

## Meaty Beaty Big and Bouncy

by James Montier

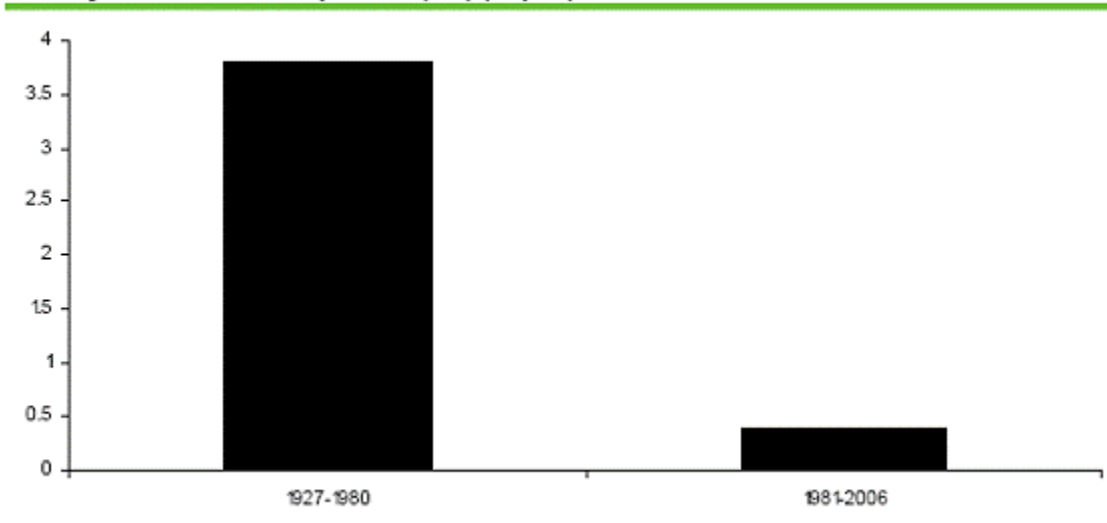
No, not a description of my stomach... although thinking about it, it could be. Nor does it purely reflect my love of The Who. Rather the chosen title is meant to reflect upon the opportunity created by recent performance of small caps. But before dealing with the tactical outlook for small caps, I want to examine the strategic arguments used for small cap investing.

A popular (well at least popular with me) TV show concerns two 'mad' scientists who love nothing more than to explode urban myths. For instance they have investigated the possibility of death by urinating on a live railway line! We could do with something similar in finance. We have a bad habit of accepting theories as fact within finance, of accepting statements as if they were truths. Even when we do bother checking the data we rarely seem to update our prior beliefs in anything other than a biased fashion.

### The myth of the size effect

Way back in 1981, Rolf Banz published a paper in the Journal of Financial Economics demonstrating that over the long-term small caps tended to outperform large caps. However, that was pretty much the last time the small cap effect was seen! Using data from Ken French, the chart below shows vividly that in the pre-1981 the US small cap effect was pronounced, running at the rate of just under 4% p.a. In the period since the study was published small caps have outperformed large caps by only 0.4% p.a. (strangely enough indistinguishable from zero).

**The myth of the small cap effect (US) (% p.a.)**



Source: Dresdner Kleinwort Macro research

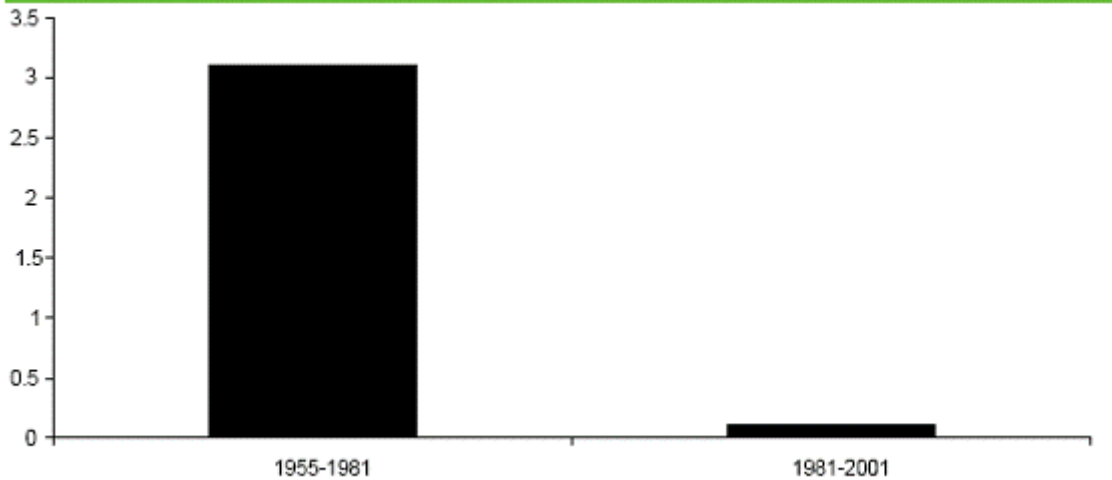
Nor is this evidence unique to the US. Stefan Nagel has calculated the picture for the UK.

