THE CASE FOR EMERGING MARKETS SMALL CAP

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EXECUTIVE SUMMARY

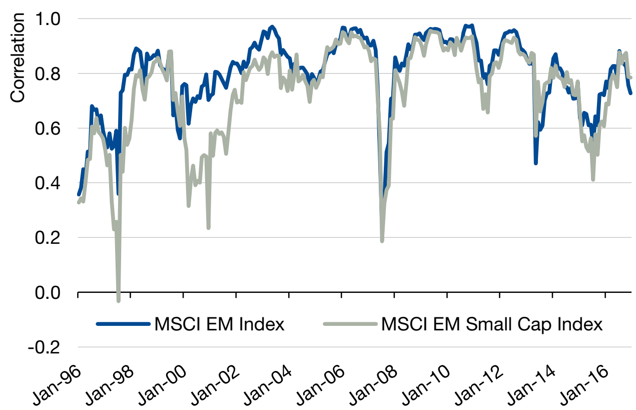
In recent years investment allocators have voiced a desire to gain exposure to the growing purchasing power of emerging markets ('EM') consumers. That desire is often coupled with the belief that the standard MSCI Emerging Markets Index ('MSCI EM Index', 'standard') composition and the strategies benchmarked to it offer less desirable exposures, particularly those related to commodities (oil), financials, and state-owned enterprises. Another concern is whether standard EM strategies continue to deliver the diversification from developed markets strategies that they have historically provided. In response to these concerns, we highlight the characteristics of EM small cap strategies and their potential benefits, which could include:

- Diversification to developed markets – on average lower historic correlation with developed markets;
- Greater exposure to domestic-demand growth – on average lower exposure to foreign revenue sources and sector composition tilted to consumer demand growth;
- Favorable small cap index performance versus standard index post global financial crisis;
- Superior forecast earnings growth with similar valuations;
- Potential to outperform the benchmark – supported by active manager historical performance; and
- Market inefficiencies present compelling opportunities for quantitative models.

HOW DOES CORRELATION WITH DEVELOPED MARKETS COMPARE?

Using monthly USD returns, we calculated rolling 12-month correlations between the two MSCI EM indices (standard and small cap) and the MSCI World Index, a proxy for developed markets. As shown in Figure 1, in recent months the MSCI Emerging Markets Small Cap Index ('MSCI EM SC Index') has become slightly more correlated with the MSCI World Index but has historically had lower correlation, particularly in the 1990s and early 2000s. The rise of globalization, cross border trade and investment, and integration of economic markets has led to the increased correlation of both EM indices to the MSCI World Index over the past 20 years. Although average correlations are comparable, there have been periods in recent years in which the MSCI EM SC Index has noticeably offered increased diversification benefits. The most recent example occurred during the mid-2015 period when the China A-share market volatility peaked.

Figure 1. Rolling 12-Month Correlation of EM Indices with the MSCI World Index (Jan. 1996 - Dec. 2016)



Source: Numeric Investors LLC, MSCI and Worldscope.

WHAT DIFFERENTIATES SMALL CAP?

Beyond return correlations are there other attributes that offer differentiation opportunities going forward? EM small cap companies are more domestic economy-oriented than larger EM companies. These on average smaller companies are better positioned to capitalize on the growing demand of EM consumers. By the nature of their size, larger EM companies generate more revenue abroad than their small cap counterparts, making them less resilient to shocks abroad and more correlated, on average, with developed markets, as previously shown in Figure 1.

