CORPORATE BOARDS, AUDIT COMMITTEES AND QUALITY OF FINANCIAL DISCLOSURE IN IPOs

RESEARCH REPORT

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ABSTRACT

This report examines how corporate boards and audit committees are associated with financial disclosure quality for a sample of 235 IPO companies that went public during the period 1999-2006. Absolute forecast error is used to proxy for earnings forecast accuracy to represent financial disclosure quality. Companies with a higher percentage of non-executive directors in the audit committees and larger audit committee size are found to have greater accuracy in forecasts. The results are consistent with the belief that effective corporate governance is associated with higher financial disclosure quality.

EXECUTIVE SUMMARY

This report provides an analysis of how corporate boards and audit committees are associated with financial disclosure quality for a sample of 235 IPO companies that went public during the period 1999-2006. Absolute forecast error is used to proxy for earnings forecast accuracy to represent financial disclosure quality. Methods of analysis include descriptive statistics and regression analysis. All regression models can be found in the summary and full reports.

Results of data analysed show that, on average, the management of IPO companies during the period 1999 to 2006 have made optimistically biased forecasts. The analysis of absolute forecast errors demonstrates that, on average, earnings forecasts fall outside the ±10% variance limit imposed by regulators. Comparison with prior Malaysian studies shows that IPOs in the sample period exhibit greater forecast accuracy than IPOs in earlier periods. The regression results report that effective audit committees, in the form of larger membership and a higher proportion of non-executive directors, are related to greater forecast accuracy. However, there is no evidence to link audit committee "financial expertise" and independence of the full board with forecast accuracy. Further investigation reveals that the forecast accuracy is positively influenced by the use of a brand-name auditor.

In sum, the results of this report reinforce the vital responsibility of audit committees and external auditors in improving financial disclosure practices. These results are also consistent with decisions made by the Malaysian regulators such as the Securities Commission to enhance the quality of financial disclosure by revising the Malaysian

Code on Corporate Governance to encourage public companies to implement good governance practices.

Recommendations discussed in this report include:

- Investigate further the detailed characteristics of the audit committee in terms of their academic qualifications and working experience in accounting or related fields.
- Investigate what explanations have been provided in the first published annual reports by the management of Malaysian IPO companies when the earnings forecasts made in their IPO prospectus have deviated outside the ± 10% limit imposed by regulators.
- Revise the current regulations contained under Para 9.19 (33) of the Bursa Malaysia Listing Requirement**.**

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1.0 INTRODUCTION

Transparent financial disclosure minimises agency problems by reducing the asymmetry of information between management and shareholders. On the other hand, poor financial disclosure may deceive shareholders leading to unfavourable effects on their wealth. Recent high-profile corporate failures have heightened global awareness of the importance of corporate transparency and accountability. In response to this, the Malaysian Securities Commission (SC) focused on corporate boards as the crucial means for improving the quality of financial information provided by listed companies. In addition, financial reporting practices can also be monitored by having effective board audit committees. This paper examines whether effective corporate governance is associated with higher financial disclosure quality, proxied by the accuracy of management earnings forecasts disclosed in IPO prospectuses.[1]

The widespread failure of Malaysian IPO companies to achieve their earnings forecasts is a major concern for capital market regulators as this reflects badly on the quality of companies that go public. The SC revealed that out of 57 companies that were listed in 2005 and had announced audited results by July 2006, 32 companies had fallen short of their earnings forecasts (The Edge Malaysia, July 17, 2006). In addition, more than half of these optimistic earnings forecasts showed deviations exceeding 20% (New Straits Times, July 11, 2006).

[1] Forecast error and forecast accuracy will be used interchangeably throughout this paper. The lower forecast error indicates greater accuracy.

A new Code on Corporate Governance has been released by the SC effective from 1 October 2007. The Revised Code 2007 replaces the existing regulations issued in March 2000. The Code aims to strengthen the roles and responsibilities of boards of directors and audit committees to ensure that they discharge their roles and responsibilities effectively. Under the Revised Malaysian Code on Corporate Governance 2007, independent non-executive directors should continue to make up at least one-third of the members of a board to ensure that the board provides an independent oversight function. The Revised Code also strengthens regulations on the independence and competency of audit committees by excluding executive directors from membership and requiring all audit committee members to be financially literate with at least one of them a member of an accounting association or body.

With these regulatory reforms, it can be expected that corporate governance structures, as expressed by corporate boards and audit committees, affect the quality of financial disclosure practices. Given that the disclosure of management earnings forecasts in the IPO prospectus is mandatory for companies seeking a listing on the Main Board and the Second Board of the Malaysian Stock Exchange (i.e., Bursa Malaysia) as a means of reducing information asymmetry between management and potential investors, the credibility of these earnings forecasts is paramount. Although extensive studies have been undertaken on management earnings forecasts for IPO companies, the relation between corporate governance and mandatory disclosure of earnings forecasts is not thoroughly understood. The accuracy of management earnings forecasts is important in building and maintaining investor confidence regarding management's credibility in making such financial disclosures.

This paper contributes to the IPO literature on earnings forecasts. This is the first comprehensive study that examines the impact of governance mechanisms on mandatory earnings forecasts in Malaysia. Prior studies on management earnings forecasts using Malaysian data (e.g., Jelic et al., 1998; Ismail and Weetman, 2007), focused on factors unrelated to corporate governance such as company age, earnings reduction prior to IPO, type of industry, and economic condition. None of them fully addressed the effect of corporate boards and audit committees on the accuracy of management earnings forecasts.

Using a sample of 235 IPO companies during the periods 1999-2006, we find that audit committees with non-executive directors, and audit committee size, have a negative association with the absolute forecast error (that is to say, a *positive* association with forecast *accuracy*). Our results indicate that the greater the proportion of non-executive directors in the audit committee and the larger the audit committee size, the more accurate the forecast made by the management of IPO companies. However, we do not find any significant relationships between board characteristics and absolute forecast errors. The results of our paper provide a degree of support for recent efforts by the SC to regulate the structure of corporate boards and audit committees to ensure the quality of financial disclosure. We also find that IPO company size has a positive relationship with the absolute forecast error. This result suggests that IPO earnings forecasts are less credible for larger companies.

This paper proceeds as follows. Section 2 provides a brief review of literature and develops our research proposition. The methods are discussed in Section 3, while

the sample selection and data sources are discussed in Section 4. Section 5 reports the results of our study and Section 6 concludes the paper.

2.0 LITERATURE REVIEW AND RESEARCH PROPOSITION

There is ample literature on the effects of corporate boards on earnings management and earnings quality (e.g., Klein, 2002; Lobo and Zhou, 2005), on level and structure of executive compensation (e.g., Core et al., 1999; Anderson and Bizjak, 2003) and on company performance (e.g., Haniffa and Hudaib, 2006; Chen et al., 2007). The effect of corporate boards on disclosure quality is not extensively examined in the literature with the exceptions of Karamanou and Vafeas (2005) in the US, Beekes and Brown (2006) in Australia, Cheng and Courtenay (2006) in Singapore, Chin et al. (2006) in Taiwan and Bedard et al. (2008) in Canada.

Beasley (1996) and Klein (2002) suggest that outside directors provide a higher quality of board oversight. Cheng and Courtenay (2006) show that companies with a higher proportion of independent directors, or with independent directors being the majority on the boards, have higher levels of voluntary disclosure in Singapore. This suggests that a board's degree of independence is directly related to higher financial disclosure quality.

