
IMD - Total Public Equity Asset Class Review

April 21, 2014

Dave Underwood, Assistant Chief Investment Officer

John Doran, Assistant Portfolio Manager

Keith Guido, Assistant Portfolio Manager

Equity Class Status Update *Subsequent to the 28th February 2014 valuations presented in the review.*

Equity Class Status Update Subsequent to the 28th February 2014 valuations presented in the review:

- Between month-end March and 4 April 2014, Equities liquidated \$400MN from the Domestic Equities asset class sourced as follows:

Domestic Equities Asset Sub-Class	Drawdown (\$Million)	% of	Drawdown	Passive Portion	
				(\$ Millions)	% of Subclass Draw
LargeCap	-175	43.75%		-150	85.71%
MidCap	-85	21.25%		-65	76.471%
SmallCap	-140	35.00%		-45	32.143%
Totals	-400	100.00%		-260	--

Contributing portfolios were:

- E2: -\$80MN
- E7: -70MN
- Intech: -\$10MN
- LSV: -\$15MN
- E3: -\$32.5MN
- E4: -\$32.5MN
- Wellington: -\$20MN
- E6: -\$45MNM
- Champlain: -\$15MN
- DFA (SC): -\$ 40MN
- TimesSquare: -\$40MN

Equity Class Status Update *Subsequent to the 28th February 2014 valuations presented in the review (Cont'd):*

- At 27th March 2014 Public Markets Committee Meeting , Equities Group and project consultant Mercer both
 - Updated the Committee on diligence conducted since the 31st January 2014 Public Markets Committee Meeting for the proposed re-set of the Non-U.S. EAFE active equities asset sub-class, *and;*
 - Recommended and obtained approval to release three of the sub-class' managers, reallocate the proceeds of those mandates to three new managers and implement a plan of transition for these changes which employs transition manager.

These changes will be presented in more detail in the Non-U.S. Equities Asset Class portion of this review.

Domestic Equities Asset Class Review

Market Performance Commentary:

- Major U.S. equity indexes continue to advance, posting new all-time highs
 - The Federal Reserve began the process of unwinding their 'QE' program beginning in December 2013; with expectations of a late 2014 completion date. Rates will remain low in the immediate future
 - Q4 13 earnings season was better than expected ,but Q1 14 estimates have been revised lower
 - Weaker than expected economic data was mostly dismissed as weather related as investors look to the future for signs of the continuing economic recovery. Jobs, inflation and retail sales will remain in focus.
 - Utility stocks have been the best performing sector in S&P® 500 YTD as volatility has driven investors to low-beta
 - Momentum as a style has outperformed Value over the past several months ;however, March saw a sharp reversal in Momentum and a shift to Value stocks. Unclear if this a temporary reversal or if the market will be looking for new areas of leadership.
- Major Non-U.S. equity indexes also continue to rise
 - The year was greeted by weak global economic data, EM 'crisis' concerns and geopolitical risks with Russia and the Ukraine
 - While the FED begins to unwind, Investors continue to look to the ECB, BOE and BOJ for clues about future stances on accommodative monetary policy.
 - European Equities have seen 35 +weeks of consecutive inflows;
 - While EM Equities had 18 weeks of consecutive outflows
 - Strong and weak currencies have offset each other giving similar index performance in local vs. US dollar terms
 - Equities have experienced sporadic bouts of volatility but VIX continues to re-set near historic lows
 - Domestic equities have managed to eke out slightly positive returns
 - European Equities have performed slightly better than Domestic with leadership from the periphery countries
 - Select EM Countries have performed well, but the index has posted negative returns YTD
 - Japanese Equities have been one of the worst Global performers YTD as the sentiment towards 'Abenomics' fades and the country reacts to fiscal adjustments in the form of higher taxes. Further BOJ easing could be a catalyst later in 2014
 - Select valuation opportunities remain, but earnings need to 'show-up' to justify further price gains

U.S. Equity Allocations as of 2/28/14

	28-Feb-2014	Total Fund MV	33,073,929,474						
Portfolio	# Assets	Mkt Value	Pct	Total Fund	Pct Public Equity	Pct Asser Class	Pct of SubClass	Inexed Pct of SubClass	Inexed Pct of Pb Eq
E2 MODEL	506	4,793,261,066.15	14.49%		26.43%	45.2032%	65.01%	65.01%	26.43%
E7 MODEL	127	806,934,108.13	2.44%		4.45%	7.6099%	10.94%	10.94%	4.45%
E8 MODEL	142	490,560,598.35	1.48%		2.70%	4.6263%	6.65%	6.65%	2.70%
INTECH LARGE CAP	136	525,558,790.36	1.59%		2.90%	4.9563%	7.13%		
LSV-US LARGE CAP VALUE	134	756,448,128.25	2.29%		4.17%	7.1337%	10.26%		
LargeCap Domestic Total	1,045	7,372,762,691.24	22.29%		40.65%	69.5294%	100.00%	82.61%	33.58%
			<i>SAA Target</i>	<i>23.00%</i>					
E3 MODEL	250	538,125,487.62	1.63%		2.97%	5.0748%	33.25%	33.25%	2.97%
E4 MODEL	295	543,897,785.74	1.64%		3.00%	5.1293%	33.60%	33.60%	3.00%
WELLINGTON MANAGEMENT CO	101	438,880,868.24	1.33%		2.42%	4.1389%	27.11%		
CRM MID CAP VALUE	54	97,756,006.03	0.30%		0.54%	0.9219%	6.04%		
MidCap DomesticTotal	700	1,618,660,147.63	4.89%		8.93%	15.2649%	100.00%	66.85%	5.97%
			<i>SAA Target</i>	<i>5.00%</i>					
E6	605	536,316,093.87	1.62%		2.96%	5.0578%	33.26%	33.26%	2.96%
CHAMPLAIN INVESTMENT PARTNERS	83	113,773,351.75	0.34%		0.63%	1.0729%	7.06%		
DIMENSIONAL FUND ADVISORS EQFD	438	443,947,978.30	1.34%		2.45%	4.1867%	27.53%		
TIMESQUARE CAPITAL MANAGEMENT	96	518,342,983.65	1.57%		2.86%	4.8883%	32.15%		
Small Cap Domestic Total	1,222	1,612,380,407.57	4.88%		8.89%	15.2057%	100.00%	33.26%	2.96%
			<i>SAA Target</i>	<i>5.00%</i>					
US Equity Total	2,967	10,603,803,246.44	32.06%		58.47%	100.0000%	58.47%	72.70%	42.51%
			<i>SAA Target</i>	<i>33.00%</i>					

Non-U.S. Equity Allocations as of 2/28/14

28-Feb-2014	Total Fund MV	33,073,929,474							
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	2,356,665,986.61	7.13%		12.99%	33.4557%	59.84%	59.84%	12.99%
BRANDES INVESTMENT PARTNERS INT EQ	66	528,010,011.15	1.60%		2.91%	7.4957%	13.41%		
ABERDEEN ASSET MANAGEMENT	50	485,334,178.26	1.47%		2.68%	6.8899%	12.32%		
HANSBERGER GLOBAL INVESTORS LC	69	338,054,928.03	1.02%		1.86%	4.7991%	8.58%		
WALTER SCOTT & PARTNERS	54	230,334,285.77	0.70%		1.27%	3.2699%	5.85%		
Large Cap Developed	241	3,938,399,389.82	11.91%		21.72%	55.9104%	100.00%	59.84%	12.99%
		<i>SAA Target</i>	<i>14.00%</i>						
BLACKROCK-MSCI EAFE SM CAP B	1	469,510,034.83	1.42%		2.59%	6.6653%	36.45%	36.45%	2.59%
AQR CAPITAL	566	180,229,879.67	0.54%		0.99%	2.5586%	13.99%		
FRANKLIN TEMPLETON INVESTMENTS	41	414,072,215.49	1.25%		2.28%	5.8783%	32.15%		
DIMENSIONAL FUND ADVISORS INTL SC	1,584	224,240,152.29	0.68%		1.24%	3.1834%	17.41%		
Small Cap Developed	2,192	1,288,052,282.28	3.89%		7.10%	18.2855%	100.00%	36.45%	2.59%
		<i>SAA Target</i>	<i>3.00%</i>						
BLACKROCK EMERGING MARKETS FUND	2	635,977,729.53	1.92%		3.51%	9.0285%	34.99%	34.99%	3.51%
EV SEM CIT ASRS	1,401	471,885,355.00	1.43%		2.60%	6.6990%	25.96%		
WILLIAM BLAIR EM EQUITY	119	432,879,111.00	1.31%		2.39%	6.1452%	23.81%		
LSV EM EQUITY	340	276,937,104.00	0.84%		1.53%	3.9315%	15.24%		
EM	1,862	1,817,679,299.53	5.50%		10.02%	25.8042%	100.00%	34.99%	3.51%
		<i>SAA Target</i>	<i>6.00%</i>						
Non US Equity Total	4,295	7,044,130,971.63	21.30%		38.84%	100.0000%	38.84%	49.15%	19.09%
		<i>SAA Target</i>	<i>23.00%</i>						

