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RESEARCH PAPER

PRODUCTS (TAKING STOCK)

Global equity investing reassessed

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This paper examines traditional approaches to buying international equities, highlighting some of the problems with capitalisation-weighted benchmarks, and suggesting that replicating a global index may no longer be the optimal solution for those investors with longer-term investment horizons. It looks at some of the new strategies available to capture beta and illustrates how diversification can be used to manage risk for investors in a less constrained portfolio.

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This paper addresses some of the issues that should concern strategically-orientated investors. It promotes the merits of a less constrained approach to capturing the international equity risk premium and in particular, argues that an unconstrained global approach and a greater role for strategic diversification can significantly enhance returns over time as part of a unifying value-based strategy.

The fundamental law – play well, play often and limit constraints

The fundamental law of active management[1] states that the expected information ratio for a portfolio is a product of skill (quality of information), breadth (how widely the information is applied) and efficiency (how effectively information and skill are transferred into holdings). Skill is usually thought of as alpha and is widely regarded as hard to come by.

Schroders' view is that a more accessible means of boosting returns is to look at all components of the fundamental law:

- breadth – widen the universe to include small cap and emerging markets;
- skill – identify and allocate to value-oriented stocks; and,
- constraints – move away from benchmarks based on market capitalisation weights.

Breadth – widening the opportunity set

This is a wide topic that can mean many things. In the context of this paper, it refers to exploiting the widest possible opportunity set. The benefits that accrue are fourfold. Firstly, investors have a greater range of opportunities at their disposal. Secondly, it allows investors to tap into higher return themes. Thirdly, greater breadth leads to diversification benefits and lower volatility in returns. And fourthly, there are opportunity costs of having too narrow a focus. A wider universe also offers the option of avoiding certain sectors or countries. Some of these points can be quantified by reference to the equity home bias. The fact that the US constitutes about half of the global equity market means that a US equity investor who chooses to ignore investment opportunities abroad is effectively forsaking half of the investable opportunities available in developed markets. Furthermore, a Japanese investor with 100% of assets in domestic equities – who was therefore unable to exploit the opportunity of underweighting Japan in the 1990s – effectively gave up more than 2% return every year for eighteen years[2].

In the vast majority of cases, recognition of this home bias inefficiency results in a greater allocation to the MSCI World Index. As at July 2006, this index incorporated 1922 stocks across 23 developed equity markets. However, adopting the MSCI World All Countries benchmark instead substantially widens the universe by the inclusion of 25 emerging markets and a further 789 stocks that constitute some 7.3% of the total index. There is readily accessible evidence that even this small allocation to emerging markets can enhance returns in excess of 0.5% per annum (Figure 1 overpage), as well as reduce risk through diversification. This equates to an additional cumulative return of 10.5% over the past twenty years.

In terms of the opportunity cost of not being able to avoid an investment theme, we only need to look back a few years to the boom and bust of the tech bubble to find a spectacular example. At its peak in early 2000, the market cap of technology stocks was over 35% of MSCI World Index. At the time, there was a widespread consensus that this was an expanding bubble – the only issue regarding the bursting of the bubble was one of timing. Nevertheless, benchmark aware managers were forced to buy technology stocks in order to manage active risk. Clearly, events have shown this was not justified and the market cap of technology stocks has collapsed to less than half that weight today (Figure 2 overpage).

