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Small caps: from beta to alpha

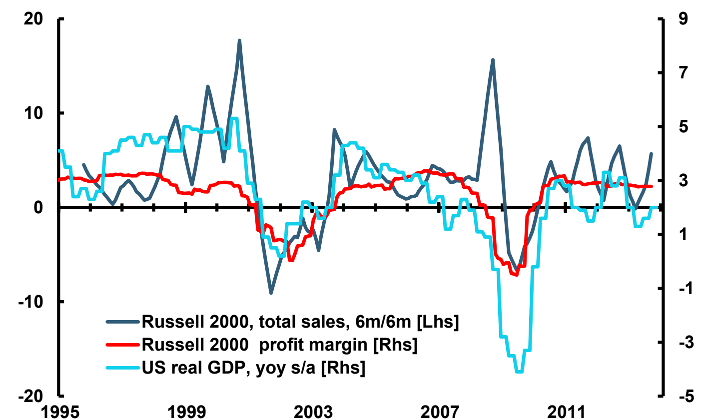
Key points

- While economic conditions continue to have a significant impact on small cap firms, their earnings are now much more resistant to economic downturns than in the past.
- The most important factor in this newfound resilience stems from their increased exposure to structural growth stories as they move up the value chain.
- Small cap companies' agility helps them to swiftly navigate paradigm shifts, quickly seize upon regulatory changes—even in mature markets—and innovate successfully.
- Their exposure to structural growth stories makes small caps natural M&A targets.
- A number of factors, including a lack of familiarity with small caps on the part of investors, less analyst coverage, higher volatility and lower liquidity, contribute to significant price inefficiencies, which provides a good environment for active strategies.

Exhibit 1

Small cap revenues and margins are more resilient

US small cap top-line growth, margins and economic actvity, in %



Source: Bloomberg & AXA IM Research

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While few were looking, small caps underwent a fundamental shift

Historically, since 1975 small cap equities have outperformed large cap equities by an average of 4% in years of GDP expansion, according to MSCI data. In line with our expectation that the global economy will accelerate in 2014[1], we are convinced that **smaller companies will be the beneficiaries of the current expansionary phase of the global economy, reinforcing our conviction that investors should give small cap equities real consideration in their portfolios.**

Despite this phenomenon, small caps have been consistently overlooked by investors for years. Smaller companies represent an under-owned asset class—though this is not a wholly intentional decision by investors. Institutional investors, in particular, have "unconsciously" adopted an underweight position in smaller companies.[2] The reasons are manifold, but moves away from equities and into bonds, and away from regional and into global portfolios, have clearly contributed. Academic work also highlights a general preference on the part of institutional investors for large and liquid equity holdings.[3] This underweight remains the case even though the benefits of holding smaller companies as part of a diverse portfolio have been documented at length.[4]

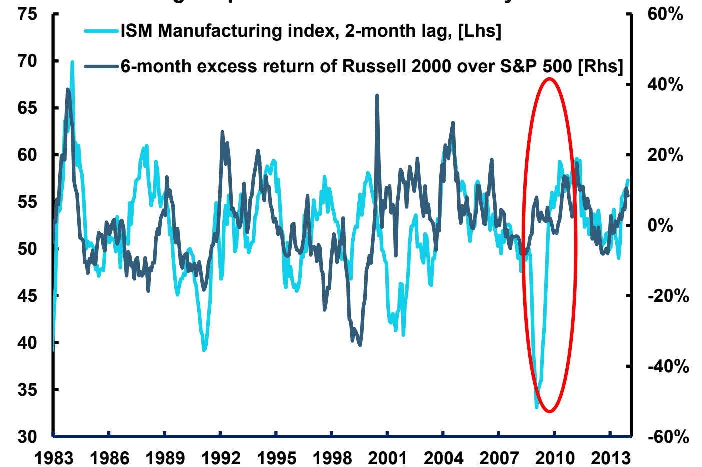
In addition, small caps have been subject to a number of myths or misconceptions, the most significant in our view being that small caps are 'only' a high beta play, the beta being explained by small cap returns that are strongly correlated to the economic cycle, and, consequently, highly vulnerable to economic downturns. Admittedly, small caps have been more sensitive to the economic cycle than large caps over the last 40 years. However, **the behaviour of small caps since the first jolt of the financial crisis defies this conventionally-accepted wisdom, and reflects what we consider to be a series of structural changes at play in the small cap investment universe**.

