



August 21, 2014

**Tucson Supplemental Retirement
System Board of Trustees**

International Small Cap and Global
Equity

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International Small Cap

Agenda

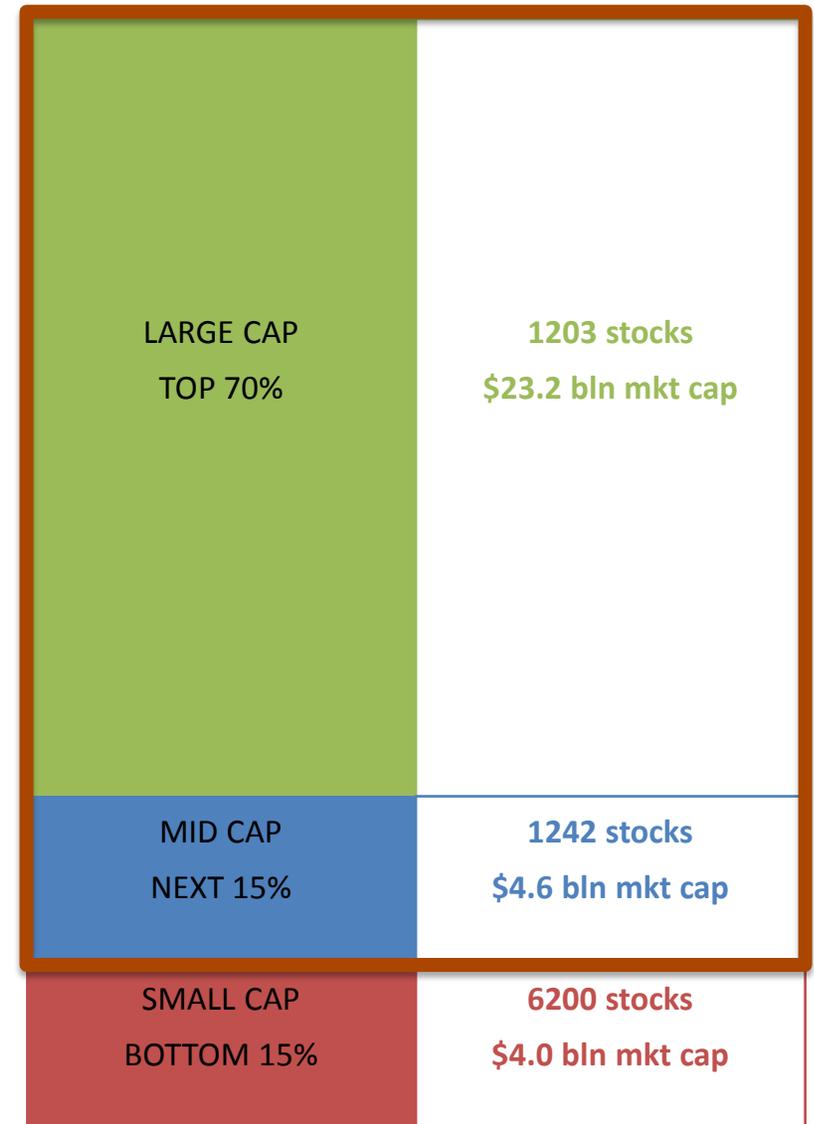
- What is International Small Cap?
- Tulsa's International Equity Structure
- Performance Potential
- Active Management Potential
- Risk/Return
- Diversification Benefits
- Market Descriptions
- Things to Consider
- Pros & Cons

International Small Cap

What is International Small Cap?

- MSCI Standard Indices (large + mid cap)
 - EAFE, ACWI exUS, World, EM, etc.
- MSCI Investible Market Indices (IMI) (standard + small)
 - EAFE IMI, ACWI exUS IMI, World IMI, EM IMI, etc.
- MSCI Small Cap
 - Bottom 15% of market cap universe for each **country**
 - No single market cap cutoff
 - **72% of all stocks are small cap (by count)**
- S&P
 - Bottom 15% (country)
- FTSE
 - Bottom 10% (regional)
- Russell
 - Bottom 15% (global)
 - Single market cap cutoff

