Tilting the balance

How to put the “value” in value management

The value-versus-growth debate in investment management has prompted research into the effect on returns of “tilts” towards either sub-set of the market, and of global economic cycles. PHILLIP DOLAN reports on the implications for investment strategies.

Stocks are categorised as “value” or “growth” according to the relationship between price and net tangible assets. Value stocks are those with below-average P/NTA values and growth stocks have above-average P/NTA. The rationale for this is that firms with higher growth prospects priced into their valuations will see their assets sell at a higher multiple than those where the growth prospects are not as attractive.

The value and growth indices quoted in the market, and typically used for style analysis in Australia, have been calculated back to 1990. An approximation of the classification methodology can be used to take the values of the indices back to 1975.

Internationally, stocks are usually classified using price to book value of total assets, including intangibles. This is the screen used for the international numbers presented in this paper. Concern over the accounting treatment of intangible assets in the Australian market led to the choice of P/NTA here. Much of the concern resulted from the extreme valuations applied by media company managements to mastheads. For example, in 1993, Australian Consolidated Press reported that intangibles were 88% of the value of total assets. FM Australia Ltd in 1989 had a corresponding value of 84%.

Prior to the late 1980s, the use of price to book value in Australia gives more sensible results, similar to those obtained using price to net tangible assets.

INDEX PERFORMANCE SINCE 1990

Figure 1 covers the period over which the Russell/ASX value and growth indices are calculated. The vertical axis presents the relative performance of the indices (scaled to begin at 100 in 1990).
It can be seen that the value index has consistently outperformed the growth index over the entire period. Since the All-Ordinaries index is simply an average of the two indices, we would always expect its performance to lie between those of the other two.

Clearly, a simple “tilt” into value stocks, whereby one ranked the stocks according to P/NTA values and held overweight positions in those stocks with the lowest P/NTA exposures, would have produced returns above those of the market as a whole over the 1990-97 period.

The return differential between value and growth since 1990 has averaged 9% a year. Against the All-Ords, the value index has outperformed by about 4.5% annually.

To give a better idea of the extent to which value has outperformed growth since 1990, Figure 2 calculates the ratio of the performance of the two indices, again scaled to 100 in 1990.

For example, if the value index were to increase by 10% over a given period, while the growth index remained flat, this would translate into a 10% “return” to the index in Figure 2. Similarly, an increase in the value index of 10% which occurred in a period in which the growth index increased by only 5% would result in a return to the value/growth index of 1.1/1.05 -1= 4.8% (approx.)

Another way to view the performance is to through a strategy which is “long” the stocks comprising the value index and “short” the stocks composing the growth index, relative to each stock’s weight in the All-Ordinaries index.

The relative simplicity, and good returns, of a strategy of tilting into value stocks over the period since 1990 suggests that, had this always been the case and were the situation depicted here to persist, the informational efficiency of the Australian equity market would be called into question. It is therefore worth examining the relative performance of value and growth-based investment strategies over longer periods.
LONGER-TERM PERFORMANCE
The relative performance chart (Figure 3) looks at the returns to a strategy of overweighting value stocks and underweighting growth stocks for the period since 1975. It is clear from this that while value stocks have outperformed growth on average over the entire period 1975-96, this outperformance has been somewhat cyclical, with each of value or growth outperforming at different times.

For example, for the 10-year period from 1982-92, the overall return from value stocks has been about the same as that from growth stocks. Similar results apply to the period from 1975-81.

PERFORMANCE OF VALUE AND GROWTH OVER SUB-PERIODS
Examination of the performance of the indices over a number of five-year sub-periods shows the extent and consistency with which value has outperformed growth, and vice versa, over the past 20 years.

As Table 1 shows, there have been two distinct periods during which growth has done better than value: 1975-80 and 1986-90. While the outperformance by growth over value is not as significant statistically as that of value over growth, it is still clear that in those extended periods a tilt to a value-based investment strategy would have underperformed the market.

Examination of the performance of the All-Ords over each of the sub-periods shows that the return on the market as a whole does not seem to be a factor in explaining the outperformance of growth over value, since that outperformance occurred during periods in which the return to the All-Ords was relatively high (26.5% a year in 1975-80) and relatively low (8.6% in 1986-90). Comparison of the relative performance of value over growth with that seen in other countries is more likely to provide possible explanations.

