



LACERS

LOS ANGELES CITY EMPLOYEES'
RETIREMENT SYSTEM

Portfolio Performance Review

Quarter Ending December 31, 2013

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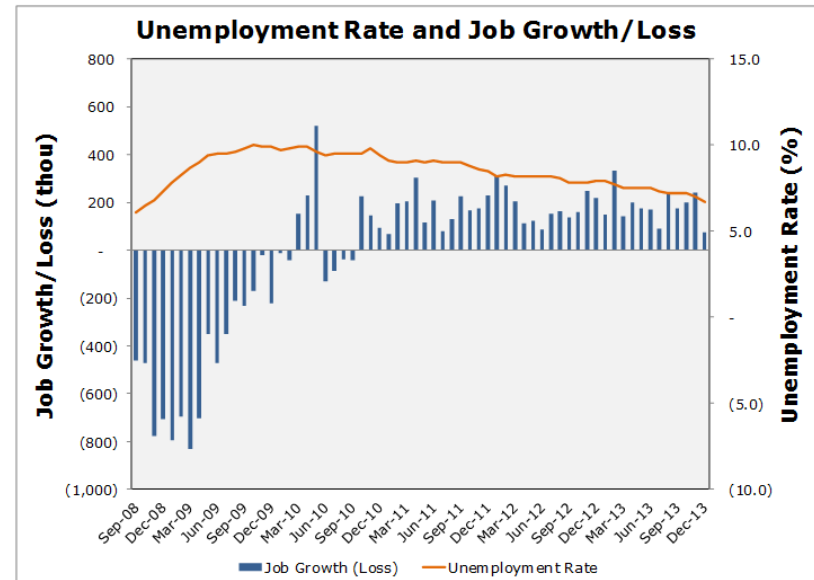
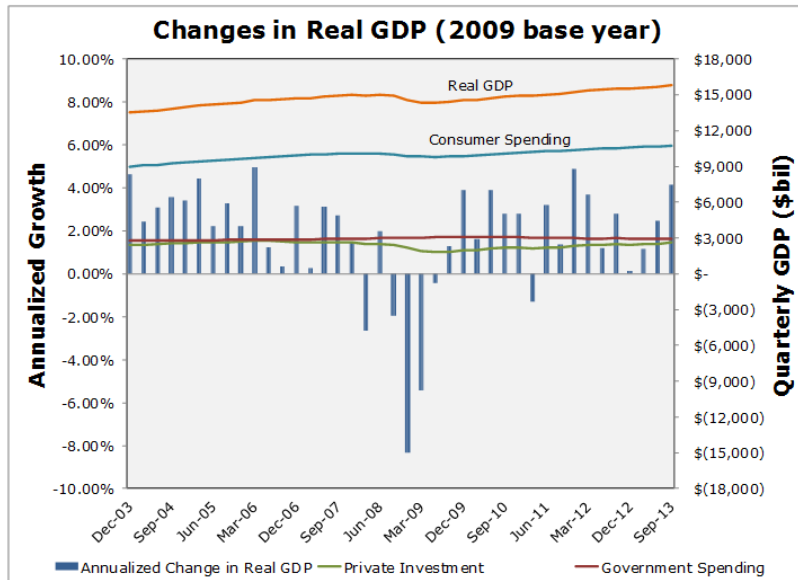


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Executive Summary

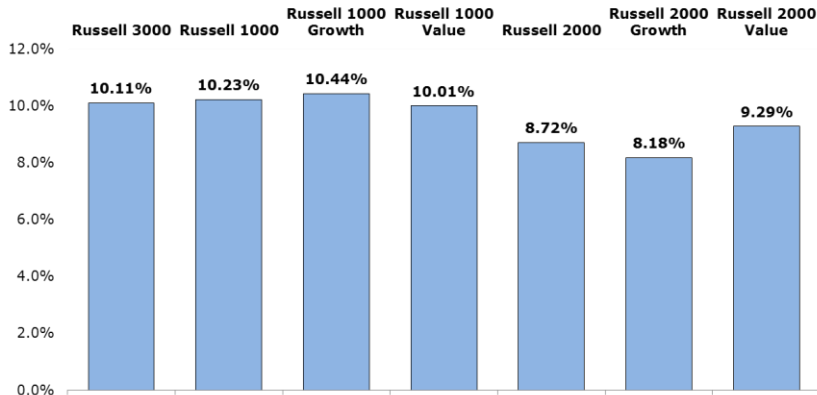
December 31, 2013	Key Economic Indicators			
CPI (all items) Seasonally adjusted	Monthly Change		Cumulative Change	
	Dec-13	0.3	3-Month	0.3
	Nov-13	0.0	12-Month	1.5
	Oct-13	-0.1	10-Yr Annual	2.4
Breakeven Inflation	10-Year	2.3		
Consumer Sentiment Unv. of Michigan Survey	Dec-13	82.5		
	Nov-13	75.1		
	1-Yr Ago	72.9	10-Yr Avg	78.2
Manufacturing Inst. for Supply Mgmt Purchasing Mngrs' Idx	Dec-13	57.0	Change in Manufacturing Sector	
	Nov-13	57.3	>50	Expansion
	1-Yr Avg	53.9	<50	Contraction

Note: Seasonally adjusted CPI data is utilized to better reflect short-term pricing activity.



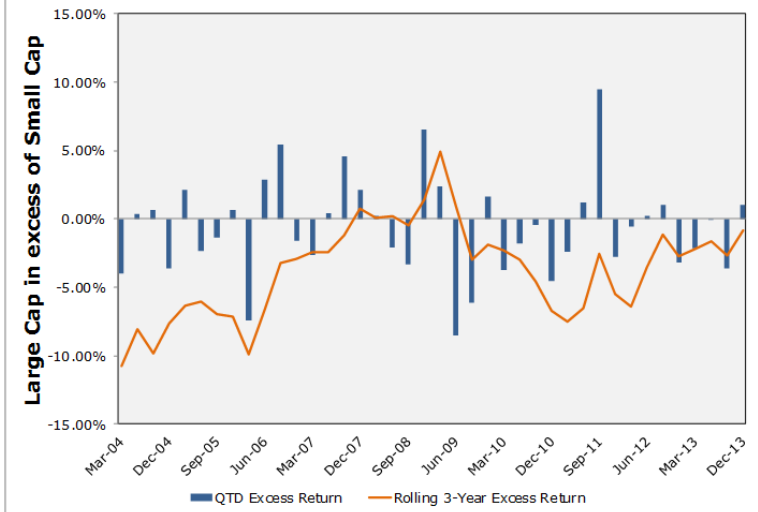
Data sources: Bureau of Economic Analysis, Bureau of Labor Statistics, Federal Reserve Bank of St. Louis, Barclays Capital

U.S. Equity

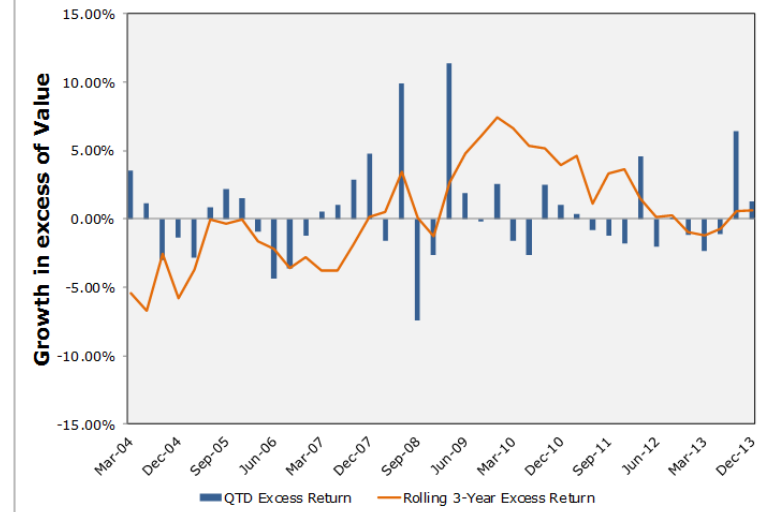


- U.S. stock market, as represented by the Russell 3000 Index, posted a return of 10.1%.
- Large-cap growth stocks performed strongest for the quarter.

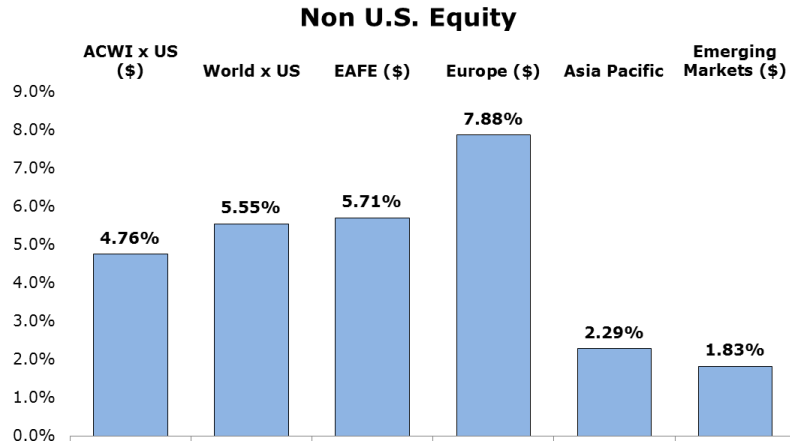
Large Cap vs. Small Cap



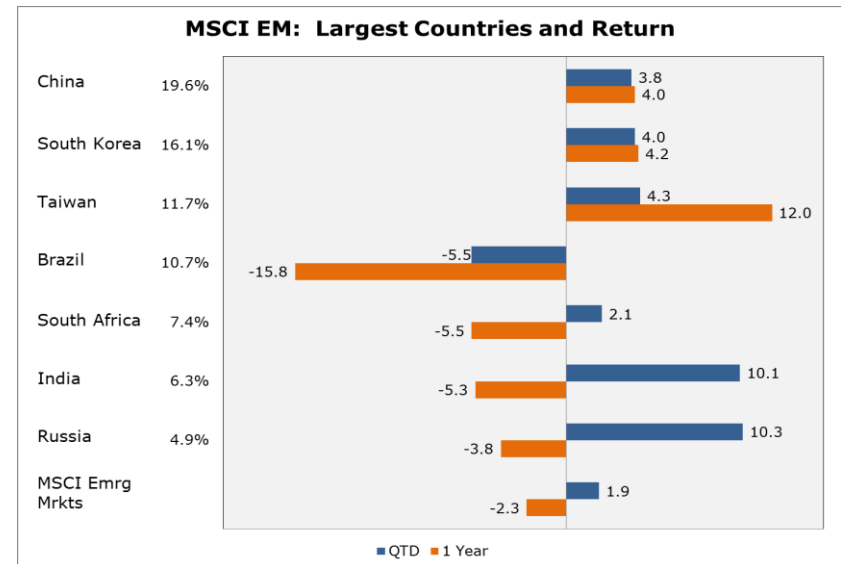
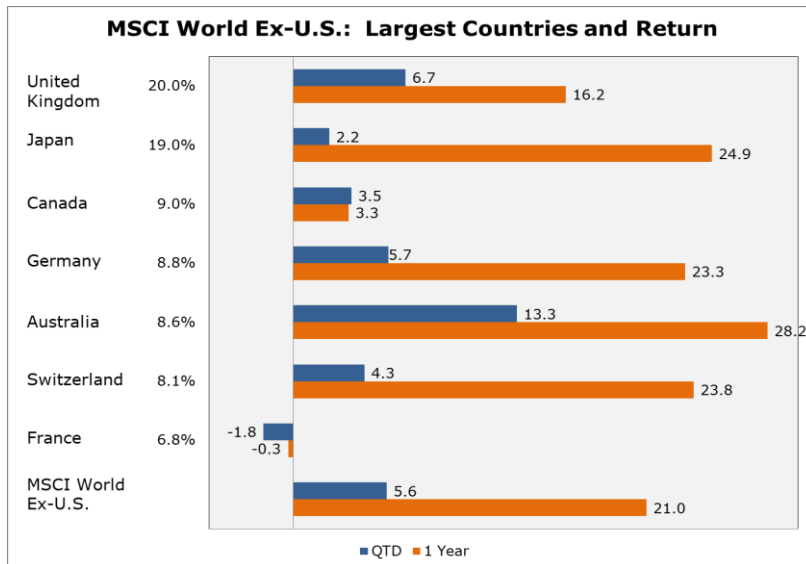
Growth vs. Value



Data sources: Wilshire Compass, Wilshire Atlas

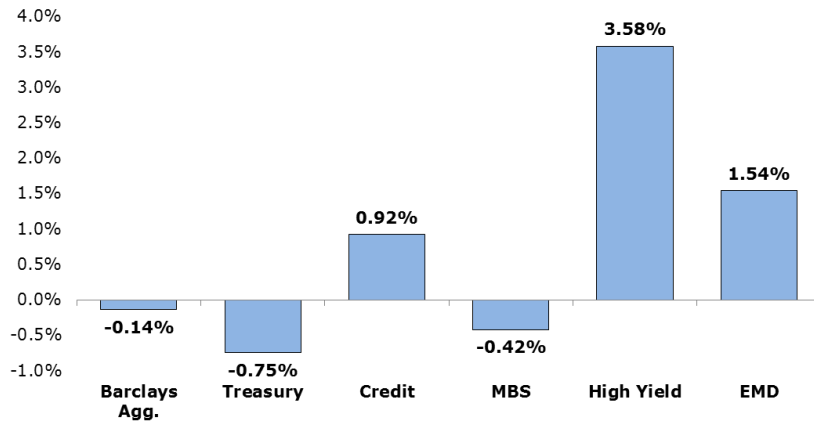


- Global equity markets also did well during the quarter, with a return of 4.8% for the MSCI ACWI ex-U.S. Index.
- Emerging Markets returned 1.8% for the quarter as political uncertainties and economic slowdowns dampened returns.



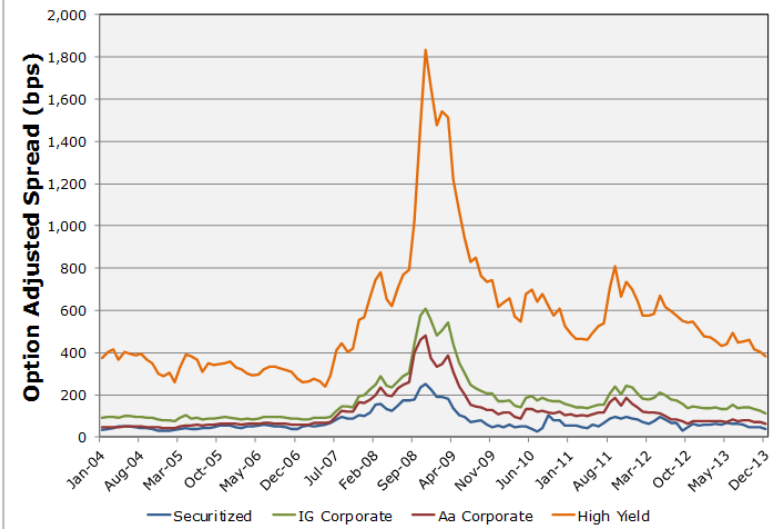
Data sources: Wilshire Compass, MSCI Barra

Fixed Income

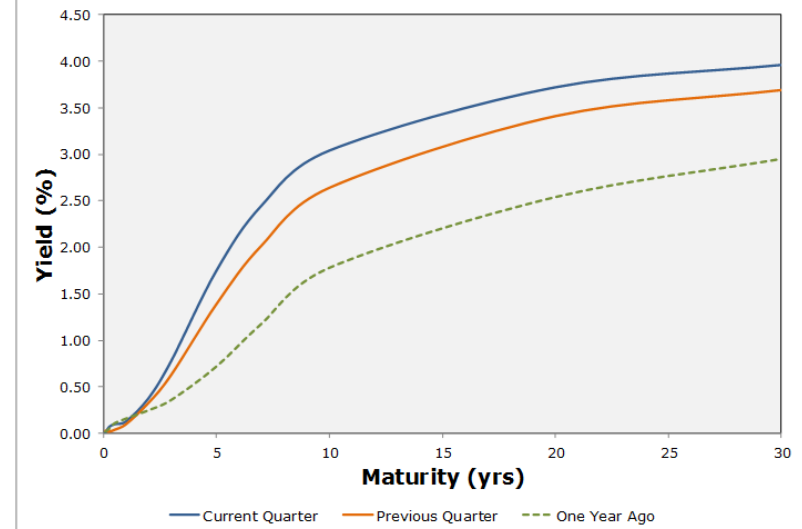


- Ten-Year Treasury yields continued to climb higher during 4Q13 settling at 3.04%, 40 basis points higher than 3Q13 and 126 basis points higher than 4Q12.
- Yields rose at all maturities over one year, leading long Treasuries to losses during the quarter and year.

Barclays Fixed Income Indexes - OAS

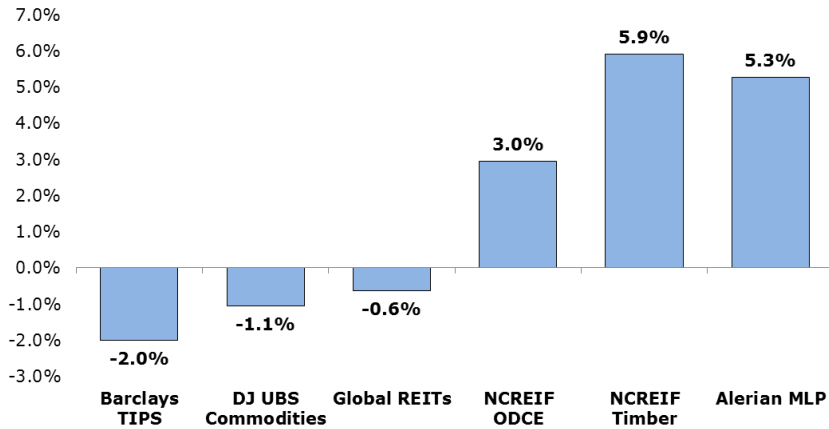


Treasury Yield Curve



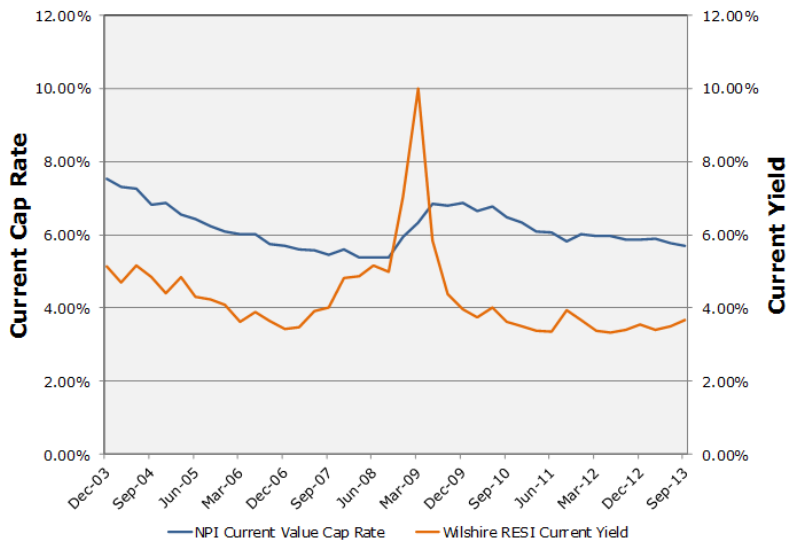
Data sources: Wilshire Compass, Barclays Capital, U.S. Treasury

Real Assets

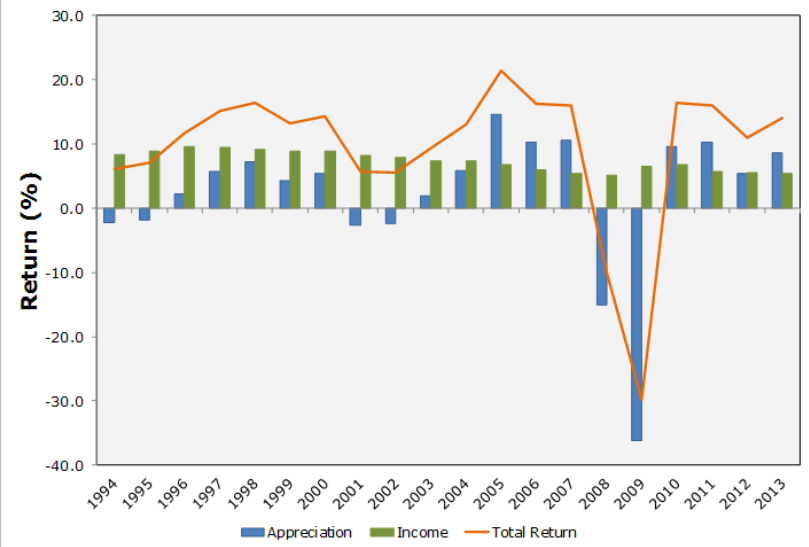


- TIPS, as represented by the Barclays U.S. TIPS Index, returned -2.0% for the quarter as real rates rose across most maturities.
- REITS, as represented by the Wilshire Global REIT Index, returned -0.6% for the quarter as interest rates remained low, pushing down cap rates in the housing sector.
- Commodities also experienced a negative return, led by the precious metals sector.