Karamanou and Vafeas (2005) examine management forecasts as a proxy for disclosure quality for a sample of 275 Fortune 500 companies in the US during the period 1995-2000. They find that the percentage of outside directors is directly related

to greater forecast accuracy, measured by the absolute value of the forecast error. Karamanou and Vafeas (2005) also test the association between ownership structure and forecast accuracy, and find higher insider ownership leads to less credible management forecasts. Similar inverse relationships for ownership structure are also found by Chin et al. (2006) using a sample of 528 Taiwanese-listed companies from 1999 to 2001. Chin et al. (2006) suggest that companies tend to issue more inaccurate forecasts in instances of greater divergence between the ultimate owner's control and the equity ownership level.

Beekes and Brown (2006) examine the relationship between corporate governance index and various indicators of disclosure quality, including the accuracy, bias and level of disagreement in analysts' earnings forecasts. They find that the disclosures by better-governed companies are more informative. Another board characteristic that is possibly related to disclosure quality is board size. Karamanou and Vafeas (2005) suggest that board size is likely to be related to monitoring diligence. They argue that adding more people to the board enhances its knowledge base. However, the dark side of larger boards is less flexibility and more inefficiency. Their evidence shows that board size has no relationship with the accuracy of management earnings forecast. Similarly, Bedard et al. (2008) find that board of directors characteristics such as board size, board independence and CEO duality are not significantly related to the credibility of management earnings forecasts.

Since the beginning of the 1990s, the effectiveness of audit committees in monitoring the financial reporting process has become one of the most significant themes in corporate governance debates (Gendron and Bedard, 2006). There are

several empirical studies that examine the characteristics of audit committee and identify those that enhance the quality of financial reporting (e.g., Klein, 2002; Felo et al., 2003; Xie et al., 2003; Abbott et al., 2004; Bedard et al., 2004; Krishnan, 2005; Persons, 2005; Lin et al., 2006; Qin, 2007; Zhang et al., 2007). The quality of financial reporting is proxied by incidence of fraud or restatements, extent of earnings management, disclosure quality or internal control weaknesses, among well-established listed companies. Our study extends the literature regarding the effects of audit committee characteristics on disclosure quality by examining a sample of newly listed companies, and is in line with Bedard et al. (2008).

Klein (2002) and Bedard et al. (2004) indicate that audit committee independence reduces earnings management. Abbott et al. (2004) find a negative association between audit committee independence and the likelihood of financial reporting restatement and financial reporting fraud. Persons (2005) also provides evidence to support the view that independent audit committees contribute positively to the financial reporting process, by showing that the likelihood of financial statement fraud is lower when the audit committee is comprised solely of independent directors.

Felo et al. (2003) find a positive relationship between financial reporting quality and audit committee size in a univariate analysis but this relationship does not hold in the multivariate analysis. Lin et al. (2006) provide evidence which suggests a negative association between the size of audit committee and the occurrence of earnings management.

Another audit committee attribute that has been widely examined is financial expertise. Abbott et al. (2004) and Bedard et al. (2004) suggest that audit committee financial expertise reduces financial restatements or earnings management. DeFond et al. (2005) argue that appointment of accounting financial experts generates a positive stock market reaction which suggests that the market believes that the specialized skills possessed by accounting financial experts are useful in executing their role as financial monitors. Zhang et al. (2007) find that companies are more likely to be identified with internal control weaknesses, if their audit committees have less financial expertise or, more specifically, have less accounting financial expertise and non-accounting financial expertise; this is consistent with prior evidence by Krishnan (2005). However, in a more recent study in Canada, Bedard et al. (2008) find no significant association between audit committee attributes (i.e., independence and having expertise in financial matters) and forecast accuracy.

Based on the evidence to date, we predict that the quality of financial disclosure and the accuracy of earnings forecasts positively correlate with the effectiveness of boards and audit committees, and thus arrive at the following research proposition:

> The accuracy of earnings forecasts is greater in IPO companies with a properly structured audit committee and board of directors.

3. METHODS

3.1 Measure of forecast accuracy

Following Bamber and Cheon (1998) and Karamanou and Vafeas (2005), management earnings forecasts were chosen to examine the relationship between governance and financial disclosure quality. This paper used forecast accuracy to proxy for disclosure quality. Forecast accuracy (*FE*) is measured by the absolute value of the forecast error (*AFE*), so greater accuracy corresponds to a smaller absolute forecast error. In a formula form, forecast error is written as:

$$FE = \frac{A_{i,T} - F_{i,T}}{\left|F_{i,T}\right|}$$

where, *FE* is forecast error, $A_{i,T}$ is actual earnings of company *i* for period *T*, $F_{i,T}$ is forecast earnings of company *i* for period *T*. Thus, the absolute forecast error is measured as the absolute difference between the actual earnings and the forecast earnings deflated by the absolute forecast earnings.[2] If the management of the IPO company makes an accurate forecast, the mean absolute forecast errors should be lower in value and not be significantly different from zero. Prior studies (e.g., Williams, 1996; Tan et al., 2002; Karamanou and Vafeas, 2005) suggest that the accuracy of management earnings forecasts gives an indication of the credibility of management.

Earnings forecast is considered biased if the actual earnings are systematically over or under the forecasted earnings. Forecasts are optimistically biased if forecast

[2] There are two companies with negative forecast earnings in our sample. We use the absolute value of forecast earnings as the denominator to avoid miscalculation of forecasts errors due to negative value of the denominator.

earnings are greater than actual earnings (forecast error is less than 0). On the other hand, if forecast earnings are lower than actual earnings (forecast error is more than 0), these forecasts are conservative or pessimistically biased. Jaggi et al. (2006) argue that managers tend to issue more optimistic forecasts to obtain higher offering proceeds.

3.2 Measure of factors influencing the degrees of financial disclosure quality

We first perform a univariate analysis to describe the overall pattern of financial disclosure quality, proxied by absolute forecast errors. The analysis is conducted to see the influence of board of director characteristics (i.e., independent non-executive directors and board size) and audit committee characteristics (non-executive director, size and professional memberships) on financial disclosure quality. We also carry out an analysis on the association between auditor (i.e., whether the IPO company is audited by BIG4/5 auditor or non-BIG4/5 auditors) and absolute forecast errors. A univariate analysis is also performed to compare financial disclosure quality before and after the introduction of the Code on Corporate Governance in March 2000.

Additional multivariate analysis is carried out to enable consideration of additional factors that may influence financial disclosure quality. The level of absolute forecast error is regressed on variables relating to board and audit committee characteristics and on five additional control variables: auditor reputation, company size, earnings reduction, forecasts horizon and company age. Our selection of potential control variables is guided by prior Malaysian evidence (e.g., Jelic et al., 1998) and

other studies on IPO earnings forecasts accuracy. We use the ordinary least squares (OLS) multiple regression model as follows:

$$AFE_i = \alpha_0 + \beta_1 INED + \beta_2 BDSIZE + \beta_3 ACNED + \beta_4 ACSIZE + \beta_5 PFMSHIP + \beta_6 AUDITOR + \beta_7 COSIZE + \beta_8 EARNRED + \beta_9 FHORIZON + \beta_{10} AGE + \varepsilon_i$$

where:

