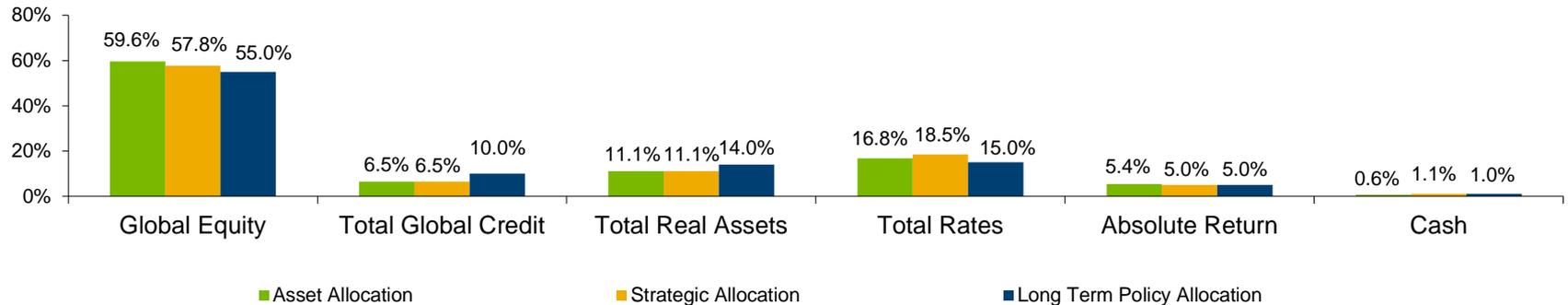
■ Liquid ■ Illiquid



Total Fund: Asset Allocation

	1 Quarter	Fiscal YTD	1 Year
Total Fund			
Beginning Market Value	24,533,633,307	25,177,941,024	25,598,672,543
+ Additions / Withdrawals	-242,632,476	-323,826,783	-1,109,538,408
+ Investment Earnings	600,928,591	37,815,182	402,795,287
= Ending Market Value	24,891,929,422	24,891,929,422	24,891,929,422

Employees Retirement System of Texas - Quarterly Asset Allocation Including Risk Management vs. Policy Target as of 12/31/2015

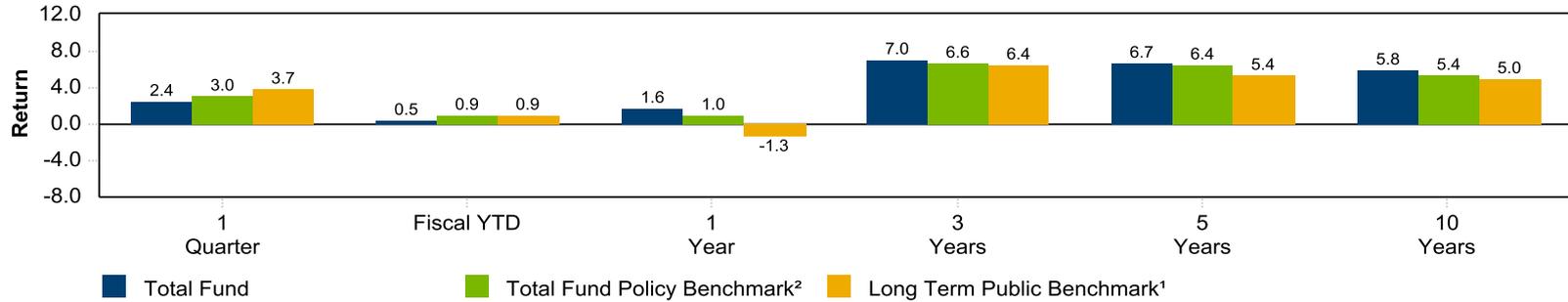


¹ All returns contained in this report are shown net of investment management fees. All returns longer than 1-year are annualized.

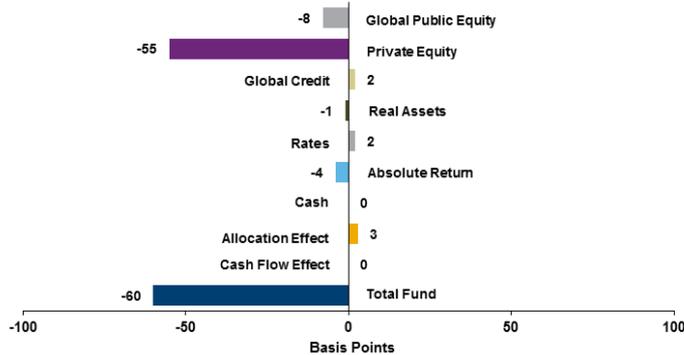
² Source data can be found on pages 5 and 14 of full report.