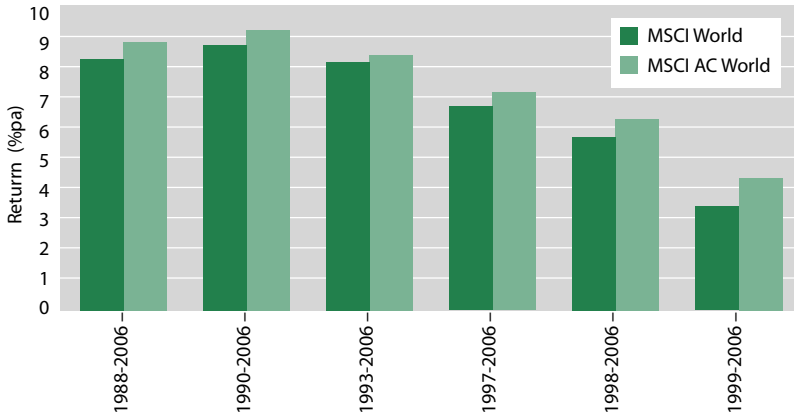
A second example is the marked underperformance of Japan in the last decade. Figure 3 (overpage) shows that, at its peak in 1988, the Japanese equity market

constituted over 44% of the MSCI World Index even though it represented just 8% of global GDP. This bubble took over 10 years to unwind and the huge cost of not being able to exploit this has been noted.

The benefits of a wide universe have been apparent to investors for some time and are well documented[3]. A closely-related extension is that portfolios with more stocks are usually more diversified and less likely to suffer significant drawdown in returns. Research in this area supports the view that there are no prizes for concentration and that risk-adjusted returns are inferior in portfolios with more concentrated positions.[4]

The benefits of widening the universe are available without the need to generate higher risk than is typical in international equities. Even greater rewards can be extracted by accessing the premium to value.

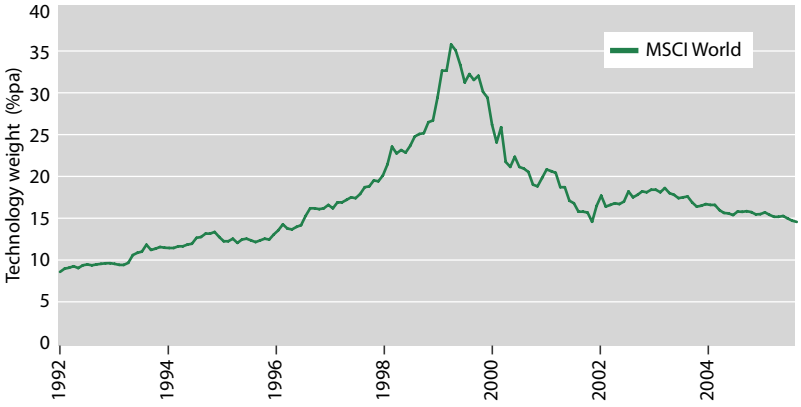
Figure 1: Benefit of investing in emerging markets – various time horizons



