

FAMILY OWNERSHIP, RELATED-PARTY TRANSACTIONS AND EARNINGS QUALITY

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ABSTRACT

This study empirically examines the effects of related-party transactions—which are typically associated with controlling shareholder expropriation activities—on the earnings quality of family firms in Malaysia. Furthermore, this study posits that at a low level of family ownership, the positive effects of familial value are likely to outweigh the negative effects of related-party transactions. However, in the presence of a high level of family ownership, the negative effects of related-party transactions are likely to be more substantial and reduce the benefits of familial value. Using hand-collected data from 2004 on related-party transactions and family ownership from a sample of 236 publically listed Malaysian firms, the results show that there is a non-linear relationship between family ownership and earnings quality after accounting for related-party transactions. This finding suggests that certain firms are likely to report high earnings quality if they have small levels of family ownership despite low levels of investor protection in Malaysia. However, when a family has a significant ownership stake in a firm, expropriation activities appear to negatively affect the earnings quality of the firm. This paper contributes to the literature by providing systematic evidence about the effects of related-party transactions on earnings quality of Malaysian firms.

Keywords: Earnings quality, related-party transactions, family firms, accruals, Malaysia

INTRODUCTION

Recent corporate scandals around the world have highlighted the expropriation of firm assets via related-party transactions¹. These transactions normally involve diverse, complex and undisclosed business transactions between a firm and parties such as directors, controlling shareholders, and other business affiliates. Related-party transactions present opportunities to expropriate firm resources and provides managers with incentives to exercise earnings management (Gordon,

Henry, & Palia, 2004). Moreover, users of financial reports believe that related-party transactions indicate aggressive accounting practices that allow firms to arbitrarily increase or decrease earnings (Sherman & Young, 2001). Related-party transactions are considered difficult to audit (Johnstone & Bedard, 2004) and are one of the causes of firms restating financial reports (General Accounting Office, 2003). A study by Jian and Wong (2004) finds that certain Chinese corporate groups use related-party transactions to manage their earnings prior to issuing new equity or to prevent delisting. Gordon and Henry (2005) report that certain related-party transactions are associated with earnings management in which fixed-rate financing from related parties is positively associated with adjusted abnormal accruals. Despite the disturbing evidence about the effects of related-party transactions on the quality of financial reporting, there is an absence of research on this issue. The primary purpose of this study is to extend this branch of the literature by examining the effects of related-party transactions on the earnings quality of family firms in Malaysia.

This study is motivated to examine this issue for two reasons. First, the Malaysian corporate sector—which is dominated by family-controlled firms (Claessens, Djankov, & Lang, 2000; Faccio & Lang, 2002; Lins, 2003)—provides a unique setting to examine the effects of related-party transactions and family ownership on earnings quality. It is argued that agency problems in family-controlled firms are mainly caused by conflicts between the majority and minority shareholders instead of the traditional conflicts between owners and managers (Gilson & Gordon, 2003; Villalonga & Amit, 2006). Thus, family-controlled firms are more likely to use related-party transactions to expropriate value from minority shareholders. Second, evidence shows that the expropriation of minority shareholders may be directly measured by analysing certain types of related-party transactions between publically listed firms and their controlling shareholders or directors (Cheung, Rau, & Stouraitis, 2006). It is argued that these transactions might show the detailed mechanisms through which controlling shareholders expropriate minority shareholders and how this could affect firm valuation. Most previous research has relied on metrics such as the deviation of cash flow rights from the voting rights of ultimate owners (for example, Fan & Wong, 2002) and the private benefits of control (for example, Leuz, Nanda, & Wysocky, 2003) to indicate the presence of expropriation activities. However, critics argue that discrepancies between voting and cash flow rights, in addition to private benefits of control, might only create strong incentives to expropriate (Anderson & Reeb, 2003; LaPorta, Lopez-de-Silanes, Shleifer, & Vishny, 2002; Leuz et al., 2003) but do not indicate actual acts of expropriation. Therefore, a new perspective on related-party transactions offers researchers an alternative tool to examine situations that involve expropriation activities.

This research investigates the role of related-party transactions in Malaysian family firms. Drawing upon the literature on family businesses (for example, Chrisman, Chua, & Sharma, 2003) and ownership structure (for example, Morck, Shleifer, & Vishny, 1988), this study proposes that the effects of related-party transactions on earnings quality are determined by the level of family ownership. Specifically, it predicts that there will be a non-linear relationship between family ownership and earnings quality after taking into account the effect of related-party transactions. It argues that the negative effects of related-party transactions when there is only a low level of family ownership will be outweighed by the positive effects of familial value. However, with high levels of family ownership, the effects of related-party transactions will have substantial negative effects that will supersede the positive effects of familial value.

The results of this study show that there is a non-linear relationship between family ownership and earnings quality for firms with significant related-party transactions. This finding suggests that firms are likely to report higher earnings quality when families have smaller ownership levels in firms. However, as family ownership becomes more significant, expropriation activities through related-party transactions then substantially and negatively affect the earnings quality of firms.

This study makes several contributions. First, it contributes to the dearth of literature on how related-party transactions influence earnings quality. In particular, it sheds light on the extent of related-party transactions undertaken by Malaysian firms and their effects on earnings quality. This information is likely to be of great interest to academics and also to regulatory authorities where it might result in a re-examination of the existing rules governing related-party transactions. Re-examining such rules may mean considering the types of related-party transactions and how it may affect the quality of earnings. Second, this study extends knowledge by providing systematic evidence about the relationship between related-party transactions, family ownership and earnings quality in Malaysia, a country with an institutional environment that differs from that of most developed countries. Specifically, the study shows that family firms with high percentages of related-party transactions may yet report high earnings quality if the family only has a small ownership percentage in the firm. Finally, this study contributes to the literature on governance and earnings management in Malaysia. By examining the influence of family ownership and related-party transactions on earnings quality, it complements prior work that focused on the effects of board characteristics, audit committees and culture on earnings management (for example, Abdul Rahman & Mohamed Ali, 2006; Mohd-Saleh, Mohamad Iskandar, & Rahmat, 2005).