Real Estate Valuation



NCREIF ODCE Fund Index Return



Data sources: Wilshire Compass, National Council of Real Estate Investment Fiduciaries

Performance Overview

- *LACERS' investment portfolio ended the quarter with a market value of \$13.5 billion, a gain of \$0.6 billion from the previous quarter. The Fund's net of fee return was 6.0% for the quarter and 18.8% for the one-year period.*
- *The Total Fund outperformed its policy benchmark by 0.7% for the quarter and outperformed by 1.8% for the one-year period.*
- *In a comparison to other public funds with market values greater than \$10 billion in TUCS (Trust Universe Comparison Service) peer universe, LACERS ranked in the 5th percentile for the quarter and in the 14th percentile for the one-year period.*
- *All asset classes produced positive returns for the quarter.*
- *All public markets (U.S. Equity, Non U.S. Equity, Core Fixed Income) outperformed their respective benchmarks for the quarter except Credit Opportunities.*
- *Private Equity¹ and Private Real Estate underperformed their respective benchmarks for the quarter.*

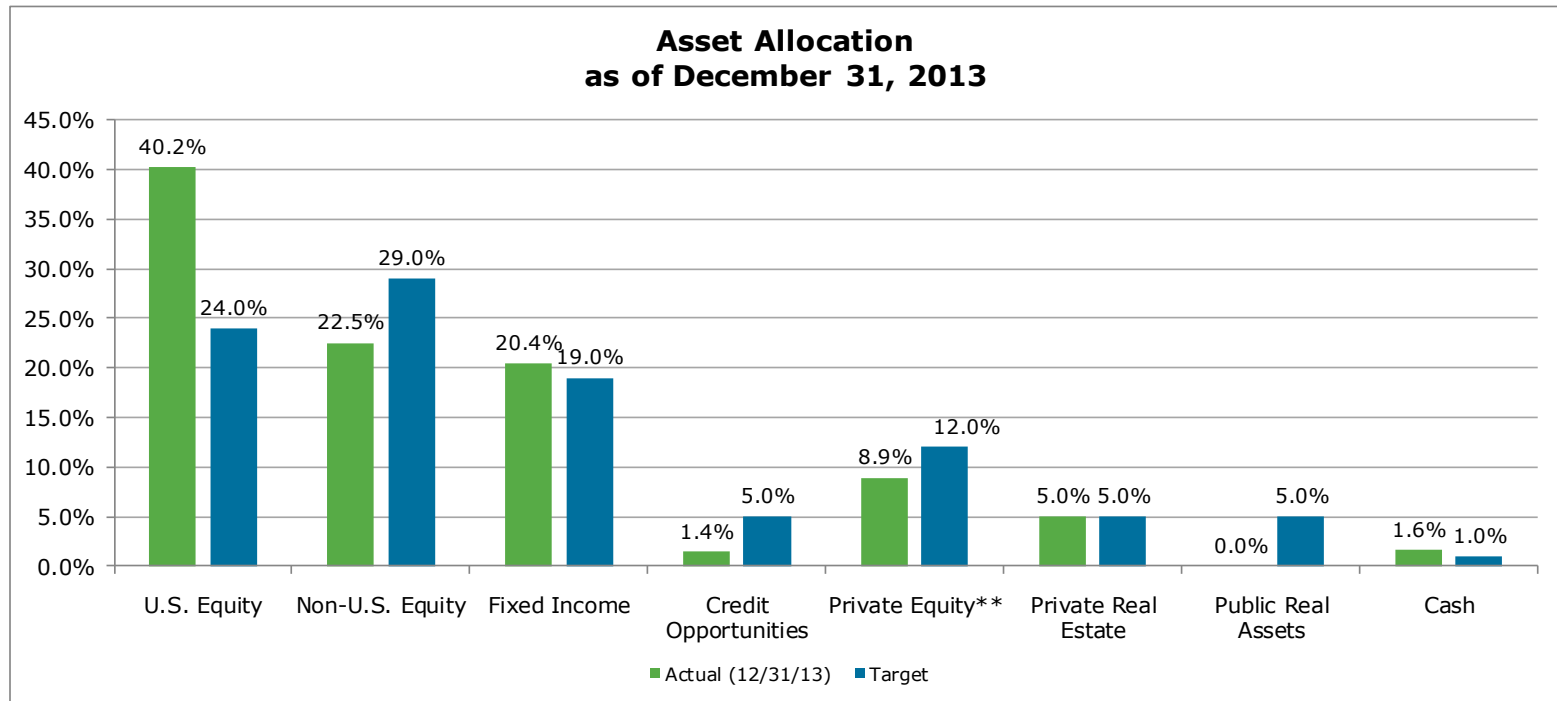
Note: Due to the J-curve effect in early stages of a fund's life, returns may lag prior to realization of proceeds in later years.

¹Name change from "Alternative Investments."



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Fund Overview



	Actual	Target*	Min.	Max
U.S. Equity	40.2%	24.0%	19.0%	29.0%
Non-U.S. Equity	22.5%	29.0%	24.0%	34.0%
Fixed Income	20.4%	19.0%	15.0%	22.0%
Credit Opportunities	1.4%	5.0%	0.0%	10.0%
Private Equity**	8.9%	12.0%	n/a	n/a
Private Real Estate	5.0%	5.0%	n/a	n/a
Public Real Assets	0.0%	5.0%	2.0%	8.0%
Cash	1.6%	1.0%	0.0%	2.0%

* Revised 1st Qtr 2012: decrease U.S. Equity from 37% to 24%; increase Non-U.S. Equity from 20% to 29%; decrease Fixed Income from 26% to 19%; allocate 5% in Credit Opportunities; increase Alternative Inv. from 9% to 12%; decrease Private Real Estate from 7% to 5%; allocate 5% in Public Real Assets. The implementation of the new Asset Allocation is in progress.

**Name change from "Alternative Investments."

Detail Actual vs Target Allocation

Asset Class / Style	Benchmark	Market Value (\$ Billion)	Market Value to Total Fund (%)	Target to Total Fund (%)	Difference from Target (%)
Equity		\$ 9.64	71.5%	65.0%	6.5%
U.S. Equity		\$ 5.42	40.2%	24.0%	16.2%
Passive		\$ 3.50	26.0%	17.5%	8.5%
Large Cap Core	S&P 500	3.36	24.9%	16.6%	8.4%
Large Cap Growth	Russell 1000 Growth	0.14	1.1%	1.0%	0.1%
Large Cap Value	Russell 1000 Value	0.00	0.0%	0.0%	0.0%
Active		\$ 1.92	14.2%	6.5%	7.7%
All Cap	Russell 3000	0.11	0.8%	0.2%	0.6%
Large Cap Core	S&P 500	-	0.0%	0.0%	0.0%
Large Cap Growth	Russell 1000 Growth	-	0.0%	0.0%	0.0%
Large Cap Value	Russell 1000 Value	0.59	4.3%	1.0%	3.4%
Mid Cap Core	Russell Mid Cap	0.07	0.5%	1.2%	-0.7%
Small Cap Core	Russell 2000	0.37	2.7%	1.2%	1.5%
Small Cap Growth	Russell 2000 Growth	0.41	3.0%	1.4%	1.6%
Small Cap Value	Russell 2000 Value	0.37	2.8%	1.4%	1.3%
Non-U.S. Equity		\$ 3.02	22.4%	29.0%	-6.6%
Passive		\$ 1.38	10.2%	10.2%	0.1%
World ex-U.S.	MSCI World ex-U.S.	1.38	10.2%	10.2%	0.1%
Active		\$ 1.64	12.2%	18.8%	-6.6%
European	MSCI Europe/10% Abs.	-	0.0%	0.0%	0.0%
Developed Core	MSCI EAFE/World ex-U.S.	0.57	4.2%	2.9%	1.3%
Developed Growth	MSCI EAFE/World ex-U.S. Growth	0.39	2.9%	2.9%	0.0%
Developed Value	MSCI EAFE/World ex-U.S. Value	0.39	2.9%	2.9%	0.0%
Emerging Markets Core	MSCI Emerging Markets	0.11	0.8%	2.6%	-1.8%
Emerging Markets Growth	MSCI Emerging Market Growth	-	0.0%	2.3%	-2.3%
Emerging Markets Value	MSCI Emerging Market Value	0.19	1.4%	2.3%	-0.9%
Small Cap Core	MSCI EAFE Small Cap	-	0.0%	2.9%	-2.9%
Private Equity¹		\$ 1.20	8.9%	12.0%	-3.1%
Vintage Year					

¹ Name change from "Alternative Investments."

Detail Actual vs Target Allocation

Asset Class / Style	Benchmark	Market Value (\$ Billion)	Market Value to Total Fund (%)	Target to Total Fund (%)	Difference from Target (%)
Fixed Income		\$ 2.95	21.9%	24.0%	-2.1%
Core		\$ 2.75	20.4%	19.0%	1.4%
Passive	Barclays Capital (BC) Aggregate	\$ -	0.0%	6.7%	-6.7%
Active		\$ 2.75	20.4%	12.3%	8.1%
Core	Barclays Capital (BC) Aggregate	2.51	18.6%	10.4%	8.3%
Intermediate Core	BC U.S. Govt/Credit Intermediate	0.24	1.8%	1.9%	-0.1%
Credit Opportunities		\$ 0.20	1.5%	5.0%	-3.5%
U.S. High Yield	BC U.S. High Yield 2% Capped	0.20	1.5%	2.8%	-1.2%
Emerging Market Debt	JP Morgan - EMBI Global Diversified	-	0.0%	1.8%	-1.8%
Opportunistic Credit	TBD	-	0.0%	0.4%	-0.4%
Real Assets		\$ 0.67	5.0%	10.0%	-5.0%
Public Real Assets		\$ -	0.0%	5.0%	-5.0%
TIPS	BC U.S. TIPS	-	0.0%	3.0%	-3.0%
REITS	TBD	-	0.0%	0.5%	-0.5%
Commodities	TBD	-	0.0%	1.0%	-1.0%
Multi Asset Real Assets	TBD	-	0.0%	0.5%	-0.5%
Private Real Estate		\$ 0.67	5.0%	5.0%	0.0%
Cash		\$ 0.22	1.6%	1.0%	0.6%
TOTAL PORTFOLIO		\$ 13.48	100.0%	100.0%	0.0%

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Fund Performance

LACERS Total Fund

(Returns are Net of Fees)

	Market Value (\$million)	% to Total Fund	Current Quarter	One Year	Three Years	Five Years	Ten Years	Fifteen Years ¹	Since Inception ¹	5 Year Tracking Error
LACERS Master Trust	\$ 13,479	100.0%	6.0	18.8	10.7	12.6	7.3	6.9	8.6	2.5
<i>Policy Benchmark</i>			5.3	17.0	10.6	13.4	7.4	6.2	8.6	
Excess Return			0.7	1.8	0.1	-0.8	-0.1	0.7	0.0	
U.S. Equity	\$ 5,418	40.2%	10.6	35.3	15.8	18.8	7.7	6.5	10.5	1.3
<i>Russell 3000</i>			10.1	33.6	16.2	18.7	7.9	5.0	9.1	
Excess Return			0.5	1.7	-0.4	0.1	-0.2	1.5	1.4	
Non-U.S. Equity	\$ 3,021	22.4%	5.8	19.7	6.3	13.9	7.9	6.5	5.6	1.6
<i>MSCI ACWI ex U.S.*</i>			4.8	15.3	5.1	12.8	7.6	5.2	5.9	
Excess Return			1.0	4.4	1.2	1.1	0.3	1.3	-0.3	
Core Fixed Income	\$ 2,746	20.4%	0.6	-1.2	--	--	--	--	2.2	--
<i>BC U.S. Aggregate*</i>			-0.1	-1.9	--	--	--	--	0.5	
Excess Return			0.7	0.7	--	--	--	--	1.7	
Credit Opportunities	\$ 203	1.5%	3.5	--	--	--	--	--	5.9	--
<i>BC US Corp HY 2% Cap</i>			3.6	--	--	--	--	--	5.9	
Excess Return			-0.1	--	--	--	--	--	0.0	
Private Real Estate **	\$ 674	5.0%	2.6	11.2	10.6	-5.0	3.4	5.0	6.0	10.5
<i>NCREIF Property Lagged + 100bps</i>			2.8	12.1	13.2	3.7	8.8	9.0	9.5	
Excess Return			-0.2	-0.9	-2.6	-8.7	-5.4	-4.0	-3.5	
Private Equity^{2**}	\$ 1,198	8.9%	4.7	16.0	14.6	10.1	13.4	11.6	10.2	17.9
<i>Russell 3000 + 300bps^A</i>			10.9	37.6	20.1	22.9	12.0	9.4	12.8	
Excess Return			-6.2	-21.6	-5.5	-12.8	1.4	2.2	-2.6	
Cash	\$ 218	1.6%								

¹ Indicates gross returns

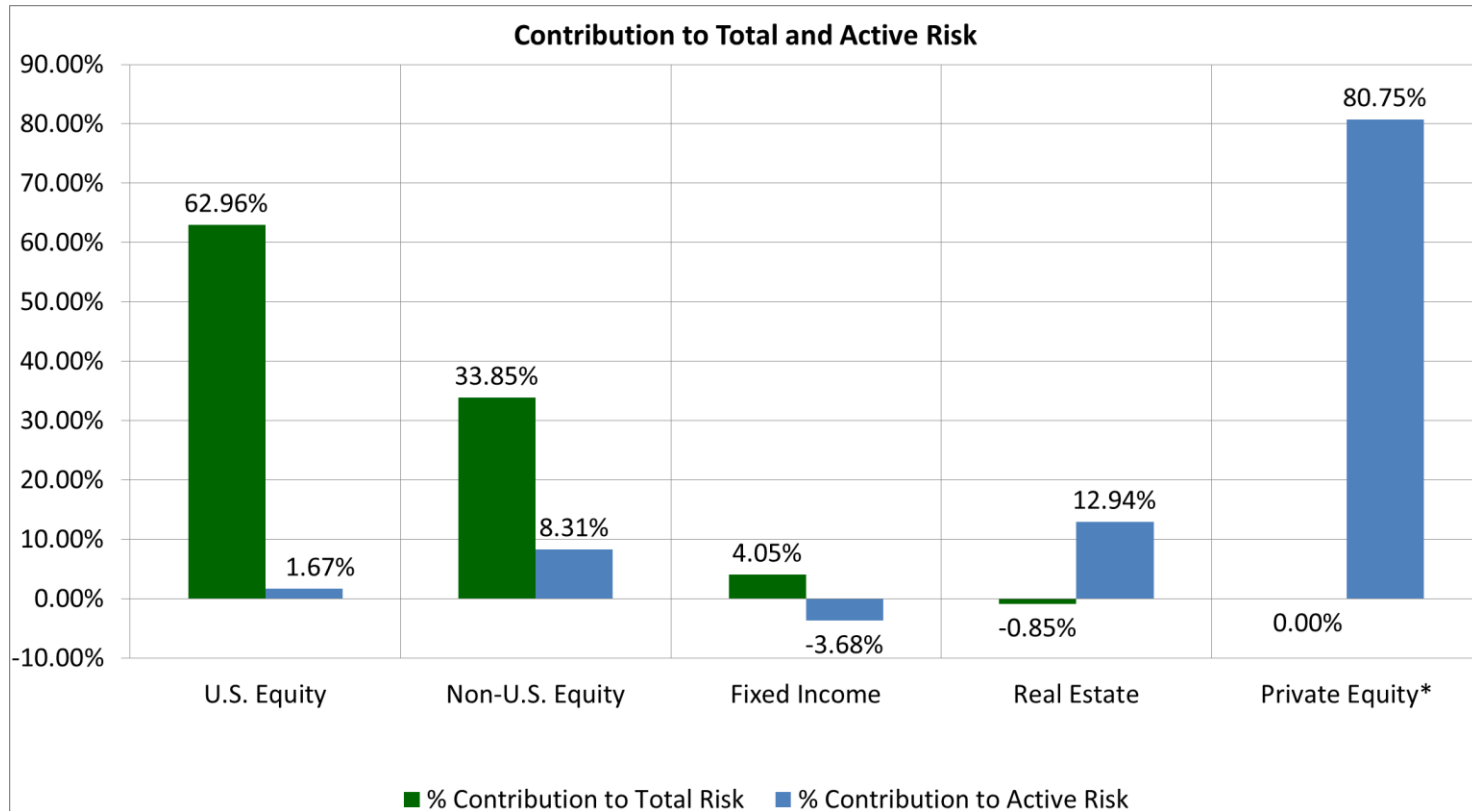
² Name change from "Alternative Investments" for performance book only

* Both the MSCI ACWI ex U.S. and BC U.S. Aggregate indices are historically blended with other indices.

** Due to the J-Curve effect in early stages of a fund's life, returns may lag prior to realization of proceeds in later years.

^A Includes Russell 3000 + 400 bps up to 6/30/12 and changed to Russell 3000 + 300 bps after 6/30/2012

Total Fund – Contribution to 5-Year Total & Active Risk

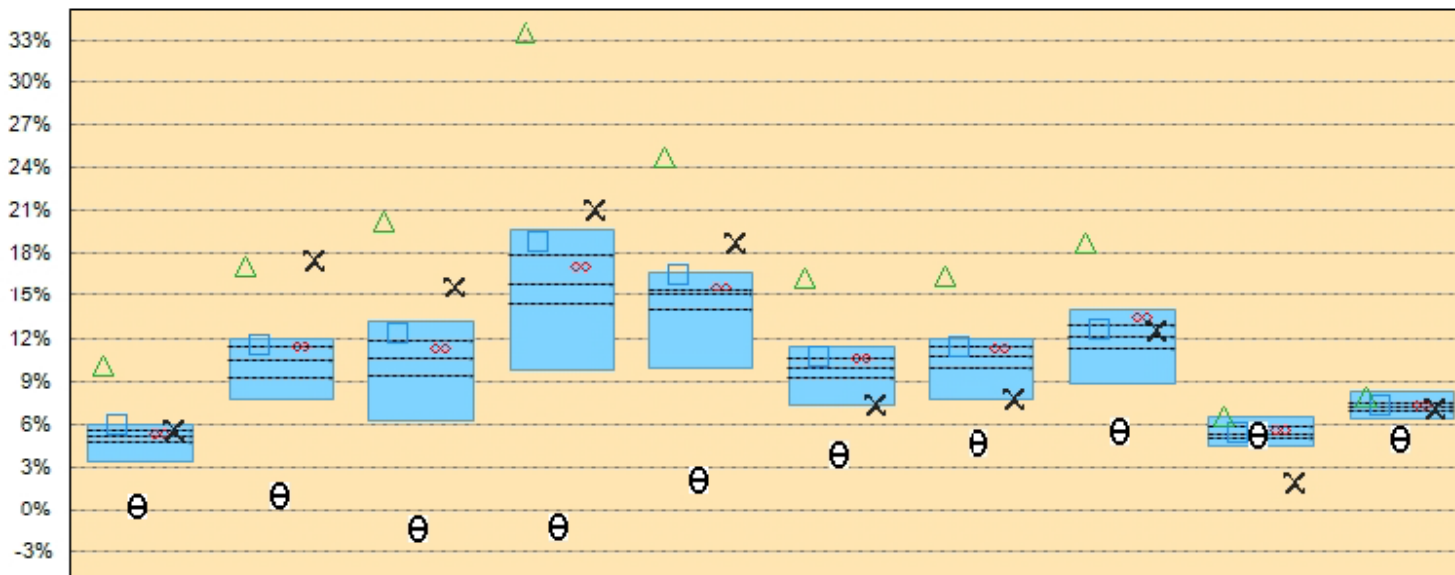


- Public equities comprises 96% of total risk despite actual weighting of 62%.
- Private markets (Real Estate and Private Equities) comprises 93% of active risk as it is difficult to separate active from 'beta' exposures in those asset classes.
- Real Estate and Fixed Income have provided modest total risk reduction.

*Name change from "Alternative Investments."

Trust Universe Comparison Service Performance Comparison

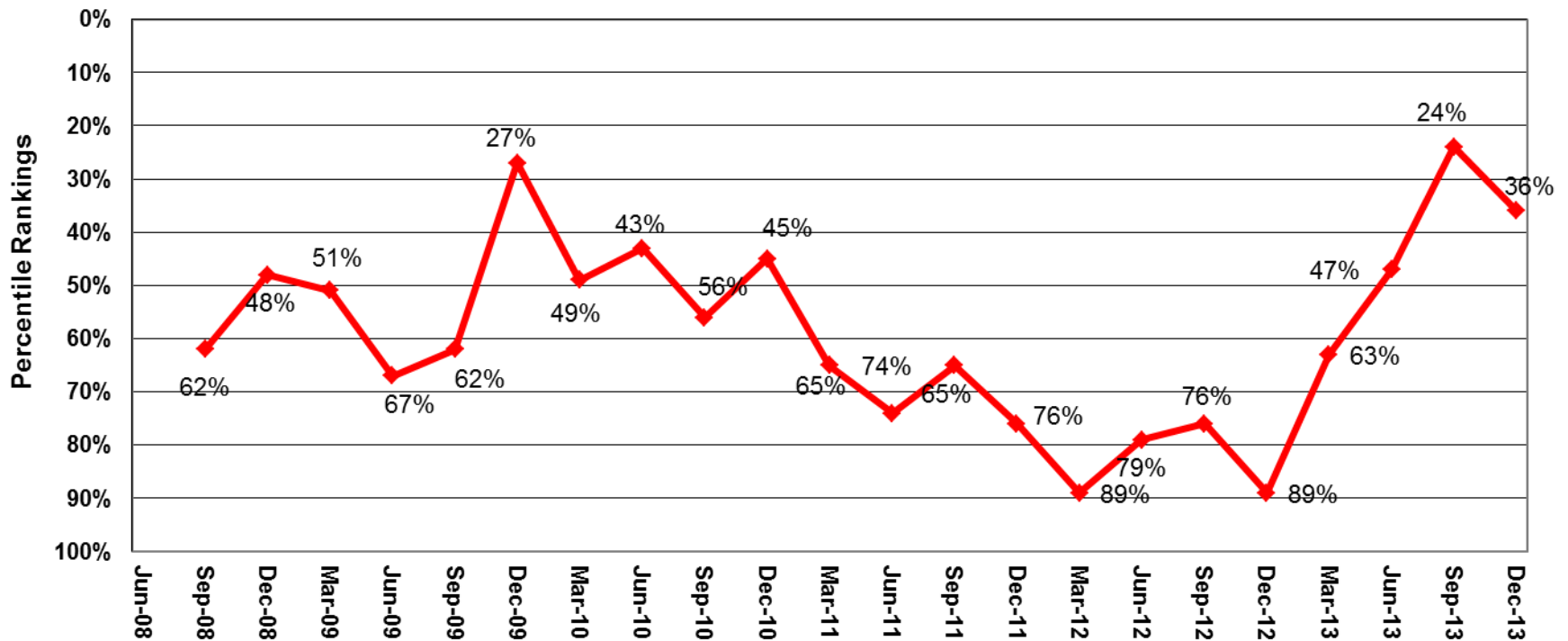
Total Returns of Public Defined Benefit Plans >\$10 billion
Cumulative Periods Ending : December 31, 2013



Percentile Rankings	1 Qtr	2 Qtrs	3 Qtrs	1 Year	2 Years	3 Years	4 Years	5 Years	7 Years	10 Years
5th	6.03	11.90	13.19	19.74	16.73	11.39	12.00	13.93	6.54	8.28
25th	5.58	11.35	11.84	17.98	15.28	10.66	11.43	12.86	5.84	7.49
50th	5.22	10.46	10.65	15.82	15.02	9.93	10.75	12.12	5.29	7.15
75th	4.80	9.28	9.43	14.42	14.01	9.26	9.96	11.33	5.05	6.97
95th	3.41	7.71	6.22	9.72	9.85	7.32	7.74	8.78	4.49	6.35
No. Of Obs	34	34	34	34	34	34	32	31	31	30
Total Fund NOF	5.99 (5)	11.54 (19)	12.36 (19)	18.84 (14)	16.54 (5)	10.69 (22)	11.35 (25)	12.65 (31)	5.44 (37)	7.35 (28)
Total Fund Policy	5.32 (46)	11.38 (22)	11.25 (34)	17.05 (28)	15.66 (22)	10.63 (31)	11.24 (28)	13.40 (9)	5.53 (37)	7.37 (28)
Russell 3000	10.11 (1)	17.10 (1)	20.24 (1)	33.57 (1)	24.71 (1)	16.25 (1)	16.42 (1)	18.71 (1)	6.50 (5)	7.89 (9)
MSCI Wild Ex US (Net)	5.55 (28)	17.49 (1)	15.59 (1)	21.02 (1)	18.69 (1)	7.34 (93)	7.74 (95)	12.49 (34)	1.93 (100)	7.07 (67)
Barclays US Univ Indx	0.22 (100)	0.97 (100)	-1.42 (100)	-1.35 (100)	2.04 (100)	3.79 (100)	4.62 (100)	5.41 (100)	5.13 (64)	4.85 (100)

Return to Risk Ratio Comparison

TUCS Public Funds > \$10 billion



- Return to risk ratio comparison puts funds with different asset allocation objectives on even footing.
- LACERS currently ranks in the 36th percentile versus peers on return/risk ratio basis.