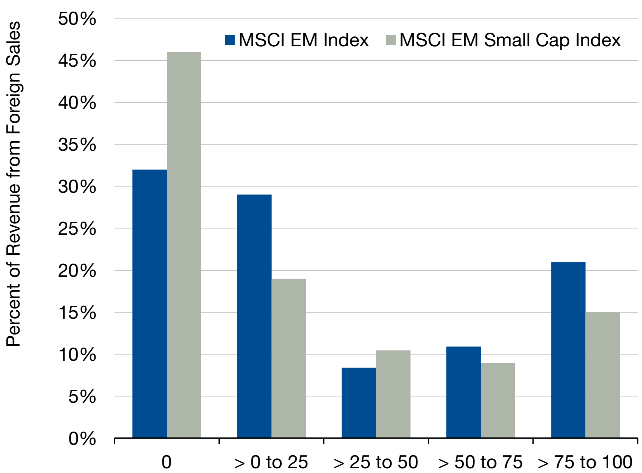
As of December 31, 2016, companies in the MSCI EM Index reported a higher percentage of foreign sales than did companies in the MSCI EM SC Index (Figure 2). A significant amount of MSCI EM SC Index companies reported no foreign sales at all, meaning 100% of sales were domestic. Figure 3 illustrates that nearly half (46%) of the MSCI EM SC Index weight is comprised of companies that report no revenue derived from foreign sales and only 24% of the index weight is comprised of companies that report a majority of revenue derived from foreign sales. In comparison, the MSCI EM Index is skewed towards companies with a higher percentage of revenue derived from foreign sales.

Figure 2. Benchmark Weighted Percent of Revenue from Foreign Sales as of December 31, 2016

	Foreign Sales
MSCI EM Small Cap Index	25.4%
MSCI EM Index	30.8%

Source: Numeric Investors LLC, MSCI and Worldscope.

Figure 3. Benchmark Weight by Percent of Revenue from Foreign Sales Buckets as of December 31, 2016

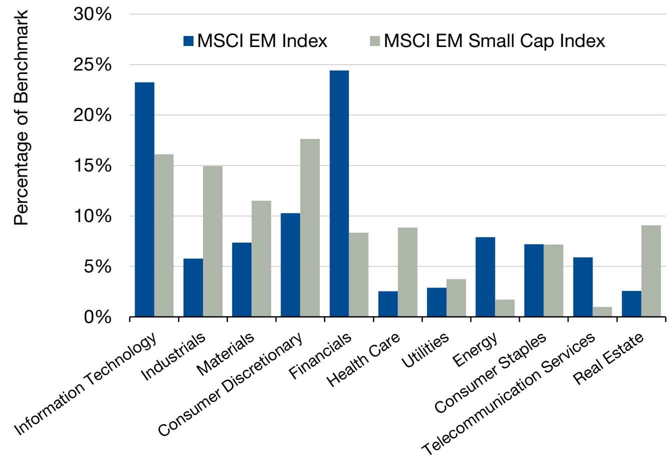


Source: Numeric Investors LLC, MSCI and Worldscope.

In addition to analyzing foreign sales, we can look to the sector composition of the EM indices as evidence that EM small cap companies have greater exposure to domestic growth (Figure 4). The MSCI EM SC Index has larger weights in consumer-oriented sectors such as Consumer Discretionary and Health Care and less weight in global demand sectors such as Energy and Information Technology; it also has less weight in the often government supported sectors such as Financials and Telecommunication Services.

By their nature, state owned enterprises (SOE) are often in industries of strategic importance and tend to have larger market capitalizations, making them a more substantial component of the MSCI EM Index than the MSCI EM SC Index. The sectors most represented by SOE companies are public good sectors such as Financials, Energy, and Telecommunication Services with significant country representation in China, Russia, Brazil, and India. Many investors are rightfully wary of companies partially controlled by government interests because state actors could potentially cloud market incentives and create inefficiencies. As such, SOEs on average are valued at a discount to similar companies without government ownership influence.

Figure 4. Sector Breakdown of MSCI EM Index and MSCI EM Small Cap Index as of December 31, 2016



Source: Numeric Investors LLC, MSCI and Bloomberg.

WHAT ABOUT PERFORMANCE DIFFERENCES?

The MSCI EM Index has outperformed the MSCI EM SC Index on an annualized basis since 1994 (Figure 5). However, post Global Financial Crisis in 2008, the MSCI EM SC Index outperformed the MSCI EM Index by over 3% annually, despite the recent underperformance in 2016.

