

Ownership Structure and Earnings Management in Malaysian Listed Companies: The Size Effect

Salsiah Mohd Ali, Norman Mohd Salleh* and Mohamat Sabri Hassan

Abstract

According to the agency theory, separation of ownership and control gives rise to manager's incentives to select and apply accounting estimates and techniques that can increase their own wealth. This issue has become more important in recent years as more firms are listed on stock exchanges as public firms. This study examines the association between the level of *managerial ownership* and earnings management activities, represented by the magnitude of discretionary *accounting* accruals in Malaysian listed firms. The results show that *managerial ownership* is negatively associated with the magnitude of *accounting* accruals. However, this study finds that *managerial ownership* is less important in large-sized firms compared to small-sized firms. This finding suggests that large-sized firms demand and use better corporate governance mechanisms due to higher agency conflicts, and, therefore, less managerial ownership is needed for control. As part of the ownership structure, this study also examines the roles of block and foreign ownerships in relation to the magnitude of discretionary accounting accruals.

Keywords: Ownership Structure, Managerial Ownership, Firm Size, Discretionary Accruals.

JEL classification: M410, G32, G34

1. Introduction

Separation of ownership and control in firms is common in the modern day business environment as more firms are listed on stock exchanges as public firms. However, this separation creates serious conflicts between the owner of a firm and the managers. Managers who are in power may

* Corresponding author. Salsiah Mohd Ali is a Tutor at the Faculty of Economics and Muamalat, Islamic Science University of Malaysia, Bandar Baru Nilai, 71800 Nilai, Negeri Sembilan, Malaysia, e-mail: salsiah@usim.edu.my. Norman Mohd Salleh is an Associate Professor at the Graduate School of Business, Universiti Kebangsaan Malaysia, 43600 Bangi, Selangor, Malaysia, e-mail: norman@ukm.my. Mohamat Sabri Hassan is an Associate Professor at the School of Accounting, Faculty of Economics and Business, Universiti Kebangsaan Malaysia, 43600 Bangi, Selangor, Malaysia, e-mail: sabri1@ukm.my

have the motivation to transfer wealth in terms of bonus or other perks at the expense of the owner i.e. the shareholders to get dividend (Watts and Zimmerman, 1986). In this regard, shareholders may incur costs to monitor the management from such unethical behaviour. Therefore, this separation of ownership and control gives rise to agency conflict. This argument is consistent with Fleming et al. (2005) who find a significant positive relationship between agency conflicts, and the degree of separation between ownership and control. The result in the study implies that as the degree of separation between ownership and control increases, the agency conflict and costs increases.

Therefore, effective control and monitoring mechanisms are needed to reduce agency conflicts and costs. Prior research finds that effective corporate governance mechanisms (John & Senbet 1998; Klein 2002), quality external audits (Becker et al. 1998; Bartov et al. 2002), and managerial ownerships (Warfield et al. 1995) will reduce agency conflicts in firms. Warfield et al. (1995) argue that managers who own a significant portion in the equity of a firm have less incentive to manipulate reported accounting information. As the level of ownership by managers increases, the gap between the interests of the managers and the shareholders decreases. Their interests in the firm are more or less aligned after managerial ownership reaches an optimum level. Therefore, we can expect that as management ownership increases, the incentives to manipulate earnings will decrease. However, there are studies that do not find a negative relationship between managerial ownerships and agency conflicts (Morck et al. 1988; Yeo et al. 2002). Results in a study by Kole (1995) may be used to explain the role of managerial ownership in reducing agency conflicts. Kole (1995) finds evidence that firm size is one significant factor that can explain divergent results in prior research. Nevertheless, the size effect has never been properly investigated in one research involving managerial ownership and earnings management that represent agency conflicts. Prior research on the relation of managerial ownership and agency conflicts purposely select only one class of firm size i.e. in large-sized firms (Morck et al. 1988; Singh & Davidson 2003), or in small-sized firms (Ang et al. 2000) to ease interpretation of the result. Other studies used firm size as a control variable (Warfield et al. 1995).

In East Asian companies, the relationship between managerial ownership and agency conflict is more unique compared to their western counterparts. The existence of significant block holder ownership can become an effective monitoring mechanism on managerial incentives when there is a low level of managerial ownership (Yeo et al. 2002). While the ownership structure in smaller sized East Asian corporations are dominated by owners who are usually the founder and have family relationship, the owners of larger sized corporations usually hold a large number of shares in blocks and operate in inter-connected but diversified

business groups. Therefore, against this background, it is interesting to investigate the role of size (representing differences in institutional structure that may form an additional control mechanism or give rise to additional agency costs) on the relationship between managerial ownership and agency conflict. If the size of companies (in this study is represented by listing status on the Main or Second boards of Bursa Malaysia) is an important factor determining the agency costs a company may face, it is imperative for the investors or other stakeholders to have a different evaluation on the adequacy of corporate governance mechanisms in the form of managerial ownership according to the size of companies.

In this study, we argue that size may be one significant reason that may affect the managerial ownership and agency conflict relationship. Therefore, the objective of this study is to investigate the role of firm size in the relationship between managerial ownership and earnings management practices. Specifically, this study addresses the question of whether the relationship between managerial ownership and earnings management is different according to firm size. Different from Kole (1995), this study uses earnings management proxy as agency conflict measurement. We feel this measurement is better than firm performance because the performance itself can be managed. To date, there is no single study that has ever investigated the role of firm size in moderating the relationship between managerial ownership and agency conflict represented by earnings management (proxied by discretionary accruals).¹ Therefore, we believe investigation into this area will (1) increase our understanding of the role of managerial ownership in firms, and (2) contribute to the literature by extending the current body of knowledge on this issue.

The organization of this paper is as follows. The following section discusses prior research on managerial ownership and earnings management, and, subsequently, research hypotheses are formulated. The third section describes the sample collection process and is followed by a section on research methodology. The results are presented and discussed in the fourth section. Conclusion, limitations and implications of policies are discussed in the final section.

2. Literature Review and Hypotheses Development

2.1. Managerial Ownership and Agency Conflicts

Managers are accountable to use resources in firms and maximize the wealth of the owners (firm value or performance). However, as managers are rational they tend to make choices that can create maximum benefit

¹ A description on the process of getting discretionary accruals can be found in the research methodology section

for themselves (Watts & Zimmerman 1986; Eccles 2001; Patten & Trompeter 2003). One of the ways is through the manipulation of reported accounting earnings. Earnings are managed, for example, to increase managers' bonus (Healy 1985), before management buyouts (DeAngelo, 1986; Perry and Williams, 1994), prior to equity offers (Teoh et al., 1998), and to meet analysts' forecasts (Kasznik, 1999).

However, when a manager's stake in the firm increases with an increase in share ownership, the conflicts between managers and shareholders reduces. Results presented in Warfield et al. (1995) suggest there is a systematic relationship between agency conflicts (proxied by discretionary accruals and firm returns) and the level of managerial ownership. The study shows that as the level of managerial ownership increases, discretionary accruals decrease and firm returns increase. Consistent with the agency theory, the study shows that managers tend to maximize firm value and have less incentive to manipulate earnings when their share ownership in the firm is high. When managers also hold a significant number of shares in the firm, the objective of the managers and shareholders starts to converge. Managers may want to maximize their own wealth, but at the same time maximizing the wealth of the firm owners.

The negative relationship between managerial ownership and agency conflict, however, is moderated by external monitoring by regulators (Warfield et al. 1995) i.e. managerial ownership may appear ineffective to reduce agency conflict when a firm is monitored closely by the regulator. This is because the agency conflict between the management and shareholders is already reduced when the regulator plays its role in monitoring the management in achieving the objective of the shareholders.

Another factor that may affect the relationship between managerial ownership and agency conflict is the level of ownership. Morck et al. (1988) report that concentrated managerial ownership exists even in large-sized firms in the U.S. The study finds there is a non-linear relationship between managerial ownership and firm performance. The result suggests a high degree of ownership concentration may cause managerial ownership to be an unimportant factor as well as, to some extent, increase the agency conflict. The evidence indicates there is a positive relationship between managerial ownership and firm performance at the level of 0%-5% and more than 25% managerial ownership. In between these ranges, there is a negative relationship between managerial ownership and firm performance. This result is in line with the entrenchment hypothesis. However, McConnell and Servaes (1990) report similar results only for the 0%-5% category. Examination of more comprehensive data reports a positive relationship between the two variables at a managerial ownership level of 0%-5%, and non-significant relationship when managerial ownership exceeds 25% (see Table 1). These conflicting results raise

questions concerning the validity of the arguments on factors that could have contributed the different results.