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U.S. Equity Managers

U.S. Equity Managers

(Returns are Net of Fees)

	Inception Date	Market Value (\$million)	% to Total U.S. Equity	Current Quarter	One Year	Three Years	Five Years	Ten Years	Since Inception ¹	5 Year Tracking Error
U.S. Equity	Oct-94	\$ 5,418	100.0%	10.6	35.3	15.8	18.8	7.7	10.5	1.3
<i>Russell 3000</i>				<i>10.1</i>	<i>33.6</i>	<i>16.2</i>	<i>18.7</i>	<i>7.9</i>	<i>9.1</i>	
Excess Return				0.5	1.7	-0.4	0.1	-0.2	1.4	
Aronson, Johnson & Ortiz	Oct-01	\$ 585	10.8%	11.4	38.3	18.6	17.3	8.7	9.2	2.9
<i>Russell 1000 Value</i>				<i>10.0</i>	<i>32.5</i>	<i>16.1</i>	<i>16.7</i>	<i>7.6</i>	<i>7.7</i>	
Excess Return				1.4	5.8	2.5	0.6	1.1	1.5	
Thomson Horstmann	Oct-95	\$ 321	5.9%	11.0	42.9	14.0	23.1	8.9	11.6	5.4
<i>Russell 2000</i>				<i>8.7</i>	<i>38.8</i>	<i>15.7</i>	<i>20.1</i>	<i>9.1</i>	<i>9.3</i>	
Excess Return				2.3	4.1	-1.7	3.0	-0.2	2.3	
Franklin Advisers	Sep-94	\$ 219	4.0%	10.8	58.8	20.6	26.9	9.9	10.5	4.9
<i>Russell 2000 Growth</i>				<i>8.2</i>	<i>43.3</i>	<i>16.8</i>	<i>22.6</i>	<i>9.4</i>	<i>7.8</i>	
Excess Return				2.6	15.5	3.8	4.3	0.5	2.7	
Sit Investments	Jan-01	\$ 189	3.5%	8.7	37.0	16.3	21.8	9.9	5.8	5.0
<i>Russell 2000 Growth</i>				<i>8.2</i>	<i>43.3</i>	<i>16.8</i>	<i>22.6</i>	<i>9.4</i>	<i>6.1</i>	
Excess Return				0.5	-6.3	-0.5	-0.8	0.5	-0.3	

¹ Indicates gross returns

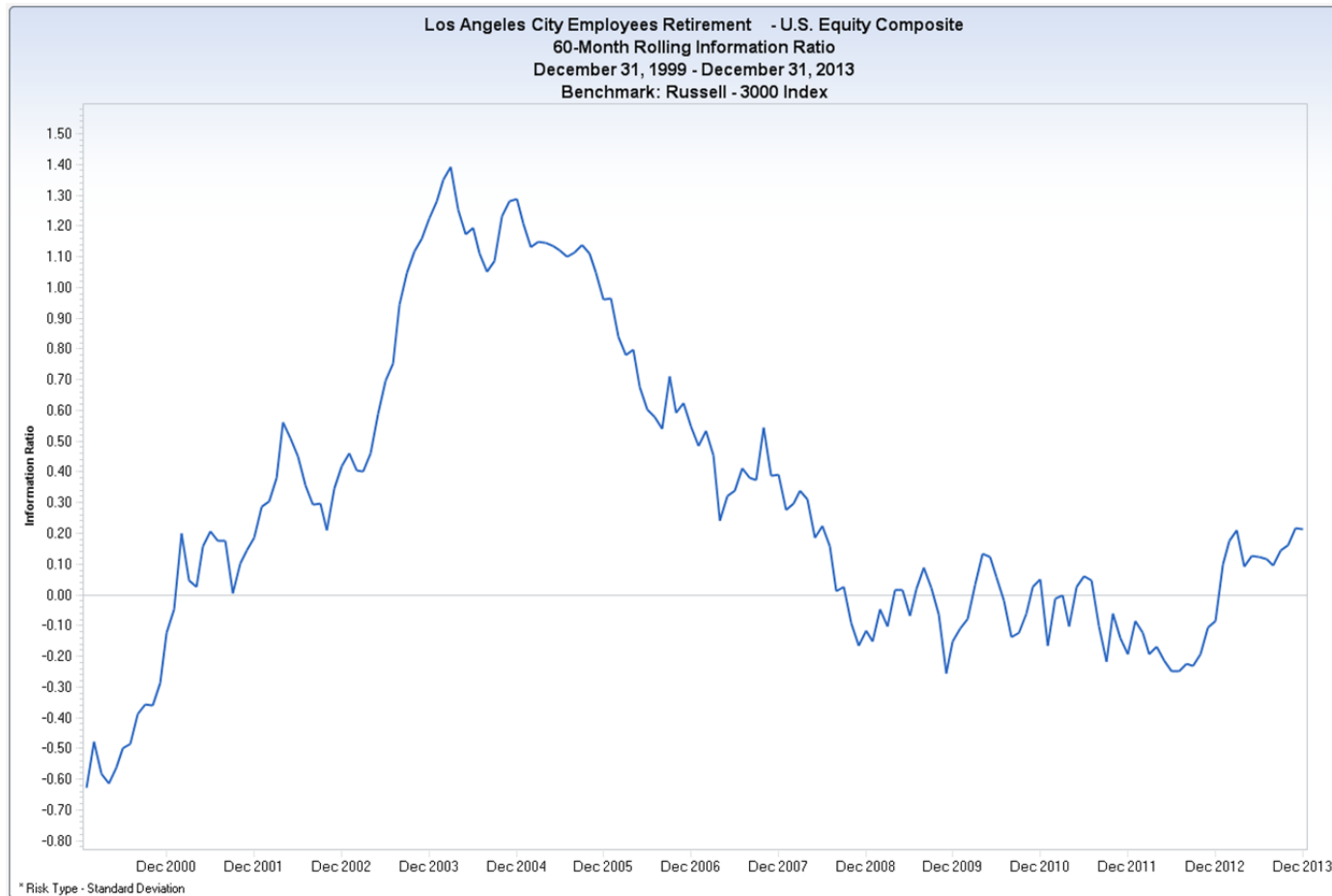
U.S. Equity Managers

(Returns are Net of Fees)

	Inception Date	Market Value (\$million)	% to Total U.S. Equity	Current Quarter	One Year	Three Years	Five Years	Ten Years	Since Inception ¹	5 Year Tracking Error
Donald Smith & Co. <i>Russell 2000 Value</i>	Feb-06	\$ 130	2.4%	13.2	33.0	10.2	21.5	--	8.4	7.7
Excess Return				9.3	34.5	14.5	17.6	--	6.6	
				3.9	-1.5	-4.3	3.9	--	1.8	
PanAgora Asset Management <i>Russell 2000 Value</i>	Feb-06	\$ 244	4.5%	10.4	41.9	19.2	22.8	--	7.0	2.6
Excess Return				9.3	34.5	14.5	17.6	--	6.6	
				1.1	7.4	4.7	5.2	--	0.4	
New Mountain Cap Group <i>Russell Midcap Blend</i>	Mar-08	\$ 71	1.3%	5.8	19.5	7.4	13.8	--	6.5	12.3
Excess Return				8.4	34.8	15.1	17.3	--	7.1	
				-2.6	-15.3	-7.7	-3.5	--	-0.6	
Rhumblin Advisors (Passive) <i>S&P 500</i>	Mar-93	\$ 1,410	26.0%	10.5	32.3	16.2	18.1	7.6	9.4	0.3
Excess Return				10.5	32.4	16.2	17.9	7.4	9.2	
				0.0	-0.1	0.0	0.2	0.2	0.2	
Blackrock S&P 500 <i>S&P 500</i>	Jun-13	\$ 1,948	36.0%	10.5	--	--	--	--	16.3	--
Excess Return				10.5	--	--	--	--	16.3	
				0.0	--	--	--	--	0.0	
Rhumblin Advisors (Passive) <i>Russell 1000 Growth</i>	Jun-13	\$ 144	2.7%	10.4	--	--	--	--	19.4	--
Excess Return				10.4	--	--	--	--	18.9	
				0.0	--	--	--	--	0.5	
Manager-of-Manager Programs			2.9%							
Attucks <i>Russell 2000</i>	Nov-05	\$ 45	0.8%	7.4	39.2	15.7	20.6	--	8.4	2.5
Excess Return				8.7	38.8	15.7	20.1	--	8.4	
				-1.3	0.4	0.0	0.5	--	0.0	
Capital Prospects <i>Russell 3000</i>	Dec-05	\$ 41	0.8%	9.2	33.4	15.1	18.2	--	7.2	2.3
Excess Return				10.1	33.6	16.2	18.7	--	7.6	
				-0.9	-0.2	-1.1	-0.5	--	-0.4	
Progress Investment <i>Russell 3000</i>	Oct-06	\$ 69	1.3%	11.0	35.0	14.5	16.6	--	5.9	2.4
Excess Return				10.1	33.6	16.2	18.7	--	6.8	
				0.9	1.4	-1.7	-2.1	--	-0.9	

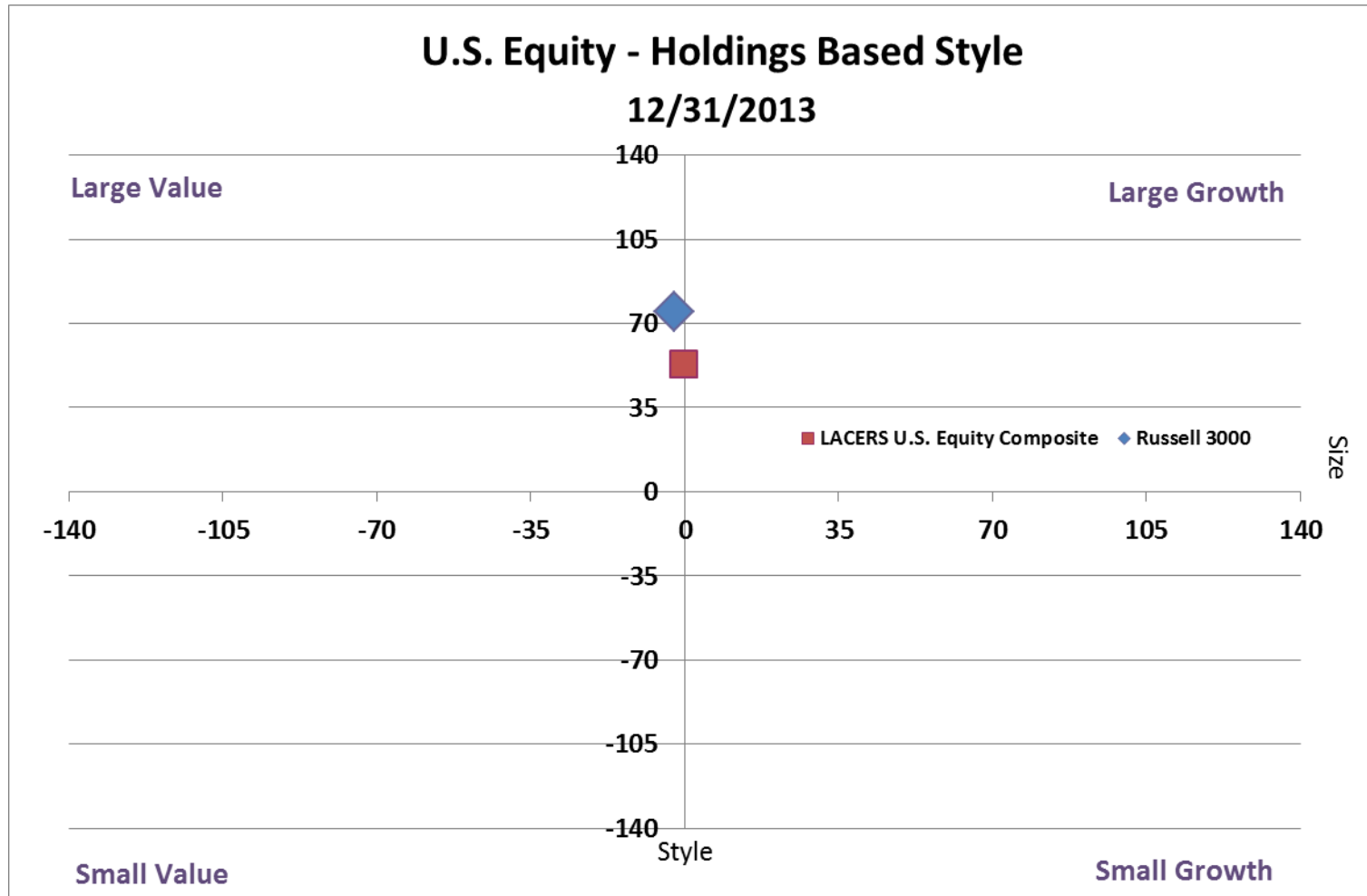
¹ Indicates gross returns

5-Year Rolling Risk-Adjusted Active Returns



- Active returns are returns earned over/under benchmark return.
- For the past five years, LACERS' information ratio showed mixed results, but it is trending upward.

Risk-adjusted active returns are referred to as "Information Ratio". Information Ratio = Excess return (alpha) / Excess risk (tracking error).



- LACERS U.S. Equity Portfolio exhibits modest, smaller cap bias versus Russell 3000 benchmark.
- As small cap stocks have outperformed large cap stocks in recent periods, this bias has been source of outperformance versus benchmark.

MANAGER REPORT CARD¹

U.S. Managers	Inception Date	Mandate	Current Quarter		One Year		Three Years		Five Years		Since Inception	Comments ²
			I	U	I	U	I	U	I	U	I	
➤ Aronson, Johnson & Ortiz	Oct-01	Large Cap Value	✓	✓	✓	✓	✓	✓	✓	✗	✓	Performance satisfactory.
➤ Thomson Horstmann	Oct-95	Small Cap	✓	✓	✓	✓	✗	✗	✓	✓	✓	Performance has improved. Monitoring manager.
➤ Franklin Advisers	Sep-94	Small Cap Growth	✓	✓	✓	✓	✓	✓	✓	✓	✓	Performance satisfactory.
➤ Sit Investments	Jan-01	Small Cap Growth	✓	✓	✗	✗	✗	✗	✗	✗	✗	Performance is poor. Monitor manager.
➤ Donald Smith	Mar-06	Small Cap Value	✓	✓	✗	✗	✗	✗	✓	✗	✓	Performance poor. Monitoring manager.
➤ Panagora	Mar-06	Small Cap Value	✓	✓	✓	✓	✓	✓	✓	✓	✓	Performance satisfactory.
➤ New Mountain Cap Grp	Mar-08	Corp Gov	✗	n/a	✗	n/a	✗	n/a	✗	n/a	✗	Performance mixed. Monitoring manager.
➤ Attucks	Nov-05	Fund of Funds	✗	n/a	✓	n/a	✓	n/a	✓	n/a	✓	"On Watch" since Jun. 2011 - performance.
➤ Capital Prospects	Dec-05	Fund of Funds	✗	n/a	✗	n/a	✗	n/a	✗	n/a	✗	"On Watch" since Jun. 2011 - performance.
➤ Progress	Sep-06	Fund of Funds	✓	n/a	✓	n/a	✗	n/a	✗	n/a	✗	"On Watch" since Oct. 2009 - performance.
➤ BlackRock R1000 Value (Passive)	Dec-98	R1000 Value Index	✓	✓	✓	✓	✓	✓	✓	✓	✓	Performance satisfactory.
➤ Rhumblin Advisors (Passive)	Mar-93	S&P 500 Index	✗	✓	✗	✓	✓	✓	✓	✗	✓	Performance satisfactory.
➤ BlackRock S&P 500 (Passive)	Jun-13	S&P 500 Index	✗	✓	n/a	n/a	n/a	n/a	n/a	n/a	✗	Limited track record.
➤ Rhumblin Advisors (Passive)	Jun-13	R1000 Growth Index	✗	✓	n/a	n/a	n/a	n/a	n/a	n/a	✓	Limited track record.

¹Current Quarter, 1-Yr, 3-Yrs, and 5-Yrs returns are net of fees. Since Inception returns are gross of fee.

²Managers are placed on the Watch List for concerns with organization, process, and performance. Managers are normally on the Watch List for 6 months though can be longer if manager issues still remain but not severe enough to warrant contract termination recommendation.

LEGEND	
✓	outperformed index I index
✗	underperformed index U universe median
=	equal to index

Aronson , Johnson & Ortiz

Mandate: Large Cap Value

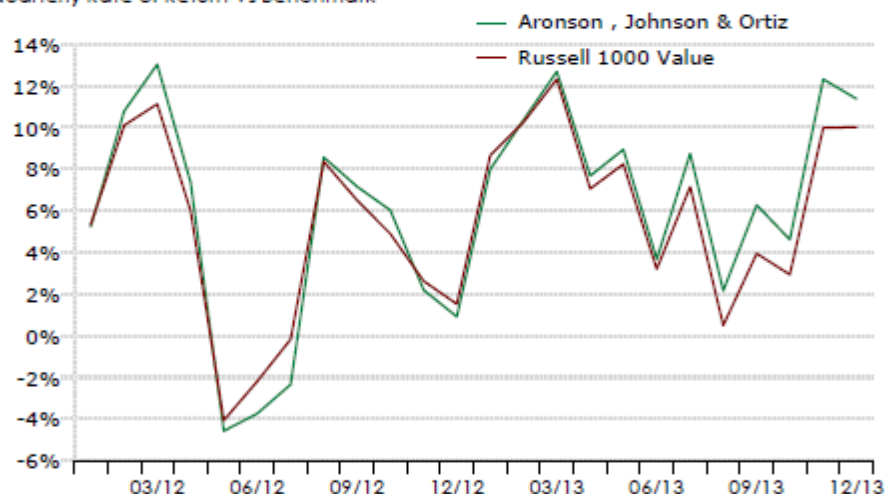
Benchmark: Russell 1000 Value

Strategy

Aronson invests in US stocks with large market caps, low P/E ratios and lower historical earnings per share that are expected to increase.

Performance

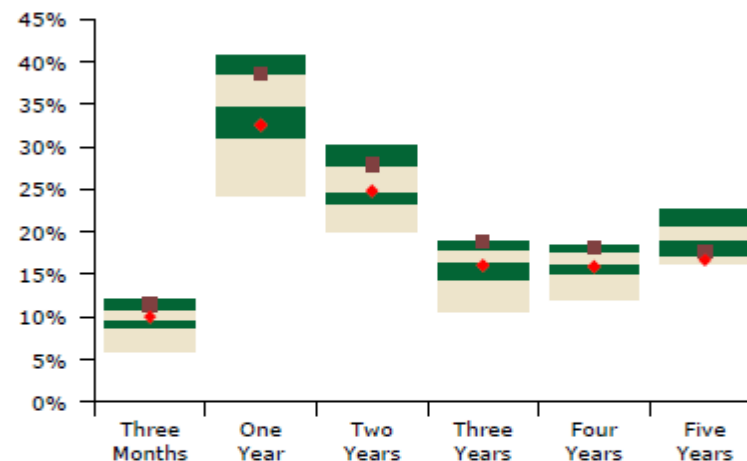
Quarterly Rate of Return Vs Benchmark



Net Returns %	LCQ	1 Yr.	2 Yrs.	3 Yrs.	5 Yrs.	Gross ITD Return	Inception Date
Aronson , Johnson &	11.4	38.3	27.5	18.6	17.3	9.2	Oct-2001
Russell 1000 Value	10.0	32.5	24.8	16.1	16.7	7.7	
<i>Excess Return</i>	1.4	5.8	2.7	2.5	0.6	1.5	

Objective: Outperform the benchmark by 200 bps , annualized over a full market cycle (normally 3-5 years).