MSCI ALL COUNTRY WORLD IMI

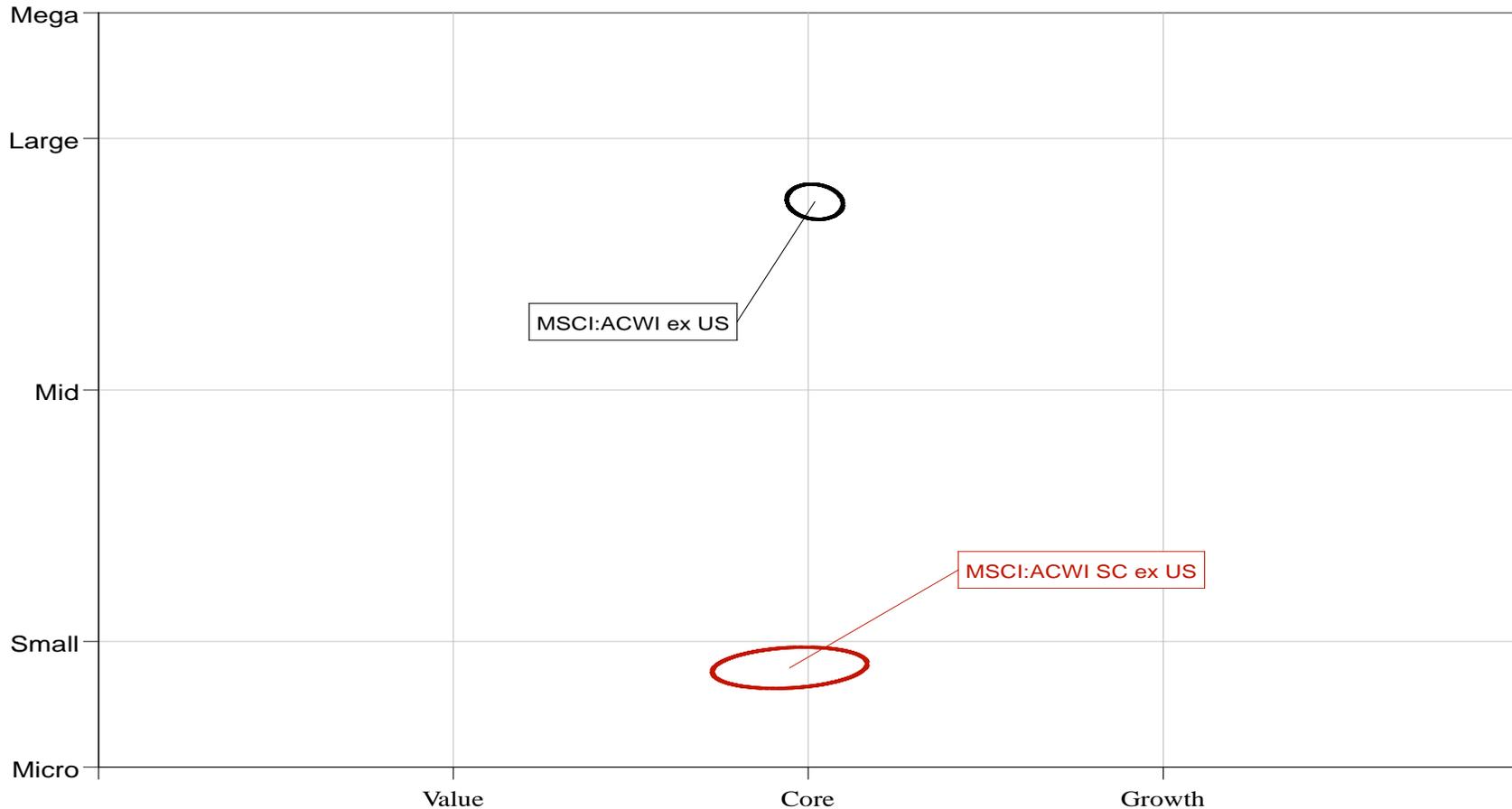


Sources: MSCI, S&P, FTSE, Russell

International Small Cap

Tulsa's International Equity Structure

International Equity Style Map
for 10 Years Ended September 30, 2013

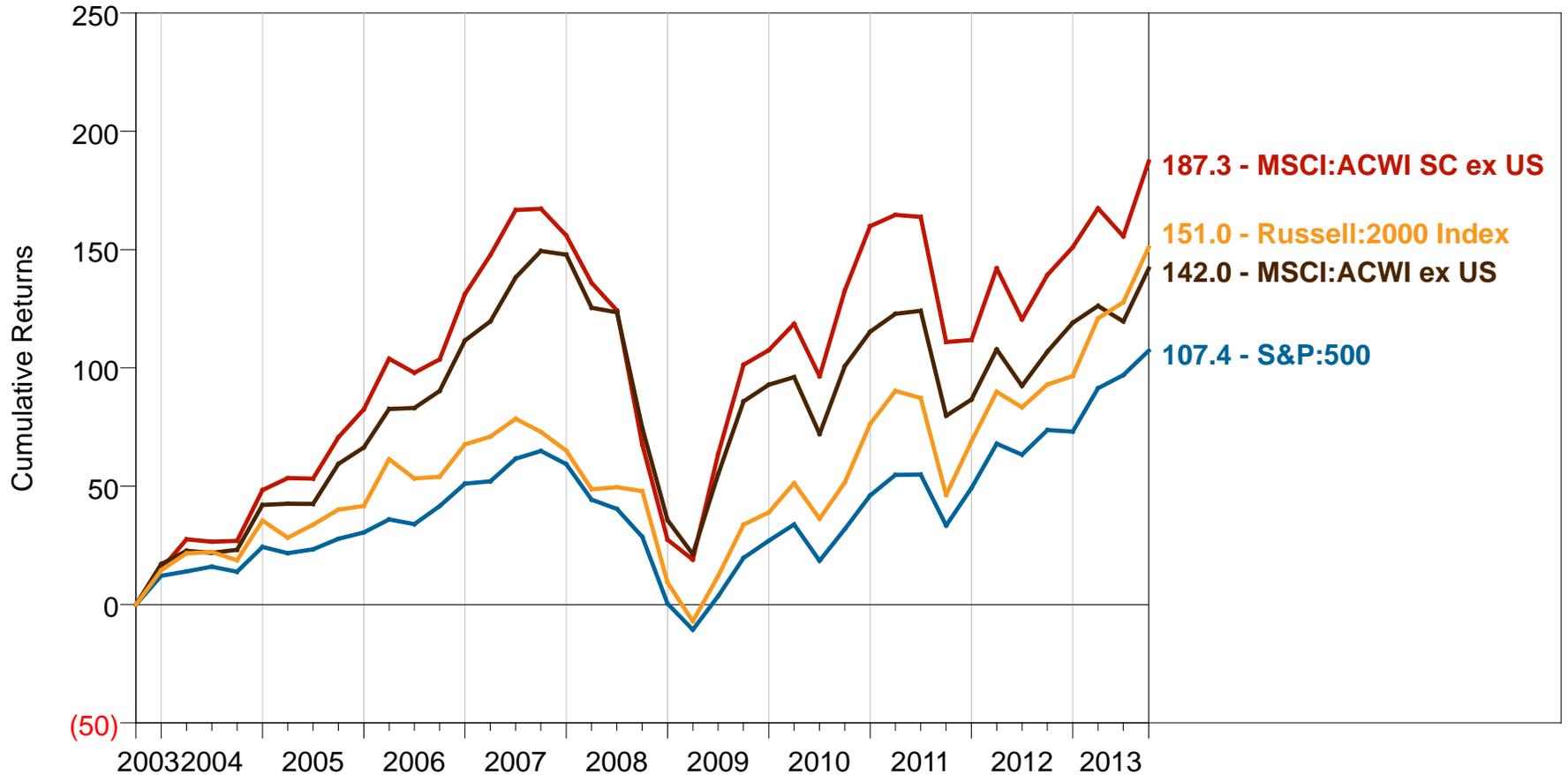


- Tulsa's portfolio is firmly entrenched in the large cap space, similar to the standard benchmark

International Small Cap

Performance Potential

Cumulative Returns
for 10 Years Ended September 30, 2013



- International and domestic small caps have outperformed larger caps over time

Sources: Callan, MSCI, S&P

International Small Cap

Performance Rotation

Periodic Table of Investment Returns
for Calendar Years
10 Years Ended September 30, 2013

2004	2005	2006	2007	2008	2009	2010	2011	2012	3 Qtrs. 2013