INTERNATIONAL COMPARISONS
Looking at the relative performance of value and growth indices in the US and the UK (data were obtained from Independence International Associates of Boston), we see patterns that are broadly similar to those in Australia (Figure 4). In particular, while value stocks have tended to outperform growth stocks over the long run in each country, the excess returns have been episodic. Further, the periods in which growth stocks have done better than value stocks tend to line up across the three countries, and the strong value outperformance that occurred in

Table 1: Sub-period value and growth annual returns

<table>
<thead>
<tr>
<th>Year</th>
<th>Value</th>
<th>Growth</th>
<th>Value-growth</th>
<th>All Ords</th>
</tr>
</thead>
<tbody>
<tr>
<td>1975-96</td>
<td>17.6</td>
<td>13.5</td>
<td>4.1</td>
<td>16.5</td>
</tr>
<tr>
<td>1975-80</td>
<td>25.1</td>
<td>27.3</td>
<td>-2.2</td>
<td>26.5</td>
</tr>
<tr>
<td>1981-85</td>
<td>19.2</td>
<td>6.4</td>
<td>12.8</td>
<td>14.1</td>
</tr>
<tr>
<td>1986-90</td>
<td>5.3</td>
<td>11.8</td>
<td>-6.4</td>
<td>8.6</td>
</tr>
<tr>
<td>1991-96</td>
<td>19.3</td>
<td>10.01</td>
<td>9.2</td>
<td>15.3</td>
</tr>
</tbody>
</table>

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The fact that resource stocks have, over time, come to represent less and less of the market (falling from around 50% in 1980 to 33% in 1996) is consistent with the long-term underperformance by growth stocks relative to value stocks over that period.

This industry decomposition can be used to explore some possible explanations for the relative performance of value and growth, especially in light of international comparisons. For example, resource (growth) companies' performance is likely to be tied closely to commodity prices, which are themselves dependent on the rate of growth of the world economy (measured in terms of world industrial production).

Similarly, high-yield industrial stocks (such as banks) can be expected to perform better during periods of declining interest rates, as have been seen worldwide over the past seven years.

**INDUSTRIALS VS RESOURCES**
The implicit tilt to industrial stocks within the value universe raises the possibility that the relative performance of value and growth may to some extent reflect a performance differential between industrial and resource stocks.

To explore this further, value and growth indices were calculated by including only industrial stocks. The results are as shown in Figure 6.

The value/growth series that excludes resource companies does not display the very strong outperformance by value over growth that was seen in 1980-85. Thus, to the extent that a tilt to value stocks, as we have defined them here, was in fact a tilt out of resource stocks over the period under examination, a significant amount of the long-run outperformance by value stocks can be attributed to the well-documented underperformance by resource stocks during much of the 1980s.

Since 1990, the outperformance of value stocks over growth stocks does not appear to have been driven by an underlying industrials/resources split. As noted, it may be due to the sustained decline in interest rates over that period.

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**Figure 4: International value/growth indices**

**Figure 5: Style index industry composition**

**Figure 6: The contribution of industrials vs. resources to value/growth outperformance**
Figure 7 shows the relative performance of the value and growth indices and the level of Australian 10-year bond rates over the period since 1990. The outperformance of value over growth has generally been accompanied by declining interest rates, which have fallen from about 12% to about 8% during the 1990s. Further, the period when interest rates were rising (during 1994) was a time when the value and growth indices performed about in line.

The rapidity with which interest rates rose during that period, and with which the trend was reversed, may make this period atypical in terms of looking for a relationship between interest rates and the relative performance of value and growth stocks. For this reason, it is worth considering a longer period.

Extending the analysis back to 1984 (i.e., over the period during which interest rates have been subject to deregulation), shows a pattern similar to that since 1990.

In particular, over the period up to 1990, when interest rates were not trending in any direction, there was no significant and consistent outperformance by either value or growth.

Similar results have been found in the US, where the value universe tends to be concentrated in interest-rate-sensitive stocks such as utilities and financial services firms (the Wilshire value index in 1993 had 39% weight in financial services and 22% in utilities – each considerably above their market weights). These stocks tend to benefit more than growth stocks from declining interest rates, as their higher yields appear more attractive when fixed-interest yields are lower.

While there does appear to be some relationship between the level of rates and the relative performance of value and growth stocks, the fit is not perfect, which suggests that other factors may be contributing to the performance differential. As noted earlier, the industrials/resources bias implicit in the composition of the growth and value indices, and the similar pattern of
outperformance observed in other countries, suggest that global influences may
be contributing as well.

THE IMPACT OF BANKS ON VALUE AND GROWTH

Figure 9 shows how the performance of value relative to growth since 1990
changes when the banks are excluded. This is a sector that has had very strong
performance since 1994, when the last of the bad debt problems of the early
1990s were finally worked out.

To the extent that banks are interest-
rate-sensitive stocks, and that their perfor-
ance has improved during a period of
generally declining interest rates since 1990,
they would be expected to have
outperformed. In the early 1990s this was
offset by the large losses incurred by
some banks as a result of poor lending
decisions made in the late 1980s.

As seen earlier, the value index has a
strong over-representation, relative to the
All-Ords, in bank stocks. Conversely, the
growth index is underweight in banks.
Allowing for this by removing banks from
the value index shows that a large part of the strong recent run-up in value
performance disappears. Indeed, most of
the outperformance by value over growth
over the period since 1990 had occurred
by 1993 and thereafter the relative
performance has tended to be cyclical.

CONCLUSIONS

We should not expect that the strong
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