Risk Premium Factors Allocations as of 2/28/14

28-Feb-2014		Total Fund MV	33,073,929,474					
Portfolio	# Assets	Mkt Value	Pct Total Fund	Pct Public Equity	Pct Asser Class	Pct of SubClass	Inexed Pct of SubClass	Inexed Pct of Pb Eq
ISHARES MSCI USA MOMENTUM FACTOR ETF	1	125,160,000.00	0.38%	0.69%		25.66%		
ISHARES MSCI USA VALUE FACTOR ETF	1	119,400,000.00	0.36%	0.66%		24.48%		
ISHARES MSCI USA SIZE FACTOR ETF	1	117,400,000.00	0.35%	0.65%		24.07%		
ISHARES MSCI USA QUALITY FACTOR ETF	1	121,926,500.00	0.37%	0.67%		24.99%		
GOVERNMENT STIF 10	1	3,945,177.25	0.01%	0.02%		0.81%		
Risk Premia Overlay Total	5	487,831,677.25	1.47%	2.69%		100.00%		
Cash From Rebalance	1	1.00	0.00%	0.00%				
Public Equity Total	7,268	18,135,765,896.32	54.83%	100.00%				61.60%
			<i>SAA Target</i>	<i>56.00%</i>				

IMD House Views

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

- **Fundamentals: POSITIVE**
 - Major risks have receded and economic data suggests stable, sub-trend growth into 2014.
 - Persistently high U.S. unemployment raise questions about a sustainable recovery; no tailspin issues have surfaced.
 - At risk longer term due to stimulus measures; inflation remains generally subdued.
 - There is considerable liquidity; Federal Reserve policy remains accommodative.
 - Overall U.S. corporate profits are still growing, but with decelerating momentum as revenue trends are flat and pressures on profit margin expansion are surfacing.
- **Valuations: NEUTRAL**
 - P/E ratios (forward) are acceptable, though now less generous, and marginally less so for the mid- and smaller-sized companies: S&P 500, 14.3-15.9x, S&P MID, 16.6-19.4x; S&P SC600, 17.1-20.7x.
 - Historic P/Es still 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 above the 4.0% long-range average for large caps, but market advances have trimmed those of mid- and small-caps to near 3.0%
- **Sentiment: POSITIVE**
 - Lessened near-term equity market volatility (i.e., VIX Index) reflects growing acceptance of risk-oriented assets.
 - Asset flows that had gone to bonds and non-U.S. equities until 2013 continue shifting toward equities, though not necessarily to stock mutual funds

Performance as of 2/28/2014

	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
LARGE CAP EQUITY														
ASRS E2: PHX (Passive)	3.50	0.95	25.21	14.32	22.95	7.21	7.48	-1	-1	-16	-3	-5	5	8
S&P 500	3.51	0.96	25.37	14.35	23.00	7.16	---							
INTECH: FL (Active)	5.76	2.38	31.11	15.44	21.94	8.01	10.05	86	24	241	-35	-118	35	78
S&P 500 Growth	4.90	2.14	28.70	15.79	23.13	7.66	---							
LSV: CHI (Active)	2.52	-0.13	30.91	15.98	27.14	9.14	11.48	50	18	903	306	414	255	256
S&P 500 Value	2.02	-0.31	21.88	12.91	22.99	6.59	---							
ASRS E7: PHX (Passive)	1.19	-0.34	19.38	---	---	---	17.86	3	1	29	---	---	---	20
MSCI USA High Div Yld Index	1.16	-0.35	19.09	---	---	---	---							
ASRS E8: PHX (Passive)	2.50	1.21	18.08	---	---	---	16.91	0	-2	54	---	---	---	79
MSCI USA Min Vol Index	2.51	1.23	17.54	---	---	---	---							
Total Large-Cap														
MID CAP EQUITY														
Wellington: SF (Active)	8.99	5.46	35.95	15.03	24.18	11.94	12.04	317	280	938	89	-277	179	128
S&P 400	5.83	2.66	26.58	14.14	26.95	10.15	---							
ASRS E3: PHX (Passive)	6.16	2.68	27.11	14.44	27.77	11.09	8.95	17	7	24	35	27	55	60
S&P 400 Growth	5.99	2.61	26.87	14.09	27.50	10.53	---							
CRM: NY (Active)	6.23	1.30	26.58	11.90	20.90	9.80	10.24	56	-141	33	-235	-552	9	14
ASRS E4: PHX (Passive)	5.61	2.73	26.28	14.18	26.25	9.97	10.83	-6	2	3	-7	-16	27	23
S&P 400 Value	5.67	2.71	26.25	14.25	26.41	9.71	---							
Total Mid-Cap														
SMALL CAP EQUITY														
ASRS E6: PHX (Passive)	1.94	0.41	32.22	16.64	27.84	---	8.89	6	-2	-8	-19	-21	---	40
Champlain: VT (Active)	-1.35	-2.57	23.26	13.63	23.54	---	10.21	-324	-299	-904	-320	-451	---	-2
S&P 600	1.88	0.43	32.30	16.83	28.04	10.18	---							
TimesSquare: New York (Active)	4.33	0.44	30.16	18.41	28.36	---	13.41	-167	-279	-487	253	-33	---	275
Russell 2500 Growth	6.00	3.23	35.03	15.87	28.68	9.91	---							
DFA: Santa Monica (Active)	2.69	0.20	32.09	14.93	31.18	10.16	12.76	25	-64	46	-154	373	49	119
R2k Val/ S&P 600 Value	2.45	0.85	31.63	16.47	27.45	9.67	---							
Total Small-Cap														

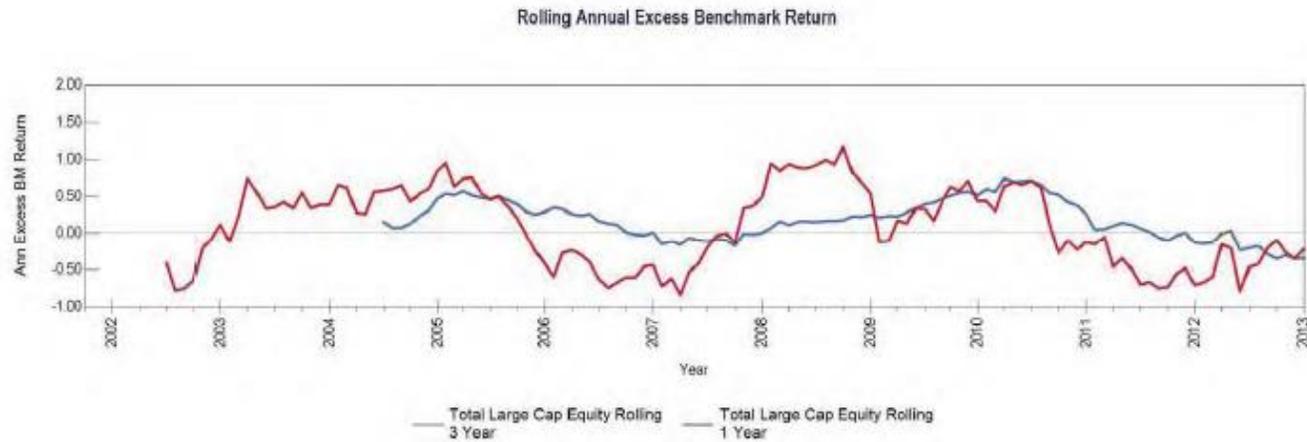
U.S. Equity - Passive Strategies

Portfolio	(\$MM)	% Total Equity	% US Equity	Benchmark
E2	4,806.6	26.4%	45.2%	S&P 500
E3	547.0	3.0%	5.1%	S&P 400 Growth
E4	544.9	3.0%	5.1%	S&P 400 Value
E6	537.1	3.0%	5.0%	S&P 600
E7	810.3	4.5%	7.6%	MSCI USA High Dividend Yield Index
E8	491.9	2.7%	4.6%	MSCI USA Minimum Volatility Index
Total	7,737.8	42.6%	72.7%	