Quartile Rankings



	QTD	1 Yr.	2 Yrs.	3 Yrs.	4 Yrs.	5 Yrs.
■ Aronson , Johnson & Ortiz	11.4	38.6	27.9	18.9	18.2	17.6
Rank	16	25	24	13	13	69
◆ Russell 1000 Value	10.0	32.5	24.8	16.1	15.9	16.7
Rank	44	64	50	57	60	86

10th Percentile	12.0	40.7	30.1	19.0	18.3	22.7
1st Quartile	11.0	38.5	27.7	17.9	17.6	20.8
Median	9.7	34.9	24.8	16.4	16.3	19.0
3rd Quartile	8.7	31.0	23.2	14.5	15.2	17.2
90th Percentile	5.9	24.2	20.1	10.6	12.1	16.3

Number Of Observations	176	156	134	122	104	88
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Thomson Horstmann

Mandate: Small Cap

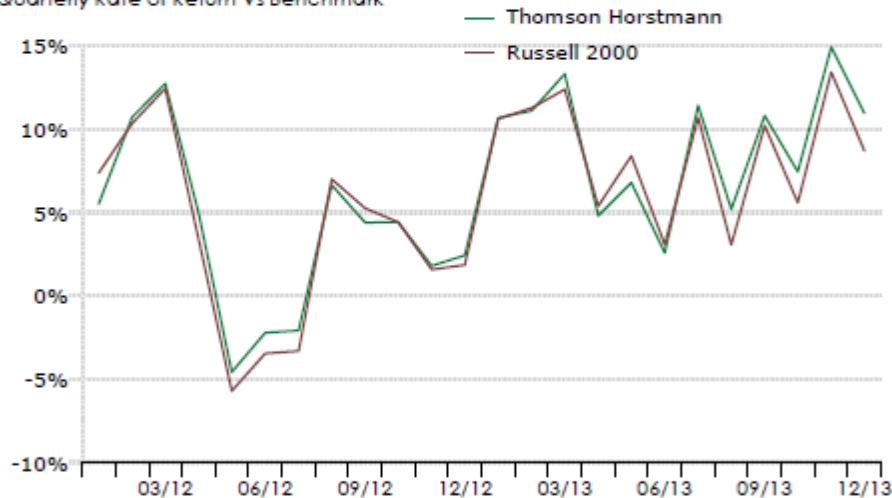
Benchmark: Russell 2000

Strategy

Thomson invests in US stocks with small market caps and low P/E ratios.

Performance

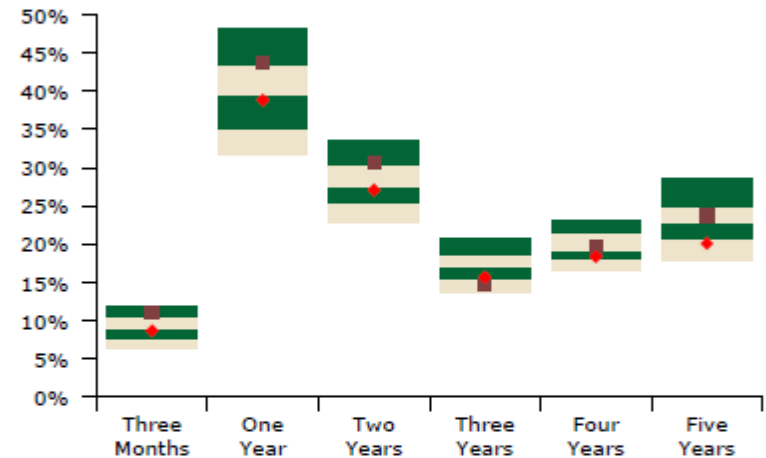
Quarterly Rate of Return Vs Benchmark



Net Returns %	LCQ	1 Yr.	2 Yrs.	3 Yrs.	5 Yrs.	Gross ITD Return	Inception Date
Thomson Horstmann	11.0	42.9	29.8	14.0	23.1	11.6	Oct-1995
Russell 2000	8.7	38.8	27.1	15.7	20.1	9.3	
<i>Excess Return</i>	2.3	4.1	2.7	(1.7)	3.1	2.3	

Objective: Outperform the benchmark by 250 bps, annualized over a full market cycle (normally 3-5 years).

Quartile Rankings



	QTD	1 Yr.	2 Yrs.	3 Yrs.	4 Yrs.	5 Yrs.
■ Thomson Horstmann	11.1	43.7	30.6	14.7	19.5	23.7
Rank	18	23	25	85	46	37
◆ Russell 2000	8.7	38.8	27.1	15.7	18.4	20.1
Rank	60	58	59	73	69	80
10th Percentile	12.0	48.3	33.6	20.8	23.1	28.6
1st Quartile	10.4	43.4	30.5	18.8	21.4	25.0
Median	9.1	39.6	27.7	17.0	19.2	22.8
3rd Quartile	7.8	35.0	25.4	15.6	18.0	20.7
90th Percentile	6.4	31.8	22.7	13.7	16.5	17.8
Number Of Observations	190	179	176	163	132	122

Franklin Global Advisers

Mandate: Small Cap Growth

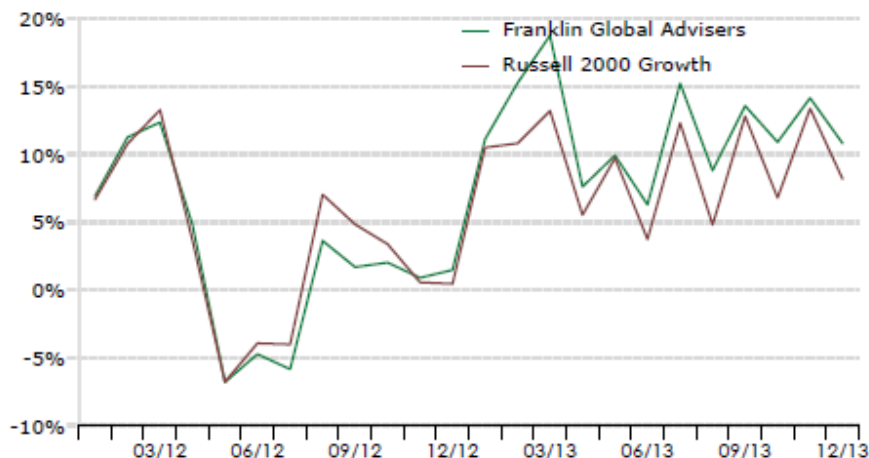
Benchmark: Russell 2000 Growth

Strategy

Franklin invests in US stocks with small market caps, low P/E ratios and earnings per share that are expected to increase at rates much greater than the overall market.

Performance

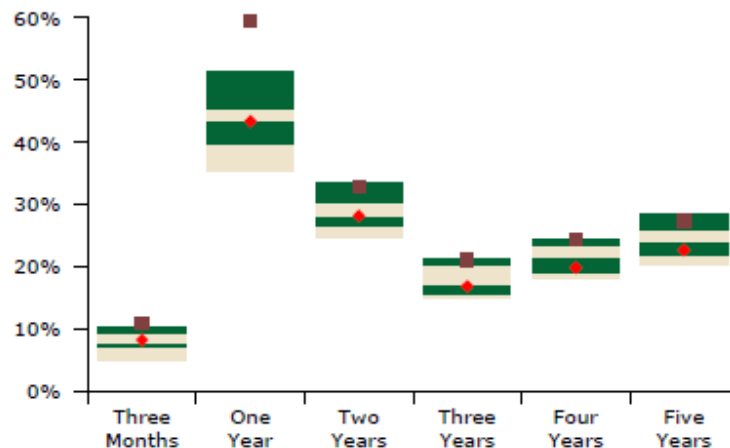
Quarterly Rate of Return Vs Benchmark



Net Returns %	LCQ	1 Yr.	2 Yrs.	3 Yrs.	5 Yrs.	Gross ITD Return	Inception Date
Franklin Global Advis	10.8	58.8	32.4	20.6	26.9	10.5	Sep-1994
Russell 2000 Growth	8.2	43.3	28.1	16.8	22.6	7.8	
<i>Excess Return</i>	2.6	15.5	4.3	3.8	4.3	2.7	

Objective: Outperform the benchmark by 200 bps , annualized over a full market cycle (normally 3-5 years).

Quartile Rankings



	QTD	1 Yr.	2 Yrs.	3 Yrs.	4 Yrs.	5 Yrs.
■ Franklin Global Advisers	10.9	59.4	32.9	21.0	24.3	27.3
Rank	5	1	12	15	10	16
◆ Russell 2000 Growth	8.2	43.3	28.1	16.8	19.8	22.6
Rank	36	51	44	55	56	66
10th Percentile	10.4	51.2	33.5	21.3	24.3	28.4
1st Quartile	9.2	45.3	30.3	20.3	23.3	25.8
Median	7.9	43.3	27.9	17.1	21.4	24.1
3rd Quartile	7.1	39.6	26.6	15.6	18.9	21.8
90th Percentile	4.8	35.2	24.6	14.8	18.1	20.3
Number Of Observations	67	66	63	52	37	38

Sit Investments

Mandate: Small Cap Growth

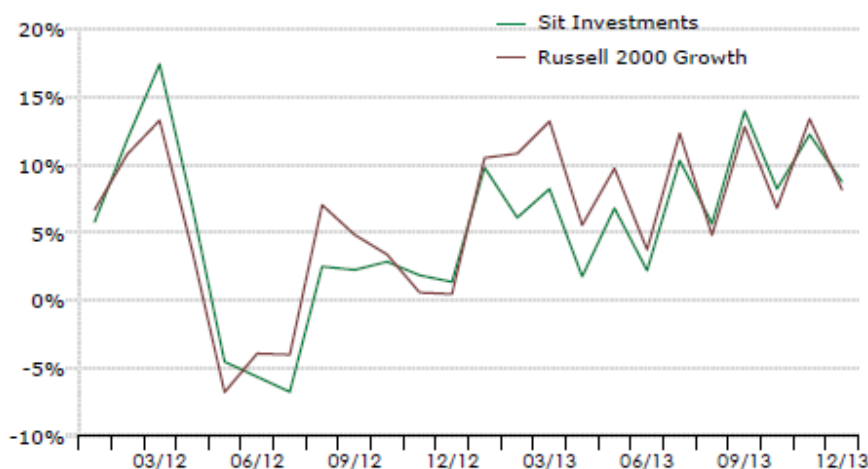
Benchmark: Russell 2000 Growth

Strategy

SIT invests in US stocks with small market caps, low P/E ratios and earnings per share that are expected to increase at rates much greater than the overall market.

Performance

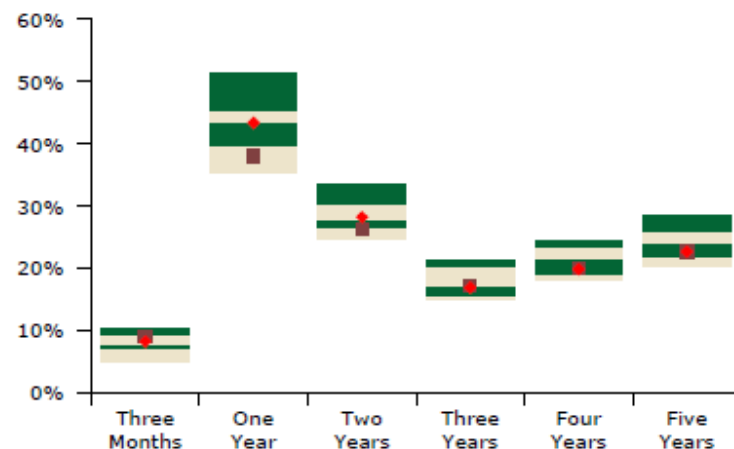
Quarterly Rate of Return Vs Benchmark



Net Returns %	LCQ	1 Yr.	2 Yrs.	3 Yrs.	5 Yrs.	Gross ITD Return	Inception Date
Sit Investments	8.7	37.0	25.4	16.3	21.8	5.8	Jan-2001
Russell 2000 Growth	8.2	43.3	28.1	16.8	22.6	6.1	
<i>Excess Return</i>	0.5	(6.3)	(2.7)	(0.5)	(0.8)	(0.3)	

Objective: Outperform the benchmark by 300-450 bps , annualized over a full market cycle (normally 3-5 years).

Quartile Rankings



	QTD	1 Yr.	2 Yrs.	3 Yrs.	4 Yrs.	5 Yrs.
■ Sit Investments	8.9	37.9	26.3	17.0	19.9	22.6
Rank	28	81	81	51	55	66
◆ Russell 2000 Growth	8.2	43.3	28.1	16.8	19.8	22.6
Rank	36	51	44	55	56	66
10th Percentile	10.4	51.2	33.5	21.3	24.3	28.4
1st Quartile	9.2	45.3	30.3	20.3	23.3	25.8
Median	7.9	43.3	27.9	17.1	21.4	24.1
3rd Quartile	7.1	39.6	26.6	15.6	18.9	21.8
90th Percentile	4.8	35.2	24.6	14.8	18.1	20.3
Number Of Observations	67	66	63	52	37	38

Donald Smith & Co.

Mandate: Small Cap Value

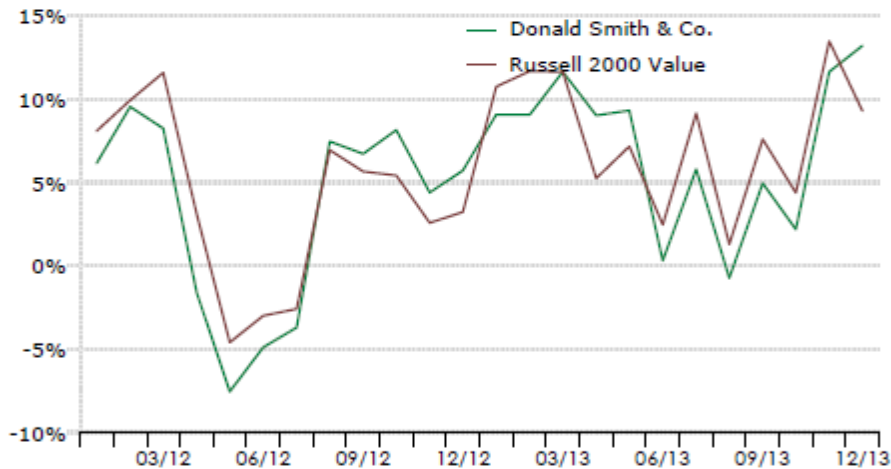
Benchmark: Russell 2000 Value

Strategy

Donald Smith invests in US stocks with small market caps, low P/E ratios and lower historical earnings per share that are expected to increase.

Performance

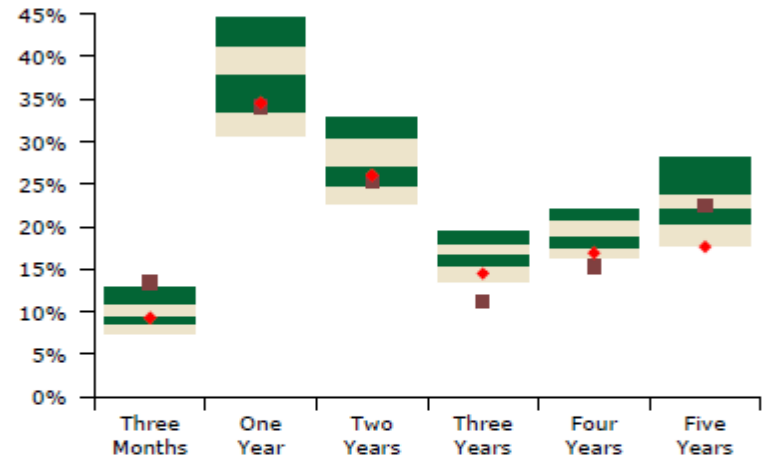
Quarterly Rate of Return Vs Benchmark



Net Returns %	LCQ	1 Yr.	2 Yrs.	3 Yrs.	5 Yrs.	Gross ITD Return	Inception Date
Donald Smith & Co.	13.2	33.0	24.3	10.2	21.5	8.4	Feb-2006
Russell 2000 Value	9.3	34.5	26.0	14.5	17.6	6.6	
<i>Excess Return</i>	3.9	(1.5)	(1.7)	(4.3)	3.9	1.8	

Objective: Outperform the benchmark by 300 bps , annualized over a full market cycle (normally 3-5 years).

Quartile Rankings



	QTD	1 Yr.	2 Yrs.	3 Yrs.	4 Yrs.	5 Yrs.
■ Donald Smith & Co.	13.4	34.1	25.3	11.1	15.3	22.5
◆ Russell 2000 Value	9.3	34.5	26.0	14.5	16.9	17.6
Rank	2	68	70	99	98	47
Rank	57	66	62	82	85	91
10th Percentile	12.8	44.7	32.9	19.3	22.1	28.2
1st Quartile	11.0	41.3	30.4	17.9	20.7	23.8
Median	9.7	37.9	27.1	16.9	19.0	22.2
3rd Quartile	8.7	33.6	24.9	15.5	17.5	20.4
90th Percentile	7.5	30.7	22.6	13.5	16.4	17.7
Number Of Observations	108	99	103	102	90	87

PanAgora Asset Management

Mandate: Small Cap Value

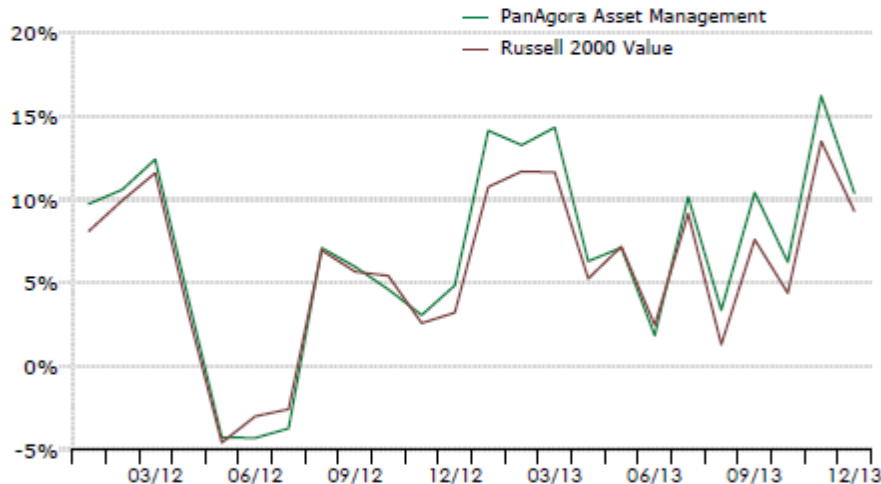
Benchmark: Russell 2000 Value

Strategy

PanAgora invests in US stocks with small market caps, low P/E ratios and lower historical earnings per share that are expected to increase.

Performance

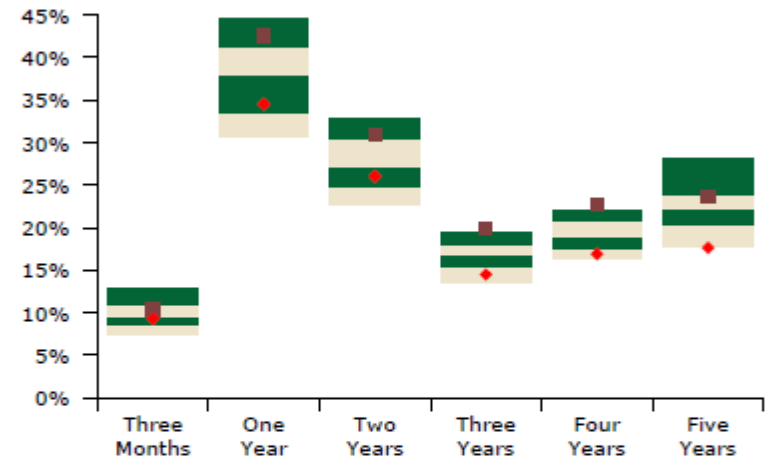
Quarterly Rate of Return Vs Benchmark



Net Returns %	LCQ	1 Yr.	2 Yrs.	3 Yrs.	5 Yrs.	Gross ITD Return	Inception Date
PanAgora Asset Mana	10.4	41.9	30.2	19.2	22.8	7.0	Feb-2006
Russell 2000 Value	9.3	34.5	26.0	14.5	17.6	6.6	
<i>Excess Return</i>	1.1	7.4	4.2	4.7	5.2	0.4	

Objective: Outperform the benchmark by 200 bps , annualized over a full market cycle (normally 3-5 years).