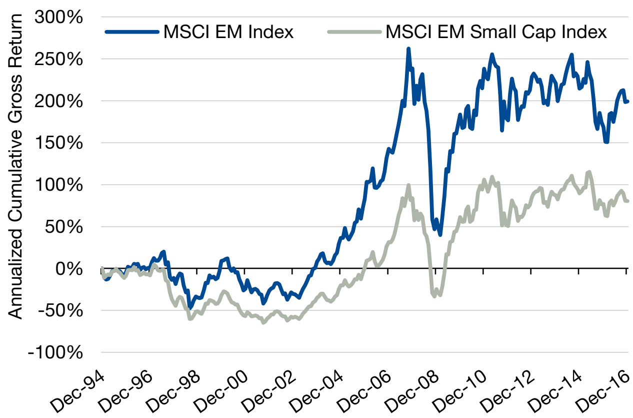
Figure 5. Annualized Return through December 31, 2016

	Since Dec. 31, 2008	Since Dec. 31, 1994
MSCI EM Small Cap Index	11.59%	2.74%
MSCI EM Index	8.26%	5.11%

Source: Numeric Investors LLC, MSCI and Bloomberg.

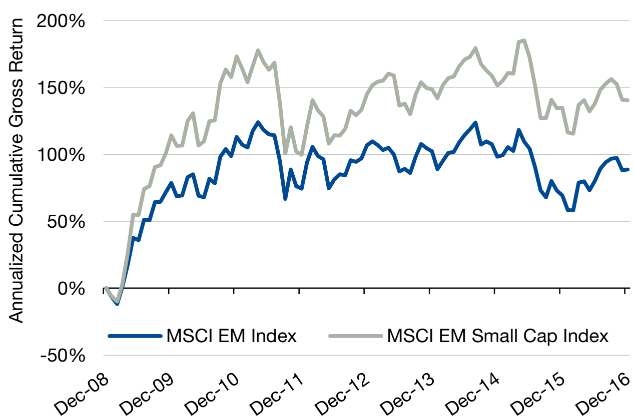
The difference in relative performance over the two periods can largely be attributed to outperformance by the MSCI EM Index between 2003 and 2007 (Figure 6). We believe this performance is attributable to the phenomenal growth generated by China's industrialization and associated insatiable demand for commodity resources; this largely benefited larger cap companies supplying China's demand. While the initial benefit was concentrated amongst China's resource supply chain, over time the benefit led to improved living standards and the development of an emerging markets middle class with associated demands. China's long process of transitioning to more domestic demand-oriented growth drivers has hampered the returns of the MSCI EM Index companies. As a result, the MSCI EM SC Index has outperformed the standard index, benefiting from growing domestic demand within EM countries (Figure 7).

Figure 6. Cumulative Gross Return (Jan. 1995 – Dec. 2016)



Source: Numeric Investors LLC, Bloomberg and MSCI.

Figure 7. Cumulative Gross Return (Jan. 2009 – Dec. 2016)



Source: Numeric Investors LLC, Bloomberg and MSCI.

After reviewing the performance differences between the indices over the two time periods, we were curious whether the performance differences could be attributed to differences during up or down markets. We used monthly returns to calculate the upside and downside capture of the MSCI EM SC Index relative to the MSCI EM Index (Figure 8).

When the MSCI EM Index had a positive monthly return, the MSCI EM SC Index underperformed it by 5% (upside capture of .95) on average. The median outcome was an underperformance of 1% (upside capture of 0.99). In months when the MSCI EM Index had a negative return, the MSCI EM SC Index lost 54% less on average (downside capture of 0.46) than the standard index. The median outcome was more muted, losing 5% less (downside capture of 0.95). We believe that median capture provides a better representation than average capture because it is less affected by outliers such as cases where the MSCI EM Index had a negative return but the MSCI EM SC Index was positive. Either way, it is evident that the MSCI EM SC Index has offered similar upside with potential downside protection to slowing global growth. We believe this reflects the lower sensitivity to global macroeconomic events within the small cap universe.

