Hot Issues, New Economy Stocks and Australian Industry IPO Returns in the Late 1990s

Robert Brooks and William Dimovski

Abstract

This paper analyses Australian IPOs at an industry level for the period 1994 to 1999. We find a significant relationship between capital weighted IPO industry returns and contemporaneous index returns suggesting that capital raising and money left on the table arguments matter. We do not find any hot issue years at an industry level. Further at an industry level we find that new economy listings are not different to listings from other sectors of the economy.

Introduction

The feature of underpricing of initial public offerings (IPO) remains one of the great anomalies of the modern finance literature. An IPO is where a company lists on the stock market for the first time. In IPOs it is persistently found that the price at the end of the first day of listing is significantly higher than the issue price in the prospectus. This implies that companies that list shares persistently leave money on the table, as they could charge higher issue prices. The feature of IPO underpricing is observed across the world. For a summary of the international evidence see Loughran, Ritter and Rydqvist (1994, 2002).

There is also empirical evidence of IPO underpricing for Australia that is consistent with the international evidence. For a summary of the Australian evidence see Finn and Higham (1988), How, Izan and Monroe (1995), Lee, Taylor and Walter (1996), How (1996, 2000), Brailsford, Heaney and Shi (2001) and Dimovski and Brooks (2002a).

The literature on IPOs has also uncovered another key feature. This is the existence of hot issue periods. Hot issue periods are periods when both the number and extent of IPOs significantly increases. For US evidence see Ritter (1984), while for Australian evidence see Brailsford, Heaney and Shi (2001). The recent period from the mid to late 1990s is a possible hot issue period. An extensive discussion of the US stock market experience during this period is provided by Shiller (2000). Shiller (2000) identifies a booming US stock market fuelled in part by new economy issues.

The purpose of the present paper is to explore issues associated with hot issue periods and new economy stocks for the Australian IPO market over the period from the mid to late 1990s. The paper defines new economy listings to be those in the following three industry sectors: telecommunications, media, healthcare and biotechnology. The paper explores the hot issue feature at an industry level by seeking to explain industry index returns and the lags of both IPO and index returns. The analysis of hot issues is important because it suggests that stock markets may form bubbles which drives up the price of new issues. Because of the greater uncertainty in valuing new listings in new economy stocks these industries are likely to be more susceptible to hot issues.
The plan of this paper is as follows. Section two outlines the sources of data and the methodology to be utilised in the empirical analysis. Section three presents the results of the empirical analysis. Section four contains some concluding remarks.

Data and Methodology

We collected data on Australian industrial and resource IPOs over the period 1994 to 1999. Over this six year period there were 358 IPOs that raised $24 billion in equity capital. The primary source of IPO data was the Connect 4 Company Prospectuses database. The IPOs are classified into years on the basis of when the prospectus was offered as distinct from when the company listed. Stock price data on the IPOs and the industry index returns was collected from the IRESS and Datatstream databases.

There are a total of 24 separate industry classifications used by the ASX. In our sample of IPOs we have six years of data. Because our modelling depends upon lags this reduces to five years of data for analysis. Therefore at most we have 120 observations (5 years x 24 industries) for analysis. We lose further observations for the following reasons:

1. Following How and Low (1993) we omit property trusts from the analysis.
2. There are no IPOs in the chemicals industry during this period.
3. For an observation to be included we need to have IPO and index data in the current and previous years.

As a result of these three factors we end up with 50 observations for further analysis.

The model to be estimated in the empirical analysis is:

\[
R_{it} = \beta_0 + \beta_1 R_{it-1} + \beta_2 R_{it-1} + \beta_3 R_{it-1} + \epsilon_{it}
\]

where \(R_{ipo,i,t}\) is the return on IPOs in industry \(i\) in year \(t\), \(R_{ind,i,t}\) is the return on the ASX industry index \(i\) in year \(t\), the \(\alpha\)'s are unknown parameters to be estimated, and \(\epsilon_{it}\) is assumed IN \((0,\sigma^2)\).

