Abstract
This paper aims to analyse the mitigating effects of ownership structure on earnings management (EM) practices. Data were collected from firms listed on Bursa Malaysia’s main market, covering the years 2011 through 2021. Panel Regression was employed to analyses the data, with the aid of STATA software version 17. The finding of this study confirmed significant negative association between foreign ownership (FOW) and EM of listed firms in Malaysia. Additionally, managerial ownership (MOW) and ownership concentration (OC) were found to be insignificantly related to EM. Similarly, the two control variables included in the analysis, only firm size (FISZ) was found to be significantly related to EM practices. Practically, this study offers an effective framework for OC, MOW, FOW and EM to reduce executive manager's opportunistic behaviour. The findings from this study supports the need for broader understanding so that investors and other stakeholders can see through earnings reports and, as a result, make informed contractual decisions, particularly when those decisions pertain to non-owner-controlled firms. In addition, the study’s findings provide helpful information to stakeholders in Malaysian listed companies on the value of FOW and it influence on EM mitigation.

Keywords: Earnings management, Foreign ownership, Managerial ownership, ownership concentration.

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1. **Introduction**

In the context of corporate governance (CG), issues related to earnings management (EM) is becoming increasingly important, where executive managers' opportunistic behaviour in the manipulation and misuse of shareholder funds are prevalent, potentially resulting in reputational damage (Nasir, et al., 2018). In most cases, public disclosure of EM, if preceded by legal action from aggrieved shareholders and other interested parties, will result in a loss of investor confidence which is usually followed by a change in stock prices and also to reputable auditors concerned (Saona, Muro & Alvarado, 2020; Astami, Rusmin & Evans, 2017; Affes & Smii, 2016). Nevertheless, the quality of CG is still being developed, as it is not yet at a satisfactory level in the majority of countries (Dao & Ngo, 2020; Chapple, et al., 2018; Domenico & Ray, 2014). This shows that developing effective CG is encouraging, and could reflects Malaysian experience markets, where companies are investing more in developing robust and effective control activities as part of their corporate controls (Tuan, Mohamad Ariff & Hashim, 2020). However, earnings manipulation are extremely common and disturbing. When financial crises emerge, members of the public frequently inquire why auditors do not carry out their duties and obligations with full diligence, believing that auditors are responsible for detecting fraud and other related crime activities (Tuan, et al., 2020; Hashim et al., 2019; DeZoort & Harrison, 2018).

A large number of academic studies have established that the various scandals and malpractices within the CG in Malaysia necessitate reforms to address the underlying issues, which include ownership concentration, ownership composition, political influence, earnings manipulation, and disclosure issues (Zulkefli & Quddus, 2019; Hasan, et al., 2019; Ali & Nasir, 2018; Mohammed, Sanusi & Alsudairi, 2017). It has been shown that the emergence of Malaysian corporate code of governance (MCCG) was designed with the objective of resolving and controlling the issue of power imbalance and decision-making authority and other CG issue (Al-Sayani, et al., 2020; Mohammed et al., 2017). The audit committees (AC) responsibilities, ownership structure (OS) and audit function, were strengthened in the amended version of MCCG (2017). Ownership structure (OS) has a variety of meanings and concepts. Composure of one of the key dimensions of CG is ownership of a company, which refers to the
essence of ownership of a firm's equity shareholding. OS reflects the potential distribution of control in the firm. As the world’s economies become more and more globalised, the OS of companies is currently characterised by change processes (Chen, Jory & Ngo, 2019; Hasan, et al., 2019).

Several earlier studies on EM concentrate on studies of EM-related events, such as initial public offerings, seasoned equity offers, import relief investigations, and loan covenant violations. In contrast to other research, this study addresses the issue to listed firms and broadens understanding of EM. This research add to the existing body of knowledge and literature through the combination of OS (foreign ownership, managerial ownership and ownership concentration) under a single model. The study contribute to the literature on how OS help explain the behaviour of EM among listed firms in Malaysia. Furthermore, this research add to the little and inconsistent evidence for the effectiveness of foreign ownership (FOW), managerial ownership(MOW) and ownership concentration (OC) on constraining EM(discretionary accrual) estimated by Kathori et al. (2005) model.