In East Asia, Yeo et al. (2002) found block holder ownership moderates the relationship between managerial ownership and agency conflict. The result implies that block holder ownership can become an effective monitoring mechanism on managerial incentives when there is a low level of managerial ownership. Consistent with Warfield et al. (1995), Jung and Kwon (2002) find a positive relationship between managerial ownership and firm performance, although the ownership structure is different. The ownership structure in Korea is dominated by owners with effective control over the firm. These owners are usually the founder, have family relationship, and are holding a large number of shares in blocks. However, when firms are classified as 'chaebol'² and 'non-chaebol' the result shows that the relationship between managerial ownership and agency conflict is not significant in 'chaebol' firms. This suggests that the negative impact of managerial ownership outweighs its positive impact in 'chaebol' firms.

In summary, the results of the test on the relationship between managerial ownership and measures of agency conflict are mixed. A summary of the studies is found in Table 1. Apart from the factors discussed above, there could be other factors that may explain divergence of the results. An investigation by Kole (1995) suggests that firm size, a factor that has been ignored in prior research, can significantly affect the relationship between managerial ownership and agency conflict.

Table 1 shows the relationship between ownership structure and firm performance (or other agency conflict measures) depends on the level of ownership concentration in a nation (Jung & Kwon 2002; La Porta et al. 1999; Mak & Li 2001; Morck et al. 1988; McConnell & Servaes 1990; Warfield et al. 1995; Park & Shin 2003; Yeo et al. 2002). Ownership structure can also affect agency conflict in situations when there is monitoring by regulators (Warfield et al. 1995), family ownership (Randoy & Goel 2003; Chrisman et al. 2004) and block-ownership monitoring (Yeo et al. 2002). Therefore, as part of Asia, Malaysian companies' ownership structure is also characterized by these unique features. There is a need to investigate whether ownership structure will reduce the agency conflict in Malaysia. It is a duty of the chief executives and directors of a listed company to disclose their interests in the company to the SC, failing to do so may result in a criminal sanction of up to RM1 million or imprisonment of up to 10 years, or both (Section 99B of the Securities Industry Act 1983). As such, the data on directors' ownership is readily available from annual reports.

² 'Chaebol' means a complex ownership structure that involves a network of various associated firms but are controlled by one or several related families (Jung & Kwon 2002)

Table 1. Summary of Prior Research

	Data/types of ownership structure	Agency conflict proxy	Moderating variable	Levels/ type of managerial ownership	Findings
<i>Research in the Western Countries</i>					
Morck et al. (1988)	Concentrated (large-sized firms)	Market value and replacement cost ratio - Tobin's Q (performance proxy)	None	1. 0%-5% 2. 5%-25% 3. >25%	+ve(significant) -ve(significant) +ve(significant)
Mc Connell & Servaes (1990)	Concentrated	Market value and replacement cost ratio - Tobin's Q	None	1. 0%-5% 2. 5%-25% 3. >25%	+ve(significant) +ve(significant) -ve(not significant)
Warfield et al. (1995)	Dispersed	1. Discretionary accruals (earnings management proxy) 2. Return on firm (R) (performance proxy)	Regulator monitoring (Reg)	No spilt 0%-100% No spilt 0%-100%	-ve (significant) +ve (significant)
Ang et al. (2000)	Small-sized firms	1. Expenses ratio 2. Efficiency ratio	None	No spilt 0%-100%	-ve (significant) -ve (significant)
Singh & Davidson (2003)	Large-sized firms	1. Expenses ratio 2. Efficiency ratio	Corporate governance	No spilt 0%-100%	-ve (significant) -ve (not significant)
<i>Research in East Asian Countries</i>					
Yeo et al. (2002)	Concentrated (Singapore)	1. Discretionary accruals (income increasing) 2. Return on firm	Block ownership	1. 0%-2% 2. >25% Regulated firms 1. 0%-2% 2. >25%	-ve (significant) +ve (significant) +ve (significant) -ve (significant)
Jung & Kwon (2002)	Concentrated (Korea)	Return on firm	Chaebol firms	1. Non 'Chaebol' 2. Chaebol	+ve (significant) Not significant

Earnings can be managed using real transactions such as asset sales and/or accelerating or deferral of revenue and expenses using accounting methods and estimates (Peasnell et al., 2000b). The effect of the latter method accumulates in accruals. Consistent with prior studies (Warfield et al., 1995; Yeo et al. 2002; Chung et al., 2002; Park and Shin, 2003), this study utilizes discretionary accruals as a proxy for agency conflict. One advantage of using accruals to manage earnings is that it is difficult and costly for the users to unravel accounting numbers to make economic decisions. Therefore, accruals are more likely to be used by managers to manage earnings than structuring actual transactions. We follow recent research studies in earnings management by focusing on accruals manipulation (Klein, 2002; Xie et al., 2003). We use the definition by Healy and Wahlen (1999) throughout the paper that earnings management reflects opportunistic behaviour of the management. Nevertheless, we acknowledge that some accounting choices and estimates may be used to signal private information. Therefore, some discretionary accruals may not be consistent with opportunistic behaviour alone, because managers could also exercise judgement for private information signalling.

Accruals are managed to shift accounting income from one period to another and usually it was managed without violating the requirement of accounting standards (Schipper 1989; Jones 1991). Consistent with Warfield et al. (1995) and Yeo et al. (2002), we use discretionary accruals to detect whether managers use discretionary accruals to mislead shareholders and, hence, gain private benefit from financial misrepresentation. This is done, particularly, when there is a high agency conflict. However, when managers become the owners of a firm, the incentives of the managers converge with the incentives of the shareholders. Therefore, this study predicts that as the managerial ownership increases, agency conflict decreases and, hence, discretionary accruals decrease.

Therefore,

H₁: There is a negative relationship between the absolute value of discretionary accruals and the percentage of managerial ownership.

2.2. Firm Size as Moderating Factor

Prior research proves there are factors (internal and external) that may affect the role of managerial ownership in reducing agency conflict. For example, the results in Warfield et al. (1995) suggest that the role of managerial ownership in reducing earnings management is not effective in regulated firms. This implies monitoring regulators may have substituted the role of managerial ownership in reducing agency conflicts. Similarly, Yeo et al. (2002) find that block ownership in Singapore moderates the managerial ownership and agency conflicts relationship. In other studies

Randoy and Goel (2003) and Chrisman et al. (2004) find evidence to support that family domination in a firm may also moderate the relationship of managerial ownership and agency conflict. They suggest that family ownership serves as a natural control mechanism that can substitute other control mechanisms. Therefore, we believe some of the control mechanisms within an organization may be replaced or substituted by other mechanisms in order to preserve accountability to shareholders.

In a study by Bushmen et al. (2003), they suggest that the demand for more systematic corporate governance is higher in large-sized firms compared to small-sized firms. This is due to the information asymmetry between managers and shareholders being higher in large-sized firms, which are naturally more complex and have a more dispersed ownership structure compared to small-sized firms. This high degree of information asymmetry in large-sized firms requires the corporate governance and other monitoring mechanisms to be better than small-sized firms. (Singh & Davidson 2003). Hence, more corporate governance and other monitoring mechanisms (such as the government or bank monitoring) are expected to exist in large-sized firms than small-sized firms (consistent with Warfield et al. 1995; Ang et al. 2000; Yeo et al. 2002; Suto 2003). As mentioned earlier, some of these mechanisms have the ability to be substitutes for other mechanisms.

Other than the factors described above, external audit mechanisms may also reduce agency conflict and costs (De Angelo 1981; Becker et al. 1998; 2004). In Malaysia, Nor Haiza (2004) finds quality external auditors (as measured by large accounting firms) are concentrated in large-sized firms. Therefore, in this study, we predict there could be some corporate governance or other monitoring mechanisms in large-sized firms that can substitute the role of managerial ownership in reducing agency conflict.

Empirical studies confirm the above argument that the relationship between managerial ownership and agency conflict for small firms is strong and consistent using different proxies of agency conflict (Ang et al., 2000), but the relationship is somewhat mixed in large firms (Singh and Davidson 2003). Singh and Davidson (2003) argue that the mixed results found in their study are due to high information asymmetry in large-sized firms, in that the managerial ownership becomes less effective as a mechanism for reducing agency conflict.

