Auditing Firm Reputation, *Ex Ante* Uncertainty and the Underpricing of Initial Public Offerings on the Second Board of the Kuala Lumpur Stock Exchange: 1990-1995

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ABSTRAK

Firma-firma audit mempunyai insentif untuk menyemak secara terperinci dan melaporkan kesahihan segala aktiviti yang tercatat dalam penyata-penyata kewangan yang disediakan oleh pihak pengurusan firma yang memohon untuk disenaraikan di Bursa Saham Kuala Lumpur. Insentif ini berdasarkan keinginan untuk mempertahankan reputasi mereka sebagai agensi yang bertanggungjawab. Oleh itu pelabur dapat menjangkakan nilai sebenar firma-firma yang akan disenaraikan itu dengan lebih tepat dan ini mengurangkan tahap ketidakpastian *ex-ante* dan dijangka menghasilkan premium yang rendah sewaktu penyenaraian. Kajian mengenai kaitan reputasi firma audit dan tahap premium sewaktu penyenaraian telah dibuat atas 100 firma yang di senarai di papan kedua Bursa Saham Kuala Lumpur, untuk jangkamasa 1990 hingga 1995. Enam firma audit yang terkenal di kelaskan sebagai *big-six* dan firma audit yang selainnya dianggap mempunyai tahap reputasi yang lebih rendah dan dikelaskan sebagai *non big-six*. Penemuan kajian menunjukan tidak ada kaitan signifikan antara reputasi firma audit dengan tahap premium penyenaraian yang diperolehi oleh firma yang diaudit. Ini bermaksud, pelabur di Malaysia menganggap bahawa semua firma audit yang berlesen memberi perkhidmatan homogen. Penemuan kajian menunjukan reputasi penaja jamin dan prestasi kentungan yang lepas ada kaitan negatif, manakala, arah aliran pasaran saham dan sisihan piawai pulangan sekitar penyenaraian ada kaitan positif dengan tahap premium yang di perolehi semasa penyenaraian.

ABSTRACT

Reputable auditing firms have an incentive to investigate and report irregularities since their reputation is at stake, therefore engaging their services enables investors to estimate the value of the firm more precisely and reduce *ex ante* uncertainty. This will attract more investors to bid for the IPO shares and consequently IPOs attested by reputable auditing firms will have a lower premium level. This study tests the conjectured inverse effect of reputation of auditing firms on the level of IPO underpricing of 100 companies listed on the second board of the Kuala Lumpur Stock Exchange, for the period 1990-1995. The reputable auditing firms are the Big Six accounting firms; the others are classified as less reputable. The findings do not support this conjecture, which implies that Malaysian investors assume that all qualified and licensed auditing firms provide homogeneous services. However, the findings show that the underwriter reputation (UW) and the past profitability of the firm (NPM) variables are inversely related, whereas the market trend and the standard deviation variables are positively associated to the level of IPO underpricing.

INTRODUCTION

Documented evidence on the premiums earned by investors in initial public offers (IPOs) in developed share markets (Ibbotson 1975; Ibbotson and Jaffe 1975; Ritter 1984; Aggrawal and Rivoli 1990) suggests a general underpricing. Studies on the underpricing of Malaysian IPOs (Ariff and Johnson 1990; Shamsher *et al.* 1994)

suggest an average underpricing of 130% at the end of the first day of listing and 77% if the shares are held and sold three years after listing. This excessive underpricing is the highest in the world and cannot be completely explained by the fundamental and market factors. Unlike other markets, there is little documented evidence on the explanations for the

underpricing of IPOs in Malaysia. However, Shamsher *et al.* (1994) suggest that the public policy goal of equitable wealth distribution among the various ethnic groups as a rationale for the intentional excessive underpricing. Various factors have been suggested in the literature as the possible reasons for underpricing, such as *ex ante* uncertainty and state of the market prior to issue (McGuinness 1992), asymmetric information between underwriter and issuer (Leyland and Pyle 1977), adverse selection problem of uninformed and informed investors (Rock 1986), adverse incentives of underwriters to reduce underwriting risk (Baron 1982), insider signalling to differentiate the quality of issues (Ritter 1984; Beatty and Ritter 1986), and price pressures during the initial period of issue (Aggrawal and Rivoli 1990). The inverse effect of auditing firm reputation on the level of IPO underpricing is documented in the literature, but the findings are inconclusive as Balvers *et al.* (1989) and Beatty (1989) suggest a significant inverse relationship whereas McGuinness (1992) and Ng *et al.* (1994) suggest no significant relationship.