The remainder of the paper is organised as follows. The next section presents the literature review and the hypothesis development, followed by the discussion of the methodology, and then the results. The last section makes several conclusions.

LITERATURE REVIEW AND RESEARCH HYPOTHESIS

Previous studies have shown that the use of certain types of related-party transactions might help controlling families to transfer the wealth of firms to themselves and expropriate minority shareholders (Cheung et al., 2006; Jian & Wong, 2004; Kohlbeck & Mayhew, 2004). This idea is supported by the tunneling concept (Johnson et al., 2000) and agency theory (Jensen & Meckling, 1976), which generally suggest that controlling families are likely to engage in transactions with their firms that transfer assets and profits to themselves. Furthermore, studies have also noted that firms that are involved in such related-party transactions tend to report poor performance because these related-party transactions destroy shareholder value (Cheung et al., 2006; Gordon et al., 2004). According to Cheung et al. (2006), related-party transactions such as asset acquisitions, asset sales, equity sales, transactions that result from trading relationships and any transactions that involve cash payments made to the controlling owners are most likely to result in expropriation of minority shareholders. In Malaysia, such transactions are likely to result in expropriation of minority shareholders because of the weak investor protection laws and the lack of shareholder activism. Both laws and law enforcement are required to protect investors from the opportunistic behaviour of insiders (LaPorta, Lopez-de-Silanes, Shleifer, & Vishny, 2000), and there is a strong assumption that Malaysia suffers from the lack of enforcement of such laws even though Malaysia's legal system mainly follows the English common law, which is a highly regarded legal system (Ball, Robin, & Wu, 2003; Leuz et al., 2003). Furthermore, the existence of the Minority Shareholders Watchdog Group (MSWG)² in Malaysia has yet to show any substantial effects on the welfare of minority shareholders, although it may have the potential to augment shareholder activism in the future (Satkunasingam & Shanmugam, 2006). Therefore, this study posits that the related-party transactions examined by Cheung et al. (2006) are likely to be used by firms in Malaysia to expropriate minority shareholders.

This study extends the above idea and investigates whether such expropriation activities affects the relationship between family ownership and earnings quality; it argues that when the level of family ownership is low, the positive effects of family ownership on earnings quality would outweigh expropriation activities. The literature indicates that familial value in family firms might contribute to competitive advantages of the firms (Arregle, Hitt, Sirmon, &

Very, 2007; Chrisman et al., 2003; Habbershon, Williams, & MacMillan, 2003), which results in high performance (Anderson & Reeb 2003; Maury 2006; Villalonga & Amit, 2006). When the level of family ownership low, the convergence of interest hypothesis (Morck et al., 1988) is useful to describe the relationship between family ownership and earnings quality because families would be less likely to expropriate minority shareholders and more likely to enjoy the benefits of familial value in the form of competitive advantages (Arregle et al., 2007; Chrisman et al., 2003; Habbershon et al., 2003). With low levels of ownership, therefore, controlling families would focus more on legitimate value maximisation and less on expropriation (Anderson & Reeb, 2003; Claessens, Djankov, Fan, & Lang, 2002; Lemmon & Lins, 2003) because an increase in family ownership would mean an increase in wealth (Morck et al., 1988). Thus, when a family has a low level of ownership in a firm, a subsequent increase in ownership levels would result in higher earnings quality.

Conversely, prior research shows that family firms might experience serious agency problems because of the conflicts of interest between controlling families and minority shareholders (Anderson & Reeb, 2003; Chau & Gray, 2010; Morck & Yeung, 2003; Villalonga & Amit, 2006). The coupling of ownership and control might encourage a family with effective control over the firm to expropriate minority shareholders (Claessens et al., 2002; Lemmon & Lins, 2003; Villalonga & Amit, 2006). This study extends this line of argument by arguing that those firms that engage in expropriation are more likely to engage in earnings management than firms without such activities because the former firms must mask the poor performance that results from their expropriation activities. In addition, users of financial statements in Malaysia are less likely to demand a high quality of earnings from these firms in response to the entrenchment effect of family ownership (Wang, 2006) because of the aforementioned absence of shareholder activism and largely ineffective investor protection laws (Ball et al., 2003; Leuz et al., 2003; Satkunasingam & Shanmugam, 2006). Thus, it is reasonable to conclude that the earnings quality of firms will deteriorate as the level of family ownership increases in firms that engage in expropriation activities. Moreover, for family firms with large family ownership that do not engage in expropriation activities, family ownership is expected to have a minimal effect on earnings quality because the controlling families with large ownership shares are not executing on the opportunities to expropriate and, therefore, have less reason to engage in earnings management.

In sum, this study assumes that a non-linear relationship between family ownership and earnings quality is actually driven by expropriation activities that might be undertaken through certain related-party transactions. Specifically, at lower levels of family ownership, it is predicted that the earnings quality of firms that have related-party transactions would increase as family ownership

increases. However, as the family ownership levels become high, further increases in ownership would result in poorer earnings quality reported by these firms. Simultaneously, no significant relationship is predicted for family ownership and earnings quality of firms that do not engage in related-party transactions. Therefore, this study hypothesises that:

- H1: At lower levels of family ownership, there is a significant positive relationship between family ownership and earnings quality in firms that engage in related-party transactions that are likely to result in expropriation, *ceteris paribus*.
- H2: At higher levels of family ownership, there is a significant negative relationship between family ownership and earnings quality in firms that engage in related-party transactions that are likely to result in expropriation, *ceteris paribus*.

