Stags who subscribe to initial public offerings and sell out quickly have reason to congratulate themselves on smart tactics. Research suggests that even though most floats come on to the market at a premium over issue price, a quick exit is likely to be more profitable than a buy-and-hold strategy. David Mustow explains.

Recent public floats have enjoyed much popularity with institutional and private investors. Both classes of investor use strategies ranging from immediate sale after listing ("stagging") to a simple buy-and-hold approach. There has been much discussion about whether one of these trading strategies is better than the other.

Research in the past 10 years into initial share underpricing in world sharemarkets has noted that most public floats list at premiums to their issue price. Saunders (1992) provides an overview. These premiums suggest an a priori case for stagging. However, little research had been done on the returns from a buy-and-hold strategy until a recent paper by Ritter (1991). He found that in the long run (after three years), a sample of 1,526 initial public offerings (IPOs) between 1975 and 1984 on the New York and American stock exchanges underperformed a group of comparable firms matched by size and industry. The implication of this finding is that it would be financially unwise to adopt a buy-and-hold approach to investment in IPOs.

This study investigates the long-run performance of 371 public floats in Australia between 1 January 1984 and 31 December 1988. It analyses the three-year and five-year performances following IPO listing of equally and value-weighted portfolios in the 371 IPOs and finds, by comparing their returns with a market accumulation index, that IPOs performed significantly worse than the market over these periods.

Three possible reasons for this abnormal performance are tested:
• whether the IPO was floated in a "hot" or "cold" issuing market;
• the size of the float; and
• the underpricing of the float at listing.

These reasons for longer-run underperformance have been previously studied in the United States. Aggarwal and Rivoli (1990) found that "fads" are important — that hot-market issues exhibit initial premiums and subsequent underperformance. Carter and Dark (1992) used the size of an IPO as a proxy for the level of information available about an IPO. They found that high market capitalisation led to better long-run performance than low capitalisation. They also found that the greater the degree of underpricing, the worse the long-run

David J. Mustow is a final-year Law and Commerce student at the University of Melbourne. This article is adapted from a Commerce honours thesis written in 1992. The author intends to join the banking and finance division of a commercial law firm.
sessions were applied, using CARs at the variability in CARs between value-weighted averages.

This was done using both equally and underpricing or market fads (the factors such as the initial underpricing, market capitalisation and whether the IPO is issued in a “hot” or “cold” market help to explain long-run performance?

Data
An initial sample of 860 floats was obtained from the Corporate Adviser database. This sample was narrowed to 371 after applying strict criteria for definition of an IPO. The criteria applied were that the float was:

■ a new public company; or
■ a private company going public.

These criteria excluded seasoned floats and transfers from the second board. The final sample of 371 IPOs were floated between 1 January 1984 and 31 December 1988. The share returns on each IPO were calculated for each month after listing. These returns were compared with the market monthly returns, measured by a market accumulation index.

The methodology followed that of Ritter (1991), which assumes that a company should provide returns equivalent to those available on the market as a whole. Excess returns for a given month are calculated by subtracting the market return from an IPO’s return. If there is no systematic difference between IPO and market returns, these excess returns should average out to zero. However, if over time they cumulate to a significant positive or negative value, the IPO can be said to have shown abnormally good or bad performance.

Thus the approach involves first calculating the cumulative abnormal return (CAR) for each IPO for each month after the listing date (referred to as the event date). Second, the CARs are averaged for all IPOs across each month after listing to determine the average underperformance or overperformance. This was done using both equally and value-weighted averages.

The next step was to test whether the variability in CARs between IPOs could be explained by initial capitalisation, underpricing or market fads (the factors). For this purpose, multiple regressions were applied, using CARs at the three-year and five-year time periods as dependent variables.

Underperformance
The equally and value-weighted distributions of CARs over time are provided in Charts 1a and 1b. They show that on average IPOs perform significantly worse than the market in the long run. However, the meaning of “underperform” in this context must be understood. This study finds that if $1,000 was equally invested in each IPO in Australia between 1 January 1984 and 31 December 1988 and held for three years, rather than investing $1,000 in the market, then this equally-weighted portfolio of IPOs performed worse than investment in the market. The investment in IPOs would have yielded an average return of -19.4 per cent per annum (after excluding underpricing). Accordingly, the equally-weighted portfolio would have returned 39.2 per cent less than the market during the first three years.

Likewise, if a value-weighted investment of 1 per cent of the market capitalisation of each IPO in Australia between 1984 and 1988 was made and held for three years, rather than investing equivalent amounts in the market, then this portfolio would yield a return of -19.4 per cent per annum (after excluding underpricing). Accordingly, the value-weighted portfolio would have returned 39.2 per cent less than the market during the first three years.

