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SMALL CAP EQUITIES: THE MISSING 15%

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You have to turn over a lot of rocks to find those little anomalies. You have to find the companies that are off the map - way off the map. You may find local companies that have nothing wrong with them at all.

A company that I found, Western Insurance Securities, was trading for $3/share when it was earning $20/share!

I tried to buy up as much of it as possible. No one will tell you about these businesses.

You have to find them.

Warren Buffett, addressing students in May 2005

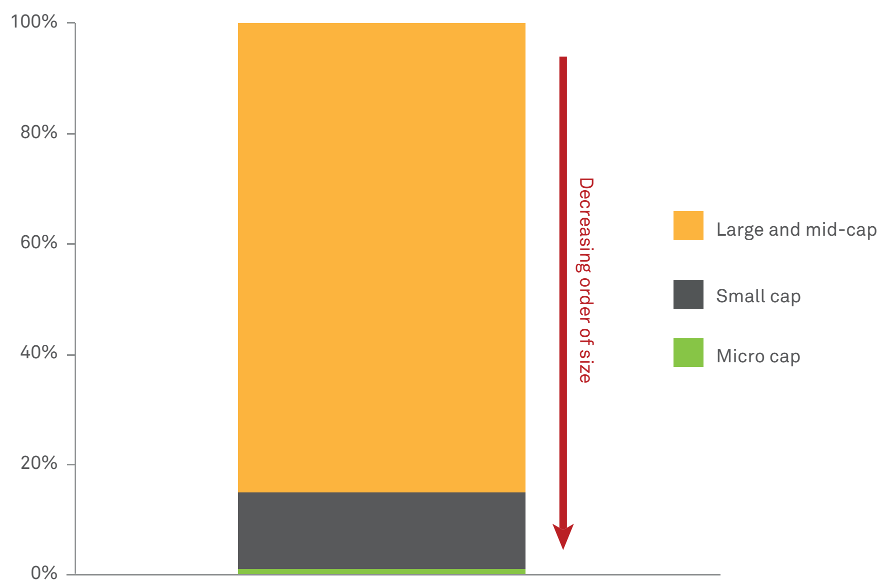
EXECUTIVE SUMMARY

The relative absence of Small Cap stocks from institutional asset allocations is surprising. The asset class serves well as a strategic position, is suited to the current market environment, and fits with a general investor desire to boost returns by moving into relatively unexplored areas of the capital markets and making small-scale liquidity sacrifices. In this brief, we will discuss the importance and usage of Small Cap stocks in diversified asset allocations, and look at what we believe are the three principal reasons to make them a strategic part of a portfolio: improved diversification, anomaly capture, and alpha generation. We will also examine the general characteristics of Small Cap stocks, so that investors have a better feel as to how these assets may perform and where they may be used.

WHAT IS A SMALL CAP STOCK?

There is no generally agreed definition of what constitutes a small-cap stock. If we follow the lead of MSCI, then the standard indices – which include large and mid-cap stocks – represent 85% of the total (free-float adjusted) capitalization in any given market. The Small Cap indices then represent the companies not large enough to be large or mid-cap, but which represent the next 14% of capitalization. The remaining 1% of capitalization is represented by micro cap indices. This structure is shown below, and is similar to the FTSE indices methodology for the same.

Exhibit 1: Structure of MSCI global indices



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This structure is a logical and comprehensive way of dividing up global markets. However, it does mean that small-cap cannot be defined in terms of a particular capitalization. If a given market has more (/less) Small Cap companies relative to other markets, the maximum capitalization of a Small Cap stock will be higher (/lower). However, the maximum size for Small Cap companies is often considered to be in the range of US$2bn - US$6bn, depending on market.

Many investors use a 'global equity' bucket, which (if either MSCI World or FTSE All-World is chosen) is unlikely to include any Small Cap stocks.

SMALL CAP AS THE MISSING ALLOCATION BUILDING BLOCK

As shown in the illustration on the page above, generic equity allocations will tend to exclude Small Cap equities. Many investors use a 'global equity' bucket, which (if either MSCI World or FTSE All-World is chosen) is unlikely to include any Small Cap stocks. Therefore, investors who do not have an additional strategic allocation to Small Cap will likely not be allocating to this segment of global financial markets.