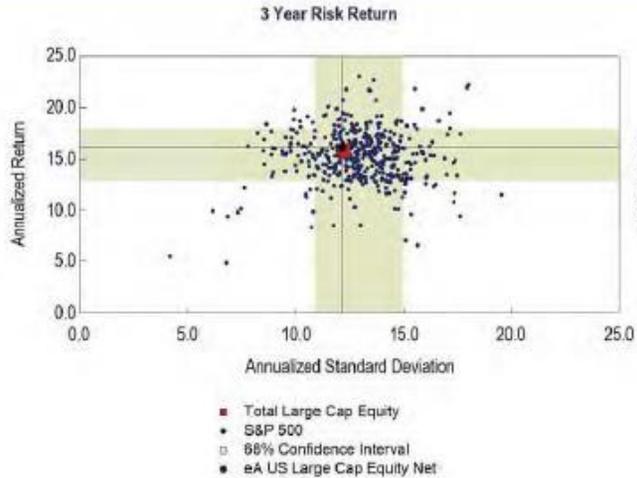
U.S. Equity - Active Strategies

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 Equity	% US Equity	Benchmark	Net Excess Return (bps)		
					1 year	3 year	5 year
	759.5	4.2%	7.1%	S&P 500 Value	903	306	414
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
	526.4	2.9%	4.9%	S&P 500 Growth	241	-35	-118

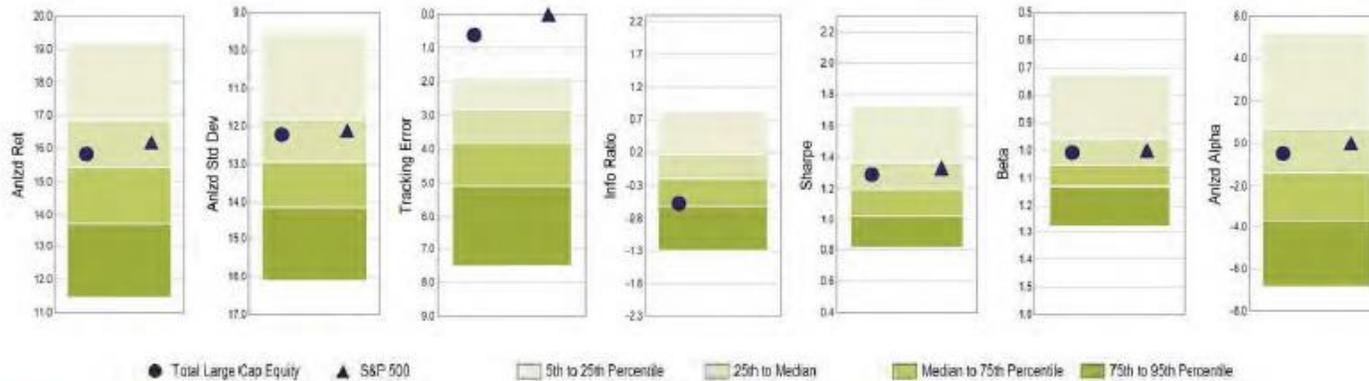
Arizona State Retirement System
Asset Class Analysis - Total Large Cap Equity



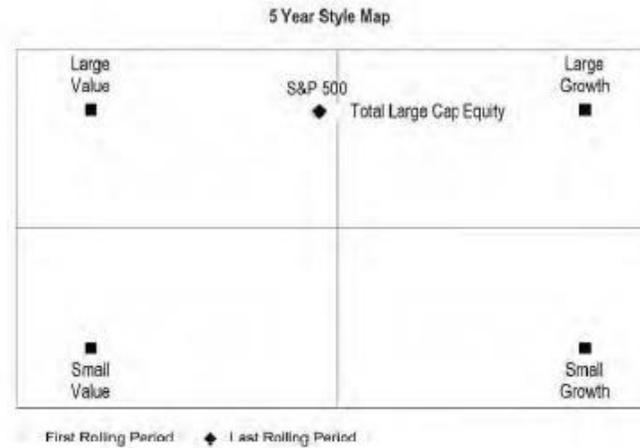
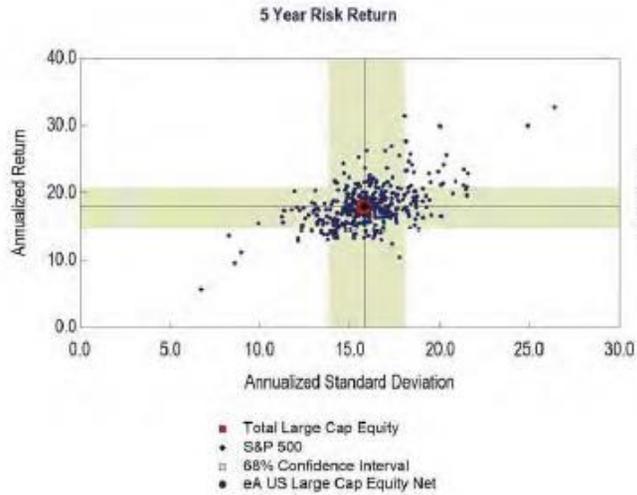
Arizona State Retirement System
Asset Class Analysis - Total Large Cap Equity



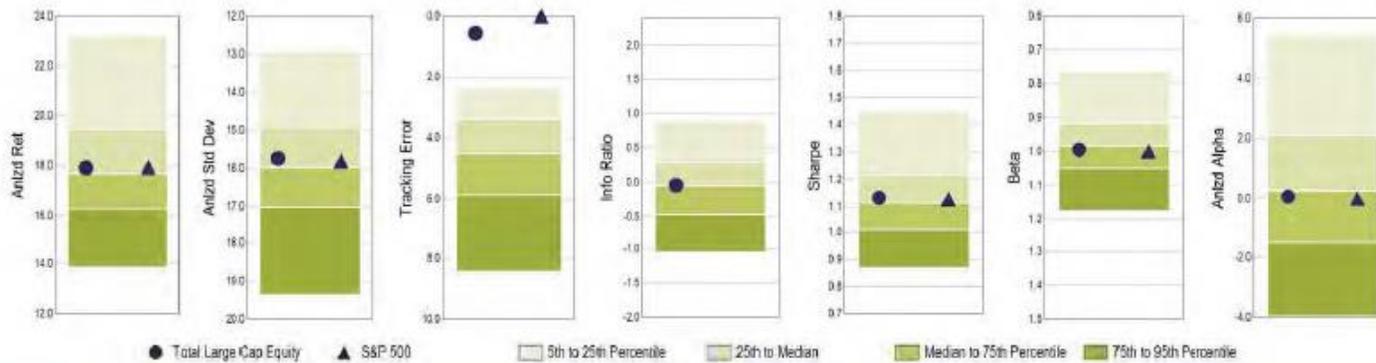
*Style map is returns based.



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



*Style map is returns based.