MSCI:ACWI SC ex US 29.1%	MSCI:ACWI SC ex US 23.0%	MSCI:ACWI SC ex US 26.7%	MSCI:ACWI x US (Net) 16.7%	Russell:2000 Index (33.8%)	MSCI:ACWI SC ex US 62.9%	Russell:2000 Index 26.9%	S&P:500 2.1%	MSCI:ACWI SC ex US 18.5%	Russell:2000 Index 27.7%
MSCI:ACWI x US (Net) 20.9%	MSCI:ACWI x US (Net) 16.6%	MSCI:ACWI x US (Net) 26.7%	MSCI:ACWI SC ex US 10.7%	S&P:500 (37.0%)	MSCI:ACWI x US (Net) 41.4%	MSCI:ACWI SC ex US 25.2%	Russell:2000 Index (4.2%)	MSCI:ACWI x US (Net) 16.8%	S&P:500 19.8%
Russell:2000 Index 18.3%	S&P:500 4.9%	Russell:2000 Index 18.4%	S&P:500 5.5%	MSCI:ACWI x US (Net) (45.5%)	Russell:2000 Index 27.2%	S&P:500 15.1%	MSCI:ACWI x US (Net) (13.7%)	Russell:2000 Index 16.3%	MSCI:ACWI SC ex US 14.4%
S&P:500 10.9%	Russell:2000 Index 4.6%	S&P:500 15.8%	Russell:2000 Index (1.6%)	MSCI:ACWI SC ex US (50.2%)	S&P:500 26.5%	MSCI:ACWI x US (Net) 11.2%	MSCI:ACWI SC ex US (18.5%)	S&P:500 16.0%	MSCI:ACWI x US (Net) 10.0%