In summary, prior research shows the potential of firm size to moderate the role of managerial ownership in reducing agency conflicts. However, there is no study that has ever examined the size factor as a moderating variable. Different from Ang et al. (2000) and Singh and Davidson (2003), this study uses the absolute value of discretionary accruals to measure agency cost.

Thus:

H₂: The negative relationship between managerial ownership and absolute discretionary accruals is weaker (stronger) in large (small) firms.

2.3. Size and its Proxies

Size is always used as a control variable. It is used as the most popular proxy for political cost i.e. the larger the size of a firm, the more it receives political attention (Gagnon, 1971; Watts and Zimmerman, 1978). Ball and Foster (1982) argue that size is a crude and noisy proxy for political attention. They argued that size can proxy for many other factors such as competitive advantage, information production cost and management ability. In this study, we extend our understanding on the use of size, as measured by board listing, to proxy for a number of constructs and the prediction of H₂ is according to the explanation made for each construct. Large-sized firms, by nature, have relatively more political exposure than small-sized firms (Watts and Zimmerman, 1986). Thus, larger firms may use accruals to decrease income in order to reduce the probability of adverse impact from political exposure (for example, Cahan, 1992). Thus, managerial ownership as one monitoring mechanism should be able to detect attempts to manage earnings that are predicted to be more in large firms compared to the smaller firms. Therefore, according to this explanation, the negative relationship between managerial ownership and absolute discretionary accruals should be stronger in large firms than small firms.

Firms listed on the Bursa Malaysia Second Board (which is smaller compared to the Main Board by default) are subject to less restrictive listing requirements. Some may have the perception that Second Board firms face greater asymmetric information, low liquidity, and low volume of trading problems compared to those on the Main Board (How, Saadouni and Verhoeven, 2007). Therefore, greater information asymmetry is always associated with more earnings management practices. Thus, the negative relationship between managerial ownership and absolute discretionary accruals should be stronger in small firms than large firms.

The different size of firms listed between the two boards also relates to the level of diversification in the business group operations. There are two competing hypotheses on the relationship of earnings management and the level of diversification. The informational asymmetry hypothesis argues that corporate diversification creates additional organizational complexity, and this leads to more incentives to engage in a higher degree of earnings management. Hence, as the size of the main board is greater than the size of the second board firms, the level of diversification is also greater in the main board firms than in the second board firms. If managerial ownership is effective in mitigating earnings management, the

negative relationship between managerial ownership and earnings management should be stronger in large firms than small firms.

On the other hand, the competing hypothesis is called the 'offsetting accruals hypothesis'. It rests on the 'internal capital market concept'. The concept claims that capital allocation among different business divisions within the same firm is more efficient than raising capital from external sources. This hypothesis argues that diversified firms derive their cash flows from diverse sources from within or outside the group. As a business group, however, the accruals generated by these cash flows tend to cancel each other out. Therefore, it is predicted that it is more difficult for managers of diversified firms to manage earnings substantially either upward or downward. Hence, consistent with the 'offsetting accruals hypothesis', we predict that there is less earnings management in the main board firms compared to the second board firms (Jiraporn, Kim and Mathur, 2008). Consistent with the second point, if managerial ownership is effective in mitigating earnings management, the negative relationship between managerial ownership and earnings management should be stronger in small firms than large firms.

In terms of ownership, the Second Board firms also have less institutional investor interest compared to their "blue chip" counterparts on the Main Board. Their shares are more accessible and affordable to retail investors (How, Saadouni and Verhoeven, 2007). Institutional investors are always referred to as sophisticated investors that have the advantage of acquiring information compared to individual investors (Jiambalvo et al. 2002). Substantial shareholding in a firm gives the institutional investors resources and reasons for having incentives to monitor and influence the decisions made by managers (Chung et al. 2002). Therefore, the expectation is the negative relationship between managerial ownership and earnings management is stronger in small firms than large firms because institutional investors play their monitoring role in large firms.

Analyst following and coverage may provide an effective control over the behaviour of the management to the extent that this control can replace other control mechanisms. As suggested by Healy and Palepu (2001), information intermediaries such as analysts and rating agencies that engage in private information production helps to detect managers' opportunistic behaviour. Analyst following and coverage may in the end reduce information asymmetry and agency costs. Yu (2008) suggests that more analyst coverage leads to less earnings management. Because larger firms listed on the main board are more likely to be associated with more analyst following and coverage than smaller firms on the second board, we should expect less earnings management practices. Because analysts play their monitoring role more in large firms (the Main Board firms) than small firms (Second Board firms), the negative relationship between

managerial ownership and earnings management is stronger in small firms than large firms.

Therefore, in this study, size may represent a combination of all or some of the above factors. The interaction of these factors may result in a stronger/weaker negative relationship between managerial ownership and earnings management. It is difficult to examine the effect of each factor in isolation because of a lot of overlapping cases. For example, many large sized companies with analyst following are also owned by institutional investors and are involved in highly diversified activities (and vice versa). This means that any attempt to investigate each factor's effect in isolation will result in huge data losses and consequently suffer from generalizability.

3. Data and Research Methodology

Secondary data is obtained from annual reports of firms listed on Bursa Malaysia for the years ending 2002 and 2003.³ Firms from the finance industry and unit trusts are excluded from this study as they are subject to some unique regulations and the accruals behaviour is different compared to other firms (Klein 2002; Chung et al. 2002; Park & Shin 2003). Newly listed firms are excluded due to inadequate data to estimate discretionary accruals. We also exclude distressed firms under the Practice Note 4 (PN4) listing.⁴ Firms from an industry with less than ten firms were also excluded so that discretionary accruals estimation can be made efficiently (Peasnell et al. 2000). The sample selection process is described in Table 2.

The discretionary accruals variable is used in this study as the dependent variable to proxy agency costs (Warfield et al. 1995; Yeo et al. 2002; Park & Shin 2003). We used the cross-sectional Jones (1991) model to estimate discretionary accruals as suggested by DeFond and Jiambalvo (1994), Subramanyam (1996), and Peasnell, Pope and Young (2000a and 2000b). The Jones (1991) model is used because it was used extensively in prior literature and was tested as the most appropriate measure for discretionary accruals estimation. In the Malaysian environment, although there is no formal test on the power of the Jones Model, there have been many studies conducted using this model, for example: Ahmed, Godfrey and Mohd-Saleh (2008), Mohd-Saleh and Ahmed (2007) and Mohd-Saleh and Ahmed (2005).

³ This is the latest data available at the time the research was carried out. The period was chosen because most Malaysian companies had recovered from the financial crisis which started in Asia in 1997. Most companies were badly hit by the crisis and the capital market starts to stabilize in 2001. However, the new Malaysian Code on Corporate Governance was introduced in that year. We expect that not all companies complied with the code at the initial stage of its implementation and this gives rise to other issues such as factors for compliance. Therefore, to avoid the confounding issues, the study selects year 2002 and 2003 for investigation.

Table 2. Sample selection

Selection process	Number of cases
Listed firms in year 2002 and 2003	1,484
Newly listed firms	109
Finance industry, PN4 firms and industry with less than 10 firms	295
Firms with inadequate data	79
Final sample	1,001

The total accruals model, as suggested in the original Jones (1991) model, includes depreciable assets in the estimation of discretionary accruals on the assumption depreciation expense is subject to manipulation. However, as argued by Peasnell et al. (2000), depreciation is more visible to users and, hence, less likely to be manipulated by managers. Working capital accruals are also easier to be manipulated and less visible to users. Therefore, we only focus on working capital accruals that exclude depreciation as suggested by Peasnell et al. (2000). The estimation of discretionary working capital accruals (*DA*) excludes depreciable assets:

$$WCA_{ijt} / A_{ijt-1} = \alpha_{ijt} [1/A_{ijt-1}] + \beta_{1ijt} [\Delta REVENUE_{ijt} / A_{ijt-1}] + \varepsilon_{ijt} \dots \dots \dots (1)$$

where:

- WCA_{ijt} : working capital accruals (changes in non-cash current assets minus changes in liabilities) in year *t* for firm *i* in *j* industry;
- A_{ijt-1} : total assets in year *t-1* for firm *i* in *j* industry;
- $\Delta REVENUE_{ijt}$: changes in revenues in year *t* for firm *i* in *j* industry.