U.S. Equity - Active Strategies

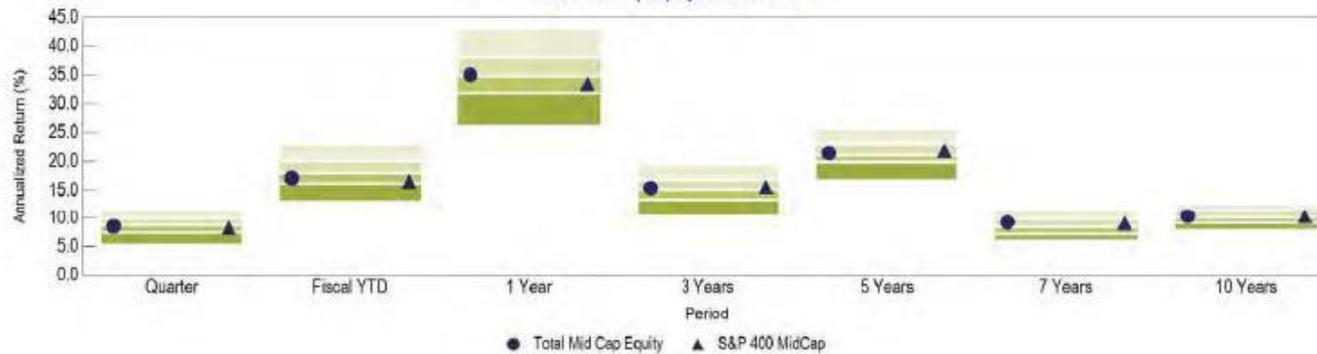
U.S Equity Mid Cap							
Wellington	The Mid Cap Opportunities Portfolio seeks to outperform the S&P MidCap 400 Index by investing in high-quality, established mid-cap companies with good balance sheets, strong management teams, and market leadership in their industry.						
	(\$MM)	% Total Equity	% US Equity	Benchmark	Net Excess Return (bps)		
					1 year	3 year	5 year
439.5	2.4%	4.1%	S&P 400	938	89	-277	
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"> Change: 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. Neglect: 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. Valuation: 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. 						
	(\$MM)	% Total Equity	% US Equity	Benchmark	Net Excess Return (bps)		
					1 year	3 year	5 year
98.1	0.5%	0.9%	S&P 400 Value	33	-235	-552	

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

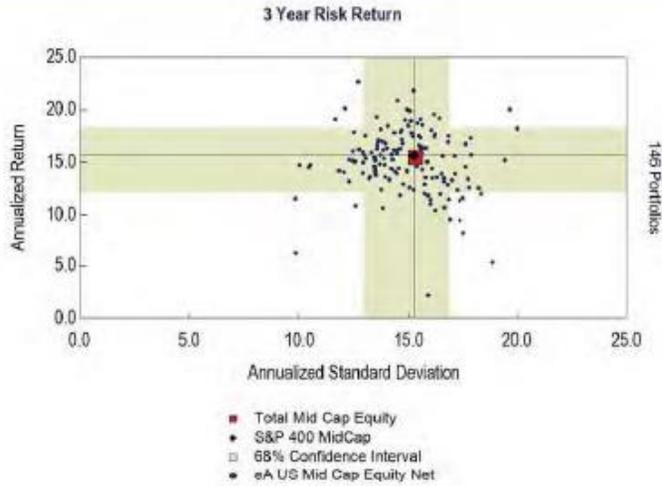
Rolling Annual Excess Benchmark Return



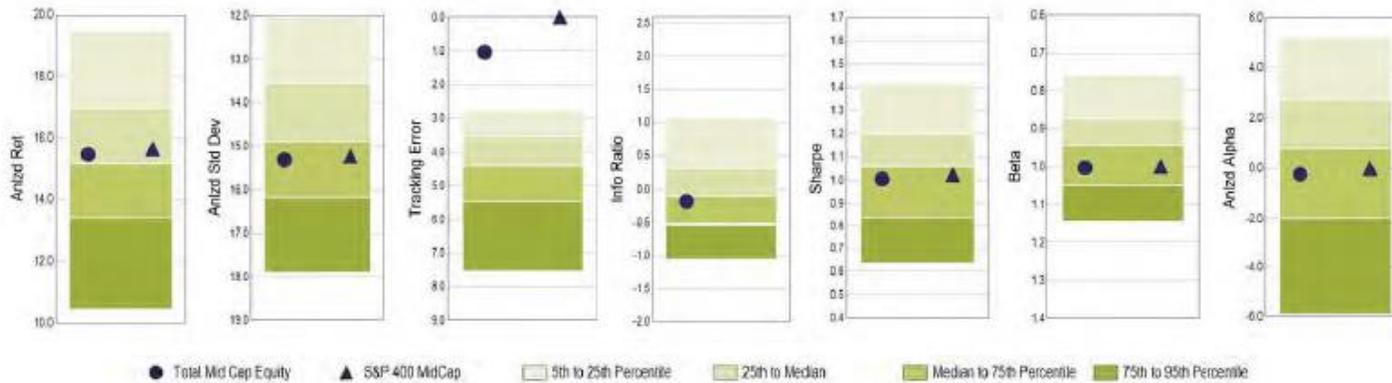
eA US Mid Cap Equity Net Accounts



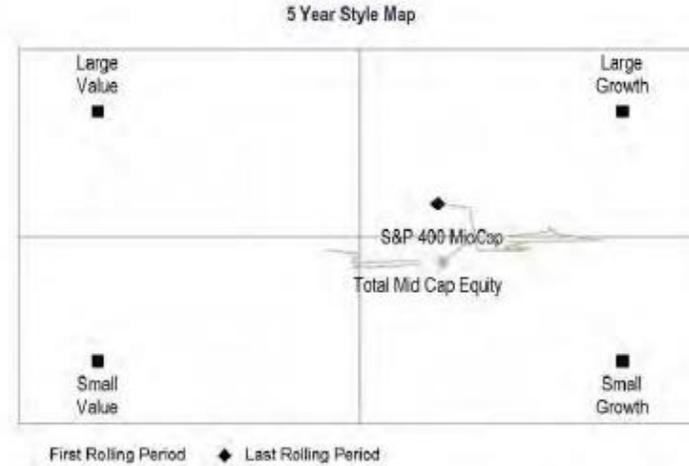
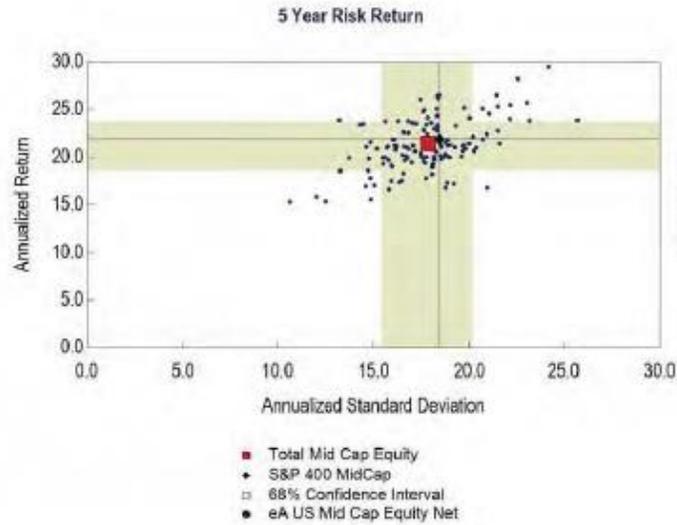
Arizona State Retirement System
Asset Class Analysis - Total Mid Cap Equity



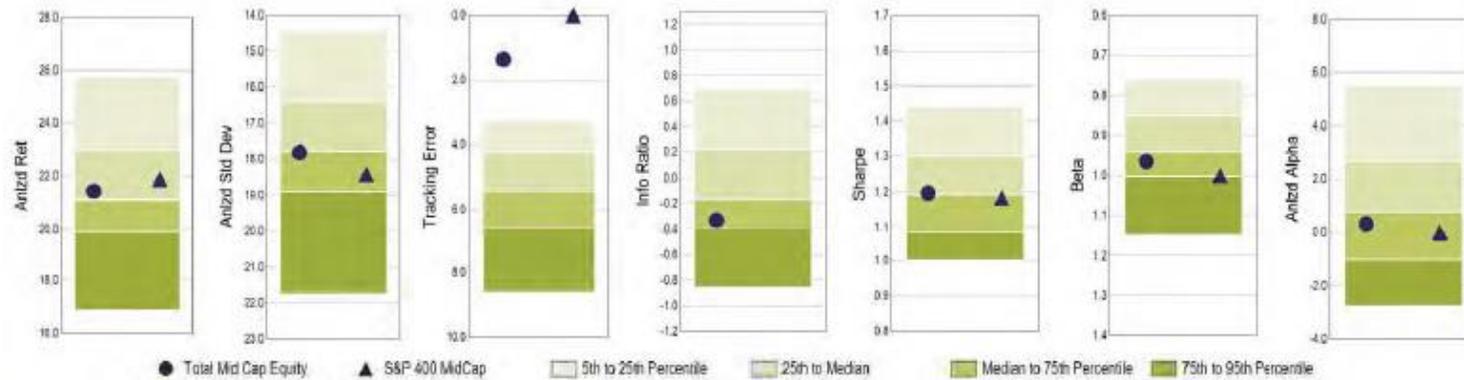
*Style map is returns based.



