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**IMD - Total Public Equity Asset Class Review**

April 20, 2015

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## Table of Contents

❑ Asset class activity subsequent to February 27, 2015	Page 3
❑ Public Equity Class Status Update / Equity Markets Environment Commentary	Page 5
❑ Public Equity Class Review	Page 11
▪ U.S. Domestic Equity Asset Category Review	Page 21
• U.S. Domestic Equity Asset Category Review – Large-Cap Mandates	Page 30
• U.S. Domestic Equity Asset Category Review – Mid-Cap Mandates	Page 38
• U.S. Domestic Equity Asset Category Review – Small-Cap Mandates	Page 46
▪ Non-U.S. Equity Asset Category Review	Page 54
• Non-U.S. Equity Asset Category Review - EAFE Mandates	Page 61
• Non-U.S. Equity Asset Category Review - EAFE-Small-Cap Mandates	Page 71
• Non-U.S. Equity Asset Category Review -Emerging Markets Mandates	Page 75

**Public Equity Class Status Update**

Activity subsequent to the February 27, 2015 date used for valuations presented in the review

Activity subsequent to the February 27, 2015

IMD Equities implemented the first phase of reallocating the Public Equities asset class toward the ca 27<sup>th</sup> February 2015 Strategic Asset Allocation Policy. Subsequent to the March 31, 2015 calendar quarter-end, \$1,273.5MN market value of securities ( $\approx 3.74\%$  of Total Fund ) moved from the Domestic Equities category into transition. Following transition  $\approx 84\%$  /\$1,075 BN of that amount will move to the EAFE sub-class, indexed mandate and  $\approx 16\%$ /\$200MN will move to the EAFE sub-class, active mandates, per \$150MN to Thompson Siegel & Walmsley; \$50MN to American Century. Sourcing of the \$1,275BN drawdown was per:

Domestic Equities Asset Sub-Class	Drawdown (\$Million)	% of Drawdown	Passive Portion	
			(\$ Millions)	% of Subclass Draw
LargeCap	-280	21.99%	-185	66.07%
MidCap	-561	44.05%	-305	54.37%
SmallCap	-432.5	33.96%	-150	34.68%
<b>Totals</b>	<b>-1,273.5</b>	<b>100.00%</b>	<b>-640</b>	<b>--</b>

Contributing portfolios were:

- E2: -\$100MN
- E7: -85MN
- Intech: -\$50MN
- LSV: -\$45MN
- E3: -\$140MN
- E4: -\$165MN
- Wellington: -\$150MN
- CRM: -\$106.4MN #
- E6: -\$150MN
- Champlain: - \$99.9MN #
- DFA (SC): -\$90MN
- TimesSquare: -\$95M

# Defunded; value as of 31 Mar2015

**Public Equity Class Status Update**

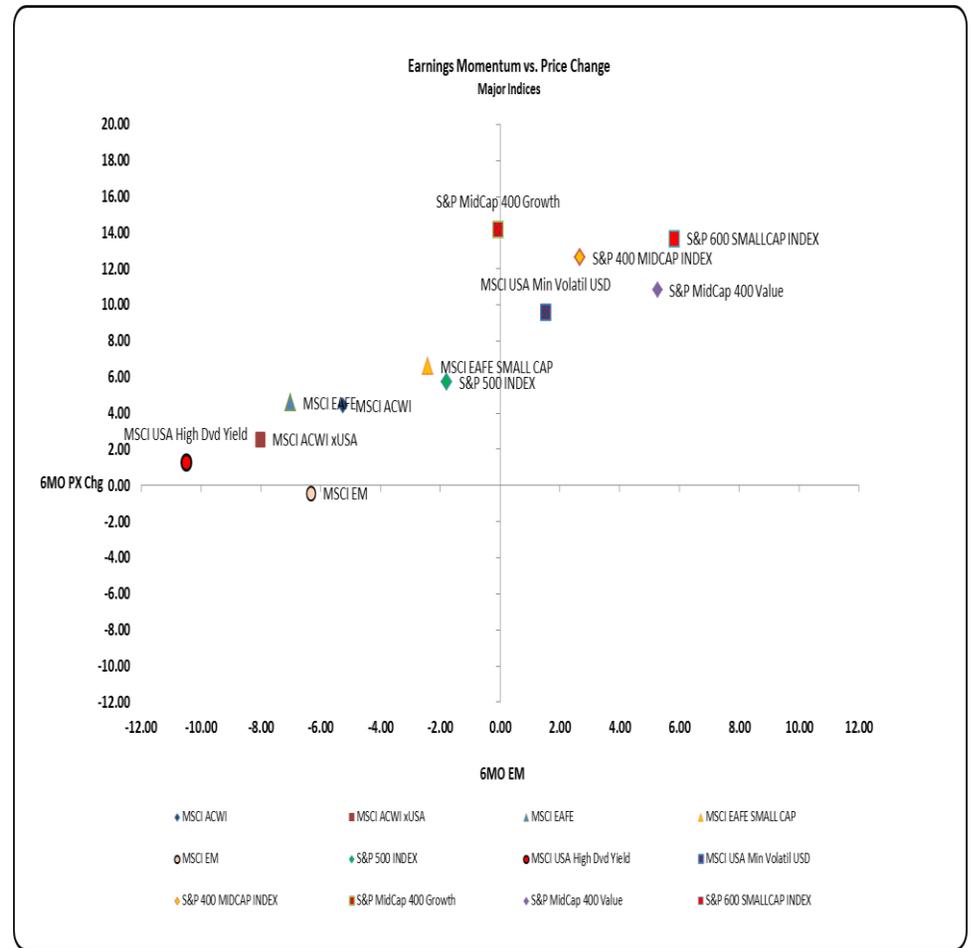
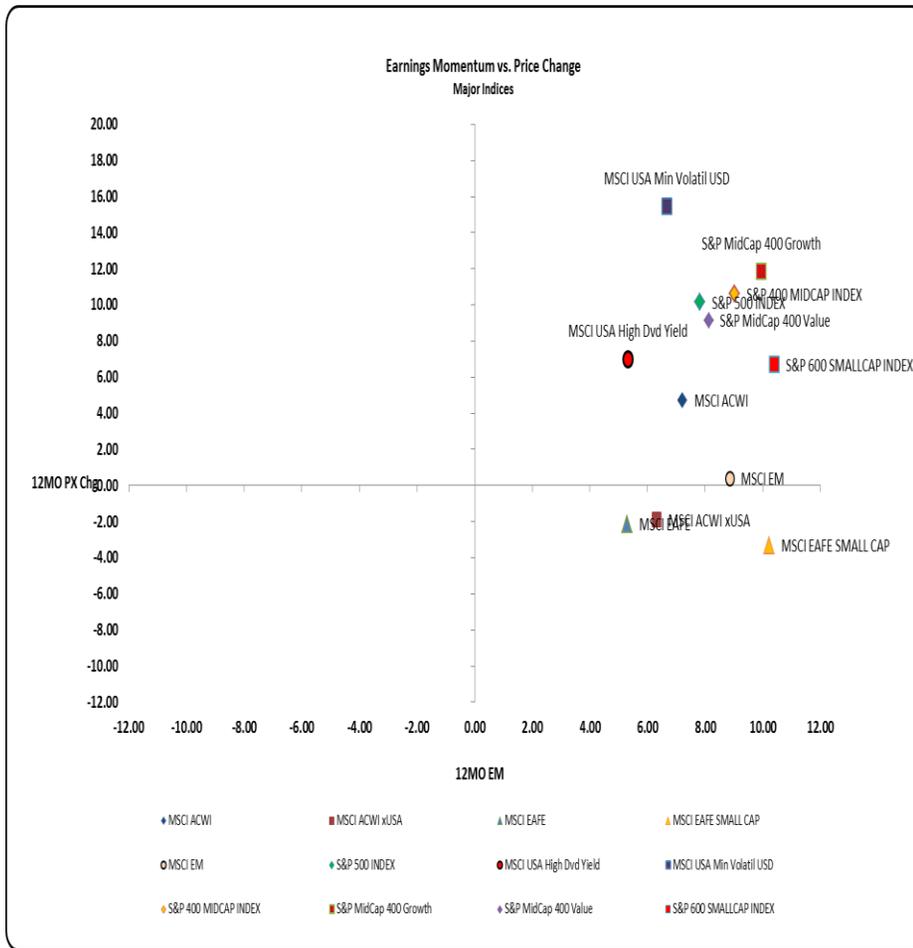
Equity Markets Environment Commentary

## Equity Markets Environment Commentary:

- **U.S. equity indexes** were up for the sixth consecutive year in 2014 before peaking at an all-time high in 1Q2015.
  - Easy monetary policy, strong earnings, better macro trends and corporate mergers & acquisitions drove the markets.
  - The Federal Reserve ended its 'QE' program and targets the latter half of 2015 for the first rise in interest rates.
  - Large-cap stocks outperformed smaller counterparts over 2014, helped by larger relative exposures to technology, healthcare and consumer companies.
  - Weakness in energy stocks impaired the performance of several indexes that have sizeable weights in the sector/industries.
  - The relative performance of stocks sensitive to interest rates also faded over the year, however perceived volatility still sends investors toward low-beta.
  - Indexes for the growth style marginally outperformed the value style, attributable again to the former's larger proportions of technology.
- **Non-U.S. equity indexes** gathered strength over the course of 2014, but struggled initially.
  - Returns measured in local currencies were very good, but the rising currency hurt them in USD terms.
  - Weak global economic data, EM crisis concerns and geopolitical risks from Russia, the Ukraine and the Middle East hindered the markets until the ECB and BOJ came out in late-year and commenced quantitative easing programs.
    - USD 30bn has flowed into European equities during 1Q2015
    - Flows into Emerging Markets equities overall, have been marginally negative since June; wide variations exist intra-regionally
- **Equities in general** have experienced sporadic bouts of volatility but VIX continues to re-set near historic lows
  - Returns on U.S. equities have managed to stay slightly positive
  - European equities have performed quite well; German stocks have led, but those from peripheral countries have rebounded lately.
  - Japanese equities have also performed well, the direct opposite of most 1H2014
  - Earnings of non-U.S. companies now 'showing-up' to validate current valuations and justify further price advances.

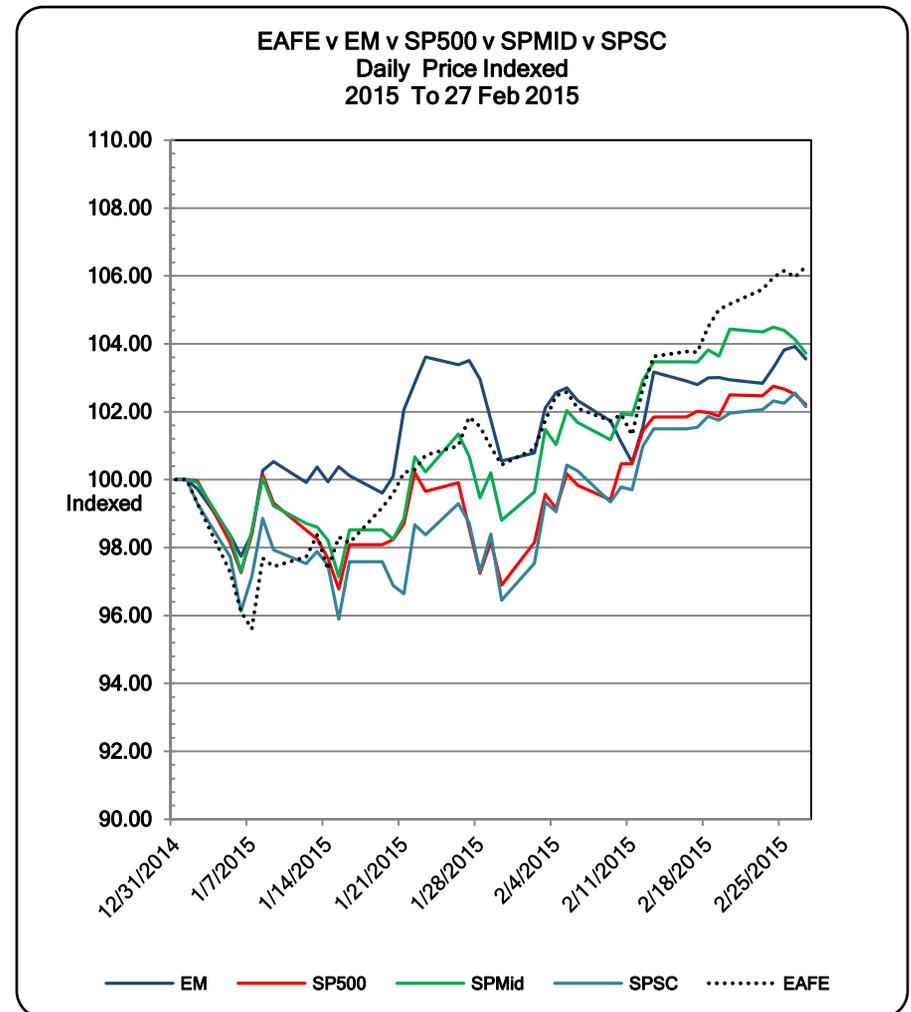
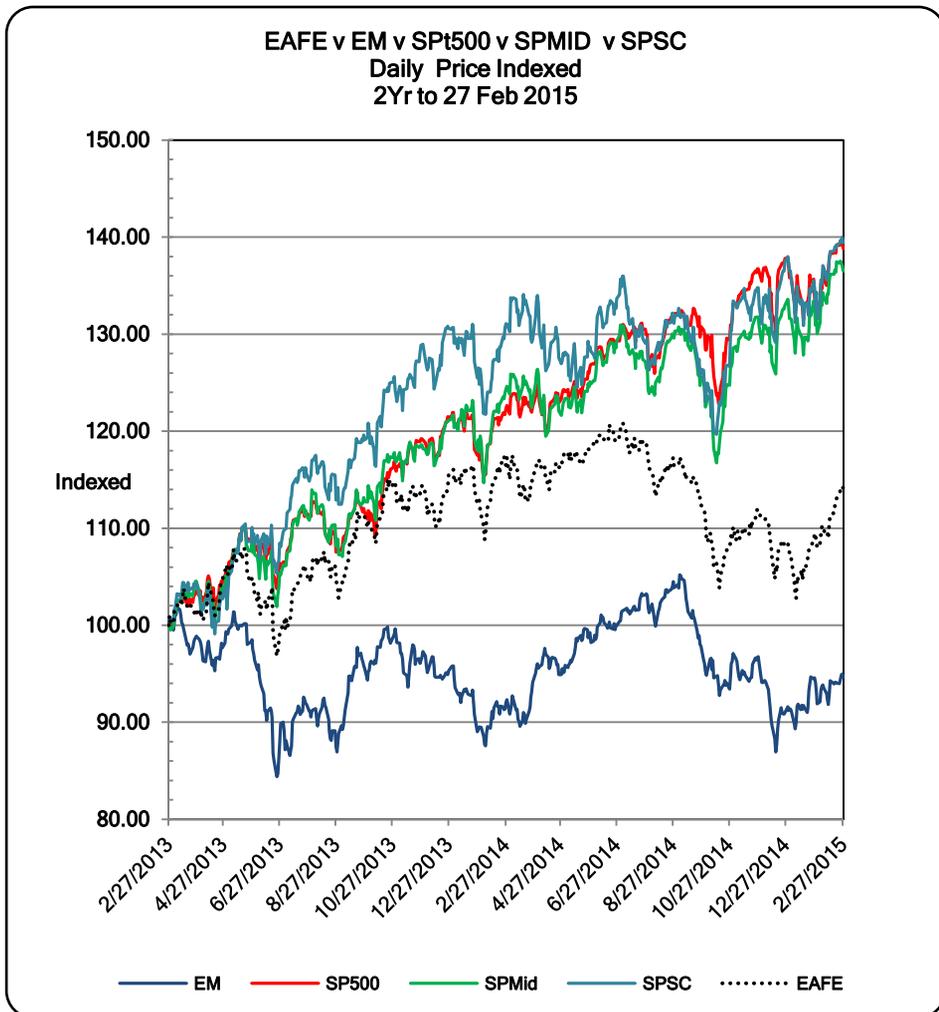
Equity Markets Environment Commentary / Earnings Momentum:

Earnings momentum deceleration among Energy and Financials stocks, primarily has exerted pronounced impact at the aggregate index level.



Equity Markets Environment Commentary / Major Indices Performance:

The performances of international developed markets have strengthened since the latter half of 2014. U.S. counterparts have not weakened materially, but in comparison, have faded somewhat during 1Q2015



## IMD House Views – U.S. Domestic Equity

### U.S. Equity - Primary Market Metrics & Indicators:

- **Fundamentals: POSITIVE**
  - Economic data still shows stable, sub-trend growth in 2015.
  - U.S. unemployment, is displaying sustained improvement. Income growth has not, although some localized instances of upward pressure has begun to surface.
  - At risk longer term due to stimulus measures, inflation remains generally subdued.
  - Liquidity remains ample; Federal Reserve policy remains accommodative without its asset purchases program.
  - Overall U.S. corporate profits growth has decelerated, mostly due to the impact of lower energy prices; revenues are still in a modest uptrend; high profit margins are no longer expanding.
  
- **Valuations: NEUTRAL**
  - US equity markets reached new highs in March but have been trendless in 2015 in the wake of mixed macro data, downward revisions to earnings estimates and anxiety over the timing and scale of the first upward reset to interest rates and more volatility in foreign exchange markets.
  - Though marginally rich, price/earnings multiples remain near historic averages: S&P 500, 15.3x- 17.4x; S&P MID, 16.9x-19.4x; S&P SC600, 17.0x-19.9x.
  - Historic P/Es imply advances of 5-10% for mid and small caps; 9-12% for S&P 500.
  - Still rising earnings and low yields on 10-Yr Treasury notes combine for equity risk premiums that are favorably above the 4.0% long-range average for large caps, whereas those of mid- and small-caps are around 4.0%.
  
- **Sentiment: NEUTRAL**
  - Short-term caution has moved up a notch following the sustained advance of equity markets without a significant pullback throughout 2013 and 2014.
  - Lessened near-term equity market volatility (i.e., VIX Index) still reflects growing acceptance of risk-oriented assets.
  - The relative strength of the U.S. Dollar continues to encourage assets into U.S. equities.

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## IMD House Views – Non-U. S. Equities

### Non-U.S. Equities - Primary Market Metrics & Indicators:

- **Fundamentals: POSITIVE**
  - Eurozone and Japanese economic conditions are firming; they remain soft in lesser-developed economies.
  - Relatively inexpensive and available money supports a shift toward risk assets.
  - Monetary and economic policies are focused on promoting economic growth and stemming disinflation.
- **Valuations: POSITIVE**
  - Reasonable global valuations relative to U.S.; price-to-book values of 1.5x - 1.9x; P/Es of 13.5x - 15.2x on trend earnings.
  - Dividend yields are incrementally more favorable with most ranging from 1.5x to 1.6x that of the S&P500.
- **Sentiment: POSITIVE**
  - Money flows continue toward both U.S. and developed markets non-U.S. equities; excepting the emerging economies markets. investors are less guarded and remain constructive on global risks despite some near term risk aversion volatility.
  - Major non-U.S. markets performance has strengthened in 2015.

**Total Public Equity Asset Class Review**

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## Total Public Equity Asset Class

### Broad Summary;

- Total Public Equities remains the largest asset class at 54% of the overall Total Fund.
- The Class is comprised of 27 mandates: U.S. Domestic Equity category - 13 ; Non-U.S Equity category -13; "Global" - 1
- Predominate allocations to passive mandates throughout the asset class, coupled with some systematic and some risk-mitigating allocation, has resulted in strong tracking with the policy benchmarks, yet affords opportunity to derive variable, but additional contribution from more active strategies.
- The Public Equities Asset Class has tracked well with its overall benchmark over time with favorable risk/return characteristics.
  - The Total U.S. Domestic Equity category has performed similarly and also with favorable risk/return characteristics.
  - Replacement of three active mandates in mid-2014 served to improve relative performance of the Total Non-U.S. Equity category and had equally positive effects on volatility and stacking error.
- Contributions, overall, from style and factor characteristics were principal drivers of investment return.
- The E7 and E8 systematic passive strategies have since inception performed as hoped, generally adding value beyond the broad market.
- The risk factor overlay pilot program is also functioning as hoped, although its attribution is minimal.

