

## **CHAPTER 5: CONCLUSION**

The final chapter presents the conclusion of this research. Firstly, an overview of the study will be provided. Thereafter, the summary of the research results and review of research objectives are discussed. Finally, the chapter ends with suggestions for future research.

### **5.1 Overview of the Study**

All firms need to raise capital at one time or another to finance new projects, expand the existing operations as well as to start up their business. One of the common and best ways that newer and less established companies have found to raise quick capital is to make a stock offering via IPO. The underpricing of IPOs has been a topic of theoretical investigations for decades. The existence of underpricing in IPOs is well documented both in the developed and under-developed markets. This study examines how IPO size, market volatility, underwriter status and reciprocal of IPO price affect IPO short term underpricing and long term performance of IPO shares.

### **5.2 Summary of the Research Results**

The underpricing of IPOs is recognized as one of the anomalies that has been a rich field for investigation in the financial community. This paper aims to provide additional evidence on the IPOs by examining the Malaysian Stock Exchange-Bursa Malaysia, which is one of the growing emerging markets in Asia. This paper

investigates the underpricing phenomenon in Malaysian IPOs, by observing the behavior of market-adjusted initial returns, the short run and long run performance of these firms.

### **5.2.1 Review of Research Objectives**

The first objective in chapter 1 relates to the evidence of IPOs' underpricing. The cross sectional data of 313 companies listed and traded in Bursa Malaysia during the periods 1998 to 2008 provide empirical evidence of underpricing of IPOs, which is consistent with the literature. On the average, the first day adjusted return is 9.4%. The result is significant and consistent with the literature.

Regarding the second objective of this paper which is to analyze the initial and short run performance of IPOs, the results show on average, an initial underpricing of 13.4% at the end of the first day, 13.7% on the second day, 13.9% on the 3<sup>rd</sup> and 4<sup>th</sup> day, 14% for 5<sup>th</sup> day and 19% for the tenth and twentieth day. These results are highly significant and are in line with the results of other international studies on IPOs. In addition, when initial market adjusted returns are regressed against long term performance of IPOs, the results confirm that the long run IPO performance is found to be inversely related to the initial returns. This provides some support for the over-optimism hypothesis of initial excess return. The initial premiums on the listing of IPOs and their subsequent poor stock market performance have been held to be evidence of speculative bubbles or fads (Shiller, 1990). This proposition is confirmed in Chapter 4.

The third objective is to analyze the long term performance of IPOs subsequent to listing. The results provide evidence of long term returns for Malaysian IPOs by analyzing their performance up to 36 months subsequent to listing calculated on the basis of a buy-and-hold strategy. Previous findings using IPOs in the US indicate poor long term performance of IPOs. Based on the sample IPOs, the average return for 24-month and 36-month post listing returns are -8.0% and -15.0% respectively and these results are statistically significant at 5% level. These findings dominantly lend support to the findings of Ritter (1991) which report that on average, IPOs performed poorly in the long run. Moreover, in the estimated long term regression equations, IPO size is the only variable which is stable and is found to be statistically significant at 5% level for Year 1, Year 2 and Year 3 returns.

Finally, the fourth research objective of this study is to investigate the four mainly determinants for IPOs' underpricing. In line with the theories and literature on underpricing, the magnitude of initial underpricing is modeled as a function of IPO size, market volatility, underwriter status and reciprocal of IPO price. When the main determinants influencing the initial performance of IPOs are investigated, IPO size and market volatility are found to be statistically significant in the estimated initial IPO underpricing regression equation. The positive relationship between IPO size and initial underpricing is consistent with the empirical findings of Allen and Faulhaber (1989). At the same time, the results of market volatility variable on initial underpricing are in line with studies performed by Menyah and Paudyal (1996). Furthermore, the underwriter status and reciprocal of IPO price appear to be weakly

influencing the initial underpricing. In order to examine the impact of underwriters' status on underpricing, the results are comparable to the results of Jelic et al. (2001) where the dummy variable for underwriter status (1=reputable, 0=non-reputable) was used. The insignificant coefficient suggests that it is not a significant variable in influencing the level of underpricing.

Overall, the analysis suggests that IPO size, market volatility, underwriter status and reciprocal of IPO price can explain over 57% of the variation in the level of underpricing.

### **5.2.2 Review of Research Hypotheses**

**H<sub>1</sub>:** There is a positive relationship between size of an IPO offering and the level of initial underpricing.