Quartile Rankings



	QTD	1 Yr.	2 Yrs.	3 Yrs.	4 Yrs.	5 Yrs.
■ PanAgora Asset Mana	10.4	42.6	30.9	19.9	22.7	23.6
Rank	33	17	23	8	5	30
◆ Russell 2000 Value	9.3	34.5	26.0	14.5	16.9	17.6
Rank	57	66	62	82	85	91
10th Percentile	12.8	44.7	32.9	19.3	22.1	28.2
1st Quartile	11.0	41.3	30.4	17.9	20.7	23.8
Median	9.7	37.9	27.1	16.9	19.0	22.2
3rd Quartile	8.7	33.6	24.9	15.5	17.5	20.4
90th Percentile	7.5	30.7	22.6	13.5	16.4	17.7
Number Of Observations	108	99	103	102	90	87

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LACERS
LOS ANGELES CITY EMPLOYEES'
RETIREMENT SYSTEM

Non-U.S. Equity Managers

Non-U.S. Equity Managers

(Returns are Net of Fees)

	Inception Date	Market Value (\$million)	% to Total Non-U.S. Equity	Current Quarter	One Year	Three Years	Five Years	Ten Years	Since Inception ¹	5 Year Tracking Error
Non-U.S. Equity	Oct-94	\$ 3,021	100.0%	5.8	19.7	6.3	13.9	7.9	5.6	1.6
<i>MSCI ACWI ex U.S.*</i>				4.8	15.3	5.1	12.8	7.6	5.9	
Excess Return				1.0	4.4	1.2	1.1	0.3	-0.3	
Emerging Markets	Jun-12	\$ 301	10.0%	2.0	-3.4	--	--	--	7.3	--
<i>MSCI Emerging Markets ND</i>				1.8	-2.6	--	--	--	7.1	
Excess Return				0.2	-0.8	--	--	--	0.2	
Batterymarch	Sep-08	\$ 110	3.7%	1.1	-3.7	-5.1	12.9	--	6.7	2.9
<i>MSCI Emerging Markets ND</i>				1.8	-2.6	-2.1	14.8	--	7.5	
Excess Return				-0.7	-1.1	-3.0	-1.9	--	-0.8	
Boston Company	Jan-03	\$ 191	6.3%	2.6	-3.1	-5.0	12.4	9.8	14.7	3.3
<i>MSCI Emerging Markets ND</i>				1.8	-2.6	-2.1	14.8	11.2	14.8	
Excess Return				0.8	-0.5	-2.9	-2.4	-1.4	-0.1	
Developed ex-U.S.	Jun-12	\$ 2,720	90.0%	6.3	23.0	--	--	--	25.9	--
<i>MSCI EAFE ND</i>				5.7	22.8	--	--	--	25.1	
Excess Return				0.6	0.2	--	--	--	0.8	
Barrow Hanley	Dec-13	\$ 389	12.9%	--	--	--	--	--	4.7	--
<i>MSCI EAFE Value</i>				--	--	--	--	--	2.2	
Excess Return				--	--	--	--	--	2.5	
Lazard Asset Management	Dec-13	\$ 388	12.8%	--	--	--	--	--	4.2	--
<i>MSCI EAFE ND</i>				--	--	--	--	--	3.2	
Excess Return				--	--	--	--	--	1.0	
MFS Inst. Adv.	Dec-13	\$ 386	12.8%	--	--	--	--	--	2.0	--
<i>MSCI World ex US Growth</i>				--	--	--	--	--	2.4	
Excess Return				--	--	--	--	--	-0.4	

¹ Indicates gross returns

Non-U.S. Equity Managers

(Returns are Net of Fees)

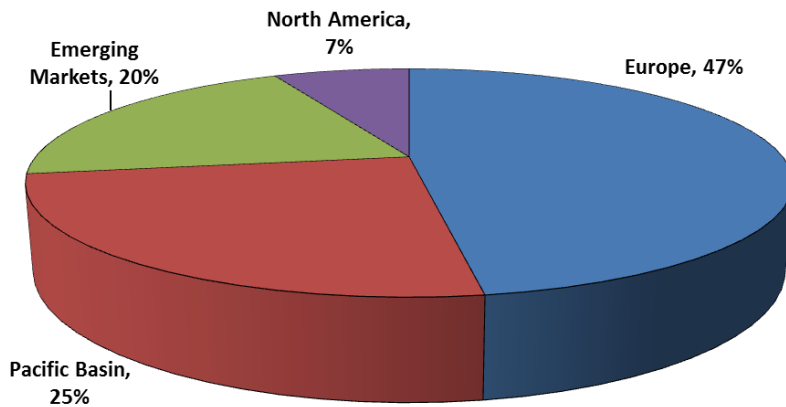
	Inception Date	Market Value (\$million)	% to Total Non-U.S. Equity	Current Quarter	One Year	Three Years	Five Years	Ten Years	Since Inception ¹	5 Year Tracking Error
State Street Equity (Passive) <i>MSCI World ex U.S.</i>	Aug-93	\$ 1,378	45.6%	5.6	22.0	7.8	13.5	7.5	6.3	0.2
Excess Return				0.0	0.4	0.4	0.4	0.3	0.7	
TT International <i>MSCI World ex U.S.</i>	May-01	\$ 178	5.9%	9.0	32.9	8.7	13.5	7.1	5.9	4.3
Excess Return				3.4	11.9	1.4	1.0	0.1	0.2	

¹ Indicates gross returns

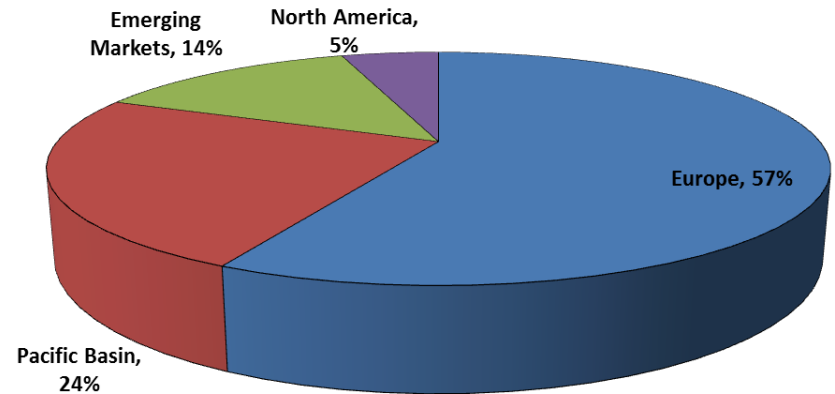
* The MSCI ACWI ex U.S.index is historically blended with other indices.

Country Allocation

Benchmark – MSCI ACWI x U.S. Index

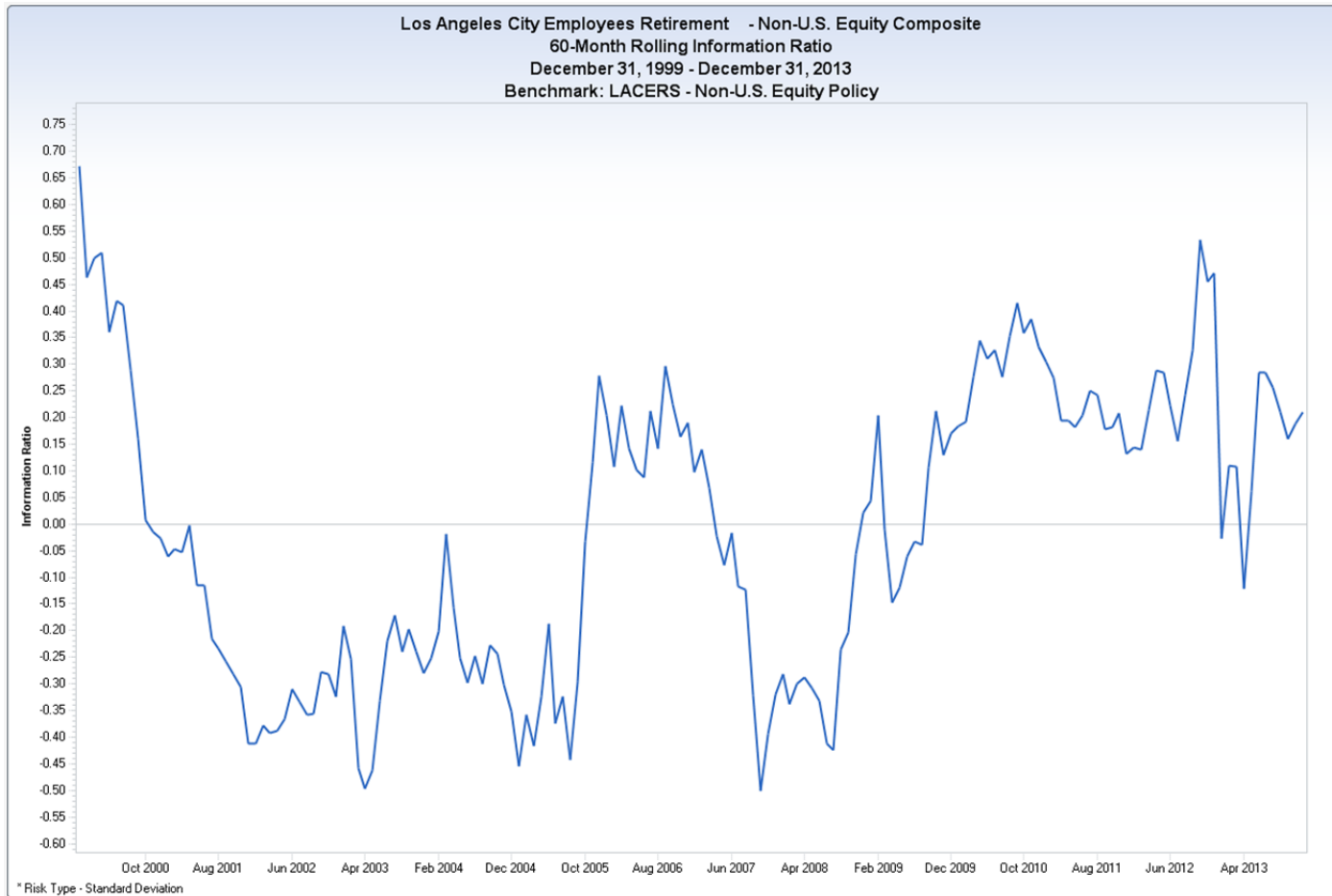


LACERS Non U.S. Equity Composite



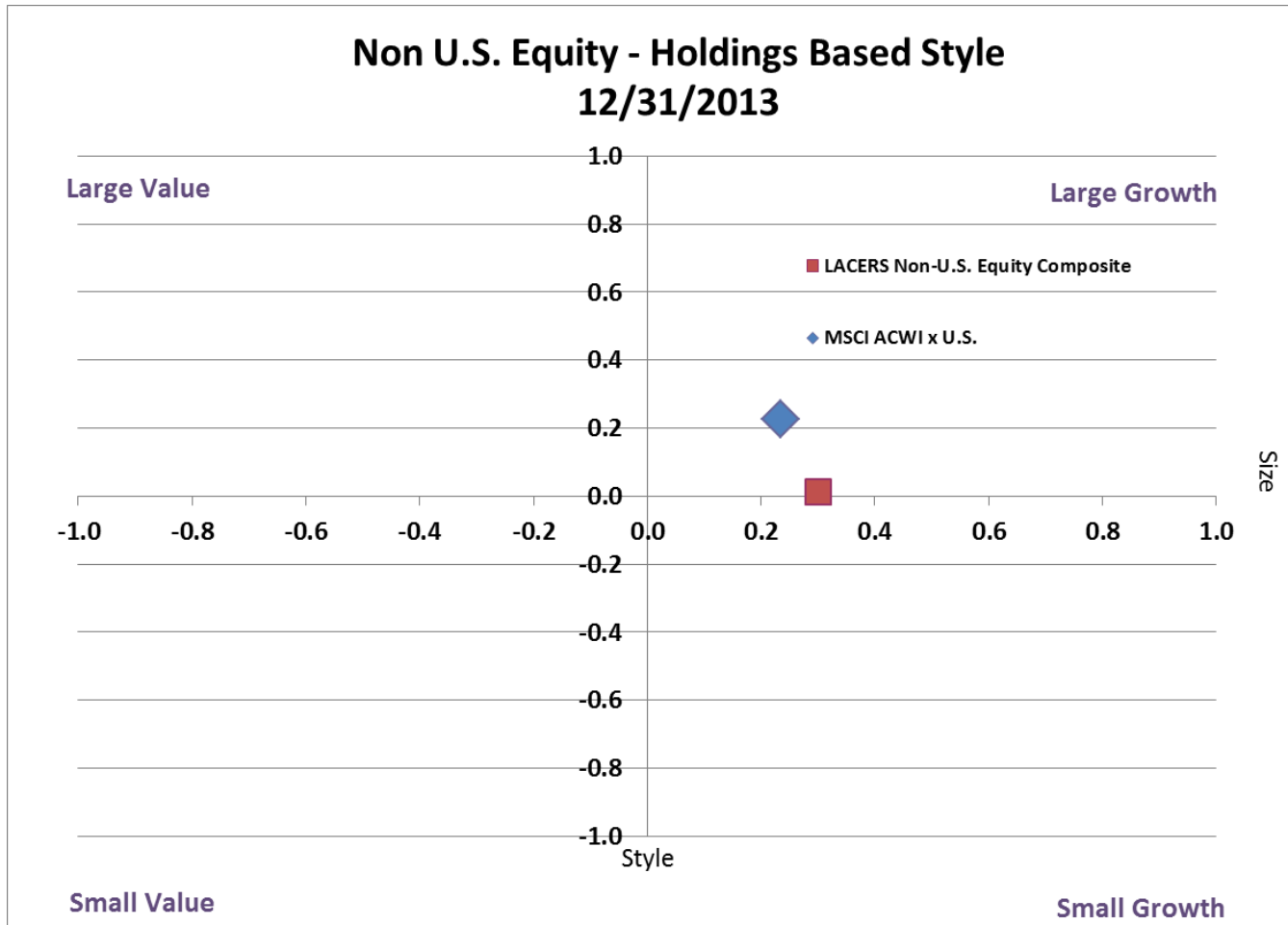
- As LACERS implements the new asset allocation, the geographic weightings of the Non-U.S. Equity Composite will become closer to the benchmark.

5-Year Rolling Risk-Adjusted Active Returns



- Active returns are returns earned over/under benchmark return.
- Non-U.S. Equity's rolling information ratio has been mostly increasing for past 3 years.

Risk-adjusted active returns are referred to as "Information Ratio". Information Ratio = Excess return (alpha) / Excess risk (tracking error).



- LACERS Non-U.S. Equity Portfolio has exhibited modest small cap bias compared to MSCI ACWI x U.S. index.

MANAGER REPORT CARD¹

Non-U.S. Managers	Inception Date	Mandate	Current Quarter		One Year		Three Years		Five Years		Since Inception	Comments ²
			I	U	I	U	I	U	I	U	I	
➤ Batterymarch	Aug-08	Emerging Markets	✗	✗	✗	✗	✗	✗	✗	✗	✗	"On Watch" since Nov. 2013 - performance lagging. Board approved termination of manager in March 2014.
➤ Boston Company	Jan-03	Emerging Markets	✓	✓	✗	✗	✗	✗	✗	✗	✗	"On Watch" since Feb. 2012 - performance lagging. Monitoring manager.
➤ Barrow Hanley	Dec-13	Non US Developed	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	✓	Limited track record.
➤ Lazard Asset	Dec-13	Non US Developed	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	✓	Limited track record.
➤ MFS Inst. Adv.	Dec-13	Non US Developed	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	✗	Limited track record.
➤ TT International	May-01	Non US Developed	✓	✓	✓	✓	✓	✗	✓	✗	✓	"On Watch" since Jan. 2009 - performance improving. Monitoring manager.
➤ State Street	Aug-93	Non US Developed	✓	✗	✓	✗	✓	✗	✓	✗	✓	Performance satisfactory.
➤ Knight Vinke	Apr-06	Corp Gov - Europe	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	In redemption process.

¹Current Quarter, 1-Yr, 3-Yrs, and 5-Yrs returns are net of fees. Since Inception returns are gross of fee.

²Managers are placed on the Watch List for concerns with organization, process, and performance. Managers are normally on the Watch List for 6 months though can be longer if manager issues still remain but not severe enough to warrant contract termination recommendation.

LEGEND		
✓	outperformed index	I index
✗	underperformed index	U universe median
=	equal to index	

Barrow Hanley

Mandate: Non-US Developed Equity Mgrs.

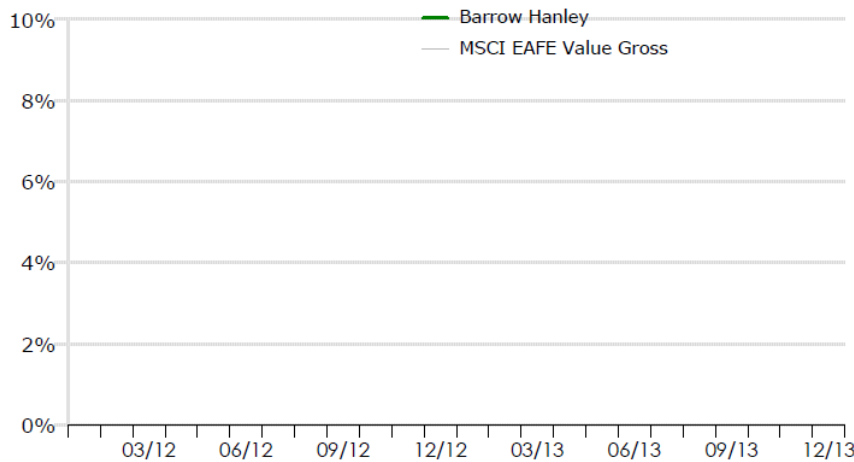
Benchmark: MSCI EAFE Value Gross

Strategy

Barrow Hanley invests in Non-US stocks across all developed countries.

Performance

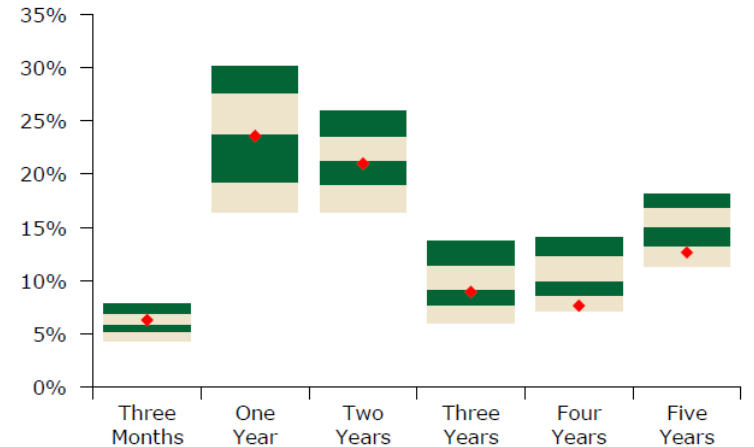
Quarterly Rate of Return Vs Benchmark



Net Returns %	LCQ	1 Yr.	2 Yrs.	3 Yrs.	5 Yrs.	Gross ITD Return	Inception Date
Barrow Hanley	--	--	--	--	--	4.7	Nov-2013
MSCI EAFE Value Grc	--	--	--	--	--	2.2	
<i>Excess Return</i>	--	--	--	--	--	2.5	

Objective: Outperform the benchmark by 200 bps , annualized over a full market cycle (normally 3-5 years).

Quartile Rankings



	QTD	1 Yr.	2 Yrs.	3 Yrs.	4 Yrs.	5 Yrs.
■ Barrow Hanley	--	--	--	--	--	--
◆ MSCI EAFE Value Gro	6.3	23.6	21.0	9.0	7.6	12.6
Rank	39	51	54	55	87	82
10th Percentile	7.8	30.1	25.9	13.7	14.1	18.2
1st Quartile	6.9	27.6	23.5	11.5	12.4	16.9
Median	5.9	23.8	21.3	9.2	9.9	15.1
3rd Quartile	5.2	19.2	19.0	7.7	8.6	13.3
90th Percentile	4.3	16.4	16.4	6.1	7.2	11.3
Number Of Observations	182	168	160	156	141	126

Lazard Asset Management

Mandate: Non-US Developed Equity Mgrs.

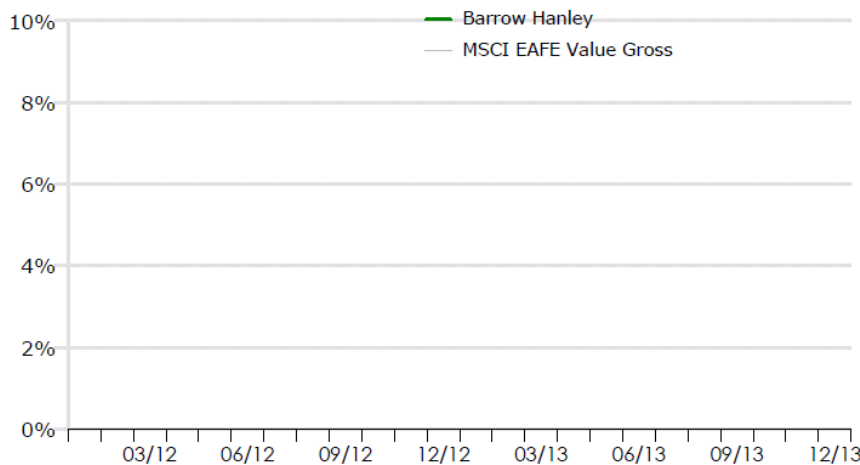
Benchmark: MSCI EAFE ND

Strategy

Lazard invests in Non-US stocks across all developed countries.

Performance

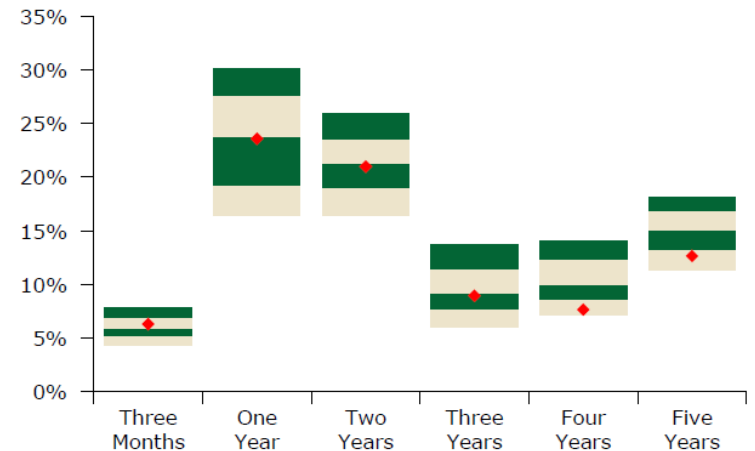
Quarterly Rate of Return Vs Benchmark



Net Returns %	LCQ	1 Yr.	2 Yrs.	3 Yrs.	5 Yrs.	Gross ITD Return	Inception Date
Lazard Asset Manage	--	--	--	--	--	4.2	Nov-2013
MSCI EAFE ND	--	--	--	--	--	3.2	
<i>Excess Return</i>	--	--	--	--	--	1.0	

Objective: Outperform the benchmark by 200 bps , annualized over a full market cycle (normally 3-5 years).

Quartile Rankings



	QTD	1 Yr.	2 Yrs.	3 Yrs.	4 Yrs.	5 Yrs.
■ Lazard Asset Manager	--	--	--	--	--	--
◆ MSCI EAFE ND	5.7	22.8	20.0	8.2	8.1	12.4
Rank	56	58	64	69	84	84
10th Percentile	7.8	30.1	25.9	13.7	14.1	18.2
1st Quartile	6.9	27.6	23.5	11.5	12.4	16.9
Median	5.9	23.8	21.3	9.2	9.9	15.1
3rd Quartile	5.2	19.2	19.0	7.7	8.6	13.3
90th Percentile	4.3	16.4	16.4	6.1	7.2	11.3
Number Of Observations	182	168	160	156	141	126

MFS Inst. Adv.

Mandate: Non-US Developed Equity Mgrs.

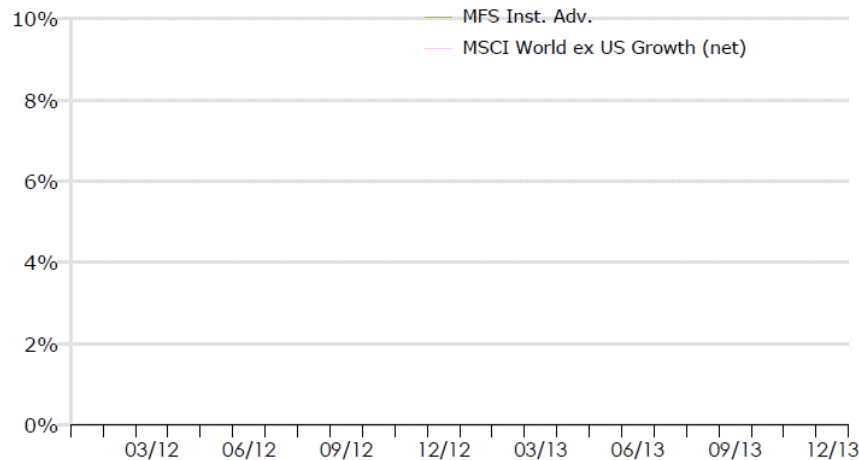
Benchmark: MSCI World ex US Growth (net)

Strategy

MFS Inst. Adv. invests in Non-US stocks across all developed countries.