RESEARCH METHOD

Sample

The study sample was selected from firms listed on Bursa Malaysia in 2004, which has all the data required to conduct this study. The year was selected because it is during a period of relative economic stability³. Therefore, it is expected that the findings obtained from the data from this year to be mainly the results of the variables selected with a minimum influence of external economic conditions. There were 963 firms listed on the Main Board, Second Boards and MESDAQ⁴ market of Bursa Malaysia as of 31st December 2004⁵. It was determined that 697 firms must be excluded from the sample because they did not have the complete data for the hypotheses testing⁶. The study also excluded three firms belonging to the finance industry. This practice is consistent with prior research, in which finance firms were excluded from the sample because of their unique characteristics and because of their different compliance and regulatory environment (Peasnell, Pope, & Young, 2000). As a result, the sample of this study consisted of 236 firms representing approximately 42% of the market capitalisation of Bursa Malaysia in 2004.

Data

The descriptions and sources of the data are as follows:

Earnings quality

This study suggests that a firm will report high earnings quality when there low levels of earnings management in the firm, which would result in earnings that reflect the true performance of the firm. This description of earnings quality is consistent with the earnings management concept proposed by Healy and Wahlen (1999) and definitions of earnings quality suggested by Schipper and Vincent (2003) and Dechow and Schrand (2004). Specifically, Healy and Wahlen (1999, p. 368) state that earnings management is indicated by "managers' use of judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers." Moreover, the ability of earnings to reflect the true performance of firms is an indication that the earnings are of high quality (Dechow & Schrand, 2004; Schipper & Vincent, 2003). Therefore, this study concludes that when managers do not manipulate accounting transactions and financial figures, earnings reported by the firms would reflect the true performance of the firm because the earnings are the products of genuine business transactions and calculations.

This definition of earnings quality is measured using the discretionary accruals quality model (DAQ) as proposed by Francis, LaFond, Olsson and Schipper (2005). This model is an improvement of Dechow and Dichev's (2002) accruals quality model, which is expressed as follows:

$$\Delta WC_t = \alpha + \beta_1 \text{Cashflow}_{t-1} + \beta_2 \text{Cashflow}_t + \beta_3 \text{Cashflow}_{t+1} + \varepsilon_t \quad (1)$$

where,

ΔWC = change in working capital, measured as the sum of the change in accounts receivable and the change in inventory minus the change in accounts payable minus the change in taxes payable
 $Cashflow$ = cash flow from operations

Although Dechow and Dichev's (2002) model is capable of measuring earnings quality because it can show the extent that managerial intervention and measurement errors move reported earnings away from Hicksian income (Schipper & Vincent, 2003), there are limitations to this model. First, the model is more applicable to firms with short-term operations because the model only focuses on current accruals (McNichols, 2002). It is suggested that the model

could be improved by augmenting it with the fundamental variables from the Jones model⁷, i.e., property, plant and equipment (PPE), in addition to change in revenues (Francis et al., 2005; McNichols, 2002). Therefore, Francis et al. (2005) and McNichols (2002) suggest the following revised model from Dechow and Dichev (2002), in which all variables are scaled by average assets (Francis et al., 2005).

$$ACC_{i,t} = \alpha + \beta_1 CFO_{i,t-1} + \beta_2 CFO_{i,t} + \beta_3 CFO_{i,t+1} + \beta_4 REV_{i,t} + \beta_5 PPE_{i,t} + \varepsilon_{i,t} \quad (2)$$

where:

- ACC* = accruals, which is equal to $(\Delta CA - \Delta Cash) - (\Delta CL - \Delta STD) - Dep$, where ΔCA is change in current assets, $\Delta Cash$ is change in cash/cash equivalents, ΔCL is change in current liabilities, ΔSTD is change in short term debt, and *Dep* is depreciation and amortisation expense
- CFO* = cash flow from operations
- REV* = change in revenue
- PPE* = gross property, plant and equipment

The second weakness of Dechow and Dichev's (2002) model is that the model does not separately show the behaviour of accruals when estimation errors are the result of intentional management decisions or unintentional causes. To overcome the first limitation, the following modified model is suggested by McNichols, whereas the model developed by Francis et al. (2005) partitions the estimation errors into unintentional errors and discretionary errors. The model is expressed as follows:

$$AQ_{j,t} = \theta_0 + \theta_1 Size_{j,t} + \theta_2 \sigma(CFO)_{j,t} + \theta_3 \sigma(Sales)_{j,t} + \theta_4 OperCycle_{j,t} + \theta_5 NegEarn_{j,t} + \tau_{j,t} \quad (3)$$

where:

- AQ* = accruals quality, which is the standard deviation of residuals, estimated from equation (2) and calculated over years $t - 4$ through t
- Size* = firm size, which is the log of total assets
- $\sigma(CFO)$ = the standard deviation of cash flow from operations, calculated over the past 10 years
- $\sigma(Sales)$ = the standard deviation of sales, calculated over the past 10 years

- OperCycle* = the length of the operating cycle in days, where the operating cycle is equal to $360/(\text{Sales Average}/\text{Average Accounts Receivable}) + 360/(\text{Cost of Goods Sold}/\text{Average Inventory})$
- NegEarn* = the proportion of earnings that are negative for the period of t to $t - 4$, calculated as the number of firm-years with negative earnings divided by 5

The discretionary accruals quality for firm j is measured by referring to the residuals of Equation (1), i.e., $\text{DAQ} = \tau_{j,t}$.

This study follows the procedure suggested by Francis et al. (2005) and McNichols (2002) in estimating earnings quality. However, it is necessary to highlight that, unlike Francis et al. (2005), who estimate $\sigma(\text{CFO})$ and $\sigma(\text{Sales})$ using 10 years of data, this study limited the estimations with data for 5 years to avoid the potential effects of the 1997 financial crisis from confounding the results of the study. In addition, to minimise confusion in interpreting the results of this study, the measure of earnings quality (EQ) was obtained by reversing the sign of the DAQ. Therefore, the DAQ were multiplied by negative one (-1).