His data starts in 1955 and shows significant small cap out performance of around 3% p.a. However, since 1981 small caps have only outperformed by 0.1% p.a. - again not distinguishably different from zero! (See top chart pp3).

Finding data on Europe is a lot harder. Piecing together several studies on Germany reveals that small caps have significantly underperformed large caps between 1995-2005 (to the tune of nearly 14% p.a. according to one study!) having previously outperformed by nearly 6% p.a. between 1954-1990.

In Europe over all, Annaert et al show that small caps outperform between 1974-2001. However, when I asked Rui Antunes to run the numbers we found that since 1990 small caps have outperformed in raw return terms, but that in risk adjusted terms there is nothing to choose between large and small caps.

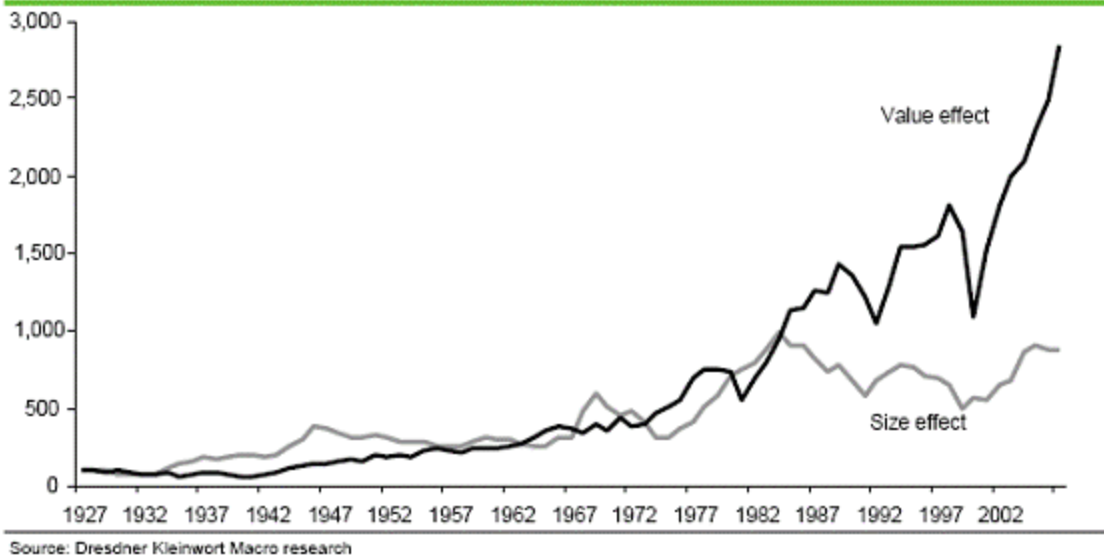
**The myth of the small cap effect (UK) (% p.a.)**



Source: Dresdner Kleinwort Macro research

In fact, all the evidence suggests that the value effect dwarfs the small cap effect. The value effect has the additional benefit of being 'discovered' much earlier than the small cap effect, and being constant in most sub-samples of a reasonable length. The chart below just puts this into graphic terms.

### Size and Value effects in the US market (1927=100)



### Size or value?

Size and style often become entangled. Rob Arnott<sup>6</sup> argues that there are two ways a stocks can become 'large', either it is the stock of a big company (on a normal multiple) or the stock of a small company with a lofty valuation. He has shown that "in our assessment of the size effect, we aren't measuring big versus small stocks; we're measuring big, mostly growth stocks versus small, mostly value stocks".

