

Ownership Structure and the Operating Performance of Malaysia Companies

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The aim of this study is to investigate the operating performance, based on a sample of 192 Malaysian IPO companies over the period 2000 to 2005 using accrual-based measures of operating performance. The pattern of performance is also analysed by categorising the sample into family or non-family relationship groups. This study confirms that the operating performance of Malaysia IPOs declined in the post-IPO period, using accrual-based performance measures. The study also finds that the accrual-based performance measure shows more deterioration, suggesting that post-IPO performance is potentially related to the reversal of pre-IPO accruals.

Field of Research: Initial public offerings, ownership structure

1. Introduction

This study will provide a review of empirical studies concentrating on relationship between ownership structure and operating performance for the IPOs companies. The studies using accounting data have been employed to ascertain if there is also deterioration in operating performance following IPOs. This study focus on pre- and post-IPO ownership structure and operating performance, and then proceeds to develop the testable hypotheses concerning accounting-based operating performance of IPOs. Operating performance is an alternative performance approach that provides a potential explanation of the somewhat anomalous short run and long run stock market performance of IPOs. In general, existing international studies find that operating performance declines in the post-IPO period (e.g., Jain and Kini, 1994; Cai and Wei, 1997; Balabat, Taylor and Walter, 2004). However, the majority of prior studies are based on the accrual measure of accounting profits. Although this approach draws attention to the existence of poor performance following IPOs, by its nature it fails to capture the impact of earnings management at the time of IPOs. This is due to the fact that accrual-based profit measures are potentially subject to accounting manipulation by managers, for example through working capital adjustments (Teah, Welsh and Wong, 1998a). Only one study has been carried out on the Malaysian market to examine operating performance (Sun and Tong, 2002). This employs the accrual-based profit approach on a sample of just 24 privatisation IPOs (PIPOs), and finds that the operating performance of Malaysian PIPOs insignificantly improve in the post-PIPO period.

This small sample is unlikely to be representative of the overall IPO population which consists mainly of private companies rather than previously state-owned companies. There is very limited study on operating performance. The small sample and limited of research paper for operating performance is the reason for this study to be investigated. The finding for this study will be different from previous studies because of a larger data and no previous study cover from 2000 to 2005. Thus, this study

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Ahmad

explores post-IPO operating performance using accrual-based approaches for a large sample of both private and privatisation IPOs. All studies have found that accrual-based operating performance measures decline in the post-IPO period. But there is some limitations for the accrual-based performance. The accrual accounting profits measure is more subject to accounting manipulation by managers, such as through working capital adjustments.

Based on the review of prior literature, the following two broad research questions are identified:

1. *'Is there any performance changes between the ownership structure before and after IPOs?'*
2. *'Is there operating performance change after floatation by using accrual-based performance measures?'*

This paper will divided into five parts, the first part of this paper is introduction. Next the second part will reviews empirical evidence on companies making Initial Public Offerings (IPO) also will provide the hypotheses related to accounting based performance. Then, third part will discuss on methodology that will be using in this study. The fourth part will discuss on results and findings for this study and lastly is the conclusion for this study.

2. Literature Review

Prior studies shows only few studies that have focused on the accounting-based operating performance of IPOs, among other Jain and Kini (1994), Cai and Wei (1997), Mikkelsen *et al.*, (1997), Pagano *et al.*, (1998), Kutsuna *et al.*, (2002), Chan *et al.*, (2003), Balatbat *et al.*, (2004), Ahmad and Lim (2005) and Wang (2005). In general, most of these studies find poor operating performance in the post-IPO period. The first study that examines the operating performance of IPO companies is undertaken by Jain and Kini (1994). They analyses the change in operating performance of 682 IPO companies in the US for the period 1976 to 1988.

Five years subsequent to the IPO relative to the one-year pre-IPO level performance, both before and after industry adjustment. They argue that the declining operating performance in the post-IPO period cannot be attributed to a decline in business activity such as lack of growth in sales or cutbacks in post-IPO capital expenditure. This is because they also find that their sample of IPO companies displayed strong growth in sales and capital expenditure following the IPOs. The similar results are also found by Chan *et al.*, (2003) for Chinese IPO companies.