Notes: Annualised returns of the MSCI World and MSCI All Countries World

Source: MSCI, Schroders

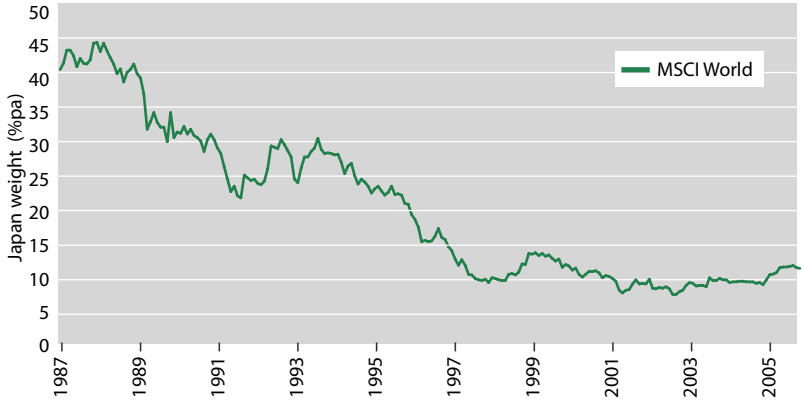
Figure 2: Technology bubble and burst



Notes: Annualised returns of the MSCI World and MSCI All Countries World

Source: MSCI, Schroders

Figure 3: Bust in Japan – a bubble that took ten years to deflate



Notes: Annualised returns of the MSCI World and MSCI All Countries World

Source: MSCI, Schroders

Skill – identify and allocate to value-oriented stocks

Value investing need not be thought of just in terms of a short-term stock selection mechanism, but as part of a long-term allocation to which all investors should have some strategic exposure. There is a large body of evidence documenting that investors have historically overestimated the prospects of growth companies while simultaneously underestimating value companies. There is remarkable commonality between the studies regardless of time-horizon or region studied, the implication being that investors systematically misprice value stocks globally. Fama and French's landmark study in the early 1990s on the performance of low price to book value stocks estimated that the premium to stocks with the very lowest book/market value (that is, cheap stocks) was as much as 13% compared to the most expensive stocks in the US universe. The study has been updated numerous times and extended to international markets with similar conclusions[5].

Schroders' research suggests value investing is highly effective in 36 out of 40 countries and is one of the best long-term strategies for investing. One way of estimating the size of this premium is to compare the return on MSCI World Index and MSCI World Value Index over time. Figure 4 shows that the historical outperformance of the Value index has been in excess of 1.2% per annum, although this more than doubles if US stocks are stripped out of the universe.

Although there have obviously been periods of time when value investing has not been profitable, it is clear that there exists some premium to value investing that is reasonably consistent across both country borders and time periods. Schroders' research in this area suggests that the value premium can be captured even more systematically than in the studies mentioned above, by utilising more refined value metrics and, more importantly, adopting an unconstrained approach to stock weighting rather than using the traditional form of capitalisation weighting.

Removing constraints – non-market cap-weighting

The benefits of broadening out the investment universe have been noted. While in most cases, greater breadth will result in both higher returns and reduced risk, this is not guaranteed. Diversification only works when the reduction in portfolio risk attributed to adding stocks

that have low correlations with the peer group is not offset by high stock specific risk. This is a particular problem in capitalisation-weighted indices that are often dominated by a handful of mega-cap stocks.

Often, index volatility is actually misattributed stock-specific risk as a direct result of this concentration in a few stocks (for example, Nortel in Canada, Nokia in Finland and BHP in Australia). More generally, there is also very marked concentration in mega and large-cap stocks in capitalisation-weighted indices which crowds out the benefits of mid cap and small cap stocks. Taking MSCI World as an example, 62% of the index is accounted for by mega cap stocks (that is, those with capitalisation greater than $20 billion) despite only representing 14% of the universe. Mid cap stocks ($1bn to $5bn) are nearly half the index by number but only 10% by weight, while small cap stocks (<$1 bn) represent just 0.3% of the index.

This bias away from mid cap and small cap stocks reflects a huge lost opportunity. To quantify this, we take one of the longest running measures of small-cap stocks – the Citigroup Extended Market Index (EMI) – and compare its performance with the equivalent Broad Market Index (BMI) which also includes small cap. As shown in Figure 5, small cap stocks have generated a performance enhancement of over 1% per annum compared to the BMI and nearer 2% per annum when compared to large cap stocks.

Other evidence is also very supportive of a small cap effect, particularly in the UK where the excess premium to small cap over the past half a century has been estimated as 2.8% per annum for small cap stocks and more than double that for micro cap stocks[6]. Finally, using data back to the 1920s, Ibbotson Associates estimates a premium of 1.7% per annum for small cap stocks and 2.7% per annum for micro cap stocks[7]. Ibbotson also found that mid cap stocks offered similar returns to small cap stocks but with reduced risk and greater consistency.