MID/LARGE CAP VS SMALL CAP IS MORE IMPORTANT THAN GROWTH VS VALUE

Comparable to the Mid/Large Cap vs Small Cap duality is the Growth vs Value duality. Many investors tactically or strategically allocate between growth and value stocks, either because these two sectors perform significantly differently under different economic conditions and are therefore a way of expressing the investor's views, or because they are looking to capture the outperformance of the value anomaly. However, the performance difference between growth and value stocks has, historically, not been as profound as the performance difference between Mid/Large-cap and Small-cap stocks.

Exhibit 2: Relative usefulness of Value vs Growth and Mid/Large Cap vs Small Cap positions

	Correlation	Standard deviation of difference
Value vs Growth	0.889	7.52%
Mid/Large Cap vs Small Cap	0.886	8.22%

Source: MSCI, calculations by BNY Mellon Investment Strategy & Solutions Group ("ISSG"), calculated from January 1995 to March 2014.

This can best be seen on the graph below, which plots the performance of the MSCI World Index alongside the MSCI World Small Cap, Growth and Value indices. The Small Cap index here shows the largest performance differentiation from the other indices.

Exhibit 3: Historical performance of MSCI style and Small Cap indices

Source: MSCI, 30 June 2014.

Over the long term, performance has been stronger for value stocks, and Small Cap stocks than the broad market. Just as most investors regard value stocks as an important means of achieving their investment goals, so are Small Cap stocks.

The fact that investors have so far not been strategically allocating to Small Cap equities is also inconsistent with trends in the fixed income area. Within the fixed income area, we have seen investors increase their exposure to a wide variety of new asset types (loans, ABS, hybrid securities) in an attempt to boost their returns and reduce their risks. Often, to do so, they have had to make relatively small liquidity sacrifices, since some of these esoteric assets are not highly liquid. We would argue that a similar logic should be followed in the equity asset class.

Portfolios that do not currently allocate to Small Caps may have missed out on an opportunity to diversify.

SMALL CAP STOCKS OFFER IMPROVED DIVERSIFICATION

Diversification has been described as "the only free lunch in finance"; increasing the range of assets you use will generally serve to decrease your risk and increase your portfolio's Sharpe ratio. Opportunities for diversification should therefore be taken, if at all practical to do so. Portfolios that do not currently allocate to Small Caps may have missed out on an opportunity to diversify. Though Small Caps are relatively highly correlated to normal equities, they are not perfectly so, and this means that including them in an allocation will (all else equal) increase the Sharpe ratio. This diversification effect is shown below:

Exhibit 4: Switching from Mid/Large Global Equity to Small Cap Global Equity

	Annualized Volatility	Annualized Return	Sharpe Ratio
Diversified Portfolio	9.60%	6.65%	0.69
Diversified Portfolio with 10% of allocation switched from Global Equity to Global Small Cap Equity	9.73%	6.89%	0.71
Difference	+0.13%	+0.25%	+0.02

Diversified portfolio consists of 35% MSCI World Index, 35% Citi World Government Bond Index, 10% BofA Merrill Lynch US Dollar Emerging Markets Sovereign Index, 10% MSCI Emerging Markets Index, 10% HFRI Fund of Funds composite index. Global Small Cap Allocation is the MSCI World Small Cap Index. Calculations by BNY Mellon ISSG, all calculations are based upon historical results from January 1995 to February 2014 and annualized.

SMALL CAP STOCKS HAVE TENDED TO OUTPERFORM

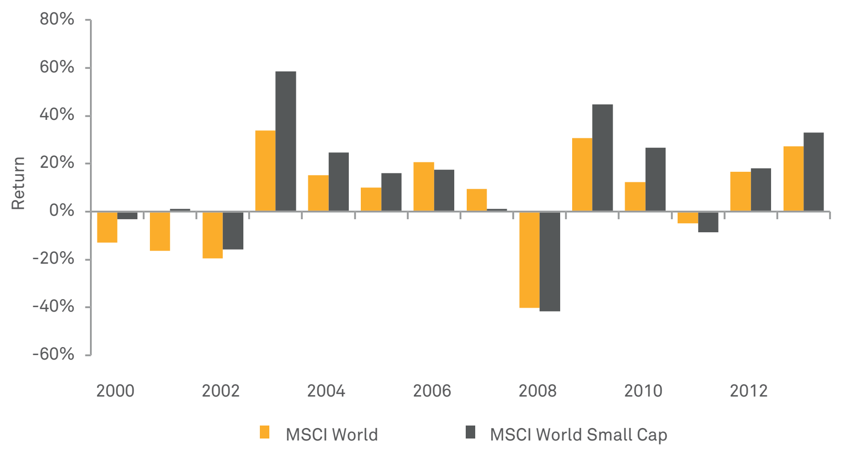
It has long been academically argued that Small Cap stocks provide higher returns than should be predicted by their level of volatility. In 1992, Fama and French developed the three-factor CAPM model to take into account the fact that value and Small Cap stocks provided higher returns than they should, relative to their market beta[1].