2. Literature Review, Theoretical Background and Hypotheses Development
Generally, EM involves different activities ranging from legitimate to outright fraudulent and false financial reporting. EM is described by Schipper (1986) as a purposeful interference in the external financial reporting process with the aim of obtaining personal benefit. Many of the previous studies used Schipper definition to explain EM (Al-Shattarat, 2021; Rahahleh, et al., 2019; Francis, Hasan & Li, 2016; Alzoubi 2016; Soliman & Ragab, 2014). It was also suggested that EM occurs when managers, with or without controls, exercise control over accounting numbers. The discretion is used to maximise either the firm's value (shareholder wealth) or the selfish interests of managers (opportunistic EM).

The OS is viewed as a CG tool that can be utilised to lower agency costs associated with agency problems (Jensen & Mackling, 1976). Demsetz (2006) viewed the firm’s OS as an endogenous result of an optimising mechanism in which there is more at stake than simply accommodating the neglecting issue. Ramadan (2015) classified OS as an organised way of doing business. This includes sole proprietorship, partnership,
corporation and non-profit making organisations. Dinga (2005) stated that types of share ownership by a corporation is basically a fractionated ownership.

2.1 Theoretical Background and Hypotheses Development

The basis of agency theory is the conflict between owners and managers. Higher-quality financial reporting helps to mitigate this disagreement. In other words, accurate financial reporting is a useful technique for owners to keep track of management activities. It can improve management's stewardship or responsibility to the owners of the firm (El-Moslemany & Nathan, 2019; Salehi et al., 2017). Agency theory and CG literature assume that the OS can be an important means of manager regulation because it puts together the foundations of an efficient control system (Hamdan & Al Mubarak, 2017; Gibson, 2014; Gonzalez & Garcia-meca, 2013; Hayam & Khaled, 2013). Many previous studies documented that OS of a firms could be essentials to the effectiveness of the oversight processes used to minimise the risk of EM practice (Bao & Lewellyn, 2017; Shayan, et al., 2017; Hsu & Wen, 2015; Aygum & Sayim, 2014). However, this study used agency theory to explore the link between OS and EM practices in the listed firms. Agency theory was chosen because it better explains the motive for EM and the relationship between OC, MOW, FOW and EM.

2.2 Ownership Concentration (OC) and Earnings Management

OC is an important internal CG mechanism that allows owners to exert control over and influence over the firm in order to safeguard their interests (Madhani, 2016). Zhong, et al. (2007) asserted OC as percentage of shares owned by the shareholders (typically greater than 5%). Since they will incur control costs, small shareholders are not interested in controlling the company. Major shareholders play a significant role in business control since they have a financial power to ensure and manage the company in order to protect their interests (Nguyen, et al., 2021). Hence, OC is a significant internal mechanism of CG as it determines the power and control between the management and the owner (Jumreornvong, et al., 2019). Numerous other previous studies also examined the effect of OC on EM and earnings quality (Pugatekaew, 2021; Piosik & Genge, 2020; Guangguo, Ruiqi & Hezun, 2019; Grimaldi & Muserra, 2017; Parveen, et al., 2016; Wang, Cao & Ye, 2015). These studies indicates negative relationship between OC and
EM, which implies that OC improves the quality of earning and reduces the level of EM practices. When capital concentration and shareholders nature are present, agency theory and CG literature assume that the OS can be an effective means of manager’s control (Zraiq & Fadzil, 2018; Gibson, 2014; Hayam & Khaled, 2013). This shows that OC play a significant role in business control and financial power to ensure that manager of the firms protect their interests and control EM. Based on the presented arguments, this study propose the following:

H1: Ownership concentration (OC) significantly influence the level of EM

2.3 Managerial Ownership (MOW) and Earnings Management

The percentage of equity shares owned by directors and their immediate families at the end of the accounting year is known as managerial ownership (MOW). MOW was also defined as ownership by members of the board. Mindzak and Zeng, (2018), El-Moslemany and Nathan (2019) have shown that the managerial owners to be an efficient method of control that leads to better management control lowers EM actions. Similarly, prior studies have shown that the presence of such shareholders improves the accuracy and reliability of financial statements (Abdullahi & Ja’afaru, 2017; Lai & Tam, 2017). Several other studies indicated that, MOW found to be significantly influence the level of EM practices (Nguyen, et al., 2021, 2020; O’Callaghan, Ashton, & Hodgkinson, 2018; Saona & Muro, 2018; Di Meo, Lara & Surroca, 2017). The relationship between managerial shareholdings and the amount of EM is notably negative, implying that managers with a major portion of ownership can effectively supervise other managers practising EM. Agency theory and CG literature assume that the OS can be an important means of manager regulation because it puts together the foundations of an efficient control system (Hamdan & Al Mubarak, 2017; Gibson, 2014; Gonzalez & Garcia-meca, 2013; Reyna, 2012). Base on the above studies, the fourteenth hypothesis is as follows:

H2: Managerial shareholdings significantly influence the level of EM
2.4 Foreign Ownership (FOW) and Earnings Management

Bao and Lewellyn (2017) perceived foreign ownership (FOW) as an investor's ownership in stock exchange market of another country, whether they are natural or legal persons. When an individual, a firm, or a multinational corporation that does business in many countries invests in a foreign country, usually through foreign direct investment or acquisition, it is known as foreign ownership (FOW) or control. When a firm acquires at least half of another firm, it becomes a holding company, and the company that were acquired becomes a subsidiary. FOW has been shown to strengthen a company's corporate reporting practices, and foreign investors are more likely to encourage management to provide more information as results of its power (Chen, Jory & Ngo, 2019; Alrabba, et al., 2018).

It has been suggested that foreign investment is more in companies that report more reliable information and it is more likely to allow management to share more information because of their ownership control. Agency theory contends that FOW monitoring may be a crucial CG mechanism (the efficient monitoring hypothesis). In essence, foreign investors may be capable of providing active oversight that is difficult for local investors, more apathetic, or uninformed investors (El-Moslemany & Nathan, 2019; Chen, et al., 2019). Foreign investors also have the chance, means, and capacity to keep a close watch on managers. Moreover, managers are less opportune to opportunistically manipulate earnings as a result of the effective monitoring, and hence FOW is likely linked to better management activity. The efficient monitoring hypothesis proposes an inverse association between a firm’s EM practices and its FOW.

Several studies indicated that FOW seek to invest in firms with sound and effective CG (Mazumder, 2016; Alzoubi, 2016). FOW have been found to reduced EM in several earlier studies (Debnath, et al., 2021; Nguyen, et al., 2021; Tran, Ly & Nguyen, 2020; Kim, An & Udawatte, 2020; Baig, De Lisle & Zaynutdinova, 2018). These studies found that firms with foreign ownership as the largest shareholders engage in significantly lower EM. The studies also documented that EM reduces and monitors effectively through FOW. This discussion leads to the following hypothesis.

H3: Foreign ownership significantly influence the level of EM.
3. **Research Methodology**

This study population comprises 775 firms listed on Bursa Malaysia's Main market as of September 2021. The study have examined the firms listed in Main Market for data availability and suitability. A total of 178 firms were removed from the population for firms newly listed and firms with incomplete financial reports for the period of the study. The total of 31 financial firms was removed from the analysis due to the uniqueness of financial reporting requirements towards these firms. The final number of firms used for this study is 566, which represents 73 percent of the total firms listed in the Main Market and resulted in 6,226 firm-year observations. Data were obtained from Bloomberg, firm’s websites and the Bursa Malaysia during the study period. The GLS method of Panel regression was employed as the primary data analysis approach and the analyses was performed using STATA Version 17.