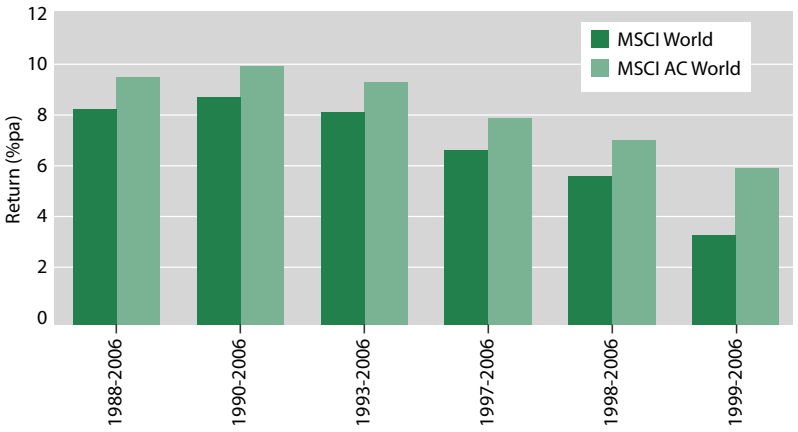
Ignoring small cap and mid cap stocks represents an opportunity cost, as it goes against the philosophy of maximising the breadth of the universe.

Moreover, buying a cap-weighted index is akin to momentum investing. It is a buy-and-hold strategy that has become entrenched on the assumption that the market portfolio is the best reflection of investors' expectations. It has been described as a strategy that allocates increasing weight to stocks that are currently overpriced relative to fair value, yet reducing allocations to stocks that are underpriced to true fair value[8]. As the better value stocks will tend to have smaller weights in capitalisation-weighted indices, investors are forced to buy less of these while the worse value stocks will have larger weights. This results in a natural drag in performance in capitalisation-weighted portfolios that can be regarded as a market failure. Taking this further, value-orientated strategies should not be benchmarked against a capitalisation-weighted index. What is true for individual stocks is also true for markets, and we have already referred to the consequences of the bubble in Japan and technology stocks in the recent past.

One response is to move away from capitalisation-weighted indices by adopting an equal-weighted index. Schroders' research estimates that such a strategy would have added nearly 1% per annum on average in the US after costs (top 1,000 stocks with quarterly rebalancing) compared to a capitalisation-weighted version. But for investors with any scale, the lack of liquidity in smaller cap stocks does not make this viable. A more implementable solution proposed by Research Affiliates is to replace noisy capitalisation-based weights with alternative, more stable, measures of company size such as cash flow, earnings, dividends, etc. For the period 1962 to 2004, their Fundamental Indices outperformed the capitalisation-weighted reference portfolio by 1.5% to 2.5% per annum with lower volatility[9].

The benefits of non-market capitalisation weighting have also been quantified recently by assessing the impact of various constraints on the transfer coefficient (that is, the correlation between predicted returns and portfolio weights).[10] Eliminating this constraint increased the transfer coefficient by 46%.[11]

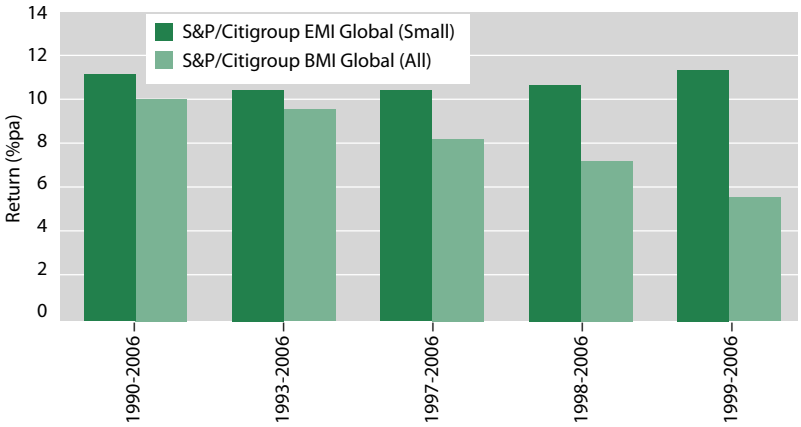
Figure 4: The value premium over time



Notes: Annualised returns of the MSCI World and MSCI All Countries World

Source: MSCI, Schroders

Figure 5: Benefit of investing in small caps – various time horizons



Notes: Annualised returns of the Citigroup Extended Market Index & Broad Market Index

