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EARNINGS MANAGEMENT IN SMALL LISTED FIRMS IN MALAYSIA USING QUANTILE REGRESSION

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ABSTRACT

This study examines the role of board independence and audit committee expertise in accounting on earnings management in small listed firms in Malaysia, which have been neglected in corporate governance research. Due to their small size, the listing requirements imposed on them by Bursa Malaysia are less stringent. Hence, these firms are predicted to have a higher tendency to manage earnings compared to large listed firms. All firms listed on the Bursa Malaysia ACE Market during the financial years 2012 to 2014 inclusive were selected. The data were analysed using quantile regression to enable the determination of the effects of the corporate governance variables across the quantiles in the conditional distribution of discretionary accruals. The results show that small listed firms have a very high propensity for accrual management compared to large listed firms. The study also reveals that board independence is not associated with either the incidence of accrual management or the direction of discretionary accruals. It also shows that audit committee expertise can mitigate the propensity for discretionary accruals and if discretionary accruals are present, the objective was to reduce the firm's earnings. However, this evidence only holds in firms where the utilization of discretionary accruals is pervasive.

Keywords: Earnings management; board of directors; audit committees; small firms; Malaysia

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1. INTRODUCTION

Business entities must ensure that the financial information provided to users is accurate (Abdullah, 1999). Evidence on the role of corporate governance in earnings management, especially the role of the board of directors and audit committees, is well documented for many firms, including those operating in Malaysia (e.g. Abdullah & Ismail, 2016; Abdullah & Mohd Nasir 2004; Abdul Rahman & Mohamed Ali, 2006; Al-Jaifi, 2017; Mohd-Saleh et al., 2005). However, as opposed to large listed firms, which are closely followed by analysts and are subjected to a great level of scrutiny by both the relevant regulatory authorities and stakeholders, evidence on the role of corporate governance and ownership in the practice of earnings management in small listed firms in Malaysia is non-existent. Small listed firms are defined as firms which are listed on the Bursa Malaysia ACE market. Hence, due to less public scrutiny, the tendency to apply aggressive accounting or accrual management might be higher than that in large listed firms. On the other hand, the motivation for accrual management could also be relatively low in small listed firms because it is more likely that they are closely held and that shareholders play an active role in the

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management of the firm, which reduces reliance on financial statements for monitoring purposes, as suggested by the Type I agency problem (e.g. Nagar et al., 2002). Besides, Ball and Shivakumar (2005) revealed that due to lower reliance on financial statements, the earnings of private firms in the United Kingdom (UK) are of low quality compared to those of public firms. Therefore, this study predicts that the incidence of earnings management will be higher in small listed firms as compared to large listed firms.

Generally, studies on large Malaysian firms have shown that discretionary accruals are very close to zero (e.g. Abdullah & Mohd Nasir, 2004; Abdullah & Ismail, 2016; Bamahros & Wan-Hussin, 2015; Mohd-Saleh et al., 2005). As opposed to the Main Market, the Bursa Malaysia Listing Requirements for a listing on the ACE Market are less stringent. However, companies listed on Bursa Malaysia are required by the Bursa Malaysia Listing Requirements to apply the accounting standards as required in the Financial Reporting Act (1997). Less stringent listing requirements imply higher level risk; therefore Malaysian institutional investors do not have the mandate to invest in companies in the ACE Market. Hence, the objectives of this study are twofold: a) to determine the incidence of accrual management and b) to determine the influence of board independence and audit committee expertise in accounting on accrual management in small listed firms in Malaysia. Besides, the study also employed the quantile regression method as opposed to the ordinary least squares method. The main advantage of using the quantile regression method over ordinary least squares is that the former doesn't impose assumptions on normality, homoscedasticity and absence of outliers. The remainder of this paper is structured as follows: Next, the literature review is presented in section 2, followed by the research methodology in section 3. Then, the findings are presented and discussed in section 4. Finally, conclusions are made in section 5.

2. THEORETICAL DEVELOPMENT AND HYPOTHESES

2.1. Earnings management

Earnings management is a deliberate attempt by the management of a firm to distort the underlying economic reality of the firm (Healy & Wahlen, 1999). The management of earnings enables management to report their desired earnings for their self-interest (Merchant & Rockness, 1994). Primarily, managers are motivated to manage earnings to safeguard their job security (Fudenberg & Tirole, 1995). The ineffectiveness of the board of directors and other internal corporate governance mechanisms could also lead to a pervasive practice of earnings management. While the deliberate attempt to manage earnings, which is usually achieved either via accrual management or via changing accounting policies, is legal, it is considered unethical because the main objective is to mislead the users of financial reports or the stakeholders of the firm by not portraying the true underlying financial performance of the firm.