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



*Style map is returns based.



U.S. Equity - Active Strategies

U.S Equity Small Cap							
TimesSquare	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
	520.8	2.9%	4.9%	Russell 2500 Growth	-487	253	-33
DFA	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
	444.4	2.4%	4.2%	S&P 600 Value	46	-154	373
Champlain	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
	113.9	0.6%	1.1%	S&P 600	-904	-320	-451

Arizona State Retirement System

Asset Class Analysis - Total Small Cap Equity

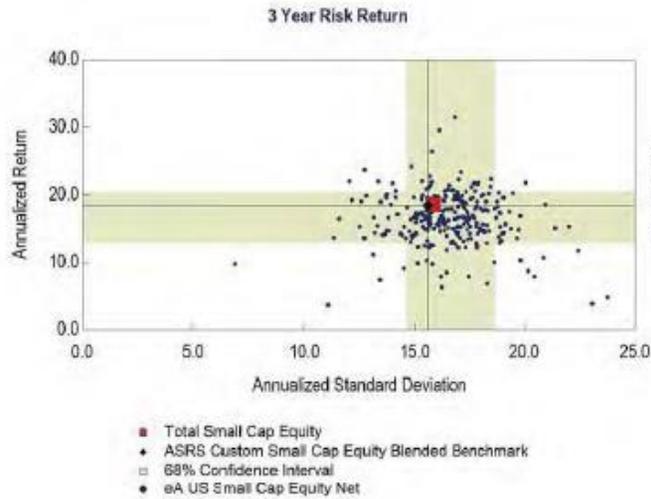
Rolling Annual Excess Benchmark Return



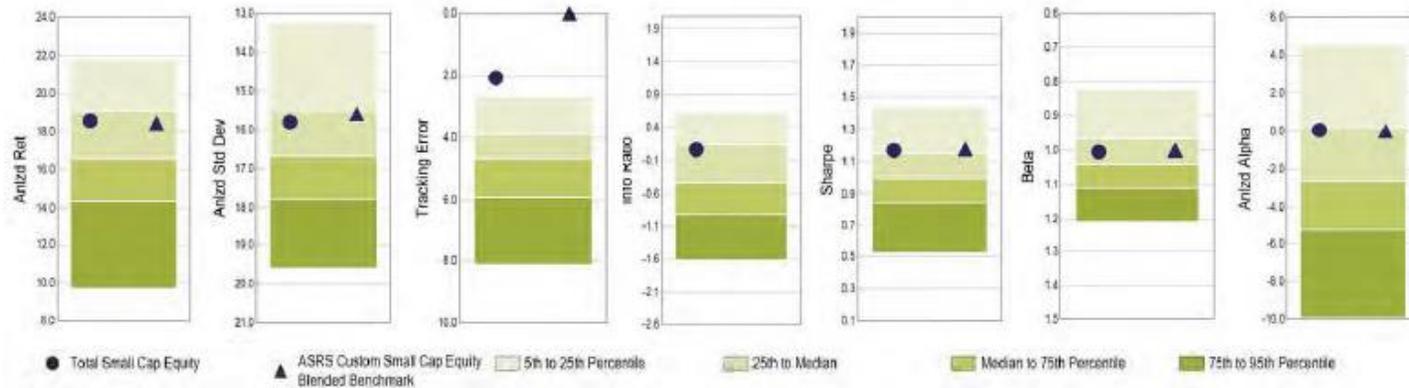
eA US Small Cap Equity Net Accounts



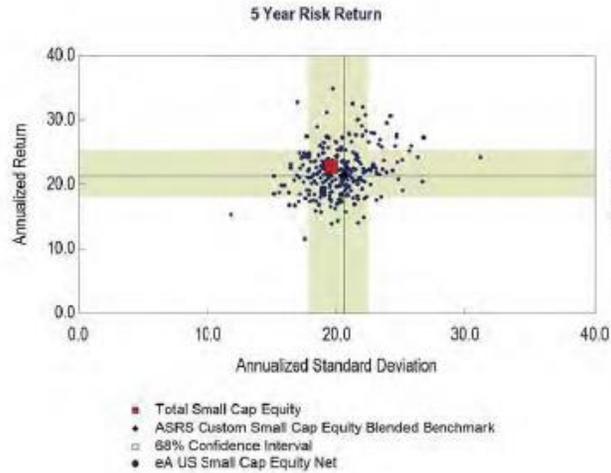
Arizona State Retirement System
Asset Class Analysis - Total Small Cap Equity



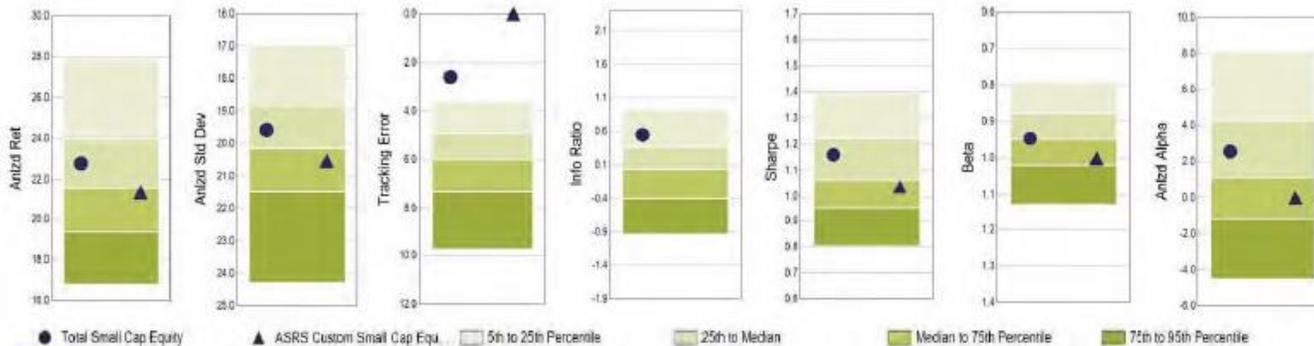
*Style map is returns based.



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



*Style map is returns based.



Non-U.S. Equities Asset Class Review

Non-U.S Equities Class Program Update - Summary of 3-27-2014 Asset Class Committee Meeting

IMD Equity Group (“staff”) undertook during 4Q2013 and 1Q2014 a holistic review of the external, active strategies managers within the International Large-Cap Equity asset sub-class (EAFE). Prompting the review was staff’s conclusion that the current complement of active managers is sub-optimal. Staff identified in particular, three managers who demonstrated unusual and unacceptable tracking error, and poor relative performance, over the short and intermediate term, to the extent that all three exhausted the value each mandate added to the performance of their respective benchmarks. This was sufficiently acute to undermine performance contributed from the indexed portion of the sub-class and offset positive relative performance of the two other non-U.S. equities asset sub-classes to the extent that the overall non-U.S. equities class underperformed the blended benchmark.