Small caps' newfound resilience

Based on historical trends, in 2008 and early 2009, when the US economy collapsed and developed economies experienced the deepest recession since WWII, the relative performances of small cap firms should have also plummeted given the sensitivity of the excess returns of small caps (over those of large caps) to cyclical economic fluctuations. Curiously, this did not occur: US small caps performed in line with large caps, and have strongly outperformed since then (*Exhibit 2*).[5]

Exhibit 2

Small caps fared well during the financial crisis



Source: Bloomberg & AXA IM Research

This evidence suggests that **small caps are now in a better position to absorb downward macro shocks while maintaining their rebound potential when economic growth accelerates**, as in 2010 and in 2013. This observation is confirmed by our analysis of the relative monthly performance of small caps to large caps according to changes in the ISM manufacturing index, an indicator of economic conditions (ISM readings above 50 indicate growth in the manufacturing sector while readings below 50 indicate contraction).

Exhibit 3

Sensitivity of the relative performance of small caps to the ISM[6]

ISM manufacturing scenario	Estimated impact on small cap monthly excess return vs. large caps	
	1983-1999	2000-2013
Positive shock (+1 point) e.g. from 50 to 51	+70bps	+140bps
Negative shock (-1 point) e.g. From 50 to 49	-14bps	0bps[7]

Source: AXA IM Research – As of 30/11/2013

Over the 2000-2013 period, our sensitivity analysis reveals that if the ISM is higher than 50, then an increase in the ISM by 1 point, e.g., from 50 to 51, implies an increase in small cap monthly outperformance by 140bps on average, while

[1] See AXA IM Investment Research "Outlook 2014"

[2] See "Small Caps – No Small Oversight", MSCI Barra March 2012

[3] See M.A. Ferriera, P. Matos (2008): "The Colors of Investors' Money: The Role of Institutional Investors Around the World." Journal of Financial Economics, 88, 499-533

[4] A 15% portfolio allocation to smaller companies has been shown to be the optimal exposure to the asset class for balancing risk and reward, removing the pitfalls associated with market timing exposure to this asset class. See *Small-Cap Dynamics*, Satya Dev Pradhuman, Wiley 2000.

[5] We based most of our results on US small caps because of data availability and historical depth.

[6] Technically speaking, to obtain these sensitivities we regressed the excess return of the Russell 2000 over the S&P500 on the ISM in excess of 50 when the ISM is above 50 and then repeat the exercise for ISM values below 50. We ran these regressions on two distinct periods, namely 1983-1999 and 2000-2013 in order to highlight the regime change for small caps since early 2000.

[7] The sensitivity is not statistically different from zero.

small caps and large caps behave similarly for ISM numbers below 50 (*Exhibit 3*).

Small cap earnings are less impacted by economic downturn

While economic conditions continue to have a significant impact on small caps, their earnings are now much more resilient to economic downturns than in the past. This is evidenced by the way the two components of earnings growth—top-line growth and margin variations—behaved during the two main cyclical downturns of the last 20 years, in 2000-2001 and 2008-2009. During the downturn of 2000-2001, US GDP growth decelerated to virtually 0, while total sales slumped by almost 10% and profit margins slid into negative territory (-5.5%). During the downturn of 2008-2009, US GDP fell 4%, while total sales declined by only 7% and profit margins dropped to -7% (*Exhibit 1*).

If in 2009 the sensitivity of top-line growth and margins to US GDP growth had been the same as in 2001, the fall in revenues and margins would have been roughly double. Thus, small caps proved significantly more resilient in 2009 than in 2001, demonstrating that the sensitivity of small cap earnings to cyclical headwinds has declined.