A study conducted in Europe indicates that private firms exhibit higher levels of earnings management (Burgstahler et al., 2006) even though both public and private firms are required to use the same set of accounting standards. In the Belgian context, Stockmans et al. (2010) also document that private family firms tend to manage earnings upwards. In a similar vein, evidence in the United States also reveals that public firms have a higher accrual quality and are more conservative than private firms (Hope et al., 2013). Further, with less stringent listing requirements

and low public scrutiny, in the absence of political costs in these small firms, the accrual management committed by these small listed firms is for income increasing. Besides, given the fact the semi-strong form of market efficiency in Malaysia where all publicly available information, including announcements on earnings results, an increase in earnings would lead to an increase in the firm's stock prices. A recent study in the Malaysian context on Main Market firms by Abdullah and Ismail (2016) indicates that average discretionary accruals are 0.04 and comparable with the discretionary accruals found in the US by Sun et al. (2011), who reported a mean value of discretionary accruals of -0.017. Thus, it is expected that:

H1a: The propensity for accrual management in smaller listed firms is high.

H1b: Accrual management in small listed firms is predominantly to increase income.

2.2. Board independence

The Malaysian Code on Corporate Governance (MCCG) 2000 (Securities Commission, 2000) and MCCG 2007 (Securities Commission, 2007) both stress the importance of independent directors making up a third of the board members as well as the separation of the roles of the chief executive officer (CEO) and chairman of the board. In MCCG 2012 (Securities Commission, 2012), this evolved into a requirement that the board must be composed of a majority of independent directors if the board chairman is not independent. Subsequently, in MCCG 2017 (Securities Commission, 2017), it is stipulated that, in large firms, the board must be composed of a majority of independent directors and that, in other firms, at least half of the board members must be independent. These latest requirements are more stringent than those in the UK Corporate Governance Code (CGC) of 2016 (Financial Reporting Council, 2016), which requires that only half of the board members (excluding the chairman) are independent while only two independent directors are required to be on the board of smaller firms (the UK CGC 2016 defines small firms as firms that are below the FTSE 350).

Typically, in family-owned firms, the main objective of appointing independent directors is to benefit from their expertise and advice on strategic directions rather than for control/monitoring purposes (Anderson & Reeb, 2003), hence resource dependence theory is likely to prevail. Also, because the board of directors is dominated by family members, the directors whom the family appoint are less likely to go against the wishes of the controlling family members (Jaggi et al., 2009). According to Jaggi et al.'s evidence (2009) on Hong Kong firms, board independence reduces earnings management, but this inverse association becomes weaker in family-controlled firms. Therefore, it is predicted that:

H2: Board independence will not affect accrual management in small listed firms in Malaysia.

2.3. Audit committee expertise

The main role of the audit committee is to oversee the financial reporting process, therefore audit committee members must be financially literate (Abdul Rahman & Mohamed Ali, 2006). This view is consistent with DeZoort and Salterio (2001), who found that the likelihood of material misstatements being detected and reported promptly increases when the audit committee is

comprised of members with financial expertise. The establishment of an audit committee by listed firms has been mandated by Bursa Malaysia for all listed firms since 1993. Subsequently, in MCCG 2007, it is a requirement that all audit committee members must be financially literate and that at least one audit In MCCG 2017, a new requirement was added which stipulated that the chairman of the board cannot simultaneously serve as the chairman of the audit committee.

An audit committee member who possesses accounting and financial expertise is better able to understand the auditing risks and procedures as well as accounting judgements than a financially inexpert audit committee member. Mohd Saleh et al. (2007) document that when audit committee members are more knowledgeable, there is a lower incidence of accrual management practices in large listed firms in Malaysia. They also suggest that it is important to have an effective audit committee in a country with inadequate legal protection such as Malaysia compared to developed countries to minimize agency costs (Mohd Saleh et al. 2007). Also, Xie et al. (2003) suggest that financial experience and training would enable audit committee members to have a better understanding of accrual management and this would then enable them to act accordingly. In the Indonesian context, audit committee expertise in finance and accounting also reduces earnings management (Mardjono & Chen, 2020). Studies in the Malaysian context found that having members who are expert in accounting and finance does not necessarily reduce earnings management (Jamil & Puat-Nelson, 2011). In the UK, Basiruddin (2011) also found that audit committee expertise in accounting and finance was not associated with earnings management. Hence, it is hypothesized that:

H3: Audit committee expertise in accounting will reduce accrual management.

3. RESEARCH DESIGN

3.1. Sample

Data were collected from non-finance firms listed on the Bursa Malaysia ACE Market for 2012, 2013 and 2014 financial years. The data required were manually collected from the annual reports of the firms which were available on the Bursa Malaysia website. As at 31 December 2014, a total of 107 firms were listed on the ACE Market out of 906 listed firms, representing about 12 per cent of the total number of listed firms. On the same date, a total of 20 firms were categorized by the Bursa Malaysia as financially-distressed firms (i.e. PN17 or GN3), three of which were listed on the ACE Market. Thus, of all the financially-distressed firms, only 15 per cent were in the ACE Market. Additionally, of all the firms listed on the ACE Market, about 3 per cent fell into the financially-distressed category as opposed to about 2 per cent in the Main Market. Hence, based on this evidence, the risk of firms in the ACE Market becoming financially distressed is not substantially higher than that of firms in the Main Market.