Teoh *et al.*, (1998), while mainly focusing on earnings management and long run share price performance in the US, also provide evidence on the time-series distribution of accounting performance. They find that the median return on assets is significantly positive in year 0 but then declines, to be significantly negative, by year four. The observed decline in the operating performance of IPO companies in general may not be too surprising. As pointed out by Jain and Kini (1994), managers may time their issues to follow periods of extraordinarily good performance. Managers take advantage of this overvaluation by issuing equity when their equity is overvalued, thereby reducing their overall cost of equity. As a result of the

Ahmad

overoptimism hypothesis, Jain and Kini (1994) argue that IPOs are followed by significant declines in operating performance.

There is a long tradition of research concerning the relationship between ownership structure and company performance. Regarding the relationship between changes in ownership structure and operating performance of companies that go public, Jain and Kini (1994) report a significant decline in operating performance post-IPO and argue that this is partly explained by decrease in the managers incentive. In similar study by Cai and Wei (1997) and Cai and Laughran (1998) analyze the subsequent performance of seasoned and unseasoned equity offerings on the Tokyo Stock Exchange, but argue that the post-issue deterioration in operating performance cannot be attributed to reduced managerial ownership. Kim *et al.* (2004) examine the operating performance of 133 IPOs in Thailand for the period from 1987 to 1993. In their study, they find that both accrual- and cash flow-based performance measures decline after the companies have gone public, both before and after industry adjustments. Kim *et al.* (2004) investigate the source of IPO underperformance by looking at the sales growth, asset turnover, and capital expenditure measures. This study is similar to Jain and Kini (1994) and Chan *et al.* (2003). Kim *et al.* (2004) find that sales significantly increase over the four years after the IPOs. But, both asset turnover and capital expenditure appear to decline during the post-IPO period. They conclude that the changes in sales and capital expenditure levels do not fully explain the interior post-IPO operating performance. Kim *et al.* (2004) also examine the relationship between managerial ownership and operating performance. By using the regression analysis, they find a curvilinear relationship between managerial ownership and the post IPO change in performance. They find that, there is a positive relationship between managerial ownership and the change in performance for companies with low and high levels of managerial ownership.

In Malaysia there is none study investigate the relationship between ownership structure and operating performance. Thus, this study will answer the research question in Malaysia perspective. Based on the above explanations, the hypotheses of the current study are as follows:

- H1: There is a difference in the level of operating performance of IPO companies as compared to their benchmarks in each year.
- H2: There is a difference in the percentage (p) of IPO companies outperforming their matched companies than would be expected by chance (which is typically tested by assuming $p = 50\%$) in each year.
- H3: There is a difference between the change in operating performance for IPO companies and their benchmarks, when change is measured against pre-IPO level.
- H4: There is a difference between the change in operating performance for IPO companies and their benchmarks, when change is measured against the previous year's performance.
- H5: There is a difference between the sources of operating performance changes for IPO companies and their benchmarks, when change is measured against pre-IPO level.

Ahmad

H6: There is a difference between the 'family relationships' group and 'non-family relationships' group pre- and post-IPO performance.

3. Method

3.1 Data

The IPO selection period ends in December 2005 to make sure that at least three years of post-IPO data is available for the sample companies. The choice of a three year post-IPO period is to enable the long term impact of the IPO to be observed. The sample size from 2000 until 2005 was selected because the previous study on operating performance is very small and the data prior 1999 is difficult to collect. By using the sample, it can compare the finding with the previous study that used small sample in their study.

Given the difficulty in obtaining earlier data, it was necessary to use a one-year period prior to the IPOs as the pre-IPO measure of accounting performance. Performance in the IPO year, and each of the three post-IPOs years, are compared with pre-IPO performance, year to year performance changes are also measured and reported. Due to this, five years of data on each proxy variable for each company were collected for the purposes of examining the pre- and post-operating performance of Malaysian IPOs, thus, five years of data had to be available for each of the sample companies. The prior to the IPO data were collected from the offering prospectuses. Post-IPO data items were collected from different sources, including DataStream.

3.2 Accrual-Based Measure

Operating performance has traditionally been measures in term of profit. The present study employs two accrual-based operating profit variables. The first operating profit to assets, and calculate the average profit that a company generates for each dollar of assets. They also provide a measure of the productivity of assets used to generate operating profit from a company's operations that incorporates profitability and efficiency.

The choice of denominator is contentious. Barber and Lyon (1996) suggest that total assets reflect both operating and non-operating assets, so they may understate the true productivity of operating assets. Therefore, focusing on operating assets deducting cash balances from total assets will influence the results, especially when the cash balance in sample IPO are significantly different. As noted by Mikkelsen *et al.* (1997), accounting profitability scaled by assets might give bias after IPOs. To reduce such bias, this study also deflates the operating performance by total sales since these are unaffected by changes in the assets base (Barber and Lyon, 1996).