In measuring \(R_{ipo,i,t}\) the paper uses two measures:

1. The simple average.
2. A weighted average where the weights reflect the capital raised.

In the weighted average this implies a greater weighting to large capital raisings, on the possibility that there is a greater cost to underpricing the greater the capital that is raised. The model is also augmented with dummy variables for the year of prospectus offering (D96, D97, D99) and a dummy variable \(D_{new}\) for the new economy industries (telecommunications, media, healthcare and biotechnology).

Empirical Results

The results of our empirical analysis are reported in table 1. The first row of table 1 reports the base model for the simple average of IPO returns across the industry. The second row of table 1 reports the base model for the capital weighted average of IPO returns across the industry. For the simple average we find that none of the variables in our model are significant. In contrast for the capital weighted average we find the contemporaneous index value to be highly significant. This suggests that the amount
of capital raised and money left on the table arguments (for further discussion of these arguments, see Loughran and Ritter (2002) and Dimovski and Brooks (2002b)) matter in linking IPO returns to industry average returns. This result also suggests that capital weighting minimises any distortionary impacts from small issues. The simple average returns will be impacted more by small issues than the capital weighted average. The stronger results for the capital weighted average suggests that investors care more about larger issues as in this context underpricing implies leaving more money on the table. It is reasonable to conjecture that in these settings that greater resources will be invested in valuation.

The third and fourth rows of Table 1 report the results for estimating the base model augmented with annual and new economy dummy variables. We find that none of these dummy variables are significant in our analysis. This suggests that an industry level for Australia over this period that there are no individual years which stand out as hot issue periods. Further at an industry level we find no significant differences between new economy stocks, and stock from other sectors that list. The diagnostic tests ($R^2$ and White) show that the model is not fully specified. This is not surprising given that many of the variables found to be significant in studies of individual IPOs have not been included in the analysis. To include such variables would require detailed weightings beyond the scope of the current analysis.

### Table 1

<table>
<thead>
<tr>
<th>Industry Average IPO Returns</th>
<th>C</th>
<th>$R_{IND}$</th>
<th>$R_{IND}$</th>
<th>$R_{IND}$</th>
<th>D96</th>
<th>D97</th>
<th>D99</th>
<th>DNEW</th>
<th>$R^2$</th>
<th>White</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simple Average</td>
<td>0.202</td>
<td>-0.065</td>
<td>0.123</td>
<td>-0.105</td>
<td>0.656</td>
<td></td>
<td></td>
<td></td>
<td>0.031</td>
<td>15.252</td>
</tr>
<tr>
<td>Capital Weighted</td>
<td>0.107</td>
<td>0.208</td>
<td>0.088</td>
<td>-0.033</td>
<td>0.789</td>
<td></td>
<td></td>
<td></td>
<td>0.115</td>
<td>26.386</td>
</tr>
<tr>
<td>Simple Average</td>
<td>0.114</td>
<td>-0.010</td>
<td>0.107</td>
<td>-0.258</td>
<td>0.379</td>
<td>0.099</td>
<td>0.249</td>
<td>0.035</td>
<td>0.094</td>
<td>0.096</td>
</tr>
<tr>
<td>Capital Weighted</td>
<td>0.095</td>
<td>0.209</td>
<td>0.083</td>
<td>-0.050</td>
<td>0.740</td>
<td>0.013</td>
<td>0.028</td>
<td>-0.005</td>
<td>0.047</td>
<td>0.128</td>
</tr>
</tbody>
</table>

This table reports the results of OLS estimation of the relationship between IPO and index returns current and lagged. Results are reported for simple average capital weighted IPO returns. The table reports parameter estimates and p-values in parentheses. The $R^2$ and White test are also reported.

### Conclusion

This paper has explored the determinants of industry level IPO returns in Australia for the period 1994 to 1999. We find a significant relationship between capital weighted IPO returns and industry index returns. This relationship is not present for simple average IPO returns suggesting that capital raising and money left on the table arguments matter. When we extend our analysis to examine individual years and new economy stocks we find no difference from the overall results. Thus at an industry level we do not find any hot issue years. Further at an industry level we find that new economy listings are not different to listings from other sectors.
Bibliography


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About the Authors

Robert Brooks works in the Research Development Unit at RMIT Business.

William Dimovski lectures in the School of Accounting and Finance at Deakin University.