Dimson & Marsh, in 1998, stated that the so-called Small Cap anomaly was 'the premier stock market anomaly – [with] the striking outperformance of smaller companies' [2]. More recent studies have confirmed that the anomaly persists in current markets. Since 2000, we see that Small Cap stocks have quite consistently outperformed Mid/Large cap stocks. In 10 out of the last 14 full calendar years, from 2000 to 2013, they have generated a higher return, and have outperformed by an annualized 6.10% (see exhibit 5).

1 Fama & French, 1992, The Cross-Section of Expected Stock Returns
2 Dimson & Marsh, 1998, Murphy's Law and Market Anomalies

Small Cap stocks are less transparent (ie, less public information on them is available), and will tend to have fewer stock analysts covering them.

Exhibit 5: MSCI World Small Cap v. MSCI World since 2000



Source: MSCI, 1 Jan 2014.

However, it must be acknowledged that the past 14 years have generally been a particularly strong period for Small Cap returns. Though the Small Cap anomaly has shown itself to be persistent, it is not constant and seems to have valuation cycles much like other financial assets. The historical returns of smaller stocks versus larger stocks (rebased to 100 at end-January 1987), within the S&P 500, are shown below.

Exhibit 6: Over a longer time frame the Small Cap anomaly has shown more variable performance

Source: CapitalIQ.

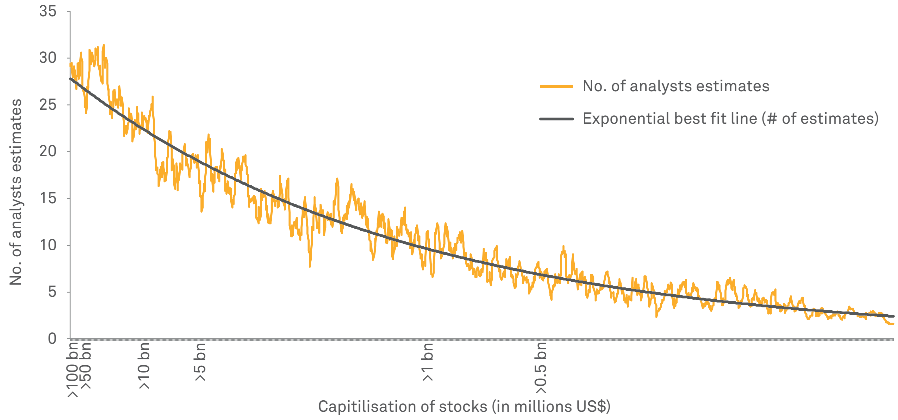
SMALL CAP STOCKS PROVIDE SUPERIOR ALPHA GENERATION OPPORTUNITIES

Small Cap stocks are less transparent (ie, less public information on them is available), and will tend to have fewer stock analysts covering them. For this reason they are often said to be less efficient, with mis-valuations that may be more profound or long-lasting than their mid- or large-cap peers.

Analyst coverage is often used as a yardstick for market inefficiency, and this decreases with stock size, as shown below (in the European market).

Diverse geographical expertise, local knowledge and significant manpower may be necessary for asset managers to best employ a stock selection approach.

Exhibit 7: The smaller a stock is, the less analyst coverage it receives



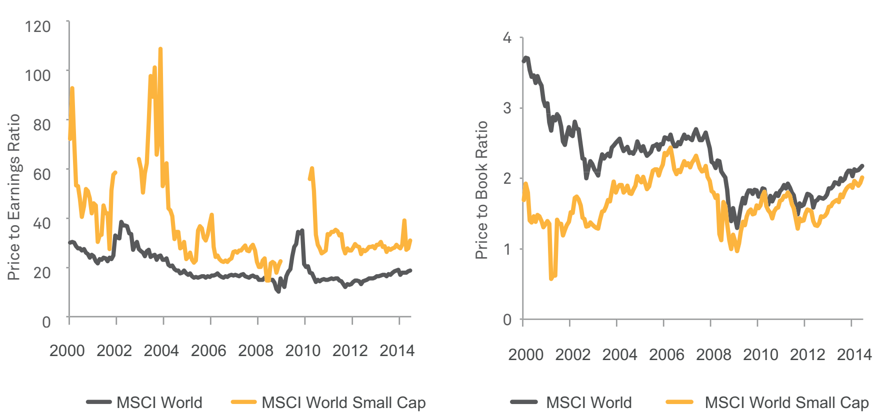
Source: Datastream, showing Earnings Estimates for 2014.

