Journal of Applied Economics and Business Research
JAEBR, 4 (1): 42-51 (2014)

The Long-Term Performance of Initial Public Offerings: Evidence from Bursa Malaysia

Hashem Zarafat [1]
Faculty of Business Management & Globalisation (FBMG), Limkokwing University of Creative Technology (LUCT), Malaysia

Mirza Vejzagic [2]
Faculty of Business Management & Globalisation (FBMG), Limkokwing University of Creative Technology (LUCT), Malaysia

Abstract
This paper investigates long-term (six-month, one-year, two-year, and three-year) returns of IPOs listed on the Bursa Malaysia (BM) in order to provide a more recent case of performance of IPOs in Malaysia. A total number of 166 firms listed and traded on the Bursa Malaysia (BM) for a period of three years starting from 2004 to 2007 were thoroughly analyzed in this paper. The findings of this paper shows that the average market-adjusted return for the six-month, one-year, two-year, and three-year after listing are -5.2%, -10.8%, -21.4%, and -32.8%, though they are not statistically significant. The regression models for the six-month return consist of market volatilities, book value to market value ratio, underwriter reputation, operating history of a company prior to going public, gross proceeds, total assets of a company prior to going public or size variable, hot or cold market period, industries, and first-day returns as an additional independent variable. The models for the long-term returns (one-year, two-year, and three-year) consist of first-day return, market volatilities, book value to market value ratio, underwriter reputation, gross proceeds, and total assets of a company prior to going public. The investigation of long-term return unveils that first-day return, size, and market volatility are three determinants of the one-year return. These three variables along with book value to market value ratio are predictors of two-year return. Last but not least, three-year return is influenced by first-day return, book value to market value ratio, and gross proceeds.

Jel Code: E44, C10, G10,

Keywords: *IPO, Long-Run Performance, Underperformance, Returns, Bursa Malaysia.*

1. Introduction

The puzzling return observations of initial public offerings have incited scholars to investigate the determinants of both short and long run returns. Numerous studies have reported underperformance of initial public offerings in the long run (Ritter, 1991; Fama & French, 1992; Kim et al., 1995; Cai & Wei, 1997; Kooli & Suret, 2002; Gregory & Al-Shwawreh, 2010; Dong, Michel, & Pandes, 2011; Ramlee & Ali, 2012; Zarafat, 2012). In this respect, Ritter (1991) presents evidences in the US market that new issues significantly underperform in the three years succeeding the initial public offerings. According to the studies conducted by Kooli and Suret (2002) and Kim et al. (1995) on IPOs returns for longer term, which is

[1] Correspondence to Hashem Zarafat, Email: hashem.zarafat@limkokwing.edu.my.

[2] Correspondence to Mirza Vejzagic, Email: mirza.v@limkokwing.edu.my

 ISSN 1927-033X

defined as a period of several years after issuing the new stocks on the market, the underperformance of IPOs in the long run are proven.

Although a number of research internationally and locally have investigated the aftermarket performance of initial public offerings, this paper makes a major contribution to the expansion of the IPO literature by providing additional evidence on long run returns of a more recent, comprehensive sample of new issues on the Bursa Malaysia (BM). As mentioned earlier, the aftermarket performance of initial public offerings is vital for both investors and firms. The results of this study can be used as a more precise guidance to help the investors in order to optimize their investment decision in initial public offerings, specifically on the Bursa Malaysia, through a better understanding of price variation and IPOs profitability. In addition, this paper investigates a more recent sample of newly issued stocks in Malaysia during more stable periods. This study expects to observe underperformance of IPOs consistent with those of previous literature.

In this paper, a thorough revision of previous literatures is provided in next section. In addition, the data collection process, sample size, and model specification for long run return are presented. This is followed by the empirical findings of the long run return analyses in next section. Finally, the conclusion is reported in the last sections of this paper.