Figure 8. Capture of MSCI EM Small Cap Index Relative to MSCI EM Index (Monthly, Jan. 2009 - Dec. 2016)

	Average	Median
Upside Capture	95%	99%
Downside Capture	46%	95%

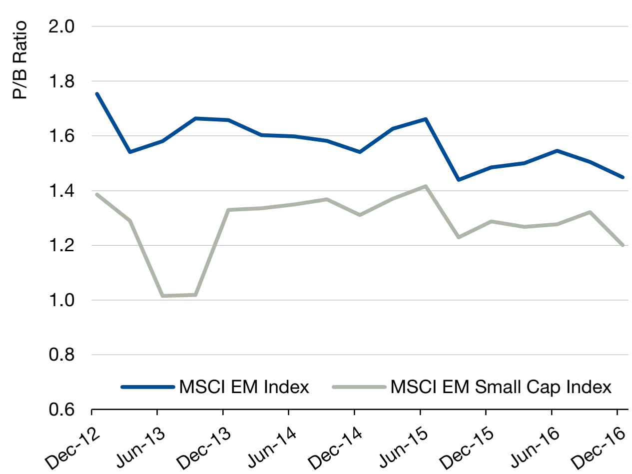
Source: Numeric Investors LLC, Bloomberg and MSCI.

IS NOW A GOOD TIME TO INVEST IN EM SMALL CAP?

While we firmly believe that EM small cap offers interesting diversification opportunities and potentially differentiated returns to the standard index, the question remains if now is a good time to invest. To determine this, we compared the relative valuation and earnings growth of the two indices.

We started by comparing the valuations of the MSCI EM SC Index and the MSCI EM Index based on their respective price to book (P/B) and price to earnings (P/E) ratios. Since 2006 the P/B ratio of the MSCI EM SC Index has been consistently lower (cheaper), but the spread has narrowed in recent years (Figure 9). The current difference in P/B relative valuation is likely attributable to sector exposure differences and less an indication of investors valuing companies differently in the two indices.

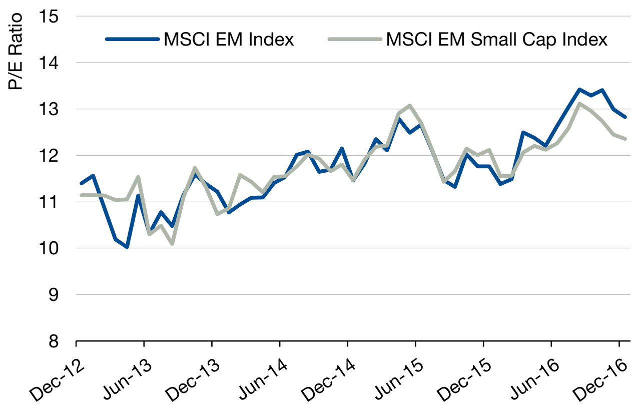
Figure 9. Quarterly Price to Book Ratio (Dec. 2012 – Dec. 2016)



Source: Numeric Investors LLC, MSCI and Worldscope.

Since 2010 the P/E ratio of the MSCI EM SC Index has largely been similar to that of the MSCI EM Index (Figure 10). As a result of the last year's MSCI EM SC Index underperformance relative to the MSCI EM Index it appears that investors value a unit of earnings with the SC index at a slight discount. Since investors value the two indices at reasonably similar P/E and P/B valuations, the next question is whether relative earnings growth expectations can provide an indication of future relative performance.