Total Fund: Performance

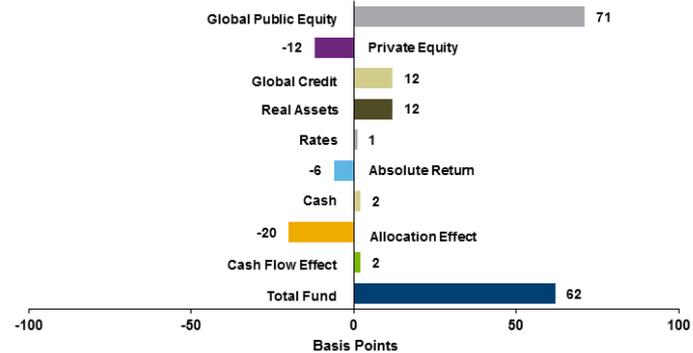
Return Summary



Total Fund Attribution Analysis
3 Months Ending 12/31/15



Total Fund Attribution Analysis
1 Year Ending 12/31/15

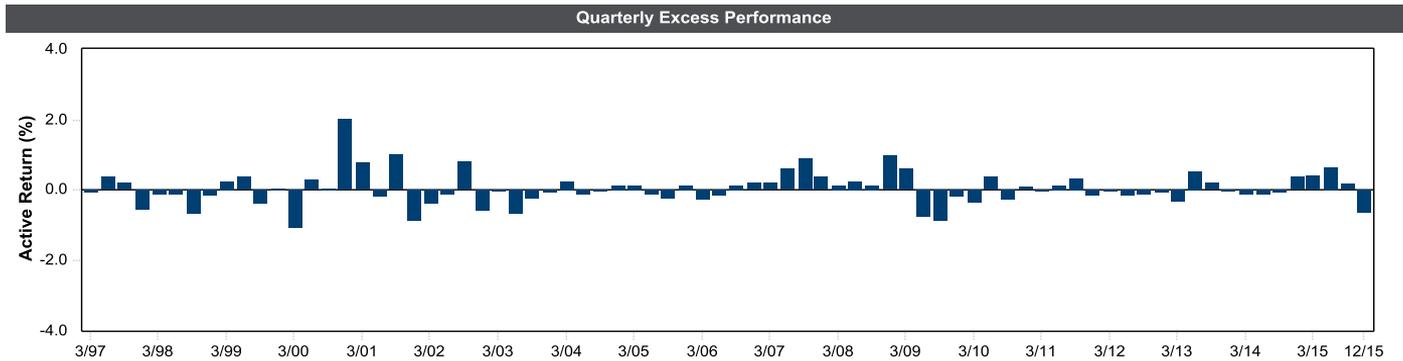
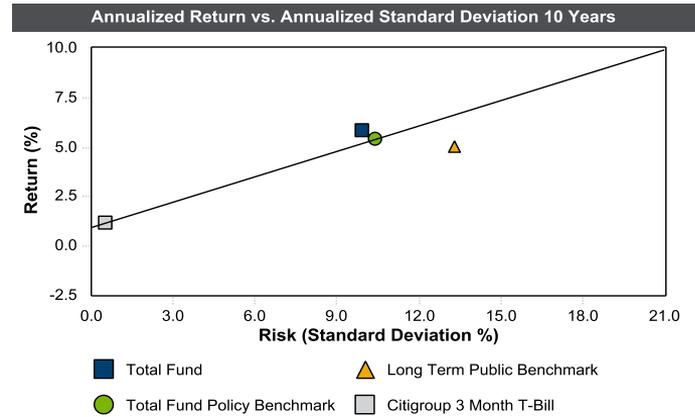
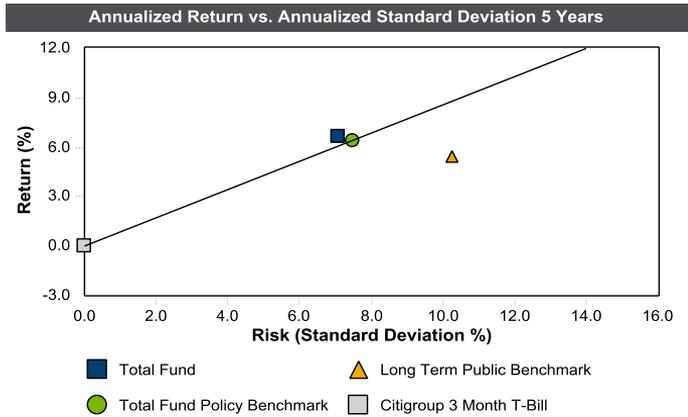


¹The Long Term Public Benchmark is a combination of 79% MSCI ACW IMI and 21% Barclays Intermediate Treasury Index.

²A detailed description of the Policy Index as of 12/31/2015 is provided in the appendix of the full report.

³Source data can be found on pages 4 and 6 of full report.

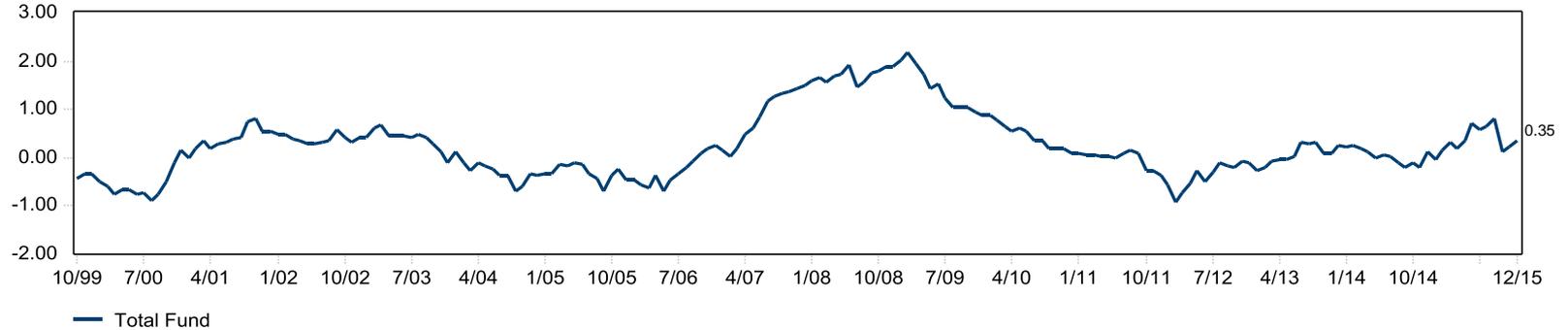
Total Fund: Risk



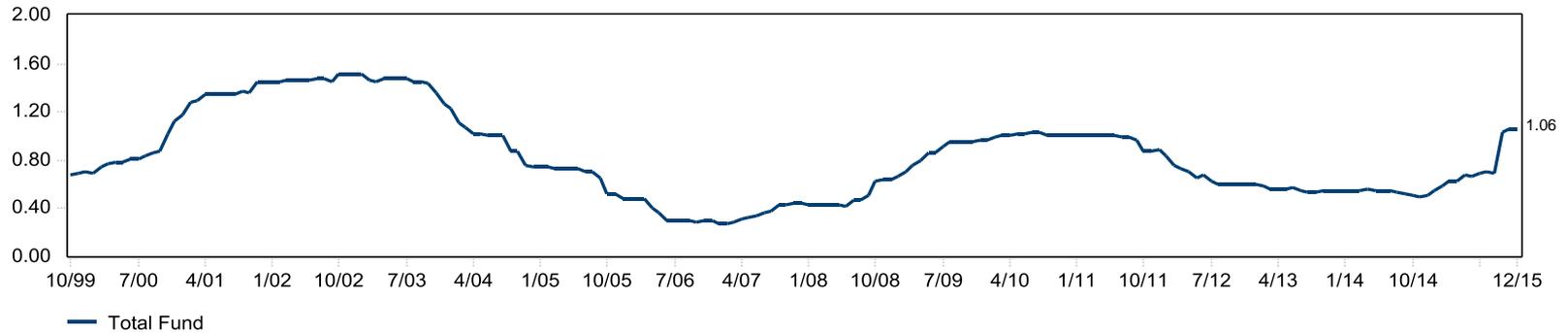
¹ Source data can be found on page 6 and 13 of full report.