AFE	=	the absolute difference between actual earnings and the earnings forecasts deflated by absolute earnings forecasts;
INED	=	percentage of independent non-executive directors on board;
BDSIZE	=	total number of directors on the board;
ACNED	=	percentage of non-executive directors on audit committee ;
ACSIZE	=	Total number of directors in audit committee;
PFMSHIP	=	dummy variable of '1' if at least one member of audit committee possesses professional accounting qualification and '0' otherwise;
AUDITOR	=	dummy variable of '1' if auditor is Big4/5 (Arthur Andersen, DeloitteKassimChan, Ernst and Young, KPMG, PricewaterhouseCoopers, or their pre-merger equivalents) and '0' otherwise;
COSIZE	=	company size, measured by ln total assets, at the date of prospectus;
EARNRED	=	dummy variable of '1' if company experienced a reduction in earnings a year prior to the IPO and '0' otherwise;
FHORIZON	=	forecast horizon, measure by the number of months from the management forecast date to end of the period for which the forecast is made;
AGE	=	Company age, measured by ln (1 + number of years between incorporation[3] and the IPO date);
ε_i	=	error terms

The additional five variables have all been identified in previous studies as being likely to influence the level of forecasts accuracy. Auditors play a significant role

[3] In Malaysia, it is common for a new unlisted public company to be established prior to IPO, whereby the new unlisted public company acquired several private companies in order to meet the minimum Listing Requirements. In our study, the incorporation date used is based on the date when the new unlisted public company is incorporated.

in validating the prospective financial information made by the IPO management at the time of public offerings. The approved auditing standard *"The Examination of Prospective Financial Information"* stipulates that the auditor should not accept, or should withdraw from, an engagement when the assumptions accompanying the forecasts are clearly unrealistic or when the auditor believes that the prospective financial information will be inappropriate for its intended use (Para 11, AI 3400). Cormier and Martinez (2006) and Lee et al. (2006) suggest that higher quality auditing is associated with greater earnings forecasts accuracy. This leads to an expectation that reputable auditors (BIG4/5) will encourage IPO companies to provide more accurate earnings forecasts. Therefore, we hypothesise a positive relationship between auditor reputation and financial disclosure quality (i.e., a negative relationship between auditor reputation and absolute forecast errors).

Jelic et al. (1998) argue that the larger the company, the more stable the company earnings and the more accurate earnings forecasts made by the managers. Thus, a negative relationship is expected between company size and the level of absolute forecast errors. However, Firth and Smith (1992) and Chan et al. (1996) find the reverse. Firth and Smith (1992) argue that larger companies raise more capital than their smaller counterparts, therefore their forecast is more difficult to make and less accurate. Thus, we expect that relationship between company size and forecast accuracy can operate in both directions.

Studies by Capstaff et al. (1995) and Jelic et al. (1998) show that earnings forecasts made by analysts and management are more inaccurate for companies that experience a reduction in earnings. Hence, we expect the accuracy of IPO earnings

forecasts to be less reliable for companies that exhibit an earnings reduction prior to IPO, than for their counterparts that register an earnings increase.

Karamanou and Vafeas (2005) and Chin et al. (2006) argue that the earlier the forecast is made (the greater the number of days from the forecast date to the end of the financial reporting date) the less accurate it will be due to the greater uncertainty regarding actual earnings. Therefore, we include the forecast horizon variable to control for forecast accuracy.

Given that historical data are important inputs into the forecasting process, previous studies postulate that the longer a company has been in existence, the greater the forecasting accuracy, as it is extremely difficult to predict the earnings of companies with little or no prior operating history. Therefore, we predict that forecast accuracy improves the longer the company has been in existence.

4.0 SAMPLE SELECTION AND DATA

Data on corporate board and audit committee characteristics were hand-collected from the offering prospectuses under the section '*corporate information*' and cross-checked with the '*director, senior management and employee*' section. Data for management earnings forecasts, auditor, company size, earnings reduction, forecast horizon, company age, and other company characteristics were also collected from the offering prospectuses. Data on the actual earnings forecasts were obtained from the first published annual reports. Care was taken in collecting the data on earnings

forecasts and actual earnings to ensure consistency. For example, data on earnings forecasts was collected first with its corresponding earnings forecast type (e.g., profit before tax, profit before tax and minority interest, or profit after tax). Then, the same type of earnings data was collected from the first published annual report. This avoids errors in the measurement of forecast accuracy and also in the interpretation of the results (Dev and Webb, 1972; Jelic et al., 1998).

For the sample, companies listed on the Main Board and Second Board of Bursa Malaysia during the period 1999-2006 were initially considered. The list of industry types was obtained from the Bursa Malaysia website. In total, 253 companies were listed on both boards. As with Karamanou and Vafeas (2005), the sample excludes financial companies (consisting of four finance companies, seven REITS and one closed-end funds companies) due to their different regulatory requirements governing their practices on disclosure. Following Ahmad-Zaluki et al (2007), two companies listed via introduction and four Infrastructure Project Companies (IPCs) were also excluded. The final sample consists of 235 IPOs (93% of the total population) that made management earnings forecasts during the period 1999-2006. Of the 235 IPOs, 8 companies are from the Construction sector, 58 companies are from the Consumer Product sector, 98 companies are from the Industrial Products sector, 14 companies are from the Properties sector, 7 companies are from the Plantation sector, 3 companies are from the Technology sector and 47 companies are from the Trading/Services sector.[might want to consider presenting this as a list, table, or even pie chart, so its easier to see the breakdown]

5.0 RESULTS

5.1 Composition of companies

Table 1 presents a distribution of our sample by year of going public (1999 to 2006) and listing board (Main Board and Second Board). Main Board companies consist of 38.3% of the sample while Second Board companies make up the balance of 61.7%. The highest number of IPOs seeking a listing on the Main Board and the Second Board occurred in 2002 (43 companies) while the lowest occurred in 2006 (14 companies).

[Insert Table 1 about here]

5.2 Descriptive statistics

Table 2 presents the descriptive statistics of our company attributes for the full sample of 235 IPO companies. The data is also separated into the Main Board (90 companies) and the Second Board (145 companies). Focusing first on the full sample, the results show that both the mean and median forecast error (*FE*) is negative, -3.50% and -1.86%, respectively. The mean forecast error is not statistically different from zero but the median value is statistically significant at 5% level (*p*-value = 0.016). The results demonstrate that, on average, the management of IPO companies during the period 1999 to 2006 have made optimistically biased forecasts, indicated by the negative sign of forecast errors. As also reported in row 3 of Panel A, the percentage of IPO companies that made conservative forecasts is slightly lower than 50%. The

overestimation in forecast can be explained by the fact that the economic conditions of our sample period (1999 to 2006) included a recovery after the economic stress experienced in 1997 and 1998. Our results are in contrast to those of Mohamad et al. (1994) and Jelic et al. (1998) who found the mean forecast error of +9.34% and +33.37%, respectively. The highest negative forecast error (minimum) is reported at -270.47% while the highest positive forecast error (maximum) is 451.29%.

[Insert Table 2 about here]

Due to the fact that outliers exist in the data set, we truncate the data to remove them. As argued by Jelic et al. (1998), this procedure is common practice in the literature. We exclude 21 companies having extreme outliers (outside the range of ± 3 times the inter-quartile range beyond the upper and lower quartiles) that may distort the results on means forecast errors. After removing these outlier companies, the mean and median forecast errors are -3.49% and 0.16%, respectively. The mean forecast error is now statistically significant from zero at 1% level but median value remains significant at 5% level. However, we do not find any significant differences in forecast errors between companies listed on the Main Board and the Second Board.