2. Litareture Review

2.2. International Evidences on IPOs Performance

Gounopoulos, Nounis, and Stylianides (2007) summarize the most recent findings of international evidence on the short and long run performance of IPOs in several countries around the world. In regards to the aftermarket performance of new issues, Firth (1997) examined the New Zealand Stock Exchange during the period of 1979 to 1987. According to his study, there is a substantial linkage between the degree of long-term underperformance and other financial factors comprising of profit forecast accuracy, corporate earnings, corporate cash flows, and the growth rate (Firth, 1997). Furthermore, Cai and Wei (1997) examine the long term returns and the operating performance of 180 Japanese initial public offerings listed on the Tokyo Stock Exchange (TSE) during the time period starting from 1971 to 1992. The result of this research shows 27 percent of three years long term returns as stated in Cai and Wei. Similar to other countries, average initial returns of the UK market with a huge sample of 3,122 new issues within the period of 42 years (i.e. 1959 to 2001) is 17.4 percent. The results of the study conducted by Levis (1993) reveals an 8.1 percent of long term returns performance whereby proving the fact that long term investment in new issues is seemingly valueless even in the UK market.

The IPOs market in the United States has been immensely examined over the past few decades. Ritter and Welch (2002) found the initial returns of 18.8 percent in the United States for the time period of 21 years starting from 1980 to 2001. Although there are several documents of the short-term overperformance, the long-term returns in the United States are opposite to the short-term. For instance, Ritter and Welch (2002) substantiate the negative long-term returns of IPOs in the US market. The trends of the world's influential stock markets such as Canada, France, Germany, Japan, and UK are consistent with that of the United States as shown in Gounopoulos et al. (2007). Kooli and Suret (2002) revealed that the long term returns of Canadian IPOs are negative at 16.86 percent. The long term return of initial public offerings in France is only 4.8 percent (Loughran et al., 2006; Gounopoulos et al., 2007).

Based on the findings of the German Market in the studies done by Ljungqvist (1997) long term underperformance of IPOs for a smaller sample stands at 12.1 percent as shown by Ljungqvist. By using a sample of 75 IPOs in Cyprus within 1999 to 2002, Gounopoulos et al.

 ISSN 1927-033X

(2007) found 20.81 percent of initial returns consistent with results from previous literature. Although the long run performance including the first day returns is considerably positive for Cypriot new issues, the return rate turns negative from the sixth month after listing, when the first day of trading is excluded (Gounopoulos et al.). By using the government ownership as the moderating effect between liquidity and IPO long-run return, Ramlee and Ali (2012) declare that higher liquidity stocks are rewarded by higher return. Su, Bangassa, and Brookfield (2011) investigate the long run performance of Chinese IPOs over the period 1996 to 2005. They posit that the choices of methods and benchmarks measuring performance of IPOs in long run is a vital factor in the evidence offered in the numerous literatures. While the divergence of opinion hypothesis is not supported by Su et al's (2011) study, their findings are consistent with the signalling hypothesis. Long-term underperformance of new issues has theoretically been attributed to a numerous reasons. A number of theories have scrutinized various aspects of the link between investors, issuing firms, and underwriters taking the firms public. In this section, major theories are evaluated and shown as follows.

2.2. The Aftermarket Performance of Malaysian IPOs

The studies done by Paudyal et al. (1998) and Zarafat (2012) confirm that Malaysian IPOs experience short excess returns. Paudyal et al. (1998) also demonstrates that there is no significant difference between the performance of IPOs in Malaysia and the performance of market portfolio; new issues with low short term returns outperform the market whereas those with higher early returns underperform in comparison to the market. Last but not least, the findings of their research imply a positive association between the long-term performance of IPOs and the reputation of the underwriters. Consequently, underpricing would explain the underperformance of IPOs if these outcomes are verified (Annuar & Shamsher, 1998; Paudyal et al., 1998; Kooli and Suret, 2002). Sundarasen and Rajangam (2008) investigated the aftermarket performance of Malaysian IPOs after the Asian financial crisis. Their study also confirmed a decrease in the long term performance of new issues for this period. The findings of their work suggest that these drops in both short and long term returns might be the indicators of a more mature and efficient market in line with more informed and rational investors; "with a change in investor psychology" with minimal proof of overreaction, fad or demand pressure hypothesis. Moreover, Ahmad-Zaluki and Lim (2012) investigate the short- and long-run performance of Malaysian initial public offerings for the period 2002 to 2005. Their study provides evidence on underpricing of short-term returns and underperformance of long-term returns of initial public offerings in Malaysia.