3.1 **Earnings Management Estimations**

The dependent variable, level of EM, were estimated using Kothari et al (2005) model. DACC proxy of EM measure consist in estimating the total accrual and extracting non-discretionary accrual (NDACC) from total accrual (TACC). In 2005, Kathori et al. has adopted Dechow et al. (1995) model and adjusted for a performance-matched firm’s DACC. However, Kothari model is used as the appropriate DACC measure in this study as it retains all three original explanatory variables. The model is expressed below:

\[
\text{DACC}_t = \text{TACC}_t - \text{NDACC}_t \\
\frac{\text{TACC}_{it}}{A_{it-1}} = \left( \frac{\Delta \text{CA}_{it} - \Delta \text{CL}_{it} - \Delta \text{Cash}_{it} + \Delta \text{STD}_{it} - \text{Dep}_{it}}{A_{it-1}} \right) = \alpha_1 t (1/A_{it-1}) + \alpha_2 i \left( \frac{\Delta \text{REV}_{it} - \Delta \text{REC}_{it}}{A_{it-1}} \right) + \alpha_3 i \left( \frac{\text{PPE}_{its}}{A_{it-1}} \right) + \alpha_4 i (\text{ROA}_{it}) + \epsilon_{it} 
\]

(1)

3.2 **Measurement of the Independent Variables**

Four independent variables have been identified as significant in determining EM practices in firms. The study also identified two control variables that influence the effects of independent variables on EM practices.

The three proxies of OS (managerial ownership concentration (OC) and foreign, ownership (FOW) were also examined in this study. MOW was measure as the proportion of the total shares owned through directors (executive) divided by the total
shares (Pucheta-Martínez & Fuentes, 2007; Alzoubi, 2017). Secondly, OC was measure as percentage of shares owned by large shareholder (Pucheta-Martínez & Fuentes, 2007; Bao & Lewellyn, 2017; Nguyen, Evans & Lu, 2017). This study also used FOW, which were measured as shares owned by foreign shareholders (Alzoubi, 2016; Alrabba, et al., 2018). Firm size (FSIZ) is measured as logarithm of TA of the firms (Ali & Zhang, 2015). Similarly, firm age was measured in this study as natural logarithm of the number of years a firm spent from the time of its incorporation (Molnar, Wang & Cheng, 2017).

### 3.3 Model Specification

Multiple regression methods using GLS method of Panel Regression (fixed and random effect) models were used to test the study's hypotheses, based on previous studies' recommendations. The empirical models in this study are expressed mathematically as follows:

\[
EM(DACCK)_{it} = \alpha + \beta_1 MOW_{it} + \beta_2 OC_{it} + \beta_3 FOW_{it} + \beta_4 FISZ_{it} + \beta_5 FAGE_{it} + \mu_{it} \tag{3}
\]

where: the subscript i and t represent the firm and time respectively; \( \beta \) and \( \mu_{it} \) are the coefficients of the explanatory variables, and the error term respectively.

### 4. Results and Discussion

The EM variable measured by DACCK has mean values of 0.103 with a minimum values of 0 and maximum of 0.871. The findings also indicated that managerial ownership (MOW) has a mean values of 1.365 and with minimum values of 0.008 and maximum of 582. The results also reveal that the ownership of firms in Malaysia is highly concentrated with an average of 0.852. Foreign ownership (FOWN) show mean, standard deviation, minimum and maximum of 0.180, 0.061, 0 and 282 respectively. Similarly, the control variables FSZE and FAGE have mean values of 7.130 and 1.423 respectively with the minimum values of 3.145 and 1.423. The maximum value was 9.815 and 1.633 while the standard deviation stood at 1.096 and 0.105 respectively. Moreover, the magnitudes of the correlations are sufficiently low and the VIF values are well below 10, indicating that multicollinearity is not an issue in the data. Table 1 shows the descriptive statistics of the dependent variables (DACCK), explanatory variables (OC, MOW, FOW, FISZ and FAGE) for the full sample.
Table 1: Descriptive Statistics