Source: Citigroup, Schroders

Bringing it all together – a unifying strategy

Most portfolio managers concentrate their efforts in stock selection and ignore the benefits of increasing breadth and reducing the opportunity cost of constraints, and neglect considerations of efficiency. The issues of breadth and constraints are a free lunch that is both exploitable and scalable and often overlooked by investors. This paper has highlighted some of the pitfalls of being constrained to a narrow universe of stocks, particularly one that is heavily concentrated by a skew to large cap companies. There are simple diversification benefits that can be achieved by broadening the universe either geographically or by looking further down the size distribution.

Furthermore, market capitalisation-weighting is not necessarily the most efficient stock selection technique available against which to benchmark. Significant value added can be achieved by simply avoiding bubbles and carefully selecting the most attractive value opportunities in a diversified fashion from the widest possible universe.

These breadth and diversification strategies are implementable today. They can be regarded as both a more efficient delivery mechanism for market exposure and as a source of additional return that can be readily exploited. The real benefit of these proposals is in how they interact over time to produce risk-adjusted returns that are superior to any one approach taken independently. In short, the Fundamental Law states that investors should play well, play often and limit constraints. The last two aspects – breadth and removing constraints – are both readily available to investors who are willing to deviate from the consensus approach.

ENDNOTES

1. Grinhold, R.C., and R.N. Kahn, *Active Portfolio Management: A Quantitative Approach for Producing Superior Returns and Controlling Risk*, 2nd ed, New York: McGraw-Hill, 2000.

2. The annualised difference between MSCI World and Kokusai (MCSI World ex-Japan) returns between 1998 and 2006 is 2.6% per annum.

3. Gorman, S., *The International Equity Commitment,* Blackwell Publishing, Inc, 2000.

4. Brandes Institute, (2004), "Concentrated Portfolios: An examination of their Characteristics and Effectiveness". This finds no statistical relationship between concentration and performance in the US. Indeed as concentration increases (that is, fewer stocks), the dispersion of results increases.

5. Ibbotson dating back to 1969 estimate the geometric return to All Value stocks in the US to be 11.6% compared to 9.3% for Growth Stocks while the return to Small-Cap Value stocks was even more impressive at 15.4%. For examples of international comparisons, refer Fama and French (1998) "Value versus Growth: The international evidence", or Carlo Capaul, Ian Rowley and William F Sharpe (1993), *Financial Analysts Journal*.

6. Dimson and Marsh, *Global Investment Returns Yearbook 2006*, ABN-AMRO

7. Ibbotson Associates, *SSBI 2005 Yearbook*.

8. Arnott, R., J. Hsu and P. Moore, 2006, "Fundamental Indexation", *Financial Analysts' Journal*, Vol 61.

9. Arnott, R., J. Hsu and P. Moore, 2006, "Fundamental Indexation", *Financial Analysts' Journal*, Vol 61.

10. Clarke, R.G., H. deSilva and S. Sapra, 2004, "Towards More Information Efficient Portfolios", *Journal of Portfolio Management*, Fall.

10. Clarke, R.G., H. deSilva and S. Sapra, 2004, "Towards More Information Efficient Portfolios", *Journal of Portfolio Management*, Fall.

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Schroder Investment Management Australia Limited is part of the Schroder Group which, as at 31 March 2006, managed investment assets of approximately A$314 billion worldwide. Schroders is one of the largest and most internationally diverse investment managers, with over 293 investment professionals from 34 offices located in 26 countries. In Australia, investment management has been a core business since 1961, and the firm currently manages in excess of A$11.6 billion (as at 31 March 2006) across a broad range of asset classes.