Arnott suggests we can disentangle the size and value effects to some extent by using other proxies for size such as book value or sales value rather than market capitalization. If the size effect was independent of a value effect then we should see it on these other measures as well. He shows that the size effect using sales is only around one third of the size effect using market cap. So effectively the cap measure is entangling a price to sales component with the pure size component.

Rui and I tested a similar idea within the European universe. Since 1974 small caps have outperformed large caps by 11% p.a when measured using market capitalization. However, this drops to 3.7% p.a. when book value is used as the sorting variable. So around 2/3rds of the reported size effect actually seems to stem from a value effect!

In the more recent sample the situation is even worse. Since 1990 European small caps have outperformed large caps by 7% p.a. on average (in raw terms) when size is measured on the basis of market capitalization. However, when size is measured on the basis of book value rather than market value it transpires that large stocks have actually outperformed small stocks by 1% p.a. So the entire size effect appears to be a value effect!

The bottom line appears to be that the small cap effect is not statistically robust to changing sample sizes. Nor is it clear that the size effect is in any way useful independent

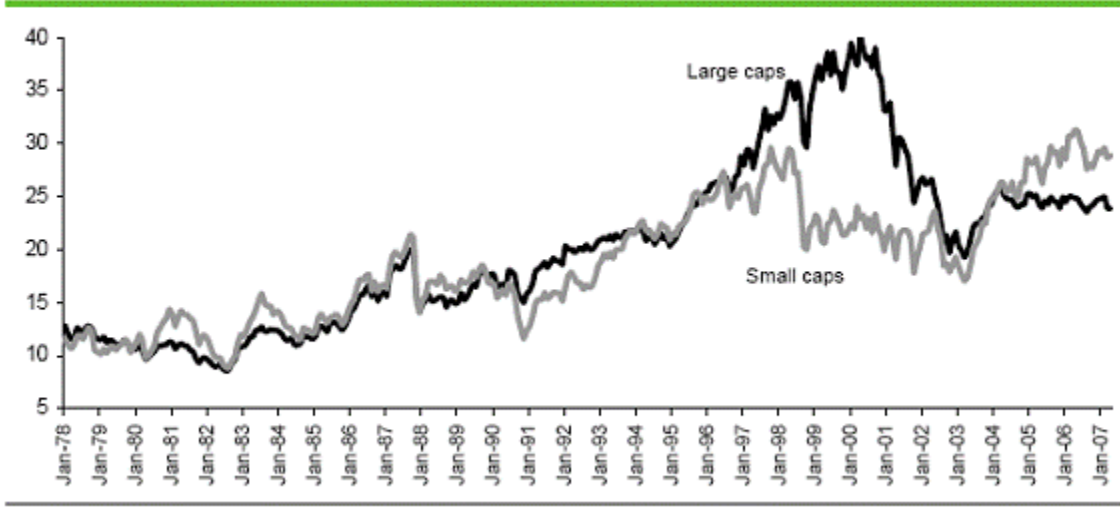
of the value effect. This is particularly important given what we are going to discuss below. But to summarize, perhaps the kindest that can be said is since it was 'identified' the small cap effect appears to have disappeared.

### Tactical considerations

OK enough casting questions over the entire investment thesis surrounding small caps. Let us turn our attention to the current situation. Whenever I've written on the dash to trash (see Global Equity Strategy, 12 April 2006 for example) I have discussed the pricing of small vs. large caps. This continues to puzzle me. Small caps are trading at a significant premium to large caps in both the US and Europe.

For instance, in the US small caps are trading on a 5 year Graham and Dodd PE of nearly 29x, meanwhile large caps are sitting on 24x.

**Graham and Dodd PE for US large and small caps (x)**



Source: Dresdner Kleinwort Macro research

A similar picture holds in Europe. The chart below shows the median trailing PE for the largest and smallest quintiles by market cap of the European market. Small caps are once again more expensive than large caps - 18x vs 15x.

### Trailing median PE for European large and small caps (x)



This makes no sense whatsoever. It implies that the liquidity premium is negative. That is to say you are paying for the pleasure of holding illiquid, inherently more idiosyncratically exposed, cyclical stocks! This is the internal equity market equivalent of the negative equity risk premium seen in 2000. Surely sheer madness.