Staff recognizes that active managers will not generate superior performance during all periods; however, the review served to identify certain weakness and potential opportunities to improve the overall EAFE construct. At the end of 3Q2013, staff assembled a short list of potentially viable replacement manager candidates sourced from prior meetings and extracted from the eVestment database. It then engaged Mercer as project consultant to conduct the due diligence and analysis on these candidates, as well as two additional suggested by Mercer, all of which Staff discussed in the 31st January 2014 Public Markets Asset Class Committee. Staff outlined for the committee its four preferences and advised that it would pursue late stage interviews with them as preparation for this committee meeting and, potentially, contract(s). It expects to award three mandates sourced from the existing EAFE managers referenced above.

Non-U.S. Equities Class Program Update - Summary of 3-27-2014 Asset Class Committee Meeting

Non-U.S. Equities Large-Cap EAFE Manager Review

EAFE: Three Sub-Class active mandates have hindered its, and Non-U.S. Equities performance over the past year

- Hansberger (EAFE Growth): Until recently, has underperformed
 - Long-range confidence in the portfolio management team has eroded
- Walter Scott (EAFE Growth): Continuing to underperform after a strong prior early period
 - Strategy is time-dependent
- Aberdeen (EAFE Value): Continuing to underperform after a strong prior early period
 - Strategy is time-dependent

Staff engaged a project consultant to supplement its analysis and vetting of potential replacements. Conclusions and recommendations of the EAFE Large Cap Review were disseminated at the Asset Class Committee meeting on March 27th, 2014.

IMD House Views

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

- **Fundamentals: POSITIVE**
 - GDP growth in the Eurozone has begun to look less recessional while that of the lesser-developed economies remains off its pace, but comparatively stronger.
 - Relatively inexpensive and available money supports a shift toward risk assets.
 - Monetary and economic policies focused on controlling economic growth and fiscal stability.
- **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 non-U.S. equities; excepting the emerging markets, investors are less guarded and remain constructive on global risks.
 - Major non-U.S. markets performances are keeping pace with those of the U.S.

Performance as of 2/28/2014

	3 Mths	YTD	1 Year	3 Years	5 Years	10 Years	Inception	3 Mths	YTD	1 Year	3 Years	5 Years	10 Years	Inception	
INTERNATIONAL EQUITY															
Aberdeen: Edinburgh (LC Active)	1.14	1.02	8.49	6.13	---	---	6.13	-170	-29	-1,124	-98	---	---	-98	
Brandes: SD (LC Active)	2.15	1.72	27.21	6.43	15.97	6.89	9.80	-69	41	748	-68	-360	-127	295	
Blackrock EAFE: SF(Passive)	2.85	1.33	19.52	6.93	---	---	12.15	1	2	-21	-18	---	---	-15	
Hansberger: FL (LC Active)	-0.14	-1.90	14.55	3.67	18.47	---	5.99	-298	-320	-518	-344	-110	---	-148	
Walter Scott: Edinburgh (LC Active)	-1.68	-2.37	6.88	---	---	---	5.64	-452	-368	-1,286	---	---	---	-250	
MSCI EAFE	2.84	1.31	19.74	7.11	18.13	7.14	---								
Total Int'l LC Equity															
AQR Capital	6.33	3.83	---	---	---	---	23.88	-2	-7	---	---	---	---	128	
Blackrock EAFE SC: SF (Passive)	6.26	3.83	26.30	9.52	---	---	16.55	-9	-7	-33	-39	---	---	-28	
DFA: Santa Monica (SC Active)	8.31	5.41	29.87	8.65	20.06	---	7.26	196	151	324	-126	-371	---	12	
Franklin Templeton: San Mateo (SC Active)	2.84	1.06	26.92	---	---	---	13.92	-351	-285	29	---	---	---	369	
MSCI EAFE Small Cap	6.35	3.90	26.63	9.91	23.77	9.42	---								
Total Int'l SC Equity															
Blackrock EM: SF (Passive)	-4.82	-3.57	-6.24	-2.24	---	---	-0.99	-3	-17	-52	-56	---	---	-52	
William Blair: Chicago (EM Active)	-1.20	-0.85	-0.48	3.43	---	---	1.54	358	255	523	511	---	---	288	
LSV: Chicago (EM Active)	-5.38	-4.56	-7.33	-1.53	---	---	-0.02	-60	-117	-162	15	---	---	54	
Eaton Vance: Boston (EM Active)	-1.99	-1.97	-1.40	0.02	---	---	0.72	280	143	432	170	---	---	127	
MSCI Emerging Markets	-4.78	-3.40	-5.71	-1.68	---	---	---								
Total EM Equity															
Total International															

Non-U.S. Equity - Passive Strategies

Portfolio	AUM (\$MM)	% Total Equity	% non-US Equity	Benchmark
BlackRock EAFE	2,356.7	13.0%	33.4%	MSCI EAFE Gross
BlackRock EAFE Small Cap	469.5	2.6%	6.7%	MSCI EAFE Small Cap Gross
BlackRock Emerging Markets	636.0	3.5%	9.0%	MSCI Emerging Markets Gross
Total	3,462.2	19.0%	49.1%	

Non-U.S. Equity – Active Strategies

Non- U.S Developed Large Cap Equity							
Brandes	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
	525.3	2.9%	7.4%	MSCI EAFE	748	-68	-360
Aberdeen	Aberdeen believes that competitive long-term returns are achieved by identifying high quality stocks at attractive valuations and holding them for the long term. It is the firm's belief that sound fundamentals drive stock prices over time. Aberdeen employs a fundamental bottom-up investment approach based upon a rigorous and disciplined proprietary research effort which originates with direct company due diligence visits. Investment professionals hold absolute return to be of the utmost importance over the long term and are benchmark-aware, but not benchmark-driven. As such, indices do not serve as a starting point for portfolio construction, and Aberdeen is comfortable taking decisive positions away from the benchmark.						
	(\$MM)	% Total Equity	% non-US Equity	Benchmark	Excess Return (bps)		
					1 year	3 year	5 year
	488.5	2.7%	6.9%	MSCI EAFE	-1,124	-98	n/a

Non-U.S. Equity - Active Strategies

Non- U.S Developed Large Cap Equity							
Hansberger	<p>Hansberger Global Investors growth equity philosophy is founded on the premise that superior growth companies with attractive valuations provide the best opportunities for investment. Hansberger believes that investors should seek to identify those companies, internationally, that have consistently exhibited the ability to maintain a competitive market advantage through innovative product design, exceptional management, strong market share and superior profitability. Hansberger identifies companies with superior growth characteristics with a focus on historical long-term company fundamentals and sustainable competitive advantage; industry Leaders with higher secular growth, superior profitability, and lower balance sheet risk</p>						
	(\$MM)	% Total Equity	% non-US Equity	Benchmark	Excess Return (bps)		
					1 year	3 year	5 year
	339.1	1.9%	4.8%	MSCI EAFE	-518	-344	-110
Walter Scott	<p>Walter Scott believes the objective for all long term investors is to maintain and enhance the, after inflation, purchasing power of their assets. Walter Scott targets long term compound real returns of 7-10% per annum for the portfolio. The firm believes this will most likely be achieved by investing in companies with high rates of internal wealth generation which in time will translate into return to the investor. Thus the firm's research efforts are directed towards identifying companies that meet its investment criteria using bottom-up, fundamental research to build a portfolio of 40-50 positions with relatively low turnover.</p>						
	(\$MM)	% Total Equity	% non-US Equity	Benchmark	Excess Return (bps)		
					1 year	3 year	5 year
	231.4	1.3%	3.3%	MSCI EAFE	-1,286	n/a	n/a