However, a less efficient market may only be advantageous if one is employing active management, and then only for certain kinds of active management. A macro-economic oriented approach to Small Cap investing will not tend to benefit greatly from the inefficient pricing of individual stocks, as it generally will not attempt to add value by observing idiosyncratic risks and differentiating between individual stocks. A more fundamental approach based around stock selection is required to take advantage of these inefficiencies. However, global Small Cap indices have both significantly more stocks (4,285 in the MSCI World Small Cap Index, vs 1,611 in the MSCI World[3]), and a wider geographical span than conventional global indices. Therefore diverse geographical expertise, local knowledge and significant manpower may be necessary for asset managers to best employ a stock selection approach.

A WORD ON THE GENERAL CHARACTERISTICS OF SMALL CAP STOCKS

Small Cap stocks have some important points of difference with large cap stocks, which are worth drawing attention to. They generally have higher Price/Earnings ratios than mid- or large-cap stocks, reflecting the fact that many of them will be younger companies, with less existing revenue. They are less likely to pay dividends, again reflecting the fact that they are younger companies. They are less liquid. On average, they have some value characteristics, with Small Cap stocks having lower price to book ratios than mid- or large-caps.

Exhibit 8: Small Cap stocks have higher P/E ratios, lower P/B ratios



P/E data is not available for MSCI World Small Cap Index for the period of Jan 2002 to Nov 2002, and Jan 2009 to Feb 2010.
Source: Bloomberg, MSCI, 30 Jun 2014.

3 MSCI, as at 30 June 2014

We believe that it would be sensible for investors to consider adding Small Cap equities to their strategic allocation.

SMALL CAP STOCKS HAVE DIFFERENT ECONOMIC AND MARKET SENSITIVITIES

We also see that Small Cap stocks exhibit different responses to changes in market or economic conditions, to mid- or large-cap stocks. This is shown below. Because of the relatively short data period for global Small Cap stocks, we have here used US (rather than global) equities for this analysis. It shows the effects of unexpected changes in a few key economic and market variables.

Effect of a 1% Change in... [4]

	Expected Growth	Expected Inflation	Fed Policy	Volatility
US Large Cap Equity	7.2%	-1.9%	-1.4%	-0.7%
US Small Cap Equity	7.6%	-0.9%	-2.1%	-1.0%

Source: BNY Mellon, based on historical data from 1973 to 2013. Large Cap Equities represented by the S&P 500 Index. Small Cap Equities represented by the Russell 2000 Index.

These results present a relatively coherent picture of the difference between Small Cap stocks and large cap stocks. Small Cap stocks are slightly more sensitive to improvements in the growth expectations, though both respond very positively to upward growth surprises. They are less sensitive to changes in inflation expectations. They are more sensitive to monetary policy tightening, perhaps because they tend to have higher leverage and so are more sensitive to changes in borrowing costs.

Perhaps most importantly, they are significantly more sensitive to changes in volatility expectations, or to changes in risk aversion. It is this difference which gives Small Cap stocks their characteristically higher beta than large cap stocks. Overall, Small Cap stocks are more aggressively positioned than large cap stocks.

They will tend to out-perform their large-cap peers in a benign economic or market environment, but under-perform in troubled times.

CONCLUSION

We believe that investors may not be aware that, by investing in 'global' equity indices, they are missing an allocation to Small Cap stocks. If this is the case, and investors have no existing Small Cap exposure, then conventional portfolio management theory would suggest that adding such an allocation should improve a portfolio's overall Sharpe ratio.

The fact that Small Caps also offer the possibility of above market returns (the so-called 'Small Cap anomaly'), and the fact that the Small Cap universe is possibly a more fertile place for obtaining alpha than the mid- or large-cap universes, only strengthens this case further. Simply put, we believe that it would be sensible for investors to consider adding Small Cap equities to their strategic allocation.

4 Unexpected increase in growth and inflation expectations means an 1% increase in consensus analysts' GDP or CPI forecasts. Unexpected increase in Fed Policy means a 1% increase in 10yr minus 2yr US Treasury yields. Unexpected increase in volatility means a 1% increase in GARCH 1m Vol.

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