<table>
<thead>
<tr>
<th>Variables</th>
<th>Obs</th>
<th>Means</th>
<th>Std deviation</th>
<th>min</th>
<th>max</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>DACCK</td>
<td>6,226</td>
<td>0.1034</td>
<td>0.15081</td>
<td>0</td>
<td>0.871</td>
<td>1.22</td>
</tr>
<tr>
<td>OC</td>
<td>6,226</td>
<td>0.8529</td>
<td>0.61509</td>
<td>0.0007</td>
<td>178.78</td>
<td>1.67</td>
</tr>
<tr>
<td>MOW</td>
<td>6,226</td>
<td>1.3654</td>
<td>0.98465</td>
<td>0.0082</td>
<td>582.54</td>
<td>1.55</td>
</tr>
<tr>
<td>FOW</td>
<td>6,226</td>
<td>0.1809</td>
<td>0.06197</td>
<td>0</td>
<td>282.05</td>
<td>1.45</td>
</tr>
<tr>
<td>FISZ</td>
<td>6,226</td>
<td>7.1304</td>
<td>1.09609</td>
<td>3.1456</td>
<td>9.6153</td>
<td>1.25</td>
</tr>
<tr>
<td>FAGE</td>
<td>6,226</td>
<td>1.4234</td>
<td>0.10549</td>
<td>0.8450</td>
<td>1.6334</td>
<td>1.33</td>
</tr>
</tbody>
</table>

In particular, the direct relationship between OC, MOW, FOW and EM in the sampled firms. As stated earlier, OS is the independent variable proxies with OC, MOW, FOW, while EM is the dependent variable, which is measured discretionary accrual (DACCK) estimated by kathori et al. (2005) model. A series of multivariate diagnostics was also performed to ensure data suitability for further analysis. The diagnostics test confirmed that heteroskedasticity is not present and the selected model can be retained. Secondly, based on the Hausman’s test, it has been decided that random effect (RE) model is more fitting for DACCK models. Table 2 presents the results of multiple regression analysis performed. The model were found to be significant (p-value = 0.0000), with R-square values of 0.798.

Table 2: Multiple Regression Results

<table>
<thead>
<tr>
<th>Expected Sign</th>
<th>DACCK (EM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>18.72 (-4.20) ***</td>
</tr>
<tr>
<td>MOW</td>
<td>–</td>
</tr>
<tr>
<td>OC</td>
<td>–</td>
</tr>
<tr>
<td>FOWN</td>
<td>–</td>
</tr>
<tr>
<td>FSIZ</td>
<td>inconclusive</td>
</tr>
<tr>
<td>FAGE</td>
<td>inconclusive</td>
</tr>
<tr>
<td>F-statistics/Wald</td>
<td>566.81 ***</td>
</tr>
<tr>
<td>Chi²</td>
<td>0.798</td>
</tr>
<tr>
<td>R-Square</td>
<td>11.58(0.9293)</td>
</tr>
<tr>
<td>Hausman’s test</td>
<td>0.3572</td>
</tr>
<tr>
<td>No. of observations</td>
<td>6,226</td>
</tr>
<tr>
<td>No. of Groups</td>
<td>566</td>
</tr>
</tbody>
</table>

Notes: ***, **, * denotes 0.1%, 1%, and 5% level of significance. Coefficients are outside the parentheses and t-statistics are within the parentheses. Variables are defined as follows: managerial ownership (MOW), ownership concentration (OC), foreign ownership (FOW), firms size (FSZE), firms age (FAGE).