Thus, although we select 2004 as the focus of study, the estimation of accrual quality requires more data. Data to estimate accruals quality and discretionary accruals quality were gathered from DataStream for the period 1999 to 2005. Some data were collected from Perfect Analysis if they were not available from DataStream.

Family ownership

This study identifies a firm as a family firm if the largest shareholder in the firm is a family, an individual or an unlisted firm. This is consistent with the definition used by Faccio and Lang (2002). This definition worked well in identifying Malaysian firms with family ownership because this study found that most of the Malaysian listed firms are owned by private companies, and the owners of the unlisted firms can be identified from the information disclosed in the annual reports, in most instances. Nevertheless, for several firms for which the information of the owners was not clearly disclosed, the study conducted further investigations by referring to other sources of information⁸. In this study, family ownership is the percentage of family shareholding in the firm⁹.

Related-party transactions

This study used related-party transactions to represent expropriation of minority shareholders. Specifically, it followed Cheung et al. (2006) in identifying related-party transactions that might result in the expropriation of minority shareholders.

These related-party transactions are asset acquisitions, asset sales, equity sales, trading relationships and cash payments.

Information about these related-party transactions is available in the section of notes to the accounts in the firms' annual report. This study noted the monetary value of each transaction and calculated the total value of these transactions for each firm in the sample. These data were then grouped into two categories, i.e., high RPT and low RPT. The high RPT category consisted of firms with a total value of related-party transactions that were equal to or more than 1% of the firms' total sales¹⁰. The low RPT category consisted of firms with a total value of related-party transactions of less than 1% of the firms' total sales. Because of the nature of the related-party transactions data, with most being small or zero, the 1% cut-off point was required to portray the variation caused by these data. Descriptive statistics show that the mean, median and standard deviation of related-party transactions data are 0.069, 0.000 and 0.338, respectively. Therefore, a binary variable is more appropriate because it will better identify the effects of related-party transactions on the relationship of family ownership and earnings quality. Further, this will also facilitate the interpretation of the relationships of these variables.

Control variables

This study included audit quality, CEO duality and independence of the audit committee as control variables in its models. Audit quality is controlled because prior research reports that clients of large auditing firms report lower discretionary accruals, i.e., high earnings quality, than clients of smaller auditing firms (Becker, DeFond, Jiambalvo, & Subramanyam, 1998; Gul, Lynn, & Tsui, 2002). Consistent with Gul et al. (2002), a dummy variable (AUDITOR) is created to represent the size of auditing firms that audited the sample firms. Moreover, this study controlled for the effects of CEO duality on earnings quality because it has been argued that the separation of duties may lead to more efficient monitoring over the board process (Fama & Jensen, 1983; Jensen, 1993), which is thus expected to increase earnings quality. CEO duality is represented by a dummy variable (DUALITY), which is consistent with Mohd-Saleh et al. (2005). This study also controlled for the independence of the audit committee by including NED_AC because it has been suggested that the presence of an audit committee might improve earnings quality (Klein, 2002; Mohd-Saleh, Mohamad Iskandar, & Rahmat, 2007). This study follows Jaggi, Leung and Gul (2009) in measuring the independence of the audit committee by calculating the proportion of non-executive directors on the audit committee. In addition, it should be noted that the test models did not control for other firm characteristics, such as size, debt and growth, which might have some effect on earnings quality, because the effects of these factors on earnings quality have previously been captured by

regressing accruals quality on innate factors, as in Equation (2)¹¹. Data for these variables were collected manually from the firms' annual reports for 2004.

Research Model

To test our hypotheses, this study proposes the following equation.

$$EQ_i = \beta_0 + \beta_1FAM_i + \beta_2FAM_i^2 + \beta_3RPT_i + \beta_4FAM_i * RPT_i + \beta_5FAM_i^2 * RPT_i + \beta_6AUDITOR_i + \beta_7DUALITY_i + \beta_8NED_AC_i + e_i \quad (4)$$

where:

- EQ_i = earnings quality, which is the reverse measure of DAQ derived from Equation (3)
- FAM_i = the percentage of family shareholding in firm i
- FAM_i^2 = the squared percentage of family shareholdings in firm i
- RPT_i = a dummy variable taking the value of 1 if the amount of related-party transactions that are most likely to result in expropriation of minority shareholders is equal to or more than 1% of the firm's total sales and 0 otherwise
- $AUDITOR_i$ = a dummy variable taking the value of 1 if firm i is audited by one of the Big 4 auditing firms and 0 otherwise
- $DUALITY_i$ = a dummy variable taking the value of 1 if the CEO also serves as chairman of the board of directors in firm i and 0 otherwise
- NED_AC_i = the proportion of non-executive directors on the audit committee

The FAM^2 terms are included in the equation to test whether there is an inverted U-shaped relation between family ownership and earnings quality¹². The use of this term to test the non-linearity of the prediction in hypotheses 1 and 2 is consistent with prior studies (Anderson & Reeb, 2003; Wang, 2006).

RESULTS

Descriptive statistics

Table 1 reports the descriptive statistics of EQ and other variables used in the test models. The table also shows these statistics for the sub-sample of family firms and non-family firms separately. Panel A of the table reports those of continuous variables, whereas panel B presents those of dichotomous variables.

There are 168 firms in the sample that have family ownership. The average percentage of family ownership in this sample is 27.3%, which reflects the dominant presence of family ownership in Malaysia; this is consistent with the findings of prior research, which shows that the majority of firms in Malaysia are family controlled (Claessens et al., 2000; Fan & Wong, 2002). The mean of earnings quality for all firms in this study is zero. This was expected because DAQ, which is the proxy for EQ, is the residual of Equation (3), where mean for residuals of a regression is always equal to zero (Gujarati, 2003). The average of earnings quality for family firms is positive and higher than the earnings quality of non-family firms, although the difference is not significant ($t = 1.305, p > 0.1$).