3. Research Methodology

3.1. Long-term Performance of IPOs

Numerous research have increasingly provided evidences of high initial returns of IPOs (underpricing) and inversely, long term underperformance (for instance, Ritter (1991) for US, Levis (1993) for the UK, Ljungqvist (1997) for Germany, Paudyal et al. (1998) for Malaysia, Dimovski and Brooks (2004) for Australia, and Kooli and Suert (2002) for Canada). According to Paudyal et al. (1998), investing in a portfolio of new issues through buying from the market on the first day of trading should not create any excess return in the long-run, if the equilibrium value is met on the first day of trading in the market. Furthermore, IPOs should underperform the market in the long-run, if the initial abnormal return is principally an outcome of over-optimism in the market (Pauydal et al., 1998). The long-run aftermarket performance of new issues listed on the BM is assessed in this study by (1) analyzing their daily compounded return over a period of time, and (2) comparing them with the market return. The returns are measured as follow:

$$R_i = \prod_{t=1}^{N}(1 + r_{it}) - 1 \quad (1)$$

where r_{it} is the raw return of company i on day t.

The calculation of compounded return of the market portfolio (BM composite index) is assessed by applying the same procedure. The market return is subtracted from the company return to investigate whether or not the sample IPOs are outperforming the market. A portfolio of IPOs performs better than the market if the adjusted excess long-run return is significantly different from zero (Paudyal et al., 1998).

The long-term excess returns of all new issues are regressed and analyzed based on the following model as proposed by Paudyal et al. (1998):

$$LR_i = \gamma + \delta_1 LnGross.Proceeds_i + \delta_2 UR_i + \delta_3 IR_i + \frac{\delta_4 BV_i}{MV_i} + \delta_5 LnSIZE_i + \delta_5 MKT.Vol_i \quad (2)$$

where,

- LR_i = long-term return of firm i for year t (t = 1, 2, 3)

- $LnGross.Proceeds_i$ = is the natural logarithm of value of the gross proceeds for company i (natural logarithm of the number of shares outstanding multiplied by the offering price of IPO)

- URi introduces a dummy variable, taking the value of 1 for more reputed underwriter and 0 for less reputable underwriter

- IRi = market adjusted initial excess return

- MKT.Voli represents the standard deviation daily market returns over two months before going public.

- BV_i/MV_i is book value of per share divided by market value of that share.

- $LnSIZE_i$ represents total assets of the firm prior going public

3.2. Research Design, Data Collection

A sample composing of 166 IPOs from Bursa Malaysia from January 2004 to December 2007 are selected for analysis in this study. The rationale behind this selection of sample is to closely investigate a more recent, consolidated financial period. Following date collection step, the date are statistically analyzed in order to thoroughly investigate into determinants and trend of the long term aftermarket price performance of IPOs in Malaysia.

4. Data Analysis

4.1 Descriptive Statistics

The results of regression analyses show that the average returns for the six-month return is -11% and statistically significant at 1% suggesting poor performance of Malaysian companies in six month after going public. Moreover, the averages return for the first year, second year, and third year are -11%, -21%, and -33%, respectively; these averages are also significant at 1%. The results of descriptive statistics for the average returns of the first, second, and third year after issuing IPOs confirm that Malaysian companies underperform in the long run (see table 1).