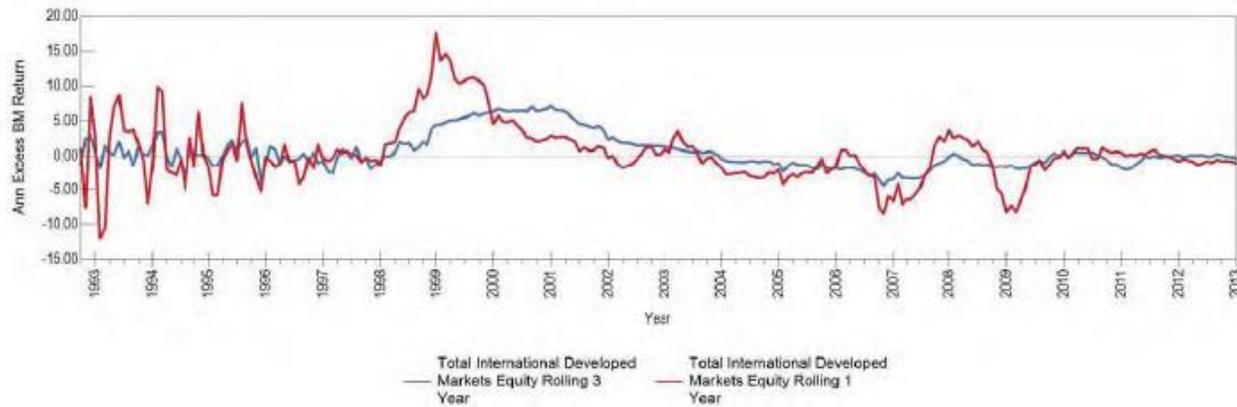
Non-U.S. Equity - Active Strategies

Non- U.S Developed Small Cap Equity							
DFA	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
	224.6	1.2%	3.2%	MSCI EAFE Small Cap	324	-126	-371
Franklin Templeton	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
	420.0	2.3%	6.0%	MSCI EAFE Small Cap	29	n/a	n/a
AQR	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
	179.6	1.0%	2.5%	MSCI EAFE Small Cap	n/a	n/a	n/a

Arizona State Retirement System

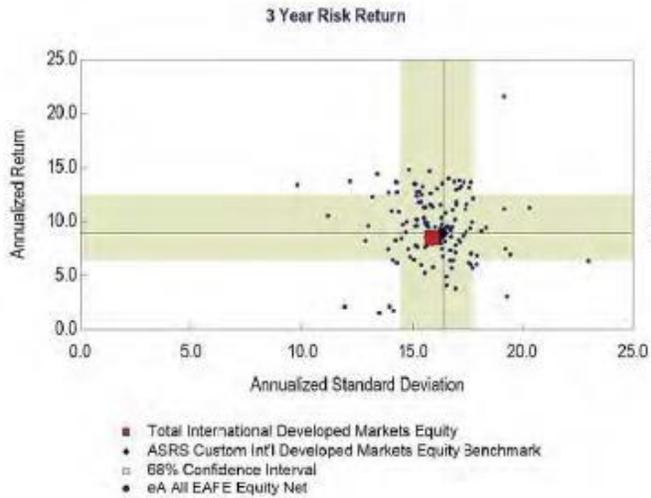
Asset Class Analysis - Total International Developed Markets Equity

Rolling Annual Excess Benchmark Return

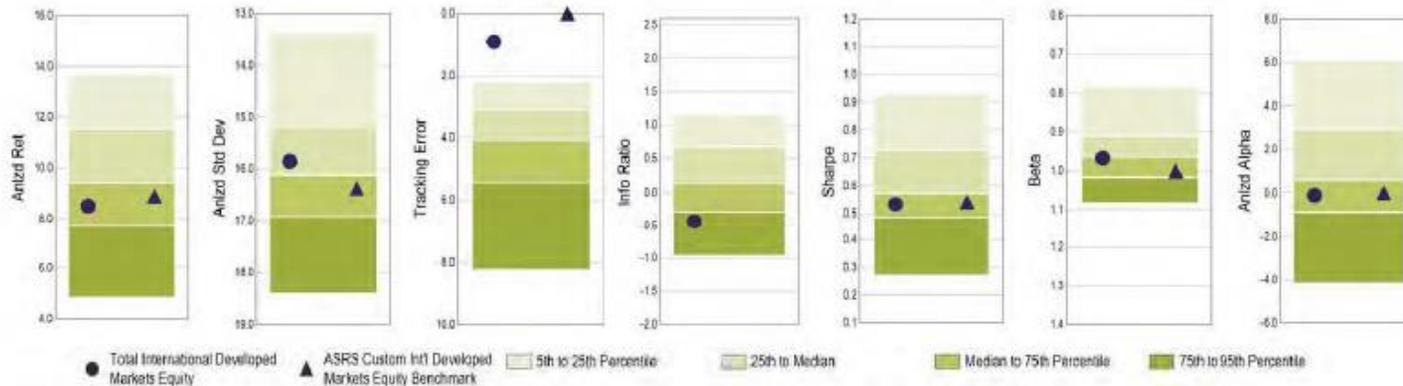


Arizona State Retirement System

Asset Class Analysis - Total International Developed Markets Equity

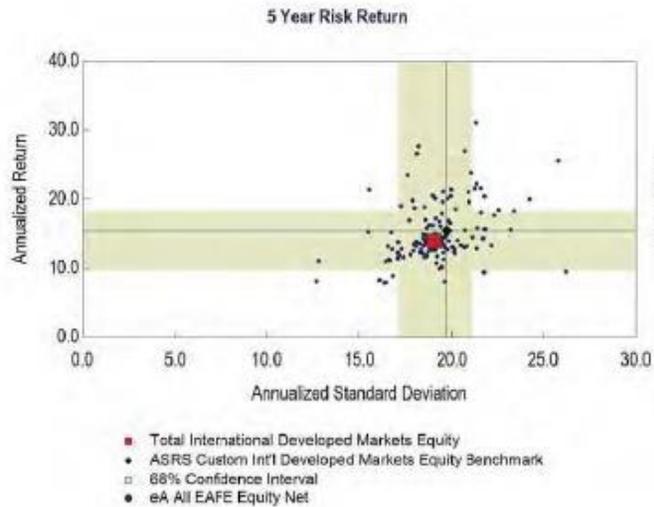


*Style map is returns based.

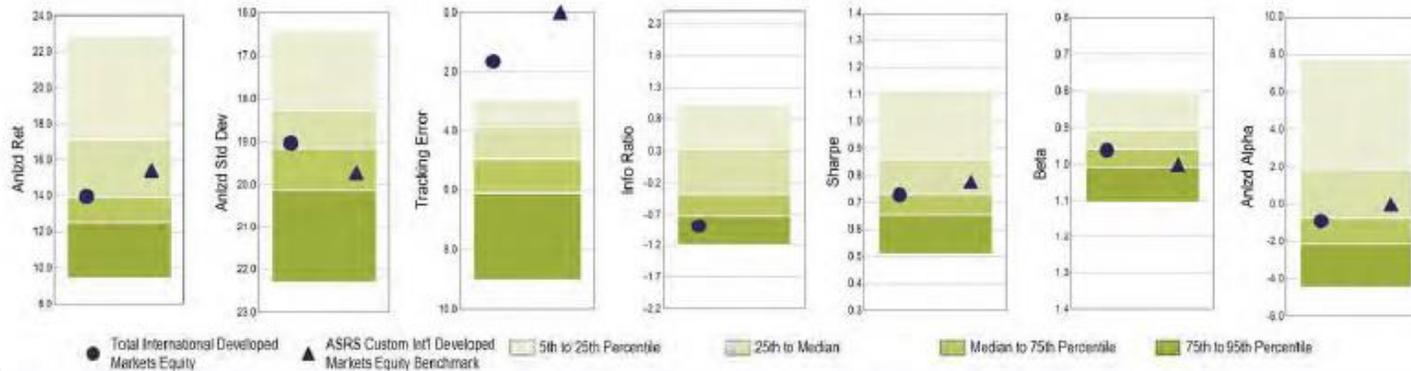


Arizona State Retirement System

Asset Class Analysis - Total International Developed Markets Equity



*Style map is returns based.