Discretionary accruals are the residuals of the above regression in each industry-year portfolio, based on the Bursa Malaysia industrial classifications (Rees, Gill and Gore, 1996; Subramanyam, 1996; Young, 1995; and Kasznik, 1999). This model expects a normal relationship between working capital accruals and changes in revenues. Consistent with Warfield et al. (1995), we used absolute value of discretionary working capital (*DA*) to detect both income-increasing as well as income-decreasing management of earnings.

4. Independent Variables

Managerial ownership (MAN). This variable is measured as the percentage of shares owned by the directors from total shares issued (McConnell and Servaes 1990; Warfield et al. 1995; Yeo et al. 2002). Consistent with Morck et al (1988), we focus the test on executive directors’ share ownership for several reasons. Therefore, we decompose *MAN* into two additional independent variables, executive ownership (*EXEC*) and non-executive

ownership (*NON-EXEC*). Morck et al., (1988) report that executive directors have the power to influence corporate decisions. They are also more involved with the operations in the firm compared to non-executive directors. We expect a negative relationship between *MAN*, *EXEC* and *DA*.

Block ownership. Previous studies have used various measurements to represent block ownership. Renneboog (2000) lists eight classes of block ownership, which held at least 5% interest in stock. The classes are (1) holding companies (more than 50% interest), (2) banks, (3) investment companies (e.g. Employees Providence Fund), (4) insurance companies, (5) industrial and commercial companies, (6) families and individual investors, (6) federal and regional authorities, and (7) realty investment companies. Following Renneboog (2000), we grouped our data into three classes. These are: (1) individual block ownership (*INDV*), which includes family ownership, (2) institutional ownership (*INST*), and finally (3) ownership by holding companies (*HOLD*). We experienced difficulty in measuring family ownership as this fact was not properly disclosed. We utilized a definition by Faccio and Lang (2002) to calculate family ownership i.e. when company shares are held by a family, an individual or an unlisted firm. Share ownership by investment companies, insurance companies and others are classified as institutional block ownership. A dichotomous variable is used to represent block ownership by holding company. A dummy variable 1 is assigned for a firm with a parent company, and 0 otherwise. A negative relationship is expected between each of the above variables i.e. *INDV*, *INST* and *HOLD*, and *DA*.

Foreign Ownership (FOREIGN). Most foreign ownerships in Malaysia are through foreign nominee or direct ownership by foreign firms. Following Suto (2003) we used the aggregate measure of all total foreign ownership and examined the overall percentage over outstanding share, and predict it to be negatively related to *DA*. Foreign ownership can be seen as one effective mechanism that could complement the current governance structure in order to monitor the management from non-value maximizing activities because their role resembles that of institutional investors (Dahlquist and Robertson, 2001).

Return on Assets (ROA). We include *ROA* to control firm's long term development forecasting error on manager's incentive for earnings management as suggested by Dechow et al. (1995) and Kasznik (1999). Consistent with Kasznik (1999), *ROA* is expected to be positively related to *DA*. *ROA* is measured as changes in net profits before tax over previous year total assets.

Cash flows from operations (CFO). DeFond and Jiambalvo (1994), Dechow et al. (1995) and Peasnell et al. (2000) provide evidence that cash flows from operations have a significant relationship with discretionary accruals. Peasnell et al. (2000) measure cash flows from operations as

operational income before depreciation and amortization minus working capital, divided by lagged total assets. In this study, we used the log of ten for cash flow from operations. The cash flow from operations is measured as cash flow from operation divided by lagged total assets. Consistent with Peasnell et al. (2000), a negative relationship is predicted between this variable and *DA* because *CFO* has a systematic inverse relationship with accruals.

Leverage (LEV). A firm experiencing financial constraints or difficulty tends to manage its earnings in order to protect itself from any action taken by debt holders (Park & Shin, 2003). Most prior studies utilize leverage as a proxy for firm's financial constraint. DeFond & Jiambalvo (1994), Dechow et al. (1995), Warfield et al. (1995), Peasnell et al. (2000) and Park & Shin (2003) indicate that leverage is positively and significantly related to discretionary accruals. This is because the nearer the firms are to financial constraint (usually used in debt covenant) the more likely they will use accruals to increase earnings in order to avoid any violation. In our study we measure leverage as total liabilities divided by the previous year total assets.

Quality audit (AUD). The auditor plays a major role in the client's disclosure policies and practices. Quality external auditors are associated with reports that have less manipulation (Nor Haiza, 2004). Prior studies used the size of audit firms as proxies for audit quality (DeAngelo, 1981). Large audit firms are expected to provide a higher quality audit service than small firms because of the reputation that they have to maintain. We include the size of audit firm as a measure of audit quality in our study. The size is measured based on a dichotomous variable 1 for Big 4 or 5, and zero otherwise. We predict that there is a negative and significant relationship between audit quality measure and discretionary accruals.

Firm size (SIZE). We measure firm size based on Bursa Malaysia (Malaysian Stock Exchange) listing classifications. Firms listed on the main board of Bursa Malaysia are classified as large firms and firms listed on the second board are classified as small firms. Board listing classifies firms based on market capitalization. However, we found that 88% of firms listed on the main board recorded the largest total assets value when the data is sorted according to total assets value. This is consistent to the size measures used in prior literature.

Two tests were run to examine the effect of size of the firm on the relationship between the level of management ownership and discretionary accruals. In the first test, we examined the relationship based on two groups; firms listed on the first board (large firms) and firms listed on the second board (small firms). We predict that the level of management ownership is weaker in large firms compared to small firms. In the second test, we examined the relationship by including the interaction variable; i.e. the interaction effect between level of management ownership and size of the

firm. A dichotomous variable 1 represents firms listed on the main board, and 0 otherwise. We predict there is a positive and significant relationship between the interaction variable with discretionary accruals.

5. Results

5.1. Descriptive Statistics

It appears from Table 3 that the mean value of *SIZE*, *LEV*, *ROA*, *AUD* and *DA* are almost equivalent to their median. Table 3 also indicates that *MAN* and *FOREIGN* may not be normally distributed. Due to this concern, the residuals of the regression were checked to ensure the normality assumption was met. Saved residuals for all regressions were checked for normality using scatter plots and Kolmogorov Smirnov tests. There was no significant non-normality in residuals for all regressions.

Table 3. Descriptive statistics

Variables	Mean	Median	Std. Dev.
SIZE	0.696	1.000	0.460
LEV	0.241	0.170	0.252
ROA	0.027	0.025	0.126
CFO	0.015	0.003	0.092
MAN	9.898	3.260	13.822
EXEC	7.925	1.160	12.351
NONEXEC	1.960	0.030	2.255
BLOCK	8.505	0.050	12.745
INDV	2.179	0.000	6.427
INST	6.325	0.000	11.689
FOREIGN	5.399	0.720	10.771
AUD	0.640	1.000	0.480
DA	0.233	0.197	0.178

Note:

SIZE = Firm size; '1' for firms listed in first board and '0' otherwise.
 LEV = Leverage
 ROA = Return on assets
 CFO = Cash flow from operations
 MAN = Level of management ownership.
 EXEC = Level of management (executive) ownership
 NONEXEC = Level of management (non executive) ownership
 BLOCK = Level of block (individual and institutional) ownership
 INDV = Level of individual block ownership
 INST = Level of institutional block ownership
 FOREIGN = Level of foreign ownership
 AUD = Audit quality, '1' for 'Big 5' dan '0' otherwise.
 DA = Discretionary Accruals

Table 4. Pearson correlation matrix

	1	2	3	4	5	6	7	8	9	10	11	12
MAN	-1.555*	0.925*	0.453*	0.132*	-0.170*	-0.253*	-0.136*	0.044	-0.057	-0.133*	-0.125*	-0.155*
1. DA	1.000	-0.153**	-0.047	0.016	-0.034	-0.068*	-0.023	-0.098**	0.198**	-0.040	-0.032	-0.012
2. EXEC	-	1.000	0.082**	0.109**	-0.158**	-0.242**	-0.142**	0.038	-0.039	-0.153**	-0.140**	-0.184**
3. NON-EXEC	-	-	1.000	0.089*	-0.077**	-0.096*	-0.027	0.014	-0.062	-0.004	-0.007	-0.069*
4. INDV	-	-	-	1.000	-0.103*	-0.139*	-0.078*	-0.041	-0.022	-0.043	0.016	-0.085**
5. INST	-	-	-	-	1.000	-0.028	0.010	0.084**	-0.022	0.051	0.105**	0.117**
6. HOLD	-	-	-	-	-	1.000	-0.018	0.151*	-0.056	0.111**	0.035	0.105*
7. FOREIGN	-	-	-	-	-	-	1.000	0.037	0.013	0.096**	0.118**	0.144**
8. ROA	-	-	-	-	-	-	-	1.000	-0.024**	0.184**	0.015	0.114**
9. LEV	-	-	-	-	-	-	-	-	1.000	-0.035	0.045	0.062
10. CFO	-	-	-	-	-	-	-	-	-	1.000	0.015	0.014
11. AUD	-	-	-	-	-	-	-	-	-	-	1.000	0.193**
12. SIZE	-	-	-	-	-	-	-	-	-	-	-	1.000

* and ** significant at $p < 0.10$ and $p < 0.05$ respectively

Note:

MAN = Level of management ownership (executive and non executive)

DA = Discretionary Accruals

EXEC = Level of executive ownership

EXEC*SIZE = The interaction between size of the firm and executive ownership

NON-EXEC = Level of non-executive ownership

NON-EXEC*SIZE = The interaction between size of the firm and non-executive ownership

INDV = Level of individual block ownership

INST = Level of institutional block ownership

HOLD = Level of holding companies block ownership

FOREIGN = Level of foreign ownership

SIZE = Firm size; '1' for firms listed in first board and '0' otherwise.