Table 1: Descriptive Statistics of Returns

 ISSN 1927-033X

Returns	Range		Mean	Standard Deviation	Variance	Skewness		Kurtosis	
	Min.	Max.				Statistic	Std. Error	Statistic	Std. Error
6 Months	-.836	1.750	-.0520	.439	.193	1.257	.188	2.457	.375
1 Year	-.947	1.848	-.108	.505	.255	1.385	.188	2.348	.375
2 Years	-.959	2.267	-.214	.531	.281	1.725	.188	4.188	.375
3 Years	-.967	2.240	-.3282	.520	.270	1.979	.188	5.619	.375

The model summary of returns (Table 2) presents R, R-Squared, and adjusted R-Squared. According to table 2, the adjusted R-Squared are 0.203, 0.184, 0.144, and 0.263 for six month, one year, two years, and three years regression models, respectively.

Table 2: The Model Summary of Returns (Stepwise Method)

Return	Model	R	R Squared	Adjusted R Squared	Standard Errors	Durbin-Watson
6 Months	1	.436	.190	.185	.386364522	1.920
	2	.461	.212	.203	.382134489	
1 Year	1	.312	.097	.092	.468938226	1.851
	2	.373	.139	.129	.459291344	
	3	.446	.199	.184	.444535672	
2 Years	1	.232	.054	.048	.517654000	1.869
	2	.337	.113	.102	.502618241	
	3	.368	.136	.120	.497742837	
	4	.406	.164	.144	.490908668	
3 Years	1	.421	.177	.172	.437682047	1.866
	2	.448	.201	.191	.432607375	
	3	.492	.242	.228	.422616766	
	4	.531	.282	.264	.412661275	
	5	.526	.276	.263	.412912258	

4.2 The Results of Regression Models

The results of multiple regression models for the six months, one year, two and three years returns are presented in Table 3.

Table 3: Summary of Coefficients of the Multiple Regressions (Stepwise Method)

	Model	Beta			T-Stat	Collinearity Statistics	
		Unstdardized Coefficients	Standard Error	Standardized Coefficients		Tolerance	VIF
1[a]	(Constant)	-.937	.391	-	-2.399	-	-
	First Day Return	.472	.075	.438***	6.286	1.000	1.000
	LnSIZE	.047	.022	.150**	2.151	1.000	1.000
2[b]	(Constant)	-1.44	.455	-	-3.162	-	-
	First Day Return	.419	.088	.339***	4.782	.990	1.010
	LnSIZE	.090	.026	.251**	3.495	.966	1.036
	Market.Volatility	-52.2	15.121	-.249**	-3.454	.958	1.044
3[c]	(Constant)	-1.50	.510	-	-2.945	-	-
	First Day Return	.280	.102	.210**	2.738	.883	1.132
	LnSIZE	.082	.030	.215**	2.717	.827	1.209
	Market.Volatility	-61.5	16.716	-.271***	-3.681	.954	1.048
	BV/MV Ratio	.331	.140	.194**	2.354	.764	1.309
4[d]	(Constant)	-3.28	.495	-	-6.628	-	-
	First Day Return	.356	.086	.294***	4.148	.895	1.118
	BV/MV Ratio	.510	.110	.331***	4.637	.885	1.131
	LnGross Proceed	.154	.029	.360***	5.293	.970	1.031

Notes: *p<0.10, **p<0.05, ***p<0.001

a. Dependent Variable: Six Month Return
b. Dependent Variable: One Year Return
c. Dependent Variable: Two Year Return
d. Dependent Variable: Three Year Return

Based on the findings of regression analyses for long run returns (Table 3), the final unstandardized and standardized models are listed as follows:

4.2.1. Final Unstandardized Model

According to coefficient analysis (Table 3), the final unstandardized model for the long run returns could be demonstrated as follow:

$$Six-Month\ Return = -0.937 + .472\ IR + 0.022\ LnSIZE \quad (3)$$

$$One-Year\ Return = .455 + .419\ IR + 0.090\ LnSIZE - 52.236\ MKT.Vol \quad (4)$$

$$Two-Year\ Return = -1.501 + 0.082\ LnSIZE - 61.530\ MKT.Vol. + 0.28\ IR + 0.331\frac{BV}{MV} \quad (5)$$

$$Three-Year\ Return = -3.282 + 0.356\ IR + 0.51\frac{BV}{MV} + 0.154\ LnGro.Proceeds \quad (6)$$