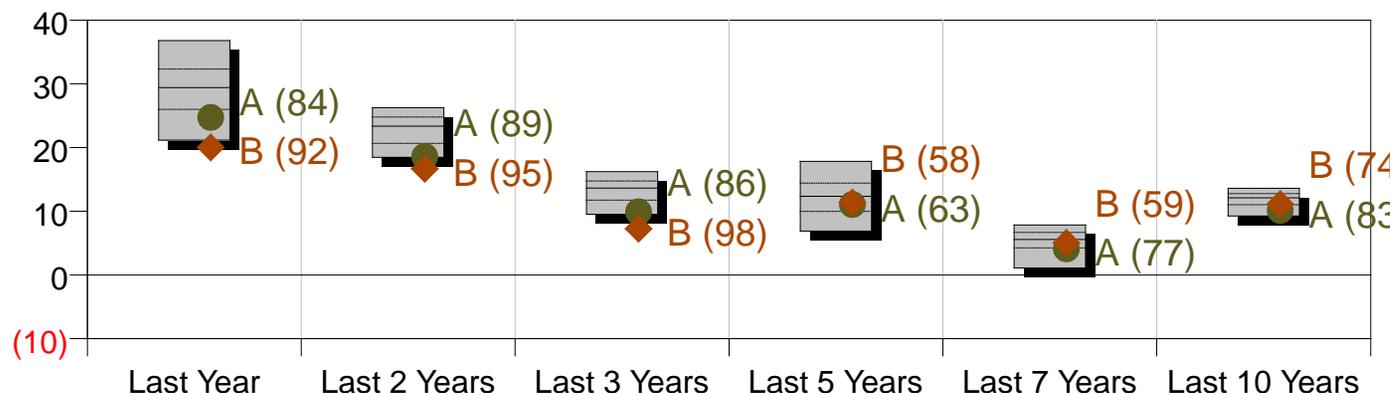
- Small Caps don't win every time

Sources: Callan, MSCI, S&P, Russell

International Small Cap

Active Management Pays

Returns
for Periods Ended September 30, 2013
Group: CAI International Small Cap Style



10th Percentile	36.81	26.26	16.22	17.86	7.86	13.63
25th Percentile	32.33	24.79	14.75	14.43	6.71	12.78
Median	29.42	23.36	13.64	12.35	5.57	12.12
75th Percentile	26.02	20.66	11.77	9.99	4.28	11.05
90th Percentile	21.18	18.47	9.53	6.90	1.10	9.28

Member Count	28	27	27	27	26	25
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MSCI:World Sm Cap ex US ● A	24.75	18.64	9.92	11.06	4.10	10.15
MSCI:ACWI SC ex US ◆ B	20.04	16.69	7.27	11.38	5.04	11.13

- Most of the International Small Cap manager universe beats the indices

Sources: Callan, MSCI

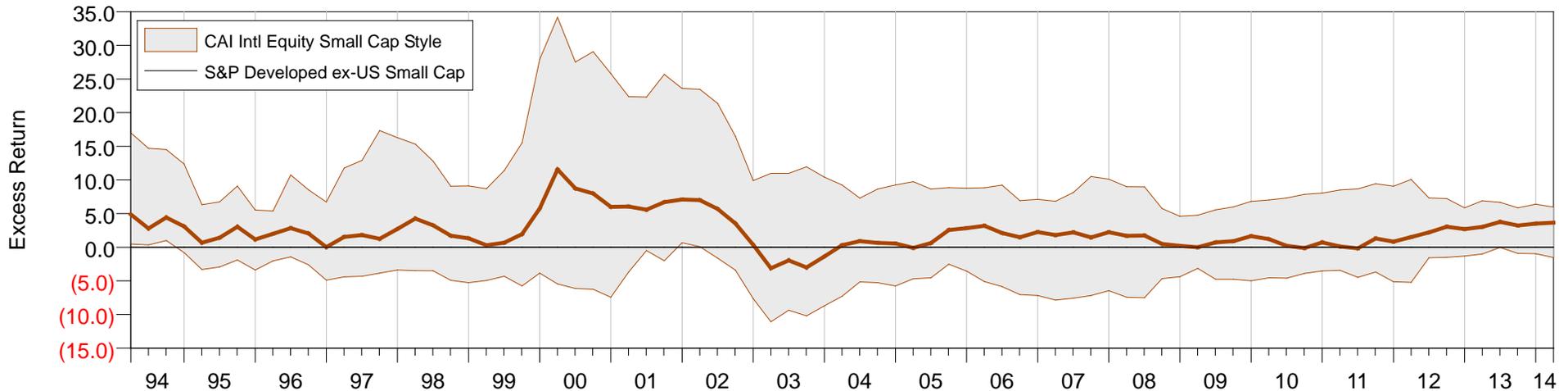
International Small Cap Style vs S&P Developed ex-US Small Cap