3.2. Earnings management

This study employed discretionary accruals to measure the incidence of earnings management. The discretionary accrual values were calculated using the modified Jones model developed by Kothari et al. (2005). The modified model by Kothari et al. (2005) was used to measure accruals. After all, the modified model incorporates firm performance (i.e. the return on assets, ROA), which improves

reliability because accrual management changes with performance. Further, the model reduces the problem of heteroscedasticity and misspecified issues (Sun et al. 2010). Total accruals (TACC) were computed as follows:

$$TACC_{ijt} = NI_{ijt} - CFO_{ijt} \quad \text{(Equation 1)}$$

$$TACC_{ijt}/TA_{ijt-1} = \alpha_1.(1/TA_{ijt-1}) + \alpha_2.(\Delta REV_{ijt}-\Delta REC_{ijt}/TA_{ijt-1}) + \alpha_3.(\Delta PPE_{ijt}/TA_{ijt-1}) + \alpha_4.ROA_{ijt-1} + \varepsilon_{ijt} \quad \text{(Equation 2)}$$

where, TACC is total accruals for the company *i* at time *t* in industry *j*; $NI_{i,t}$ is net income (before taxes, extraordinary income and discontinued operations plus depreciation and amortization); and CFO_{ij} is cash flow from operations for firm *i*, in year *t* and industry *j*. The change in sales ($\Delta REV_{i,t}$ - $\Delta REC_{i,t}$) was adjusted by the change in accounts receivables to avoid endogenous bias (Jeter & Shivakumar, 1999). The coefficients, i.e. α_1, α_2, α_3, and α_4, were computed for each Bursa Malaysia sectorial classification for the three years, separately. The non-discretionary accruals (NDACC) for each firm for each year were computed by fitting the values found in equation 2 into equation 3. Thus,

$$NDACC_{i,t} = \alpha_1.(1/TA_{i,t-1}) + \alpha_2.(\Delta REV_{ijt}-\Delta REC_{ijt}/TAijt\text{-}1) + \alpha_3.(\Delta PPE_{ijt}/TA_{ijt-1}) + \alpha_4.ROA_{ijt-1} \quad \text{(Equation 3)}$$

Finally, discretionary accruals (DACC), i.e. the error term (i.e. ε) in equation 2, were computed as follows:

$$DACC_{ijt} = TACC_{ijt}/TA_{ijt-1} - NDACC_{ijt}/TA_{ijt-1} \quad \text{(Equation 4)}$$

3.3. Hypothesis testing

H_{1a} was tested using at-test to determine whether absolute DACC was significantly different from zero H_{1b} was tested by focusing on the direction of DACC. Hence, a t-test was used to determine whether 'signed' DACC was significantly different from zero. H_2 and H_3 were tested using the following regression model:

$$ACCRUALS_{it} = \alpha_{0it} + \beta_1.BODIND_{it} + \beta_2.ACEXPERT_{it} + \sum \beta_n X_{it} + \varepsilon_{it}, \quad \text{(Equation 5)}$$

where ACCRUALS is discretionary accruals measured either by $DACC_{it}$ (signed discretionary accruals for firm *i* in year *t*) or $ABSDACC_{it}$ (absolute discretionary accruals for firm *i* in year *t*); $BODIND_{it}$ is the proportion of independent directors on the board for firm *i* in year *t*; $ACEXPERT_{it}$ is the presence of at least one audit committee member who is a member of a professional accounting body for firm *i* in year *t*; and X_{it} is a vector of control variables, which are: LNAST, log natural of firm's total assets; BODCHR, board chairman independence (a binary variable; 1: if the board chairman is independent and 0 otherwise); TOP5, total per centage of shares held by top five shareholders; ROA, firm performance measured by dividing profit before tax and interest by total assets for firm *i* in year *t*; GRG, leverage measured by total debts divided by total assets for

firm *i* in year *t*; FAMBOD, family on the board (a binary variable: 1 if at least one board member is affiliated to the firm's substantial shareholder and 0 otherwise); BIG4, auditor size (a binary variable: 1 if the audit is a big four audit firm and 0 otherwise) for firm *i* in year *t*; and ε_{it}, is the error term for firm *i* in year *t*.

The focus of H_2 and H_3 was on the magnitude of accruals, rather than its direction, therefore the absolute value of the DACCs was used rather than the signed DACCs (see, for example, Barton, 2001; Klein, 2002). However, in this study, the signed DACC was also used as the dependent variable in additional tests to test H1b and also to test the direction of the influence of board independence and audit committee on earnings management.