Operating return on operating assets (OI/OA)

$$= \frac{\text{Operating profit before tax}}{\text{Total assets} - (\text{Cash and equivalents})}$$

Ahmad

Operating return on sales (OI/Sales)

$$= \frac{\text{Operating profit before tax}}{\text{Total sales}}$$

3.3 Analysis of The Association Between Ownership Structure and Post-IPO Operating Performance

For the family relationships, '1' is used to denote a company that has a family relationship, and '0' is used to denote company that has no family relationship. Data on family relationship was obtained from the offering prospectuses. The family relationships information available from the prospectuses stated whether any of the directors and senior management have family relationships with other directors and senior managers, such as brother, son, spouse etc.

4. Result

Table 4.1 presents the descriptive statistics for 192 IPOs and 192 matched companies. The descriptive statistics indicate that the median (mean) operating return on sales (OI/Sales) for the sample of IPO and matched companies is 11.9% (15.2%) and 11.3% (13.3%), respectively. These are expected to be similar since the IPO companies have been matched primarily on OI/Sales. While the difference between median is not statistically significant, the difference means OI/Sales is statistically significant at the 5% level. There is a wide variation in this operating margin, IPO companies range between -22% and 60% and the matched companies between -25% and 51%. The skewness (kurtosis) is typical for company size measures generally, but also suggest a larger positive tail with greater central clustering for IPO companies.

There are significant differences in both median and mean values at the 1% level. For example, the median (mean) total sales for IPO companies are RM60 million (RM115 million) compared with RM125 million (RM670 million) for matched companies. The difference is partly a function of the process used in size matching, since IPOs were usually matched with the closest larger non-IPO company, even though the size range between 70% and 130% of IPO was used.

4.1 Accrual-Based Operating Performance

Prior to investigating the changes in the operating performance of the Malaysian IPOs, it is useful to consider the level of operating performance of IPO companies and their respective matched companies over time for the pre-IPO period, during the IPO, and the post-IPO period. The analysis of the level of performance is conducted to identify any differences between IPO and matched companies throughout years -1, 0, +1, +2, and +3. Similar to Jain and Kini (1994), Mikkelsen *et al.* (1997), and Kim *et al.* (2004), the analysis focuses on median performance due to the tendencies of accounting ratio to have outlier in the data.

Panel A and Panel B of table 4.2 provide analyses of the results of the *level* of operating performance using the operating return on operating assets (OI/OA) and operating returns on sales (OI/Sales). Both the median and mean levels of OI/OA of the IPO companies are higher and significantly different at the 1% level to that of

Ahmad

their matched companies in the year prior to the IPO and IPO year. But, only the mean level of OI/OA of the IPO companies overperforms their matched companies significantly at the 5% level in the year immediately after the IPO. While IPO companies continue to overperform matched companies in year +2, both median and mean levels are not statistically different. However, IPO companies underperform the matched companies in the third year following the IPOs at the 1% level. These results are confirmed by a significant percentage positive with more (and less) than 50% observed in year -1 and 0 (and year +3).

Consistent with the results reported for the OI/OA measures, median OI/Sales is also higher for IPO companies compared to their matched companies in year -1 and year 0. However, only performance in year 0 is significantly different at the 1% level. This result is confirmed by a significant percentage positive adjusted OI/Sales of 60% in year 0. Subsequent to year 0, the matched companies seem to dominate the IPO companies, albeit both groups show a decline in performance from year -1 to year +3, however, only year +3 shows a significant IPO underperformance. The percentage positive adjusted OI/Sales at year +3 are only 39%, significantly different from 50%.

Ahmad

Table 4.1: Descriptive statistics for 192 IPO companies and 192 matched companies

	OI/Sales (%)		Operating profit				Total sales		Total assets	
			Before tax				(RM million)		(RM million)	
(RM million)	IPO	Matched	IPO	Matched	IPO	Matched	IPO	Matched	IPO	Matched
Mean	15.22 ^b	13.33	15 ^a	107	115 ^a	670	219 ^a	1,232		
Median	11.93	11.25	7 ^a	20	60 ^a	125	70 ^a	295		
Std Deviation	11.20	11.05	46	224	223	1,865	1,086	3,676		
Kurtosis	3.26	3.32	103	25	95	15	125	25		
Skewness	1.09	0.47	10	5	9	419	7			
Minimum	-22.42	-25.22	-21	-19	9	2	6	28		
Maximum	60.40	51.11	702	2,245	3,560	11,650	13,345	23,500		
Number of Companies	192	192	192	192	192	192	192	192	192	192

Note:

^{a and b} IPO and matched company values significantly different at the 0.01 and 0.05 levels, respectively, using a two-tailed test.