The RE results indicates that FOW are found to be negatively and significantly related with EM (β = -0.034, t = -6.54). The results also indicated that MOW and OC are found
to be insignificantly related with EM ($\beta = 0.054$, $t = 1.17$; $\beta = 0.011$, $t = 1.67$). However, this shows that the results are inconsistent with the hypotheses developed (H1 & 2). Additionally, the RE regression results shows that FISZ have significant relationship with EM ($\beta = 0.024$, $t = 4.39$), while FAGE indicated insignificant association with EM (DACCK) ($\beta = 0.026$, $t = 1.20$).

5. Discussions

The findings of this study indicates insignificant negative relationship between OC and EM, hence the findings does not supports H1 that OC influence EM practices. The argument that blockholders assist the company by matching the interests of shareholders and directors is contradicted by this study findings. It's possible that Managers may be under pressure to ensure that the company achieves positive financial results when blockholders are closely watching the company's financial issues. Empirically, this study is inconsistent with previous studies document an effect of the OC in preventing opportunistic EM (Pugatekaew, 2021; Piosik & Genge, 2020; Guangguo, et al., 2019; Martin & Reyna, 2018; Grimaldi & Muserra, 2017; Parveen, et al., 2016; Wang, et al., 2015).

The finding of this study also shows that MOW indicates insignificant association with the level of EM, hence the results does not supports H2 that MOW mitigates EM. Given the small amount of equity held by the managers, it seems doubtful that MOW will be unable to resolve any possible conflicts of interest brought on by the separation of ownership and control. However, this study finds that MOW has no effect on the level of EM. The finding is contrary to the previous studies of Mindzak and Zeng, (2018), El-Moslemany and Nathan (2019), Abdullahi and Ja’afaru, (2017) who have shown that the managerial owners are efficient method of control that leads to better management control lowers opportunistic behaviour. The contradictory relationship between OC, MOW and EM discovered in this study, however, shows that OC and MOW are less effective than advocated by agency theorists in minimising EM and reducing agency issues. The plausible reason for the inconsistent results is that the EM proxy is different in their study as most of the studies used a five-year average period, whereas this study uses three different models. The findings of this study also indicated that increasing the number of FOW constrains EM. The significant negatively signed coefficient on FOW
supports this hypothesis (H3). This implies that FOW effectively constrain EM. The findings is consistent with several studies (Debnath, et al., 2021; Nguyen, et al., 2021; Tran, et al., 2020; Kim, An & Udawatte, 2020).

The result of this study shows that the effect between FISZ and EM is statistically significant ($p<0.05$). The result supports many other findings in this area (Kim, et al., 2020; Arja, et al., 2019; Ali & Zhang, 2015). This suggests that the explained variation in the models appears to be significantly influenced by the size of the firm and that larger firms should be more likely to prevent EM due to more advanced control systems, the positive value shows that larger firms are more likely to engage in EM. For firms age (FAGE) control variable is found to have insignificant negative relationship with EM. In line with earlier research by Nguyen et al. (2021), DeZoort and Harrison (2018), the negative relationship suggests that the level of EM decreases as firm age increases. This suggested that large firms are subject to more scrutiny from the public than smaller firms with shorter service ages. The finding also demonstrated that as it’s important to satisfy stakeholders expectations, older firms should have higher EM. The results contradict this claim because the positive coefficient indicates that EM practice increases with firm age.

6. Conclusion and Implication

In general, the findings of this study suggests that firms with effective OS such as FOW mitigates EM. Moreover, other ownership factors, namely ownership concentration (OC) and managerial ownership (MOW), have no effect on the level of EM. Moreover, the expectation of some beneficial OS variables and constraining opportunistic EM activities was to a large extent found to be inaccurate in Malaysia. That is, OS variables (MOW and OC) examined in this research have insignificant effect on EM. The findings of this study demonstrates that it is essential for companies to practice good OS mechanisms, establishing the structure tasked with assessing the board of commissioner to control the internal operations of the firm. It is essential that stakeholders need to be more informed of the methods and effects of EM. The findings from this study supports the need for broader understanding so that investors and other stakeholders can see through earnings reports and, as a result, make informed contractual decisions, particularly when those decisions pertain to non-owner-controlled firms.
References