According to the above equation for unstandardized model, it can be interpreted that for every unit increase in IR, six-month return is expected to increase by .472 units, provided that other variables remain unchanged. In addition, for every unit increase in LnSIZE, the six-month return is expected to increase by 0.022 units, provided that other variables remain unchanged. In addition, it can be interpreted that for every unit increase in IR, one-year return is expected to increase by .419 units, provided that other variables remain unchanged and for every unit increase in LnSIZE, the one-year return is expected to increase by 0.090 units, provided that other variables remain unchanged. Moreover, for every unit increase in

 ISSN 1927-033X

MKT.Vol, one-year return is expected to decrease by 52.236 units, provided that other variables remain unchanged.

Similarly, according to the above equation for unstandardized model, it can be interpreted that for every unit increase in LnSIZE, two-year return is expected to increase by .082 units, provided that other variables remain unchanged and for every unit increase in MKT.Vol, the two-year return is expected to decrease by 61.530 units, provided that other variables remain unchanged. In addition, for every unit increase in IR, two-year return is expected to increase by 0.28 units, provided that other variables remain unchanged and for every unit increase in BV/MV, two-year return is expected to increase by 0.331 units, provided that other variables remain constant. Finally, it could be interpreted that for every unit increase in IR, three-year return is expected to increase by .356 units, provided that other variables remain unchanged and for every unit increase in BV/MV, the three-year return is expected to decrease by 0.51 units, provided that other variables remain unchanged. In addition, for every unit increase in LnGross.Proceeds, three-year return is expected to increase by 0.154 units, provided that other variables remain unchanged. It is evident that constant coefficient is -3.282 and it is statistically significant at 1% confidence level.

4.1.2. Final Standardized Model

A standardized variable is computed by subtracting the mean of that variable and then dividing the result by standard deviation of that specific variable. The final standardized model which is based on standardized coefficients (Table 3) is presented as follows:

$$Six - Month\ Return = 0.438\ IR + 0.150\ LnSIZE \quad (7)$$

$$One - Year\ Return = 0.339\ IR + 0.251\ LnSIZE - 0.249\ MKT.Vol \quad (8)$$

$$Two - Year\ Return = 0.215\ LnSIZE - 0.271\ MKT.Vol + 0.210\ IR + 0.194\frac{BV}{MV} \quad (9)$$

$$Three - Year\ Return = 0.294\ IR + 0.331\frac{BV}{MV} + 0.36\ LnGross.Proceeds \quad (10)$$

The equation for six month return indicates that IR with standardized coefficient of 0.438 has the highest impact on the six-month return. The next important variable is LnSIZE with standardized beta of 0.150. Thus, the investors who are interested in investing in Malaysian IPOs should consider initial return (IR) and total assets prior going to public of a company (LnSIZE) to be crucial factors in their decisions. Furthermore, the equation for one year return indicates that IR with standardized coefficient of 0.339 has the highest impact on the one-year return. The next important variables are LnSIZE and MKT.Vol with standardized beta of 0.251 and -0.249, respectively. Thus, the investors who are interested in investing in Malaysian IPOs should consider initial return (IR), total assets of a company prior to going public (LnSIZE), and market volatility (MKT.Vol) to be crucial factors in their decisions.

The equation for two year return indicates that LnSIZE with standardized coefficient of 0.215 has the highest impact on the two-year return. The next important variables are IR, BV/MV, and MKT.Vol with standardized beta of 0.210, 0.194, and -0.271 respectively. Moreover, for the three year return, the equation indicates that LnGross.Proceeds with standardized coefficient of 0.215 has the highest impact on the three-year return. The next important variables are BV/MV and IR with standardized beta of 0.331 and 0.294 respectively.