Consistent with previous studies on earnings management, control variables were included in the research model as follows: company size, a proxy for political costs, was measured by the natural log of total assets (e.g. Abdul Rahman & Mohamed Ali, 2006; Jaggi et al., 2009). As for auditor size, a score of 1 was given if a company was audited by a Big-4 auditor and 0 otherwise (e.g. Abdullah & Ismail, 2016; Jaggi et al., 2009; Johl et al., 2007; Sun et al., 2011). The gearing ratio (GRG), which is the ratio of total debt to total assets and a measure of the risk of breaching debt covenants (e.g. Abdullah & Ismail, 2016; Abdul Rahman & Mohamed Ali, 2006; Mohd Saleh et al., 2005; 2007; Sun et al., 2011) was also included as another control variable. The coefficients of these control variables were expected to be positive.

The impact of the firm performance was controlled for by including the ROA, i.e. the ratio of net income to total assets (e.g. Abdullah & Ismail, 2016; Abdul Rahman & Mohamed Ali, 2006; Jaggi et al., 2009; Kothari et al., 2005; Mohd Saleh et al., 2005; 2007) in the analysis. It is argued that firms experiencing financial difficulties and poor performance have a higher tendency to manage earnings (Bartov et al., 2000). Due to a risk-averse inclination, family-owned firms have a higher tendency to nominate board members from among family members (Abdullah & Ismail, 2016; Abdullah et al., 2016; Anderson & Reeb, 2003), which potentially weakens earnings quality because the family-member directors are beholden to their families and thus are less effective in discharging their monitoring roles (Jensen & Meckling, 1976). Therefore, the presence of a family member on the board is another control variable. Further, it is predicted that auditor quality (Big4) will be able to mitigate earnings management because high-quality auditors can detect irregularities as well as accrual management (e.g. Abdullah & Ismail, 2016; Becker et al., 1998).

The independence of the board chairman was also included in the analyses because the board chairman has the power to decide on the agenda of board meetings and the direction of board meetings. Even though previous studies in the Malaysian context (e.g. Abdullah, 2004) did not find CEO duality (i.e. board chairman independence) to have a significant effect on firm performance or earnings management, these studies focused on large listed firms. The present study, on the other hand, focuses on small listed firms. Moreover, in the UK for example, the CGC 2016 (Financial Reporting Council, 2016) requires that the board chairman be independent on the appointment, indicating the importance of having an impartial board chairman. In Malaysia, the MCCG 2017 states that the positions of the board chairman and CEO should be separated. Besides, the effect of the concentration of ownership (e.g. Abdullah & Mohd Nasir, 2004; Abdullah et al., 2016a; Abdul Rahman & Mohamed Ali, 2006) was also included in the analyses because Malaysia is known for high share ownership concentration and the influence of these large shareholders on a firm's operations comes either through the board members who represent their interests or

through the top executives who are appointed by them. Ownership concentration was measured by including the percentage of shareholdings held by the top five shareholders (Haniffa & Hudaib, 2006). Finally, the lagged firm performance variable (ROA_{t-1}) was included in the analyses because it is expected that the prior year's performance will influence the current year's accrual management.

4. RESULTS AND DISCUSSION

Out of a total of 107 firms listed on the ACE Market as at 31 December 2014, only 90 firms were included in the sample after excluding firms that were classified under finance or financially distressed (i.e. firms classified under PN17 or GN3 categories). After collecting the data needed from the annual reports of these firms from the Bursa Malaysia website, 255 firm-years with complete data for the financial years 2012–2014 inclusive were available for analysis. Descriptive statistics are presented in Table 1.

Table 1: Descriptive Statistics

Panel A: Continuous variables

Variables	Mean	Std. deviation	Skewness
Discretionary accruals (DACC)	0.685	2.444	4.611
Absolute discretionary accruals (ABSDACC)	1.058	2.307	6.957
Board independence (BODIND)	0.504	0.115	0.357
Firm size (LNAST) (log natural of total assets)	17.115	0.980	0.050
Profitability (return on assets)	-0.183	1.4122	-11.949
Gearing (GRG)	0.164	0.456	8.986
Top five shareholdings (TOP5)	64.885	287.970	266.605
Return on assets of the previous year (ROA_{t-1})	-0.332	2.165	-8.282

Panel B: T-tests

Variable	Mean	*t*-statistics	p-value
DACC	0.6850	4.562	0.000^{***}
ABSDACC	1.0589	7.470	0.000^{***}

Note: $^{***}p<0.01$, $^{**}p<0.05$, $^{*}p<0.10$ respectively

Panel C: Dichotomous Variables (in percentages)

Variables	0 (No)	1 (Yes)
Big audit firm (BIG4)	90.6	9.4
Audit committee expertise in accounting (ACEXPERT)	76	24
Family on the board (FAMBOD)	75	25
Chairman's independence (BODCHR)	48.7	51.3