Total Fund: Rolling Information Ratio and Tracking Error (36 months)

Information Ratio (Excess Return Ratio)¹



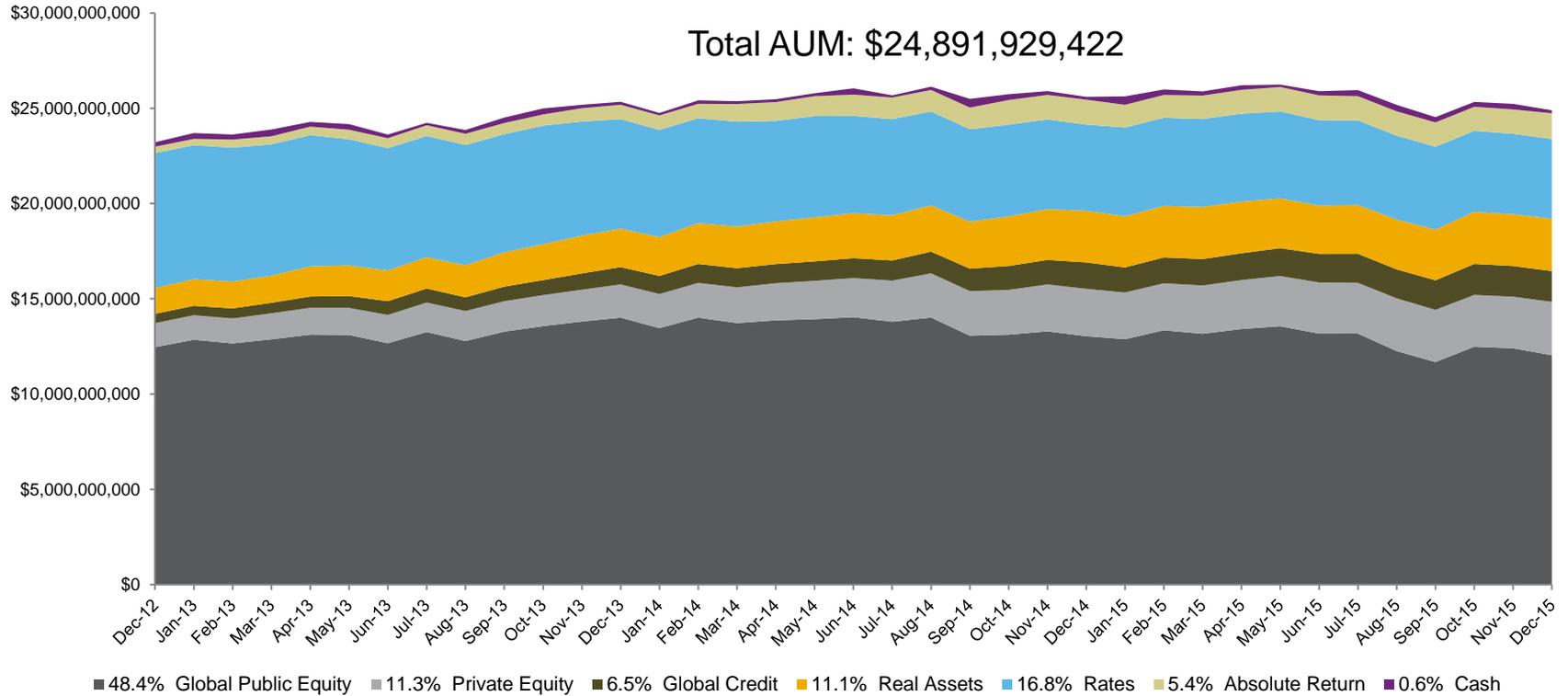
Tracking Error²



¹ Measured by dividing the active rate of return by the tracking error. The higher the Information Ratio, the more value-added contribution by the manager.

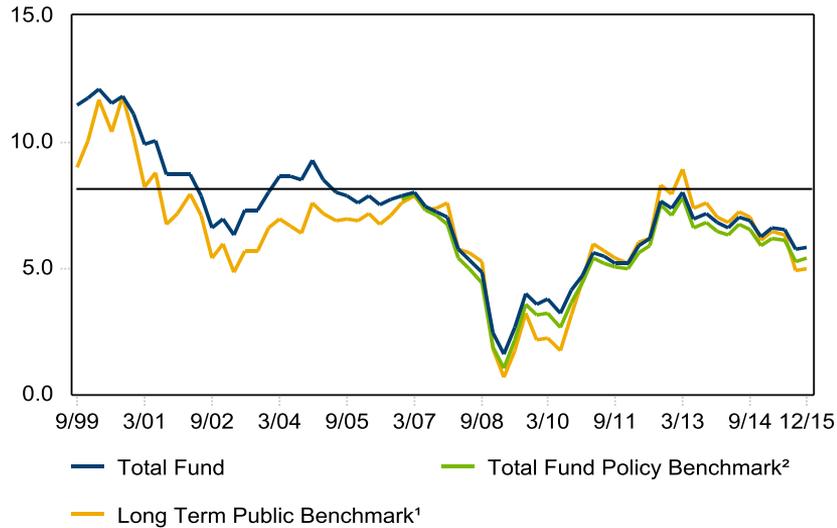
² A measure of the standard deviation of a portfolio's performance relative to the performance of an appropriate market benchmark.