ROA = Return on assets

LEV = Leverage

CFO = Cash flow from operations

AUD = Audit quality; '1' for 'Big 5' dan '0' otherwise.

Table 4 presents the correlation analysis for all variables. Table 4 indicates that the correlation between the variables is small, within the range of 0.004 and 0.242. Additionally, we also look for a high Variance Inflation Factors (VIF) when we perform the regression. The highest Variance Inflation Factor (VIF) is only 1.403.⁵ Hence, multicollinearity is not a concern.

5.1.1. Relationship Between the Ownership Structure and Discretionary Accruals

Prior studies show that there are mechanisms to monitor the performance of the management. These include corporate governance mechanisms (Klein, 2002, Singh & Davidson, 2003), external auditors (DeAngelo, 1981; Becker et al., 1988,) and block holders (DeFond & Jiambalvo, 1994; Peasnell et al., 2000; Yeo et al., 2002; Jung et al., 2002; Jiambalvo et al., 2002 and Singh & Davidson, 2003). Consistent with these studies we examined the effect of individual ownership, institutional ownership, holdings companies ownership, management ownership, foreign ownership, firm size, leverage and quality audit on discretionary accruals. Table 5 presents results of the test on the relationship between ownership structure and discretionary accruals.

Table 5 indicates that three of the ownership types are significantly related to discretionary accruals. These are the level of management ownership, institutional ownership and holding companies ownership. While management ownership and holding companies ownership are negatively and significantly related to discretionary accruals at $p < 0.001$, institutional ownership is reported to be negatively and significantly related to discretionary accruals at $p < 0.05$. The Adjusted R^2 for equation 1 is 0.081, which is similar to previous studies as reported in Warfield et al., 1995 (8.34%-12.48%); Ang et al., 2000 (3.0%-8.0%); and Yeo et al., 2002 (3.85%-7.7%).

The results indicate that the higher the level of management ownership, the lower the incentive for managers to manage earnings. This is consistent with Warfield et al. (1995). Earnings management is one of the proxies for agency costs, since it is in conflict with the agency contract. Consistent with the agency theory, our results indicate that conflicts that occur because of the separation of ownership and control will be reduced as managerial ownership increases. In addition, the study also explores whether there is an entrenchment effect of managerial ownership on agency conflict. The data shows that only four observations recorded a high level of managerial ownership (exceeds 25%). Regression analysis utilizing data excluding these observations yields similar results.

⁵ Kennedy (1998) suggests VIF of more than 10 indicates harmful collinearity.

Table 5. Relationship between ownership structure and discretionary accruals (n=1,001)

$$DA_{ij} = \alpha_0 + \alpha_1 MAN_{ij} + \alpha_2 INDV_{ij} + \alpha_3 INST_{ij} + \alpha_4 HOLD_{ij} + \alpha_5 FOREIGN_{ij} + \alpha_6 SIZE_{ij} + \alpha_7 ROA_{ij} + \alpha_8 LEV_{ij} + \alpha_9 CFO_{ij} + \alpha_{10} AUD_{ij} + \varepsilon_{ij}$$

	Predicted Sign	Coefficient	t-stat
Constant		0.263	17.627**
MAN	(-)	-0.003	-6.068**
INDV	(-)	0.001	0.654
INST	(-)	-0.001	-1.690*
HOLD	(-)	-0.048	-2.950*
FOREIGN	(-)	-0.001	-1.248
SIZE	(-)	-0.011	-0.849
ROA	(+)	-0.020	-0.438
LEV	(+)	0.127	5.698**
CFO	(-)	-0.077	-1.270
AUD	(-)	-0.017	-1.483
Adjusted R ² = 0.081		F- statistics = 8.618	Probability > F = 0.000

* and ** significant at p < 0.05 and p < 0.01 respectively

Note:

- DA = Discretionary Accruals
- MAN = Level of management ownership.
- INDV = Level of individual block ownership
- INST = Level of institutional block ownership
- HOLD = Level of holding companies block ownership
- FOREIGN = Level of foreign ownership
- SIZE = Firm size; '1' for firms listed in first board and '0' otherwise.
- ROA = Return on assets
- LEV = Leverage
- CFO = Cash flow from operations
- AUD = Audit quality, '1' for 'Big 5' and '0' otherwise

The significant results for the relationship between institutional ownership and holding companies ownership and discretionary accruals are also consistent with previous studies. The evidence indicates that block ownership plays a significant role in monitoring earnings management activities (Chung et al., 2002; Yeo et al., 2002; Koh, 2003) and agency costs (DeFond & Jiambalvo, 1994; Chung et al., 2002; Jiambalvo et al., 2002; Park & Shin, 2003).

5.1.2. Firm Size as Moderating Factor

We hypothesized that firm size moderates the relationship between the level of executive ownership and discretionary accruals. In order to

investigate this, we perform two types of regression analysis. Extending equation 2, first, we estimated the relationship using two different sub-sample groups; large firms and small firms. Firms that are listed on the main board represent large firms, and firms that are listed on the second board are small firms. We included two additional independent variables, executive ownership (*EXEC*) and non-executive ownership (*NON-EXEC*) to represent management ownership. This separation may capture the role of executive directors who have a direct relationship in managing a firm's business activities in monitoring earnings management. When manager's interest is similar to the incentive of the owner, earnings management behaviour is expected to be reduced.

Table 6 presents the regression results of this estimation. Panel A of Table 6 presents results for regression analysis on large firms. Panel A Table 6 indicates that ownership structure is significantly related to discretionary accruals. Panel A indicates that the level of executive ownership is negatively and significantly related to discretionary accruals at $p < 0.001$. Panel A also reports that holding companies ownership is negatively and significantly related to discretionary accruals at $p < 0.001$. Panel B Table 6 presents results for regression analysis on small firms. Similar to large firms, Panel B indicates that executive ownership and holding companies ownership are negatively and significantly related to discretionary accruals at $p < 0.001$ and $p < 0.050$, respectively. In addition to that, Panel B also indicates that the level of non-executive ownership and institutional ownership are significantly related to discretionary accruals at $p < 0.050$ and $p < 0.001$, respectively.