#### The response

The only argument to justify this ludicrous mis-pricing, that I've heard, is that small caps can grow faster than large caps, and therefore deserve a premium to reflect this higher growth.

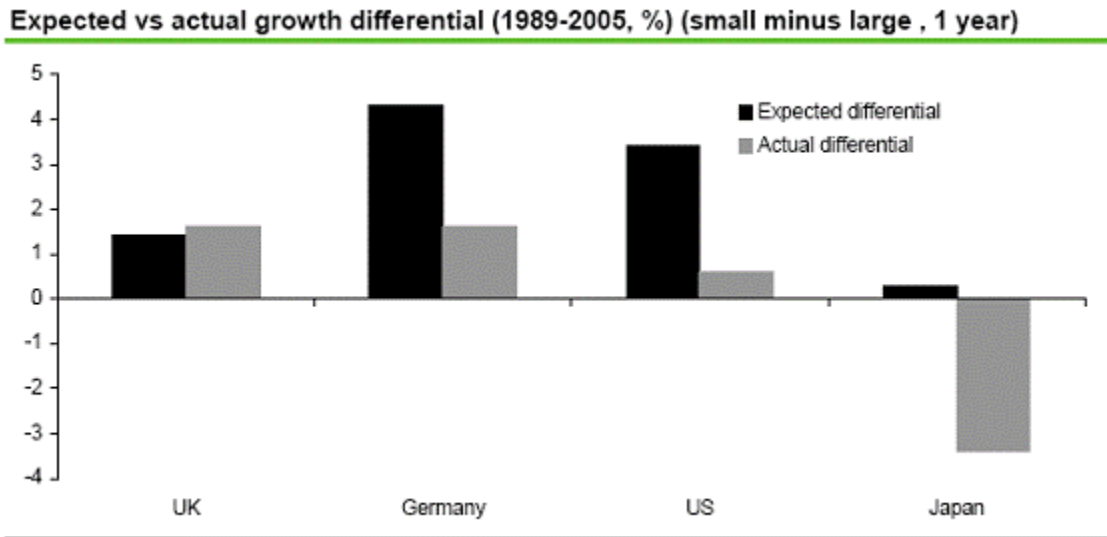
It is the same argument that was used to justify a zero equity risk premium in the dot.com bubble. That is to say investors had 'rationally' re-priced equity risk and were now happy to accept lower returns.

It transpired that this wasn't the case in 2000. We suspect it won't be the case for small caps now. People invest in small caps because they believe they generate a higher return (as we noted above this belief is a highly debatable viewpoint from the outset). However, for the liquidity premium to be negative you now have to argue that for some reason small caps are less risky than large caps!

It is also worth noting that the reality of small cap growth deliverance is usually less exciting than analysts would have us believe. Using data from the Andrew Laphorne's seminal note on the drivers of small cap performance (Quant Quickie, 14 November 2005) the chart below shows the expected differential between small and large caps in terms of earnings growth, and the actual delivered differential between small and large caps.

The good news is that small caps do on average grow faster than large caps (with the exception of Japan - amazing what a decade of deflation can do for you). The bad news is

that the actual delivered differential is much lower than the analysts' forecasts.



Source: Dresdner Kleinwort Macro research

As we explored in Global Equity Strategy, 1 February 2007, paying a premium for something that is likely to disappoint you is a pretty certain path to poor performance, we called it valuation risk. Buying small caps on a premium to large caps seems to us to be a prime example of valuation risk.

## Conclusions

The very concept of small cap investing is pretty suspect. From an empirical skeptic's viewpoint, the evidence is not convincing. Since 1981, most of the evidence appears to be that the size effect has vanished. Disentangling the size and value effects suggests that a very large proportion of the size effect is in actual fact a value effect!

Even if you still believe in small caps (and it would have to be a matter of blind faith given the evidence) now is certainly not the time to be investing in them. Small caps are trading at a premium to large caps in both the US and Europe. This implies a negative liquidity premium - investors are paying for the pleasure of holding illiquid, inherently cyclically exposed stocks. This doesn't sound like a sound investment proposition to me.

In addition, the delivered growth of small caps (whilst in excess of large caps) is usually less than analysts were expecting. Buying an expensive asset with a high likelihood of earnings disappointment (even without the business cycle risk) would seem to expose investors to unnecessary valuation risk.