Total Public Equity Asset Class – Category Allocations as of February 27, 2015

TOTAL PUBLIC EQUITY ASSET CLASS  
Asset Categories & Risk Factors as of 02-27-15

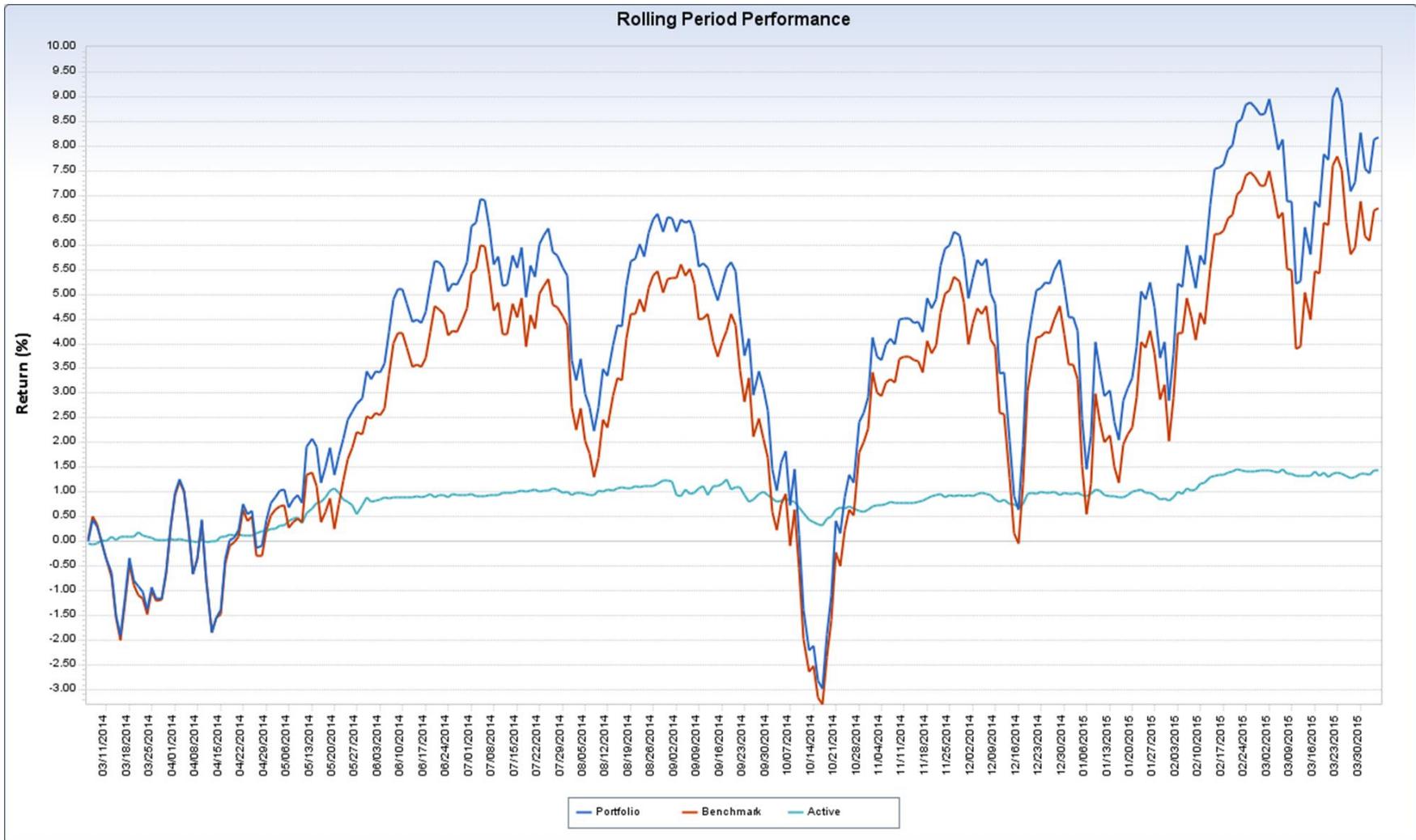
	Market Value	Pct of Public Equity	Category Weight	ASRS SAA Policy	Proportion Indexed
U.S. Equity	11,141,898,982.09	59.17%	32.03%	33.00%	74.05%
Non-U.S. Equity	7,126,429,989.38	37.84%	20.49%	23.00%	48.90%
Risk Factors Overlay	563,224,134.85	2.99%	1.62%	---	---
<b>Total Asset Category</b>	<b>18,831,553,107.32</b>	<b>100.00%</b>	<b>54.14%</b>	<b>56.00%</b>	<b>62.31%</b>
<b>Total Fund</b>	<b>34,785,135,525.00</b>				

Risk Factors Overlay Detail

ISHARES MSCI MOMENTUM FACTOR ETF	143,660,160.00	25.51%
ISHARES MSCI VALUE FACTOR ETF	136,191,760.00	24.18%
ISHARES MSCI SIZE FACTOR ETF	135,508,200.00	24.06%
ISHARES MSCI QUALITY FACTOR ETF	141,599,975.00	25.14%
GOVERNMENT STIF	6,264,039.85	1.11%
	<b>563,224,134.85</b>	<b>100.00%</b>

**Total Public Equity - Cumulative Total Return  
12 Months to February 27, 2015**

Total Fund has tracked the policy benchmark consistently over the past year.



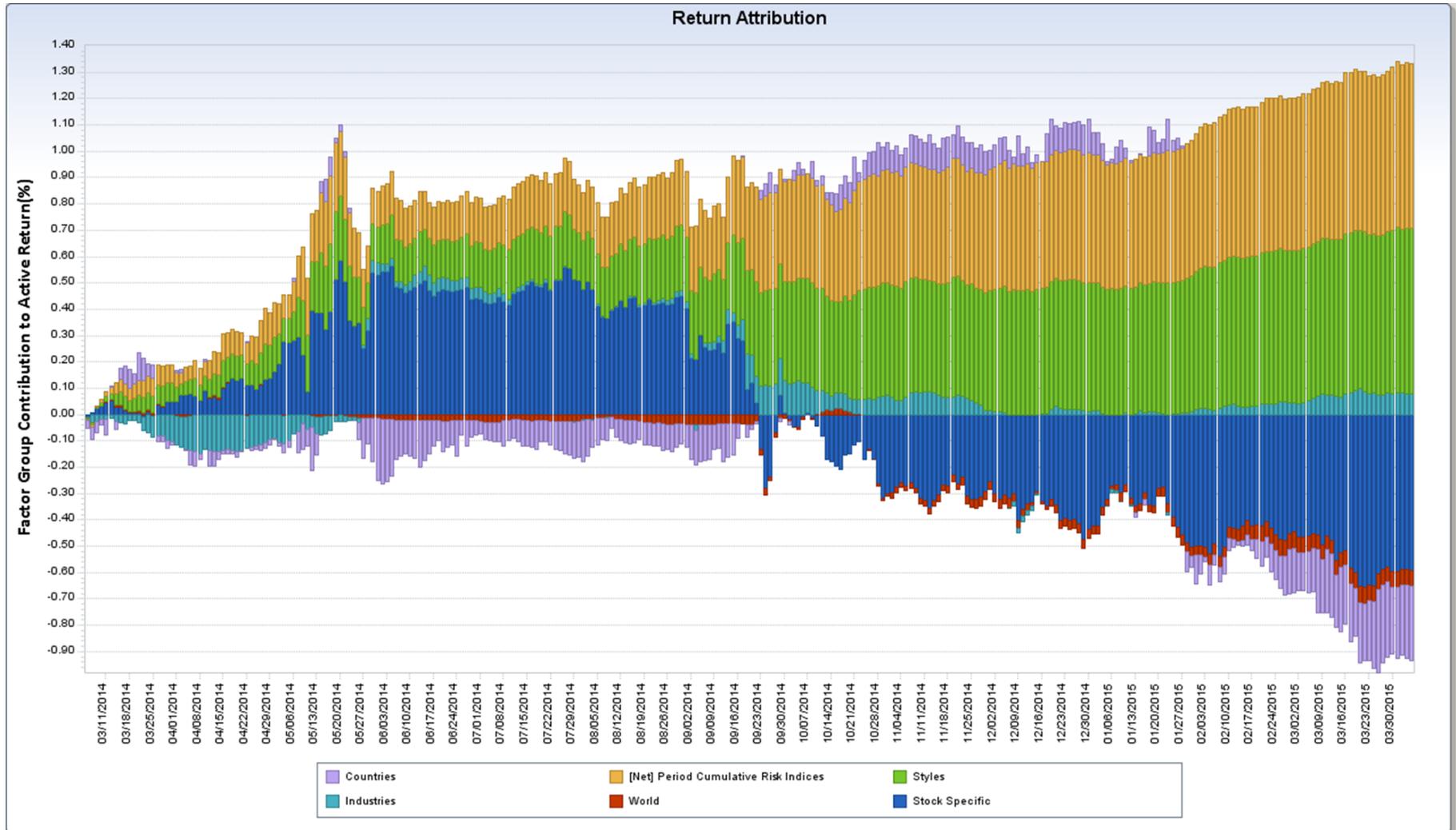
Total Public Equity - Performance as of 12/31/2014

Arizona State Retirement System

Total Domestic and International Equity Performance Summary

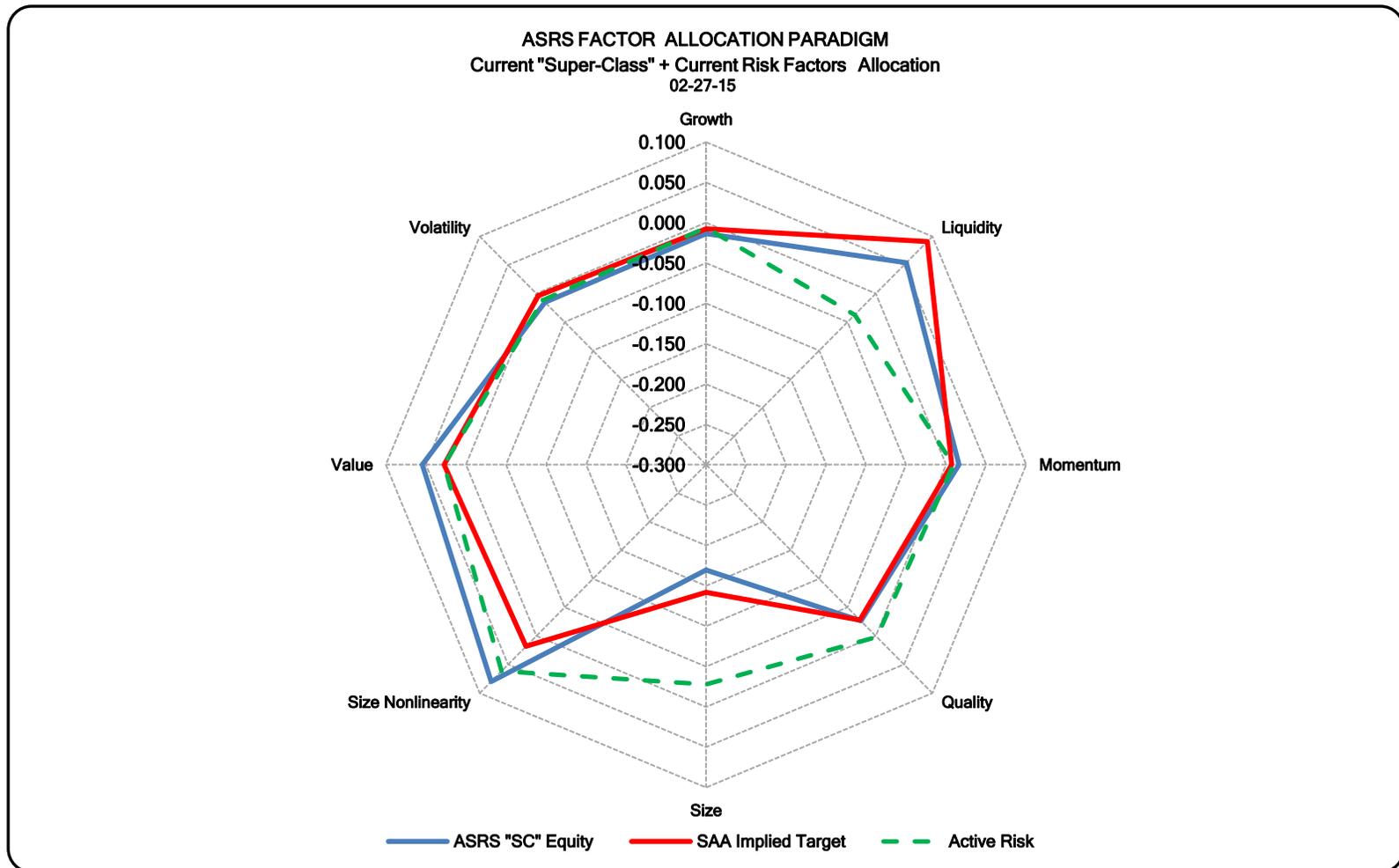
	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	6 Mo (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Return (%)	Since
<b>Total Domestic and International Equity<sup>1,2</sup></b>	<b>18,164,680,985</b>	<b>53.1</b>	<b>1.7</b>	--	<b>-0.9</b>	--	<b>5.2</b>	--	<b>16.1</b>	--	<b>12.0</b>	--	<b>6.8</b>	--	<b>6.8</b>	Jan-98
ASRS Custom Total Equity Benchmark			<u>1.9</u>	--	<u>-0.9</u>	--	<u>5.1</u>	--	<u>16.2</u>	--	<u>12.0</u>	--	<u>6.9</u>	--	<u>6.1</u>	Jan-98
Over/Under			-0.2		0.0		0.1		-0.1		0.0		-0.1		0.7	
<b>Risk Factors</b>			<b>5.4</b>	--	<b>6.9</b>	--	<b>13.7</b>	--	--	--	--	--	--	--	<b>18.2</b>	Jun-13
Equity Risk Factor Portfolio	545,321,390	1.6	5.4	--	6.9	--	13.7	--	--	--	--	--	--	--	18.2	Jun-13
ASRS Custom Total Equity Benchmark			<u>1.9</u>	--	<u>-0.9</u>	--	<u>5.1</u>	--	<u>16.2</u>	--	<u>12.0</u>	--	<u>6.9</u>	--	<u>11.9</u>	Jun-13
Over/Under			3.5		7.8		8.6								6.3	
<b>Total Domestic and Int'l Equity ex-Equity Risk Factor Portfolio<sup>1,2</sup></b>	<b>17,619,359,595</b>	<b>51.5</b>	<b>1.6</b>	--	<b>-1.1</b>	--	<b>5.0</b>	--	<b>16.0</b>	--	<b>12.0</b>	--	<b>6.8</b>	--	<b>6.8</b>	Jan-98
ASRS Custom Total Equity Benchmark			<u>1.9</u>	--	<u>-0.9</u>	--	<u>5.1</u>	--	<u>16.2</u>	--	<u>12.0</u>	--	<u>6.9</u>	--	<u>6.1</u>	Jan-98
Over/Under			-0.3		-0.2		-0.1		-0.2		0.0		-0.1		0.7	

Total Public Equity - Cumulative Attribution to Return  
12 Months to February 27, 2015

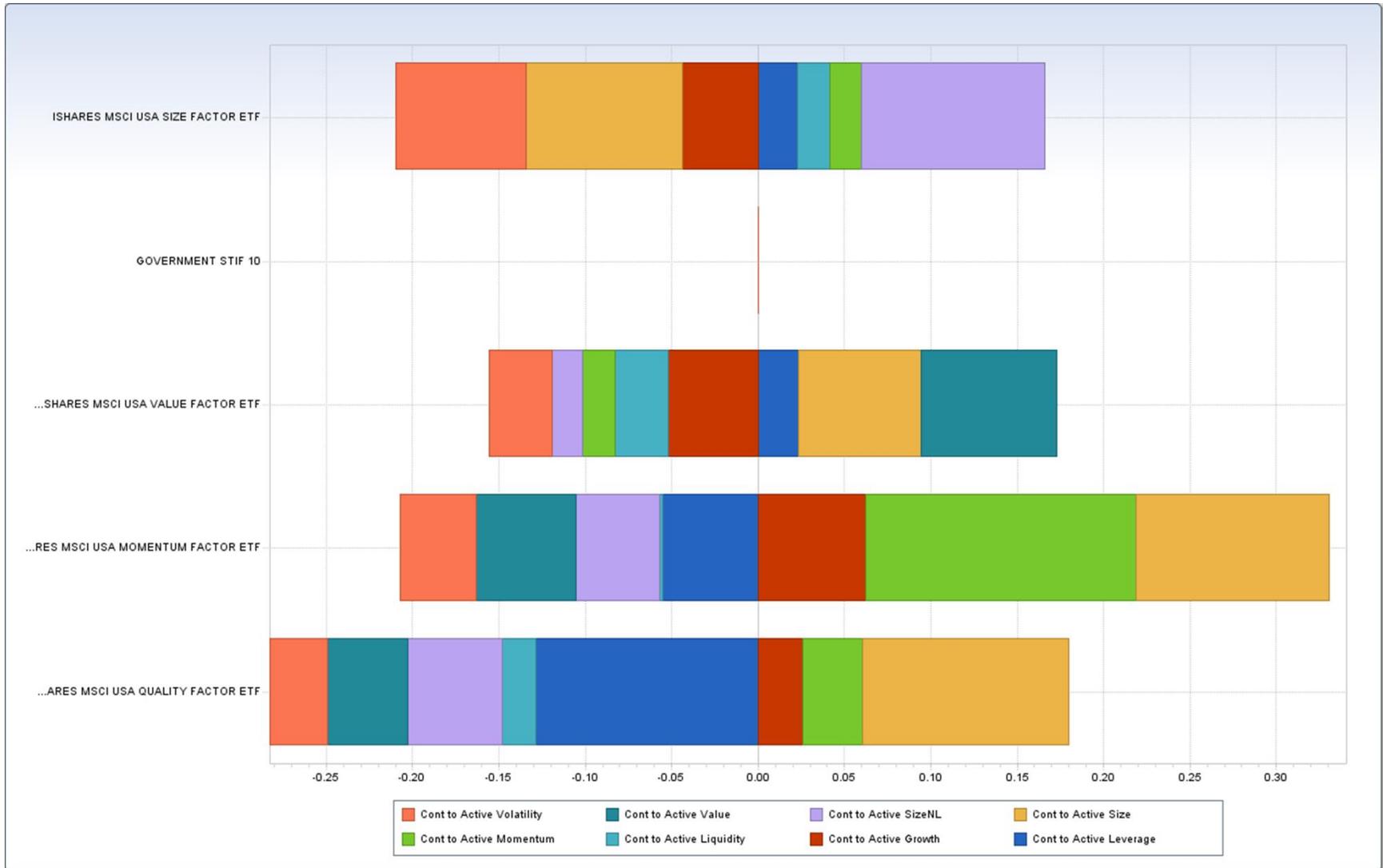


**Total Public Equity – Risk Factors Exposures as of February 27, 2015**

Total Public Equities, for the most part, oriented closely to the policy benchmark. Variances (measured in basis points) are relatively small. Exposure toward “Size” (i.e., smaller capitalization), historically a major bias, has been reduced over the past year. Exposure toward midcap (i.e., “Size Nonlinearity”) is the largest variance. (It has been reduced as part of the post March 31, 2015 reallocation.)

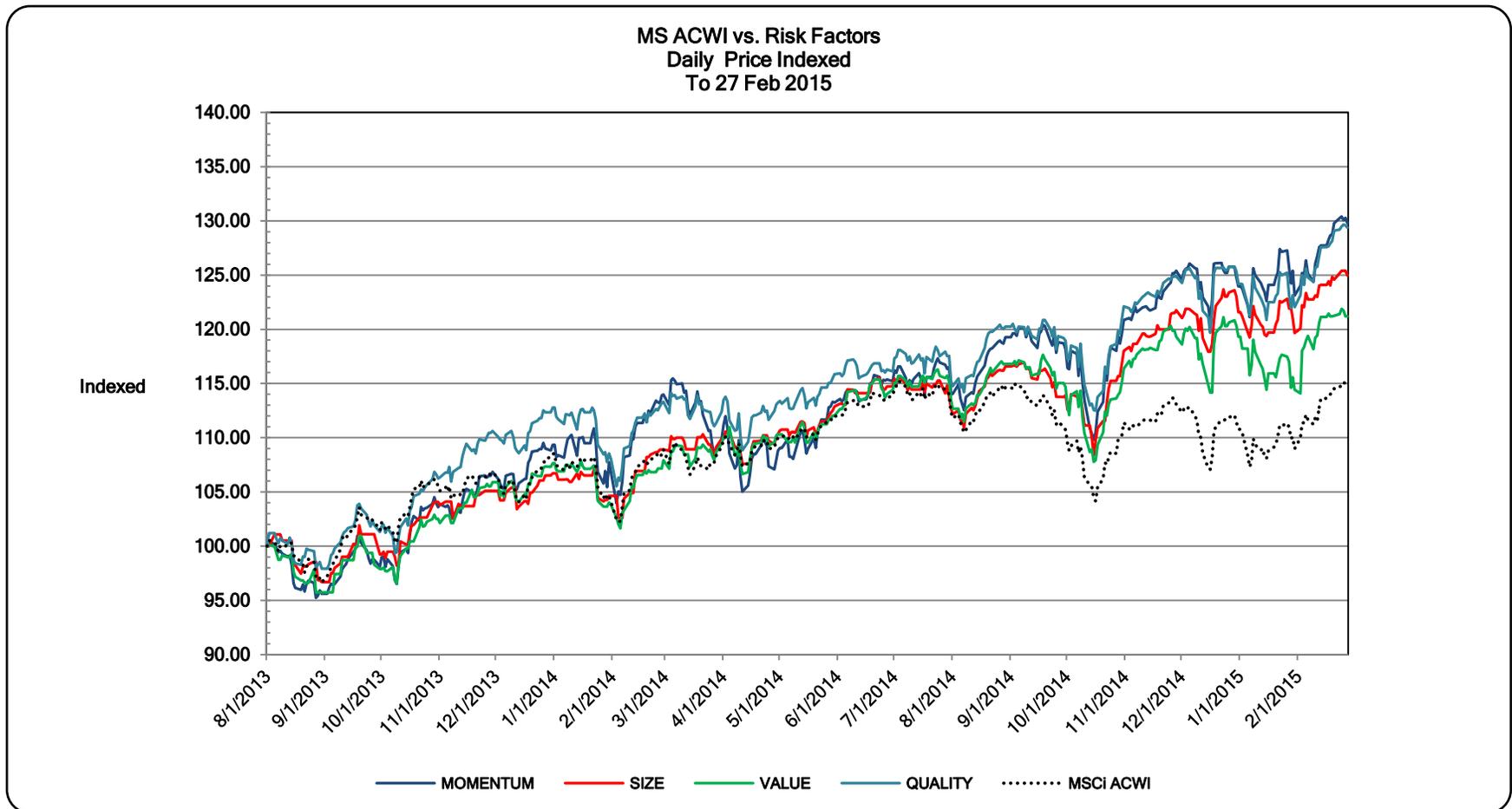


**Total Public Equity - Risk Factors Overlay**  
**Risk Factor ETFs Factor Relative Exposures as of February 27, 2015**



**Total Public Equity – Risk Factors**  
**18 Months to Feb 27, 2015**

Price performance of the respective individual factor ETFs both tracked the broad market consistently and have been strong, relatively.



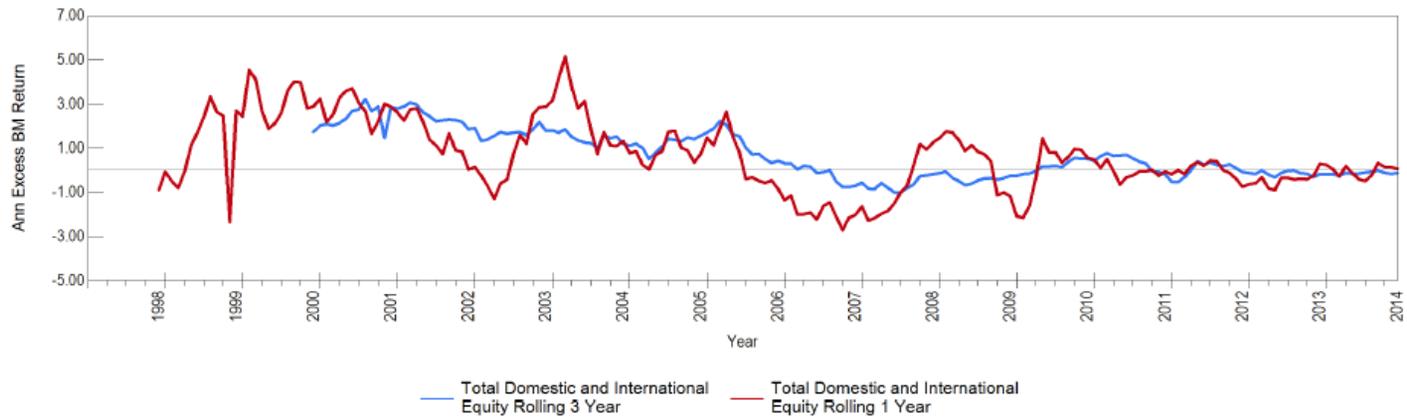
### Total Public Equity - Performance as of 12/31/2014

The overall asset class is consistently tracking the policy benchmark.