In our second regression analysis, and to confirm the above findings, we included interaction variable (*SIZE*EXEC*) in equation 2. Size of the firm is represented by '1' for large firms, and '0' otherwise. If we find the coefficient for the interaction variable is significant but the size variable alone is not significant, this indicates that the size of the firm is a 'pure' moderating variable. This is because individually, size of the firm is not significantly related to discretionary accruals (Cohen & Cohen 1975). However, the size of the firm (*SIZE*) is referred to as the 'quasi' moderating variable if the *SIZE* and the interaction variables are both significantly related to discretionary accruals (Sharma et al. 1981; Darrow & Kahl 1982). Table 7 presents results of the extended equation. Our results indicate that the positive and significant relationship between the interaction variable and discretionary accruals weaken the significant relationship between executive ownership and discretionary accruals. Table 7 also indicates that *SIZE* is also significantly related to discretionary accruals. Therefore, we conclude that size of the firm is a 'quasi' moderating variable. This is consistent with our hypothesis that the negative and significant relationship between management ownership is weak (strong) for larger (smaller) firms. However, agency conflicts and earning management (as a proxy for agency

Table 6. The effect of firm size on the relationship between ownership structure and discretionary accruals

$$DA_{ij} = \alpha_0 + \alpha_1 EXEC_{ij} + \alpha_2 NON-EXEC_{ij} + \alpha_3 INDV_{ij} + \alpha_4 INST_{ij} + \alpha_5 HOLD_{ij} + \alpha_6 FOREIGN_{ij} + \alpha_7 ROA_{ij} + \alpha_8 LEV_{ij} + \alpha_9 CFO_{ij} + \alpha_{10} AUD_{ij} + \epsilon_{ij}$$

Panel A: Large Firms (n=697)	Predicted Sign	Coefficient	t-stat
Constant		0.219	13.468**
EXEC	(-)	-0.002	-3.088**
NON-EXEC	(-)	0.000	0.285
INDV	(-)	0.001	0.894
INST	(-)	-0.000	-0.317
HOLD	(-)	-0.033	-1.900**
FOREIGN	(-)	-0.000	-0.287
ROA	(+)	0.123	2.176**
LEV	(+)	0.177	6.596**
CFO	(-)	-0.097	-1.403
AUD	(-)	-0.025	-1.851*
Adjusted R ² = 0.081 F- statistics = 6.012 Probability > F = 0.000			
Panel B: Small Firms (n=304)	Predicted Sign	Coefficient	t-stat
Constant		0.309	13.544**
EXEC	(-)	-0.004	-5.326**
NON-EXEC	(-)	-0.005	-2.450*
INDV	(-)	0.000	0.065
INST	(-)	-0.004	-2.564**
HOLD	(-)	-0.085	-2.230*
FOREIGN	(-)	-0.001	-1.028
ROA	(+)	-0.200	-2.396*
LEV	(+)	0.097	2.311*
CFO	(-)	-0.013	-0.109
AUD	(-)	-0.008	-0.379
Adjusted R ² = 0.173 F- statistics = 6.134 Probability > F = 0.000			

* and ** significant at p < 0.05 and p < 0.01 respectively

Note:

- DA = Discretionary Accruals
- EXEC = Level of executive ownership
- NON-EXEC = Level of non-executive ownership
- INDV = Level of individual block ownership
- INST = Level of institutional block ownership
- HOLD = Level of holding companies block ownership
- FOREIGN = Level of foreign ownership
- ROA = Return on assets
- LEV = Leverage
- CFO = Cash flow from operations
- AUD = Audit quality, '1' for 'Big 5' and '0' otherwise.

Ownership Structure and Earnings Management

costs) can be reduced by increasing the level of management ownership. Nevertheless, this is not the ultimate solution for the issue. This is because large firms tend to use other mechanisms to control earnings management and agency conflict.

Table 7. The effect of interaction variable on the relationship between ownership structure and discretionary accruals (n=1,001)

$$DA_{ij} = \alpha_0 + \alpha_1 EXEC_{ij} + \alpha_2 EXEC*SIZE_{ij} + \alpha_3 NON-EXEC_{ij} + \alpha_4 INDV_{ij} + \alpha_5 INST_{ij} + \alpha_6 HOLD_{ij} + \alpha_7 FOREIGN_{ij} + \alpha_8 SIZE_{ij} + \alpha_9 ROA_{ij} + \alpha_{10} LEV_{ij} + \alpha_{11} CFO_{ij} + \alpha_{12} AUD_{ij} + \varepsilon_{ij}$$

	Predicted Sign	Coefficient	t-stat
Constant		0.276	17.499**
EXEC	(-)	-0.004	-5.881**
EXEC*SIZE	(+)	0.002	2.424**
NON-EXEC	(-)	-0.001	-1.248
INDV	(-)	0.001	0.644
INST	(-)	-0.001	-1.499
HOLD	(-)	-0.045	-0.281**
FOREIGN	(-)	-0.001	-1.280
SIZE	(-)	-0.032	-2.108*
ROA	(+)	-0.019	-0.414
LEV	(+)	0.132	5.924**
CFO	(-)	-0.072	-1.175
AUD	(-)	-0.018	-1.551
Adjusted R ² = 0.077 F- statistics = 7.993 Probability > F = 0.000			

* and ** significant at p < 0.05 and p < 0.01 respectively

Note:

- DA = Discretionary Accruals
- EXEC = Level of executive ownership
- EXEC*SIZE = The interaction between size of the firm and executive ownership
- NON-EXEC = Level of non-executive ownership
- INDV = Level of individual block ownership
- INST = Level of institutional block ownership
- HOLD = Level of holding companies block ownership
- FOREIGN = Level of foreign ownership
- SIZE = Firm size; '1' for firms listed in first board and '0' otherwise.
- ROA = Return on assets
- LEV = Leverage
- CFO = Cash flow from operations
- AUD = Audit quality, '1' for 'Big 5' and '0' otherwise.

6. Conclusion

The objective of this study is to examine the association between ownership structure and earnings management in Malaysian listed companies. Our study provides evidence that the level of management ownership can limit earnings management activities. This is similar to Warfield et al. (1995). In addition, results of this study indicate that the size of the firm is a 'quasi' moderating variable where the negative and significant relationship between the level of management ownership and discretionary accruals is weakened by a positive and significant relationship between the interaction between size of the firm and executive ownership and discretionary accruals. This indicates that although management ownership may reduce the earnings management activities, other factors such as firm size may also affect the behaviour. Managerial ownership is found to be an effective monitoring mechanism, particularly in small firms. This result suggests managerial ownership should be encouraged in small firms so that it can substitute for the weakness of other corporate governance mechanisms. Our study also indicates that other types of ownership play an important role in monitoring firms' activities.

One important limitation of this study is the measurement of foreign ownership which is based on ownership by foreign nominee firms. However, there is a possibility that some local firms used foreign nominee firms to invest in other firms. We are also unable to separate the effect of family ownership from individual ownership since no proper disclosure of the fact was made in annual reports. The results of this study cannot be generalized to other countries since the ownership structure, legal background, minority shareholder's protection and culture are different. This study uses board listing as a measure of size. The difference between both boards, in practice, may not only be size. We suspect there could be differences in other factors such as analyst following, capital structure, the number of transactions that could also lead to the difference in the management incentives and, hence, the behaviour of accruals. These factors are subject to future investigation.

References

- Ahmed, K, Godfrey, J.M. and Mohd-Saleh, N. (2008). Market Perceptions of Discretionary Accruals by Debt Renegotiating Firms During Economic Downturn. *The International Journal of Accounting* 43, 114-138.
- Anderson, R.C., Mansi, S.A., & Reeb, D.M. 2003. Founding Family Ownership and the Agency Cost of Debt, *Journal of Financial Economics* 68, 263- 285.
- Ang, J., Cole, R., & Lin, J. 2000. Agency Cost and Ownership Structure, *Journal of Finance* 55, 81-106.
- Atkinson, A.S. 2002. Ethics in Financial Reporting and the Corporate Communication Professional, *Corporate Communication* 7, 212-218.