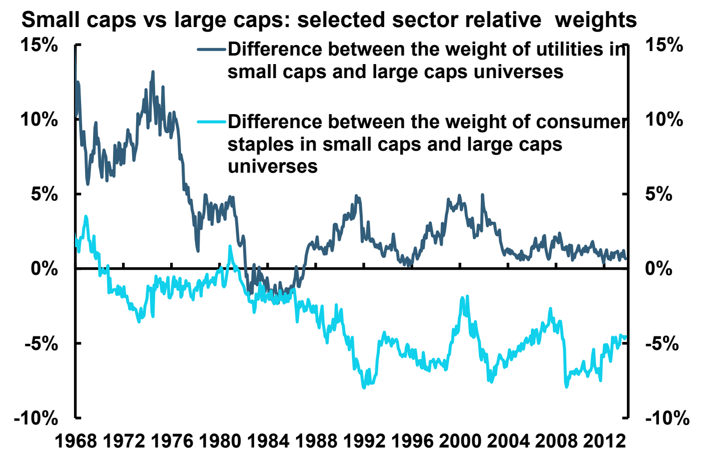
One reason the earnings of small cap firms have become more resilient is the geographic diversification of their revenue base. The share of foreign sales in total sales of US small caps has increased from 11% to around 17% over the last two decades.[8] The same broadly holds true for European small cap companies which have built a very strong presence in Asia or the United States.

Strong play on structural growth

Another and, in our view, the most important factor for this newfound resilience stems from the fact that small caps **have preserved their ability to grow faster than large companies through their increased exposure to structural growth stories**. **US small caps have been able to post a 15% compound annual growth rate for earnings per share (EPS) since early 2000, compared to 5.5% for large caps,[9] while at the same time the aggregate volatility of small cap top-line growth has declined.**

This stellar EPS growth has been fuelled in part by what we call disruptive technologies, i.e. lead to entirely new products and services. As part of this shift from cyclical to structural growth exposure, **small cap companies move up the value chain. As a result, their profiles change and they increasingly make their presence felt in high value added sectors**. As *Exhibit 4* shows, in the United States, smaller companies operating in Utilities and Consumer Staples have decreased their weight by 15% and 7% respectively compared to large caps since the late 60's.

Exhibit 4
Traditional industries are declining within the small cap universe



Source: AXA Rosenberg

One advantage that their lesser size offers smaller firms is greater agility to fully leverage secular growth opportunities as they arise. Their agility helps them to i) swiftly navigate paradigm shifts, ii) quickly seize upon regulatory changes—even in mature markets, and iii) innovate successfully.

Small caps are able to swiftly navigate paradigm shifts

A concrete example of the **ability of small caps to adapt and profit from disruptive technologies** is the US Energy sector. Many small oil Exploration & Production (E&P) companies have generated double-digit revenue and earnings growth from the unconventional oil and gas boom. North American small and mid-cap E&P companies have decreased their costs and increased revenue with substantial improvement in earnings growth. **Whiting Petroleum** is one such E&P firm. One of the first-movers in the fast-growing Bakken basin/Three Forks area –a strong, rich shale oil and gas basin where Whiting began drilling in 2007—the firm applied its innovative cost control and completion methods, along with its willingness to take the lead on critical midstream elements like processing and pipelines in order to establish itself as an active leader.

Small caps can quickly seize upon regulatory changes

The French telecommunications sector offers a clear example of **the ability of small firms to quickly benefit from regulatory changes.** In 2009, the French telecommunications regulatory agency (ARCEP) recognized that a market made up of three incumbent mobile providers was not optimal for competition and thus sold a 3G spectrum license to **Iliad**, an alternative telecoms carrier, for €240mn. Iliad, already a challenger in the landline phone business, became the 4th mobile operator and quickly seized 15%

[8] Based on Russell 2000 data

[9] Data : MSCI US small caps versus MSCI US, from January 2000 to January 2014. The related annualised EPS growth for the MSCI Europe small caps and the MSCI Europe is 4.4% and 0.7% respectively

market share in the mobile telecom market in just one year. This success story helped Iliad outgrow the small cap universe—pushing its market cap up to close to €10bn.