ERS Asset Allocation Evolution

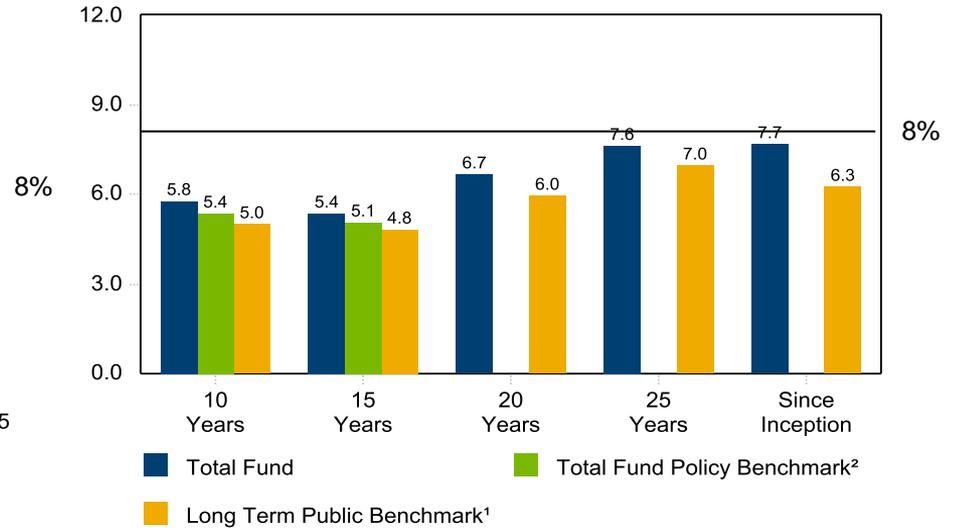


Long Term Investment Results

Rolling 10 Year Return



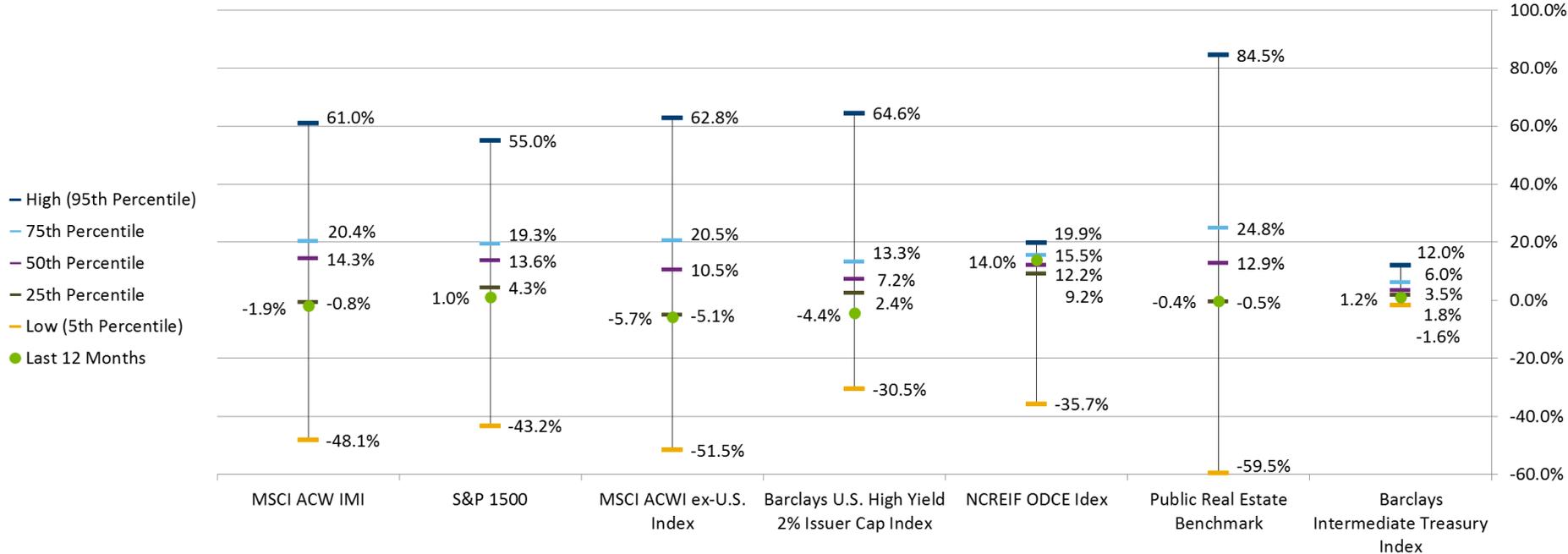
Return Summary



¹The Long Term Public Benchmark is a combination of 79% MSCI ACW IMI and 21% Barclays Intermediate Treasury Index.

²The Total Fund Policy Benchmark has an inception date of 11/30/1996.

Rolling 12-Month Capital Market Returns (10 Years ending 12/31/15)