Ahmad

Reported in table 4.3 are the median and mean *changes* in operating return deflated by operating assets (OI/OA). Panel A reports the results on the pre- and post-IPO changes, while Panel B provides the results of the year-to-year changes. Panel A reports that all the median OI/OA values decline from the pre-IPO level. All of them are significantly different from zero at the 1% level. The results are consistent with US studies by Jain and Kini (1994) who found a decline of 9.09% in return on assets three years after the IPO, and by Kim *et al.* (2004). Kim *et al.* (2004) report a 71% decline to year +3 from the pre-IPO performance level. The equivalent measure for the present study is a decline of 64%.

The matched company number exhibit a similar pattern of statistically significant underperformance for the four years, reflecting economy-wide, industry-wide, pre-event performance and size factors. The matched company-adjusted results control for such factors and show a decline throughout the performance windows examined except for the difference with year 0. The median matched company-adjusted changes range from -0.1% to -8.1% are statistically significant, indicating that IPO companies have a higher rate of decline than their matched companies. This shows that the decline in post-IPO OI/OA is not simply an industry-effect, a reflection of mean reversion or size related. The decline in OI/OA from -1 suggests that the IPO companies may time the issues to occur after good performance.

The year-to year changes in OI/OA reported in Panel B also show significant declines in performance with the rate of decline slowing somewhat. After controlling for the matched companies within a similar industry, pre-IPO performance and size, the changes in OI/OA still show significant declines except for the change from year -1 to 0. Thus, it is clear that IPOs in Malaysia so show deterioration in accrual-based return on operating assets for the three post-IPO years. Contrary to expectations, this study did not find a large decline in OI/OA in the year -1 to 0, but this was observed in year 0 to +1.

Results for changes in the less downward-biased measure OI/Sales are reported in table 4.4. Interestingly, as can be observed from Panel A that there is slight improvement in performance in year 0 relative to year -1 for the IPO companies. However, this improvement is not statistically significant. Subsequently to the IPO, there is a significant decline in performance in OI/Sales for both the IPO and matched companies. The year-to-year changes reported in Panel B indicate that the median OI/Sales for the IPO companies peaks in the IPO year and then declined following the IPO. Consistent with the OI/OA results, the highest decline occurs in the year immediately after the IPO (year 0 to +1).

4.2 Family Relationship and Post-IPO Operating Performance

Prior research has suggested that there may be a link between family involvement and company performance (Anderson and Reeb, 2003). In the present study, of these 192 companies, 180 had family involvement in senior management prior to the IPOs and 12 companies had no family involvement. Table 4.5 shows the median change in operating performance for the post-IPO period relative to the pre-IPO year for both groups. Overall, the table provides no or very little evidence of family involvement affecting post-IPO performance.

Ahmad

Overall, the results of the present study demonstrate that operating performance which is accrual-based, decline after listing. Univariate analysis of the association between family relationship and post-IPO operating performance produce little evidence to explain the deterioration in operating performance. This results has answer the research question which is there is no performance changes between the ownership structure before and after IPOs and there is no operating performance change after floatation by using accrual-based performance measures.

Ahmad

Table 4.2: The median and mean levels of operating return on operating assets (OI/OA) and operating return on sales (OI/Sales)