Table 1 also reveals that the average value of related-party transactions that might result in expropriation for firms in this sample is 6.9% of their total sales; family firms have a higher value in these transactions (8.4%) than non-family firms (3.1%). Although these percentages are relatively marginal, the presence of such transactions indicates that a portion of firm wealth is not used efficiently to maximise value. It is also important to note that 23.8% of family firms and 27.9% of non-family firms have such related-party transactions. Moreover, the table also shows that, on average, more than two-thirds of the members of the audit committee of the firms in this study are represented by independent non-executive directors and that both family firms and non-family firms share this trend, which is consistent with the report of Mohd-Saleh et al. (2007) that approximately 73% of audit committee members in their sample are independent directors.

Panel B of Table 1 shows that the majority of firms in both classifications were audited by Big 4 firms. In addition, it is reported that none of the non-family firms appointed the same person as CEO and chairman, but 32% of family firms had their chairmen also acting as CEO. These statistics indicate that the recommendation by the Code of Corporate Governance that discourages CEO duality has been well-accepted by non-family firms but that many family firms remain reluctant to heed the Code's recommendation. For the entire sample in this study, 23% of the firms were practicing CEO duality. This figure is lower than that of Mohd-Saleh et al. (2005), who report that nearly 45% of firms in their study practice CEO duality. The reason for this difference might be explained by the sample used in Mohd-Saleh et al. (2005), which was collected in 2001, the year in which the Code of Corporate Governance was made compulsory on listed firms by Bursa Malaysia. Therefore, during this year, many listed firms might not yet fully comply with the Code, which discourages CEO duality.

Table 1
Descriptive statistics for full sample and subsamples

	All (N = 236)				Family Firms (n = 168)				Non-Family Firms (n = 68)				t-test statistics (sig. two-tailed)	
	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.		
FAM	0.273	0.270	0.222											
EQ	0.000	0.209	0.989	0.053	0.258	0.941	-0.132	0.166	1.096				1.305 (0.193)	
RPT (% of total sales)	0.069	0.000	0.338	0.084	0.000	0.398	0.031	0.000	0.070				1.667 (0.097)	
NED_AC	0.712	0.667	0.119	0.714	0.667	0.116	0.707	0.667	0.125				0.364 (0.716)	

	All (N = 236)		Family Firms (n = 168)		Non-Family firms (n = 68)		Diff. between family and non-family firms Value for Pearson χ^2	Asymp. Sig. (2-sided)
	Yes	No	Yes	No	Yes	No		
RPT	59 (25.0%)	177 (75.0%)	40 (23.8%)	128 (76.2%)	19 (27.9%)	49 (72.1%)	0.248	0.619
AUDITOR	179 (75.8%)	57 (24.2%)	115 (68%)	53 (32%)	64 (94%)	4 (6%)	16.033	0.000
DUALITY	54 (22.9%)	182 (77.1%)	54 (32%)	114 (68%)	0 (0%)	68 (100%)	26.550	0.000

Note: EQ denotes earnings quality, which is the reverse measure of DAO derived from equation (1). FAM is the percentage of family shareholding. RPT is a dummy variable taking the value of 1 if the amount of related party transactions that are most likely to result in expropriation of minority shareholders is equal or more than 1% of the firm's total sales, and 0 otherwise. AUDITOR is a dummy variable taking the value of 1 if the firm is audited by one of the Big 4 auditing firms and 0 otherwise. DUALITY is a dummy variable taking the value of 1 if the CEO also serves as Chairman of the board of directors the firm and 0 otherwise, and NED_AC is the proportion of non-executive directors in audit committee.

Table 2 presents the correlation results of the variables in the test models. The table indicates that EQ is positively related to all independent variables, although it is only significantly correlated to AUDITOR and DUALITY. The table also reveals that FAM is mildly correlated to AUDITOR and DUALITY.

Table 2
Pearson correlation coefficients between variables in the test models

	EQ	FAM	RPT	AUDITOR	DUALITY
FAM	0.014				
RPT	0.002	-0.047			
AUDITOR	0.130*	-0.167**	0.028		
DUALITY	0.126*	0.304**	0.012	-0.117	
NED_AC	0.099	0.027	0.092	-0.056	0.005

Note: EQ denotes earnings quality, which is the reverse measure of DAQ derived from equation (1), FAM is the percentage of family shareholding, RPT is a dummy variable taking the value of 1 if the amount of related party transactions that are most likely to result in expropriation of minority shareholders is equal or more than 1% of the firm's total sales, and 0 otherwise, AUDITOR is a dummy variable taking the value of 1 if the firm is audited by one of the Big 4 auditing firms and 0 otherwise, DUALITY is a dummy variable taking the value of 1 if the CEO also serves as Chairman of the board of directors the firm and 0 otherwise, and NED_AC is the proportion of non-executive directors in audit committee.

*significant at 0.05 level (2-tailed), **significant at 0.01 level (2-tailed)

Regression Results

Table 3 presents the regression results of family ownership, related-party transactions and control variables on earnings quality. Recall that our hypothesis predicts that the non-linear relationship between family ownership and earnings quality will be more significant in firms that engage in related-party transactions that could result in expropriation than in firms without such transactions. The regression results show that the model is significant at $p < 0.01$ level with adjusted R^2 of 6.8%. Specifically, the coefficient of the interaction term FAM*RPT is 4.478 and significant at $p < 0.05$, whereas the interaction term of $FAM^2 * RPT$ is -8.850 and significant at $p < 0.01$. These results suggest that the non-linear relationship between family ownership and earnings quality is only significant for firms that have related-party transactions that are most likely to result in expropriation. This result supports the hypothesis that at the lower levels of family ownership, as the family ownership increases, the earnings quality of firms that have related-party transactions increases. By contrast, as the level of family ownership becomes higher, further increases in ownership results in poorer earnings quality.