This study focuses on the effect of reputation of auditing firms on the level of IPO underpricing on the second board of the Kuala Lumpur Stock Exchange. One hundred IPOs were analysed for the period 1990-1995.

THEORETICAL RELATIONSHIP BETWEEN AUDITOR FIRM REPUTATION AND IPO UNDERPRICING

Managers of IPOs are assumed to have private information about the future prospects of the company and it is in their interest to convey the information to prospective investors to reduce underpricing of the IPOs. This information is usually provided through a prospectus which includes information on financial status, future prospects and audited financial statements. In Malaysia, it is a mandatory requirement under the Companies Act 1965 for IPOs to issue a prospectus including audited financial statements, which are considered an important element in the prospectus. Financial statements audited by more reputable auditing firms are perceived to be more credible to prospective investors than those audited by less reputable auditing firms. This preference on the part of prospective investors may be explained in terms

of the need to minimize monitoring cost. Auditing services are demanded as monitoring devices to minimize agency cost because of the conflict of interest between owners and managers (Watts and Zimmerman 1983).

Since very little is known of the IPOs, and prospective investors must rely on the disclosures in a prospectus to evaluate the future prospects, credible financial statements are required to enable investors to trust the disclosed information to eliminate the need to search for alternative sources of information for verification purposes. Since in Malaysia the allocation of shares to the public is based on the lottery system, the costs of an information search (if verification is required) may not be compensated by the number of shares allocated, therefore requiring a greater level of underpricing to attract potential investors. The provision of credible financial statements serves to reduce the monitoring cost.

DeAngelo (1981) and Simunic and Stein (1987) suggest that the credibility of financial statements depends on the perceived quality of the audit. A higher perceived quality of audit is more likely to be associated with a more reputable auditing firm because of their larger collateral properties (and therefore greater presumed reputation at stake) and confidence of investors in the auditing firm's reputation for accuracy and reliability of information audited. Therefore, the more reputable the auditing firm employed by an IPO, the less the chance of misrepresentation by the managers' disclosures, consequently lower costs of monitoring and lower underpricing of the IPO.

Beatty and Ritter (1986) suggest that the greater the *ex ante* uncertainty, the greater the expected underpricing of the IPO. The owners of the company have an incentive to signal their private information about the firm's future prospects to reduce *ex ante* uncertainty. However, the effectiveness of this mechanism is mitigated by the IPO companies with relatively high *ex ante* uncertainty to signal low *ex ante* uncertainty. The role of an auditing firm in providing credentials to disclosed information is important to mitigate this problem.

Reputable auditing firms have an incentive to investigate and report irregularities since their reputation is at stake, therefore engaging their services enables investors to estimate the value of the company more precisely and reduce *ex ante* uncertainty. This will attract more investors

to bid for the IPO shares, and consequently IPOs attested by reputable auditing firms will have lower level of premiums.

This study tests whether there is a significant inverse relationship between auditing firm reputation and underpricing of Malaysian IPOs. Specifically, IPO companies that engage the services of more reputable firms should exhibit lower underpricing than companies that engage the services of less reputable auditing firms. For the purpose of this study, the reputable auditing firms are those that are internationally classified as the Big Six operating in the market and the rest are classified as non-Big Six.

DATA AND METHODOLOGY

The data for this study were drawn from 100 IPOs from the second board of the Kuala Lumpur Stock Exchange for the period 1990-1995. The source for the variables used in the regression analysis was the companies' prospectuses, and the share prices were extracted from the daily diary published by the Kuala Lumpur Stock Exchange. Following the guidelines by McGuinness (1992) and Ng *et al.* (1994), a regression model was used to test the conjectured inverse relationship between auditing firm reputation and level of IPO underpricing. The factors of *ex ante* uncertainty, perception of company value, other reputation effects and state of the market prior to the IPO were controlled in the step-wise regression model. The auditor reputation conjecture was tested by the estimated coefficients of the more reputable auditing firms (Big Six) and the less reputable auditing firms (non-Big Six) indicator variables. The linear regression model is expressed as follows:

$$UP_i = b_0 + b_1 (AGE_i) + b_2 (\%OFFER_i) + b_3 (SD_i) + b_4 (NPM_i) + b_5 (UW_i) + b_6 (MKT_i) + b_7 (AUD_i) + e_i$$

where

UP = the level of underpricing at the end of first day after listing;