Fiscal year relative to IPO	Median level (%)				Mean level (%)				IPO – matched Company		
	IPO Company	Matched Company	Difference: z-statistics (p-value)		IPO Company	Matched Company	Difference: z-statistics (p-value)		% Positive	z-statistic	n
Panel A : OI/OA											
-1	14.28	9.62	6.71	(0.000)	18.02	11.34	5.05 ^a	(0.000)	70.08	6.40 ^a	192
0	12.91	7.50	7.39 ^a	(0.000)	15.08	8.52	4.99 ^a	(0.000)	72.83	7.28 ^a	192
+1	8.22	6.64	1.52	(0.129)	9.50	6.59	2.30 ^b	(0.022)	53.15	1.00	192
+2	6.89	6.27	0.13	(0.896)	6.94	5.72	0.90	(0.370)	49.61	-0.13	192
+3	4.89	6.04	-3.40 ^a	(0.001)	1.47	6.88	-2.71	(0.007)	40.16	-3.14 ^a	192
Panel B : OI/Sales											
-1	13.93	13.56	0.82	(0.410)	16.32	15.33	2.18 ^b	(0.030)	50.39	0.13	192
0	14.25	12.38	4.31 ^a	(0.000)	16.92	16.48	0.12	(0.908)	59.84	3.14 ^a	192
+1	9.75	10.28	-0.64	(0.525)	11.59	9.00	0.80	(0.423)	45.67	-1.38	192
+2	8.97	10.17	-1.12	(0.261)	8.19	5.37	0.79	(0.430)	44.88	-1.63	192
+3	5.94	9.89	-3.60 ^a	(0.000)	1.90	5.80	-0.81	(0.416)	38.98	-3.51 ^a	192

Ahmad

Table 4.3: The median and mean changes in operating return on operating assets (OI/OA)

	Median	Mean	Median	Mean	Median	Mean	Median	Mean
<i>Panel A:</i>								
Pre-post-IPO changes (%)	Year -1 to 0		Year -1 to +1		Year -1 to +2		Year -1 to +3	
IPO company	-1.20 ^a	-2.94 ^b	-6.06	-8.52 ^a	-7.50 ^a	-11.08 ^a	-10.24 ^a	-16.55 ^a
p-value	0.000	0.011	0.000	0.000	0.000	0.000	0.000	0.000
Matched company	-0.81 ^a	-2.82 ^b	-2.82 ^a	-4.76 ^a	-3.60 ^a	-5.63 ^a	-3.45 ^a	-4.46 ^a
p-value	0.000	0.013	0.000	0.000	0.000	0.000	0.000	0.000
Matched company-adjusted	-0.08	-0.11	-4.36 ^a	-3.76 ^b	-5.87 ^a	-5.45 ^a	-8.07 ^a	-12.09 ^a
p-value	0.976	0.942	0.000	0.024	0.000	0.002	0.000	0.000
<i>Panel B:</i>								
Year-to-year changes (%)	Year -1 to 0		Year 0 to +1		Year +1 to +2		Year +2 to +3	
IPO company	-1.20 ^a	-2.94 ^b	-4.21 ^a	-5.58 ^a	-1.42 ^a	-2.56 ^a	-1.97 ^a	-5.47 ^a
p-value	0.000	0.011	0.000	0.000	0.000	0.000	0.000	0.001
Matched company	-0.81 ^a	-2.82 ^b	-0.96 ^a	-1.94	-0.34 ^a	-0.87	0.07	1.17
p-value	0.000	0.013	0.000	0.146	0.040	0.487	0.675	0.297
Matched company-adjusted	-0.08	-0.11	-3.44 ^a	-3.65 ^b	-1.84 ^a	-1.69	-1.81 ^a	-6.64 ^a
p-value	0.976	0.942	0.000	0.010	0.006	0.210	0.000	0.001
Number of companies	192	192	192	192	192	192	192	192

Note:

^a and ^b Significantly different from zero at the 0.01 and 0.05 levels, respectively, using a two-tailed test.

Table 4.4: The median and mean changes in operating return on sales (OI/Sales)

	Median	Mean	Median	Mean	Median	Mean	Median	Mean
<i>Panel A:</i>								
Pre-post-IPO changes (%)	Year -1 to 0		Year -1 to +1		Year -1 to +2		Year -1 to +3	
IPO company	0.26	0.70	-2.22 ^a	-3.73 ^a	-3.26 ^a	-8.13 ^a	-7.54 ^a	-13.25 ^a
p-value	0.265	0.110	0.000	0.000	0.000	0.000	0.000	0.000
<i>Panel B:</i>								
Year-to-year changes (%)	Year -1 to 0		Year 0 to +1		Year +1 to +2		Year +2 to +3	
IPO company	0.27	0.70	-3.15 ^a	-5.43 ^a	-0.77 ^a	-3.30 ^a	-1.75 ^a	-6.59 ^a
p-value	0.24	0.110	0.000	0.000	0.000	0.003	0.000	0.003
Number of companies	192	192	192	192	192	192	192	192

Note:

^a, ^b and ^c Significantly different from zero at the 0.01, 0.05, and 0.10 levels, respectively, using a two-tailed test.