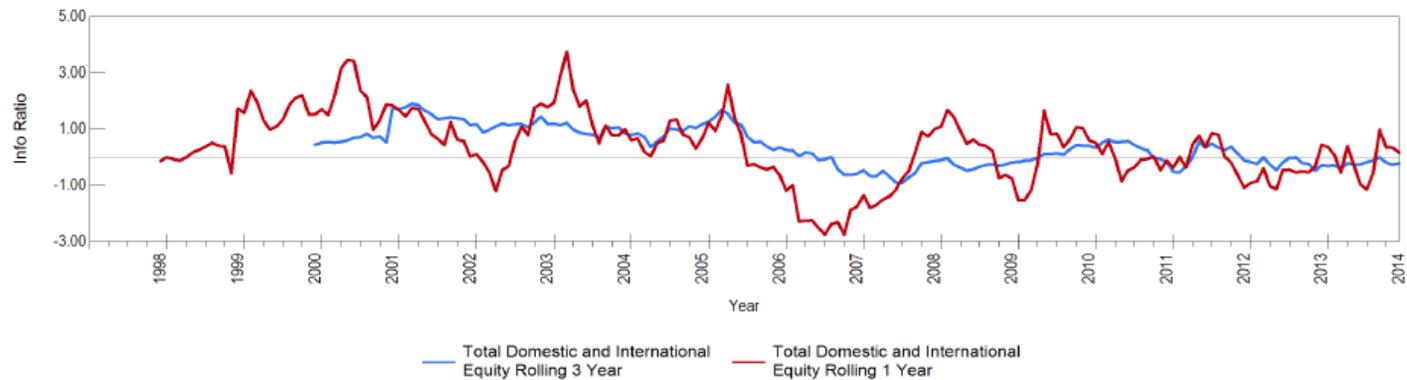
#### Arizona State Retirement System

#### Asset Class Analysis - Total Domestic and International Equity

Rolling Annual Excess Benchmark Return



Rolling Information Ratio



**U.S. Domestic Equity Asset Category Review**

U.S. Domestic Equity Asset Category – Sub-Class Allocations as of 2/27/15

U.S. DOMESTIC EQUITY CATEGORY SUMMARY

Asset Sub-Classs as of 02-27-15

	Market Value	Asset Sub-Class Weight	Asset Category Weight	ASRS SAA Policy	Proportion Indexed
Large-Cap	8,018,232,407.55	71.96%	23.05%	23.00%	83.06%
Mid-Cap	1,637,806,921.17	14.70%	4.71%	5.00%	66.27%
Small-Cap	1,485,859,653.37	13.34%	4.27%	5.00%	33.98%
<b>Total Asset Category</b>	<b>11,141,898,982.09</b>	<b>100.00%</b>	<b>32.03%</b>	<b>33.00%</b>	<b>74.05%</b>

U.S. Domestic Equity Category - Mandate Allocations as of 2/27/15

28-Feb-2015	Total Fund MV	34,785,155,525							
Portfolio	# Assets	Mkt Value	Pct Fund	Total Pct Public Equity	Pct Asser Class	Pct of SubClass	Inexed Pct of SubClass	Inexed Pct of Pb Eq	
E2 MODEL	511	5,295,552,828.61	15.22%	28.16%	47.53%	66.04%	66.04%	28.16%	
E7 MODEL	132	808,779,766.38	2.33%	4.30%	7.26%	10.09%	10.09%	4.30%	
E8 MODEL	160	555,688,339.62	1.60%	2.96%	4.99%	6.93%	6.93%	2.96%	
INTECH LARGE CAP	118	506,001,074.11	1.45%	2.69%	4.54%	6.31%			
LSV-US LARGE CAP VALUE	136	852,210,398.83	2.45%	4.53%	7.65%	10.63%			
<b>LargeCap Domestic Total</b>	<b>1,057</b>	<b>8,018,232,407.55</b>	<b>23.05%</b>	<b>42.65%</b>	<b>71.96%</b>	<b>100.00%</b>	<b>83.06%</b>	<b>35.42%</b>	
		<i>SAA Target</i>	<i>23.00%</i>						
E3 MODEL	230	541,930,910.90	1.56%	2.88%	4.86%	33.09%	33.09%	2.88%	
E4 MODEL	306	543,462,935.88	1.56%	2.89%	4.88%	33.18%	33.18%	2.89%	
WELLINGTON MANAGEMENT CO	102	446,443,326.42	1.28%	2.37%	4.01%	27.26%			
CRM MID CAP VALUE	54	105,969,747.97	0.30%	0.56%	0.95%	6.47%			
<b>MidCap DomesticTotal</b>	<b>692</b>	<b>1,637,806,921.17</b>	<b>4.71%</b>	<b>8.71%</b>	<b>14.70%</b>	<b>100.00%</b>	<b>66.27%</b>	<b>5.77%</b>	
		<i>SAA Target</i>	<i>5.00%</i>						
E6	606	504,938,731.06	1.45%	2.69%	4.53%	33.98%	33.98%	2.69%	
CHAMPLAIN INVESTMENT PARTNERS	76	96,943,633.39	0.28%	0.52%	0.87%	6.52%			
DIMENSIONAL FUND ADVISORS EQFD	498	396,844,221.52	1.14%	2.11%	3.56%	26.71%			
TIMESQUARE CAPITAL MANAGEMENT	95	487,133,067.40	1.40%	2.59%	4.37%	32.78%			
<b>Small Cap Domestic Total</b>	<b>1,275</b>	<b>1,485,859,653.37</b>	<b>4.27%</b>	<b>7.90%</b>	<b>13.34%</b>	<b>100.00%</b>	<b>33.98%</b>	<b>2.69%</b>	
		<i>SAA Target</i>	<i>5.000%</i>						
<b>US Equity Total</b>	<b>3,024</b>	<b>11,141,898,982.09</b>	<b>32.03%</b>	<b>59.26%</b>	<b>100.00%</b>	<b>59.26%</b>	<b>74.05%</b>	<b>43.88%</b>	
		<i>SAA Target</i>	<i>33.00%</i>						

**U.S. Domestic Equity Category - Mandates / Passive Strategies as of February 27,2015**

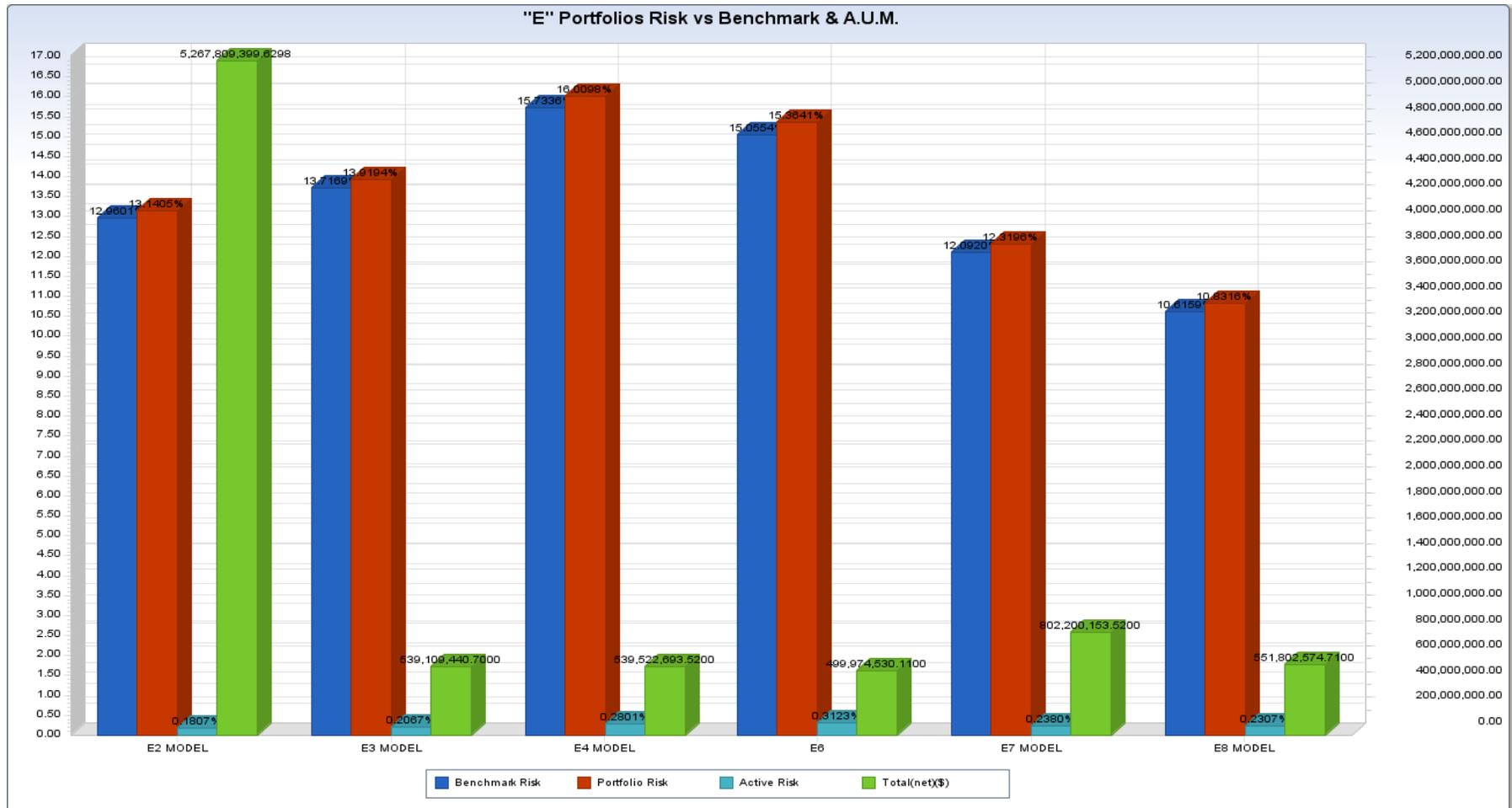
The six passive index replication strategies are managed by IMD and make up the majority of the category. E2, E3, E4 and E6 portfolios are conventional index strategies; the E7 and E8 portfolios are systematic index replication strategies in a “paired set” that offset each other in the short term while enabling access to the underlying strategies, which over the long term have returned an excess to that of the broad market.

**U.S. DOMESTIC EQUITIES**  
**Passive Mandates Summary as of 02-27-15**

	<b>Market Value</b>	<b>% Total Equity</b>	<b>% U.S. Equity</b>	<b>Benchmark</b>
E2	5,295,552,828.61	28.16%	47.53%	S&P 500
E3	541,930,910.90	2.88%	4.86%	S&P 400 Growth
E4	543,492,935.88	2.89%	4.88%	S&P 400 Value
E6	504,938,731.06	2.69%	4.53%	S&P 600
E7	808,779,766.38	4.30%	7.26%	MSCI USA High Dividend Yield Index
E8	535,688,339.62	2.70%	4.09%	MSCI USA Minimum Volatility Index
<b>Total Asset Sub-Class</b>	<b>8,230,383,512.45</b>	<b>43.62%</b>	<b>73.15%</b>	

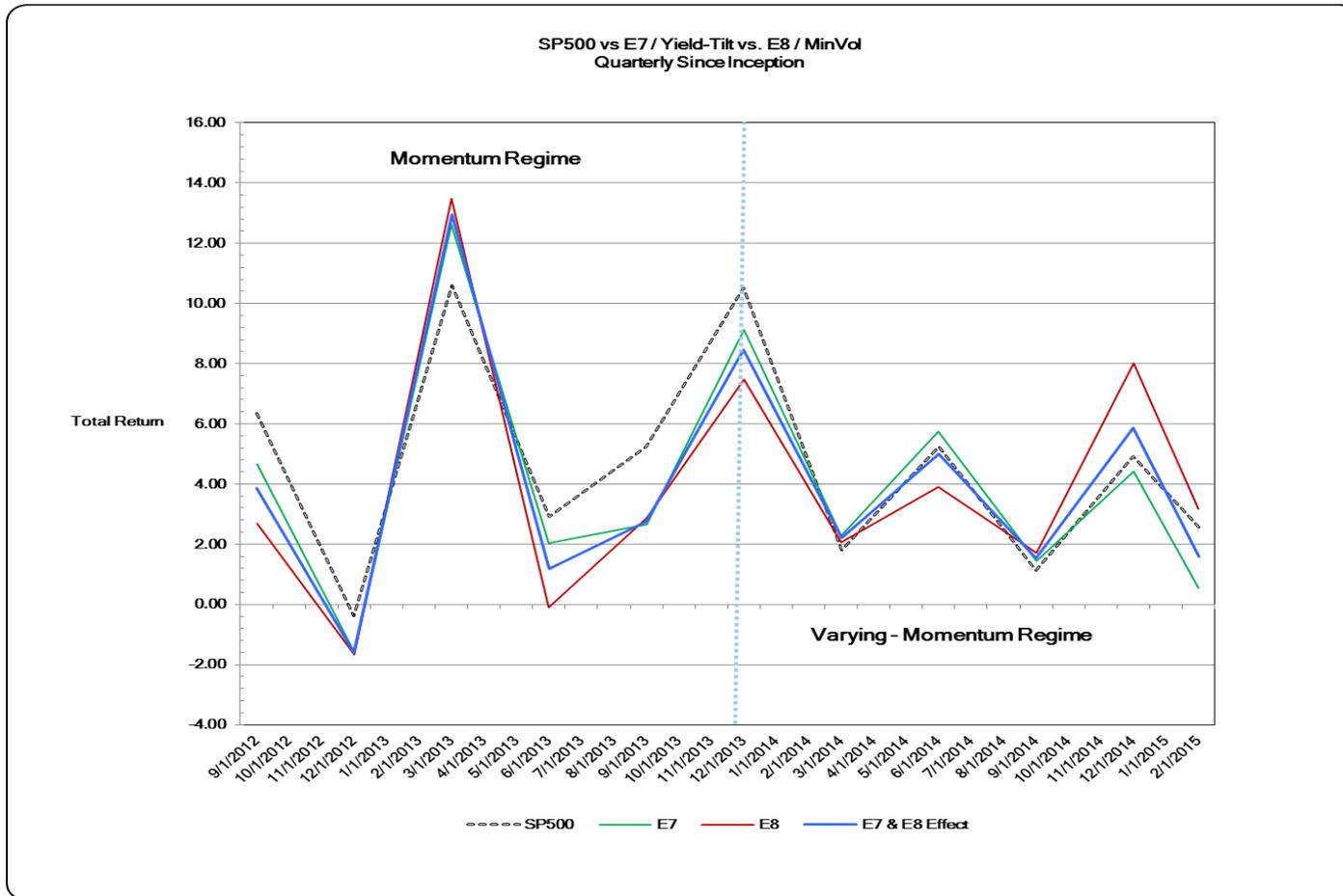
### U.S. Domestic Equity Category - Mandates / Passive Strategies

All of the internally-managed passive portfolios conform strongly to their respective benchmarks. The residual active risk is accounted for by frictional cash and the "equitization" components (index futures & collateral) needed to keep the portfolios fully exposed to the benchmark equity market. With the exception of index change/corporate actions events, frictional cash is maintained within a range of 0.85% to 1.25% of portfolio market value.



**U.S. Domestic Equity Category - Passive Mandates / E7 & E8 vs. SP500 as of February 27, 2015**

The E7 and E8 systematic passive strategies have since inception performed as hoped, generally adding value beyond the broad market. The strategies are sensitive to regimes in which the overall indexes are driven by price momentum. The relative proportion between the two strategies has been approximately 60% E7 (“Yield Tilt”) and 40% E8 (Min-Vol) since inception. This was moved closer to 50% during the post- March 31<sup>st</sup> drawdown of the U.S. Equity class.

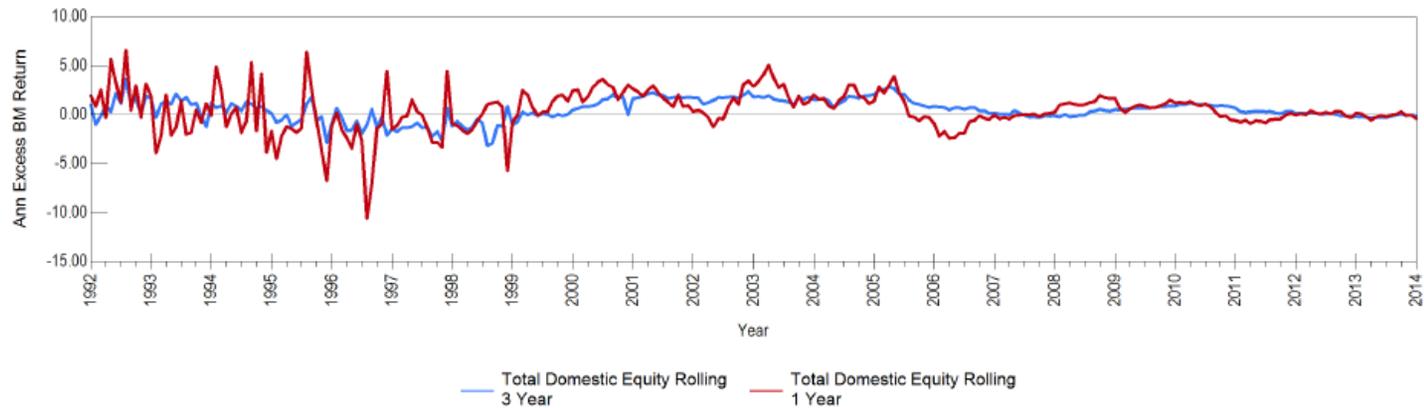


Total Domestic Equity - Performance as of 12/31/2014

Arizona State Retirement System

Asset Class Analysis - Total Domestic Equity

Rolling Annual Excess Benchmark Return



eA All US Equity Net Accounts

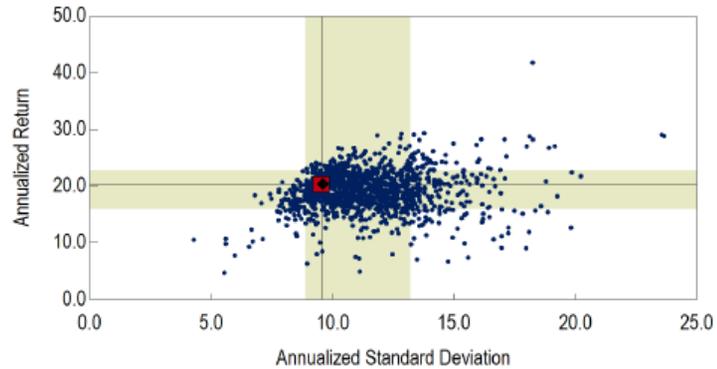


Total Domestic Equity - Performance as of 12/31/2014

Arizona State Retirement System

Asset Class Analysis - Total Domestic Equity

3 Years Ending December 31, 2014



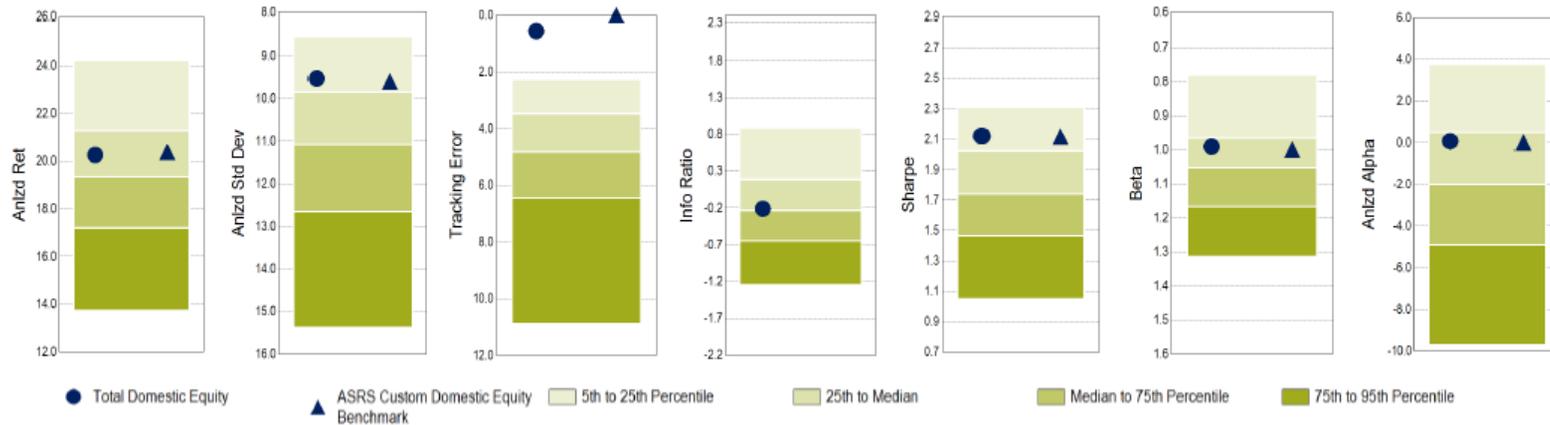
- Total Domestic Equity
- ◆ ASRS Custom Domestic Equity Benchmark
- 68% Confidence Interval
- eA All US Equity Net

3 Year Style Map



- First Rolling Period
- ◆ Last Rolling Period

\*Style map is returns based.