AGE = operating history of the company; a dummy variable approach is used with a benchmark of 10 years;

%OFFER = percentage of shares owned by outside investors after the offering;

SD = standard deviation of daily returns for days 2-14 after first trading day;

NPM = the company's average profit margin for the last 5 years;

UW = underwriter reputation group; indicator variable takes a value of 1 if it is from reputable group, otherwise 0;

MKT = the state of the market prior to the listing, measured by the moving average of 15 days' returns on the KLSE Composite Index;

AUD = auditor reputation group; indicator variable takes a value of 1 if it is from the reputable group (Big Six), otherwise 0;

e = error term

The AGE variable represents the age of the IPO company from the date of incorporation. A longer operating history provides more information on the quality of management and enables investors to evaluate the prospective value of the company from past information. An arbitrary benchmark of 10 years was chosen with the hope that a longer history reduces investor *ex ante* uncertainty about the true value of the company, and therefore results in less underpricing of the IPO.

The % OFFER variable reflects the expected monitoring costs. Jensen and Meckling (1976) suggest that the lower the percentage of shares held by insiders (therefore the higher percentage held by outsiders) the higher the monitoring costs and the lower the level of underpricing. In this respect, Downes and Heinkel (1982) and Beatty (!989) show that the percentage retained by insiders signals private information to outsiders.

The standard deviation of returns (SD) variable denotes the *ex post* proxy for the *ex ante* uncertainty to control for *ex ante* uncertainty in the sample. Beatty and Ritter (1986) suggest a positive relationship between SD and level of underpricing. The average net profit margin (NPM) for the last five years reflects the expected future performance of the the company.

Higher expected future performance reduces the risk of buying the IPO and therefore reduces the level of underpricing.

The underwriter reputation variable (UW) controls underwriter reputation as Balvers *et al.* (1989) found that underwriter reputation has

an impact on the level of IPO underpricing. IPOs with reputable underwriters have a lower level of underpricing. The reputation of the underwriters is proxied by their turnover during the period of study, assuming large underwriters have a greater reputation at stake.

The state of the market prior to the date of listing of the IPO is controlled by the variable MKT in the regression model. The underpricing of IPOs is conjectured to be larger during bullish markets (therefore positive coefficient for this variable) than during bearish markets. For example, the average underpricing of IPOs on the second board during 1990-1992 (bearish period) was 40% whereas in 1993-1995 (the bullish period) the average premiums were 85% (Cheng *et al.* 1996). The MKT variable is measured by the first-order moving average of the 15-day market trend prior to the first day of listing. The market trend is proxied by the daily returns on the Kuala Lumpur Stock Exchange's Composite Index.

FINDINGS

Descriptive Analysis

Table 1 shows the statistics for the second board IPOs. The average underpricing is 74%, which is relatively high and is a common feature of the Malaysian IPOs. Among the Big Six auditing firms, KPMG Peat Marwick, Ernst & Young and Coopers and Lybrand audited 45 IPOs in total, which is 70% of those audited by the Big Six. The level of average underpricing within the Big

TABLE 1
Descriptive analysis of average underpricing by auditing firms and auditing firm reputation of IPOs on the Second Board of KLSE

Auditing Firm	Number Of IPOs	Average Underpricing (%)
By Classification		
Big Six		
KPMG Peat Marwick	19	79.6
Ernst & Young	14	59.6
Coopers & Lybrand	12	65.4
Arthur Andersen	9	85.3
Price Waterhouse	7	101.6
Deloitte Ross Tohmatsu	2	75.1
All Big Six	63	75.6
Non Big six	37	72.3
Overall	100	74.4

Six ranges from 59 to 101% and there is no significant difference (F = 0.18) between the average level of underpricing among them. The level of average underpricing for all the Big Six firms was 76% and not significantly different (F= 1.11) from the 72% for the Non Big Six firms.

Table 2 presents the correlation matrix for the independent variables used in the study. The correlation matrix indicates that the correlation among the independent variables is small (less than 0.20), implying that there is no significant multicollinearity problem that could affect the interpretation of the results of the regression analysis. Kaplan (1982) and Emory (1982) suggest that multicollinearity could be a problem when the correlation exceeds 0.80.