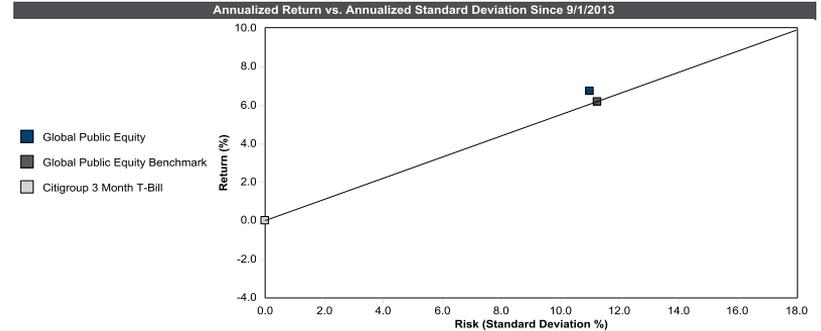
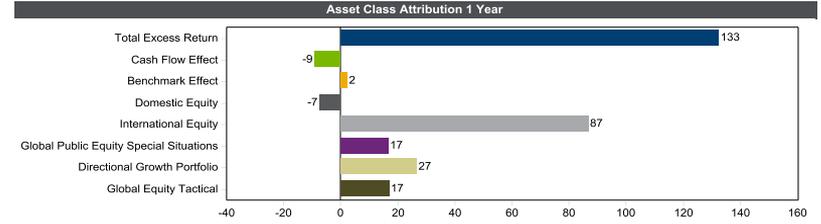
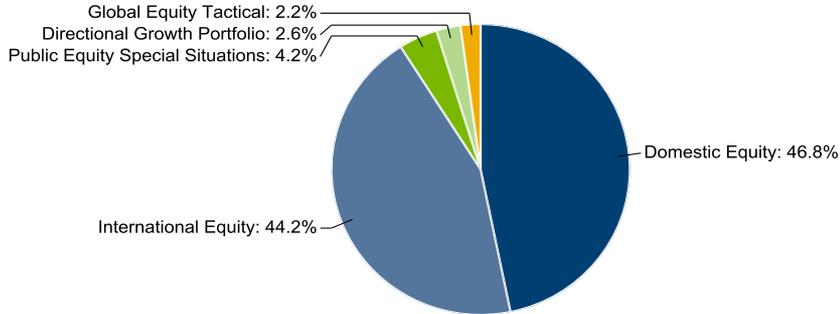


- The chart above depicts the dispersion of rolling 12 month returns of various capital markets over the last 10 years.

Return Seeking Global Public Equity Performance

	Allocation			Performance(%)		
	Market Value (\$)	%	Policy(%)	1 Quarter	Fiscal YTD	1 Year
Global Public Equity	12,039,703,057	48.4	47.8	4.8	0.5	-1.1
<i>Global Public Equity Benchmark</i>				5.0	1.2	-2.4

Global Public Equity Asset Allocation



¹ Source data can be found on pages 16, 17, and 18 of full report.

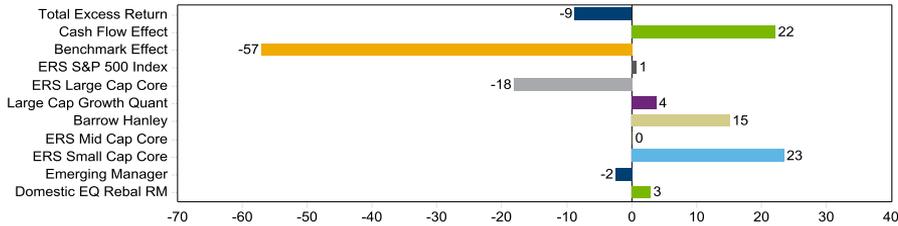
² While the Special Situations, Directional Growth, and Global Equity Tactical component's underlying managers may have domestic or international equity benchmarks, the components are not included in the attribution for domestic and international equity

Return Seeking (Global Equity)

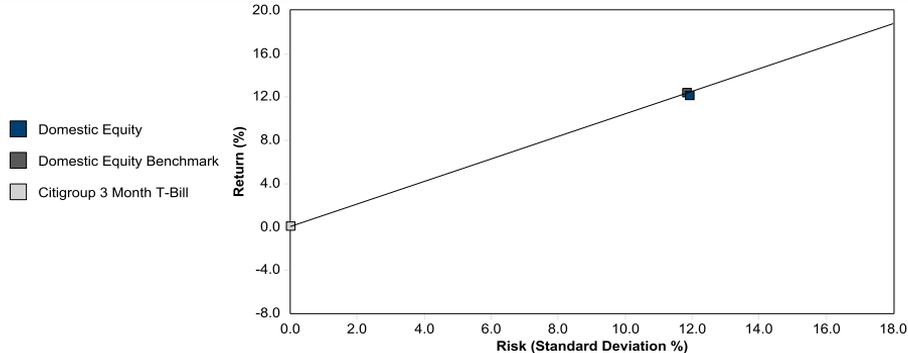
Domestic Equity Performance

	Allocation		Performance(%)					
	Market Value (\$)	%	1 Quarter	Fiscal YTD	1 Year	3 Years	5 Years	10 Years
Domestic Equity	5,633,016,632	22.6	5.5	2.1	0.9	14.5	12.1	7.1
<i>Domestic Equity Benchmark</i>			6.6	3.9	1.0	14.9	12.4	7.3