It is argued in the previous literature that IPOs larger in size signal their intrinsic value by underpricing by a larger margin [Allen and Faulhaber (1989), Grinblatt and Hwang (1989)]. Thus, a positive relationship between this variable and the initial underpricing is expected.

The multiple regression results as reported in Table 7 show that IPO size has the expected positive sign. The coefficient is 0.534 and is statistically significant at 5% level. This shows that the size of the IPO offering has a significant positive relationship on the level of initial underpricing. The result is supportive of findings by

Allen and Faulhaber (1989) where firms with higher intrinsic values signal their firms' values through increased underpricing.

**H<sub>2</sub>:** There is a positive relationship between market volatility and the level of initial underpricing.

Empirical evidence suggests that IPOs which go public during hot markets (the period when stock market has high return) have high first day returns. The success of IPO issue sometimes depends on the timing of the issue, whether the overall market sentiment is bullish, bearish or flattish.

Consistent with expectation, the market volatility has the expected positive sign as reported in Table 7. The coefficient of this variable is 0.286 is statistically significant at 5% level. This indicates market volatility is one of the main determinants of underpricing. This finding is supportive of the results by Menyah and Paudyal (1996) where they observed issuers tend to set the offer price below the true "intrinsic" price at a time of high market volatility.

**H<sub>3</sub>:** There is a positive relationship between reciprocal of the IPO subscription price and the level of initial undepricing.

The larger the subscription price, the more difficult it will be for average investors to acquire the stocks as higher priced IPOs are beyond the affordability of

average IPO investors. As such, the demand for pricey IPO is lesser than the cheaper priced IPOs as the price can be extremely high.

Multiple regression results as exhibited in Table 7 demonstrate that the reciprocal of IPO price has a positive relationship on the level of IPO underpricing. The coefficient for this variable is 0.046 and it is not statistically significant at any meaningful level. This signifies that there is an insignificant relationship between IPO price and the level of underpricing.

**H<sub>4</sub>:** There is a positive relationship between the reputation of underwriter and the level of initial underpricing.

This proposition implies that IPOs underwritten by reputable underwriters may signal that they are good and safe investments, in which case investors tend to pay higher price in the market, pushing the share price upwards, and resulting in excess initial returns.

A substantial body of literature examines the effect of underwriter reputation on the initial performance of IPOs. In Malaysia, Jelic et al. (2001), using data from 1980 to 1995, report that underwriters with a better reputation tend to, on average, increase initial underpricing. In Japan, Beckman et. al (2001) found no evidence that underwriter reputation influences the level of underpricing based on Japanese IPOs between 1980 and 1998.

The multiple regression results reveal that reputation of underwriter reputation has a positive relationship with the magnitude of initial underpricing. The coefficient for this predictor is 0.014 and it is not statistically significant at 5% level. This result is in agreement with the findings by Beckman et al. (2001) which examined Japanese IPOs from 1980 to 1998, found no evidence that underwriter reputation influences the level of underpricing.

### **5.3 Suggestions for Future Research**

This study can be extended in the future by incorporating the oversubscription rate for each IPO as a measure of demand, the age of the firms before IPO listing , retained ownership by original owners and total assets of the each company in the IPO underpricing model.

Further research in different market settings seems warranted. The study can be extended by splitting the sample of IPOs into hot and cold market sub-samples. It is aimed to allow comparisons of underpricing levels different market conditions. It also allows for investigation into the differential in IPO initial returns between hot and cold markets as characterized by Ritter (1984), where the initial IPO return is observed to be generally higher in hot market than cold market.

This study aims to study the short and long run performance of IPOs listed in Bursa. In line with numerous studies, the 36-month timeframe is commonly used as a measure for long term performance.

Long run performance may be the most controversial area of IPO research. The results are sensitive not only to methodology, but also to the exact time period chosen. A longer timeframe beyond 36 months to show the very long run performance seems to be warranted as studied by Louhgran and Ritter. Drobotz et al. (2002) measure long term performance up to 10 years of monthly data after going public. This is much more extensive and allows for a thorough assessment of aftermarket performance in the very long run. In the study, it was found that underperformance is significant in both absolute values and statistical terms only in the very long run beyond the 36 months of aftermarket trading.

This study can also be extended to include the investigation of two first day market indicators of heterogeneous investors' expectations or divergence of opinions using two first day trading indicators, namely opening-day-spread and flipping ratio and their predictive power over IPO short and long run performance. Opening-day spread is defined as the difference between day high and day low on the first trading day. Flipping ratio is defined as the percentage of opening day trading volume divided by the number of shares offered on the first trading day (Miller and Reily, 1987 and Aggarwal, 2003).