- Percent of Three-Year periods where Manager Beat Benchmark by more than Hurdle – by Percentile

Hurdle	0.75%	0.80%	0.85%	0.90%	0.95%	1.00%	1.05%	1.10%	1.15%	1.20%
Median	71%	71%	70%	70%	68%	68%	68%	68%	68%	66%
45th Percentile	86%	86%	85%	83%	80%	78%	78%	76%	75%	73%
40th Percentile	94%	94%	94%	93%	93%	90%	90%	88%	88%	88%
35th Percentile	99%	98%	98%	98%	98%	98%	98%	98%	96%	96%
30th Percentile	100%	100%	100%	100%	100%	100%	100%	100%	100%	99%
25th Percentile	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Average Annualized Excess Return – Median Manager: **2.26%**

Rolling 12 Quarter Excess Return relative to S&P Developed ex-US Small Cap for 20 Years ended March 31, 2014

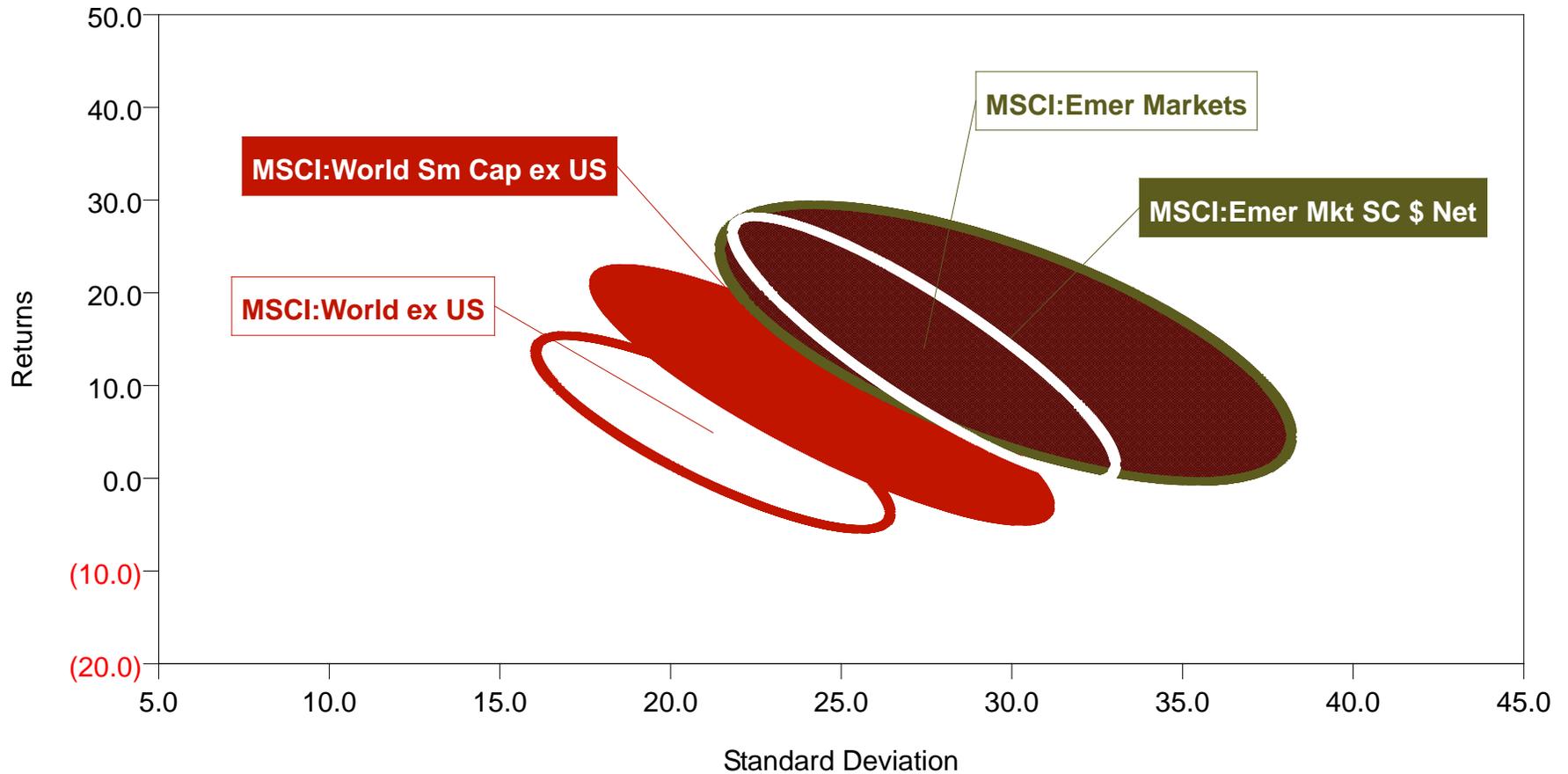


- Active management also tends to exceed typical fee hurdles

International Small Cap

Risk/Return

Rolling 20 Quarter Scatter Chart
for 10 Years Ended September 30, 2013



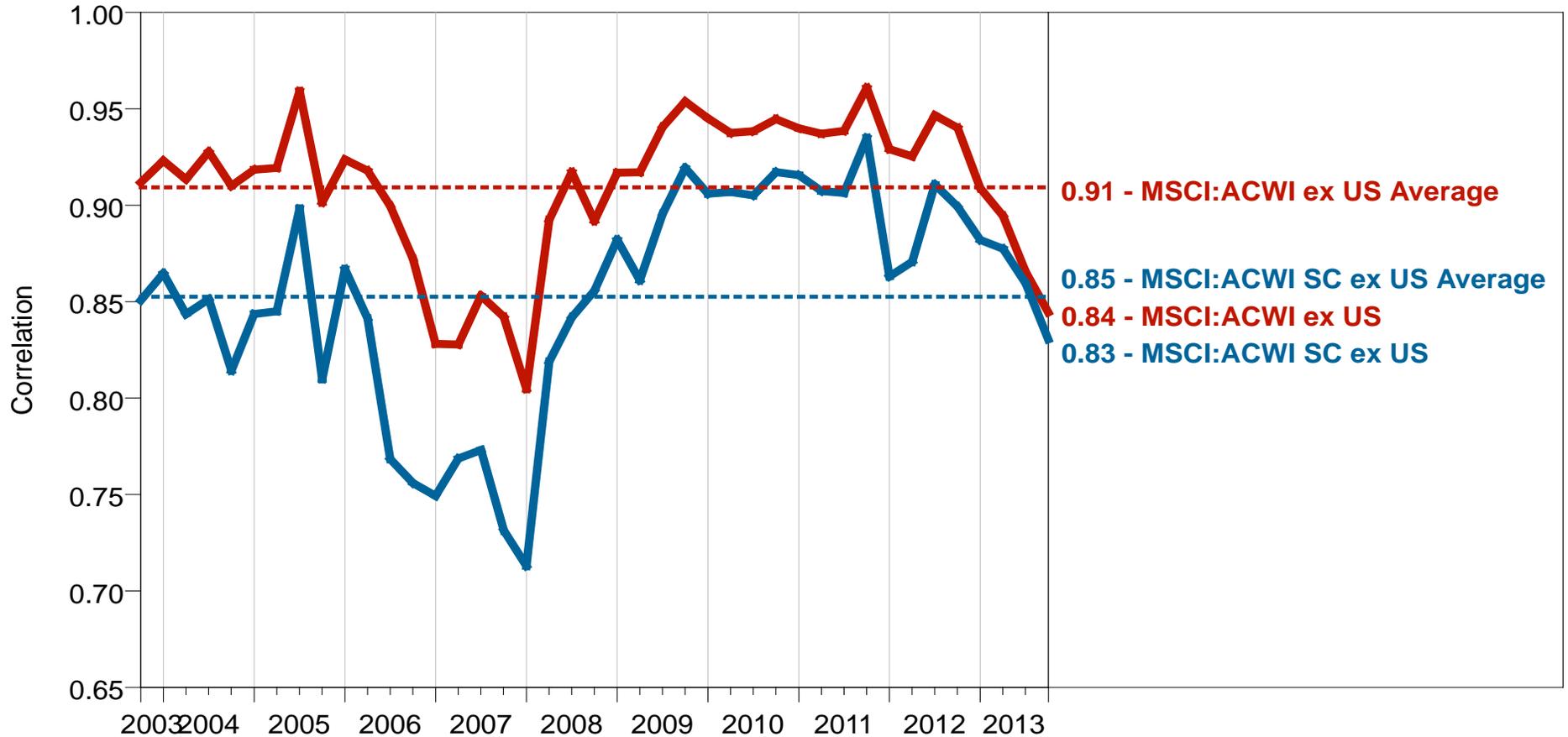
- International Small Caps bring higher volatility (with higher returns)