Ownership Structure and Earnings Management

- Ball, R., & Foster, G. 1982. Corporate Financial Reporting: A Methodological Review of Empirical Research. *Journal of Accounting Research* 20, 161-234.
- Ball, R., Robin, A., & Wu, J.S. 2003. Incentive Versus Standards: Properties of Accounting Income in Four East Asian Countries, *Journal of Accounting and Economics* 36, 235-270
- Bartov, E., Givoly, D., & Hayn, C. 2002. The Rewards to Meeting or Beating Earnings Expectations, *Journal of Accounting and Economics* 33, 173-204.
- Bartov, E., Gul, F., & Tsui. 2001. Discretionary Accruals Models and Audit Qualifications, *Journal of Accounting and Economics* 30, 421-452.
- Basu, S. 1997. The Conservatism Principle and the Asymmetric Timeliness of Earnings, *Journal of Accounting and Economics* 24, 3-37.
- Beaver, W.H., & McNichols, M.F. 1998. The Characteristics and Valuation of Loss to Allowances for Loan Losses and the Property Casualty Insurer, *Review of Accounting Studies* 3, 73-95.
- Becker, L.C., DeFond, M.L., Jiambalvo, J., & Subramanyam, K.R. 1998. The Effect of Audit Quality on Earnings Management, *Contemporary Accounting Research* 15, 1-24.
- Beneish, M.D. 2001. Earnings management: A Perspective, *Managerial Finance* 27, 3-1.
- Berle, A.A., Jr. & G.C. Means. 1932. *The Modern Corporation and Private Property*. New York: Commerce Clearing House.
- Bhojraj, S., & Sengupta, P. 2003. Effects of Corporate Governance on Bond Ratings and Yields: The Role of Institutional Investor and Outside Directors, *Journal of Business* 76, 455-475.
- Black, K. 2000. *Business statistics: Contemporary decision making*. 3rd Ed.: South – Western College Publishing.
- Bos, A.D., & Donker, H. 2004. Monitoring Accounting Changes: Empirical Evidence from the Netherlands, *Corporate Governance* 12, 60-73.
- Bowen, R.M., Noreen, E.W., & Lacy, J.M. 1981. Determinants of the Corporate Decision to Capitalize Interest, *Journal of Accounting and Economics* 3, 151-179.
- Burgstahler, D., & Dichev, I. 1997. Earnings Management to Avoid Earnings Decreases and Losses, *Journal of Accounting and Economics* 24, 99-126.
- Bushman, R., Chen, Q., Engel, R., & Smith, A. 2003. Financial Accounting Information, Organizational Complexity and Corporate Systems, *Journal of Accounting and Economics* 37, 167-201.
- Cahan, S. 1992. The Effect of Antitrust Investigations on Discretionary Accruals: A Refined Test of the Political-Cost Hypothesis, *The Accounting Review* 67, 77-95.
- Carroll, K.A. 2004. *Property Rights and Managerial Decisions: Comparative Theory and Policy*. Gordonsville, VA, USA: Pal Grave Macmillan.
- Chaney, P.K., & Lewis, C.M. 1998. Income Smoothing and Underperformance in Initial Public Offerings, *Journal of Corporate Finance* 4, 1-29.
- Chaney, P.K., & Lewis, C.M. 1995. Earnings Management and Firm Valuation Under Asymmetric Information, *Journal of Corporate Finance* 1, 319-345.

- Chen, S. and Ho, K.W. (2000). Corporate Diversification, Ownership Structure, and Firm Value: The Singapore Evidence, *International Review of Financial Analysis* 9(3), 315-326.
- Chrisman, J.J., Chua, J.H., & Litz, R.A. 2004. Comparing The Agency Costs Of Family And Non-Family Firms: Conceptual Issues and Exploratory Evidence, *Entrepreneurship: Theory & Practice* 28, 335-355.
- Chung, K.H., Jacob, R.A., & Tang, Y.B. 2003. Earnings Management by Firm Announcing Earnings After SEC filing, *International Advances in Economic Research* 9, 152-164.
- Chung, R., Firth, M., & Kim, J.B. 2002. Institutional Monitoring and Opportunistic Earnings Management, *Journal of Corporate Finance* 8, 29-48.
- Claessens, S., Djankov, S., & Lang, H.P. 2000. The Separation of Ownership and Control in East Asian Corporations, *Journal of Financial Economics* 58, 81-112.
- Cohen, J. & Cohen, P. 1975. *Applied Multivariate Regression/Correlation Analysis for the Behavioral Sciences*: Lawrence Erlbaum.
- Cooper, D.R., & Schindler, P.S. 2001. *Business Research Methods*. 7th Ed. Singapore: McGraw Hill International Editions.
- Core, J.F., Holthausen, R.W., & Larcker, D.F. 1999. Corporate Governance, Chief Executive Officer Compensation and Firm Performance, *Journal of Financial Economics* 51, 371-406.
- Dahlquist, M. and G. Robertson. (2001). Direct Foreign Ownership, Institutional Investors and Firm Characteristics. *Journal of Financial Economics* 59, 413-440.
- Darrow, A.L., & Kahl, D.R. 1982. A Comparison of Moderated Regression Techniques Considering Strength of Effect, *Journal of Management* 8, 35-47.
- David, P., Hitt, M.A., & Gimeno, J. 2001. The Role of Institutional Investors in Influencing R&D, *Academy of Management Journal* 44, 144-157.
- Davis, E.P. 2002. Institutional Investors, Corporate Governance and the Performance of the Corporate Sector, *Economic Systems* 26, 203-229.
- DeAngelo, L.E. 1981. Auditor Size and Audit Quality, *Journal of Accounting and Economics* 3, 183-199.
- DeAngelo, L.E. 1986. Accounting Numbers as Market Valuation Substitutes: A Study of Management Buyouts of Publics' Stockholders, *The Accounting Review* 61, 400-420.
- Dechow, P.M., Sloan, R.G., & Sweeney, A.P. 1995. Detecting Earnings Management, *The Accounting Review* 7, 193-225.
- DeFond, M.L., & Jiambalvo, J. 1994. Debt Covenant Violation and the Manipulation of Accruals, *Journal of Accounting and Economics* 17, 145-176.
- DeFond, M.L., & Park, C.W. 1997. Smoothing Income in Anticipation of Future Earnings, *Journal of Accounting and Economics* 23, 115-140.

Ownership Structure and Earnings Management

- Demsetz, H., & K. Lehn. 1985. The Structure of Corporate Ownership: Causes and Consequences, *Journal of Political Economy* 93, 1155-1177.
- Demsetz, H., & Villalonga, B. 2001. Ownership Structure and Corporate Performance, *Journal of Corporate Finance* 7, 209-233.
- Denis, J. D., Denis, D. K., & Sarin, A. 1997. Agency Problems, Equity Ownership, and Corporate Diversification. *Journal of Finance* 52, 135-160.
- Eccles, R.G. 2001. *The Value Reporting Revolution: Moving Beyond the Earnings Game*. New York: John Wiley & Sons, Incorporated
- Eun, C.S., & Janakiraman, S. 1998. International Ownership and the Firm Value, *Global Finance Journal* 9, 149-171.
- Faccio, M, Lang, L.H.P. (2002). The Ultimate Ownership of Western European Corporations. *Journal of Financial Economics* 65, 365-395.
- Fleming, G., Heaney, R., & McCosker, R. 2005. Agency Cost and Ownership Structure in Australia, *Pacific-Basin Finance Journal* 13, 29-52
- Gagnon, J. M. (1971). The Purchase or Pooling Choice: Some Empirical Evidence. *Journal of Accounting Research* 9, 52-72.
- Gaver, J., Gaver, K., & Austin, J. 1995. Additional Evidence in Bonus Plans and Income Management, *Journal of Accounting and Economics* 19, 3-29.
- Godfrey, J.M., & Juffs, C.A., 1993. Efficiency Versus Opportunism in the Reporting of Foreign Currency Translation Gains and Losses, *Journal of International Accounting, Auditing and Taxation* 1, 83-111.
- Guidry, F., Leone, A.J. & Rock, S. 1999. Earnings-Based Bonus Plans and Earnings Management by Business – Unit Managers. *Journal of Accounting and Economics* 26(1-3), 113-142
- Haniffa, R.M, & Cooke, T.E. 2002. Culture, Corporate Governance and Disclosure in Malaysian Corporations. *ABACUS*, 38(3), 317-349.
- Healy, P.M. 1985. The Effect of Bonus Schemes on Accounting Decisions. *Journal of Accounting and Economics* 7(1-3), 85-107.
- Ho, S.M., & Wong, K.S. 2001. A Study of the Relationship between Corporate Governance Structures and the Extent of Voluntary Disclosure. *Journal of International Accounting, Auditing & Taxation* 10(2), 139-156.
- Holderness, C.G. 2003. A Survey of Blockholders and Corporate Control. *Economic Policy Review - Federal Reserve Bank of New York* 9(1), 51-63.
- Holthausen, R.W., Larcker, D., & Sloan, R. 1995. Annual Bonus Schemes and the Manipulation of Earnings. *Journal of Accounting & Economic* 19 (1), 29-74.
- How, J., Jelic, R. Saadouni, B. & Verhoeven, P.2007. Share Allocations and Performance of KLSE Second Board IPOs. *Pacific-Basin Finance Journal* 15(3), 292-314.
- Jensen, M.C. 1993. The Modern Industrial Revolution, Exit, and the Failure of Internal Control Systems. *Journal of Finance* 48(3), 831-880.