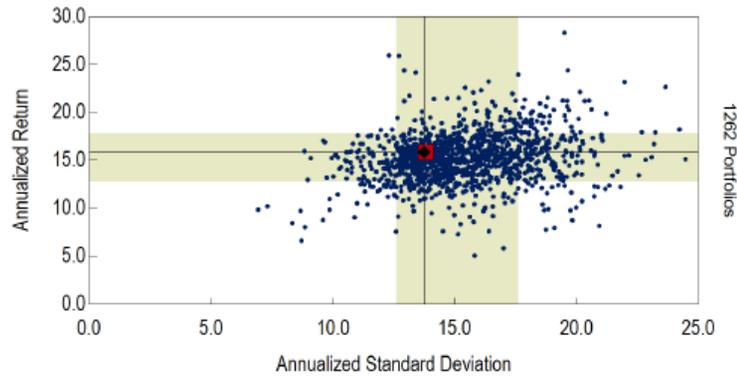
- Total Domestic Equity
- ▲ ASRS Custom Domestic Equity Benchmark
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile

Total Domestic Equity - Performance as of 12/31/2014

Arizona State Retirement System

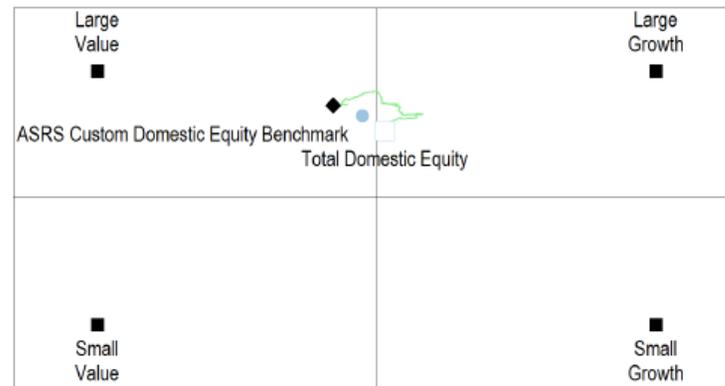
Asset Class Analysis - Total Domestic Equity

5 Years Ending December 31, 2014



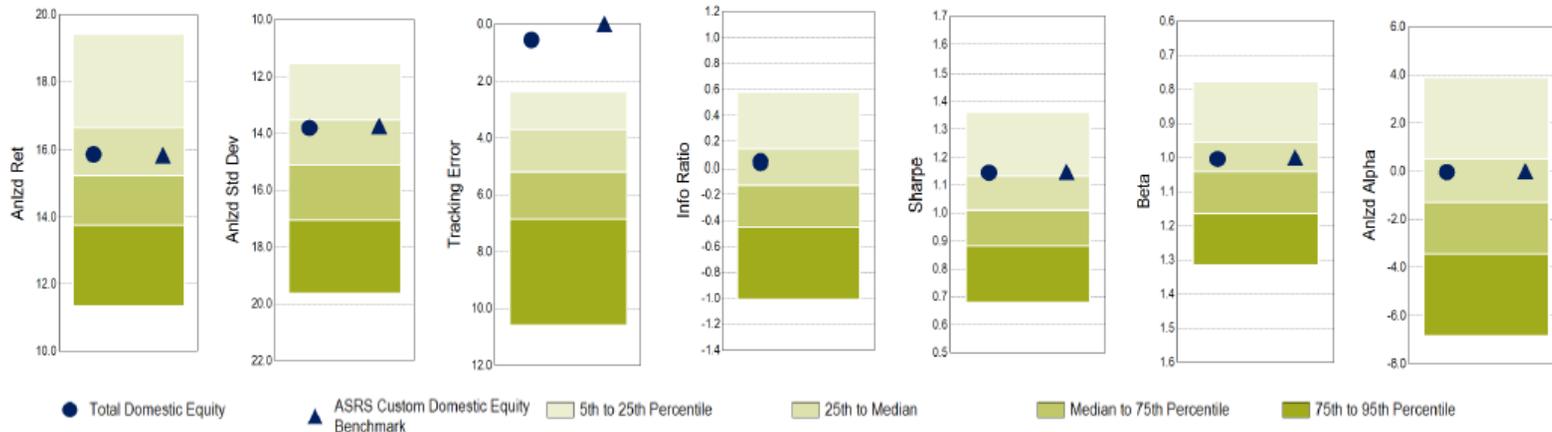
- Total Domestic Equity
- ◆ ASRS Custom Domestic Equity Benchmark
- 68% Confidence Interval
- eA All US Equity Net

5 Year Style Map



- First Rolling Period
- ◆ Last Rolling Period

\*Style map is returns based.



- Total Domestic Equity
- ▲ ASRS Custom Domestic Equity Benchmark
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile

**U.S. Domestic Equity Asset Category Review  
Large-Cap Mandates**

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**U.S. Domestic Equity Asset Category - Large-Cap Mandates**

**U.S. Large-Cap:**

- Excess returns of the asset sub-class have trended upward in recent periods after having weakened in the prior two years.
- The Intech mandate accounted for most of the erosion; the strategy was less effective in those periods, thus relative performance suffered. The firm addressed this by adjusting its (quantitative) methodologies which began to show some effectiveness.
- LSV continues to deliver good relative returns, adding value despite a tougher performance over the second half of 2014.
- Even with the above headwind, the overall sub-class tracks well with the benchmark with slightly less risk (annualized Standard deviation).

Total Domestic and Large Cap Equity – Performance as of 12/31/2014

Arizona State Retirement System

Domestic and Large Cap Equity Performance Summary

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	6 Mo (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Return (%)	Since
<b>Total Domestic Equity<sup>1</sup></b>	<b>10,867,172,487</b>	<b>31.8</b>	<b>5.3</b>	<b>51</b>	<b>4.6</b>	<b>38</b>	<b>11.5</b>	<b>33</b>	<b>20.3</b>	<b>38</b>	<b>15.9</b>	<b>38</b>	<b>8.3</b>	<b>52</b>	<b>11.4</b>	<b>Jul-75</b>
<i>ASRS Custom Domestic Equity Benchmark</i>			<u>5.9</u>	42	<u>5.0</u>	33	<u>12.0</u>	30	<u>20.4</u>	36	<u>15.8</u>	39	<u>8.1</u>	58	<u>11.5</u>	<i>Jul-75</i>
<i>Over/Under</i>			-0.6		-0.4		-0.5		-0.1		0.1		0.2		-0.1	
<i>eA All US Equity Net Median</i>			5.3		3.6		9.1		19.3		15.3		8.4		12.6	<i>Jul-75</i>
<b>Total Large Cap Equity</b>	<b>7,850,157,523</b>	<b>22.9</b>	<b>4.9</b>	<b>42</b>	<b>6.0</b>	<b>32</b>	<b>13.5</b>	<b>26</b>	<b>20.0</b>	<b>46</b>	<b>15.3</b>	<b>36</b>	<b>7.7</b>	<b>61</b>	<b>8.3</b>	<b>Jul-02</b>
<i>S&amp;P 500</i>			<u>4.9</u>	41	<u>6.1</u>	30	<u>13.7</u>	24	<u>20.4</u>	38	<u>15.5</u>	33	<u>7.7</u>	64	<u>8.2</u>	<i>Jul-02</i>
<i>Over/Under</i>			0.0		-0.1		-0.2		-0.4		-0.2		0.0		0.1	
<i>eA US Large Cap Equity Net Median</i>			4.6		4.9		11.6		19.7		14.7		8.0		8.7	<i>Jul-02</i>
<b>Active Large Cap Equity</b>																
<b>INTECH</b>	<b>484,638,674</b>	<b>1.4</b>	<b>3.0</b>	<b>86</b>	<b>4.6</b>	<b>71</b>	<b>10.1</b>	<b>60</b>	<b>19.2</b>	<b>62</b>	<b>15.1</b>	<b>43</b>	<b>7.8</b>	<b>59</b>	<b>10.0</b>	<b>Jan-03</b>
<i>S&amp;P/Citigroup 500 Growth<sup>2</sup></i>			<u>5.1</u>	40	<u>7.1</u>	30	<u>14.9</u>	11	<u>20.5</u>	40	<u>16.0</u>	21	<u>8.5</u>	39	<u>9.7</u>	<i>Jan-03</i>
<i>Over/Under</i>			-2.1		-2.5		-4.8		-1.3		-0.9		-0.7		0.3	
<i>eA US Large Cap Growth Equity Net Median</i>			4.6		5.8		11.1		19.8		14.8		8.2		9.9	<i>Jan-03</i>
<b>LSV</b>	<b>832,670,586</b>	<b>2.4</b>	<b>4.2</b>	<b>54</b>	<b>3.4</b>	<b>62</b>	<b>11.4</b>	<b>50</b>	<b>23.2</b>	<b>15</b>	<b>16.7</b>	<b>11</b>	<b>8.9</b>	<b>20</b>	<b>11.7</b>	<b>Jan-03</b>
<i>S&amp;P/Citigroup 500 Value<sup>2</sup></i>			<u>4.8</u>	39	<u>5.0</u>	32	<u>12.4</u>	38	<u>20.4</u>	40	<u>14.9</u>	42	<u>6.7</u>	74	<u>9.4</u>	<i>Jan-03</i>
<i>Over/Under</i>			-0.6		-1.6		-1.0		2.8		1.8		2.2		2.3	
<i>eA US Large Cap Value Equity Net Median</i>			4.4		4.0		11.3		19.5		14.5		7.9		10.2	<i>Jan-03</i>
<b>Enhanced/Passive Large Cap Equity</b>																
<b>Internally Managed E2</b>	<b>5,183,287,241</b>	<b>15.1</b>	<b>5.0</b>	<b>48</b>	<b>6.1</b>	<b>30</b>	<b>13.7</b>	<b>33</b>	<b>20.4</b>	<b>31</b>	<b>15.5</b>	<b>34</b>	<b>7.7</b>	<b>68</b>	<b>7.8</b>	<b>Apr-97</b>
<i>S&amp;P 500</i>			<u>4.9</u>	48	<u>6.1</u>	30	<u>13.7</u>	33	<u>20.4</u>	31	<u>15.5</u>	34	<u>7.7</u>	69	<u>7.8</u>	<i>Apr-97</i>
<i>Over/Under</i>			0.1		0.0		0.0		0.0		0.0		0.0		0.0	
<i>eA US Large Cap Core Equity Net Median</i>			4.7		5.0		12.5		19.6		14.8		8.2		9.0	<i>Apr-97</i>
<b>Internally Managed E7</b>	<b>808,308,745</b>	<b>2.4</b>	<b>4.4</b>	<b>57</b>	<b>6.0</b>	<b>31</b>	<b>14.8</b>	<b>24</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>18.1</b>	<b>Aug-12</b>
<i>MSCI USA High Dividend Yield Index</i>			<u>4.5</u>	57	<u>6.1</u>	31	<u>14.9</u>	22	<u>17.9</u>	77	<u>16.8</u>	9	<u>8.8</u>	23	<u>18.0</u>	<i>Aug-12</i>
<i>Over/Under</i>			-0.1		-0.1		-0.1		--		--		--		0.1	
<i>eA US Large Cap Core Equity Net Median</i>			4.7		5.0		12.5		19.6		14.8		8.2		20.2	<i>Aug-12</i>
<b>Internally Managed E8</b>	<b>541,252,277</b>	<b>1.6</b>	<b>8.0</b>	<b>4</b>	<b>9.8</b>	<b>3</b>	<b>16.7</b>	<b>8</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>17.5</b>	<b>Aug-12</b>
<i>MSCI USA Minimum Volatility Index</i>			<u>8.0</u>	4	<u>9.9</u>	3	<u>16.5</u>	8	<u>17.5</u>	82	<u>16.0</u>	23	<u>8.5</u>	38	<u>16.9</u>	<i>Aug-12</i>
<i>Over/Under</i>			0.0		-0.1		0.2		--		--		--		0.6	
<i>eA US Large Cap Core Equity Net Median</i>			4.7		5.0		12.5		19.6		14.8		8.2		20.2	<i>Aug-12</i>

U.S. Domestic Equity Category - Large-Cap Performance as of 2/27/15

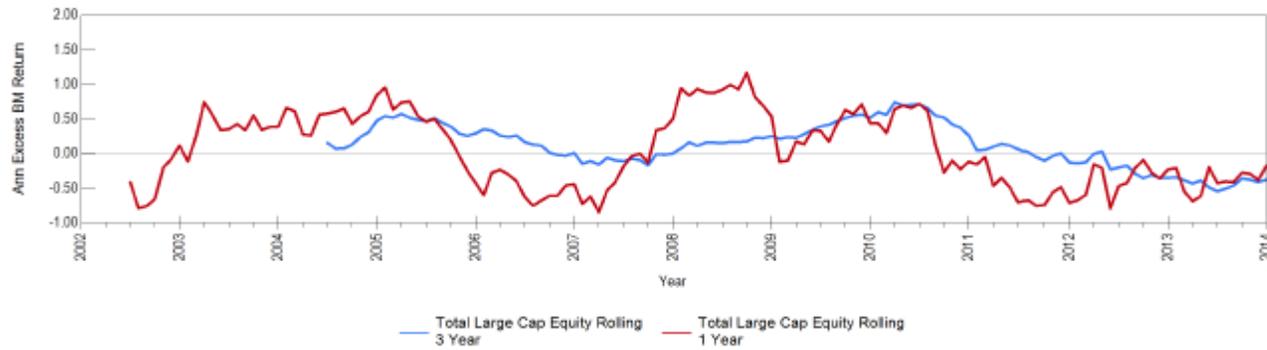
	Net Returns (%)							Excess Returns (basis points)						
	3 Mths	YTD	1 Year	3 Years	5 Years	10 Years	Inception	3 Mths	YTD	1 Year	3 Years	5 Years	10 Years	Inception
<b>U.S. LARGE CAP EQUITY</b>														
ASRS E2: PHX (Passive)	2.28	2.56	15.53	17.97	16.17	8.04	7.91	-3	-1	2	-3	-1	5	7
S&P 500	2.31	2.57	15.51	18.00	16.18	7.99	7.84							
INTECH: FL (Active)	3.31	4.31	12.13	17.55	16.51	8.18	10.22	9	10	-510	-121	-95	-83	31
S&P 500 Growth	3.22	4.21	17.22	18.76	17.46	9.01	9.91							
LSV: CHI (Active)	3.06	2.29	14.08	20.61	16.87	8.94	11.69	171	148	46	341	198	205	239
S&P 500 Value	1.35	0.81	13.62	17.20	14.89	6.89	---							
ASRS E7: PHX (Passive)	-0.15	0.60	15.85	---	---	---	17.08	0	1	-15	---	---	---	6
MSCI USA High Div Yld Index	-0.15	0.60	16.00	---	---	---	---							
ASRS E8: PHX (Passive)	3.22	3.13	18.88	---	---	---	17.67	-6	-3	12	---	---	---	53
MSCI USA Min Vol Index	3.28	3.16	18.76	---	---	---	---							
<b>Total Large-Cap</b>														

U.S. Domestic Equity Category – Large-Cap Asset Sub-Class

Arizona State Retirement System

Asset Class Analysis - Total Large Cap Equity

Rolling Annual Excess Benchmark Return



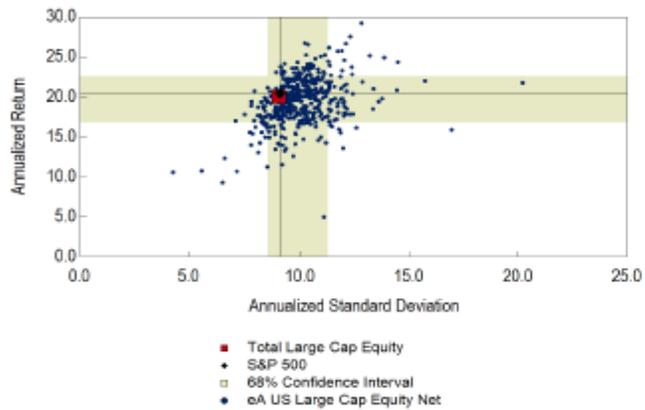
eA US Large Cap Equity Net Accounts



U.S. Domestic Equity Category – Large-Cap Asset Sub-Class

Arizona State Retirement System  
Asset Class Analysis - Total Large Cap Equity

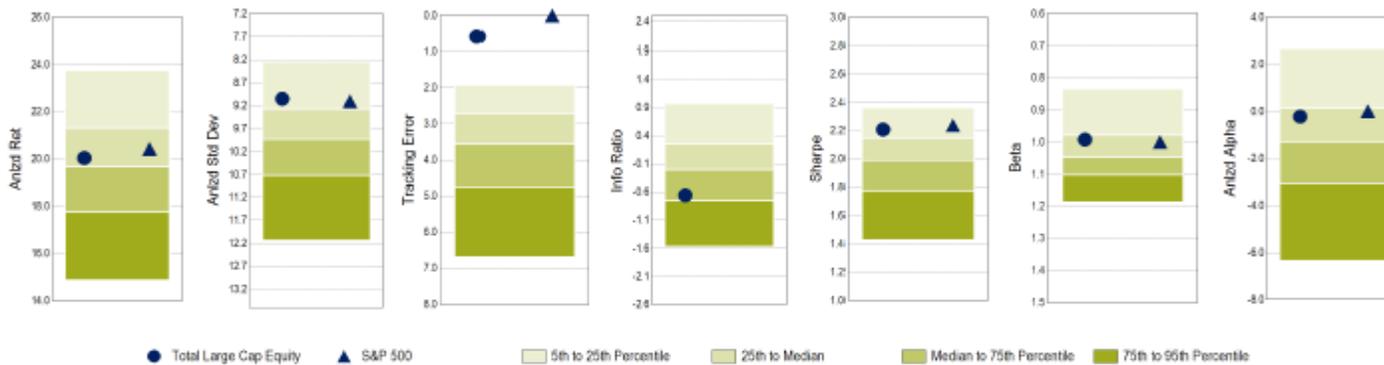
3 Years Ending December 31, 2014



3 Year Style Map



\*Style map is returns based.

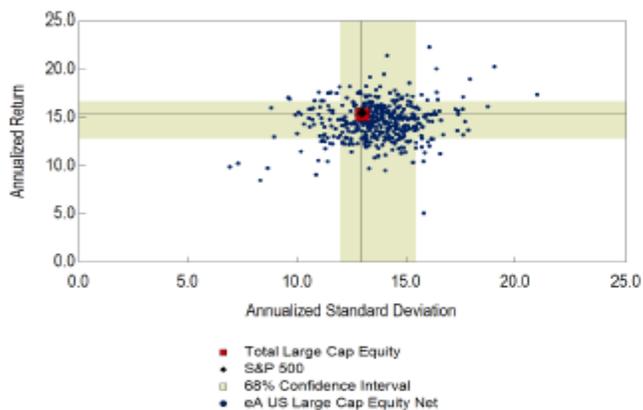


U.S. Domestic Equity Category – Large-Cap Asset Sub-Class

Arizona State Retirement System

Asset Class Analysis – Total Large Cap Equity

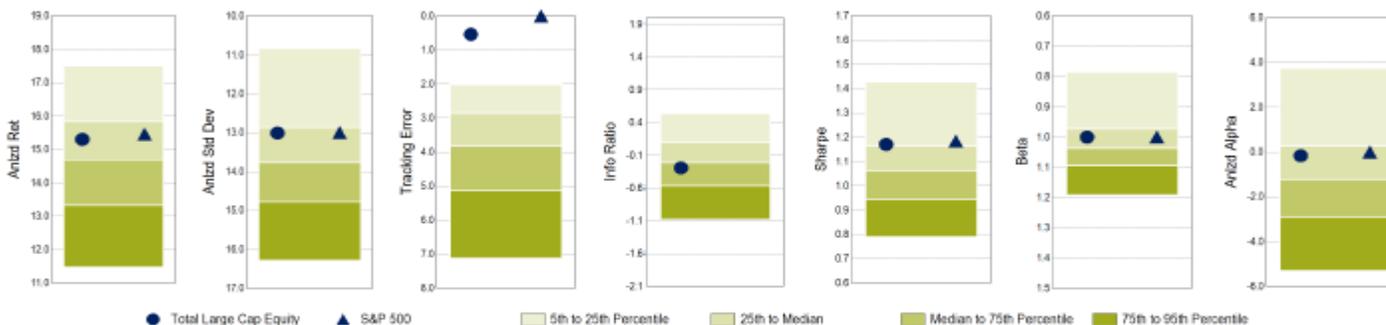
5 Years Ending December 31, 2014



5 Year Style Map



\*Style map is returns based.



**U.S. Domestic Equity Category – Large-Cap Mandates / Active Strategies**

U.S Equity Large Cap							
LSV	<p>LSV's strategy is managed using quantitative techniques to select individual securities in a risk-controlled, bottom-up approach. The portfolio decision making process is quantitative, ranking securities based on fundamental measures of value and indicators of near-term appreciation potential. The objective of the model is to pick undervalued stocks with signs of recent recovery. Stocks are screened simultaneously to generate an overall expected return ranking for each stock in the universe; based on traditional value measures, assessing whether a security is undervalued, and momentum indicating signs of recent recovery.</p>						
	(\$MM)	% Total Public Equity	% US Equity	Benchmark	Net Excess Return (bps)		
					1 year	3 year	5 year
	852.2	4.5%	7.7%	S&P 500 Value	46	341	198
INTECH	<p>INTECH believes it can add value using natural stock price volatility through a mathematically based, risk-managed process. The firm does not pick individual stocks or forecast stock alphas, but uses natural stock price volatility and correlation characteristics to attempt to generate an excess return. Essentially, INTECH adjusts the cap weights of an index portfolio to potentially more efficient combinations. INTECH's relative performance is generally influenced by two factors - the market's relative volatility structure and size (market diversity). Relative volatility refers to how stocks move relative to one another or relative to a benchmark. Size (market diversity) is a measure of how capital is distributed among stocks in a market or index. Since INTECH's strategies tend to overweight smaller stocks and underweight larger stocks in a large-cap index, rising diversity tends to benefit INTECH's relative performance.</p>						
	(\$MM)	% Total Equity	% US Equity	Benchmark	Net Excess Return (bps)		
					1 year	3 year	5 year
	506.0	2.7%	4.5%	S&P 500 Growth	-510	-121	-95

**U.S. Domestic Equity Asset Category Review  
Mid-Cap Mandates**

## U.S. Domestic Equity Asset Category – Mid-Cap Mandates / Active Strategies

### U.S. Mid-Cap

- The sub-class short-run and long-term performance has tracked the benchmark within a few basis points despite variable relative performance of the active mandates, of which the value strategy (CRM) has been weak chronically.
- IMD has been able to offset these shortcomings through managing allocations among the subclass and a sizeable passive component. This has resulted in favorable risk characteristics, particularly favorable tracking error.
- *CRM*, defunded in the first quarter of 2015, views investment prospects on a long-term basis and relies on experience in identifying what it believes are inappropriately undervalued companies. The strategy consists of a fundamental, bottom-up screening process and attempts to identify stocks undergoing change, neglected by current consensus, and attractively priced based on current fundamentals. CRM has underperformed the benchmark over the past one, three and five year periods.
- *Wellington* centers their investment philosophy on owning high quality companies with strong management teams and good balance sheets. They focus on fundamental analysis and build the portfolio to meet three imperatives of quality, diversification and purity. Wellington performed in line with the benchmark over the prior year, but has added 284 bps of excess return over the past three years.