Sources: Callan, MSCI, S&P

International Small Cap

Diversification Benefits - Correlation

Rolling 12 Quarter Correlation Relative To S&P:500
for 10 Years Ended September 30, 2013

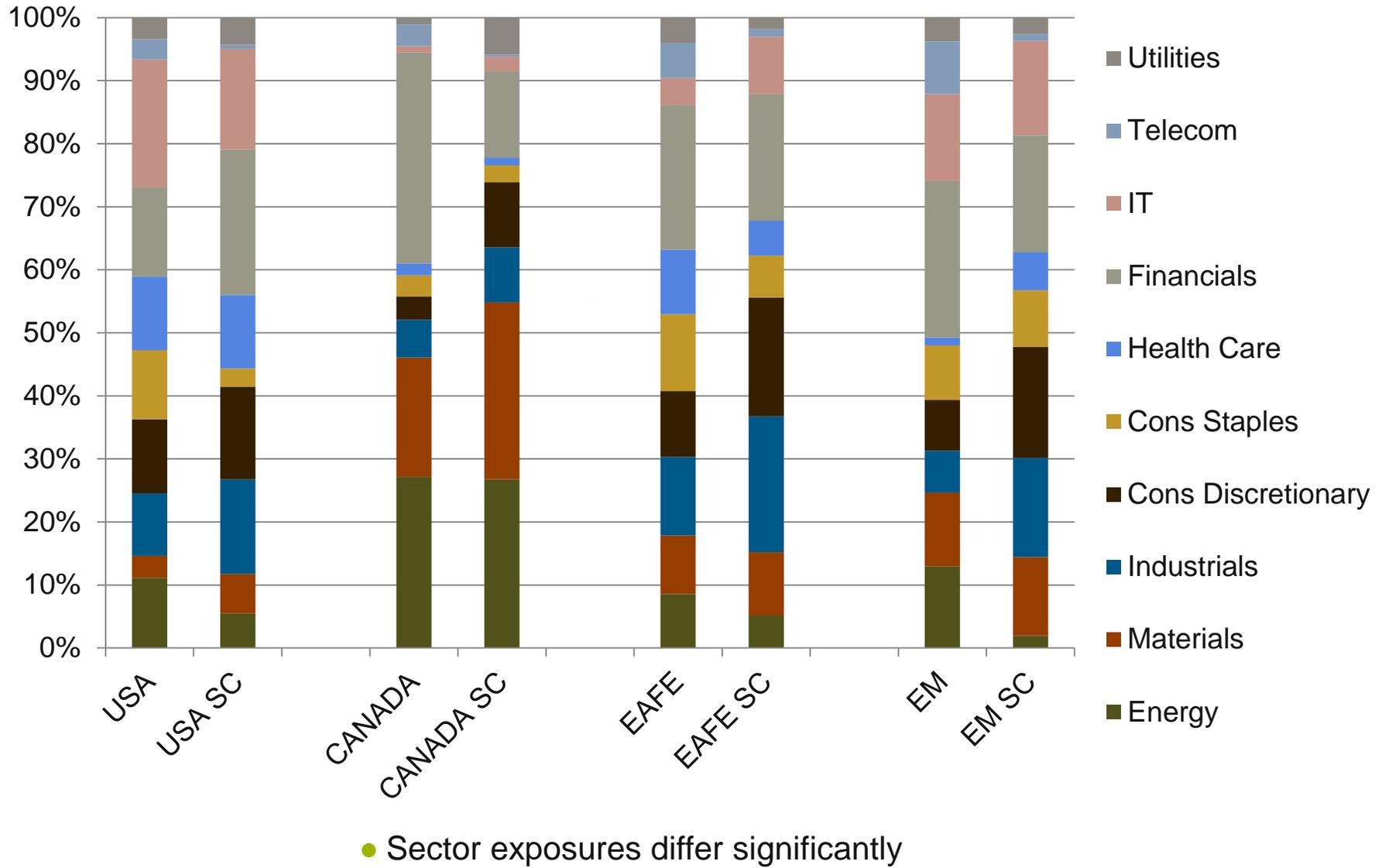


- International Small Caps offer lower correlation to S&P 500

Sources: Callan, MSCI, S&P

International Small Cap

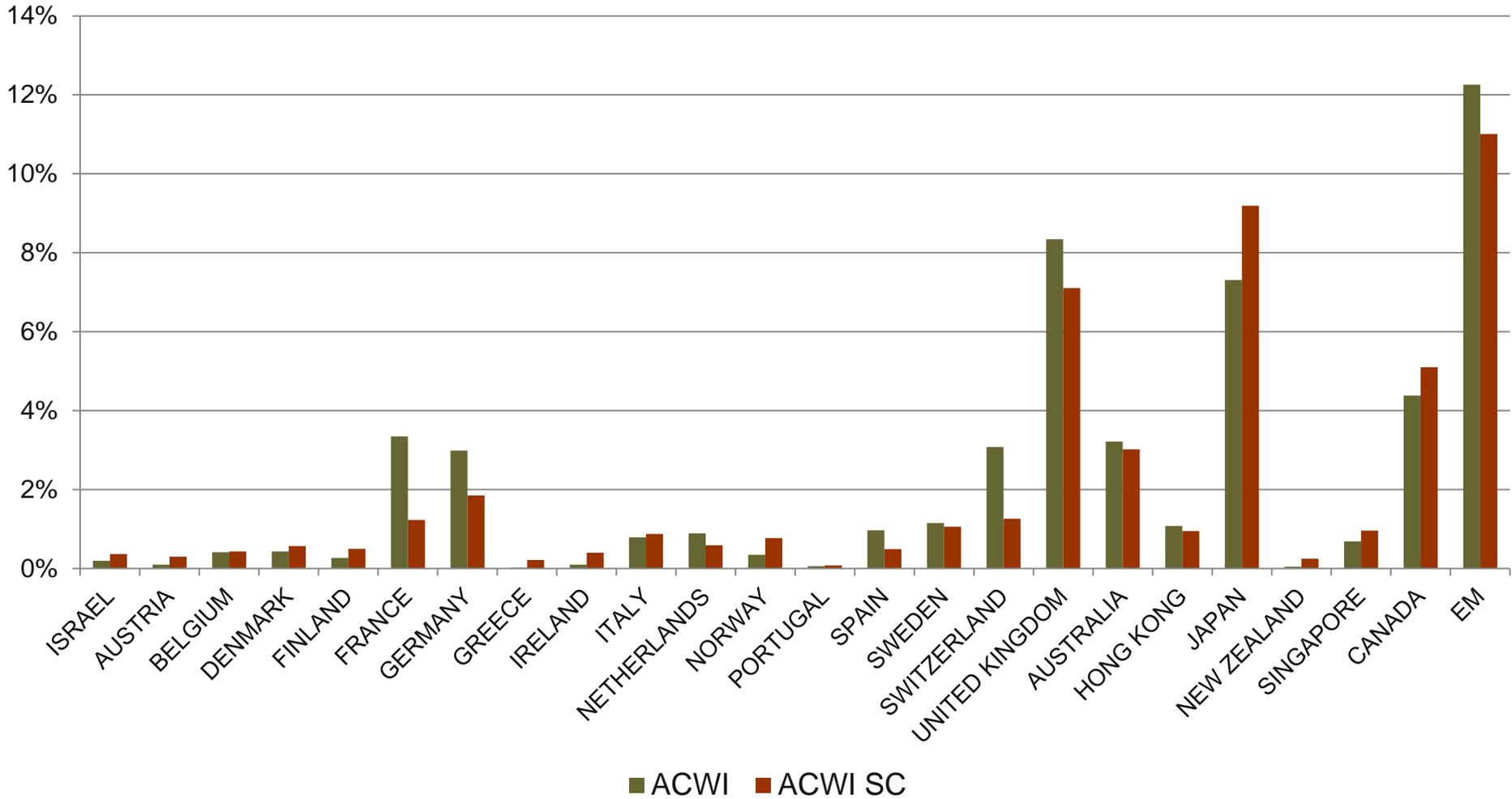
Sector Differences



Sources: Callan, MSCI

International Small Cap

MSCI Country Exposures (Sept 2012 – request update if needed)



● USA = 47.5% ACWI / 48.6% ACWI Small Cap

Sources: Callan, MSCI

International Small Cap

Other considerations

- Higher Fees: typically 75 bps to 120 bps for \$50mm
- Developed versus All Country or Dedicated Emerging Markets
 - Emerging Market Small Cap product availability is thin
- Dedicated Small Cap versus All Cap
- Quantitative versus Fundamental
 - Models continue to work well in small cap land
- Vehicles
 - Smaller allocations make separate accounts less practical (due to EM)
- Country/Sector/Stock attribution effects harder to analyze
 - Less correlated with exchange futures or sector ETFs
 - Less familiar universe
- Tougher business proposition for managers
 - Capacity constrained
 - Broader universe = research resources
 - Results in fewer products - but still enough

International Small Cap

Pros & Cons

Pros

- Take advantage of increased opportunity set outside of the U.S.
- Higher growth potential
- Potential for alpha from active management in less efficient market
- Broader diversification
- Better access to local economies

Cons

- Greater liquidity risk
- Less product availability
- Less product capacity
- Higher volatility in isolation
- Less style purity
- Greater default risk
- Greater financing risk
- More expensive