The results in Panel A of Table 1 show that the magnitude of accrual management in ACE listed firms is very high compared to that in Malaysian firms listed on the Main Market found in previous studies, in terms of both absolute DACC and signed DACC (e.g. Abdullah et al., 2014; Abdullah & Ismail, 2016; Abdul Rahman & Mohamed Ali, 2006; Mohd-Saleh et al., 2005: 2007). For instance, Mohd-Saleh et al. (2005) found that for firms listed on the Main Board the mean DACC was -0.007. Later, Abdullah and Ismail (2016) found that the mean DACC was 0.0014. By way of comparison, evidence from the Chinese Mainland context shows that privately-owned listed firms

have a mean DACC of 0.007, while state-owned listed firms have a mean DACC of -0.001 (Ding et al., 2007). Also, in a study involving 593 multinational companies in 26 countries, Prior et al. (2008) found that the mean DACC was -0.01.

Further, the mean value for absolute DACC in small listed firms in the present study is also very high compared to that of large firms as found in the previous study (e.g. Abdullah & Ismail, 2016), i.e. 1.058 as opposed to 0.06 in the large firms analysed by). Similarly, Al-Rassas and Kamardin (2015), who investigate all the Main Market listed firms for financial years 2009–2012 inclusive, found that the mean absolute DACC was 0.056, which means that the average value of the absolute DACC of firms listed on the ACE Market is 19 times higher than that of the firms listed on the Main Board. Thus, the present study reveals that the mean DACC in small listed firms is five times higher (and 17 times higher) than the mean DACC (and absolute DACC) of the large listed firms analysed in previous studies conducted in Malaysia and other countries. Hence, H_{1a}, in which it was posited that the incidence of accrual management in small listed firms would be higher than in large firms, is supported.

Panel B of Table 1 presents the results of the t-tests conducted on the DACC. As shown, both absolute DACC and signed DACC are statistically and significantly different from zero and the sign of the mean is positive. Therefore, DACCs are used by small listed firms to inflate earnings. Besides, out of 255 valid observations, 230 observations reported positive DACC (i.e. 90 per cent). Hence, based on these findings, H_{1b}, in which it is predicted that small listed firms would have a higher tendency of managing earnings upwards through DACC, is accepted. Panel C of Table 1 reveals the level of gearing is lower in small listed firms at about 16 per cent as opposed to the 26 per cent for large listed firms found by Abdullah and Ismail (2016). As for board independence, generally about half of the board members in each small firm consist of independent directors, which is higher than the proportion in large firms, which stands at around 45 per cent as reported by Abdullah and Ismail (2016). Further, only one-fourth of small listed firms appoint family members to the boards of directors. Concerning the board chairman, the majority of firms appoint an independent board chairman (52 per cent) as opposed to firms who either combine the roles of board chairman and CEO or appoint a non-executive board chairman.

Panel A of Table 2 presents the results of the cross-sectional multiple regression analysis when the dependent variable is absolute DACC and using the quantile regression method for the 0.1, 0.3, 0.5, 0.7 and 0.9 quantiles. Panel B of Table 3, on the other hand, presents the results of the cross-sectional multiple regression analysis when the dependent variable is signed DACC and using the quantile regression method for the 0.1, 0.3, 0.5, 0.7 and 0.9 quantiles. The results using the panel least squares method are also presented in both panels for comparison.

Table 2: Panel Least Squares (PLS) and Quantile Regression Results (t-values in parentheses)
Panel A: $ABSDACC_{it} = \alpha_{0it} + \beta_1.BODIND_{it} + \beta_2.ACEXPERT_{it} + \sum \beta_n X_{it} + \varepsilon_{it}$,