U.S. Domestic Equity Category – Mid Cap Performance as of 12/31/2014

Arizona State Retirement System

Mid Cap Equity Performance Summary

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	6 Mo (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Return (%)	Since
<b>Total Mid Cap Equity</b>	<b>1,574,006,298</b>	<b>4.6</b>	<b>5.9</b>	<b>39</b>	<b>1.4</b>	<b>67</b>	<b>9.6</b>	<b>41</b>	<b>20.6</b>	<b>30</b>	<b>16.2</b>	<b>42</b>	<b>9.6</b>	<b>49</b>	<b>10.6</b>	<b>Jul-02</b>
<i>S&amp;P 400 MidCap</i>			<u>6.3</u>	31	<u>2.1</u>	58	<u>9.8</u>	40	<u>20.0</u>	40	<u>16.5</u>	36	<u>9.7</u>	43	<u>10.6</u>	<i>Jul-02</i>
Over/Under			-0.4		-0.7		-0.2		0.6		-0.3		-0.1		0.0	
<i>eA US Mid Cap Equity Net Median</i>			5.5		3.0		8.4		19.0		15.6		9.5		10.9	<i>Jul-02</i>
<b>Active Mid Cap Equity</b>																
Wellington	420,868,783	1.2	4.9	62	0.0	81	10.5	35	22.5	6	15.9	56	10.9	6	11.6	Jul-02
<i>S&amp;P 400 MidCap</i>			<u>6.3</u>	32	<u>2.1</u>	55	<u>9.8</u>	39	<u>20.0</u>	45	<u>16.5</u>	46	<u>9.7</u>	66	<u>10.6</u>	<i>Jul-02</i>
Over/Under			-1.4		-2.1		0.7		2.5		-0.6		1.2		1.0	
<i>eA US Mid Cap Core Equity Net Median</i>			5.8		2.6		8.2		19.6		16.3		10.1		11.0	<i>Jul-02</i>
CRM	103,344,065	0.3	5.2	54	1.5	55	6.2	74	18.7	60	13.2	90	8.4	81	9.9	Jan-04
<i>S&amp;P/Citigroup 400 Value<sup>1</sup></i>			<u>6.9</u>	20	<u>1.9</u>	50	<u>12.1</u>	33	<u>21.3</u>	36	<u>16.4</u>	42	<u>9.3</u>	53	<u>10.2</u>	<i>Jan-04</i>
Over/Under			-1.7		-0.4		-5.9		-2.6		-3.2		-0.9		-0.3	
<i>eA US Mid Cap Value Equity Net Median</i>			5.4		1.8		10.5		19.9		15.8		9.6		10.4	<i>Jan-04</i>
<b>Passive Mid Cap Equity</b>																
Internally Managed E3	517,156,324	1.5	5.8	43	2.3	68	7.5	52	18.9	43	17.0	18	10.6	20	8.7	Dec-00
<i>S&amp;P/Citigroup 400 Growth<sup>1</sup></i>			<u>5.8</u>	42	<u>2.4</u>	68	<u>7.6</u>	51	<u>18.8</u>	45	<u>16.7</u>	24	<u>10.0</u>	32	<u>8.2</u>	<i>Dec-00</i>
Over/Under			0.0		-0.1		-0.1		0.1		0.3		0.6		0.5	
<i>eA US Mid Cap Growth Equity Net Median</i>			5.3		3.4		7.6		18.4		15.4		9.0		7.9	<i>Dec-00</i>
Internally Managed E4	532,637,127	1.6	6.8	20	1.8	51	11.9	34	21.2	37	16.3	45	9.6	51	10.8	Jul-02
<i>S&amp;P/Citigroup 400 Value<sup>1</sup></i>			<u>6.9</u>	20	<u>1.9</u>	50	<u>12.1</u>	33	<u>21.3</u>	36	<u>16.4</u>	42	<u>9.3</u>	53	<u>10.6</u>	<i>Jul-02</i>
Over/Under			-0.1		-0.1		-0.2		-0.1		-0.1		0.3		0.2	
<i>eA US Mid Cap Value Equity Net Median</i>			5.4		1.8		10.5		19.9		15.8		9.6		11.0	<i>Jul-02</i>

U.S. Domestic Equity Category – Mid-Cap Performance as of 2/27/15

	Net Returns (%)							Excess Returns (basis points)						
	3 Mths	YTD	1 Year	3 Years	5 Years	10 Years	Inception	3 Mths	YTD	1 Year	3 Years	5 Years	10 Years	Inception
<b>U.S. MID CAP EQUITY</b>														
Wellington: SF (Active)														
S&P 400	6.43	6.08	11.16	20.08	16.74	11.36	11.97	163	213	1	284	-28	131	118
ASRS E3: PHX (Passive)														
S&P 400 Growth	4.80	3.94	11.14	17.25	17.02	10.05	---	-1	0	-11	11	33	55	55
CRM: NY (Active)														
S&P 400 Value	5.31	5.06	10.14	16.18	17.53	10.44	---	-58	-27	-466	-241	-259	-93	-29
ASRS E4: PHX (Passive)														
S&P 400 Value	4.16	2.74	11.92	18.23	16.44	9.86	10.91	-1	4	-16	-11	-7	26	20
<b>Total Mid-Cap</b>														
	4.17	2.70	12.08	18.34	16.51	9.60	---							

U.S. Domestic Equity Category – Mid-Cap Asset Sub-Class

Arizona State Retirement System

Asset Class Analysis - Total Mid Cap Equity

Rolling Annual Excess Benchmark Return



eA US Mid Cap Equity Net Accounts

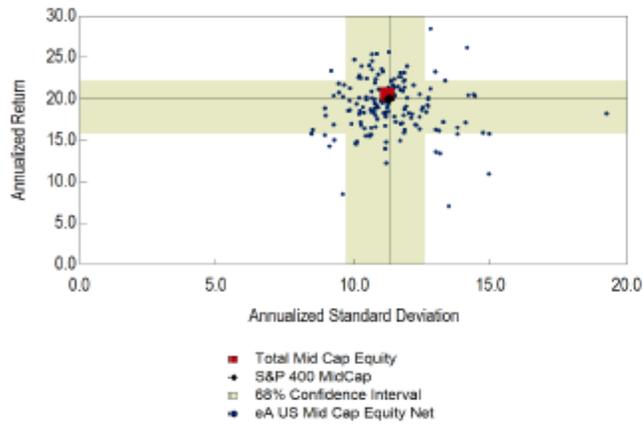


U.S. Domestic Equity Category – Mid-Cap Asset Sub-Class

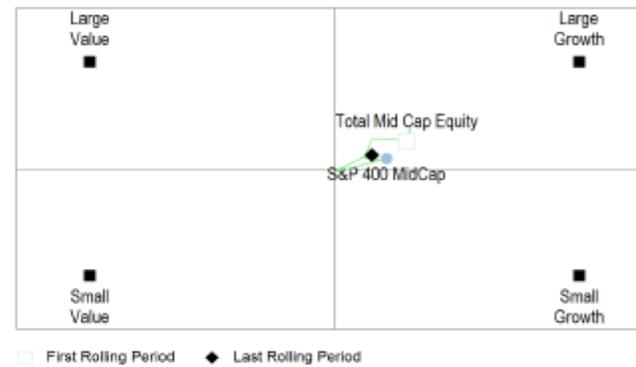
Arizona State Retirement System

Asset Class Analysis - Total Mid Cap Equity

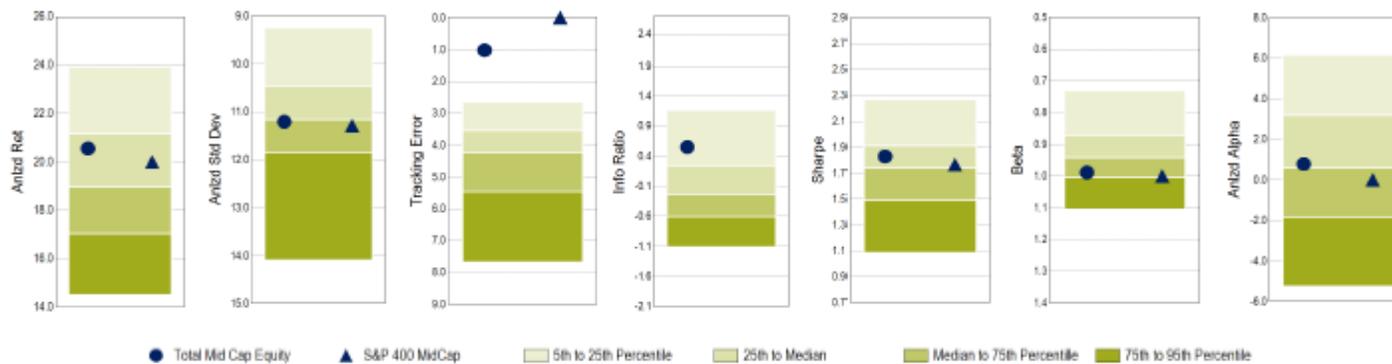
3 Years Ending December 31, 2014



3 Year Style Map



\*Style map is returns based.

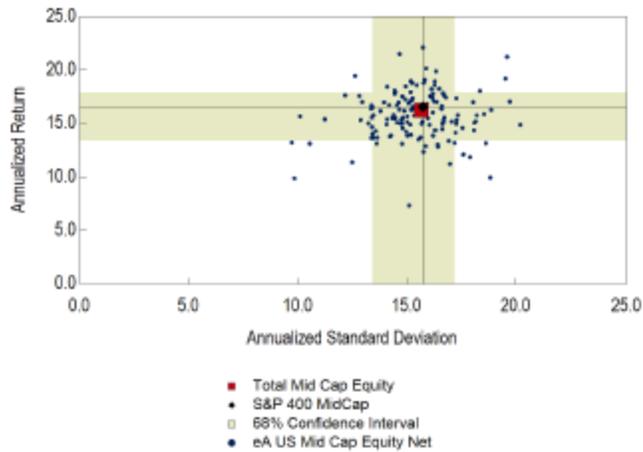


U.S. Domestic Equity Category - Mid-Cap Asset Sub-Class

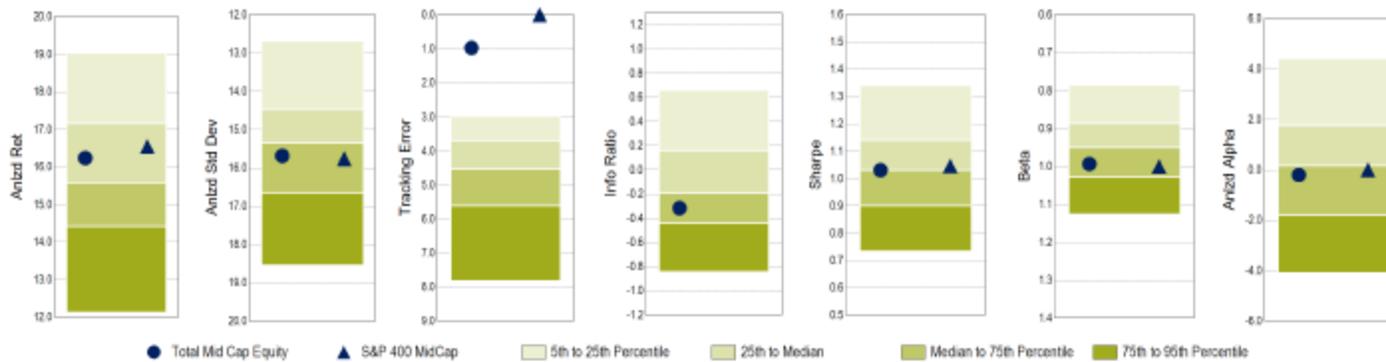
Arizona State Retirement System

Asset Class Analysis - Total Mid Cap Equity

5 Years Ending December 31, 2014



\*Style map is returns based.



**U.S. Domestic Equity Category – Mid-Cap Mandates / Active Strategies**

U.S Equity Mid Cap							
Wellington	The Mid Cap Opportunities Portfolio seeks to outperform the S&P MidCap 400 Index by investing in high-quality, established mid-cap companies with good balance sheets, strong management teams, and market leadership in their industry.						
	(\$MM)	% Total Equity	% US Equity	Benchmark	Net Excess Return (bps)		
					1 year	3 year	5 year
446.4	2.4%	4.0%	S&P 400	1	284	-28	
CRM	<p>CRM’s investment philosophy strives to outperform the broad market and pertinent indices over a full market cycle by participating in good market periods and limiting declines in poor periods. The Firm’s experience in identifying what it believes to be inappropriately undervalued companies and its process of patiently waiting for market recognition has provided CRM’s clients with long-term returns. The Firm looks for the following attributes in all investment ideas within the portfolio:</p> <ol style="list-style-type: none"> <li><b>Change:</b> The global financial markets are rich with change. Every day the markets present investors with mergers, divestitures, restructurings, new management teams or new products and expanded markets.</li> <li><b>Neglect:</b> Especially in its early stages, change tends to be greeted with uncertainty, expressed as investor neglect — manifested through behavioral finance, negative sentiment, negative-to-neutral stock ratings, benchmark exclusion, and buyer aversion.</li> <li><b>Valuation:</b> When change meets neglect, the intrinsic value of a company may exceed the current stock price. At the intersection of change and neglect with attractive valuation, CRM finds the potential for outperformance with lower downside risk.</li> </ol>						
	(\$MM)	% Total Equity	% US Equity	Benchmark	Net Excess Return (bps)		
					1 year	3 year	5 year
106.0	0.6%	1.0%	S&P 400 Value	-466	-241	-259	

**U.S. Domestic Equity Asset Category Review  
Small-Cap Mandates**

## U.S. Domestic Equity Asset Category - Small-Cap Mandates / Active Strategies

### U.S. Small-Cap

- The sub-class underperformed the benchmark for the 2014 year, but has tracked well with the benchmark over time. Noticeably weak relative performance of the three active strategies which could not be offset by the passive component in 2014 accounted for the underperformance of the subclass. IMD defunded the most perpetually ineffective of these active strategies (Champlain, noted below) in the course of the March 31, 2015 reallocation from the U.S. Domestic Equities category.
- 2014 performance of the subclass has affected short-run tracking error although return/risk characteristics remain solid.
- *TimesSquare (TS)*, a fundamental growth manager, focuses primarily on the aspects of the business model, looking for companies with exceptional management, strong balance sheets and strong, sustainable growth. TS has outperformed the benchmark by 41 bps and 25 bps over the past three and five years respectively.
- *DFA* is guided by an investment philosophy based on rigorous academic and empirical research. The strategy is structured around systematic expected premiums – company size, relative price, and profitability – and focuses on stocks with low relative prices within approximately the smallest 10% of the US equity universe. DFA has added 56 bps of excess return to the benchmark over the past three years, but has faced headwinds over the past year resulting in underperformance.
- *Champlain*, defunded in the first quarter of 2015, maintains the philosophy that investing in a good business at a good price is a high probability path to wealth creation. They buy the shares of superior businesses with credible and sincere managements at a discount to Fair or Intrinsic Value, which gives investors several potential paths to success. Champlain has outperformed the benchmark by 117 bps over the past year, but has underperformed over the past three and five years.

U.S. Domestic Equity Category – Small Cap Performance as of 12/31/2014

Arizona State Retirement System

Small Cap Equity Performance Summary

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	6 Mo (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Return (%)	Since
<b>Total Small Cap Equity</b>	<b>1,442,997,701</b>	<b>4.2</b>	<b>6.7</b>	<b>68</b>	<b>1.1</b>	<b>49</b>	<b>3.9</b>	<b>51</b>	<b>20.4</b>	<b>32</b>	<b>17.0</b>	<b>32</b>	<b>9.2</b>	<b>28</b>	<b>10.9</b>	<b>Jul-02</b>
<i>ASRS Custom Small Cap Equity Blended Benchmark</i>			<u>9.8</u>	21	<u>2.5</u>	34	<u>5.8</u>	38	<u>20.2</u>	34	<u>17.3</u>	26	<u>9.0</u>	34	<u>10.4</u>	<i>Jul-02</i>
<i>Over/Under</i>			-3.1		-1.4		-1.9		0.2		-0.3		0.2		0.5	
<i>eA US Small Cap Equity Net Median</i>			8.1		1.0		4.0		18.9		15.7		8.4		10.0	<i>Jul-02</i>
<b>Active Small/Mid Cap Equity</b>																
TimesSquare	461,267,858	1.3	5.5	64	1.7	66	2.2	65	20.6	20	17.3	27	--	--	12.4	Apr-05
<i>Russell 2500 Growth</i>			<u>7.5</u>	31	<u>3.0</u>	38	<u>7.1</u>	30	<u>20.5</u>	21	<u>17.3</u>	27	<u>9.4</u>	36	<u>10.1</u>	<i>Apr-05</i>
<i>Over/Under</i>			-2.0		-1.3		-4.9		0.1		0.0				2.3	
<i>eA US Small-Mid Cap Growth Equity Net Median</i>			6.6		2.4		3.3		17.5		15.8		8.8		9.2	<i>Apr-05</i>
<b>Active Small Cap Equity</b>																
Champlain	95,811,208	0.3	10.0	17	4.6	13	5.1	47	16.9	68	15.8	42	--	--	10.1	Jan-08
<i>S&amp;P 600 SmallCap</i>			<u>9.8</u>	19	<u>2.5</u>	38	<u>5.8</u>	43	<u>20.2</u>	40	<u>17.3</u>	28	<u>9.0</u>	28	<u>9.8</u>	<i>Jan-08</i>
<i>Over/Under</i>			0.2		2.1		-0.7		-3.3		-1.5				0.3	
<i>eA US Small Cap Core Equity Net Median</i>			8.5		1.5		4.4		18.7		15.7		8.4		8.3	<i>Jan-08</i>
DFA - US Small Cap	389,950,275	1.1	3.4	83	-2.2	77	3.6	65	21.5	21	16.9	20	8.8	30	12.3	Sep-98
<i>DFA Blended Benchmark</i>			<u>10.4</u>	9	<u>2.9</u>	13	<u>7.5</u>	23	<u>21.2</u>	24	<u>17.0</u>	20	<u>8.8</u>	32	<u>11.4</u>	<i>Sep-98</i>
<i>Over/Under</i>			-7.0		-5.1		-3.9		0.3		-0.1		0.0		0.9	
<i>eA US Small Cap Value Equity Net Median</i>			7.3		-0.1		5.0		18.8		15.3		8.3		11.9	<i>Sep-98</i>
<b>Passive Small Cap Equity</b>																
Internally Managed E6	495,968,359	1.4	9.9	18	2.5	37	5.7	44	20.2	40	17.1	31	--	--	8.6	Feb-07
<i>S&amp;P 600 SmallCap</i>			<u>9.8</u>	19	<u>2.5</u>	38	<u>5.8</u>	43	<u>20.2</u>	40	<u>17.3</u>	28	<u>9.0</u>	28	<u>8.3</u>	<i>Feb-07</i>
<i>Over/Under</i>			0.1		0.0		-0.1		0.0		-0.2				0.3	
<i>eA US Small Cap Core Equity Net Median</i>			8.5		1.5		4.4		18.7		15.7		8.4		7.1	<i>Feb-07</i>

U.S. Domestic Equity Category - Small-Cap Performance as of 2/27/15

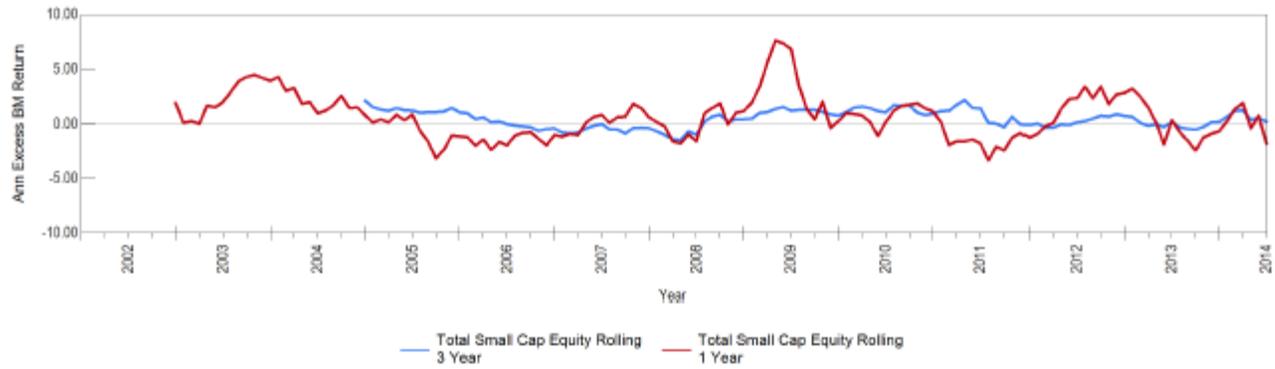
	Net Returns (%)							Excess Returns (basis points)						
	3 Mths	YTD	1 Year	3 Years	5 Years	10 Years	Inception	3 Mths	YTD	1 Year	3 Years	5 Years	10 Years	Inception
<b>U.S. SMALL CAP EQUITY</b>														
ASRS E6: PHX (Passive)	5.23	2.29	7.69	17.73	17.49	---	8.74	-2	-3	-6	-7	-14	---	34
Champlain: VT (Active)	2.10	0.99	8.92	14.82	16.31	---	10.03	-315	-134	117	-298	-132	---	15
S&P 600	5.25	2.32	7.75	17.79	17.63	9.22	---							
TimesSquare: New York (Active)	5.73	5.39	7.18	18.35	18.65	---	12.77	-132	-31	-244	41	25	---	221
Russell 2500 Growth	7.05	5.71	9.62	17.94	18.40	10.15	---							
DFA: Santa Monica (Active)	2.56	1.79	5.22	18.16	16.48	9.07	12.29	-52	144	-179	56	-10	6	100
R2k Val/ S&P 600 Value	3.08	0.35	7.01	17.61	16.58	9.01	---							
<b>Total Small-Cap</b>														

U.S. Domestic Equity Category - Small-Cap Mandates / Active Strategies

Arizona State Retirement System

Asset Class Analysis - Total Small Cap Equity

Rolling Annual Excess Benchmark Return



eA US Small Cap Equity Net Accounts

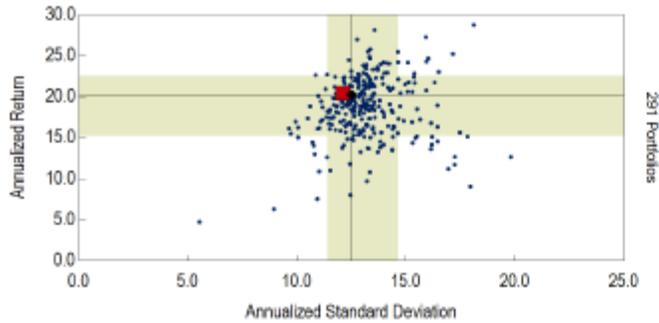


U.S. Domestic Equity Category – Small-Cap Mandates / Active Strategies

Arizona State Retirement System

Asset Class Analysis - Total Small Cap Equity

3 Years Ending December 31, 2014



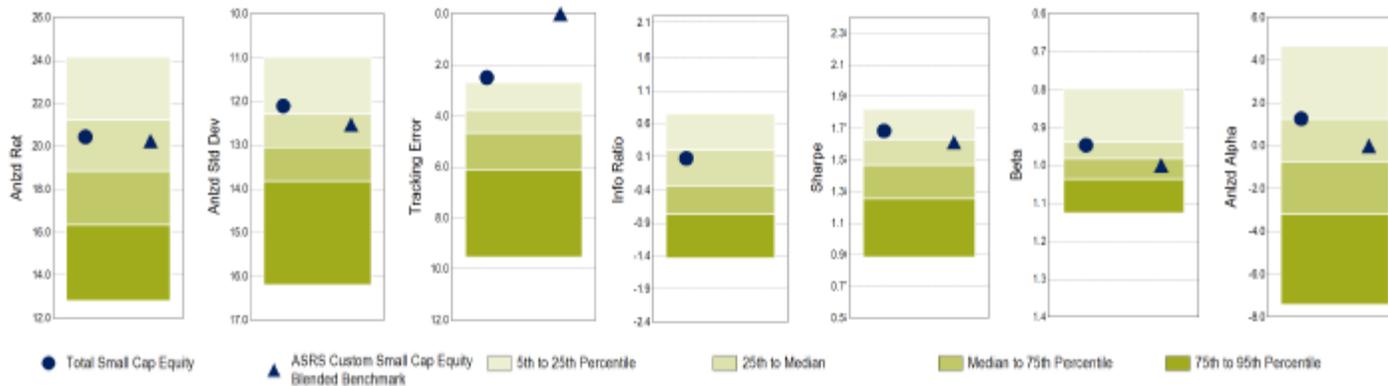
- Total Small Cap Equity
- ASRS Custom Small Cap Equity Blended Benchmark
- 68% Confidence Interval
- eA US Small Cap Equity Net

3 Year Style Map



- First Rolling Period
- ◆ Last Rolling Period

\*Style map is returns based.