The coefficients for FAM and FAM^2 are insignificant, suggesting an insignificant relationship between family ownership and earnings quality in firms without such transactions. This result reconciles prior research that shows serious

agency problems in family firms because of the conflicts of interest between controlling families and minority shareholders (Anderson & Reeb, 2003; Chau & Gray, 2010; Morck & Yeung, 2003; Villalonga & Amit, 2006) that may encourage and result in the expropriation of minority shareholders (Claessens et al., 2002; Lemmon & Lins, 2003; Villalonga & Amit, 2006). However, when the level of control is low, family ownership may exert a positive effect on performance because of the alignment of interests between family shareholders and other shareholders. The regression result in Table 3 also shows that AUDITOR has a significant positive relationship with earnings quality with a coefficient of 0.448 and significance at $p < 0.01$. This result suggests that employing one of the Big 4 auditors might help in improving earnings quality. This is consistent with prior research that found that clients of the Big 4 auditors are more likely to report higher earnings quality (Becker et al., 1998; Gul et al., 2002). The analysis also shows that the coefficient of DUALITY is 0.237 and significant at $p < 0.05$, which suggests that firms with CEO-Chairman duality are more likely to report higher earnings quality because duality might bring effective monitoring to the firms (Haniffa & Cooke, 2002) and enhance earnings quality.

Table 3 also reports that NED_AC has a positive and significant relationship with EQ, which results in a coefficient is 0.764 and significance at $p < 0.1$. This finding is consistent with Mohd-Saleh et al. (2007) and Klien (2002) and suggests that the independence of the audit committee might enhance earnings quality.

To further explore the influence of related-party transactions that are likely to result in expropriation on the relationship between family ownership and earnings quality, the study divided the sample into two sub-samples. The first sub-sample, labelled High RPT, contained firms that had related-party transactions with a total value of 1% or more of the firms' total sales. The second sub-sample, labelled Low RPT, contained firms with a value of related-party transactions of less than 1% of the firms' total sales. The regression results for both sub-samples are presented in Table 4.

For the High RPT sub-sample, the coefficient for FAM is significantly positive, whereas the coefficient for FAM² is significantly negative. These results indicate that the relationship between family ownership and earnings quality is non-linear for firms with related-party transactions. This result also supports both hypotheses in this paper and is consistent with the previous literature. Moreover, for the Low RPT sub-sample, the regression result indicates no significant relationship between family ownership and earnings quality because the coefficients of both FAM and FAM² are insignificant. A test for a possible linear relationship between family ownership and earnings quality for the Low

RPT sub-sample shows an insignificant relationship between family ownership and earnings quality (coefficient for FAM = 0.050, *t*-statistic = 0.162). Overall, the regression models for the High RPT sub-sample and the Low RPT sub-sample are significant at *p* < 0.01 level with adjusted *R*² figures of 15% and 4%, respectively.

Table 3
Family ownership, RPT and earnings quality

$$EQ_i = \beta_0 + \beta_1FAM_i + \beta_2FAM_i^2 + \beta_3RPT_i + \beta_4FAM_i * RPT_i + \beta_5FAM_i^2 * RPT_i + \beta_6AUDITOR_i + \beta_7DUALITY_i + \beta_8NED_AC_i + e_i$$

	Expected sign	Coeff.	<i>t</i> -stat
Intercept		-1.020	-2.314**
FAM	+	0.865	0.802
FAM ²	-	-1.180	-0.718
RPT	-	-0.194	-0.565
FAM*RPT	+	4.478	2.000**
FAM ² *RPT	-	-8.850	-2.484***
AUDITOR		0.448	2.343***
DUALITY		0.237	1.939**
NED_AC		0.764	1.289*
<i>N</i>			236
<i>Adj. R</i> ²			0.068
<i>F</i> -value			3.135***

Notes: EQ denotes earnings quality, which is the reverse measure of DAQ derived from equation (1), FAM is the percentage of family shareholding, RPT is a dummy variable taking the value of 1 if the amount of related party transactions that are most likely to result in expropriation of minority shareholders is equal or more than 1% of the firm's total sales, and 0 otherwise, AUDITOR is a dummy variable taking the value of 1 if the firm is audited by one of the Big 4 auditing firms and 0 otherwise, DUALITY is a dummy variable taking the value of 1 if the CEO also serves as Chairman of the board of directors the firm and 0 otherwise, and NED_AC is the proportion of non-executive directors in audit committee.

The reported *t*-statistics are white-adjusted (White, 1980) values to control for heteroskedasticity.

*significant at 0.1 level (one-tailed), ** significant at 0.05 level (one-tailed), ***significant at 0.01 level (one-tailed)

In summary, these findings suggest that the influence of family ownership on earnings quality is more dominant in firms that engage in expropriation activities than in firms that do not engage in such activities. Specifically, it is shown that firms that expropriate minority shareholders would first experience the positive effects of family ownership on earnings quality. As family ownership increases, so does the earnings quality. However, the negative relationship between family ownership and earnings quality would prevail once family ownership is too large. The more dominant effect of family ownership on earnings quality for firms that engage in related-party transactions that could

result in expropriation is consistent with the arguments of alignment and entrenchment effects, as discussed in the previous section. Moreover, it is important to note that family ownership would only influence earnings quality if the firms actually engaged in the expropriation activities. The mere presence of the incentive to expropriate, which is normally shown through the size of family ownership, may not be able to explain the variation in earnings quality.