Variable	PLS	Q0.1	Q0.30	Q0.50 (Median)	Q0.70	Q0.90
Constant	-5.694	-3.99	-4.462	-5.636	-5.740	-5.105
	(-2.209)**	(-5.099)***	(-7.938)***	(-3.161)***	(-10.940)**	(-6.587)***
BODIND	1.511	-0.240	-0.055	-0.233	-0.079	0.118
	(1.241)	(-0.914)	(-0.269)	(-0.917)	(-0.079)	(0.306)
ACEXPERT	-0.423	0.067	-0.026	-0.027	-0.043	-0.056
	(-1.948)**	(1.251)	(-0.810)	(-0.750)	(-1.409)*	(-1.444)*
BODCHR	-0.237	-0.051	-0.155	-0.029	-0.029	-.0047
	(-0.876)	(-0.727)	(-0.330)	(-0.353)	(-0.527)	(-0.615)
FAMBOD	-0.264	0.115	0.059	-0.049	-0.061	-0.119
	(-0.334)	(1.078)	(0.696)	(-0.525)	(-0.645)	(-1.203)
GRG	-0.044	-0.340	-0.023	-0.148	0.226	0.165
	(-0.149)	(-0.603)	(-0.114)	(-0.452)	(8.078)***	(5.518)***
ROA	-0.032	0.024	0.123	-0.151	-0.307	-0.304
	(-0.327)	(0.155)	(0.823)	(-0.231)	(-35.913)**	(-36.651)***
BIG4	-0.012	-0.213	-0.003	0.011	-0.004	0.065
	(-0.027)	(-1.326)*	(-0.040)	(0.141)	(-0.054)	(0.610)
LNAST	0.383	0.259	0.296	0.377	0.382	0.395
	(2.641)***	(5.842)***	(8.197)***	(3.575)***	(11.898)***	(11.308)***
TOP5	-0.000	0.000	0.000	-0.000	-0.000	-0.000
	(-0.145)	(1.602)*	(0.186)	(-0.560)	(-2.6540***	(-3.333)***
ROA_{t-1}	-0.509	-0.028	-0.195	-0.693	-0.724	-0.822
	(-7.857)*	(-0.360)	(-2.021)**	(-1.038)	(-55.621)***	(-100.398)***
Pseudo R^2/Adjusted R^2	0.242	0.111	0.137	0.155	0.239	0.274

Note: *** p<0.01, ** p<0.05, * p<0.10 respectively

The results in Panel A of Table 2 (i.e. using absolute DACC as the dependent variable), when panel least squares is used, reveal that board independence is not associated with earnings management. In fact, at various quantiles, the insignificant influence of board independence persists. Similarly, an insignificant influence is also observed when signed DACC are used, as shown in Panel B of Table 3. Therefore, H_2 is not supported. These findings are consistent with previous findings for large listed firms in Malaysia (e.g. Abdul Rahman & Mohamed Ali, 2006; Mohd-Saleh et al., 2005). Further, a recent study in the UK market by Katmon and Farooque (2017) found similar results. Moreover, Chen et al. (2015) revealed that an increase in board independence does not lead to reduced earnings management. Hence, according to the present study, the extent of the presence of independent directors on the board of small listed firms in Malaysia does not influence either the extent of accrual management or the direction of accrual management and, in general, this finding is consistent with the evidence for large listed firms. In other words, the extent of the presence of independent directors on the board does not mitigate the incidence of accrual management in small listed firms. On the other hand, the results in Panels A and B of Table 2 reveal that the presence of members of the audit committee who are competent in accounting does influence the extent of accrual management. However, the direction of accrual management is mixed. In Panel A, when the panel least squares method is used, the presence of members of the audit committee who are competent in accounting leads to a lower incidence of earnings

management. However, when quantile regression is used, the negative influence only holds when absolute DACC is in the higher quantiles (i.e.in the 0.70 and 0.90 quantiles). In the quantiles lower than 0.70, the influence, though negative, is not significant. Hence, the expertise of the audit committee in accounting is only beneficial when accrual management is pervasive in the firms. Hence, agency theory with regards to the monitoring effectiveness of the audit committee is only observed when the audit committee is an expert in accounting and when the incidence of accrual management in the firm is pervasive. Similarly, the results in Panel B indicate that the presence of members of the audit committee with expertise in accounting is associated with income-reducing accrual management only in the higher quantiles (i.e. in the 0.90 quantile). The influence, however, is not significant in the quantiles lower than 0.90 and when the panel least square method is employed. Thus, taking this evidence together, audit committee expertise only works when the incidence of discretionary accrual management is pervasive. If the incidence of accrual management is moderate or low, audit committee expertise in accounting does not help to mitigate discretionary accrual management. Hence, in the quantiles lower than 0.70, the evidence is generally consistent with that of prior studies on large firms in Malaysia (e.g. Abdullah & Ismail, 2016; Katmon & Farooque, 2017; Mohd-Saleh et al., 2007). Likewise, Katmon and Farooque (2017) also found that audit committee expertise in accounting is not associated with accrual management in the UK market. As the results of the present study indicate, the influence of the presence of members of the audit committee who are competent in accounting on accrual management appears to be non-linear.

As for the control variables, the results in Panels A and B of Table 2 are mixed. First, neither the independence of the board chairman nor the proportion of family members of large shareholders on the board of directors influence either the propensity for DACC or the direction of DACC, using either the panel least squares method or quantile regression method. The result on the influence of the independence of the board chairman is consistent with prior studies in Malaysia (e.g. Abdullah & Mohd Nasir, 2004; Abdul Rahman & Mohamed, Ali 2006; Hashim & Devi, 2009). The presence of family members on the board of directors does not influence accrual management is somewhat consistent with the evidence documented by Abdullah and Ismail (2016).