- Jensen, M.C., & Meckling, W.H., 1976. Theory of the Firm: Managerial Behavior, Agency Cost and Ownership Structure. *Journal of Financial Economics* 3(4), 305-360.
- Jiambalvo, J., Rajgopal, S., & Venkatachalam, M. 2002. Institutional Ownership and the Extent to Which Stock Prices Reflect Future Earnings. *Contemporary Accounting Research* 19(1), 117-144.
- Jiraporn, P., Kim, Y.S. & Mathur, I. 2008. Does Corporate Diversification Exacerbate or Mitigate Earnings Management?: An Empirical Analysis. *International Review of Financial Analysis* 17(5), 1087-1109.
- John, K., & Senbet, L.W. 1998. Corporate Governance and Board Effectiveness. *Journal of Banking & Finance* 22(4), 371-403.
- Jones, J.J. 1991. Earnings Management During Import Relief Investigations. *Journal of Accounting Research* 29(2), 193-228.
- Jung, K., & Kwon, S.Y. 2002. Ownership Structure and Earnings Informativeness: Evidence from Korea. *The International Journal of Accounting* 37(3), 301-325.
- Kao, L., & Chen, A. 2004. The Effects of Board Characteristics on Earnings Management. *Corporate Ownership & Control* 1(3), 96-107.
- Kasznik, R. 1999. On the Association between Voluntary Disclosure and Earnings Management. *Journal of Accounting Research* 37(1), 57-81.
- Kennedy, P. (1998). *A Guide to Econometrics*. Massachusetts: The MIT Press.
- Klein, A. 2002. Audit Committee, Board of Director Characteristics and Earnings Management. *Journal of Accounting and Economics* 33(3), 375-400.
- Koh, P.S. 2003. On the Association between Institutional Ownership and Aggressive Corporate Earnings Management in Australia. *The British Accounting Review* 35(2), 105-128.
- Kole, S.R., 1995. Measuring Managerial Equity Ownership: A Comparison of Sources of Ownership Data. *Journal of Corporate Finance* 1(3-4), 413-435.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. 1999. Corporate Ownership Around the World. *Journal of Finance* 54(2), 471-518.
- Lee, Y.S., Rosenstein, S., Wyatt, J.G. 1999. The Value of Financial Outside Directors on Corporate Boards. *International Review of Economics and Finance* 8(4), 421-431.
- Mak, Y.T., & Li, Y. 2001. Determinants of Corporate Ownership and Board Structure: Evidence from Singapore. *Journal of Corporate Finance* 7(3), 235-256.
- McConnell, J.J., & Servaes, H. 1990. Additional Evidence on Equity Ownership and Corporate Value. *Journal of Financial Economics* 27(2), 595-612.
- Mohd-Saleh, N and Ahmed, K. (2007). Accounting Choices of Distressed Firms During Debt Renegotiation: Evidence from Malaysia. *International Journal of Accounting, Auditing and Performance Evaluation* 4(6), 589-607.
- Mohd-Saleh, N. and Ahmed, K. (2005). Earnings Management of Firms Undergoing Debt Contract Renegotiation. *Accounting and Business Research* 35(1), 69-86.

Ownership Structure and Earnings Management

- Morck, R., A, Shleifer, & R, Vishny. 1988. Management Ownership and Market Valuation: An Empirical Analysis. *Journal of Financial Economic* 20, 293-315.
- Nor Haiza. 2004. Pengurusan Perolehan, Urus Tadbir Korporat & Kualiti Audit: Kajian Di Malaysia. *Master Of Accounting Thesis, UKM*.
- Park, Y.W., & Shin, H.H. 2003. Board Composition and Earnings Management in Canada. *Journal of Corporate Finance* 10(3), 431-457
- Patten, D.M., & Trompeter, G. 2003. Corporate Responses to Political Costs: An Examination of the Relation between Environmental Disclosure and Earnings Management. *Journal of Accounting and Public Policy* 22(1), 83-94.
- Peasnell, K.V., Pope, P.F., & Young, S. 2000. Accrual Management to Meet Earnings Targets: UK Evidence Pre – and Post – Cadbury. *British Accounting Review* 32(4), 415-445.
- Randoy, R., & Goel, S. 2003. Ownership Structure, Founder Leadership, and Performance in Norwegian SMEs: Implication for Financing Entrepreneurial Opportunities. *Journal of Business Venturing* 18(5), 619-637.
- Renneboog, L. 2000. Ownership, Managerial Control and the Governance of Companies Listed on the Brussels Stock Exchange. *Journal of Banking & Finance* 24(12), 1959-1995.
- Roe, M.J. 1994. *Strong managers, weak owners: The political Roots of American Corporate Finance*. Pg. 11. Ewing, NJ, USA: Princeton University Press.
- Rosenstein, R., & Wyatt, J.G. 1997. Inside Directors, Board Effectiveness, and Shareholder Wealth. *Journal of Financial Economics* 44(2), 229-250.
- Schipper, K. 1989. Earning Management. *Accounting Horizons* 15(4), 91-102.
- Shalit, S. S, & Sankar, U. 1977. The Measurement of Firm Size. *Review of Economics & Statistics* 59(3), 290 - 298
- Sharma, S., Durand, R.M., & Gur-Arie, O. 1981. Identification and Analysis of Moderator Variables. *Journal of Marketing Research* 18(3), 291-300.
- Shleifer, A., & Vishny, R. 1997. A Survey of Corporate Governance. *Journal of Finance* 52(2), 737-785.
- Shleifer, A., & Vishny, R.W. 1986. Large Shareholders and Corporate Control. *Journal of Political Economy* 94(3), 461-488.
- Singh, M., & Davidson, W.N. 2003. Agency Cost, Ownership Structure and Corporate Governance Mechanisms. *Journal of Banking & Finance* 27(5), 793-816
- Smith, M.P. 1996. Shareholder Activism by Institutional Investors: Evidence from CalPERS. *Journal of Finance* 51(1), 227-252.
- Steven, F.C., Betty, M.C., Richard, G.E. 1997. Earnings Management of Chemical Firms in Response to Political Cost from Environmental Legislation. *Journal of Accounting, Auditing and Finance* 12(1), 37-65.
- Suto, M. 2003. Capital Structure and Investment Behaviour of Malaysian Firms in the 1990s: A Study of Corporate Governance Before the Crisis. *Corporate Governance: An International Review* 11(1), 25-40.

- Sweeney, A.P. 1994. Debt-Covenant Violations and Manager's Accounting Responses. *Journal of Accounting and Economics* 17(3), 281-308.
- Teoh, S.H., Welch, I., & Wong, T.J. 1998. *Journal of Finance* 53(6), 1935-175.
- Thomas, A.P. 1991. Towards a Contingency Theory of Corporate Financial Reporting Systems. *Journal of Accounting, Auditing & Accountability* 4(4), 40-57.
- Tihanyi, L., Johnson, R.A., Hoskisson, R.E., & Hitt, M.A. 2003. Institutional Ownership Differences and International Diversification: The Effects of Boards of Directors and Technological Opportunity. *Academy of Management Journal* 46(2), 195-211.
- Toutenburg, H. 2002. *Statistical Analysis of Designed Experiments*. Secaucus, NJ: Springer-Verlag New York, Incorporated.
- Vafeas, N. 1999. Board Meeting Frequency and Firm Performance. *Journal of Financial Economics* 53(1), 113-142.
- Van den Berghe, L. 2002. *Corporate Governance in a Globalising World: Convergence or Divergence?: A European Perspective*. Hingham, MA, USA: Kluwer Academic Publisher.
- Warfield, T.D., Wild, J.J., & Wild, K.L. 1995. Managerial Ownership, Accounting Choices, and Informativeness of Earnings. *Journal of Accounting and Economics* 20(1), 61-91.
- Watts, R.L., & Zimmerman, J.L. 1986. *Positive Accounting Theory*. Englewood Cliffs: Prentice Hall.
- Watts, R.L., & Zimmerman, J.L. 1978. Towards a Positive Theory of the Determination of Accounting Standards. *The Accounting Review* 53(1), 112-136.
- Xu, X., & Wang, Y. 1999. Ownership Structure and Corporate Governance in Chinese Stock Companies. *China Economic Review* 10(1), 75-98.
- Yeo, H.H., Tan, M.S., Ho, K.W., & Chen, S.S. 2002. Corporate Ownership Structure and the Informativeness of Earnings. *Journal of Business Finance and Accounting* 29(7) & (8), 1023-1046.
- Young, S. 1999. Systematic Measurement Error in the Estimation of Discretionary Accruals: An Evaluation of Alternative Modeling Procedures. *Journal of Business Finance & Accounting* 26(7-8), 833-863
- Yu, F. 2008. Analyst Coverage and Earnings Management. *Journal of Financial Economics* 88(2), 245-271.
- Zimmerman, J.L. 1983. Taxes and Firm Size. *Journal of Accounting and Economics* 5, 119-149.