Ahmad

Table 4.5: Operating performance of IPOs based on family relationships

Operating performance	Family group	IPO company			
		-1 to 0	-1 to +1	-1 to +2	-1 to +3
OI/OA	Non-family relationships	-1.29	-4.10	-6.55	-8.25
	Family relationship	-0.086	-5.35	-7.23	-11.88
	z-statistic for difference	0.18	-0.45	-1.33	-1.55
	p-value	0.756	0.498	0.320	0.255
OI/Sales	Non-family relationships	0.27	-1.82	-2.50	-4.34
	Family relationship	0.29	-3.33	-5.01	-8.02
	z-statistic for difference	0.67	-0.83	-2.58 ^b	-2.89 ^a
	p-value	0.559	0.256	0.053	0.010
Number of companies		192	192	192	192

5. Conclusion

This study provides the research design employed to investigate the accounting performance of Malaysian IPOs. The accrual-based measure is used to investigate accounting-based operating performance. This study reports the empirical results on the accounting performance of 192 Malaysian IPOs that went public during the period 2000 to 2005. Comparison of the pre- and post-IPO accounting-based operating performance in terms of levels and changes provides some interesting findings. The limitations of this study are in data collections. Some of the data are not available in Datastream, as an alternative the data is collected from the IPO prospectuses. This may take a long time.

Summarising the main findings of this study, there is moderate evidence supporting that view that the average IPO in Malaysia underperforms seasoned companies over a three-year period. However, there is strong evidence of declining performance in the IPO year and up to three years following IPOs, relative to the pre-IPO period. The year-to-year analysis reveals that the decline in performance is greatest in the year immediately following the IPO. The deterioration in performance is more pronounced when performance is measured using accrual-based approaches. The analysis of IPOs involving family relationships shows slightly greater post-IPO deterioration in performance than IPOs with no family involvement. However, there is little evidence of family involvement significantly affecting post-IPO performance.

References

- Anderson, RC and Reeb, DM 2003, 'Founding-family ownership and firm performance: Evidence from the S&P 500', *Journal of Finance*, vol. 58, no. 3, pp. 1301-1328.
- Balabat, MCA, Taylor, SL and Walter, TS 2004, 'Corporate governance, insider ownership and operating performance of Australian initial public offerings', *Accounting and Finance*, vol. 44, no. 3, pp. 299-328.
- Barber, BM and Lyon, JD 1996, 'Detecting abnormal operating performance: The empirical power and specification of test statistics', *Journal of Financial Economics*, vol. 41, no. 3, pp. 359-399.
- Cai, J and Loughran, T 1998, 'The performance of Japanese seasoned equity offerings, 1971-1992', *Pacific-Basin Finance Journal*, vol. 6, no. 5, pp. 395-425.
- Cai, J and Wei, KCJ 1997, 'The investment and operating performance of Japanese initial public offerings', *Pacific-Basin Finance Journal*, vol. 5, no. 4, pp. 389-417.
- Chan, K, Wang, J and Wei, KCJ 2003, 'Underpricing and long-term performance of IPOs in China', *Journal of Corporate Finance*, vol. 10, no. 3, pp. 409-430.
- Jain, BA and Kini, O 1994, 'The post-issue operating performance of IPO firms', *Journal of Finance*, vol. 49, no. 5, pp. 1699-1726.
- Kim, KA, Kitsabunnarat, P and Nofsinger, JR 2004, 'Ownership and operating performance in an emerging market: Evidence from Thai IPO firms', *Journal of Corporate Finance*, vol. 10, no. 3, pp. 355-381.
- Kutsuna, K, Okamura, H and Cowling, M 2002, 'Ownership structure pre- and post-IPOs and the operating performance of JASDAQ companies', *Pacific-Basin Finance Journal*, vol. 10, no. 2, pp. 163-181.

Ahmad

- Mikkelson, WH, Partch, MM and Shah, K 1997, 'Ownership and operating performance of companies that go public', *Journal of Financial Economics*, vol. 44, no.3, pp. 281-307.
- Pagano, M, Panetta, F and Zingales, L 1998, 'Why do companies go public? An empirical analysis', *Journal of Finance*, vol. 53, no. 1, pp. 27-64.
- Teoh, SH, Welch, I and Wong, TJ 1998, 'Earnings management and the long-run market performance of initial public offerings', *Journal of Finance*, vol. 53, no. 6, pp. 1935-1974.
- Wang, C 2005, 'Ownership and operating performance of Chinese IPOs', *Journal of Banking and Finance*, vol. 29, no. 7, pp. 1835-1856.