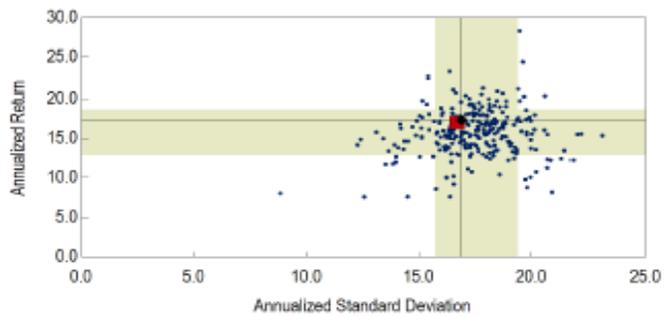
- Total Small Cap Equity
- ▲ ASRS Custom Small Cap Equity Blended Benchmark
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile

U.S. Domestic Equity Category – Small-Cap Mandates / Active Strategies

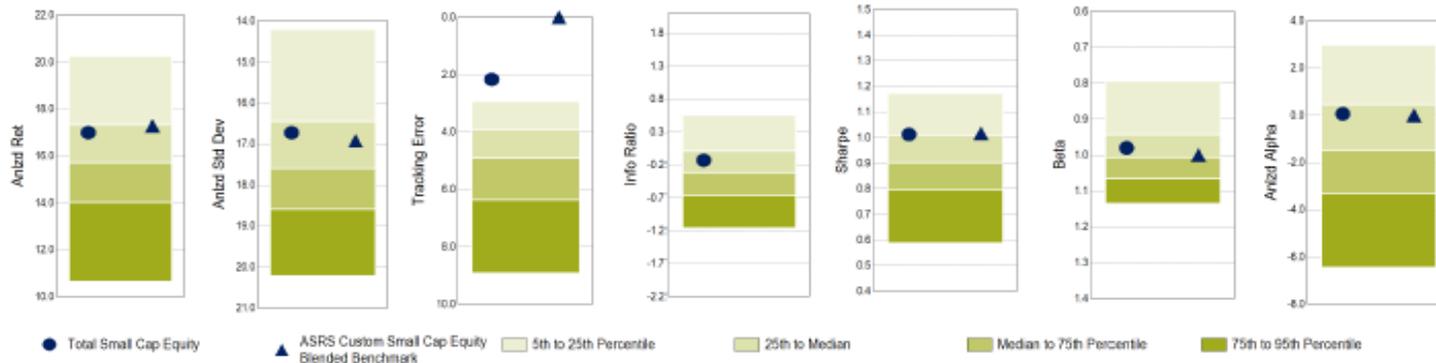
Arizona State Retirement System

Asset Class Analysis - Total Small Cap Equity

5 Years Ending December 31, 2014



\*Style map is returns based.



**U.S. Domestic Equity Category - Small-Cap Mandates / Active Strategies**

U.S Equity Small Cap							
<b>TimesSquare</b>	TSCM uses fundamental research skills, which place a particular emphasis on the assessment of management quality and an in-depth understanding of superior business models, to build a diversified portfolio of growth stocks which will generate superior risk-adjusted returns. TSCM believes the market is still inefficient, so that their proprietary independent research will add value for clients.						
	(\$MM)	% Total Equity	% US Equity	Benchmark	Net Excess Return (bps)		
					1 year	3 year	5 year
	487.1	2.6%	4.4%	Russell 2500 Growth	-244	41	25
<b>DFA</b>	DFA attempts to capture excess returns by providing reliable exposure to style and size risk factors. DFA's research has shown that the value style, as defined by book-to-market ratio, and small market capitalization are risk factors that explain a large proportion of performance over long periods of time. DFA structures the portfolio to target these risk factors which should deliver higher expected returns than the market over the long term.						
	(\$MM)	% Total Equity	% US Equity	Benchmark	Net Excess Return (bps)		
					1 year	3 year	5 year
	396.8	2.1%	3.6%	S&P 600 Value	-179	56	-10
<b>Champlain</b>	Champlain invests in quality business at a good price. The portfolio holds shares of superior businesses with credible managements at a discount to intrinsic value, giving several potential paths to wealth creation. First, the market may bid the shares to a premium over fair value. Second, management may grow the fair value over time in a faster rate than market appreciation. Third, the company may be bought by a larger company or private market investor.						
	(\$MM)	% Total Equity	% US Equity	Benchmark	Net Excess Return (bps)		
					1 year	3 year	5 year
	96.9	0.5%	0.9%	S&P 600	117	-298	-132

**Non-U.S. Equity Asset Category Review**

Non-U.S. EQUITY CATEGORY SUMMARY

Asset Sub-Class as of 02-27-15

	Market Value	Asset Sub-Class Weight	Asset Category Weight	ASRS SAA Policy	Proportion Indexed
EAFE	3,963,508,999.36	55.62%	11.39%	14.00%	59.44%
EAFE Small-Cap	1,243,198,791.67	17.44%	3.57%	3.00%	36.87%
Emerging Markets	1,919,722,198.35	26.94%	5.52%	6.00%	31.91%
<b>Total Asset Category</b>	<b>7,126,429,989.38</b>	<b>100.00%</b>	<b>20.48%</b>	<b>23.00%</b>	<b>48.90%</b>

Non-U.S. Equity Category –Mandate Allocations as of 2/27/15

28-Feb-2015	Total Fund MV	34,785,155,525							
Portfolio	# Assets	Mkt Value	Pct Fund	Total Pct Public Equity	Pct Asser Class	Pct of SubClass	Inexed Pct of SubClass	Inexed Pct of Pb Eq	
BLACKROCK-EAFE CNTRY FUND UA	2	2,356,068,488.32	6.77%	12.53%	33.06%	59.44%	59.44%	12.53%	
BRANDES INVESTMENT PARTNERS INT EQ	59	594,664,275.14	1.71%	3.16%	8.34%	15.00%			
AMERICAN CENTURY	106	527,139,167.95	1.52%	2.80%	7.40%	13.30%			
THOMPSON SIEGEL WALMSLEY	109	156,887,412.71	0.45%	0.83%	2.20%	3.96%			
TRINITY STREET	37	328,749,655.24	0.95%	1.75%	4.61%	8.29%			
<b>Large Cap Developed</b>	<b>313</b>	<b>3,963,508,999.36</b>	<b>11.39%</b>	<b>21.08%</b>	<b>55.62%</b>	<b>100.00%</b>	<b>59.44%</b>	<b>12.53%</b>	
		<i>SAA Target</i>	<i>14.00%</i>						
BLACKROCK-MSCI EAFE SM CAP B	1	458,313,457.83	1.32%	2.44%	6.43%	36.87%	36.87%	2.44%	
AQR CAPITAL	565	176,865,422.17	0.51%	0.94%	2.48%	14.23%			
FRANKLIN TEMPLETON INVESTMENTS	37	396,994,397.23	1.14%	2.11%	5.57%	31.93%			
DIMENSIONAL FUND ADVISORS INTL SC	1,524	211,025,514.44	0.61%	1.12%	2.96%	16.97%			
<b>Small Cap Developed</b>	<b>2,127</b>	<b>1,243,198,791.67</b>	<b>3.57%</b>	<b>6.61%</b>	<b>17.44%</b>	<b>100.00%</b>	<b>36.87%</b>	<b>2.44%</b>	
		<i>SAA Target</i>	<i>3.00%</i>						
BLACKROCK EMERGING MARKETS FUND	2	670,086,853.35	1.93%	3.56%	9.40%	34.91%	34.91%	3.56%	
EV SEM CIT ASRS	1,515	480,389,697.00	1.38%	2.55%	6.74%	25.02%			
WILLIAM BLAIR EM EQUITY	131	471,646,438.00	1.36%	2.51%	6.62%	24.57%			
LSV EM EQUITY	331	297,599,210.00	0.86%	1.58%	4.18%	15.50%			
<b>EM</b>	<b>1,979</b>	<b>1,919,722,198.35</b>	<b>5.52%</b>	<b>10.21%</b>	<b>26.94%</b>	<b>100.00%</b>	<b>34.91%</b>	<b>3.56%</b>	
		<i>SAA Target</i>	<i>6.00%</i>						
<b>Non US Equity Total</b>	<b>4,419</b>	<b>7,126,429,989.38</b>	<b>20.49%</b>	<b>37.90%</b>	<b>100.00%</b>	<b>37.90%</b>	<b>48.90%</b>	<b>18.53%</b>	
		<i>SAA Target</i>	<i>23.00%</i>						

Non-U.S. Equity Category - Mandates / Passive Strategies

Non-U.S. EQUITIES CATEGORY  
Passive Mandates Summary as of 02-27-15

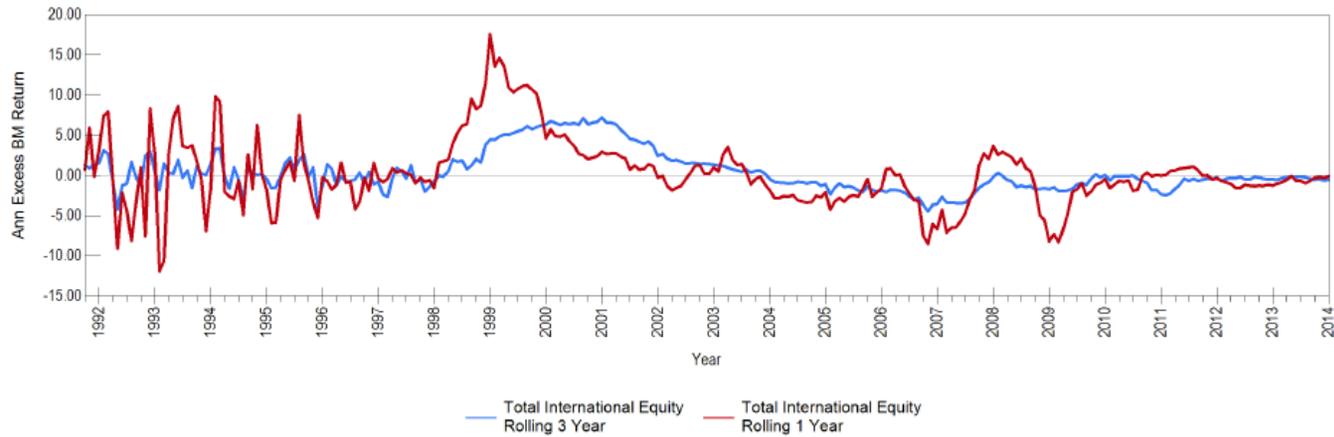
	Market Value	% Total Equity	% Non-U.S. Equity	Benchmark
BlackRock EAFE	2,356,068,488.32	12.53%	33.06%	MSCI EAFE (Net)
BlackRock EAFE Small Cap	458,313,457.83	2.44%	6.43%	MSCI EAFE Small Cap (Net)
BlackRock EAFE Small Cap	670,086,853.35	3.56%	9.40%	MSCI Emerging Markets (Net)
<b>Total Asset Sub-Class</b>	<b>3,484,468,799.50</b> 	18.53%	48.89%	

Total International Equity - Performance as of 12/31/2014

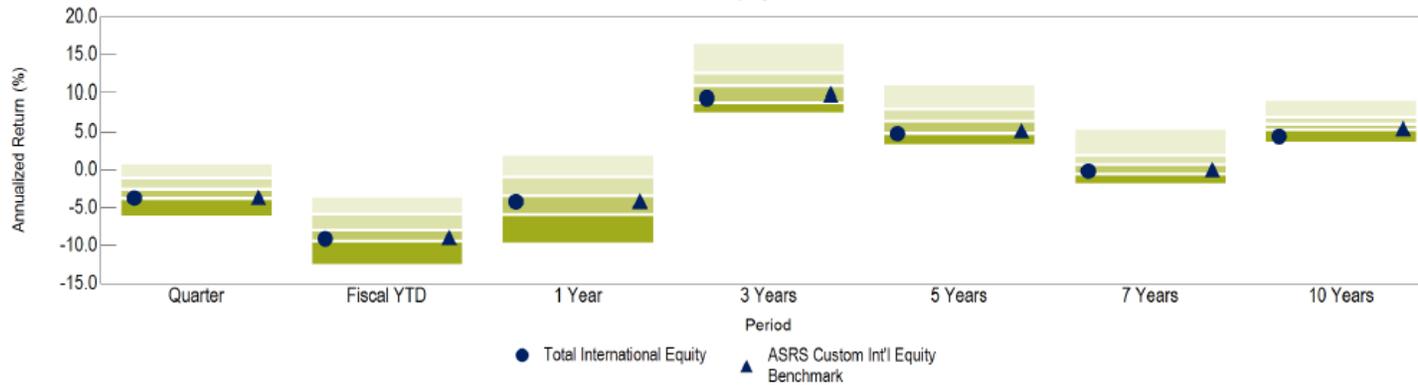
Arizona State Retirement System

Asset Class Analysis - Total International Equity

Rolling Annual Excess Benchmark Return



eA All ACWI ex-US Equity Net Accounts

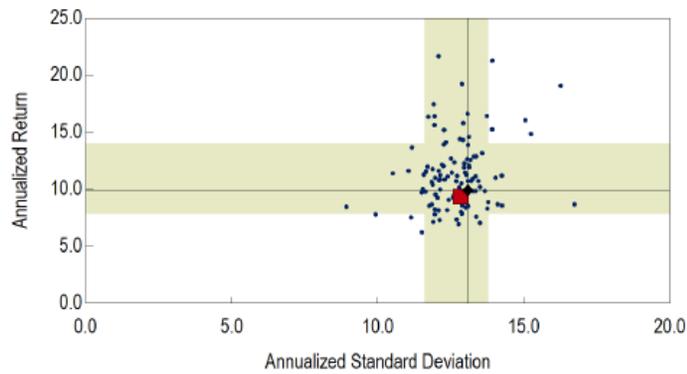


Total International Equity - Performance as of 12/31/2014

Arizona State Retirement System

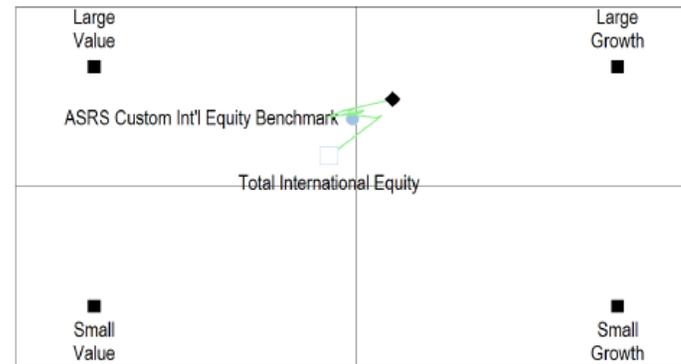
Asset Class Analysis - Total International Equity

3 Years Ending December 31, 2014



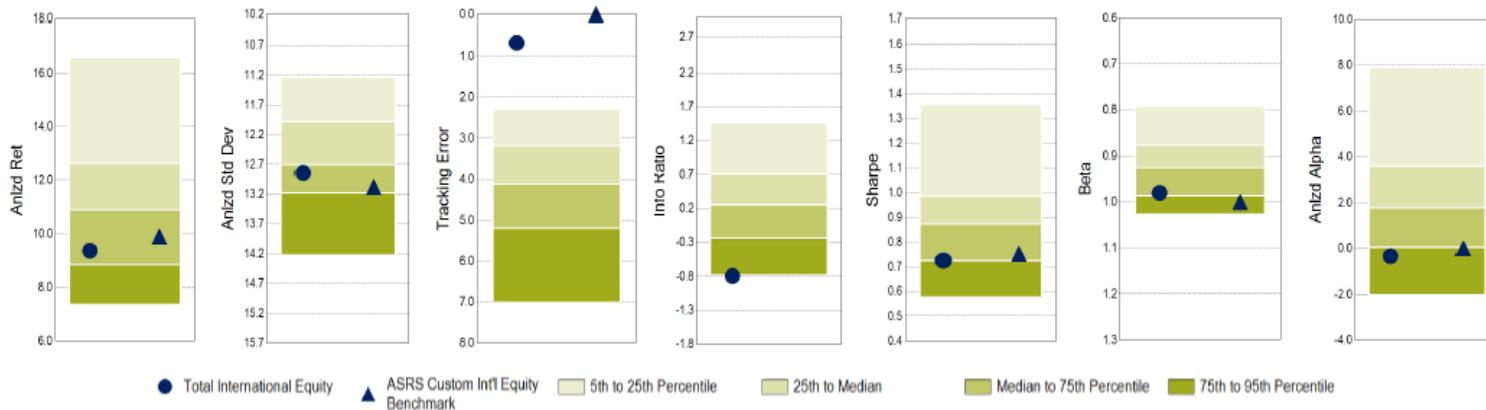
- Total International Equity
- ◆ ASRS Custom Int'l Equity Benchmark
- 68% Confidence Interval
- eA All ACWI ex-US Equity Net

3 Year Style Map



- First Rolling Period
- ◆ Last Rolling Period

\*Style map is returns based.



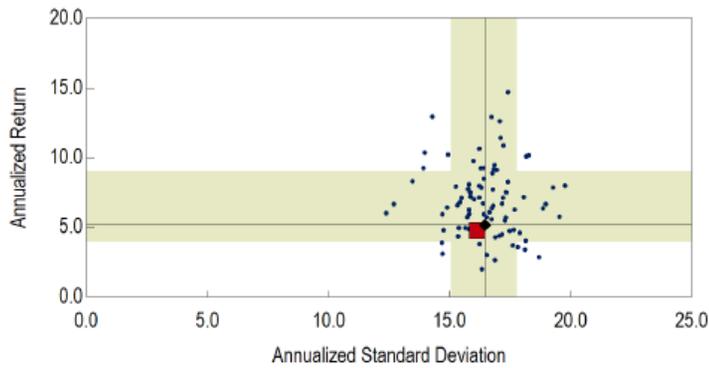
- Total International Equity
- ▲ ASRS Custom Int'l Equity Benchmark
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile

Total International Equity - Performance as of 12/31/2014

Arizona State Retirement System

Asset Class Analysis - Total International Equity

5 Years Ending December 31, 2014



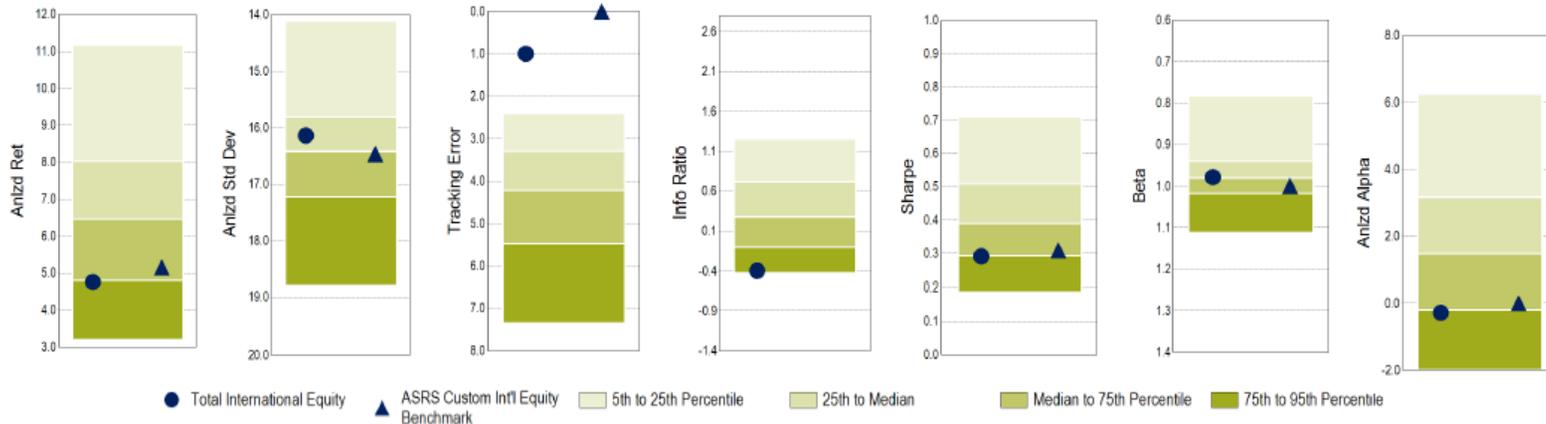
- Total International Equity
- ◆ ASRS Custom Int'l Equity Benchmark
- 68% Confidence Interval
- eA All ACWI ex-US Equity Net

5 Year Style Map



- First Rolling Period
- ◆ Last Rolling Period

\*Style map is returns based.