Table 4
Association between family ownership and earnings quality for subsamples

$$EQ_i = \alpha_0 + \alpha_1 FAM_i + \alpha_2 FAM_i^2 + \alpha_3 AUDITOR_i + \alpha_4 DUALITY_i + \alpha_5 NED_AC_i + e_i$$

	High RPT		Low RPT	
	Coeff.	t-stat	Coeff.	t-stat
Intercept	-1.930	-1.706	-0.783	-1.583*
FAM	4.684	2.332***	0.931	0.855
FAM ²	-8.804	-2.688***	-1.249	-0.756
AUDITOR	0.103	0.448	0.521	2.258**
DUALITY	0.069	0.360	0.256	1.722**
NED_AC	2.211	1.803**	0.330	0.502
N		59		177
Adj. R ²		0.150		0.040
F-Value		3.041***		2.456***

Notes: EQ denotes earnings quality, which is the reverse measure of DAQ derived from equation (1), FAM is the percentage of family shareholding, RPT is a dummy variable taking the value of 1 if the amount of related party transactions that are most likely to result in expropriation of minority shareholders is equal or more than 1% of the firm's total sales, and 0 otherwise, AUDITOR is a dummy variable taking the value of 1 if the firm is audited by one of the Big 4 auditing firms and 0 otherwise, DUALITY is a dummy variable taking the value of 1 if the CEO also serves as Chairman of the board of directors the firm and 0 otherwise, and NED_AC is the proportion of non-executive directors in audit committee.

The reported t-statistics are white-adjusted (White, 1980) values to control for heteroskedasticity.

*significant at 0.1 level (one-tailed),** significant at 0.05 level (one-tailed),***significant at 0.01 level (one-tailed)

Additional Test

A test was conducted to check whether the results of this study might be influenced by the industry in which the firm operates. To perform this test, the industry of each firm was identified by referring to the classification used by Bursa Malaysia. This study creates a dummy variable for each industry and includes these in the test model to control for possible differences of earnings quality across industries. There are eight additional variables included in the equations, including Construction, Consumer Products, Hotel, Industrial Products, Infrastructure, Plantation, Property, and Trade and Services¹³. The

sector variable is assigned with a value of 1 when the firm belongs to that sector, and the other industry variables take zero values.

Table 5
Regression results with industry dummies

$$EQ_i = \beta_0 + \beta_1FAM_i + \beta_2FAM_i^2 + \beta_3RPT_i + \beta_4FAM_i * RPT_i + \beta_5FAM_i^2 * RPT_i + \beta_6AUDITOR_i + \beta_7DUALITY_i + \beta_8NED_AC_i + e_i$$

	Expected sign	Coeff.	t-stat
Intercept		-0.958	-2.098**
FAM	+	0.927	0.818
FAM ²	-	-1.354	-0.780
RPT	-	-0.249	-0.700
FAM*RPT	+	4.411	1.967**
FAM ² *RPT	-	-8.700	-2.386***
AUDITOR		0.433	2.253**
DUALITY		0.235	1.818**
NED_AC		0.703	1.184
Industry dummies			Included
N			236
Adj. R ²			0.043
F-Value			1.654**

Note: EQ denotes earnings quality, which is the reverse measure of DAQ derived from equation (1), FAM is the percentage of family shareholding, RPT is a dummy variable taking the value of 1 if the amount of related party transactions that are most likely to result in expropriation of minority shareholders is equal or more than 1% of the firm's total sales, and 0 otherwise, AUDITOR is a dummy variable taking the value of 1 if the firm is audited by one of the Big 4 auditing firms and 0 otherwise, DUALITY is a dummy variable taking the value of 1 if the CEO also serves as Chairman of the board of directors the firm and 0 otherwise, and NED_AC is the proportion of non-executive directors in audit committee.

The reported t-statistics are white-adjusted (White, 1980) values to control for heteroskedasticity.

*significant at 0.1 level (one-tailed),** significant at 0.05 level (one-tailed),***significant at 0.01 level (one-tailed)

Table 5 presents the results of this test. The regression results are qualitatively identical to the results in Table 3, in which the coefficients of the interaction terms remain significant despite the inclusion of industry dummies.

CONCLUSIONS

The objective of this study is to examine whether real acts of expropriation influence the relationship between family ownership and earnings quality. The results show that the non-linear relationship between family ownership and earnings quality only prevailed in family firms that engaged in real expropriation

activities, such as certain types of related-party transactions. The study also finds that family ownership in firms that did not engage in such activities may not be a factor that contributes to the variation in earnings quality. This implies that family ownership only influences earnings quality when firms engage in real activities of expropriation. Alternatively, the evidence suggests that the incentive to expropriate, which is normally indicated by the size of family ownership, does not necessarily result in earnings management. Of equal importance, the study also finds that, in spite of a firm's expropriation activities, firms with low levels of family ownership might yet report high earnings quality because the positive effects of familial ownership outweigh the negative effects of agency problems in the firms with lower levels of family ownership. As a result, these firms tend to have less earnings management incidents.

This study has several limitations. One of the limitations of this study is the relatively small sample size. To be included in the sample of this study, firms had to have complete data necessary to estimate earnings quality. Recall that the use of discretionary accruals quality requires data of cash flow from operations for at least seven years. As a result, only 236 firms listed at Bursa Malaysia in 2004 were selected to be in the sample. Related to this issue, the study also tends to use sample of established firms because only long established firms would have at least seven years of data. Therefore, the results of this study may not apply to newly established firms, which do not have enough data to allow for a good estimation of earnings quality. It also must be highlighted that this study only employs single proxy for earnings quality and other independent variables. Therefore, the results from this study must be interpreted with caution. Another limitation of this study is that it assumes that the size of family ownership could represent the influence of a family in the firms because it is a normal phenomenon in Malaysia, in which the controlling owner is part of the management of the firms. Nevertheless, the literature suggests that the influence of family could better be gauged by assessing the breadth and depth of dedication of family members to the business through the number of individuals and generations of family members involved in the business (Astrachan, Klein, & Smyrnios, 2002). However, this approach is beyond the scope of this study because the process of ascertaining this characteristic would require information on family background and history, which would be very laborious and costly to gather. Nevertheless, the use of different measures of family influence in firms may provide further understanding of the role of family influence on earnings quality.