The mean and median absolute forecast errors are 23.76% and 9.14%, respectively. Both the mean and median absolute forecast errors are significantly different from zero. After removing the outlier companies, not reported in the table, the mean and median absolute forecast errors are also statistically significant from zero with values of 13.62% and 8.40%, respectively. Interestingly, our results demonstrate that, on average, earning forecasts made by the management of Malaysian IPO

companies are outside the range of ± 10% limit imposed by regulators.[4] As reported in row 4 of Panel A, only 56.6% of our sample IPO companies had met the Bursa Malaysia earning forecasts threshold. Nevertheless, the results of absolute forecasts errors found in our study are lower than the results of 54.91% for mean and 12.1% for median observed by Jelic et al. (1998). In addition, the mean absolute forecast error observed in our study is also lower than the results of 27.91% observed by Mohamad et al. (1994). Our results indicate that IPOs in our sample period exhibit greater forecast accuracy than IPOs in earlier periods. Similar to the results observed for the forecast errors, we do not find any significant differences in absolute forecast errors between Main Board and Second Board IPO companies.

The average percentage of non-executive directors on the board is 52%, with Main Board companies showing a significantly higher average than the Second Board companies (55% vs. 52%). Out of 52% of non-executive directors, 35% of them are independent directors. Some IPO companies in the sample have less than one third independent directors in their boards. For the full sample, board size ranges from 4 to 16 with a mean of 8 directors. As for the audit committee composition, the size ranges from 3 to 5, with a mean and median of 3. All the audit committees in our sample have majority non-executive directors. The mean and median proportion of independent non-executive directors in audit committees is about two third. On average, 71% of the audit committees have professional memberships either in local or international accounting bodies.

[4] Para 9.19 (33) of the Bursa Malaysia Listing Requirement stipulates that in the case of any deviation of 10% or more between 1) the profit after tax and minority interest stated in a profit estimate, forecast or projection previously announced or disclosed in a public document and 2) the announced unaudited accounts, an explanation of the deviation and reconciliation thereof should be disclosed in the annual reports.

As expected, Main Board companies are more established than their counterparts in the Second Board. This is reflected in the mean and median differences in firm age measured from incorporation to prospectus date, which are significantly higher for Main Board than Second Board companies. For the full sample, the forecast horizon (i.e., the number of months between the prospectus date and the end of forecast period) ranges from 3 to 15 months, with a mean of 8 months. The pre-IPO shareholders in the sample, on average, retained 75% of their holdings. On average, IPO companies in the Main Board are five and four times larger than IPO companies in the Second Board in terms of total assets and turnover, respectively.

As for the choice of IPO advisers, Main Board companies are more likely to engage BIG4/5 firms of accountants and prestigious underwriters than are Second Board companies. Finally, almost one-fifth of the companies in the sample reported an earnings decline prior to IPO. The incidence of earnings decline is more prevalent among Main Board IPOs than Second Board IPOs (30% vs. 19%).

In order to clearly identify the number of companies in each forecast error category, we report the distribution of forecast errors in 10% bands in Table 3. It shows that out of 235 IPO companies, 133 sample companies (56.6%) meet the regulatory limit within the $\pm 10\%$ range required by IPO regulators in Malaysia.[5] On the other hand, 43.4% of the companies in our sample had forecast errors outside the 10% tolerance level. This percentage is 10% lower than what was observed by Jelic et al. (1998) in their study on earnings forecast accuracy on Malaysian Main Board IPOs during the period 1984 to 1995.

[5] See footnote 4.

[Insert Table 3 about here]

5.3 Cross-sectional pattern of financial disclosure quality in IPOs

This section provides a univariate analysis of financial disclosure quality, proxied by absolute IPO earnings forecast errors. Table 4 reports the cross-sectional pattern of absolute forecast errors categorised by board characteristics (independent non-executive directors and board size), audit committee characteristics (audit committee NED, audit committee size and professional memberships), type of auditor engaged in the IPO, and broken into periods before and after the introduction of the Code on Corporate Governance in March 2000. The first two columns report how the data were split and the number of observations in each subgroup. Columns 3 and 4 report the mean and median absolute forecasts errors for each subgroup.

[Insert Table 4 about here]

We split our independent non-executive director data into two categories: (i) companies with the percentage of independent non-executive directors (INED) greater than 33%, and (ii) companies with percentage of independent non-executive directors (INED) less than 33%. At the time of IPO, two-thirds of our sample companies had INED greater than 33%. We find that the mean absolute forecast errors for the INED>33% group is slightly lower than that of the INED<33% group, but the median results show the reverse. However, we do not find any significant difference between the two groups based on either mean or median results. Our initial results demonstrate

that the proportion of independent non-executive directors is not an important determinant of financial disclosure quality.

The board size variable is also split into two categories based on the median number of directors (i.e. seven). The mean and median absolute forecast errors for companies with a larger board size are greater than those of companies with a smaller number of directors. The *p*-value of 0.092 (*t*-stat = 1.696) obtained from independent *t*-test indicates that the difference between companies with large and small boards, on average, is weakly statistically significant at 10% level. However, the results based on median, obtained from Mann-Whitney U-test, do not show any difference between the two groups.

Our audit committee NED variable is also split into two categories. The first category is for those companies having exclusively non-executive directors in the audit committees. There are 23 companies in our sample under this category; the remaining 209 do not have exclusively non-executive directors in the audit committees. We find that the mean absolute forecast error is slightly lower for companies that have exclusively non-executive directors in their audit committees. This results support our expectation that the higher the percentage of NED in a given audit committee, the more accurate the IPO forecast is, and hence the higher the quality of financial reporting in the IPO prospectus. However, the difference between the two groups is not statistically significant. Our results for the median measure show the reverse, although the difference is insignificant.

Given that the audit committee size ranges from three to five, we also perform univariate analysis on the absolute forecast error partitioned by size of audit committee. There are 217 companies (92%) having three members in their audit committees and 16 companies (7%) having four members. There are only two companies (1%) having five audit committee members. We find that companies having three members in the audit committee yielded the highest mean and median absolute forecast errors, whilst companies having five members in their audit committees yielded the lowest mean and median absolute forecast errors. However, based on the results of one-way ANOVA and Kruskal-Wallis tests, the differences between the three groups of audit committee size are not statistically significant.

We also split our audit committees according to their membership in professional accounting bodies, both local and international. If and only if at least one of the members of a company's audit committee held a professional membership with accounting bodies, we regarded that company as having professional memberships. 182 companies in our sample met this criterion. We find that companies having audit committees with professional accounting memberships provide less credible forecasts, as shown by higher percentage of mean and median absolute forecast errors, as compared to companies that have no professional accounting membership in their audit committees. However, the difference between these two groups is not statistically significant.

Our sample is also split based on the reputation of the auditor, that is whether or not the IPO company prospectus is verified by a BIG4/5 auditor. 141 companies in our sample appointed a high quality auditor before going public. Out of these 141

companies, 42 and 43 companies appointed KPMG or Ernst and Young (EY), respectively as their auditor. On the other hand, only 13 companies appointed DelloitteKassimChan (DKC) as their auditor. We do not find any significant difference between the accuracy of IPO profit forecasts attested by the BIG4/5 auditing firms and those of their nonBIG4/5 counterparts in our sample using univariate analysis.

Finally, we also split our sample based on whether the companies were listed prior to or after the introduction of the Code on Corporate Governance in March 2000. Only 20 companies in our sample were listed prior to March 2000, while the remaining 215 companies were listed after March 2000. Contrary to our expectation, both the mean and median results show that companies listed prior to the introduction of the Code on Corporate Governance in March 2000 have lower absolute forecast errors. However, we do not find any significant difference between the pre- and post-March 2000 period in terms of the accuracy of earnings forecasts. Our results indicate that the introduction of the Code on Corporate Governance itself is not the key determinant of financial disclosure quality.