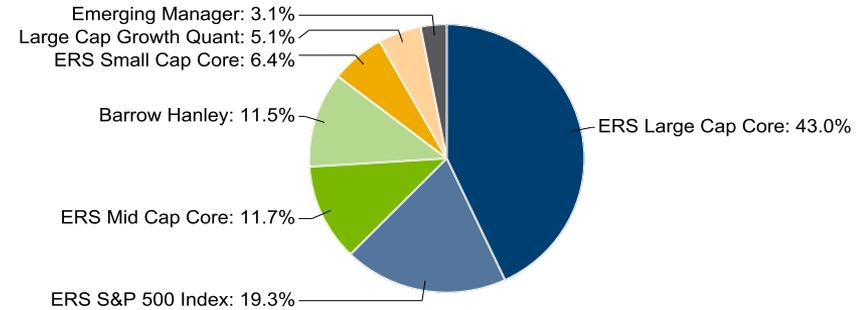
Asset Class Attribution 1 Year



Annualized Return vs. Annualized Standard Deviation 5 Years



Domestic Equity Asset Allocation

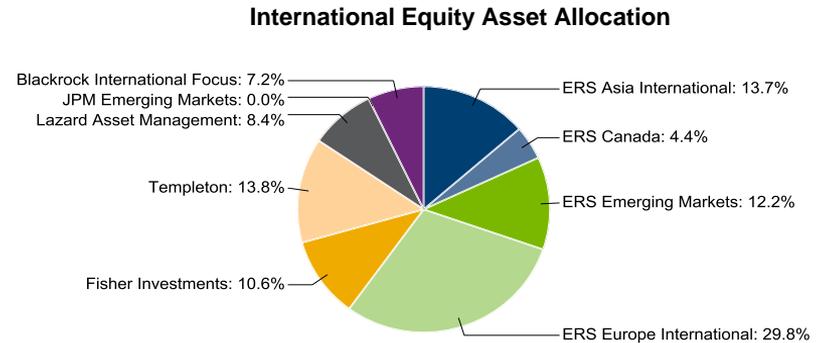
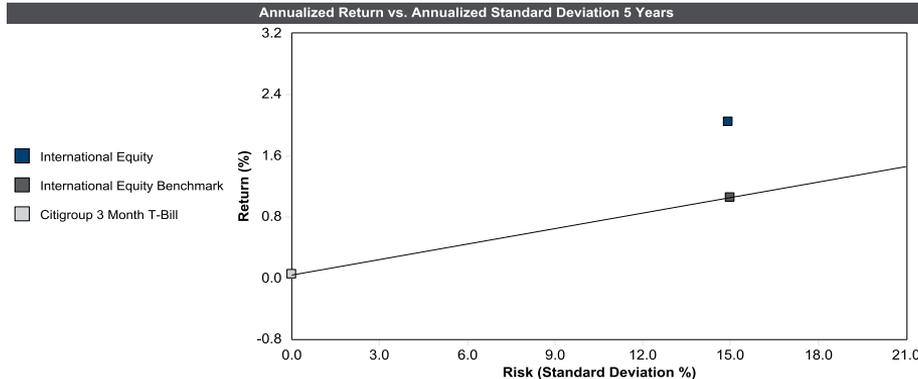
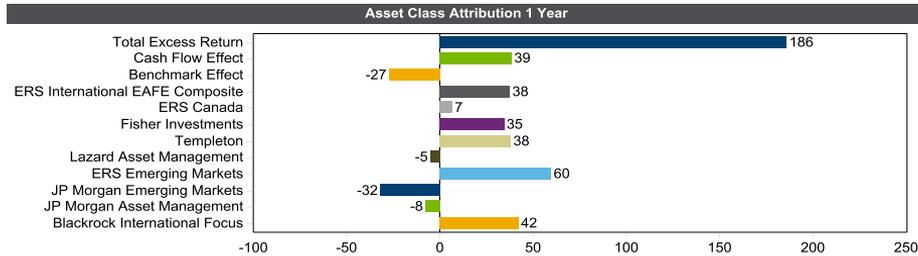


¹ Source data can be found on pages 20, 21, and 22 of full report.

Return Seeking (Global Equity)

International Equity Performance

	Allocation		Performance(%)					
	Market Value (\$)	%	1 Quarter	Fiscal YTD	1 Year	3 Years	5 Years	10 Years
International Equity	5,321,833,171	21.4	3.8	-1.1	-3.8	2.4	2.1	3.2
<i>International Equity Benchmark</i>			3.2	-1.5	-5.7	1.5	1.1	2.4



¹ Source data can be found on pages 24, 25, and 26 of full report.

Return Seeking (Global Equity) Private Equity Summary

	Allocation			Internal Rate of Return(%)			
	Market Value (\$)	%	Policy(%)	1 Year	3 Years	5 Years	Since Inception
Private Equity	2,776,693,242	11.3	10.0	5.5	12.1	12.2	11.1

Private Equity Program Summary by Fiscal Year as of 12/31/2015

ERS FY	# of Deals	Capital Committed	Capital Called	Distributions	Market Value
1999	1	\$100,000,000	\$88,405,114	\$129,578,992	\$0
2007	1	\$60,585,106	\$57,031,407	\$113,112,748	\$4,653,247
2008	3	\$195,970,000	\$226,174,818	\$207,857,712	\$150,162,592
2009	12	\$903,920,300	\$948,693,535	\$665,865,389	\$626,980,727
2010	7	\$461,265,000	\$463,147,525	\$229,781,745	\$335,987,811
2011	9	\$648,150,000	\$525,553,359	\$211,464,531	\$403,431,188
2012	7	\$501,658,349	\$348,689,012	\$97,172,428	\$385,663,799
2013	7	\$478,315,938	\$256,888,846	\$18,451,668	\$256,984,149
2014	13	\$1,187,235,810	\$441,404,223	\$29,045,067	\$433,332,474
2015	11	\$1,024,485,000	\$161,941,344	\$25,665,971	\$158,881,082
2016	3	\$174,972,087	\$20,616,174	\$0	\$20,616,174
Total	74	\$5,736,557,591	\$3,538,545,356	\$1,727,996,251	\$2,776,693,242

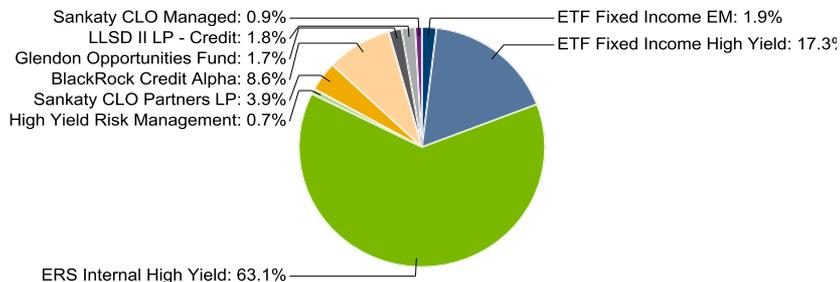
¹ Source data can be found on page 28 of full report.