The aforementioned limitations and insights generate several opportunities for future research. It is suggested that future research uses a larger sample size to reinforce the findings of this study. A larger sample size could be obtained by extending the period of analysis, thus allowing for a sample that

consists of a larger number of firms year, instead of the number of firms. Future studies may also want to employ a different proxy to represent family influence in the firms. For example, the literature on family business suggests that the validated F_PEC scale could be a good measure of the degree of family influence in the firms (Astrachan et al., 2002). Research that uses a proxy that closely measures family influence would provide better insights on the effects of family involvement in business on earnings quality.

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NOTES

1. Popular examples of abusive use of related-party transactions in corporate scandals are found in the Enron, Adelphia, and Tyco cases.
2. The Minority Shareholder Watchdog Group (MSWG) was established as part of the effort to protect the interests of minority shareholders through shareholder activism. This body can influence the decision-making process in publically listed companies because it is a leader for minority shareholders; it monitors the markets for breaches and non-compliance with corporate governance practices by publically listed companies (<http://www.mswg.org.my/web/page.php?pid=36&menu=sub>).
3. The year 2004 is during the period in which Malaysia put in place several important reforms in its financial structure to overcome the effects of the 1997 Asian Financial Crisis and before the global financial crisis of 2007 to 2010, which contributed to unstable economic condition at the beginning of the 21st century. Because of these reasons, it was expected that the findings obtained from the 2004 data would be mainly the result of the variables selected with minimum influence of the effects of economic conditions.
4. Presently, it is known as the ACE market.
5. Although the companies in this sample are listed on different markets, there are no significant differences in terms of listing requirements that might affect the results of this study.
6. A large number of firms were excluded because they did not have complete 7-year data on cash flow from operations, which are required in estimating

accruals quality (Equation 2). Because the definition of data might have been inconsistent with that used by the database, which could result in an inaccurate analysis, this study did not seek the data from annual reports of the firms.

7. The Jones model is given as follows:

$$NDA_t = \alpha_1(1/A_{t-1}) + \alpha_2(\Delta REV_t/A_{t-1}) + \alpha_3(PPE_t/A_{t-1})$$

where:

NDA_t	=	nondiscretionary accruals in year t scaled by lagged total assets
ΔREV_t	=	change in revenue of year t
PPE_t	=	gross property, plant and equipment at the end of year t
A_{t-1}	=	Total assets at the end of year $t - 1$

8. For example, the substantial shareholder of Sapura Resources Berhad is Sapura Holdings Sendirian Berhad; the latter holds 51.03% of the former's outstanding shares, but the analysis of shareholding did not disclose the controlling ownership interest of the latter. However, previous studies, such as those of Gomez and Jomo (1997), Johnson and Mitton (2003) and Gul (2006), that have examined a number of Malaysian companies with well-known controlling owners, have verified that Sapura Holdings Sendirian Berhad is owned by Tan Sri Dato' Seri Ir. Shamsudin Bin Abdul Kadir who is also the director of Sapura Resources Berhad, and who operates together with his son, Datuk Shahril Bin Shamsudin. Similarly, no information was disclosed in the annual report on who controls Budaya Generasi (M) Sdn Bhd, the largest shareholder of Padiberas Nasional Berhad. Following the definition of Faccio and Lang (2002), this study classified Padiberas Nasional Berhad as a firm with family ownership, and the search of public documents confirmed this categorisation because it was revealed that the owner of Budaya Generasi (M) Berhad is Tan Sri Syed Mokhtar Al Bukhary (Fernandez, 2006). Based on these cases, this study believes that the definition used by Faccio and Lang (2002) has provided sufficient guidance for identifying firms with family ownership.
9. Unlike previous studies, this study does not use any cut-off points to separate family from non-family firms. The practice of using the percentage of shareholding is consistent with Anderson and Reeb (2003) in testing non-linear relationships.
10. Prior research has identified: (a) percentage effect on net income, (b) percentage effect on sales or total revenues, and (c) percentage effect on total assets as three quantitative measures commonly used by auditors to determine the materiality of misstatements (Ricchiute, 1998). Cho et al. (2003) suggests that investors' materiality threshold for the "percentage effect on sales" criterion is between 0.01% and 0.025%. We are more conservative in this sense and take RPTs above 1% of total sales to be material from the perspective of the users of financial

reports. However, we also acknowledge that this quantitative measure of materiality—particularly with respect to RPTs (as a percentage of sales or assets)—may not be accurate because the materiality of RPT must be determined by the nature and extent of the transactions.

In addition, we conducted a test in which we included all firms with RPT and excluded firms with RPT = 0—reducing the sample to 119—and ran the same regression model. We found that the results are qualitatively similar to our main findings.

11. Similarly, it was assumed that industry effects have been captured when firm characteristics that are normally similar for all firms in the same industry were included in the AQ model. Therefore, this study does not control for industry effects in its test models. Nevertheless, dummy variables representing different industries are included in the test models when additional tests were conducted.
12. Wang (2006) also suggested an alternative means of testing the non-linearity of the relationship, which involves creating two dummy variables, high family ownership (H_FAM) and low family ownership (L_FAM). The median of family ownership can be used to categorise the firms, such that H_FAM equals one if the percentage of stock owned by family members is greater than or equal to the median of family ownership and zero otherwise.
13. Although firms in the sample come from 9 sectors, only 8 industry variables are included in the equations because both regression models contain constant terms (Kleinbaum, Kupper, Muller, & Nizam, 1998).

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