- Total International Equity
- ▲ ASRS Custom Int'l Equity Benchmark
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile

**Non-U.S. Equity Asset Category Review  
EAFE Mandates**

## Non-U.S. Equity Category - EAFE Mandates / Active Strategies

### EAFE Equity:

- *Note: NEPC combines the International Developed Markets (EAFE) and the International Developed Markets-Small-Cap (EAFE-SC) sub-classes in its reports. Consequently tracking error and risk analysis reflects the combined sub-classes*
- Replacement of three active mandates in mid-2014 served to improve relative performance of the Total Non-U.S. Equity category and had equally positive effects on volatility and stacking error.
- *Brandes*, a Graham & Dodd value investor, believes that market prices trend towards the intrinsic, underlying worth of a company over time. By staying committed to their philosophy, they have been taking advantage of negative sentiment in international markets over recent years and have been able to uncover attractive stocks. Brandes continues to outperform their benchmark, generating excess returns of 259 bps and 104 bps over the last one and three years respectively.
- *American Century (AC)* maintains a fundamentally driven, risk-managed equity portfolio that invests in companies that it believes are demonstrating early and sustainable accelerating growth. Using a unique investment methodology for defining growth – an acceleration of change from a starting point – the team looks for companies at an inflection point where future earnings growth prospects may change dramatically. Since inception in the third quarter of 2014, AC has outperformed the MSCI EAFE benchmark by 247 bps.
- *Thompson, Siegel & Walmsley (TSW)* engages in a disciplined process that is designed to identify undervalued stocks with a catalyst to unlock value. They believe that the best way to value a stock investment is in terms of the underlying company's cash generation because ultimately, that is what will determine return on investment. TSW has added 13 bps in excess return since inception in the third quarter of 2014.
- *Trinity Street (TS)* believes in intensive, fundamental bottom-up research on companies involved in change, to build revenue, margin, cash flow and earnings estimates which may be substantially different from consensus. Portfolios are concentrated in positions in which they have a high conviction for outperformance over a 2-3 year outlook. Although TS has underperformed the benchmark since inception in mid-2014, we remain committed to their longer term approach and investment philosophy.

International Developed Markets Equity – Performance as of 12/31/2014

Arizona State Retirement System

International and International Developed Markets Equity Performance Summary

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	6 Mo (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Return (%)	Since
<b>Total International Equity<sup>1</sup></b>	<b>6,752,187,108</b>	<b>19.7</b>	<b>-3.7</b>	<b>75</b>	<b>-9.1</b>	<b>72</b>	<b>-4.2</b>	<b>61</b>	<b>9.4</b>	<b>72</b>	<b>4.8</b>	<b>77</b>	<b>4.4</b>	<b>86</b>	<b>6.1</b>	<b>Apr-87</b>
<i>ASRS Custom Int'l Equity Benchmark</i>			<u>-3.6</u>	74	<u>-8.9</u>	71	<u>-4.1</u>	59	<u>9.9</u>	65	<u>5.2</u>	69	<u>5.5</u>	72	<u>5.8</u>	<i>Apr-87</i>
<i>Over/Under</i>			-0.1		-0.2		-0.1		-0.5		-0.4		-1.1		0.3	
<i>eA All ACWI ex-US Equity Net Median</i>			-2.5		-7.9		-3.4		10.9		6.5		6.0		7.7	<i>Apr-87</i>
<b>Total International Developed Markets Equity<sup>2</sup></b>	<b>4,889,534,411</b>	<b>14.3</b>	<b>-3.3</b>	<b>62</b>	<b>-9.8</b>	<b>71</b>	<b>-5.4</b>	<b>66</b>	<b>11.1</b>	<b>65</b>	<b>6.3</b>	<b>63</b>	<b>5.1</b>	<b>55</b>	<b>6.4</b>	<b>Apr-87</b>
<i>ASRS Custom Int'l Developed Markets Equity Benchmark</i>			<u>-3.3</u>	62	<u>-9.3</u>	64	<u>-4.9</u>	60	<u>11.9</u>	56	<u>6.5</u>	57	<u>6.2</u>	38	<u>6.1</u>	<i>Apr-87</i>
<i>Over/Under</i>			0.0		-0.5		-0.5		-0.8		-0.2		-1.1		0.3	
<i>eA All EAFE Equity Net Median</i>			-2.8		-8.4		-4.3		12.7		7.0		5.3		7.2	<i>Apr-87</i>
<b>Active Large Cap International Equity</b>																
<b>Brandes</b>	<b>545,344,386</b>	<b>1.6</b>	<b>-4.3</b>	<b>80</b>	<b>-10.8</b>	<b>83</b>	<b>-4.2</b>	<b>50</b>	<b>11.0</b>	<b>67</b>	<b>5.3</b>	<b>77</b>	<b>4.3</b>	<b>79</b>	<b>8.9</b>	<b>Oct-98</b>
<i>Brandes Custom Benchmark</i>			<u>-3.6</u>	67	<u>-9.2</u>	62	<u>-4.9</u>	60	<u>11.4</u>	61	<u>5.9</u>	66	<u>5.9</u>	42	<u>6.1</u>	<i>Oct-98</i>
<i>Over/Under</i>			-0.7		-1.6		0.7		-0.4		-0.6		-1.6		2.8	
<i>eA All EAFE Equity Net Median</i>			-2.8		-8.4		-4.3		12.7		7.0		5.3		7.2	<i>Oct-98</i>
<b>American Century<sup>3</sup></b>	<b>498,143,261</b>	<b>1.5</b>	<b>-1.5</b>	<b>25</b>	<b>-6.2</b>	<b>18</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>-6.2</b>	<b>Jul-14</b>
<i>MSCI EAFE</i>			<u>-3.6</u>	67	<u>-9.2</u>	62	<u>-4.9</u>	60	<u>11.1</u>	65	<u>5.3</u>	76	<u>4.4</u>	77	<u>-9.2</u>	<i>Jul-14</i>
<i>Over/Under</i>			2.1		3.0		--		--		--		--		3.0	
<i>eA All EAFE Equity Net Median</i>			-2.8		-8.4		-4.3		12.7		7.0		5.3		-8.4	<i>Jul-14</i>
<b>Trinity Street<sup>3</sup></b>	<b>309,077,086</b>	<b>0.9</b>	<b>-4.9</b>	<b>86</b>	<b>-11.0</b>	<b>84</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>-11.0</b>	<b>Jul-14</b>
<i>MSCI EAFE</i>			<u>-3.6</u>	67	<u>-9.2</u>	62	<u>-4.9</u>	60	<u>11.1</u>	65	<u>5.3</u>	76	<u>4.4</u>	77	<u>-9.2</u>	<i>Jul-14</i>
<i>Over/Under</i>			-1.3		-1.8		--		--		--		--		-1.8	
<i>eA All EAFE Equity Net Median</i>			-2.8		-8.4		-4.3		12.7		7.0		5.3		-8.4	<i>Jul-14</i>
<b>TS&amp;W International<sup>3</sup></b>	<b>147,886,391</b>	<b>0.4</b>	<b>-2.9</b>	<b>54</b>	<b>-8.6</b>	<b>52</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>-8.6</b>	<b>Jul-14</b>
<i>MSCI EAFE</i>			<u>-3.6</u>	67	<u>-9.2</u>	62	<u>-4.9</u>	60	<u>11.1</u>	65	<u>5.3</u>	76	<u>4.4</u>	77	<u>-9.2</u>	<i>Jul-14</i>
<i>Over/Under</i>			0.7		0.6		--		--		--		--		0.6	
<i>eA All EAFE Equity Net Median</i>			-2.8		-8.4		-4.3		12.7		7.0		5.3		-8.4	<i>Jul-14</i>

International Developed Markets Equity – Performance as of 12/31/2014

Arizona State Retirement System

International and International Developed Markets Equity Performance Summary

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	6 Mo (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Return (%)	Since
<b>Passive Large Cap International Equity</b>																
BlackRock EAFE Equity Index	2,218,289,892	6.5	-3.6	66	-9.2	62	-4.7	57	11.3	61	5.6	73	--	--	9.0	Jul-09
MSCI EAFE			<u>-3.6</u>	67	<u>-9.2</u>	62	<u>-4.9</u>	60	<u>11.4</u>	61	<u>5.7</u>	71	<u>4.9</u>	61	<u>9.1</u>	Jul-09
Over/Under			0.0		0.0		0.2		-0.1		-0.1				-0.1	
eA All EAFE Equity Net Median			-2.8		-8.4		-4.3		12.7		7.0		5.3		10.3	Jul-09
<b>Active Small Cap International Equity</b>																
DFA - International Small Cap	199,925,998	0.6	-5.4	89	-13.9	95	-6.7	79	13.9	75	6.7	98	--	--	5.2	Sep-05
MSCI EAFE Small Cap			<u>-2.3</u>	50	<u>-9.9</u>	60	<u>-4.9</u>	67	<u>14.1</u>	70	<u>8.9</u>	82	<u>6.4</u>	91	<u>5.5</u>	Sep-05
Over/Under			-3.1		-4.0		-1.8		-0.2		-2.2				-0.3	
eA EAFE Small Cap Equity Net Median			-2.3		-9.2		-3.7		15.5		10.6		7.7		6.7	Sep-05
Franklin Templeton	370,360,513	1.1	-3.0	73	-13.4	93	-11.4	93	14.5	69	--	--	--	--	6.9	Apr-11
MSCI EAFE Small Cap			<u>-2.3</u>	50	<u>-9.9</u>	60	<u>-4.9</u>	67	<u>14.1</u>	70	<u>8.9</u>	82	<u>6.4</u>	91	<u>5.3</u>	Apr-11
Over/Under			-0.7		-3.5		-6.5		0.4						1.6	
eA EAFE Small Cap Equity Net Median			-2.3		-9.2		-3.7		15.5		10.6		7.7		7.2	Apr-11
AQR Capital	167,661,481	0.5	-1.5	41	-8.1	36	-3.6	48	--	--	--	--	--	--	9.2	Jun-13
MSCI EAFE Small Cap			<u>-2.3</u>	50	<u>-9.9</u>	60	<u>-4.9</u>	67	<u>14.1</u>	70	<u>8.9</u>	82	<u>6.4</u>	91	<u>7.5</u>	Jun-13
Over/Under			0.8		1.8		1.3								1.7	
eA EAFE Small Cap Equity Net Median			-2.3		-9.2		-3.7		15.5		10.6		7.7		8.2	Jun-13
<b>Passive Small Cap International Equity</b>																
BlackRock EAFE Small Cap Equity Index	431,072,612	1.3	-2.0	48	-9.7	59	-4.8	66	13.9	75	--	--	--	--	11.2	Jun-10
MSCI EAFE Small Cap			<u>-2.3</u>	50	<u>-9.9</u>	60	<u>-4.9</u>	67	<u>14.1</u>	70	<u>8.9</u>	82	<u>6.4</u>	91	<u>11.4</u>	Jun-10
Over/Under			0.3		0.2		0.1		-0.2						-0.2	
eA EAFE Small Cap Equity Net Median			-2.3		-9.2		-3.7		15.5		10.6		7.7		12.5	Jun-10

Non-U.S. Equity Category - Developed Large-Cap Performance as of 2/27/15

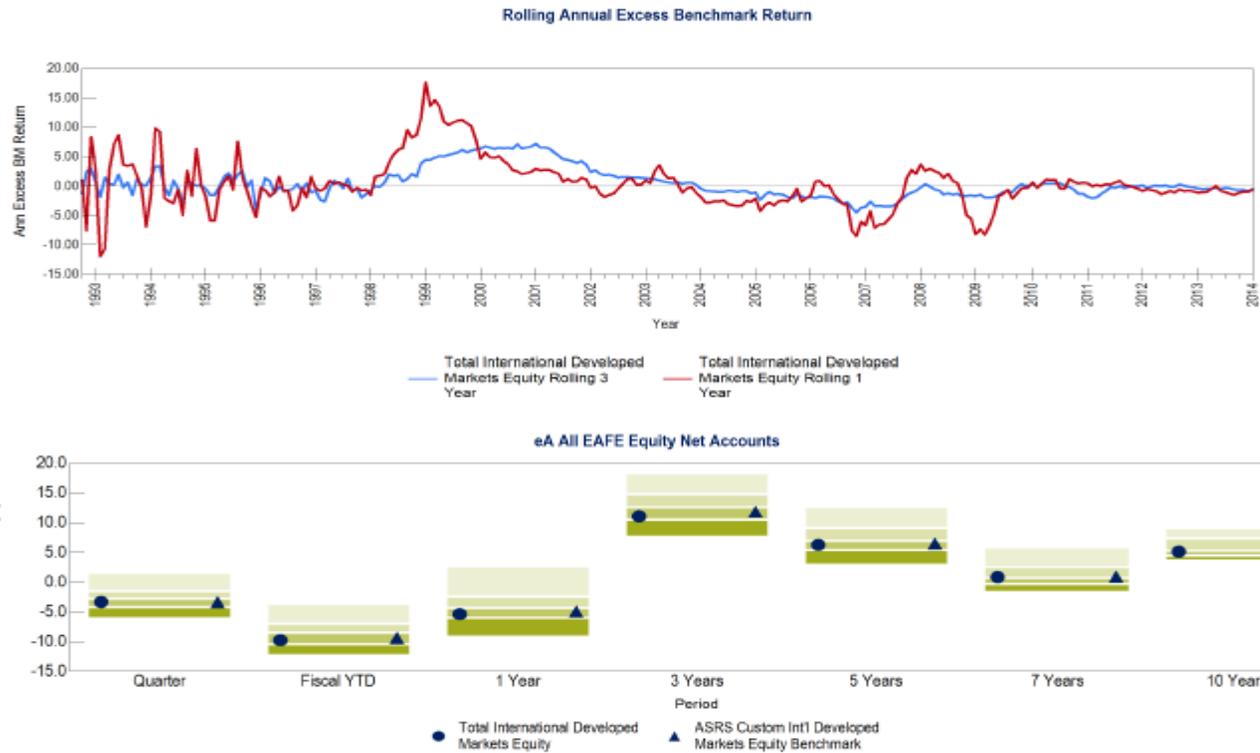
	Net Returns (%)							Excess Returns (basis points)						
	3 Mths	YTD	1 Year	3 Years	5 Years	10 Years	Inception	3 Mths	YTD	1 Year	3 Years	5 Years	10 Years	Inception
<b>INT'L DEVELOPED LARGE CAP EQUITY</b>														
Brandes: SD (LC Active)	5.03	8.94	2.56	10.77	8.03	5.00	9.35	223	244	259	104	-33	-128	292
American Century (LC Active)	2.35	5.72	---	---	---	---	-0.87	-46	-78	---	---	---	---	248
Trinity Street (LC Active)	2.16	6.12	---	---	---	---	-5.61	-65	-38	---	---	---	---	-226
Thompson, Siegel, and Walmsley (LC Active)	2.62	5.91	---	---	---	---	-3.22	-19	-59	---	---	---	---	13
Blackrock EAFE: SF(Passive)	2.83	6.50	0.21	9.69	8.09	---	9.94	3	1	24	-3	-8	---	-7
MSCI EAFE	2.81	6.50	-0.04	9.73	8.17	5.27	---							
<b>Total Int'l LC Equity</b>														

### Non-U.S. Equity Category – Developed Markets Mandates

Note: NEPC combines the International Developed Markets (EAFE ) and the International Developed Markets-Small-Cap (EAFE-SC) sub-classes in its reports. Consequently tracking error and risk analysis reflects the combined sub-classes.

#### Arizona State Retirement System

#### Asset Class Analysis - Total International Developed Markets Equity



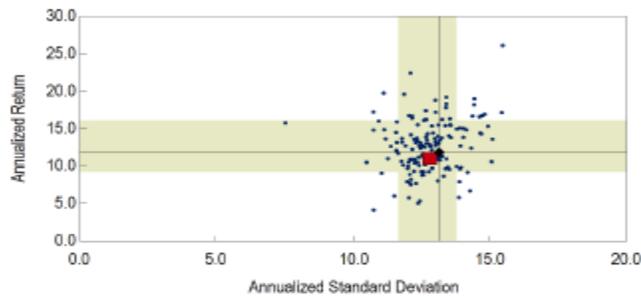
### Non-U.S. Equity Category – Developed Markets Mandates

Note: NEPC combines the International Developed Markets (EAFE) and the International Developed Markets-Small-Cap (EAFE-SC) sub-classes in its reports. Consequently tracking error and risk analysis reflects the combined sub-classes.

#### Arizona State Retirement System

#### Asset Class Analysis - Total International Developed Markets Equity

3 Years Ending December 31, 2014



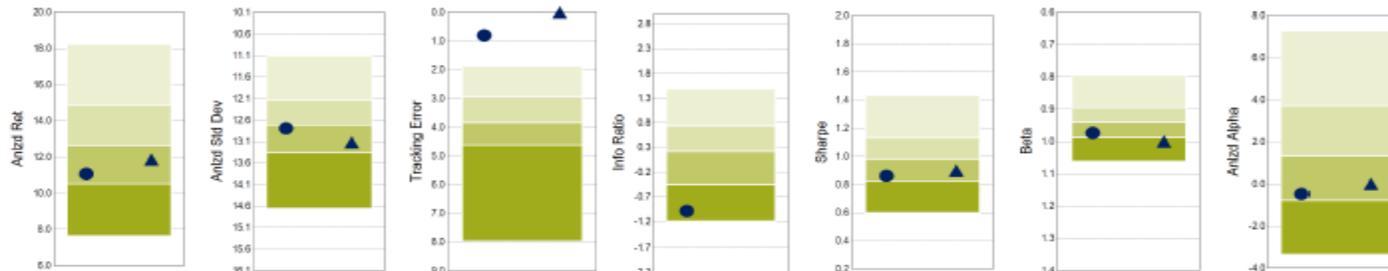
- Total International Developed Markets Equity
- ASRS Custom Intl Developed Markets Equity Benchmark
- 68% Confidence Interval
- eA All EAFE Equity Net

#### 3 Year Style Map



- First Rolling Period
- ◆ Last Rolling Period

\*Style map is returns based.



- Total International Developed Markets Equity
- ▲ ASRS Custom Intl Developed Markets Equity Benchmark
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile

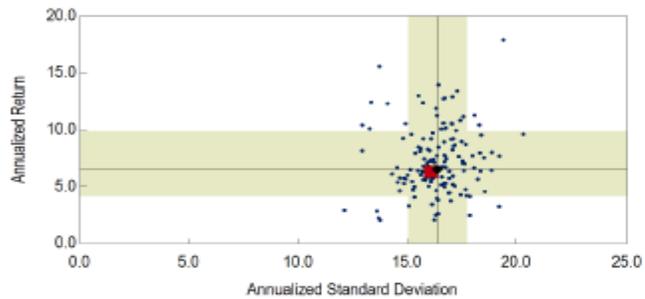
### Non-U.S. Equity Category – Developed Markets Mandates

Note: NEPC combines the International Developed Markets (EAFE) and the International Developed Markets-Small-Cap (EAFE-SC) sub-classes in its reports. Consequently tracking error and risk analysis reflects the combined sub-classes.

#### Arizona State Retirement System

#### Asset Class Analysis - Total International Developed Markets Equity

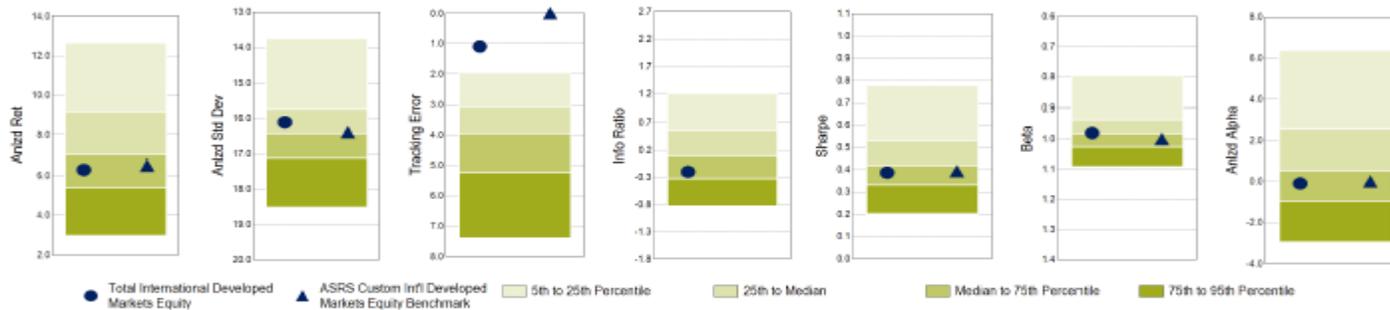
5 Years Ending December 31, 2014



- Total International Developed Markets Equity
- ASRS Custom Int'l Developed Markets Equity Benchmark
- 68% Confidence Interval
- eA All EAFE Equity Net



\*Style map is returns based.