Concerning other control variables, only firm size and firm profitability are found to consistently affect accrual management. Firm size is associated with a higher incidence of DACC and it is also associated with income-increasing DACC. This evidence is consistent with the findings of some previous studies conducted in Malaysia (Abdullah & Ismail, 2016; Ishak et al., 2011) and in the UK (Katmon & Farooque, 2017), but it is not consistent with the findings of other studies undertaken in Malaysia (e.g. Abdul Rahman & Mohamed Ali, 2006; Mohd-Saleh et al., 2007; Hashim & Devi, 2009). Nevertheless, based on the present evidence, perhaps, as the firm size gets larger, there is pressure to report a higher profit, which can be achieved through accrual manipulations. One explanation for this supposition might be that as small listed firms get larger, they might be eyeing a listing on the Main Market, and to be listed on the Main Market they have to report continuous profits every year

The other control variable, i.e. firm profitability, is associated with a propensity for DACC as well as income-increasing DACC, as shown in Panels A and B of Table 2. However, the association between performance and the propensity for DACC is only observed in quantiles of 0.70 and higher. In contrast, the association between performance and income-increasing DACC is only observed in quantiles of 0.70 and below. This evidence is consistent with prior studies in Malaysia,

such as Abdullah and Ismail (2016) and Mohd-Saleh et al. (2007). The evidence is also consistent with that for firms in the UK as revealed by Katmon and Farooque (2017), but inconsistent with the findings reported by Abdullah and Ismail (2016) for large firms in Malaysia. Hence, from the present evidence, it can be surmised that there is a high tendency for top-performing firms to use income-increasing accruals as opposed to moderate or poor performing firms. Therefore, there is evidence to show that small listed firms, especially top-performers, use DACC to inflate earnings.

The firm gearing ratio is associated with the incidence of DACC in the 0.70 quantile and above. On the other hand, for quantiles lower than 0.70, the influence of the gearing ratio is not significant. Except for Abdullah and Ismail (2016), this evidence is not consistent with prior studies conducted in Malaysia (Abdul Rahman & Mohamed Ali, 2006; Abdullah & Mohd Nasir, 2004; Hashim & Devi, 2009; Ishak et al., 2011; Mohd-Saleh et al., 2007). These studies reveal that the gearing ratio is not associated with DACC, which supports the evidence for the UK documented by Katmon and Farooque (2017). Also, when signed DACCs reach the median, the gearing ratio is associated with income-increasing DACC. Therefore, the gearing ratio will lead to income-increasing DACC when DACC is moderate. Therefore, the evidence that the firm's gearing level is associated with a propensity for DACC is consistent with the findings of earlier studies on large firms (e.g. Abdullah & Ismail 2016; Mohd-Saleh et al., 2007).

The results also show that the concentration of ownership as measured by the cumulative percentage of shares owned by a firm's top five shareholders is associated with a high propensity for DACC and with the direction of DACC either in the lower quantiles (0.10) or the higher quantiles (0.70 and 0.90). In between these quantiles, the effect of ownership concentration on DACC is not significant, similar to the results found using the panel least squares method. However, the directions of the influence of ownership concentration on both the propensity for DACC and the direction of DACC are different depending on the quantiles. The propensity for DACC (as shown in Panel A of Table 2) increases in the lower quantiles (i.e.0.10) but decreases in the higher quantiles (i.e. 0.70 and 0.90). Conversely, in the lower quantiles (i.e. 0.10), firms tend to use income-increasing DACC. On the other hand, income-decreasing DACC is observed in the higher quantiles (i.e. 0.90). The quantile regression results support the evidence presented by Abdullah et al. (2014). Further, the evidence in the present study is somewhat similar to the evidence documented by Abdullah and Mohd Nasir (2004) and Hashim and Devi (2009). Combining all the evidence, the extent of ownership by large shareholders does influence the propensity for and direction of DACC depending on the quantiles of the DACC.

Additional analyses for audit committee expertise were performed whereby the variable was defined as having at least one professionally qualified accountant on the firm's audit committee. Professionally qualified accountants were defined as those who held membership with professional accounting bodies, such as ACCA, ICAA. CPAA, IACEW and ICAS. The results are shown in Table 3. Results in Table 3 are generally similar to the results shown in Table 2 earlier. Hence, appointing professionally qualified accountants on audit committees does not result in better monitoring to ensure high-quality accounting information.

Table 3: Panel Least Squares (PLS) and Quantile Regression Results from Further Analysis on Audit Committee (t-values in parentheses)

$$ABSDACC_{it} = \alpha_{0it} + \beta_1.BODIND_{it} + \beta_2.ACEXPERT_{it} + \sum \beta_n X_{it} + \varepsilon_{it}$$

$$DACC_{it} = \alpha_{0it} + \beta_1.BODIND_{it} + \beta_2.ACEXPERT_{it} + \sum \beta_n X_{it} + \varepsilon_{it},$$