4.1.3. Analysis of Residuals

As it is well known, a good model is fitted when the residuals are approximately normal and roughly independently distributed with a mean of zero and some constant variance. Graphical methods are basically conducted in order to investigate into the residuals of a model. The residuals must satisfy four important criteria of being *linear*, *independent*, *distributed normally, and having equal variances* (LINE Assumption). By using the residual plots and tests of normality for the four models, it can shown that almost all the standardized residual values are within -3 and +3. The dots for all models are tightly clustered around the lines and scattered almost evenly above and below zero, thus the pattern is independent. If a pattern is Independent, it is also Linear. The graphical observations of residuals also show that the dots are scattered randomly and hence, there is no non-linear or quadratic pattern. Averages for all four models are almost a line around zero. If the skewness is within -2 and +2 the data are normally distributed (Schumacker & Lomax, 2004). The skewness of residuals is 1.335 which falls within the acceptable limits. Observation of a funnel shape is a sign of homoscedascity. Since no funnel shape is observed in the results of these four models, it could be concluded that homoscedascity assumption is satisfied. Based on the sample size (Central Limit Theorem) and L.I.N.E assumptions in testing residuals in the model, it could be concluded that the models are valid and there are no serious departures from normality.

5. Conclusion

This paper provides empirical evidence on long-term performance of IPOs in Malaysia. The average market-adjusted return for the six-month, one-year, two-year, and three-year after listing are -5.2%, -10.8%, -21.4%, and -32.8%, however they are not statistically significant. Contrary to the results of previous works done in Malaysia, the findings of this research are consistent with the study conducted by Ahmad-Zaluki and Lim (2012). The regression model for the six-month return is similar to those of short-term returns with first-day return as an additional independent variable. Finally, the models for the long-term returns (one-year, two-year, and three-year) consist of fist-day Return (IR), market volatilities (MKT.Vol), book value to market value ratio (BV/MV), underwriter reputation (UR), gross proceeds (LnGross.Proceeds), and total assets of a company prior to going public (LnSIZE).

The investigation of long-term returns shows that IR, LnSIZE, and MKT.Vol are three determinants of one-year returns. These three variables along with BV/MV are predictors of two-year returns. Last but not least, three-year return is influenced by IR, BV/MV, and LnGross.Proceeds. Among many models of long-term returns with different independent variables, this study uses the model proposed by Jelic et al. (2001) which has been used in different studies. However, there could be other models that scrutinize the nature of underpricing in Malaysia better. Thus, one of the limitations of this study is using only the abovementioned model.

Future studies could be conducted based on: adaptation of different models of long-term returns that more accurately explains the nature of businesses in Malaysia, conducting a research with a larger sample of Malaysian IPOs with a broader time period in order to understand the aftermarket performance of IPOs better.

References

Ahmad-Zaluki NA, Lim BK, 2012. The Investment Performance Of Mesdaq Market Initial Public Offerings (IPOs). *Asian Academy of Management Journal of Accounting and Finance* 8:1, 1-23.

Annuar MN, Shamsher M, 1998. The Performance and Signalling Process of Initial Public Offers in Malaysia: 1980-1996. *Pertanika J. Sci. & Hum.* 6:2, 71-79.

 ISSN 1927-033X

Cai J, Wei K, 1997. The investment and operating performance of Japanese initial public offerings. *Pacific-Basin Finance Journal* 5: 389-417.

Dimovski W, Brooks R, 2004. Initial Public Offerings in Australia 1994 to 1999, Recent Evidence of Underpricing and Underperformance. *Review of Quantitative Finance and Accounting* 22: 179-198.

Dong M, Michel J, Pandes JA, 2011. Underwriter Quality and Long-Run IPO Performance. *Journal of Financial Management* 40:1, 219-251.

Durbin J, Watson GS, 1950. Testing for Serial Correlation in Least Squares Regression. I, *Biometrika* 37: 409–428.

Durbin J, Watson GS, 1951. Testing for Serial Correlation in Least Squares Regression. II. *Biometrika* 38: 159–179.