5.4 Analysis of association of corporate board, audit committee and financial disclosure quality in IPOs

To confirm the results of our univariate analysis, we further perform multivariate analysis and consider additional factors that may influence the financial disclosure quality. In particular, we regress the level of absolute forecast errors with board and audit committee variables, and several additional control variables identified in Section 3. The number of samples in the regression is less than 235 after removing

extreme outliers (21 companies) and companies without detailed information on corporate directorships (three companies).

Our bivariate correlation analysis reported in Table 5 shows moderate correlations between board size (BDSIZE) and number of independent non-executive directors (INED), and between audit committee size (ACSIZE) and number of audit committee non-executive directors (ACNED), with correlations of -0.350 and 0.353, respectively. However, none of the other independent variables has high correlations, which suggests multicollinearity is not likely to be an issue in our regression models.

[Insert Table 5 about here]

Table 6 presents results of White's (1980) adjusted OLS regressions addressing the link between IPO earnings forecast accuracy and corporate governance characteristics. To investigate the existence of multicollinearity in the estimation of the relation between corporate governance and management earnings forecasts, the variance inflation factors (VIFs) for each of the independent variables are computed. Consistent with the previous correlation matrix, VIFs for the governance variables as reported in column 2 of Table 6 are always below 2.0, suggesting that multicollinearity is not likely to be a major factor driving our results.

We report four regression model results in Table 6. The results of the first regression model (Model 1), which consider all boards and audit committees, and other control variables are reported in columns 4 and 5. We find that the absolute value of the forecast error significantly declines (at 5% level) with a higher percentage of

non-executive directors in audit committee. Our results suggest that the higher the percentage of non-executive directors in the audit committee, the more accurate are the earnings forecasts in the IPO prospectuses. We also find that the absolute forecast error has a negative relationship with size of audit committees, suggesting that audit committees with more members make more accurate forecasts. Our results are consistent with those of Karamanou and Vafeas (2005) that suggest good corporate governance is associated with greater financial disclosure quality. Results on control variables suggest that management forecasts are more accurate only after controlling for company size. We find that the larger the IPO company, the greater the forecast errors and the lower the financial disclosure quality. Our results are consistent with Firth and Smith (1992), suggesting that larger companies raise more capital than their smaller counterparts making it more difficult to forecast future earnings accurately.

[Insert Table 6 about here]

To gain further insight on which characteristics (either of boards or audit committees) have greater influence on financial disclosure quality, we perform additional regressions. Our second model (Model 2) only includes board characteristics and control variables, while our third model (Model 3) only includes audit committee characteristics and control variables. Focusing first on the results of Model 2, our results confirm that none of our board characteristics has a significant influence on the quality of financial disclosure in IPO companies. Interestingly, BIG4/5 auditor has a significant negative relationship (at 10% level) with absolute forecast errors. Our results suggest that higher quality auditors do play a role in increasing the quality of

financial disclosure. Company size continues to be influential but the level of significance has reduced to 5%.

Similar to the results observed in Model 1, when we include only audit committee characteristics and other control variables in our Model 3, we find that only the audit committee non-executive director variable (ACNED) has a significant negative relationship (at 10% level) with absolute forecast errors. Audit committee size is no longer a major determinant of financial disclosure quality but still in the expected sign (i.e., negative). Similar to the results of Model 2, auditor reputation has a significant influence on financial disclosure quality. Company size continues to be significant at the 1% level. Other control variables in our model do not show any significant association with financial disclosure quality.

Due to the fact that board characteristics and the rest of control variables are not the main factors influencing the quality of financial disclosure in our Models 1, 2 and 3, we then perform additional regression by excluding them in our Model 4. The results are reported in the last two columns of Table 6. We find that all of the variables identified in Model 4 with the exception of audit committee size variable are found to influence the financial disclosure quality.

As a whole, our results suggest that smaller companies with properly structured audit committees and more reputable auditors have lower forecast errors, which indicate greater financial disclosure quality.

6.0 CONCLUSION

This paper examines the association between the board of directors, the audit committee and the accuracy of management earnings forecasts. We find that effective audit committees with a larger membership and a higher proportion of non-executive directors are related to greater forecast accuracy. This finding is similar to the work undertaken by Karamanou and Vafeas (2005), suggesting that effective governance is associated with high quality information flowing from management to investors. However, no evidence is found linking audit committee financial expertise and independence of the full board with the accuracy of management earnings forecasts in IPOs. This again raises doubts about the efficacy of independent directors in enhancing the quality of financial disclosure in Malaysia, as previously documented in Wan-Hussin et al. (2005).

In sum, the results of this paper demonstrate the vital responsibility of audit committees and external auditors in improving financial disclosure practices. These results are also consistent with decisions made by Malaysian regulators such as the Securities Commission to enhance the quality of financial disclosure by revising the Malaysian Code on Corporate Governance to encourage public companies to implement good governance practices.

7.0 RECOMMENDATIONS AND POSSIBLE SOLUTIONS

Due to the fact that professional membership of the audit committee does not play a significant role in monitoring the quality of the information contained in the IPO prospectus, we suggest that future research should investigate further the specific characteristics of the audit committee in terms of their academic qualifications and working experience in accounting or other related fields. These characteristics might provide further insight into factors affecting the quality of financial disclosure and could have direct implications for further improvement in corporate governance.

It would also be interesting to investigate what explanations have been provided in their first published annual reports by the management of Malaysian IPO companies when the earnings forecasts made in their IPO prospectuses have deviated outside the ± 10% limit imposed in Para 9.19 (33) of the Bursa Malaysia Listing Requirements.

REFERENCES

Abbott, L.J., Parker, S. and Peters, G.F. (2004), 'Audit committee characteristics and restatements', *Auditing: A Journal of Practice & Theory*, Vol. 23, No. 1, pp. 69-87.

Ahmad-Zaluki, N.A., Campbell, K. and Goodacre, A. (2007), 'The long run share price performance of Malaysian initial public offerings (IPOs)', *Journal of Business Finance & Accounting*, Vol. 34, pp. 78-110.

Anderson, R.C. and Bizjak, J.M. (2003), 'An empirical examination of the role of the CEO and the compensation committee in structuring executive pay', *Journal of Banking and Finance*, Vol. 27, pp. 1323-1348.

Bamber, L. and Cheon, Y.S.(1998), 'Discretionary management earnings forecast disclosures: Antecedents and outcomes associated with forecast venue and forecast specificity choices', *Journal of Accounting Research*, Vol. 36, pp.167-190.

Beasley, M. (1996), 'An empirical analysis between the board of director compositions and financial statement fraud', *Accounting Review*, Vol. 71, pp. 443-466.

Bedard, J., Chtourou, S.M. and Courteau, L. (2004), 'The effect of audit committee expertise, independence, and activity on aggressive earnings management', *Auditing: A Journal of Practice & Theory*, Vol. 23, No. 2, pp. 13-35.

Bedard, J., Coulombe, D., and Courteau, L. (2008), 'Audit committee, underpricing of IPOs, and accuracy of management earnings forecasts', *Corporate Governance: An International Review*, Vol. 16, No. 6, pp. 519-535.

Beekes, W. and Brown, P. (2006), 'Do better-governed Australian firms make more informative disclosures?', *Journal of Business Finance & Accounting*, Vol. 33, pp. 422-450.