Performance

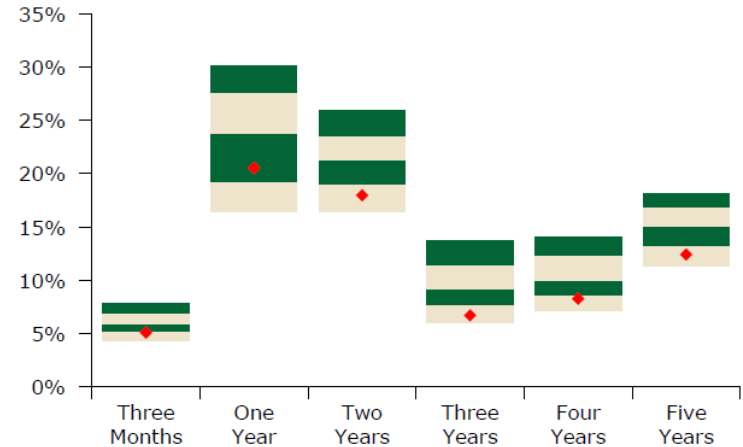
Quarterly Rate of Return Vs Benchmark



Net Returns %	LCQ	1 Yr.	2 Yrs.	3 Yrs.	5 Yrs.	Gross ITD Return	Inception Date
MFS Inst. Adv.	--	--	--	--	--	2.0	Oct-2013
MSCI World ex US Gr	--	--	--	--	--	2.4	
Excess Return	--	--	--	--	--	(0.4)	

Objective: Outperform the benchmark by 200 bps , annualized over a full market cycle (normally 3-5 years).

Quartile Rankings



	QTD	1 Yr.	2 Yrs.	3 Yrs.	4 Yrs.	5 Yrs.
■ MFS Inst. Adv.	--	--	--	--	--	--
◆ MSCI World ex US Gr		5.1	20.5	18.0	6.7	8.3
Rank		79	66	82	88	81
10th Percentile		7.8	30.1	25.9	13.7	14.1
1st Quartile		6.9	27.6	23.5	11.5	12.4
Median		5.9	23.8	21.3	9.2	9.9
3rd Quartile		5.2	19.2	19.0	7.7	8.6
90th Percentile		4.3	16.4	16.4	6.1	7.2
Number Of Observations	182	168	160	156	141	126

TT International

Mandate: Non-US Developed Equity Mgrs.

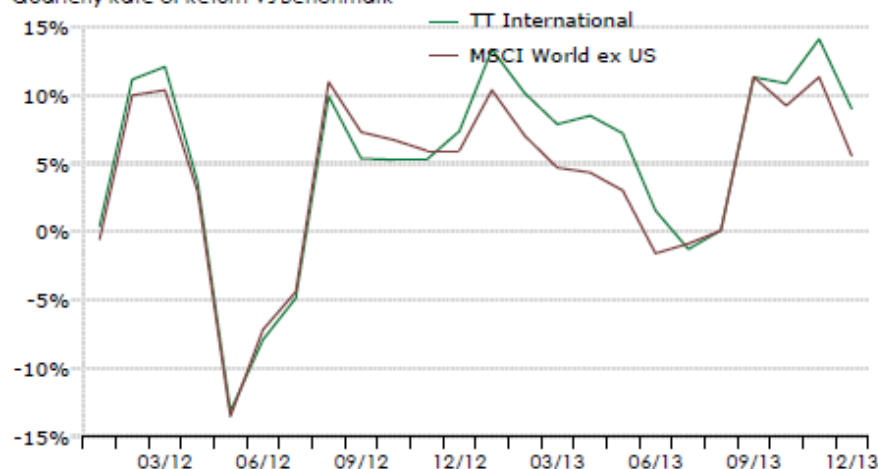
Benchmark: MSCI World ex US

Strategy

TT Intl invests in Non-US stocks primarily in developed countries. There is no regional focus. Potential investment opportunities are pursued in all countries within the MSCI World ex US index.

Performance

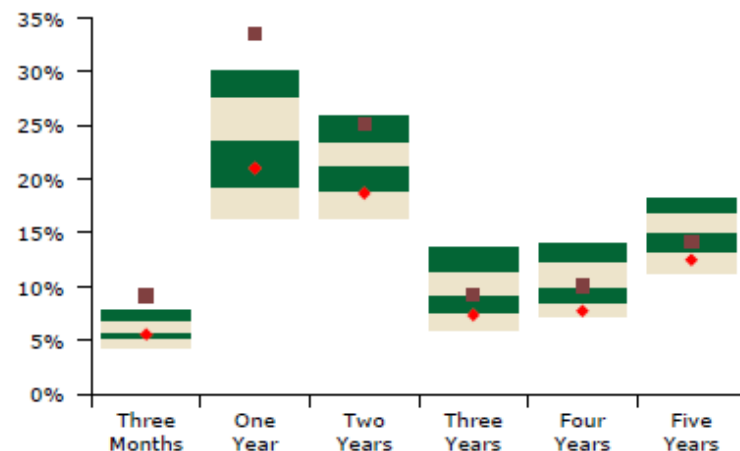
Quarterly Rate of Return Vs Benchmark



Net Returns %	LCQ	1 Yr.	2 Yrs.	3 Yrs.	5 Yrs.	Gross ITD Return	Inception Date
TT International	9.0	32.9	24.6	8.7	13.5	5.9	May-2001
MSCI World ex US	5.6	21.0	18.7	7.3	12.5	5.7	
<i>Excess Return</i>	3.4	11.9	5.9	1.4	1.0	0.2	

Objective: Annualized absolute excess returns expected to be 15% per annum over a full market cycle (normally 3-5 years).

Quartile Rankings



	QTD	1 Yr.	2 Yrs.	3 Yrs.	4 Yrs.	5 Yrs.
■ TT International	9.1	33.5	25.1	9.2	10.1	14.2
Rank	3	1	18	51	46	63
◆ MSCI World ex US	5.6	21.0	18.7	7.3	7.7	12.5
Rank	61	64	77	85	87	84
10th Percentile	7.8	30.1	25.9	13.7	14.1	18.2
1st Quartile	6.9	27.6	23.5	11.5	12.4	16.9
Median	5.9	23.8	21.3	9.2	9.9	15.1
3rd Quartile	5.2	19.2	19.0	7.7	8.6	13.3
90th Percentile	4.3	16.4	16.4	6.1	7.2	11.3
Number Of Observations	182	168	160	156	141	126

Boston Company

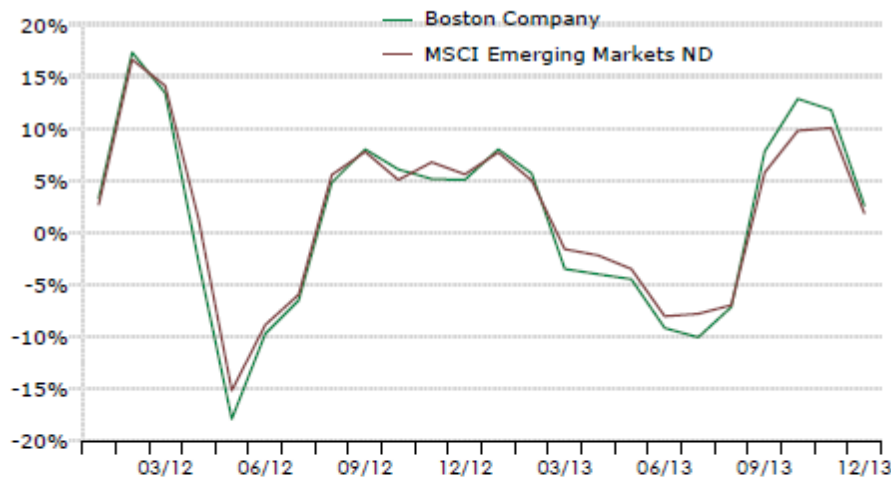
Mandate: Emerging Markets Equity
Benchmark: MSCI Emerging Markets ND

Strategy

Boston Co. invests in Non-US stocks in emerging countries that are part of the MSCI Emerging Markets index.

Performance

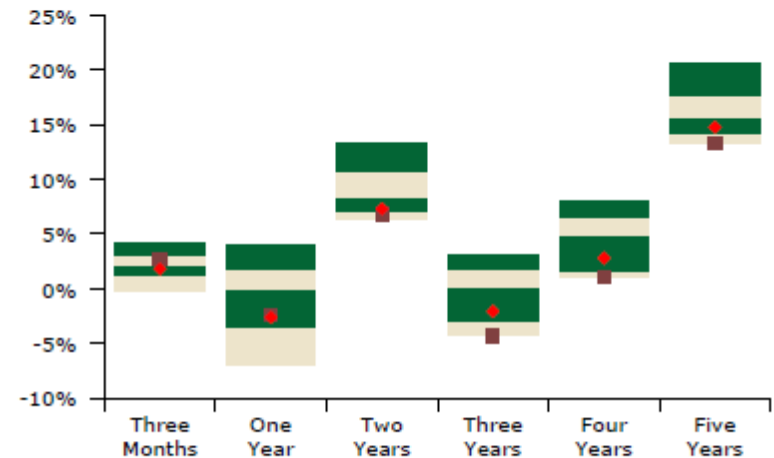
Quarterly Rate of Return Vs Benchmark



Net Returns %	LCQ	1 Yr.	2 Yrs.	3 Yrs.	5 Yrs.	Gross ITD Return	Inception Date
Boston Company	2.6	(3.1)	6.1	(5.0)	12.4	14.7	Jan-2003
MSCI Emerging Mark	1.8	(2.6)	7.3	(2.1)	14.8	14.8	
<i>Excess Return</i>	0.8	(0.5)	(1.2)	(2.9)	(2.4)	(0.1)	

Objective: Outperform the benchmark by 200-300 bps , annualized over a full market cycle (normally 3-5 years).

Quartile Rankings



	QTD	1 Yr.	2 Yrs.	3 Yrs.	4 Yrs.	5 Yrs.
■ Boston Company	2.7	(2.4)	6.8	(4.3)	1.1	13.3
Rank	39	66	86	90	89	85
◆ MSCI Emerging Markets	1.8	(2.6)	7.3	(2.1)	2.8	14.8
Rank	57	67	72	66	65	66
10th Percentile	4.2	4.1	13.3	3.1	8.0	20.6
1st Quartile	3.2	1.9	10.7	1.8	6.6	17.7
Median	2.1	(0.3)	8.3	0.2	4.8	15.8
3rd Quartile	1.2	(3.8)	7.1	(3.1)	1.7	14.1
90th Percentile	(0.2)	(6.9)	6.4	(4.3)	1.0	13.3
Number Of Observations	71	71	64	59	52	47

Batterymarch

Mandate: Emerging Markets Equity

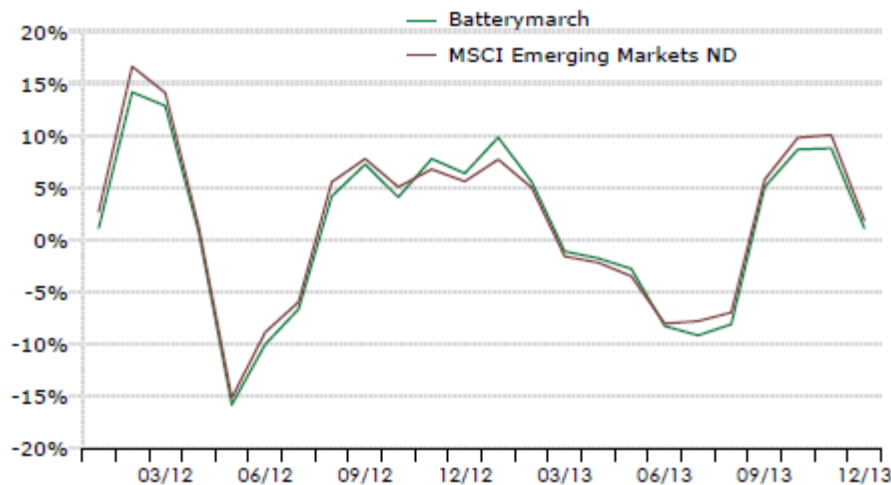
Benchmark: MSCI Emerging Markets ND

Strategy

Batterymarch invests in Non-US stocks in emerging countries that are part of the MSCI Emerging Markets index.

Performance

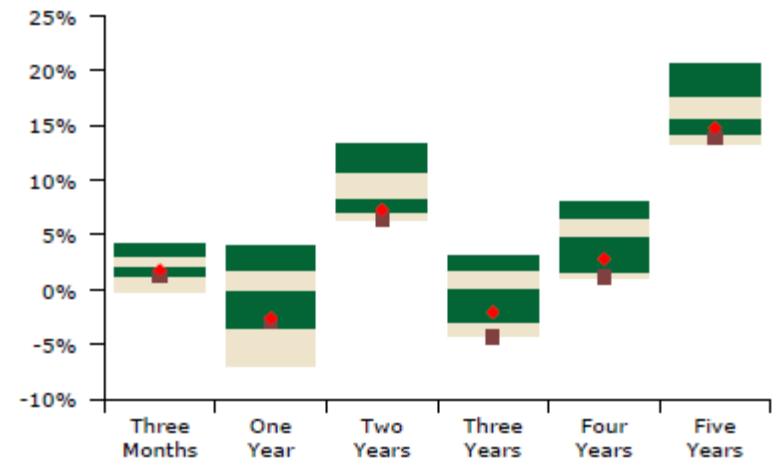
Quarterly Rate of Return Vs Benchmark



Net Returns %	LCQ	1 Yr.	2 Yrs.	3 Yrs.	5 Yrs.	Gross ITD Return	Inception Date
Batterymarch	1.1	(3.7)	5.5	(5.1)	12.9	6.7	Sep-2008
MSCI Emerging Mark	1.8	(2.6)	7.3	(2.1)	14.8	7.5	
<i>Excess Return</i>	<i>(0.7)</i>	<i>(1.1)</i>	<i>(1.8)</i>	<i>(3.0)</i>	<i>(1.9)</i>	<i>(0.8)</i>	

Objective: Outperform the benchmark by 300 bps , annualized over a full market cycle (normally 3-5 years).

Quartile Rankings



	QTD	1 Yr.	2 Yrs.	3 Yrs.	4 Yrs.	5 Yrs.
■ BatteryMarch	1.3	(2.9)	6.4	(4.3)	1.2	13.9
Rank	69	70	89	92	87	79
◆ MSCI Emerging Mark	1.8	(2.6)	7.3	(2.1)	2.8	14.8
Rank	57	67	72	66	65	66
10th Percentile	4.2	4.1	13.3	3.1	8.0	20.6
1st Quartile	3.2	1.9	10.7	1.8	6.6	17.7
Median	2.1	(0.3)	8.3	0.2	4.8	15.8
3rd Quartile	1.2	(3.8)	7.1	(3.1)	1.7	14.1
90th Percentile	(0.2)	(6.9)	6.4	(4.3)	1.0	13.3
Number Of Observations	71	71	64	59	52	47



LACERS
LOS ANGELES CITY EMPLOYEES'
RETIREMENT SYSTEM

Fixed Income Managers

Fixed Income Managers

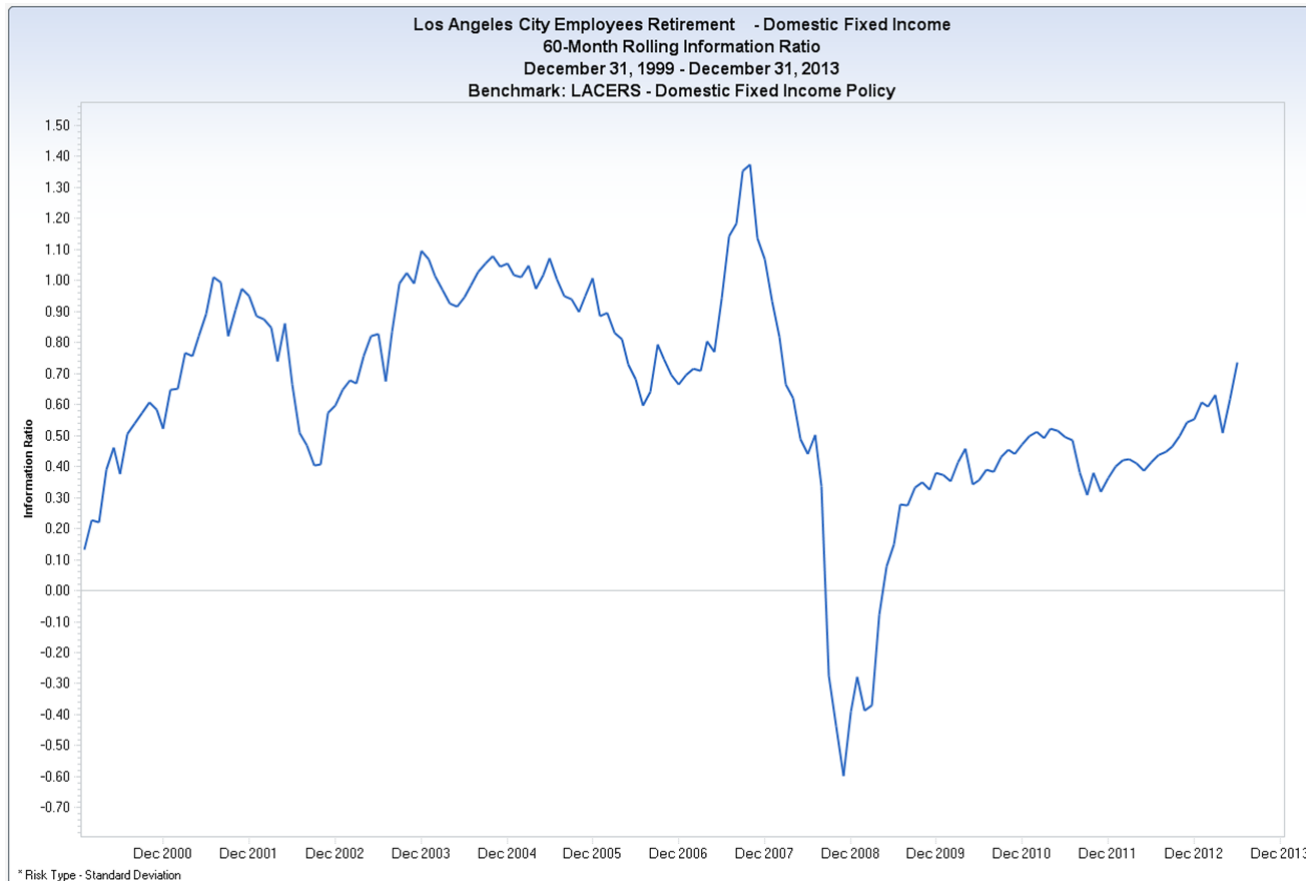
(Returns are Net of Fees)

	Inception Date	Market Value (\$million)	% to Total Fixed Income	Current Quarter	One Year	Three Years	Five Years	Ten Years	Since Inception ¹	5 Year Tracking Error
Core Fixed Income	Jun-12	\$ 2,746	100.0%	0.6	-1.2	--	--	--	2.2	--
<i>BC U.S. Aggregate*</i>				-0.1	-1.9	--	--	--	0.4	
Excess Return				0.7	0.7	--	--	--	1.8	
Loomis Sayles	Jun-80	\$ 1,113	40.5%	1.1	-1.1	4.5	8.2	5.8	9.8	2.7
<i>BC U.S. Aggregate*</i>				-0.1	-1.9	3.6	5.3	4.8	8.2	
Excess Return				1.2	0.8	0.9	2.9	1.0	1.6	
Neuberger Berman	Nov-90	\$ 1,127	41.0%	0.3	-1.4	4.4	9.1	6.1	7.5	3.0
<i>BC U.S. Aggregate*</i>				-0.1	-1.9	3.6	5.3	4.8	6.6	
Excess Return				0.4	0.5	0.8	3.8	1.3	0.9	
Baird Advisors	Mar-05	\$ 237	8.7%	0.2	0.0	4.2	5.9	--	5.1	0.9
<i>BC U.S. Govt/Credit Intermed</i>				0.0	-0.9	2.9	4.0	--	4.4	
Excess Return				0.2	0.9	1.3	1.9	--	0.7	
LM Capital Group	Mar-05	\$ 269	9.8%	0.5	-1.7	3.6	6.2	--	5.3	1.8
<i>BC U.S. Aggregate*</i>				-0.1	-1.9	3.3	4.2	--	4.6	
Excess Return				0.6	0.2	0.3	2.0	--	0.7	
Credit Opportunities	Jun-13	\$ 203	100.0%	3.5	--	--	--	--	5.9	--
<i>BC US Corp High Yield 2% Cap</i>				3.6	--	--	--	--	5.9	
Excess Return				-0.1	--	--	--	--	0.0	
Aegon USA	Jun-13	\$ 101	49.6%	3.2	--	--	--	--	5.2	--
<i>BC US Corp High Yield 2% Cap</i>				3.6	--	--	--	--	5.9	
Excess Return				-0.4	--	--	--	--	-0.7	
Franklin Advisors	Jun-13	\$ 102	50.4%	3.8	--	--	--	--	6.7	--
<i>BC US Corp High Yield 2% Cap</i>				3.6	--	--	--	--	5.9	
Excess Return				0.2	--	--	--	--	0.8	

¹ Indicates gross returns

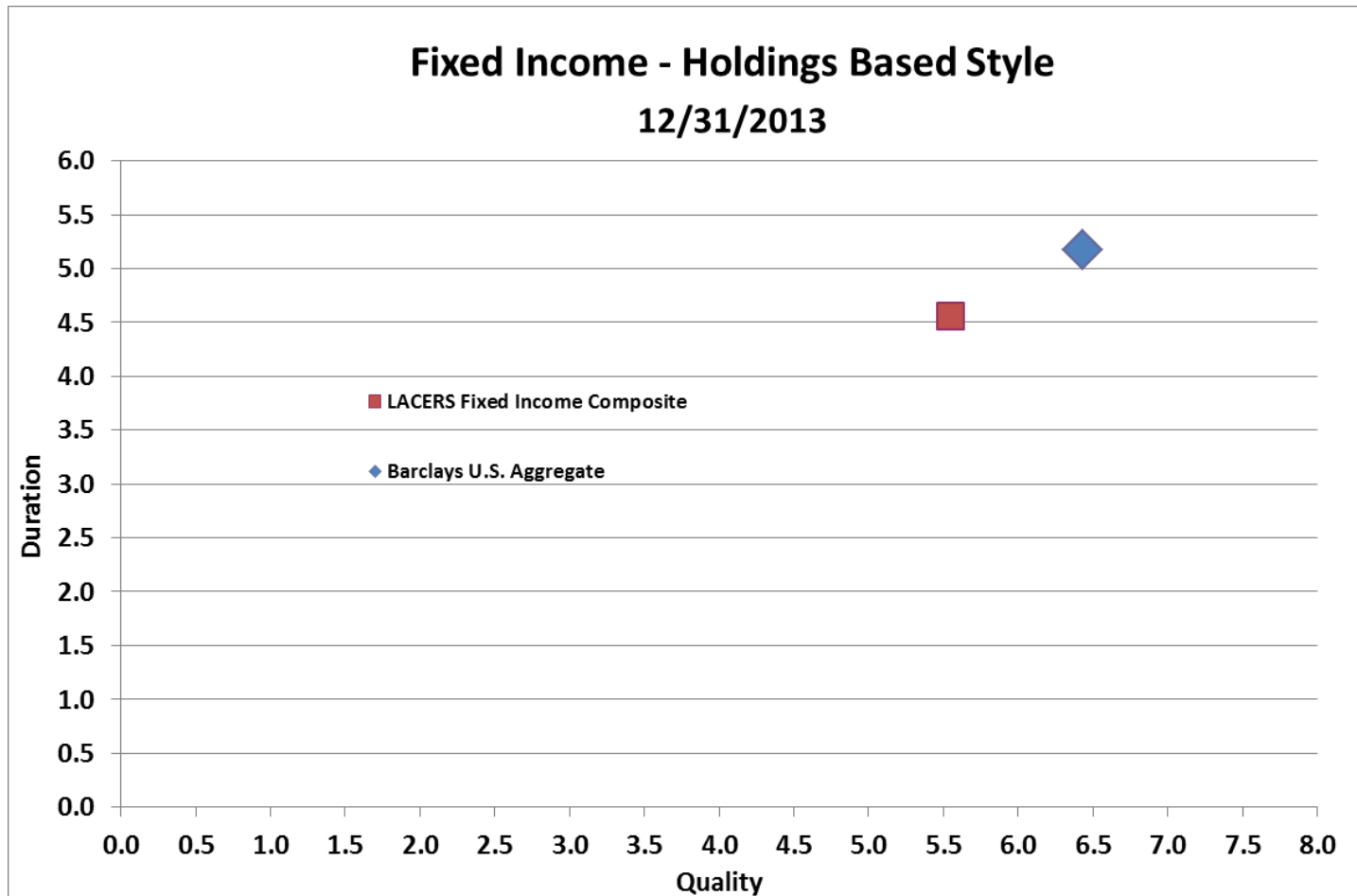
* The BC U.S. Aggregate index is historically blended with other indices.