December 31, 2014

**Non-U.S. Equity Category – EAFE Mandates / Active Strategies**

Non- U.S Developed Large Cap Equity							
<b>Brandes</b>	Brandes is a bottom-up, Graham & Dodd, value-oriented, investment manager focusing on the fundamental characteristics of a company in order to develop an estimate of its intrinsic value. Brandes selects stocks that are selling at a discount to the firm's estimates of their intrinsic business value, seeking to establish a margin of safety and an opportunity for competitive performance. The investment process drives the firm to build portfolios that typically consist of out-of-favor or overlooked issues that it believes are undervalued. Such securities may remain overvalued for months or years, and may exhibit sharp price fluctuations.						
	(\$MM)	% Total Equity	% non-US Equity	Benchmark	Excess Return (bps)		
					1 year	3 year	5 year
	594.7	3.2%	8.3%	MSCI EAFE	259	104	-33
<b>American Century</b>	American Century's philosophy of growth investing is centered on the belief that accelerating growth in earnings and revenues is more highly correlated to stock price performance rather than the absolute level of growth. Managers use a bottom-up stock selection process utilizing proprietary fundamental research to invest primarily in large cap companies exhibiting improving fundamentals and accelerating growth characteristics. Managers invest in companies in developed countries outside the U.S., with limited investments in companies in emerging countries. The portfolio is constructed within a risk-aware framework to maximize stock specific risk, while minimizing risk from unintended sources.						
	(\$MM)	% Total Equity	% non-US Equity	Benchmark	Excess Return (bps)		
					<i>YTD</i>	<i>3 months</i>	<i>1TD</i>
	527.1	2.8%	7.4%	MSCI EAFE	-78	-46	247

**Non-U.S. Equity Category - EAFE Mandates / Active Strategies**

Non- U.S Developed Large Cap Equity							
<b>Thompson, Siegel &amp; Walmsley</b>	<p>TS&amp;W employs a core investment style influenced by a value philosophy. The process is designed to identify inexpensive stocks that are exhibiting evidence of positive development in business fundamentals and starts with a proprietary Four-Factor screen. TS&amp;W defines value using cash flows. Cash flows are a more robust measure of business value than earnings and are more readily comparable across geographies. The process seeks to avoid value traps by investing in companies that are exhibiting positive change. As part of the initial screen, TS&amp;W evaluates earnings potential (defined as earnings estimate revisions and earnings surprises) and relative price strength, which are regarded as evidence of change that can be uncovered through fundamental analysis. The process employs rigorous risk controls and a sell discipline.</p>						
	(\$MM)	% Total Equity	% non-US Equity	Benchmark	Excess Return (bps)		
					<i>YTD</i>	<i>3 months</i>	<i>ITD</i>
	156.9	0.8%	2.2%	MSCI EAFE	-59	-19	13
<b>Trinity Street</b>	<p>Trinity Street believes that equity markets are usually efficient and provide an adequate mechanism for valuing companies and taking into account all of the company-specific data and external influences on such valuations. The firm also believes, however, that this pricing mechanism can be interrupted when a company is undergoing rapid and fundamental change. On occasions, the market can be slow to interpret the impact and consequences of such change, sometimes leading to major mispricings-pricings. Consequently, they focus all of their research effort on fundamental bottom-up analysis of rapidly-changing companies, to discern whether the consequences of the change taking place are “under-recognized” by brokers’ forecasts and/or the market valuation of the company meaning that the company may be undervalued. “Change” is a genuine constant in markets and is ever-present, but where it takes place is constantly moving. It takes place irrespective of whether value, growth or other trends are generally impacting markets. Under-Recognized Change can therefore be seen as a consistent source of alpha which should work in most market environments.</p>						
	(\$MM)	% Total Equity	% non-US Equity	Benchmark	Excess Return (bps)		
					<i>YTD</i>	<i>3 months</i>	<i>ITD</i>
	328.7	1.8%	4.6%	MSCI EAFE	-38	-65	-226

**Non-U.S. Equity Asset Category Review  
EAFE Small-Cap Mandates**

## Non-U.S. Equity Category - EAFE Small-Cap Mandates / Active Strategies

### EAFE Small-Cap Equity:

- *Note: NEPC combines the International Developed Markets (EAFE ) and the International Developed Markets-Small-Cap (EAFE-SC) sub-classes in its reports. Consequently tracking error and risk analysis reflects the combined sub-classes.*
- Relative performance of EAFE-SC markets were challenged in 2014. They trailed their larger-cap counterparts throughout 2014, ending the year with a negative return. This flux affected greatly the active mandates of the EAFE-SC asset sub-class. Signs of strength in international developed markets in early 2015 have led to a rebound, and some relative outperformance versus the U.S. equity markets.
- *DFA* employs a strategy based on rigorous empirical and academic research, with the goal of adding value over the long-term. Quantitative and qualitative screens are used in tandem to provide a consistent focus on relevant dimensions of expected returns while minimizing unnecessary turnover. DFA has historically been a strong performer, but faced headwinds in 2014 resulting in underperformance.
- *Franklin Templeton (FT)* believes a concentrated, yet diversified portfolio of high-quality companies with sustainable business models has the potential to produce above-average risk-adjusted returns over the longer term. They seek companies that have a clear competitive advantage, strong balance sheets and free cash flow, and are attractively priced based on rigorous valuation analysis. Despite underperforming the benchmark over a one year period, FT has provided excess returns of 130 bps over the past three years.
- *AQR* believes market inefficiencies can be exploited through a diversified and disciplined approach. By combining the factor characteristics of value and momentum, they seek to uncover stocks that are attractively priced with a near-term catalyst that will drive returns. AQR has delivered excess returns of 25 bps over the past year

Non-U.S. Equity Category - Developed Small-Cap Performance as of 2/27/15

	Net Returns (%)							Excess Returns (basis points)						
	3 Mths	YTD	1 Year	3 Years	5 Years	10 Years	Inception	3 Mths	YTD	1 Year	3 Years	5 Years	10 Years	Inception
<b>INT'L DEVELOPED SMALL CAP EQUITY</b>														
AQR Capital	4.79	5.32	-2.18	---	---	---	11.60	-129	-135	25	---	---	---	82
Blackrock EAFE SC: SF (Passive)	6.08	6.66	-2.16	11.17	---	---	12.34	-1	0	26	-15	---	---	-15
DFA: Santa Monica (SC Active)	4.22	5.36	-6.74	10.07	8.53	---	5.69	-186	-130	-431	-124	-232	---	-39
Franklin Templeton: San Mateo (SC Active)	7.78	7.01	-6.15	12.61	---	---	8.42	170	35	-372	130	---	---	157
MSCI EAFE Small Cap	6.08	6.66	-2.42	11.31	10.85	6.42	---							
<b>Total Int'l SC Equity</b>														

**Non-U.S. Equity Category – EAFE Small-Cap Mandates / Active Strategies**

Non- U.S Developed Small Cap Equity							
<b>DFA</b>	DFA attempts to capture excess returns by providing reliable exposure to style and size risk factors. DFA’s research has shown that the value style, as defined by book-to-market ratio, and small market capitalization are risk factors that explain a large proportion of performance over long periods of time. DFA structures the portfolio to target these risk factors which should deliver higher expected returns than the market over the long term.						
	(\$MM)	% Total Equity	% non - US Equity	Benchmark	Excess Return (bps)		
					1 year	3 year	5 year
	211.0	1.1%	3.0%	MSCI EAFE Small Cap	-431	-124	-231
<b>Franklin Templeton</b>	FTI’s investment philosophy is based on a belief that companies with sustainable competitive advantages, which are able to generate cash flows, strong return on investment and have low downside risk, can create shareholder value and deliver superior risk-adjusted returns over a full market cycle. By conducting disciplined, fundamental bottom-up research, Franklin Global Small Cap Team can identify companies whose potential has not been fully recognized by the market.						
	(\$MM)	% Total Equity	% non - US Equity	Benchmark	Excess Return (bps)		
					1 year	3 year	5 year
	397.0	2.1%	5.6%	MSCI EAFE Small Cap	-372	130	n/a
<b>AQR</b>	AQR's investment philosophy is based on the fundamental concepts of value and momentum. They believe that pursuing the philosophy of over weighting cheap securities which are showing a positive outlook while simultaneously under weighting expensive securities with a deteriorating outlook across many markets will continue to work over the long term. AQR's believes that applying this valuation and momentum philosophy across a large number of securities, minimizing transaction costs, and incorporating disciplined risk-control will lead to attractive long-term results.						
	(\$MM)	% Total Equity	% non - US Equity	Benchmark	Excess Return (bps)		
					1 year	3 year	5 year
	176.9	0.9%	2.5%	MSCI EAFE Small Cap	25	n/a	n/a

**Non-U.S. Equity Asset Category Review  
Emerging Markets Mandates**

## Non-U.S. Equity Category - Emerging Markets Mandates / Active Strategies

### Emerging Markets Equity:

- Although the emerging markets for equities declined over the course of 2014, thus trailing the global developed markets, the Emerging Markets Equity sub-class performed well in terms of relative return, declining a mere -0.9% versus -2.2% for the MSCI Emerging Markets Index. This is attributed to the robust performance of the William Blair and LSV active strategies. These, and the Eaton Vance active strategy have each added excess return since their addition to the ASRS Total Fund.
- The combination of these active strategies and a meaningful passive component has resulted in favorable risk/return characteristics, supplemented by low realtive tracking error.
- *William Blair (WB)*, who utilizes a bottom-up research process to select stocks of well-managed, quality growth companies which are expected to maintain superior growth and profitability. In addition to the fundamental analysis associated with security selection, WB views the economic strength of developing economies and industries as critical inputs to the portfolio construction process. WB has added 298 bps and 461 bps of excess return over the last one and three years respectively.
- *Eaton Vance (EV)*, a quantitative manager who employs a rules based strategy, attempts to add excess return through the identification of mispriced securities and systematic rebalancing. Despite a challenging year in 2014, EV has delivered positive excess return of 81 bps over the prior three years.
- *LSV* employs a quantitative technique to select undervalued stocks with high near-term appreciation potential. The competitive strength of the strategy is that it avoids introducing any judgmental biases and behavioral weaknesses into the process that often influence investment decisions. LSV has generated positive excess returns of 120 bps and 42 bps over the past one and three years respectively.

Emerging Markets Equity – Performance as of 12/31/2014

Arizona State Retirement System

International Emerging Markets Equity Performance Summary

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	6 Mo (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Return (%)	Since
<b>Total International Emerging Markets Equity</b>	<b>1,862,249,364</b>	<b>5.4</b>	<b>-4.8</b>	<b>64</b>	<b>-7.4</b>	<b>58</b>	<b>-0.9</b>	<b>51</b>	<b>5.8</b>	<b>46</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>0.4</b>	<b>Oct-10</b>
<i>MSCI Emerging Markets</i>			<u>-4.5</u>	60	<u>-7.8</u>	66	<u>-2.2</u>	62	<u>4.3</u>	69	<u>2.0</u>	67	<u>8.7</u>	70	<u>-0.1</u>	Oct-10
Over/Under			-0.3		0.4		1.3		1.5						0.5	
eA Emg Mkts Equity Net Median			-3.9		-6.9		-0.8		5.6		3.5		9.7		1.0	Oct-10
<b>Active Emerging Markets Equity</b>																
Eaton Vance	465,690,277	1.4	-8.5	95	-10.5	88	-4.3	78	5.0	60	--	--	--	--	0.0	Dec-10
<i>MSCI Emerging Markets</i>			<u>-4.5</u>	60	<u>-7.8</u>	66	<u>-2.2</u>	62	<u>4.3</u>	69	<u>2.0</u>	67	<u>8.7</u>	70	<u>-0.1</u>	Dec-10
Over/Under			-4.0		-2.7		-2.1		0.7						0.1	
eA Emg Mkts Equity Net Median			-3.9		-6.9		-0.8		5.6		3.5		9.7		0.9	Dec-10
LSV Emerging Market	291,832,376	0.9	-4.7	64	-8.1	69	-0.3	44	6.4	41	--	--	--	--	1.1	Dec-10
<i>MSCI Emerging Markets</i>			<u>-4.5</u>	60	<u>-7.8</u>	66	<u>-2.2</u>	62	<u>4.3</u>	69	<u>2.0</u>	67	<u>8.7</u>	70	<u>-0.1</u>	Dec-10
Over/Under			-0.2		-0.3		1.9		2.1						1.2	
eA Emg Mkts Equity Net Median			-3.9		-6.9		-0.8		5.6		3.5		9.7		0.9	Dec-10
William Blair	460,687,148	1.3	-1.1	9	-2.6	9	4.9	15	9.4	12	--	--	--	--	2.6	Nov-10
<i>MSCI Emerging Markets</i>			<u>-4.5</u>	60	<u>-7.8</u>	66	<u>-2.2</u>	62	<u>4.3</u>	69	<u>2.0</u>	67	<u>8.7</u>	70	<u>-0.8</u>	Nov-10
Over/Under			3.4		5.2		7.1		5.1						3.4	
eA Emg Mkts Equity Net Median			-3.9		-6.9		-0.8		5.6		3.5		9.7		0.4	Nov-10
<b>Passive Emerging Markets Equity</b>																
BlackRock Emerging Markets Equity Index	644,039,564	1.9	-4.5	61	-7.9	67	-2.4	65	3.8	73	--	--	--	--	-0.5	Oct-10
<i>MSCI Emerging Markets</i>			<u>-4.5</u>	60	<u>-7.8</u>	66	<u>-2.2</u>	62	<u>4.3</u>	69	<u>2.0</u>	67	<u>8.7</u>	70	<u>-0.1</u>	Oct-10
Over/Under			0.0		-0.1		-0.2		-0.5						-0.4	
eA Emg Mkts Equity Net Median			-3.9		-6.9		-0.8		5.6		3.5		9.7		1.0	Oct-10

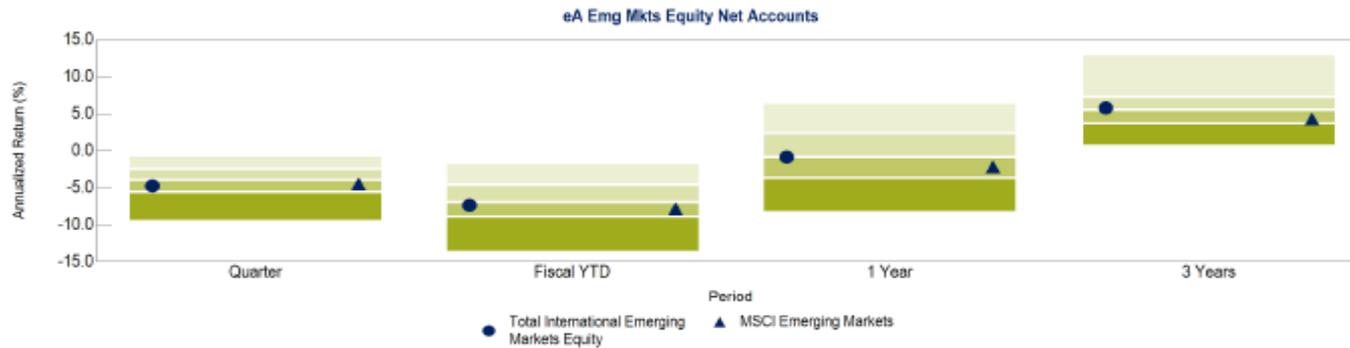
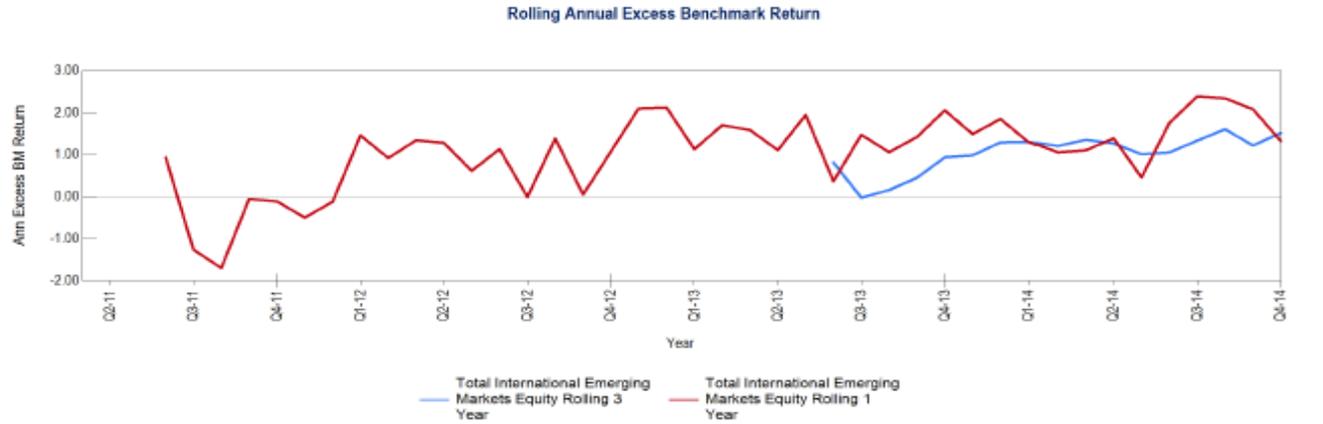
Non-U.S. Equity Category - Emerging Markets Performance as of 2/2/15

	Net Returns (%)							Excess Returns (basis points)						
	3 Mths	YTD	1 Year	3 Years	5 Years	10 Years	Inception	3 Mths	YTD	1 Year	3 Years	5 Years	10 Years	Inception
<b>INT'L EMERGING MARKETS EQUITY</b>														
Blackrock EM: SF (Passive)	-1.09	3.65	4.87	-0.53	---	---	0.31	-3	-7	-14	-41	---	---	-43
William Blair: Chicago (EM Active)	-1.15	2.07	7.99	4.49	---	---	2.99	-8	-165	298	461	---	---	290
LSV: Chicago (EM Active)	-2.66	1.65	6.22	0.29	---	---	1.42	-160	-206	120	42	---	---	69
Eaton Vance: Boston (EM Active)	-3.54	2.63	0.19	0.69	---	---	0.59	-248	-108	-482	81	---	---	-13
MSCI Emerging Markets	-1.07	3.71	5.01	-0.12	---	---	---							
<b>Total EM Equity</b>														

Non-U.S. Equity Category - Emerging Markets Mandates

Arizona State Retirement System

Asset Class Analysis - Total International Emerging Markets Equity

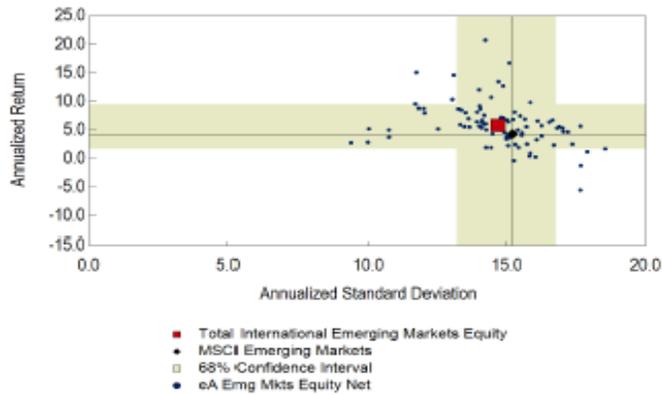


Non-U.S. Equity Category - Emerging Markets Mandates

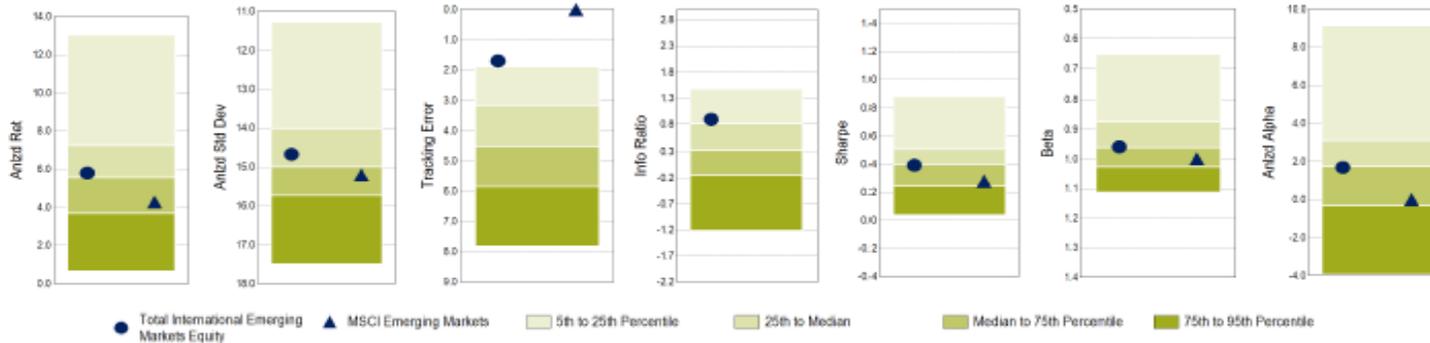
Arizona State Retirement System

Asset Class Analysis - Total International Emerging Markets Equity

3 Years Ending December 31, 2014



\*Style map is returns based.



**Non-U.S. Equity Category – Emerging Markets Mandates / Active Strategies**

Non- U.S Emerging Market Equity							
<b>Eaton Vance</b>	The Eaton Vance - Parametric Emerging Markets Equity strategy utilizes a structured, rules-based investment approach that seeks to exploit the unique characteristics of the emerging market equity asset class to achieve enhanced returns based on their research indicating that the systematic movement of developing countries is the dominant factor in explaining security returns, supporting country selection, as opposed to security selection, as the most important aspect in capturing returns in emerging markets.						
	(\$MM)	% Total Equity	% non - US Equity	Benchmark	Excess Return (bps)		
					1 year	3 year	5 year
	480.4	2.6%	6.7%	MCSI Emerging Markets	-482	81	n/a
<b>LSV</b>	The Emerging Markets Value Equity strategy's primary emphasis is the use of quantitative techniques to select individual securities in what would be considered a bottom-up approach. A risk control discipline limits the over- or under-exposure of the portfolio to industry concentrations. Value factors and security selection dominate sector/industry factors as drivers of performance.						
	(\$MM)	% Total Equity	% non - US Equity	Benchmark	Excess Return (bps)		
					1 year	3 year	5 year
	297.6	1.6%	4.2%	MCSI Emerging Markets	120	42	n/a
<b>William Blair</b>	William Blair's philosophy is based on the belief that the market is inefficient with respect to distinguishing between an average growth company and a quality growth company. In their view, a quality growth company is one that can achieve a higher growth rate for a longer period of time than the market expects, leading to superior stock performance. Characteristics of the business franchises for these companies commonly include experienced and motivated management teams, unique business models, and attractive financial characteristics.						
	(\$MM)	% Total Equity	% non - US Equity	Benchmark	Excess Return (bps)		
					1 year	3 year	5 year
	471.6	2.5%	6.6%	MCSI Emerging Markets	298	461	n/a

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