² Total portfolio market value includes FX contracts and STIF balance

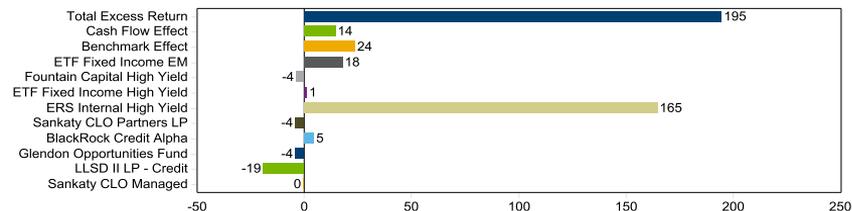
Return Seeking Global Credit Performance

	Allocation			Performance(%)		
	Market Value (\$)	%	Policy(%)	1 Quarter	Fiscal YTD	1 Year
Total Global Credit	1,614,576,299	6.5	6.5	-1.7	-3.6	-2.5
<i>Barclays U.S. High Yield - 2% Issuer Cap</i>				-2.1	-4.6	-4.4

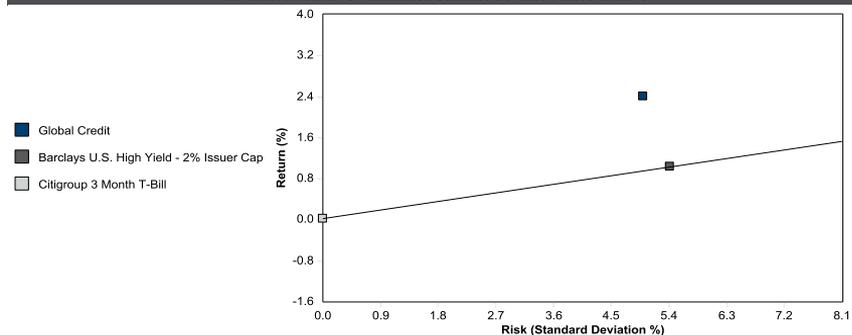
Global Credit Asset Allocation



Asset Class Attribution 1 Year



Annualized Return vs. Annualized Standard Deviation Since 9/1/2013



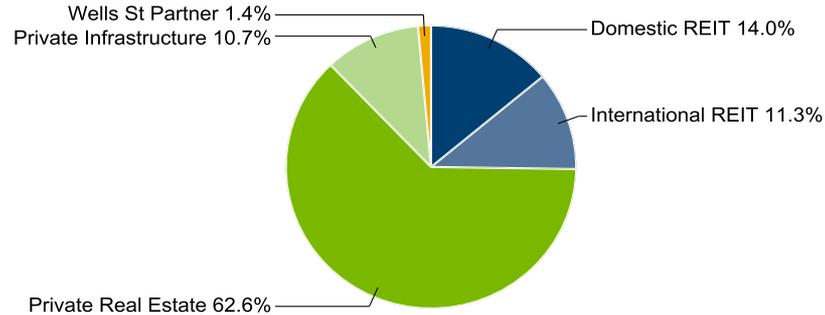
¹ Source data can be found on page 32 and 33 of full report.

Return Seeking

Total Real Assets Asset Class Performance

	Allocation			Performance(%)				
	Market Value (\$)	%	Policy(%)	1 Quarter	Fiscal YTD	1 Year	3 Years	5 Years
Total Real Assets	2,755,989,076	11.1	11.1	3.2	3.8	8.5	10.2	-
Real Estate	2,460,088,250	9.9	-	3.5	4.2	9.6	10.3	10.4

Total Real Assets Asset Allocation



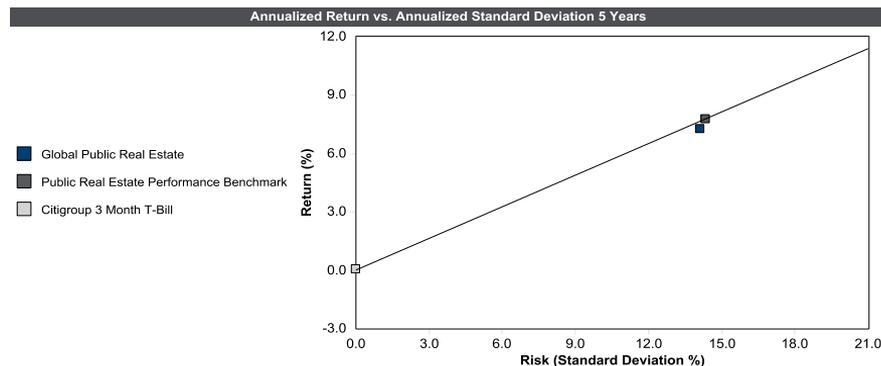
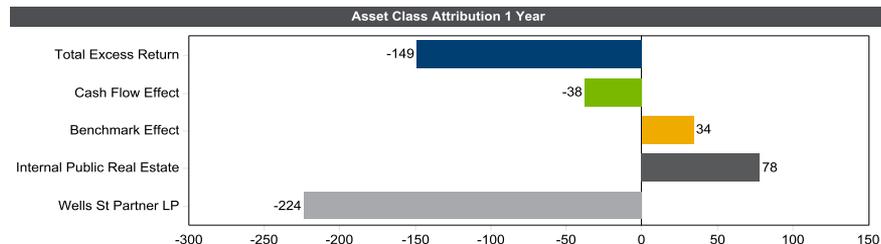
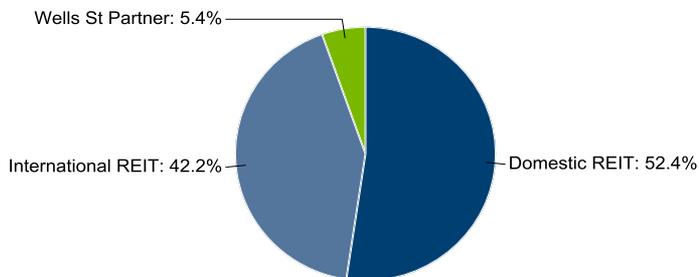
¹ Source data can be found on page 9 and 36 of full report.

Return Seeking (Real Assets)

Real Estate Portfolio Performance

	Allocation		Performance(%)				
	Market Value (\$)	%	1 Quarter	Fiscal YTD	1 Year	3 Years	5 Years
Global Public Real Estate	735,326,768	3.0	4.0	4.5	-1.9	5.5	7.3
<i>Public Real Estate Performance Benchmark</i>			4.2	4.6	-0.4	6.3	7.8

Global Public Real Estate Asset Allocation



¹ Source data can be found on pages 38 and 39 of the full report.