5-Year Rolling Risk-Adjusted Active Returns



- Active returns are returns earned over/under benchmark return.
- Despite dip in 2008, fixed income composite has provided mostly positive risk-adjusted active returns since inception.

Risk-adjusted active returns are referred to as "Information Ratio". $\text{Information Ratio} = \text{Excess return (alpha)} / \text{Excess risk (tracking error)}$.



- LACERS Fixed Income portfolio has slightly lower duration than benchmark.
- Portfolio is modestly lower quality versus benchmark.

MANAGER REPORT CARD¹

Core Fixed Income	Inception Date	Mandate	Current Quarter		One Year		Three Years		Five Years		Since Inception	Comments ²
			I	U	I	U	I	U	I	U	I	
➤ Neuberger Berman	Nov-90	Core - Plus	✓	✗	✓	✗	✓	✓	✓	✓	✓	Performance satisfactory.
➤ Loomis Sayles	Jun-80	Core - Plus	✓	✓	✓	✓	✓	✓	✓	✓	✓	Performance satisfactory.
➤ Baird Advisors	Mar-05	Intermediate	✓	✗	✓	✗	✓	✓	✓	✓	✓	Performance satisfactory.
➤ LM Capital Group	Feb-05	Core - Plus	✓	✓	✓	✗	✓	✓	✓	✓	✓	Performance satisfactory.
Credit Opportunities												
➤ Aegon USA	Jun-13	High Yield Bonds	✗	✗	n/a	n/a	n/a	n/a	n/a	n/a	✗	Limited track record.
➤ Franklin Advisers	Jun-13	High Yield Bonds	✓	✓	n/a	n/a	n/a	n/a	n/a	n/a	✓	Limited track record.

¹Current Quarter, 1-Yr, 3-Yrs, and 5-Yrs returns are net of fees. Since Inception returns are gross of fee.

²Managers are placed on the Watch List for concerns with organization, process, and performance. Managers are normally on the Watch List for 6 months though can be longer if manager issues still remain but not severe enough to warrant contract termination recommendation.

LEGEND		
✓	outperformed index	I index
✗	underperformed index	U universe median
=	equal to index	

Baird Advisors

Mandate: Intermediate Fixed Income

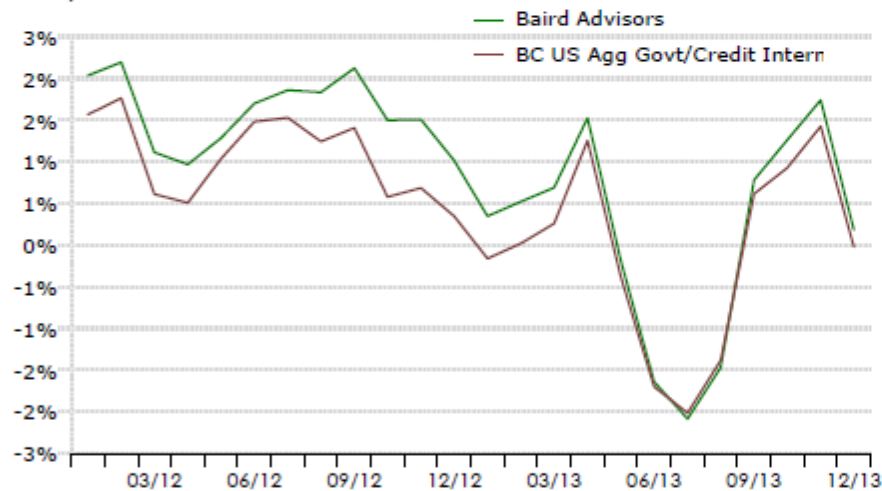
Benchmark: BC US Agg Govt/Credit Intermed

Strategy

Baird invests primarily in US investment-grade bonds in the government and credit sectors with 3-5 year maturities.

Performance

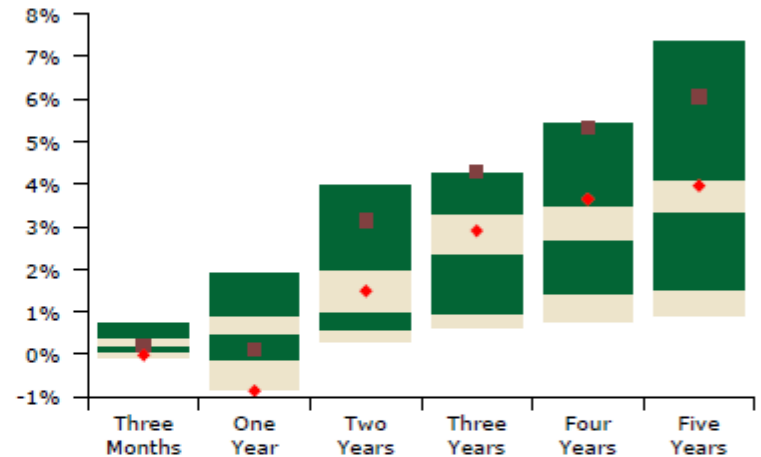
Quarterly Rate of Return Vs Benchmark



Net Returns %	LCQ	1 Yr.	2 Yrs.	3 Yrs.	5 Yrs.	Gross ITD Return	Inception Date
Baird Advisors	0.2	(0.0)	3.0	4.2	5.9	5.1	Mar-2005
BC US Agg Govt/Cred	(0.0)	(0.9)	1.5	2.9	4.0	4.4	
<i>Excess Return</i>	0.2	0.9	1.5	1.3	1.9	0.7	

Objective: Outperform the benchmark by 15-40 bps , annualized over a full market cycle (normally 3-5 years).

Quartile Rankings



	QTD	1 Yr.	2 Yrs.	3 Yrs.	4 Yrs.	5 Yrs.
■ Baird Advisors	0.2	0.1	3.1	4.3	5.3	6.1
Rank	51	64	20	9	12	19
◆ BC US Agg Govt/Cred	(0.0)	(0.9)	1.5	2.9	3.6	4.0
Rank	89	91	38	32	22	32
10th Percentile	0.7	1.9	4.0	4.2	5.4	7.3
1st Quartile	0.4	0.9	2.0	3.3	3.5	4.1
Median	0.2	0.5	1.0	2.4	2.7	3.4
3rd Quartile	0.1	(0.2)	0.6	0.9	1.4	1.5
90th Percentile	(0.1)	(0.8)	0.3	0.6	0.8	0.9
Number Of Observations	47	35	33	36	35	31

LM Capital Group

Mandate: Intermediate Fixed Income

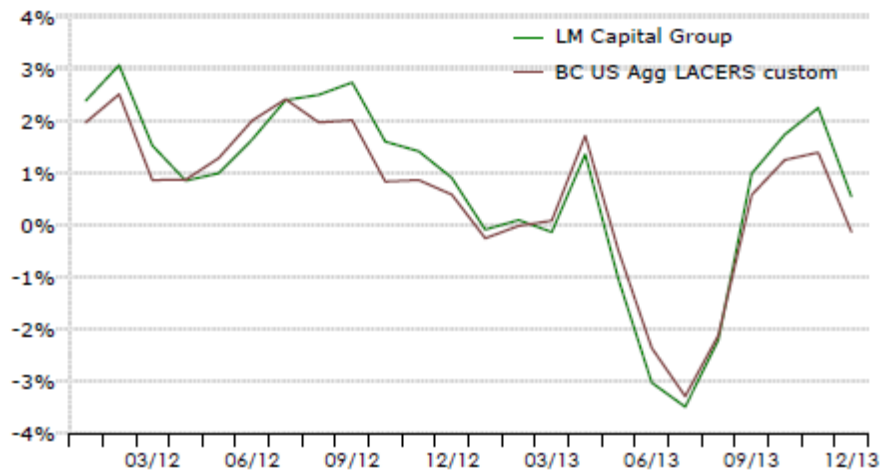
Benchmark: BC US Agg LACERS

Strategy

LM Capital invests primarily in US investment-grade bonds in the government and credit sectors with 3-5 year maturities.

Performance

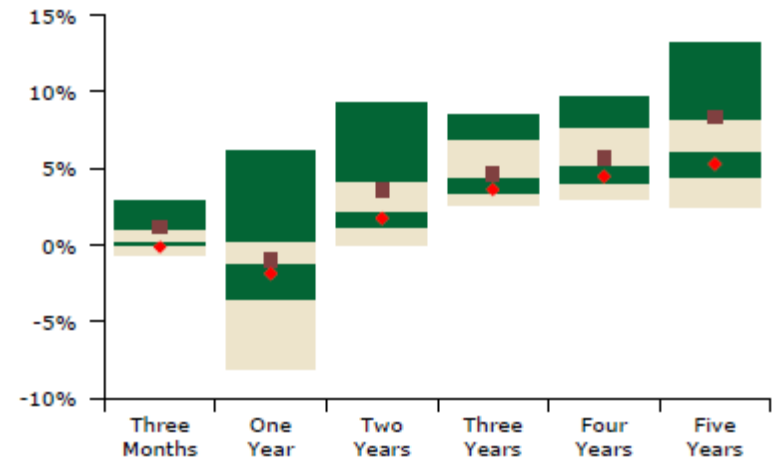
Quarterly Rate of Return Vs Benchmark



Net Returns %	LCQ	1 Yr.	2 Yrs.	3 Yrs.	5 Yrs.	Gross ITD Return	Inception Date
LM Capital Group	0.5	(1.7)	2.5	3.6	6.2	5.3	Mar-2005
BC US Agg LACERS c	(0.1)	(1.9)	1.8	3.3	4.2	4.6	
<i>Excess Return</i>	0.6	0.2	0.7	0.3	2.0	0.7	

Objective: Outperform the benchmark by 30-80 bps , annualized over a full market cycle (normally 3-5 years).

Quartile Rankings



	QTD	1 Yr.	2 Yrs.	3 Yrs.	4 Yrs.	5 Yrs.
■ LM Capital Group	0.6	(1.6)	2.7	3.8	4.7	6.4
Rank	13	96	22	21	19	18
◆ BC US Agg LACERS	(0.1)	(1.9)	1.8	3.3	3.9	4.2
Rank	91	97	34	25	21	24
10th Percentile	0.7	1.9	4.0	4.2	5.4	7.3
1st Quartile	0.4	0.9	2.0	3.3	3.5	4.1
Median	0.2	0.5	1.0	2.4	2.7	3.4
3rd Quartile	0.1	(0.2)	0.6	0.9	1.4	1.5
90th Percentile	(0.1)	(0.8)	0.3	0.6	0.8	0.9
Number Of Observations	47	35	33	36	35	31

Loomis Sayles

Mandate: US Fixed Income Manager

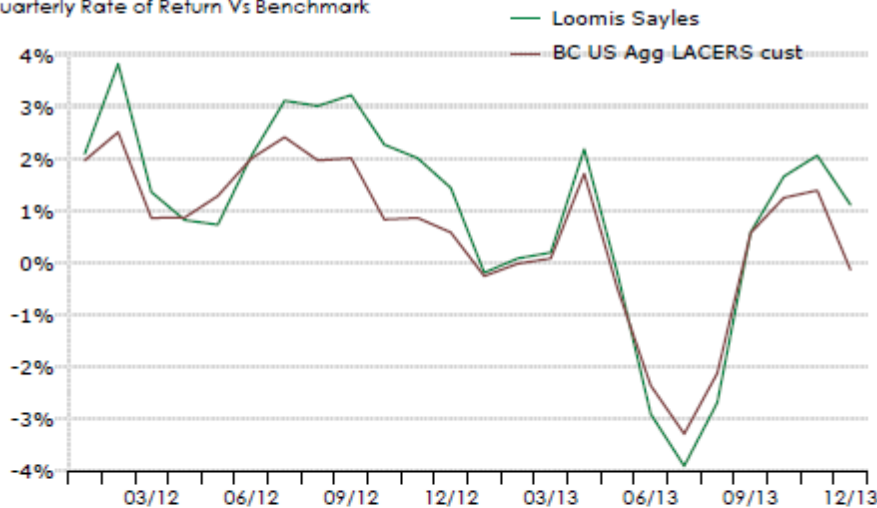
Benchmark: BC US Agg LACERS

Strategy

Loomis invests primarily in US investment-grade bonds rated BBB- or higher by Moody's.

Performance

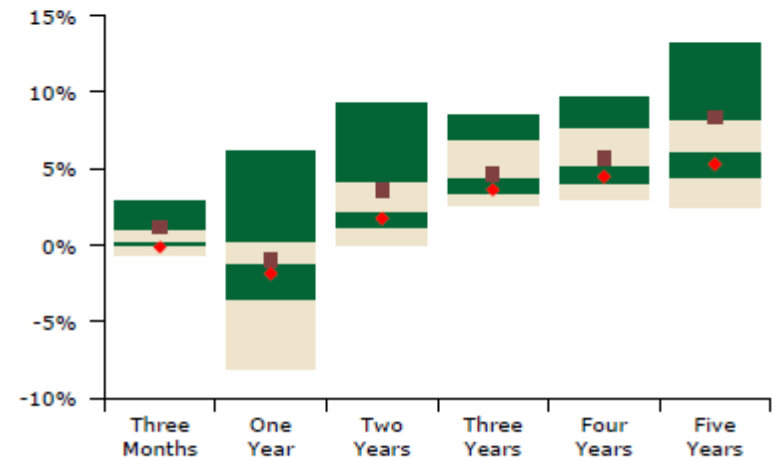
Quarterly Rate of Return Vs Benchmark



Net Returns %	LCQ	1 Yr.	2 Yrs.	3 Yrs.	5 Yrs.	Gross ITD Return	Inception Date
Loomis Sayles	1.1	(1.1)	3.5	4.5	8.2	9.8	Jun-1980
BC US Agg LACERS c	(0.1)	(1.9)	1.8	3.6	5.3	8.2	
<i>Excess Return</i>	1.2	0.8	1.7	0.9	2.9	1.6	

Objective: Outperform the benchmark by 50 bps, annualized over a full market cycle (normally 3-5 years).

Quartile Rankings



	QTD	1 Yr.	2 Yrs.	3 Yrs.	4 Yrs.	5 Yrs.
■ Loomis Sayles	1.1	(1.0)	3.6	4.7	5.7	8.4
Rank	25	45	32	47	40	24
◆ BC US Agg LACERS	(0.1)	(1.9)	1.8	3.6	4.5	5.3
Rank	78	62	61	71	64	62
10th Percentile	2.9	6.2	9.2	8.5	9.6	13.1
1st Quartile	1.1	0.3	4.2	6.9	7.7	8.2
Median	0.3	(1.3)	2.2	4.4	5.3	6.2
3rd Quartile	(0.1)	(3.7)	1.2	3.5	4.0	4.4
90th Percentile	(0.7)	(8.1)	(0.1)	2.7	3.0	2.6
Number Of Observations	423	401	340	318	292	246

Neuberger Berman

Mandate: US Fixed Income Manager

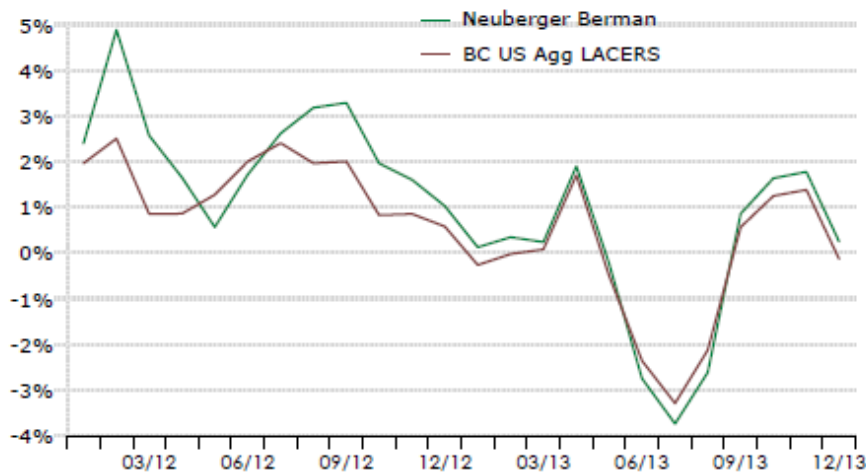
Benchmark: BC US Agg LACERS

Strategy

Neuberger invests in investment-grade bonds rated BBB- or higher by Moodys.

Performance

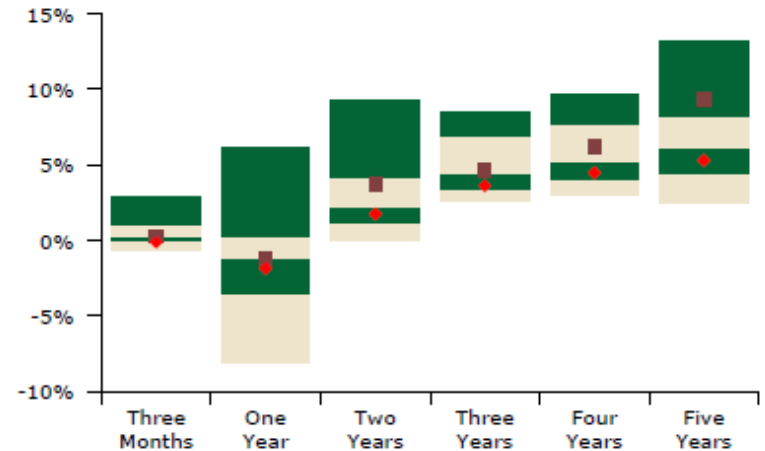
Quarterly Rate of Return Vs Benchmark



Net Returns %	LCQ	1 Yr.	2 Yrs.	3 Yrs.	5 Yrs.	Gross ITD Return	Inception Date
Neuberger Berman	0.3	(1.4)	3.6	4.4	9.1	7.5	Nov-1990
BC US Agg LACERS	(0.1)	(1.9)	1.8	3.6	5.3	6.6	
<i>Excess Return</i>	0.4	0.5	1.8	0.8	3.8	0.9	

Objective: Outperform the benchmark by 100 bps , annualized over a full market cycle (normally 3-5 years).

Quartile Rankings



	QTD	1 Yr.	2 Yrs.	3 Yrs.	4 Yrs.	5 Yrs.
■ Neuberger Berman	0.3	(1.3)	3.7	4.6	6.2	9.3
Rank	53	50	31	47	34	21
◆ BC US Agg LACERS	(0.1)	(1.9)	1.8	3.6	4.5	5.3
Rank	78	62	61	71	64	62
10th Percentile	2.9	6.2	9.2	8.5	9.6	13.1
1st Quartile	1.1	0.3	4.2	6.9	7.7	8.2
Median	0.3	(1.3)	2.2	4.4	5.3	6.2
3rd Quartile	(0.1)	(3.7)	1.2	3.5	4.0	4.4
90th Percentile	(0.7)	(8.1)	(0.1)	2.7	3.0	2.6
Number Of Observations	423	401	340	318	292	246

Aegon USA

Mandate: High Yield Fixed Income

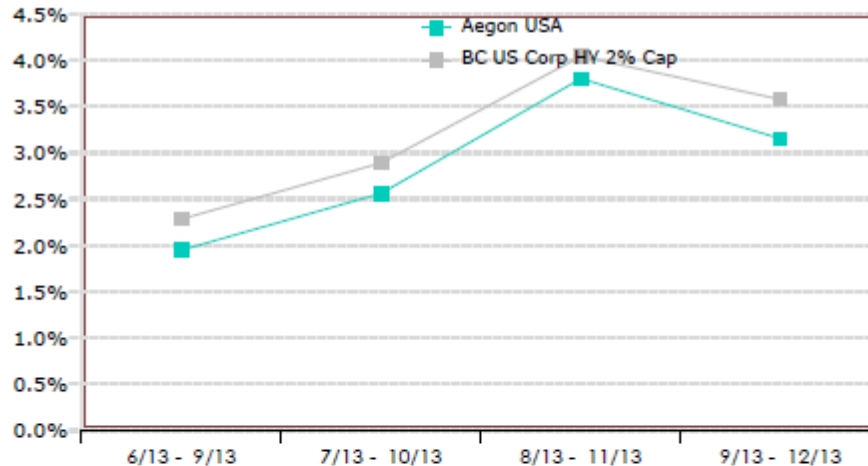
Benchmark: BC US Corp HY 2% Cap

Strategy

Aegon USA Investment Management, LLC. primarily invests in fixed income securities that are issued by corporations with high yield ratings (below investment grade) with a heavy focus on controlling credit risk via in-depth research of all issuers in the portfolio.