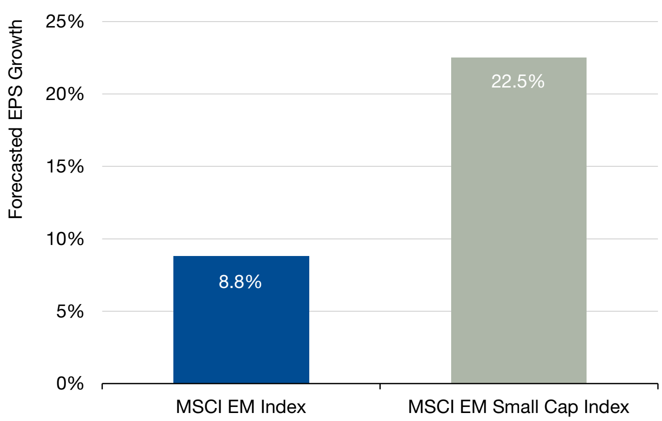
Figure 10. Forward 12-Month P/E Estimates (Dec. 2012 – Dec. 2016)



Source: Numeric Investors LLC, MSCI and IBES.

On average, the market pays a higher multiple for growth so there is potentially some upside to the EM small cap relative valuation. We calculated expected Earnings Per Share (EPS) growth for both indices using index level EPS data as of December 31, 2016. Figure 11 shows that 22.5% year over year growth is forecast for the MSCI EM SC Index while 8.8% year over year growth is forecast for the standard index. With modestly attractive valuations and superior forecast earnings growth, there appears to be some support for EM small cap performance going forward. That said, in the absence of an obvious timing opportunity, other factors should feature prominently in the decision to allocate to EM small cap.

Figure 11. Index Forecast Earnings Growth as of December 31, 2016

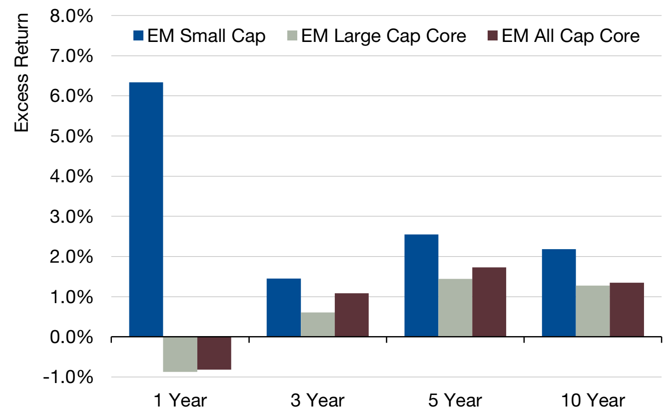


Source: Numeric Investors LLC, MSCI and IBES.

DO ACTIVE MANAGERS ADD VALUE?

As it appears difficult to make a compelling case that now is a obvious entry point for allocating to EM small cap strategies, a logical next step is to compare the ability to add value (excess returns) in the universe. The analysis is based on data from the eVestment database for trailing 1, 3, 5, and 10 year returns of managers classified as EM large cap, all cap, and small cap. The median EM small cap manager outperformed its manager preferred benchmark by a wider margin than did managers in the other two groups. This was especially true over the most recent year when the median of EM small cap managers outperformed by 6.3% compared to the -.9% and -.8% outcomes in the large cap and all cap universes, respectively. While it might be difficult to make a case that now is a good time to allocate to EM small cap based on valuation, we believe there is a case to be made that excess return potential is more compelling in EM small cap.

Figure 12. Trailing Active Manager Median Excess Return as of December 31, 2016

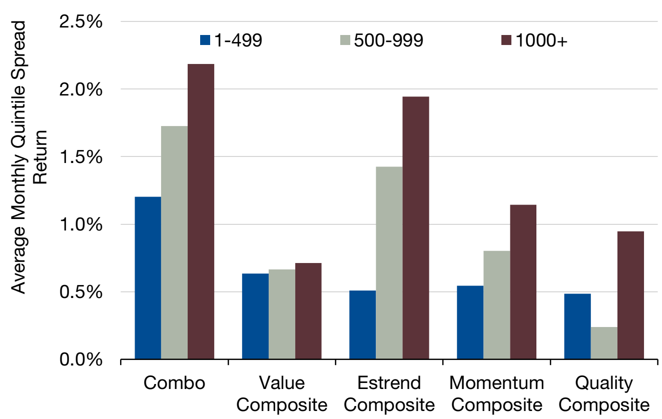


Source: Numeric Investors LLC and eVestment Global Database.