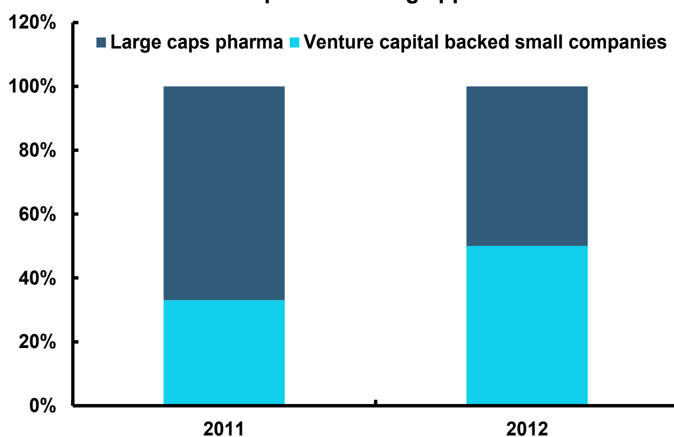
Small caps are increasingly successful innovators

The ability of small cap companies to innovate is particularly visible in the technology and biotech sectors. In the latter, many therapeutic breakthroughs have been initiated by small biotech companies. *Exhibit 5* illustrates that in 2012 small biotech companies were awarded 50% of drug approvals in the US.

Exhibit 5

Small caps represent a growing share of drug approvals

% of small biotech companies in drug approvals



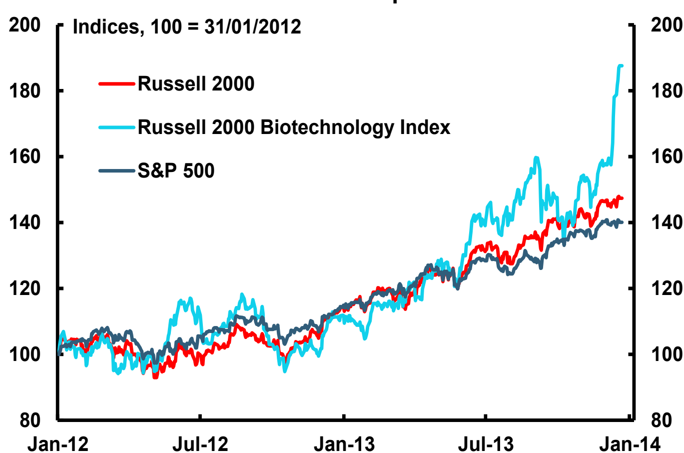
Source: FDA, AXA Framlington

This significant gain in drug approvals over the prior year has translated into very strong stock performance. As *Exhibit 6* shows, small cap biotech stocks are clearly outperforming the rest of the small cap arena. **The focus on R&D and intellectual property has clearly enabled small caps to sustain product leadership and competitive advantages**.

Exhibit 6

Small biotech companies are outperforming

Performance of small biotech companies



Source: Bloomberg & AXA IM

The exposure to structural growth stories makes small caps natural M&A targets

Thanks to their focus on innovation and structural growth, **small cap performance is, more than ever, driven by** mergers and acquisitions **(M&A), since they are often acquired by larger firms trying to gain access to crucial technology or new markets**, resulting in substantial gains for small cap investors. Big data and cloud computing have been major disruptive trends. Software as a Service (SaaS) has emerged as an alternative to traditional licensed software products. Small cap cloud computing companies are now challenging traditional software, data and solutions suppliers. Subscription- and consumption-based models are cannibalizing the traditional software license purchase model at an accelerating pace, leading to a raft of consolidation in this space. Established software companies such as Oracle and SAP have snapped up several smaller companies in order to gain exposure to these fast-growing markets. A prominent example is **Ariba**, a small software and IT services company specializing in web-based procurement, which was purchased by SAP with a 20% premium last year.

With many large cap firms currently sitting on huge piles of cash in today's low growth economic environment, there is a natural tendency for companies to acquire growth: over the last 20 years, 88 percent of all M&A targets in Europe were small and medium-sized companies—paying an average premium of 28 percent.[10] **We expect small cap exposure to structural growth to remain attractive for large caps as M&A targets in the future.**

Investing in small caps

Harnessing the potential of small caps is not as straightforward as investing in large caps, however. First, the opportunity set is much greater than for larger companies: the standard MSCI World Index comprises some 1,500 names, rising to over 4,000 for the MSCI World Small Cap Index, an investment universe that is challenging for most active investment managers to cover. Second, smaller companies are, by their nature, more volatile than their larger brethren. In fact, while the agility of smaller firms brings many advantages, there is a flip side. **Developments presented here—such as moving up the value chain, pioneering trends, and leading product innovation—often entail company-level decisions with no guarantee of success, making them a significant source of specific risk among small cap companies in the medium to long term.**