Variable	PLS (ABSDACC)	PLS (DACC)	Q0.30 (ABSDACC)	Q0.30 (DACC)	Q0.70 (ABSDACC)	Q0.70 (DACC)
Constant	-6.279	-12.732	-4.683	-6.624	-5.957	-8.010
	(-1.390)	(-3.769)***	(-8.467)***	(-3.693)***	(-10.559)***	(-6.833)***
BODIND	1.530	1.762	-0.089	-0.322	-0.100	-0.142
	(0.827)	(0.991)	(-0.298)	(-0.420)	(-0.306)	(-0.570)
ACCEXPERT	0.152	0.200	0.044	0.041	0.051	0.005
	(0.871)	(1.185)	(1.287)	(0.573)	(1.326)*	(0.127)
BODCHR	-0.115	-0.080	-0.001	0.007	-0.027	-0.018
	(-0.448)	(-0.320)	(-0.025)	(0.143)	(-0.579)	(-0.419)
FAMBOD	-0.069	0.033	0.017	0.166	-0.026	-0.005
	(-3.337)***	(1.413)*	(0.937)	(0.726)	(-1.544)*	(-0.395)
GRG	-0.107	-0.739	-0.063	-0.324	0.223	-0.221
	(-225)	(-1.929)**	(-0.238)	(-0.708)	(-7.567)***	(-0.342)
ROA	-0.056	0.224	0.109	0.248	-0.315	0.251
	(-1.050)	(1.837)**	(0.714)	(9.053)***	(-37.796)***	(15.495)***
BIG4	-0.167	-0.155	-0.025	-0.029	0.029	0.029
	(-0.371)	(-0.405)	(-0.259)	(-0.251)	(0.333)	(0.276)
LNAST	0.335	0.712	0.308	0.423	0.387	0.518
	(1.682)**	(4.713)***	(8.603)***	(3.433)***	(11.022)***	(7.013)***
TOP5	0.009	0.001	-0.000	0.000	0.001	-0.000
	(1.582)**	(1.620)*	(-0.414)	(0.433)	(1.145)	(-1.185)
ROA_{t-1}	-0.520	-0.189	-0.506	0.127	-0.727	-0.155
	(-3.139)*	(-0.503)	(-1.779)**	(0.117)	(-55.186)***	(-13.075)***
Pseudo R^2/Adjusted R^2	0.204	0.120	0.253	0.226	0.186	0.156

Note: ***p<0.01, **p<0.05, *p<0.10 respectively. ACCEXPERT is defined as having at least one audit committee member who was a member a professional accounting body recognized by the Malaysian Institute of Accountants (MIA), such as ACCA, CPAA, CPA(M), CIMA and ICAEW.

5. CONCLUSION

In Malaysia, small listed firms on the ACE Market are subject to less stringent listing requirements compared to firms listed on the Main Market of the Bursa Malaysia. Therefore, it is worth examining whether the incidence of earnings management in small listed firms is significantly different from that of large listed firms even though both types of listed firms are subject to the same accounting standards. The issue of earnings quality is very important because this information is used by users to make decisions. It is postulated that, because small listed firms are subject to less stringent listing requirements and they are followed less by analysts and because these small firms are usually controlled by families, the incidence of earnings management would be higher compared to that in large listed firms. Hence, the quality of the accounting information would be of lesser quality. The analysis of the financial years 2012–2014 inclusive (255 firm-years) shows that the DACC of these small listed firms is very high, i.e. 0.6850, which is 17 times higher than the average DACC reported by Abdullah and Ismail (2016), who examined all firms listed on the

Bursa Malaysia Main Market for the financial years 2008–2011 inclusive. Further, the present study shows that accrual management (the proxy used for earnings management) is predominantly income-increasing as 95 per cent of the observations recorded positive DACC. Thus, the incidence of accrual management in small listed firms is more prevalent than in large listed firms.

Two corporate governance variables were tested, namely board independence and audit committee expertise in accounting. The results indicate that board independence does not influence either the propensity for DACC or the direction of DACC. Even though the results do show that board independence reduces the propensity for DACC and that it is associated with income-reducing DACC, the influence is, however, statistically insignificant. The results are similar using either the PLS or quantile regression methods. Hence, board independence is not effective in curtailing accrual management in small listed firms, a conclusion similar to that drawn regarding large listed firms in Malaysia. On the other hand, the evidence indicates that audit committee expertise in accounting does help in mitigating accrual management and that it is associated with income-reducing accrual management. However, the results of the quantile regression reveal that audit committee expertise in accounting is only effective in mitigating accrual management in the higher quantiles (i.e. 0.70 and 0.90).

In conclusion, the incidence of accrual management in small listed firms is very high compared to that in large listed firms. However, the results indicate that corporate governance mechanisms, except for audit committee expertise, can mitigate the incidence of accrual management. Having a higher percentage of independent directors on the board and appointing an independent board chairman is effective in mitigating accrual management. Also, audit committee expertise in accounting can help to mitigate accrual management but the influence is found to be more pronounced in the higher quantiles of accrual management.

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