DO QUANTITATIVE MODELS WORK IN SMALL CAPS?

The additional excess return that active managers have generated in EM small cap is consistent with the model efficacy we measured within the smallest stocks of the Numeric Investors EM investment universe. We measured quintile (top 20% minus bottom 20%) model spreads for our EM universe, bucketed by capitalization rank from January 2012 through December 2016 (Figure 13). The back tested returns of the combo alpha and the four composite model groups were superior within companies with capitalization rank greater than 1,000 (smallest companies). The back test analysis is based on monthly rebalanced, equal-weighted portfolios and does not incorporate transaction costs. As such, the magnitude of the difference in efficacy between the EM large and small cap universes is exaggerated by the differential in transaction costs.

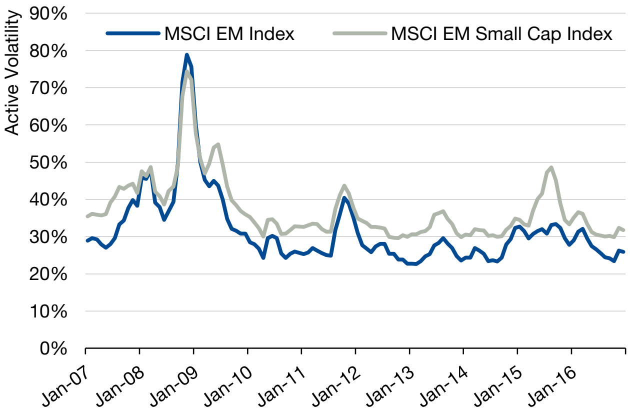
Figure 13. Average Monthly Quintile Spread by Capitalization Rank (Jan. 2012 – Dec. 2016)



Source: Numeric Investors LLC.

To further examine the potential to add alpha in EM, we looked at the active volatility of each MSCI EM index. As illustrated in Figure 14, on average, the MSCI EM SC Index is less efficient than the standard index. This inefficiency can be explained by less liquidity, fewer institutional investors, less sell side analyst coverage, and less transparency. As a result, EM small cap stocks have higher idiosyncratic stock volatility (active volatility). This higher active volatility implies that active managers have more opportunities to add value within the small cap EM universe than in the standard index universe.

Figure 14. Active Volatility (Jan. 2007 - Dec. 2016)



Source: Numeric Investors LLC and MSCI.

CONCLUSION

Our goal was to illustrate potential benefits of investing directly in EM small cap strategies. Those potential benefits include; potential return diversification; exposure to growing emerging market consumer demand; favorable return profile; history of active manager success; and potential for quantitative models going forward. We think these potential benefits support the decision to invest in EM small caps as part of a long-term asset allocation to emerging markets.

Ori Ben-Akiva

Head of International Strategies

Ori leads the International Strategies Group responsible for the day-to-day portfolio management for all non-U.S. strategies. In addition, he initiates and directs ongoing research for those strategies; he spearheaded the development and launch of the Emerging Market strategies. Ori is a member of Man Numeric's ('Numeric') Investment Committee and Management Committee. He joined Numeric in 1998 as a transaction cost research analyst and equity trader. In late 1998, Ori became Portfolio Manager of the Numeric Small Cap Value strategy and joined the international equity group in 1999. He assumed the Director of International Strategies title in October 2011. Prior to joining Numeric, he was a Portfolio Analyst at The Oak Group, LP, a Chicago based hedge fund investment manager. Ori received a B.A. in Economics from the University of Chicago.

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Senior Portfolio Analyst

Catherine joined Numeric Investors in 2012 as a portfolio analyst on the Portfolio Implementation and Research team. She is now a senior portfolio analyst on the International strategies team. Prior to joining Numeric, Catherine was an analyst in the performance reporting group at Cambridge Associates. She received a bachelor's degree in mathematics and economics from Lafayette College. Catherine is a CFA® charterholder.

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