'Best Practices in Corporate Disclosure', available on the internet at http://www.sc.com.my/eng/html/cg/Legal.html.

Capstaff, J., Paudyal, K. and Rees, W. (1995), 'The accuracy and rationality of earnings forecasts by UK analysts', *Journal of Business Finance & Accounting*, Vol. 22, pp. 67-85.

Chan, A.M.Y, Sit, C.L.K., Tong, M.M.L., Wong, D.C.K. and Chan, R.W.Y. (1996), 'Possible factors of the accuracy of prospectus earnings forecast in Hong Kong', *International Journal of Accounting*, Vol. 31, No. 3, pp. 381-398.

Chen, A., Kao, L., Tsao, M. and Wu, C. (2007), 'Building a corporate governance index from the perspectives of ownership and leadership for firms in Taiwan', *Corporate Governance: An International Review*, Vol. 15, pp. 251-261.

Cheng, E. and Courtenay, S. (2006), 'Board composition, regulatory regime and voluntary disclosure', *International Journal of Accounting*, Vol. 41, pp. 262-289.
Chin, C.L., Kleinman, G., Lee, P. and Lin, M.F. (2006), 'Corporate ownership structure and accuracy and bias of mandatory earnings forecast: evidence from Taiwan', *Journal of International Accounting Research*, Vol. 5, No.2, pp. 41-62.

Core, J.E., Holthausen, R.W. and Larcker, D.F. (1999), 'Corporate governance, chief executive officer compensation and firm performance', *Journal of Financial Economics*, Vol. 51, pp. 371-406.

Cormier, D. and Martinez, I. (2006), 'The association between management earnings forecasts, earnings management, and stock market valuation: Evidence from French IPOs', *International Journal of Accounting*, Vol. 41, No. 3, pp. 209-236.

DeFond, M.L., Hann, R.N. and Hu, X. (2005), 'Does the market value financial expertise on audit committees of boards of directors?', *Journal of Accounting Research*, Vol. 43, No. 2, pp. 153-193.

Dev, S. and Webb, M. (1972), 'The accuracy of companies' profit forecasts', Journal of Business Finance, Vol. 4, No. 3, pp. 26-39.

Downes, D.H. and Heinkel, R. (1982), 'Signalling and the valuation of unseasoned new issues', *Journal of Finance*, Vol. 37, pp. 1-10.

Felo, A.J., Krishnamurthy, S. and Solieri, S.A. (2003), 'Audit committee characteristics and the perceived quality of financial reporting: An empirical analysis', Available at http://ssrn.com/abstract=401240.

Firth, M. and Smith, A. (1992), 'The accuracy of profits forecasts in initial public offerings prospectuses', *Accounting and Business Research*, Vol. 22, No. 87, pp. 239-247.

Gendron, Y. and Bedard, J. (2006), 'On the constitution of audit committee effectiveness', *Accounting, Organizations and Society*, Vol. 31, pp. 211-239.

Haniffa, R. and Hudaib, M. (2006), 'Corporate governance structure and performance of Malaysian listed companies', *Journal of Business Finance & Accounting*, Vol. 38, No. 3, pp. 1-29.

Ismail, N. and Weetman, P. (2007), 'Forecast accuracy in initial public offerings and the impact of external constraints relative to managerial choice: A research note', *Accounting and Finance*, Vol. 47, pp. 513-525.

Jaggi, B., Chin, C., Lin, H-W. and Lee, P. (2006), 'Earnings forecast disclosure regulation and earnings management: evidence from Taiwan IPO firms', *Review of Quantitative Finance & Accounting*, Vol. 26, pp. 275-299.

Jelic, B., Saadouni, B., and Briston, R. (1998), 'The accuracy of earnings forecasts in IPO prospectuses on the Kuala Lumpur Stock Exchange', *Accounting and Business Research*, Vol. 29, No. 3, pp. 57-52.

Karamanou, I. and Vafeas, N. (2005), 'The association between corporate boards, audit committees, and management earnings forecasts: an empirical analysis', *Journal of Accounting Research*, Vol. 43, pp. 453-486.

Klein, A. (2002), 'Audit committee, board of director characteristics, and earnings management', *Journal of Accounting and Economics*, Vol. 33, pp. 375-400.

Krishnan, J. (2005), 'Audit committee financial expertise and internal control: an empirical analysis', *Accounting Review*, Vol. 80, No. 2, pp. 649-675.

Lee, P.J., Taylor, S.J. and Taylor, S.L. (2006), 'Auditor conservatism and audit quality: Evidence from IPO earnings forecasts', *International Journal of Auditing*, Vol. 10, pp. 183-199.

Lin, J.W., Li, J.F. and Yang, J.S. (2006), 'The effect of audit committee performance on earnings quality', *Managerial Auditing Journal*, Vol. 21, No. 9, pp. 921-933.

Lobo, G.J. And Zhou, J. (2005), 'Did conservatism in financial reporting increase after the Sarbanes-Oxley Act?', *Accounting Horizon*, pp. 57-73.

Mohamad, S., Nassir, A., Kuing, T.K. and Ariff, M. (1994), 'The accuracy of profit forecasts of Malaysian IPOs', *Capital Market Review*, Vol. 2, No. 2, pp. 46-69.

Persons, O.S. (2005), 'The relation between the new corporate governance rules and the likelihood of financial statement fraud', *Review of Accounting & Finance*, Vol. 4, No. 2, pp. 125-148.

Qin, B. (2007), 'The influence of audit committee financial expertise on earnings quality: US evidence', *ICFAI Journal of Audit Practice*, Vol. 4, No. 3, pp. 7-28.

Tan, H., Libby, R. and Hunton, J. (2002), 'Analysts' reaction to earnings preannouncement strategies', *Journal of Accounting Research*, Vol. 40, pp. 223-239.

Wan-Hussin, W.N., Che-Adam, N., Lode, N.A. and Kamardin, H. (2005), Determinants of early adoption of FRS 114 (Segment Reporting) in Malaysia", *Asian Academy of Management Journal*, Vol. 10, No. 2, pp. 1-20.

Williams, P. (1996), 'The relation between a prior earnings forecast by management and analyst response to a current management forecast', *Accounting Review*, Vol. 71, pp. 103-113.

Xie, B., Davidson, W.W., DaDalt, P.J. (2003), 'Earnings management and corporate governance: The role of the board and audit committee', *Journal of Corporate Finance*, Vol. 9, pp. 295-316.

Zhang, Y., Zhou, J., Zhou, N. (2007), 'Audit committee quality, auditor independence, and internal control weaknesses', *Journal of Accounting and Public Policy*, Vol. 26, No. 3, pp. 300-327.

Table 1: Distribution of IPO sample by year and board of listings

	Number of sample and percent					
IPO Year	**Main Board**	**Percent**	**Second Board**	**Percent**	**Total**	**Percent**
1999	9	10.00	10	6.90	19	8.09
2000	12	13.33	26	17.93	38	16.17
2001	5	5.56	14	9.66	19	8.09
2002	21	23.33	22	15.17	43	18.30
2003	13	14.44	22	15.17	35	14.89
2004	15	16.67	26	17.93	41	17.45
2005	9	10.00	17	11.72	26	11.06
2006	6	6.67	8	5.52	14	5.96
Total number of sample (percent)	**90**	**(100)**	**145**	**(100)**	**235**	**(100)**

This table reports the distribution of 235 IPOs by year of going public (1999-2006) and board of listing (Main Board and Second Board).