Return Seeking (Real Assets) Private Real Estate Summary

	Allocation		Internal Rate of Return(%)			
	Market Value (\$)	%	1 Year	3 Years	5 Years	Since Inception
Private Real Estate	1,717,072,032	6.9	10.4	12.6	12.8	12.7

Private Real Estate Program Summary by Fiscal Year as of 12/31/2015

ERS FY	# of Deals	Capital Committed	Capital Called	Distributions	Market Value
2010	2	\$136,300,000	\$135,160,829	\$41,629,167	\$144,556,553
2011	7	\$598,150,000	\$617,249,516	\$320,215,770	\$564,183,917
2012	7	\$492,650,000	\$497,362,949	\$194,096,071	\$463,828,313
2013	5	\$415,710,000	\$314,330,563	\$169,908,846	\$221,362,277
2014	10	\$490,480,000	\$288,692,809	\$75,416,431	\$219,590,151
2015	8	\$460,360,270	\$81,948,288	\$12,366,459	\$71,993,272
2016	3	\$85,000,000	\$31,557,550	\$0	\$31,557,550
Total	42	\$2,678,650,270	\$1,966,302,503	\$813,632,744	\$1,717,072,032

¹ Source data can be found on page 40 of the full report.

Return Seeking (Real Assets) Private Infrastructure Summary

	Allocation		Internal Rate of Return(%)		
	Market Value (\$)	%	1 Year	3 Year	Since Inception
Private Infrastructure	295,900,826	1.2	2.2	5.2	7.2

Private Infrastructure Program Summary by Fiscal Year as of 12/31/2015

ERS FY	# of Deals	Capital Committed	Capital Called	Distributions	Market Value
2012	1	\$70,000,000	\$70,000,000	\$0	\$91,065,000
2013	2	\$205,000,000	\$119,963,490	\$1,367,894	\$144,231,908
2015	2	\$105,000,000	\$38,574,301	\$8,675,346	\$26,125,196
2016	2	\$148,000,000	\$41,667,397	\$7,188,675	\$34,478,722
Total	7	\$528,000,000	\$270,205,189	\$17,231,915	\$295,900,826

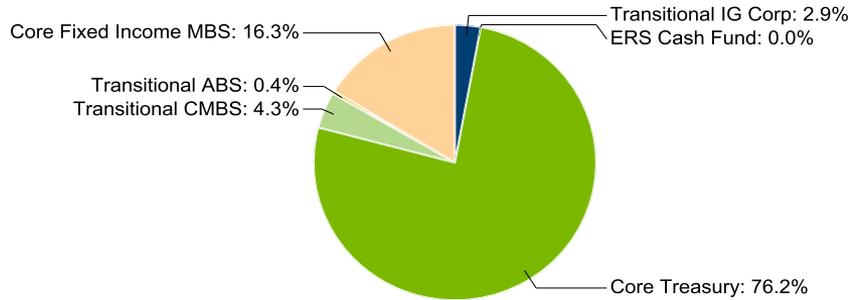
¹ Source data can be found on page 43 of the full report.

Risk Reduction

Rates Asset Class Performance

	Allocation			Performance(%)		
	Market Value (\$)	%	Policy(%)	1 Quarter	Fiscal YTD	1 Year
Total Rates	4,176,376,339	16.8	18.5	-0.7	0.0	1.3
<i>Barclays U.S. Treasury Float Adjusted: Intermediate</i>				-0.9	-0.1	1.2

Total Rates Asset Allocation



¹ Source data can be found on page 46 of full report.

Risk Reduction Absolute Return Portfolio Performance

	Allocation			Performance(%)		
	Market Value (\$)	%	Policy(%)	1 Quarter	Fiscal YTD	1 Year
Absolute Return	1,350,848,565	5.4	5.0	0.1	-0.6	3.0
<i>90 Day Tbill + 4%</i>				<i>1.0</i>	<i>1.3</i>	<i>4.0</i>
Arrowgrass Master Fund LTD	98,763,520	0.4	-	0.0	0.5	7.5
Southpaw Credit Opportunity	93,726,995	0.4	-	0.8	-1.5	-2.9
Aspect Diversified Fund	40,757,209	0.2	-	5.9	6.9	17.7
Conatus Capital Partners LP	74,606,889	0.3	-	1.5	-1.1	8.1
MW European TOPS Fund	75,824,823	0.3	-	2.3	1.4	11.6
Arrowgrass Partnership II LP	23,098,860	0.1	-	0.0	0.5	7.5
Pentwater Event Fund	51,847,119	0.2	-	-4.5	-8.3	-5.7
LLSD	41,737,145	0.2	-	-1.4	-1.3	10.7
Glazer Enh Off Fd Lt	53,892,930	0.2	-	3.4	3.9	10.2
Magnetar Structured Fund LP	107,462,818	0.4	-	-2.3	-3.9	2.5
Iguazu Partners LP	113,270,227	0.5	-	1.6	1.2	3.1
Taconic Opportunity Fund LP	98,844,042	0.4	-	0.1	-2.5	-1.7
Pharo Macro Fund Ltd	63,300,651	0.3	-	0.0	1.6	1.1
Northwest Fund Limited	76,315,277	0.3	-	1.1	1.5	4.9
Aristeia Partners LP	93,592,582	0.4	-	-2.6	-2.6	-6.5
CC ARB Fund, LLC	103,412,090	0.4	-	-0.1	0.3	4.0
GKC Credit Opportunity	61,330,839	0.2	-	1.7	2.4	1.3
LLSM II LP	24,064,549	0.1	-	-5.1	-5.4	-
Glazer Enhanced Fund	55,000,000	0.2	-	-	-	-

¹ Source data can be found on page 51 of the full report.

Summary Analysis

- The Total Fund underperformed its primary benchmark by 60 bps during the fourth quarter, and outperformed by 62 bps during calendar year 2015.
- Actual allocations continue to be in line with the strategic targets and are substantially on their way to the long-term policy targets set in the 2012 asset liability study.
- The Total Fund produced a slightly higher return with slightly lower risk (standard deviation) than its benchmark over the five and ten year period.
- The Total Fund has also outperformed the Long Term Public Benchmark over all longer-term trailing periods.
- The Total Fund Policy Benchmark has produced a return commensurate to the Long Term Public Benchmark at a lower level of risk over the five and ten year period.

Questions?