TABLE 2
Correlation matrix for the explanatory variables in the regression analysis (Second Board IPOs)

	AGE	AUD	INSIDER	NPM	SD	UW
AGE	1.00	-0.0456	-0.0315	-0.151	-0.0818	.00082
AUD		1.00	0.2674	0.1083	0.1226	-0.1607
INSIDER			1.00	0.0783	-0.0688	0.0845
NPM				1.00	0.1096	0.0896
SD					1.00	0.1679
UW						1.00

(b) Regression Results

TABLE 3
Regression Results for the auditor firm reputation model (Second Board)

	Coefficient	Standard Error	t - Statistic	Expected Sign
Intercept	-0.805	1.371	-0.587	
AGE	-0.251	0.869	-0.289	-
INSIDER	-0.873	0.137	-0.637	-
SD	6.41	2.44	2.63*	+
NPM	-0.256	0.091	-2.87*	-
UW	-0.864	0.091	-9.49*	-
MKT	0.026	0.007	3.71*	+
AUD	-0.348	0.916	0.379	-

R^2=8.53   F=1.94   N=100

Regression Results

Table 3 summarizes the results of the regression analysis of second board IPOs. All the signs of the coefficients are in the expected direction. The standard deviation (SD) and the net profit margin (NPM) variables are significant at 5%

level whereas the underwriter reputation (UW) and the market trend variable (MKT) are significant at 1% level. These findings suggest that the underpricing of IPOs is positively related to the *ex ante* uncertainty and underpricing of IPOs is larger during bullish rather than bearish markets, consistent with the findings of Beatty and Ritter (1986). The financial measure of expected IPO value as estimated by the NPM variable suggests that the level of premiums is inversely related to the expected financial performance. The underwriter reputation is perceived as risk surrogate by investors as the level of premiums is inversely related to this variable. The AGE and the INSIDER variables are not significant. The variable of interest, auditor reputation, does not support the conjecture that the level of premiums is inversely related to the auditor reputation. The measure of auditor firm reputation based on the Big Six or otherwise is a crude measure and therefore a more robust measure would be in terms of the compensation paid to the auditing firm, since the larger the compensation of the reputable auditing firm, the less *ex ante* uncertainty and therefore the lower the level of premiums. However, information on the amount of compensation to the auditing firms and the costs of performing the audit (this information is required to run the two-stage least square regression) is not made available upon request. Therefore the refinement of the present analysis is not possible. Another possible surrogate of auditor firm reputation variables is the number of the companies audited by the auditing firms within the Big Six group. A dummy variable regression was run to test the auditor reputation hypothesis with a value of 1 assigned for IPOs audited by KPMG Peat Marwick, Ernst & Young and Coopers & Lybrand, and zero otherwise. The results (not reported here) are not significantly different from those reported in Table 3, suggesting no significant relationship between auditor firm reputation and the level of underpricing of second board IPOs. These results, however, could be due to the weakness of the surrogate variable of auditor firm reputation.

CONCLUSION

In this study it is conjectured that the reputable auditing firms attest to the accuracy of the IPO management disclosures in prospectuses and therefore reduce the *ex ante* uncertainty regarding the potential value of the firm. This implies an expected inverse relationship between levels of underpricing of IPOs associated with reputable auditing firms. The findings, however, do not support this conjecture. The coefficient of the auditor reputation variable (AUD) is negative but not statistically significant, even after taking another surrogate (the number of the companies audited by each of the big-six audit firms) of auditing firm reputation. The findings imply that Malaysian investors do not differentiate between the services of reputable and those considered less reputable auditing firms. The investors assume that all qualified and licensed auditing firms provide homogeneous services. These findings are inconsistent with those of Balvers *et al.* (1989) and DeAngelo (1981) on the US market and consistent with the findings of Ng *et al.*(1994) on the Hong Kong market. The findings on the US market suggest that investors do differentiate between the services of reputable auditing firms and those considered less reputable, whereas the study on the Hong Kong market suggests a supply of homogenous auditing services.

However, the findings show that the underwriter reputation (UW) and the past profitability of the company (NPM) variables are inversely related to the level of second board IPO underpricing. The market trend and the standard deviation variables are positively associated to the level of IPO underpricing. These findings supports the *ex ante* uncertainty hypothesis suggested by Beatty and Ritter (1986).

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