Table 2: Descriptive statistics for 235 Malaysian IPOs between 1999-2006

Attributes	Mean				Median				Minimum			Maximum		
	All (n=235)	Main Board (n=90)	Second Board (n=145)	t-stat for diff	All (n=235)	Main Board (n=90)	Second Board (n=145)	z-stat for diff	All (n=235)	Main Board (n=90)	Second Board (n=145)	All (n=235)	Main Board (n=90)	Second Board (n=145)
Panel A: Earnings forecast attributes														
Forecast error (%)	-3.50	-3.51	-3.50	-0.002	-1.86	0.31	-2.33	0.789	-270.47	-162.36	-270.47	451.29	162.17	451.29
Absolute forecast error (%)	23.76	19.45	26.44	-1.349	9.14	9.83	9.04	0.003	0.13	0.18	0.13	451.29	162.36	451.29
Conservative forecast (%)	49.36	52.22	47.52	0.689	na	na	na	na	na	na	na	na	na	na
Meeting 10% accuracy threshold (%)	56.60	50.00	60.69	-1.600	na	na	na	na	na	na	na	na	na	na
Panel B: Boards attributes														
Non-exec director (NED) (%)	51.92	54.59	50.29	1.975**	50.00	50.00	50.00	1.811*	20.00	22.00	20.00	89.00	89.00	89.00
Independent NED (%)	34.71	34.97	34.56	0.342	33.00	33.00	33.00	0.152	15.00	18.00	15.00	75.00	75.00	67.00
Board size	7.61	7.47	7.70	-0.949	7.00	7.00	8.00	-1.156	4.00	4.00	4.00	16.00	14.00	16.00
Panel C: Audit committee attributes														
Audit committee NED (%)	70.32	72.50	68.96	2.330**	66.67	66.67	66.67	1.539	50.00	50.00	60.00	100.00	100.00	100.00
Audit committee INED (%)	67.69	67.78	67.64	0.179	66.67	66.67	66.67	0.926	50.00	50.00	50.00	100.00	100.00	100.00
Audit committee size	3.09	3.06	3.10	-1.269	3.00	3.00	3.00	0.975	3.00	3.00	3.00	5.00	4.00	5.00
Professional memberships (%)	71.45	78.89	76.55	0.415	na	na	na	na	na	na	na	na	na	na

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Table 2 *(continued)*: Descriptive Statistics for 235 Malaysian IPOs between 1999-2006

Attributes	Mean				Median				Minimum			Maximum		
	All (n=235)	Main Board (n=90)	Second Board (n=145)	t-stat for diff	All (n=235)	Main Board (n=90)	Second Board (n=145)	z-stat for diff	All (n=235)	Main Board (n=90)	Second Board (n=145)	All (n=235)	Main Board (n=90)	Second Board (n=145)
Panel D: Company attributes														
Company age (years)	5.57	8.07	4.03	3.966***	2.67	3.84	2.41	2.664***	0.21	0.21	0.51	39.82	39.82	24.86
Forecast horizon (months)	8.07	8.30	7.93	0.843	7.40	7.80	7.30	0.760	2.97	3.07	2.97	14.93	14.93	14.90
Leverage (%)	19.46	20.24	18.97	0.581	18.00	18.00	19.00	-0.006	0.00	0.00	0.00	82.00	82.00	60.00
Retained ownership (%)	74.58	73.78	75.07	-0.859	75.12	75.00	75.83	-0.820	30.91	41.00	30.91	97.54	96.89	97.54
Total assets (RM million)	270.72	537.81	104.95	3.957***	120.27	213.88	91.43	10.699***	44.68	79.26	44.68	6,445.75	6,445.75	400.66
Turnover (RM million)	142.85	253.65	74.08	4.301***	79.25	151.10	56.39	8.210***	18.26	28.54	18.26	2,798.10	2,798.10	312.79
Auditor - BIG4/5 (%)	60.00	73.33	51.72	3.446***	na	na	na	na	na	na	na	na	na	na
Underwriter (%)	53.62	61.11	48.97	1.830*	na	na	na	na	na	na	na	na	na	na
Earnings reductions (%)	23.40	30.00	19.31	1.822*	na	na	na	na	na	na	na	na	na	na

This table shows the descriptive statistics for 235 IPOs that went public during the period 1999-2006. Data for the proportion of independent and non-independent non-executive directors are for 232 companies due to unavailable details on corporate directorships for three companies. Forecast error is the difference between actual earnings and the management forecasts deflated by absolute value of management forecasts. 'Non-executive director refers to the percentage of non-executive directors out of total directors. Board size is total number of directors on the board. Audit committee NED is computed as the percentage of non-executive directors in audit committee out of the total directors in audit committees. Audit committee size is total number of directors in audit committee. Professional membership is a dummy variable equal to 1 if at least one member of the company's audit committee possesses professional accounting qualification and 0 otherwise. Company age is defined as the number of years between incorporation and the IPO date. Forecast horizon is the number of months from the management forecast date to end of the period for which the forecast is made. Leverage is the level of borrowings divided by total assets at the date of the publication of the prospectus. Retained ownership, α is calculated as in Downes and Heinkel (1982): $\alpha = (N - N_p - N_s) / N$, where α is the proportionate ownership retained by the insiders (original owners); N is the total number of shares outstanding after the initial offer; N_p is the number of primary shares in the initial offer (public issue); and N_s is the number of secondary shares offered by the insiders for resale (offer for sale). Total assets are at the date of prospectus. Turnover is the average turnover for a period of three years prior to IPO. Auditor - BIG4/5 is a dummy variable equal to 1 for IPO companies audited by one of the Big 4/5 auditors, and 0 otherwise. Underwriter is a dummy variable equal to 1 for IPO companies which used a prestigious underwriter for the IPO, as defined in Jelic et al. (2001), and 0 otherwise. Earnings reductions is a dummy variable equal to 1 for IPO companies that experience a reduction in earnings a year prior to the IPO, and 0 otherwise.

*** and ** denote results significantly different from zero at the 0.01 and 0.05 levels, respectively, using two-tailed tests. The differences between the mean and median of the Main Board (n = 90) and the Second Board (n = 145) are based on the independent t-test and the Mann-Whitney U test, respectively.

Table 3: Distribution of forecast errors

% forecast error	Number of companies
>100	4
90 to 100	1
80 to 90	0
70 to 80	2
60 to 70	1
50 to 60	1
40 to 50	0
30 to 40	6
20 to 30	11
10 to 20	16
0 to 10	**74**
-1 to -10	**59**
-11 to -20	12
-20 to -30	10
-30 to -40	11
-40 to -50	12
-50 to -60	1
-60 to -70	3
-70 to -80	3
-80 to -90	4
-90 to -100	1
<-100	3
Total number of sample	235