International Developed Small Cap

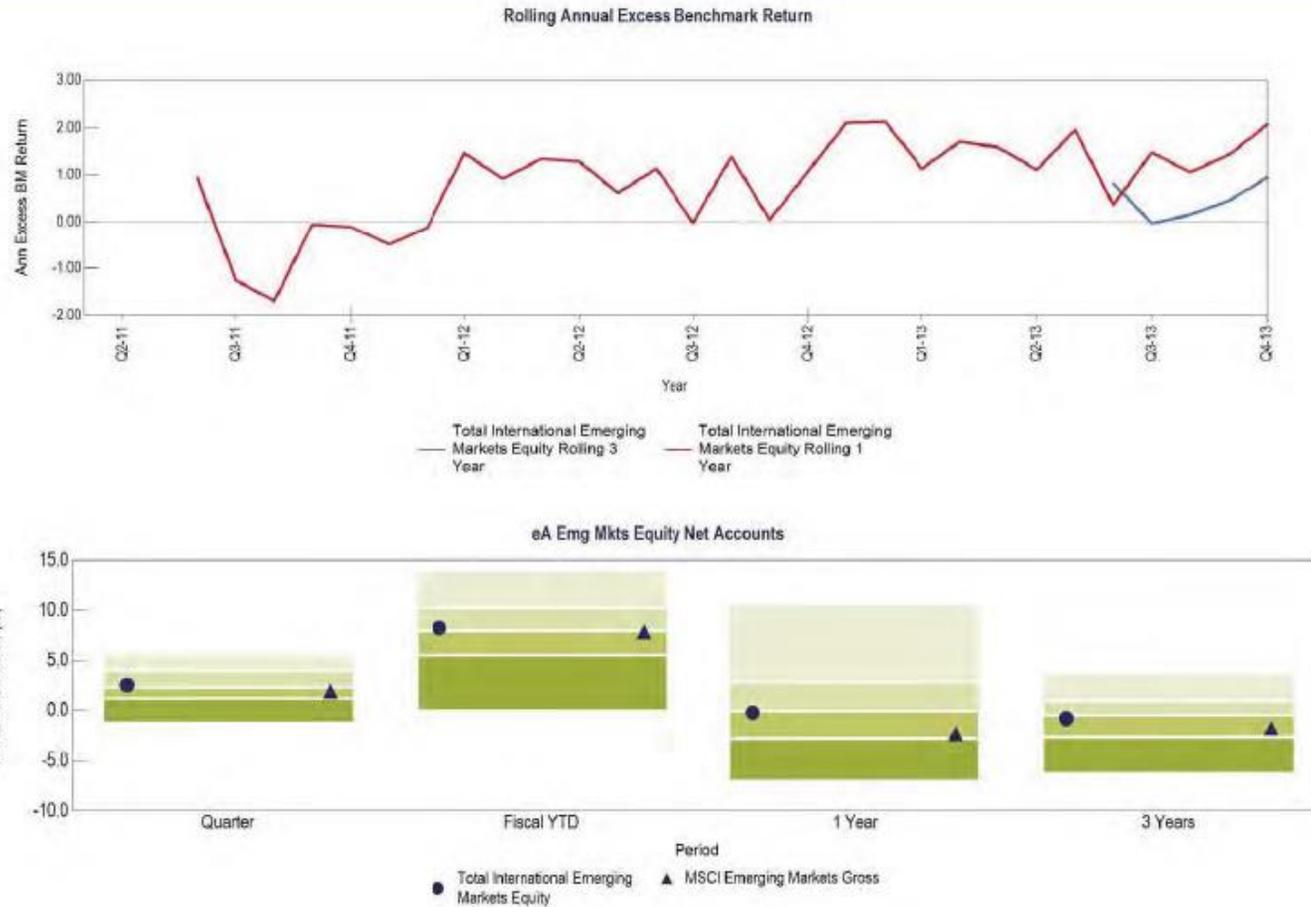
- International Small Caps had a very good year in 2013 primarily due to the prospects of a recovery in the Euro-Zone and the positive effects of accommodative monetary policy in Japan.
- *DFA* has recently posted strong excess returns of 300bps over the past year. Their deep value quantitative investment process has been helped by a value bias in the non-US developed markets over the past quarter and their performance benchmark is a neutral MSCI EAFE Small Cap Index.
- *Franklin Templeton (FT)* had a stellar year, posting one year excess returns of 1,136bps for their bottoms-up fundamental stock selection portfolio. The mandate focuses on low leverage growth companies with strong cash flows, near term momentum and attractive valuations. The portfolio is highly concentrated and should be expected to deviate substantially from their benchmark over short periods of time. There have been no firm changes of note and the team added an analyst to the team as a generalist in 2012.
- *AQR*, a recent hire in 2013, believes fundamentals drive stock returns. However, they tend to select stocks that combine value and momentum factor characteristics. Additionally, they use systematic rebalancing to add value when appropriate. AQR has performed in-line with the benchmark since hired.

Non-U.S. Equity - Active Strategies

Non- U.S Emerging Market Equity							
Eaton Vance	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
	473.7	2.6%	6.7%	MCSI Emerging Markets	432	170	n/a
LSV	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
	277.4	1.5%	3.9%	MCSI Emerging Markets	-162	15	n/a
William Blair	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
	433.7	2.4%	6.1%	MCSI Emerging Markets	523	511	n/a

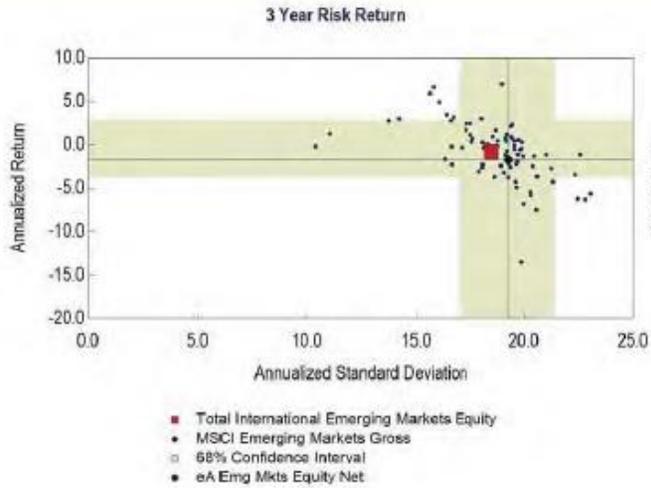
Arizona State Retirement System

Asset Class Analysis - Total International Emerging Markets Equity

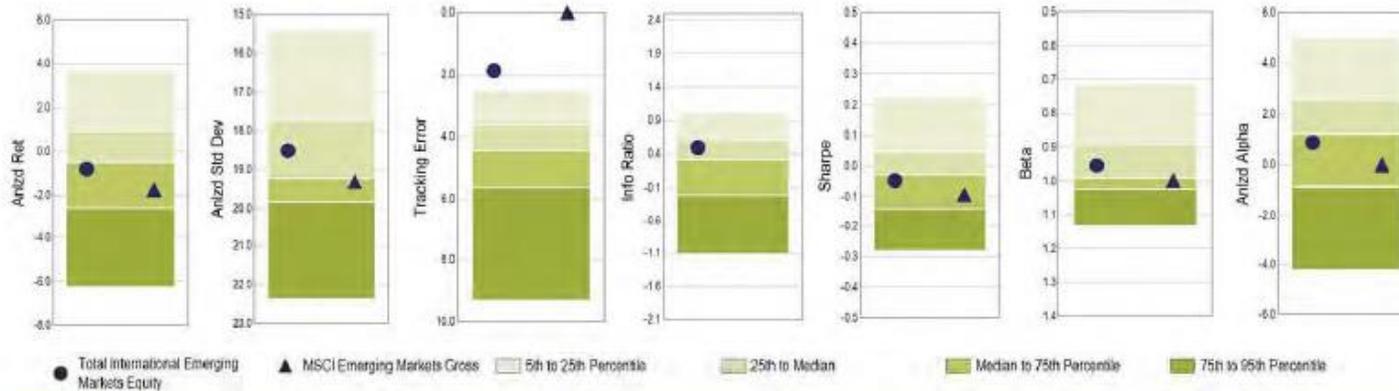


Arizona State Retirement System

Asset Class Analysis - Total International Emerging Markets Equity



*Style map is returns based.



Emerging Market Equities

- Although Emerging Markets have underperformed DM, our Active Managers have been able to navigate the difficult environment and add excess return.
- *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 approximately 500 bps of excess return over the last one and three years.
- *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. EV has delivered positive excess returns 400 and 170 bps over the last one and three years respectively.