Performance

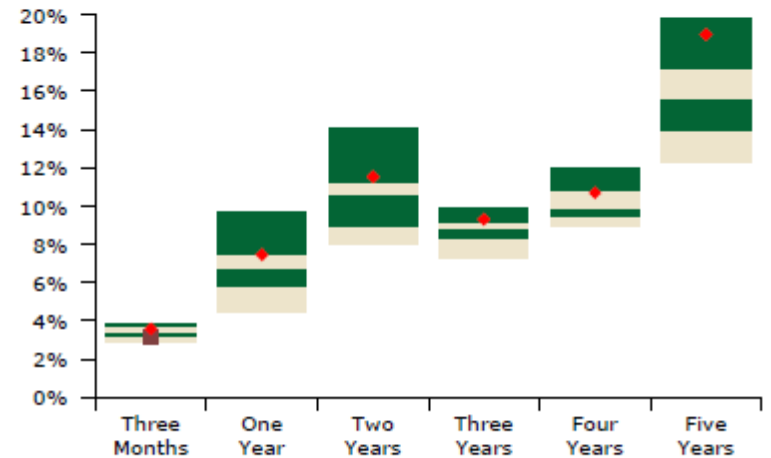
Quarterly Rate of Return Vs Benchmark



Net Returns %	LCQ	1 Yr.	2 Yrs.	3 Yrs.	5 Yrs.	Gross ITD Return	Inception Date
Aegon USA	3.2	--	--	--	--	5.2	Jun-2013
BC US Corp HY 2% C	3.6	--	--	--	--	5.9	
Excess Return	(0.4)	--	--	--	--	(0.7)	

Objective: Outperform the benchmark by 200 bps , annualized over a full market cycle (normally 3-5 years).

Quartile Rankings



	QTD	1 Yr.	2 Yrs.	3 Yrs.	4 Yrs.	5 Yrs.
■ Aegon USA	3.2	--	--	--	--	--
Rank	81					
◆ BC US Corp HY 2% C	3.6	7.4	11.5	9.3	10.7	19.0
Rank	34	28	24	17	28	14
10th Percentile	3.8	9.7	14.0	9.9	12.0	19.8
1st Quartile	3.7	7.5	11.3	9.1	10.8	17.2
Median	3.4	6.7	10.6	8.8	9.8	15.7
3rd Quartile	3.2	5.8	8.9	8.3	9.5	13.9
90th Percentile	2.9	4.4	8.0	7.3	8.9	12.3
Number Of Observations	35	35	32	26	24	22

Franklin Advisers

Mandate: High Yield Fixed Income

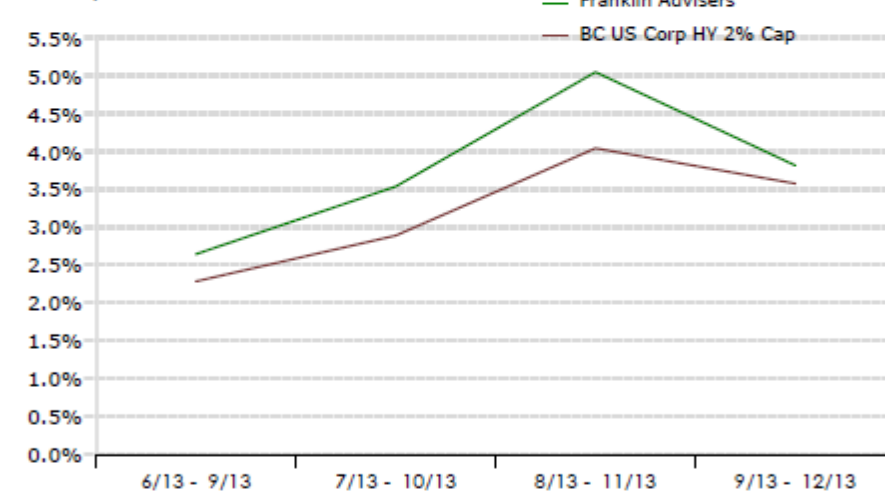
Benchmark: BC US Corp HY 2% Cap

Strategy

Franklin Advisers, Inc. invests in U.S. high yield corporate bond market that focus on fundamental credit analysis of corporate issuers across the high yield market with a goal of identifying those securities offering the potential for strong risk-adjusted total returns.

Performance

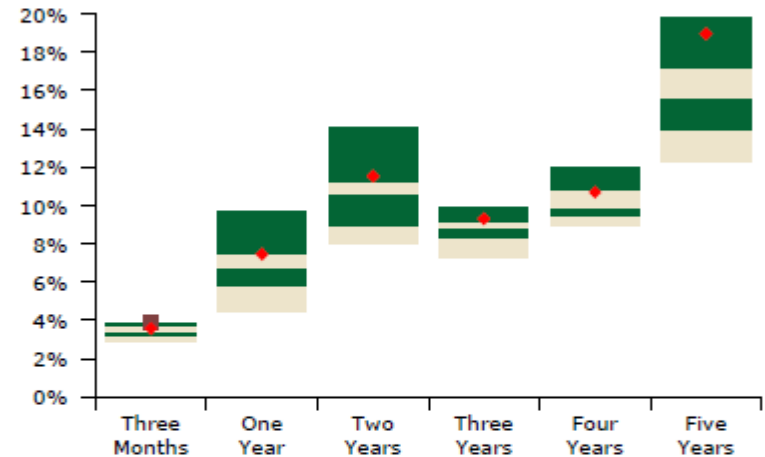
Quarterly Rate of Return Vs Benchmark



Net Returns %	LCQ	1 Yr.	2 Yrs.	3 Yrs.	5 Yrs.	Gross ITD Return	Inception Date
Franklin Advisers	3.8	--	--	--	--	6.7	Jun-2013
BC US Corp HY 2% C	3.6	--	--	--	--	5.9	
<i>Excess Return</i>	0.2	--	--	--	--	0.8	

Objective: Outperform the benchmark by 200 bps , annualized over a full market cycle (normally 3-5 years).

Quartile Rankings



	QTD	1 Yr.	2 Yrs.	3 Yrs.	4 Yrs.	5 Yrs.
■ Franklin Advisers	3.9	--	--	--	--	--
◆ BC US Corp HY 2% C	3.6	7.4	11.5	9.3	10.7	19.0
Rank	8					
10th Percentile	3.8	9.7	14.0	9.9	12.0	19.8
1st Quartile	3.7	7.5	11.3	9.1	10.8	17.2
Median	3.4	6.7	10.6	8.8	9.8	15.7
3rd Quartile	3.2	5.8	8.9	8.3	9.5	13.9
90th Percentile	2.9	4.4	8.0	7.3	8.9	12.3
Number Of Observations	35	35	32	26	24	22



LACERS
LOS ANGELES CITY EMPLOYEES'
RETIREMENT SYSTEM

Definitions

I. Asset Allocation

- Market %: market value as a percent of the total fund's market value.
- Target %: investment policy on target allocation for each asset classes.
- Minimum and Maximum %: range of allocation for each asset classes.

II. Policy Benchmarks

• Current (adopted January 24, 2012)

- ◆ U.S Equity: 24% Russell 3000
- ◆ Non-U.S Equity: 29% MS ACWI ex U.S. Net Div
- ◆ Fixed Income: 19% Barclays Capital (BC) Aggregate
- ◆ Credit Opportunities: 5% 65% Barclays U.S. High Yield Capped / 35% JP Morgan EMBI - Global Diversified
- ◆ Public Real Assets: 5% CPI + 5%
- ◆ Private Real Estate: 5% NCREIF + 100 bps annually
- ◆ Private Equity: 12% Russell 3000 plus 300 bps annually. Calculated on a dollar-weighted basis, and holding cash flows at 0% return for the first 36 months
- ◆ Cash: 1% 90-day Treasury Bill
- ◆ **Total:** 24% U.S. Equity; 29% Non-U.S. Equity; 19% Fixed Income; 5% Credit Opportunities; 5% Public Real Assets; 5% Private Real Estate; 12% Private Equity; 1% Cash

• Prior (adopted October 13, 2009)

- ◆ U.S Equity: 27% Russell 3000
- ◆ Non-U.S Equity: 20% MS ACWI ex U.S. Net Div
- ◆ Core Fixed Income: 26% Barclays Capital (BC) Universal
- ◆ Private Real Estate: 7% NCREIF
- ◆ Private Equity: 9% Russell 3000 plus 400 bps annually. Calculated on a dollar-weighted basis, and holding cash flows at 0% return for the first 36 months.
- ◆ Cash: 1% 90-day Treasury Bill
- ◆ **Total:** 37% U.S. Equity; 20% Non-U.S. Equity; 26% Core Fixed Income; 7% Private Real Estate; 9% Private Equity; 1% Cash

III. Indices

- **Cash**

Salomon Brothers 3-Month Treasury Bills: an average of the last three 3-month treasury bill issues' monthly return equivalents of yield averages, which are not marked to market. Month-end discount yields are converted to bond-equivalent yields, then a simple average is taken, and that number is decomposed to a monthly return using the actual number of days in the month and a 365-day year.

- **Equity**

- ◆ **Dow Jones Industrial Average:** This index is the price-weighted average of 30 actively traded blue chip stocks.
- ◆ **NASDAQ:** A market value weighted index that measures all domestic and non-US based securities, more than 4700 companies listed on the NASDAQ stock market.
- ◆ **Russell Midcap Value:** contains Russell Midcap stocks having less-than-average growth orientation and are included in the Russell 1000 Value Index.
- ◆ **Russell 1000:** consists of the 1000 largest securities in the Russell 3000 Index. The Russell 1000 is capitalization-weighted.
- ◆ **Russell 1000 Growth:** contains Russell 1000 stocks having greater-than-average growth orientation. Stocks tend to exhibit lower dividend yields and higher price-to-book ratios, price-earnings ratios and forecast growth values than the Value universe. The index is capitalization-weighted (as opposed to equal-weighted).
- ◆ **Russell 1000 Value:** contains those Russell 1000 securities with a less-than-average growth orientation. Securities in this index tend to exhibit lower price-to-book and price-earnings ratios, higher dividend yields and lower forecasted growth values than the Growth universe. Russell 1000 Value is capitalization-weighted.
- ◆ **Russell 2000:** contains the smallest 2,000 stocks in the Russell 3000 Index, representing approximately 11% of the Russell 3000 total market capitalization. The index is capitalization-weighted (as opposed to equal-weighted).
- ◆ **Russell 2000 Growth:** contains those Russell 2000 securities with a greater-than-average growth orientation. Securities in this index tend to exhibit higher price-to-book and price-earnings ratios, lower dividend yields and higher forecasted growth values than the Value universe.
- ◆ **Russell 2000 Value:** contains those Russell 2000 securities with a less-than-average growth orientation. Securities in this index tend to exhibit lower price-to-book and price-earnings ratios, higher dividend yields and lower forecasted growth values than the Growth universe.
- ◆ **Russell 3000:** measures performance of the 3000 largest US companies based on total market capitalization. This index represents approximately 98% of the investable US equity market. The Russell 3000 is capitalization-weighted.
- ◆ **Standard and Poor 500:** the S&P, which represents approximately 75% of NYSE market capitalization and 30% of NYSE issues, contains 500 industrial, utility, transportation and financial companies in the U.S. markets (mostly

NYSE issues). The S&P is capitalization-weighted (as opposed to equal-weighted), calculated on a total return basis with dividends reinvested.

- ◆ **Morgan Stanley All Country World ex USA:** an arithmetic, market value-weighted average of approx. 1800 securities from outside the United States. The index is calculated on a total return basis, including reinvestment of gross dividends before deduction of withholding taxes.
 - ◆ **Morgan Stanley Capital International Emerging Markets Free:** contains securities of the following countries which are available to all investors regardless of local status: Argentina, Brazil, Chile, Colombia, Greece, India, Indonesia, Israel, Jordan, Malaysia, Mexico, Pakistan, Peru, Philippines, Poland, Portugal, South Africa, Sri Lanka, Thailand, Turkey and Venezuela.
 - ◆ **Morgan Stanley Capital International EAFE:** an arithmetic, market value-weighted average of over 900 securities from Europe, Australia, and the Far East. The index is calculated on a total return basis, including reinvestment of gross dividends before deduction of withholding taxes. The following countries are represented: Australia, Austria, Belgium, Denmark, Finland, France, Germany, Hong Kong, Ireland, Italy, Japan, Malaysia, Netherlands, New Zealand, Norway, Singapore, Spain, Sweden, Switzerland and the United Kingdom.
 - ◆ **Morgan Stanley Capital International Europe:** includes companies representing 15 European countries: Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.
 - ◆ **Morgan Stanley Capital International Pacific:** includes companies representing 5 countries: Australia, Hong Kong, Japan, New Zealand and Singapore.
 - ◆ **Morgan Stanley Capital International Pacific ex Japan:** includes companies representing 4 countries: Australia, Hong Kong, New Zealand and Singapore.
 - ◆ **Morgan Stanley All Country Asia Pacific:** includes companies representing 14 countries: Australia, China, Hong Kong, India, Indonesia, Japan, Malaysia, Pakistan, Philippines, Korea, New Zealand, Singapore, Thailand, and Taiwan. It is calculated on a total return basis with dividends reinvested.
- **Fixed Income**
 - ◆ **Barclays Capital Aggregate:** an aggregate of the Government/Corporate Bond Index, the Mortgage-Backed Securities Index, and the Asset-Backed Securities Index. The index contains fixed rate debt issues with at least one-year maturity, \$100 million par value outstanding, and investment grade ratings by Moody's, S&P or Fitch (in that order). Returns are market-value weighted inclusive of accrued interest.
 - ◆ **Barclays Capital Universal:** This index contains the Barclays Capital Aggregate index bonds plus approximately 10% of the remaining index includes US High Yield, Eurodollar, Emerging Markets, 144A Private Placements, and CMBS bonds.

- ◆ **Barclays Capital US Govt/Credit Intermediate:** This index is a sub-component of the Barclays Capital Aggregate index. Bonds consist of the US Treasury, US Agency (non-MBS), and US Investment-grade credit holdings with a maturity range of 1 to 10 years.
- ◆ **Barclays U.S. High Yield 2% Capped:** This index is an unmanaged index that covers U.S. corporate, fixed-rate, non-investment grade debt with at least one year to maturity and at least \$150 million in par outstanding. Index weights for each issuer are capped at 2%.
- ◆ **Bond Rating Methodology:** Bond ratings are intended to characterize the risk associated with holding a particular bond or categories of bonds. These ratings are the risk assessed by the market and that the bond issuer must pay to attract purchasers to the bond. These ratings are expressed as a series of letters and sequences.

Rating Categories in descending order:

- ◇ **AAA:** The best quality rating, stable cash flows, very protective bond covenants, very low probability of default.
- ◇ **Aa:** The second best rating. Stable cash flows, less protective bond covenants, very low probability of default.
- ◇ **A:** Stable cash flows, less protective bond covenants, long-term probability of default is higher than AAA or Aa.
- ◇ **Baa:** Medium quality rating, reliable cash flows short term, less-reliable cash flows long term, bond covenants offer limited protection. Moderate probability of default. Downgrade to a lower rating is also possible. Baa bonds are the lowest rating still considered 'investment grade.
- ◇ **Ba thru B:** Highly speculative. Long-term assurance of cash flows and protective elements are low. Purchasers of these bonds generally specialize in assessing credit risk of specific bond issues. Much higher spreads versus investment grade bonds provide the incentive for purchasers. High default or downgrade risk.
- ◇ **Caa thru C:** Poor standing. Either close to default or in default. Highly probable loss of principal.
- ◇ **D:** Coupon payments were not paid on the due date which puts the bond in default. Unless both Protective covenants and issuer assets are adequate (not likely), holder loses all likelihood of recovering principal.

- **Private Real Estate**

NCREIF Property Index: the NPI contains investment-grade, non-agricultural, income-producing properties which may be financed in excess of 5% gross market value; were acquired on behalf of tax exempt institutions; and are held in a fiduciary environment. Data is collected quarterly from a membership of investment managers and plan sponsors.

Returns are gross of fees; include income, realized gains/losses, and appreciation/depreciation; and are market-value weighted. Property values are determined by consistent appraisal methodology and sold properties are removed in the quarter of the sale (the historical data remains). Current quarter performance is preliminary.

IV. Universe Comparison

All Northern Trust Universes are gross of fees. Universe breaks are at 10, 25, 50, 75 and 90 percentiles.

- **TUCS Plan Universes**

Published on a quarterly basis using monthly observations. Over time, the plan population members will change due to new plans being introduced and other plans closing or leaving the universe.

Public Funds

Includes the range of performance of all Public Funds greater than 10 billion dollars. Monitored by the Wilshire's Trust Universe Comparison Services Group. Plans include state and municipal plans and systems.

- **Manager Universes**

Created using the performance of managers used by sponsor subscribers to the Risk & Performance Services Group (RPS). Each occurrence of a manager is considered as an observation. The manager universes are used to describe the actual experience of plan sponsors use of the managers; no manager supplied representative portfolios or composites are used in the creation of the universes. All occurrences of a manager are included in the magnitudes they are used by the sponsors; no stratification or judgments are introduced by RPS to alter a manager's representation. Manager portfolios are used from all market segments (ERISA, Public, Foundation & Endowments, and Wealth) since managers are hired to fulfill a specific policy objective that is not unique by plan type. Inclusion in a universe is based upon quantitative screening using the criteria described; an RPS analyst determines the comparison of a manager to this style background for reporting purposes. The portfolio criteria are applied as the average of the values over the time period being observed and not simply the current point in time value.

- ♦ **U.S. Equity - Large Cap Core**

Includes portfolios with a portfolio average market capitalization greater than \$10 billion but not displaying any significant growth or value bias. The Barra Growth and Barra Book to Price risk factors are used to determine style orientation. Most of the portfolios also display a market-like beta.

- ◆ **U.S. Equity - Large Cap Growth**
Includes portfolios with a portfolio average market capitalization greater than \$10 billion. Portfolios will also display a significant growth bias as represented by a Barra Growth Risk Factor in the top 40% of all US equity portfolios and a Barra Price/Book score in the bottom 70% of all US equity portfolios monitored by RPS. Most growth portfolios display an above market beta.
- ◆ **U.S. Equity - Large Cap Value**
Includes portfolios with a portfolio average market capitalization greater than \$10 billion. Portfolios will also display a significant value bias as represented by a Barra Price/Book score in the top 30% of all US equity portfolios monitored by RPS. Most value portfolios display a below market beta and above market dividend yield.
- ◆ **U.S. Equity - Small Cap Growth**
Includes portfolios with a portfolio average market capitalization of less than \$2 billion. Small Cap Growth portfolios will also display a growth bias as represented by a Barra Growth Risk Factor in the top 31% of all US equity portfolios monitored by RPS.
- ◆ **U.S. Equity - Small Cap Value**
Includes portfolios with a portfolio average market capitalization of less than \$2 billion. Small Cap Value portfolios will also display a value bias as represented by a Barra Price/Book score in the top 27% and a Barra Growth factor score in the bottom 31% of all US equity portfolios monitored by RPS.
- ◆ **Non-U.S. Equity - Developed Markets**
Includes all managers investing in developed markets outside of North America. The majority of the portfolios in this universe are EAFE-oriented but may contain an opportunistic allocation to emerging markets equity (extended EAFE). There are a few regional non-US equity managers (Europe & Pacific Basin) also represented.
- ◆ **Non-U.S. Equity - Emerging Markets**
Includes all managers investing in emerging markets. The universe includes emerging markets managers that are diversified across all emerging markets as well as specialists in regional emerging markets.
- ◆ **U.S. Core Fixed Income**
Includes all managers, active and passive, investing in US Fixed Income.

- ◆ **Credit Opportunities**

Includes all managers, active and passive, investing in US high yield and emerging market debt managers.

- ◆ **Public Real Assets**

Includes all managers investing in Public REITS, TIPS, Commodities, and Multi Asset Real Asset/Return managers.

V. Investment Performance

- **Time:** the internal rate of return (accounting for daily cash flows) monthly based on trade-date, full accrual accounting, and using market values. For periods of greater than one month, a time series of linked monthly returns is maintained, introducing a time weighted effect.
- The Private Real Estate and the Private Equity returns are lagged one quarter.
- The LACERS Total Fund return is dollar-weighted to include Private Equity.

VI. Performance Attribution

- **Holdings-Based Attribution.**

U.S. Equity, Non-U.S. Equity, and Fixed Income tables are Holdings-based. The table details various attribution subcategories which impacted each manager's performance such as: selection, weighting, duration, yield, quality, etc.

VII. Terminology

- **Duration:** A measure of the sensitivity of the price (the value of principal) of a fixed-income portfolio given a 1% change in the US Treasury yield curve (interest rates). A portfolio with a duration of 4 would be expected to lose 4% of its value when interest rates rise 1%. Duration is expressed as a number of years. Rising interest rates mean falling bond prices, while declining interest rates mean rising bond prices.
- **Information ratio:** A ratio of portfolio returns above the returns of a benchmark (usually an index) to the volatility of those returns. The information ratio (IR) measures a portfolio manager's ability to generate excess returns relative to a benchmark, but also attempts to identify the consistency of the investor. This ratio will identify if a manager has beaten

the benchmark by a lot in a few months or a little every month. The higher the IR the more consistent a manager is and consistency is an ideal trait.

- **Standard deviation:** A statistical measure of volatility or the degree to which an individual value in a probability distribution tends to vary from the mean of the distribution. A manager with a one-year return of 5% and a standard deviation of 5, indicates the range of returns for this manager will likely fall between 0% and 10% during most annual time periods.
- **Tracking error:** A measure of the difference between returns of the portfolio and that of the benchmark it was attempting to imitate; reported as a "standard deviation percentage" difference.