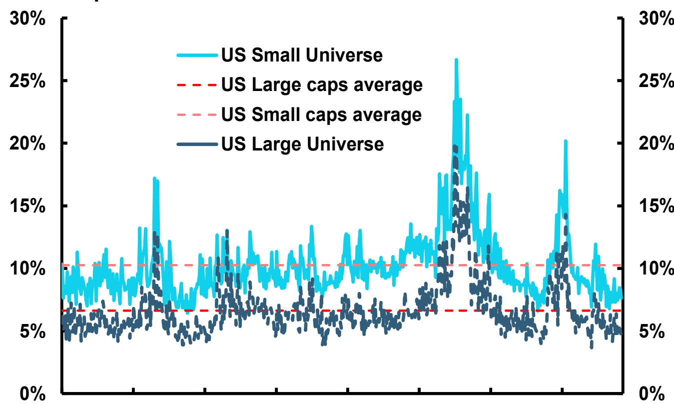
Therefore, alpha opportunities in the small cap arena abound. First, small caps exhibit a wider dispersion of returns than other equities. Second, lower (or non-existent) analyst coverage of small cap firms contributes to wider

[10] Source: Thomson Reuters data

gaps between a firm's share price and its fundamental value. Third, we currently see significant mispricing in the market. Let's examine each of these factors in turn.

Small caps demonstrate higher return dispersion

Exhibit 7
Cross sectional dispersion of monthly returns



Source: AXA Rosenberg, 30 November 2013

Exhibit 7 shows the monthly cross-sectional dispersion of returns for US large and small cap stocks.[11] **The spread of monthly returns is clearly greater amongst smaller companies when compared to large.** At the same time, we note higher levels of specific risk associated with smaller companies, although specific risk associated with both large and small cap companies is currently at historically low levels. **This dispersion of returns presents an array of mis-pricing opportunities for active stock pickers to capitalise on.**

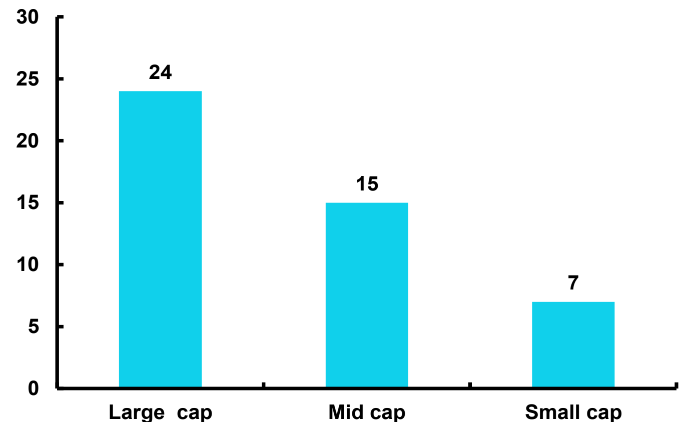
Small caps are under a smaller microscope

Although smaller companies have to some extent diversified their revenues, as outlined previously, their earnings are often still perceived to be more volatile and less easy to predict, something that is compounded by the lack of coverage by analysts and magnifies the potential for mis-pricing at the stock level.

In the United States, for example, a typical large cap stock is covered by an average of 24 analysts. The number of analysts falls to just 7 for smaller companies, though many smaller firms are simply not covered at all (*Exhibit 8*). This means that **amongst larger companies the gap between a company's share price and its fundamental value is often small, even fractional in the largest and most well-covered companies, whereas this dispersion can be a lot higher amongst smaller companies**.

[11] Data from AXA Rosenberg's US large cap and small cap universes which are of similar size to the S&P 500 and Russell 2000 indices, respectively.

Exhibit 8
Fewer analysts cover each small cap stock



Source: AXA Rosenberg, 30 September 2013

Current price inefficiencies are significant

A number of factors, including a lack of investor familiarity with small caps, less analyst coverage, higher volatility, and lower liquidity, contribute to significant price inefficiencies. This type of environment creates opportunities for a successful stock-picker to add value over and above the beta available from a passive allocation to smaller companies. The greater price "spread" of smaller companies creates more opportunity to arbitrage this spread away.