The study does not claim that every IPO has underperformed the market. Clearly recent floats, such as the Commonwealth Bank, would refute such a claim. Rather, the study finds that the sample, in aggregate, underperformed the market.

Explanatory factors
Table 1 shows the results from re-
gressions which seek to determine the role of the three factors suggested earlier in long-run performance across IPOs (using equally weighted CARs). The market conditions are measured by $X_1$, which takes a value of 0 if the float took place in a cold market, and a value of 1 if it took place in a hot market. The second variable ($X_2$) measures the size of the float and the third variable ($X_3$) measures the initial premium at which the float lists. Panel A of Table 1 examines the determinants of abnormal returns after three years and Panel B after five years.

To interpret Table 1, note that the abnormal return for any company after three years can be written as:

$$CAR = -2.315 - 0.347X_1 + 0.087X_2 + 0.079X_3$$

For a company issued in a cold market, $X_1 = 0$. The average market capitalisation of all IPOs was $X_2 = 16.62$ and average initial underpricing of all IPOs was $X_3 = 15.49$ per cent. Consequently for the average issue in a cold market the abnormal return was:

$$CAR = -2.315 - 0.347(0) + 0.087(16.62) + 0.079(0.1549)$$

$= -0.8568$

For a company issued in a hot market, $X_1 = 1$. The average market capitalisation of IPOs and the average initial underpricing for the total sample are unchanged. Therefore, for the average issue in a hot market, the abnormal return can be represented by:

$$CAR = -2.315 - 0.347(1) + 0.087(16.62) + 0.079(0.1549)$$

$= -1.2038$

In terms of Chart 1a, cold-issue IPOs lie above the CAR line and hot-issue IPOs below the CAR line at the 36-month interval.

These findings illustrate that the type of market in which an IPO is floated — namely a hot or a cold issuing market — affects the performance of an IPO, vis à vis the market, over the subsequent three years. The negative sign of the coefficient ($-0.347$) signifies that IPOs issued in a hot market perform worse than IPOs issued in a cold market.

While the positive sign of the coefficient on market capitalisation ($+0.087$) indicates that IPOs with larger market capitalisation perform better in the long run than those with a smaller market capitalisation, the result is not statistically significant at standard levels.

Likewise, the underpricing factor has no significant explanatory power for the long-run performance of IPOs.

Turning to Panel B of Table 1, the reduction in significance of each variable between the 36 and 60-month time intervals can be attributed to unidentified factors which intervene during these latter two years and reduce the explanatory power of the original factors.

The low R² and highly significant constant in Table 1 indicate that poor performance persists. However, it is not possible to predict accurately the relative long-run performance of a particular IPO using the factors considered here.

**Conclusion**

This study has two main implications. First, for investors in Australia, staggering appears to make sense. The study supports Ritter's (1991) contention that it is financially wise to adopt a buy-and-hold approach to a comprehensive portfolio of IPOs. A wiser approach would be to invest in a market surrogate. However, the underperformance could be mitigated — although not eliminated — if a comprehensive portfolio of IPOs, issued in a cold market, and with relatively large market capitalisations, is held for at least three years.

Second, for new floats, initial underpricing may not mean incorrect pricing by the lead managers, since, over time, new floats "come back to the pack".

**NOTES**

1 The analysis begins on the first day of the first full calendar month after listing thereby excluding the effect of initial underpricing (see note 2).

2 For example, investing 1,000 in each IPO.

Accordingly, IPO returns are not weighted by any factor, but are treated equally.

3 For example, purchasing 1 per cent of the initial capitalisation of each of the 171 IPOs in the sample. Accordingly, IPO returns in a value-weighted portfolio are weighted according to the initial capitalisation of each float.

4 A "hot" issuing market is defined as one where a large number of IPOs were being issued each month (at least seven) and a "cold" issuing period is defined by exclusion — that is, the times that are not hot issuing periods.

5 Underpricing is defined as the percentage difference between the float price and the closing price on the first day of trading.

6 A seasoned float is one which is not the first float of the company, ie, a second or subsequent capital raising. It also includes floats where the company had been listed, was delisted and is now being floated again.


8 This ignores the role of systematic risk as measured by beta. However, Mauer and Senbet (1992) and Ritter (1991) have cast doubt on the need for beta adjustment in IPO studies.

9 On the first day of the first full calendar month after trading.

10 The scale of this axis is different from Chart 1a because of the value-weighting adjustment. This adjustment involved weighting an IPO's CAR by its percentage contribution to the total initial market capitalisation of all the IPOs in the sample. This method of weighting reduces the absolute value of an IPO's CAR. Therefore the mean value-weighted CARs represented on the Y-axis are much smaller than the equally weighted CARs.

11 Expressed as the natural logarithm (ln) of the initial market capitalisation.

12 This represents an average market capitalisation of $16,579,726.

**REFERENCES**