Fama EF, French KR, 1992. The Cross-Section of Expected Stock Returns. *The Journal of Finance* 50:2.

Firth M, 1997. An analysis of the stock market performance of new issues in New Zealand. *Pacific- Basin Finance Journal* 5: 63-85.

Gounopoulos D, Nounis CP, Stylianides P, 2007. The Short and Long Term Performance of Initial Public Offerings in the Cyprus Stock Exchange. *Journal of Financial Decision Making* 4:1.

Gregory A, Al-Shwawreh F, 2010. UK IPOs: Long Run Returns, Behavioural Timing and Pseudo Timing. *Journal of Business Finance & Accounting* 37:5-6, 612-647.

Jelic R, Saadouni B, Briston R, 2001. Performance of Malaysian IPOs: Underwriters reputation and management earnings forecasts. *Pacific-Basin Finance Journal* 9: 457-486.

Kim J, Krinsky I, Lee J, 1995. The aftermarket performance initial public offerings in Korea. *Pacific-Basin Finance Journal* 3: 429-448.

Kooli M, Suret J, 2002. The Aftermarket Performance of Initial Public offerings in Canada. *Journal of Multinational Financial Management* 14:1, 47-66.

Levis M, 1993. The long-run performance of initial public offerings: The UK experience 1980-1988, *Financial Management* 22: 28-41.

Ljungqvist AP, 1997. Pricing initial public offerings: Further evidence from Germany. *European Economic Review* 41: 1309-1320.

Loughran T, Ritter J, Rydqvist K, 2006. Initial public offerings: International insights. *Pacific-Basin Finance Journal* 2: 165-199.

Schumacker RE, Lomax RG, 2004. *A beginner's guide to structural equation modeling, Second edition.* Mahwah, NJ: Lawrence Erlbaum Associates.

Shamsher M, Annuar MN, 1997. Auditing Firm Reputation, Ex Ante Uncertainty and Underpricing of Initial Public Offerings on the Second Board of the Kuala Lumpur Stock Exchange: 1990-1995. *Pertinka J. Soc. Sci. & Hum.* 5:1.

Su C, Bangassa K, Brookfield D, 2011. Long-Run Performance of Chinese Initial Public Offerings: Further Evidence. *Asia-Pacific Journal of Financial Studies* 40: 285-316.

Paudyal K, Saadouni B, Briston RJ, 1998. Privatisation initial public offerings in Malaysia: initial premium and long-term performance. *Pacific-Basin Finance Journal* 6: 427-451.

Ramlee R, Ali R, 2012. Lquidity, Initial Public Offering (Ipo) Long-Term Return And Government Ownership: Evidence From Bursa Malaysia Ipo Stocks. *Asian Academy of Management Journal of Accounting and Finance* 8:1, 39-66.

Ritter JR, 1991. The long-Run Performance of Initial Public Offerings. *The Journal of Finance* 46:1, 3-27.

Ritter JR, Welch I, 2002. A Review of IPO Activity, Pricing, and Allocations, Yale ICF Working Paper, No. 02-01. Available at SSRN: http://ssrn.com/abstract=296393.

Rocholl J, 2004. How does the Underwriter match Allocation and Demand in IPO Bookbuilding. *Working Paper, ESMT European School of Management and Technology*.

Rock K, 1986. Why New Issues Are Underpriced. *Journal of Financial Economics*, 15: 187-212.

Sundarasen SDD, Rajangam N, 2008. Under-Pricing And The Aftermarket Performance In The Malaysian Stock Market After The Asian Financial Crisis. *Word Congress on Money, Economy and Management, Imperial College London*. Available at: http://www.wbiconpro.com/london%20finance/Sundarasen%28315%29.pdf.

Zarafat H, 2012. The Performance of Initial Public Offerings: An Empirical Study of Bursa Malaysia, *International Journal of Commerce, Business and Management* 2:2, 2319-2828.

 ISSN 1927-033X