From a valuation perspective, we can see that today's market offers high levels of valuation opportunity. To show this point, we rank the universe of stocks from high fair value to price ratio (undervalued stocks) to low fair value to price ratio (overvalued stocks).[12] Then, we split the ranking in half and divide the average undervaluation of the first group by the average overvaluation of the second group. *Exhibit 9* shows that for small caps, over time, the spread between the two halves has moved to levels not reached since the tech bubble of 2000 (light blue line).[13]

This implies that there is significant mis-pricing within the small cap market, which provides a good environment for active strategies. Further, it shows that

[12] Using AXA Rosenberg's proprietary Fair Value to Price measure, which uses AXA Rosenberg's model to perform a regression across 200 different balance sheet and income statement items to derive a view on a company's value relative to its prevailing share price. The process uses the market to appraise each company based on the unique structure of its balance sheet and income statement, allowing for granular analysis of peers.

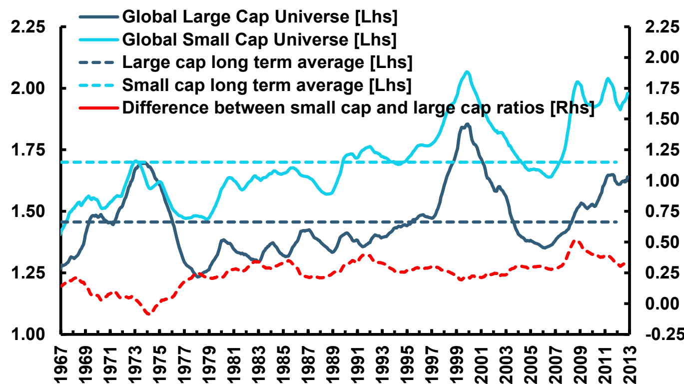
[13] The exhibit "Ratio of AXA Rosenberg Fair Value-to-Price High vs Low, 12m rolling % change (1968-2013)" is based on AXA Rosenberg Universe of approximately 20,000 securities (as of December 2012) worldwide that AXA Rosenberg deems to have sufficient accounting history and standards. The time periods shown are the full history of AXA Rosenberg's Universe for each region through June 2013. The data shown were captured in real time during the timeframe shown. Portions of the dataset referred to above precedes AXA Rosenberg's existence. Past performance is not a guide to future performance.

within the global small cap universe the opportunity to add value through stock picking appears to be much greater than for large caps, both currently and historically.

Exhibit 9

High levels of valuation opportunity in small caps

Ratio of fair value-to-price for high vs. low valuation model halves rolling 12-month average



Source: AXA Rosenberg

Looking ahead

For investors contemplating an allocation to small cap equities, an important consideration is whether this valuation gap will compress. If this occurs, it will benefit active investors. The clearest way to flesh out an indication is by examining the equity rally currently underway. The initial stage of the equity rally witnessed so far has been driven by a sharp rerating of valuation multiples. We think two independent forces have been at work here: i) massive liquidity injections led by the Fed (Quant Easing III) and ii) fading systemic risk in zone euro. With the first stage of the rally gradually coming to an end, **a key theme that will move to the fore as 2014 unfolds becomes clear: earnings growth will take over from the declining liquidity booster. Company fundamentals will become increasingly important, favouring the convergence of small cap prices toward their fair value, and thus benefitting active investors.**

One element to watch over the course of this transition will be company leverage. For smaller companies with limited access to capital markets, leverage is an important tool for participating in a recovery and can help a firm grow. However, with the potential for interest rate rises on the horizon, it is important for investors to be able to differentiate between strong companies that use leverage well and have sufficient income to cover their debt, and weaker ones that may be distressed or at risk of default. This means that, for investors, avoiding bad stocks will become as important as picking good ones.

Conclusion

The breadth of the universe multiplies the investment opportunities. Combine this with strong exposure to structural growth stories, significant levels of mispricing, low coverage yet a favourable investment outlook and the opportunities for stock pickers to add value from smaller companies seem plentiful as we move into 2014. Greater investor focus on this overlooked asset class should help narrow the spread and turn the small cap beta to alpha for investors.

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