Table 4: Cross-sectional patterns of absolute forecast errors

Category	Number of sample	Mean	Median
Panel A: Independent non-exec director			
INED>33%	152	23.91	9.37
INED<33%	80	24.28	8.77
t-test/z-test of difference		*-0.061*	*0.014*
p-value		*0.951*	*0.989*
Panel B: Board size			
more than 7	117	28.68	9.61
less than or equal to 7	118	18.89	8.93
t-test/z-test of difference		*1.696**	*1.429*
p-value		*0.092*	*0.153*
Panel C: Audit committee NED			
all ACNED (100%)	23	23.19	12.41
ACNED less than 100%	209	24.13	9.14
t-test/z-test of difference		*-0.095*	*0.011*
p-value		*0.924*	*0.991*
Panel D: Audit committee size			
Three	217	24.84	9.39
Four	16	11.39	8.24
Five	2	5.65	5.65
F-value/Chi-Square of difference		*0.856*	*1.007*
p-value		*0.426*	*0.604*
Panel E: Professional memberships			
Yes	182	24.58	9.26
No	53	20.98	9.04
t-test/z-test of difference		*0.520*	*0.192*
p-value		*0.604*	*0.848*
Panel F: Auditor			
BIG4/5	141	23.92	8.95
AA	*20*	*27.50*	*8.94*
DKC	*13*	*16.00*	*9.44*
EY	*43*	*24.47*	*8.94*
KPMG	*42*	*26.40*	*8.52*
PwC	*23*	*19.67*	*8.95*
Non-BIG4/5	94	23.54	9.60
t-test/z-test of difference		*0.064*	*-0.599*
p-value		*0.949*	*0.549*

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Table 4: (*continued*) Cross-sectional patterns of absolute forecast errors

Category	Number of sample	Mean	Median
Panel G: Introduction of Code on Corporate Governance			
Before Code (Pre March 2000)	20	13.15	6.77
After Code (Post March 2000)	215	24.75	9.35
t-test/z-test of difference		*-1.121*	*-1.009*
p-value		*0.263*	*0.313*

This table reports the cross-sectional pattern of absolute forecast errors categorised by the proportion of independent non-executive director, board size, audit committee NED, professional memberships and auditor.

* denotes results significantly different from zero at the 0.10 level, using two-tailed tests. The differences between the mean and median of the INED > 33% and INED < 33%, between board size more than 7 and less than 7, between all ACNED (100%) and ACNED less than 100%, between companies having audit committee with professional memberships and do not, between BIG4/5 and Non-BIG4/5, and between pre- and post-March 2000 are based on the independent t-test and the Mann-Whitney U test, respectively. The difference between the mean and median of the audit committee size group is based on one-way ANOVA and Kruskal-Wallis tests respectively.

Table 5: Correlation matrix for variables in the determinants of financial disclosure quality regressions

	AFE	***INED***	***BDSIZE***	***ACNED***	***ACSIZE***	***PFMSHIP***	***AUDITOR***	***COSIZE***	***EARNRED***	***FHORIZON***
INED	0.060									
BDSIZE	0.019	-0.350***								
ACNED	0.015	0.139**	0.204***							
ACSIZE	-0.010	0.172**	0.103	0.353***						
PFMSHIP	-0.029	0.062	0.056	0.082	0.161**					
AUDITOR	-0.059	-0.104	-0.009	0.069	0.017	0.001				
COSIZE	0.078	-0.042	0.028	0.178**	0.034	0.052	0.162**			
EARNRED	-0.066	-0.025	0.002	-0.033	0.034	-0.009	0.073	0.086		
FHORIZON	0.056	0.009	-0.093	0.006	-0.039	-0.144	-0.030	0.067	-0.053	
AGE	-0.027	-0.114	0.088	-0.092	0.063	-0.030	0.056	0.101	0.116	0.011

This table shows the bivariate Pearson correlation between dependent and independent variables. The number of sample is less than 235 after removing extreme outliers (21 companies) and three companies whose details on corporate directorships were unavailable. *AFE* is the level of absolute forecast errors, measured by the absolute difference between actual earnings and the forecasts deflated by absolute earnings forecasts, *INED* is percentage of independent non-executive directors out of total directors, *BDSIZE* is total number of directors on the board, *ACNED* is percentage of non-executive directors out of total audit committee members, *ACSIZE* is the number of audit committee members, *PFMSHIP* is a dummy variable equal to 1 if at least one member of the company's audit committees possesses professional accounting qualification and 0 otherwise, *AUDITOR* is a dummy variable equal to 1 for IPO companies audited by one of the BIG4/5 auditors, and 0 otherwise., *COSIZE* is company size measured by ln total assets at the date of prospectus, *EARNRED* is dummy variable equal to 1 if company had experienced a reduction in earnings a year prior to the IPO and 0 otherwise, *FHORIZON* is forecast horizon, measured by the number of months from the management forecast date to end of the period for which the forecast is made, and AGE is company age, measured by ln (1 + number of years between incorporation and the IPO date).

***, ** denote results significantly different from zero at the 0.01 and 0.05 levels, respectively, using two-tailed tests.

Table 6: Determinants of financial disclosure quality

			Model 1 All boards and audit committees characteristics		Model 2 Only boards characteristics		Model 3 Only audit committees characteristics		Model 4 Selected variables	
	VIF	Expected sign	Coefficient	*t*-stat	Coefficient	*t*-stat	Coefficient	*t*-stat	Coefficient	*t*-stat
INED	1.28	-	13.263	1.17	6.861	0.63				
BDSIZE	1.29	-	0.576	1.01	0.266	0.53				
ACNED	1.33	-	-0.174	-2.16**			-0.139	-1.84*	-0.135	-1.87*
ACSIZE	1.08	-	-3.490	-1.73*			-2.757	-1.37	-3.049	-1.56
PFMSHIP	1.05	-	0.136	0.06			0.189	0.09		
AUDITOR	1.08	-	-3.110	-1.55	-3.499	-1.74*	-3.502	-1.76*	-3.788	-1.91*
COSIZE	1.28	?	3.287	3.03***	2.469	2.43**	3.285	3.01***	3.326	2.97***
EARNRED	1.02	+	-2.723	-1.40	-2.771	-1.46	-2.760	-1.43		
FHORIZON	1.06	+	0.334	1.17	0.339	1.22	0.290	1.03		
AGE	1.05	-	-0.695	-0.63	-0.550	-0.51	-0.637	-0.59		
Constant			-10.570	-0.74	-19.195	-1.41	-5.819	-0.43	-4.645	-0.35
n			211		211		211		211	
F-value			1.95**		1.89*		2.17**		3.00**	
R-square			7.62%		5.71%		6.85%		5.64%	
Adj R-square			3.00%		2.46%		3.16%		3.50%	

This table reports the results of OLS regressions for all board and audit committee characteristics (Model 1), only board characteristics (Model 2), only audit committee characteristics (Model 3) and the selected variables (Model 4). The number of samples in the regression is less than 235 after removing extreme outliers (21 companies) and three companies without details on corporate directorships. The *t*-statistics reported in the table were adjusted for heteroscedasticity (White's correction). The dependent variable is the level of absolute forecast errors (*AFE*), measured by the absolute difference between actual earnings and the forecasts deflated by absolute earnings forecasts, *INED* is percentage of independent non-executive directors out of total directors, *BDSIZE* is total number of directors on the board, *ACNED* is percentage of non-executive directors out of total audit committee members, *ACSIZE* is the number of audit committee members, *PFMSHIP* is a dummy variable equal to 1 if at least one member of the company's audit committee possesses professional accounting qualification and 0 otherwise, *AUDITOR* is a dummy variable equal to 1 for IPO companies audited by one of the BIG4/5 auditors, and 0 otherwise, *COSIZE* is company size measured by ln total assets, at the date of prospectus, *EARNRED* is dummy variable equal to 1 if company had experienced a reduction in earnings a year prior to the IPO and 0 otherwise, *FHORIZON* is forecast horizon, measured by the number of months from the management forecast date to end of the period for which the forecast is made, and *AGE* is company age, measured by ln (1 + number of years between incorporation and the IPO date).

***, **, and * denote results significantly different from zero at the 0.01, 0.05 and 0.10 levels, respectively, using two-tailed tests.