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The Impact of COVID-19 Pandemic and IFRS Adoption on Earnings Quality: Malaysian Evidence

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Abstract
The coronavirus (COVID-19) pandemic is regarded as the world's most serious health, economic, and social crisis. Therefore, managers play an important role in ensuring the survival of their business, and their discretion in financial reporting during a crisis becomes an interesting area to study. Meanwhile, the adoption of the International Financial Reporting Standard (IFRS) is anticipated to enhance the accuracy of earnings reported in financial statements. As a result, the objective of this study is to investigate the relationship between IFRS adoption and the impact of COVID-19 on earnings quality among Malaysian public listed companies. This study used two measures of earnings management: Accrual Earnings Management (AEM) and Real Earnings Management (REM). The sample of this study covers the period after the implementation of MFRS 111 for Construction companies in the year 2012 until the latest COVID-19 outbreak up to the year 2021. This study discovered that earnings management decreases after the adoption of IFRS, indicating that earnings management activities have been mitigated. However, the results also demonstrate that that earnings management figures are significant during the COVID-19 outbreak. Furthermore, the findings show that board composition and firm characteristics have an impact on firms' decisions to manage their earnings, whether on an accrual or real earnings management basis.
Keywords: Earnings Management, IFRS, MFRS, COVID-19, Earnings Quality

Introduction

The relationship between corporate governance and financial reporting quality is one of the most common topics studied by accounting academics. The board of directors, a key corporate governance instrument, is responsible for managing and guiding a company's organisation as well as defending the interests of all stakeholders (Fama & Jensen, 1983; Jensen & Meckling, 2019). The board of directors plays a critical role in ensuring effective corporate governance for the corporation to reduce information asymmetry, control insider opportunism, and mitigate managerial incentives in earnings management practises, thereby

contributing to the integrity of financial reporting (Chen et al., 2011; Chi et al., 2015; Khalil & Ozkan, 2016; Peasnell et al., 2005).

As a result, the purpose of this study is to investigate how earnings management has changed since the implementation of IFRS, as well as how COVID-19 has affected companies listed on the Bursa Malaysia, particularly those in the construction industry, due to the unique features of their business that allow for earnings management (Abdullah, 2013). Additionally, this study examines how the qualities of a corporate board (board size, female directors, board independence, audit committee, and audit committee with expertise) affect the quality of financial reporting. This study employs accruals earnings management (AEM) and real earnings management (REM) as proxies for the quality of earnings reported in financial statements, which is consistent with earlier studies. The analysis discovers that the presence of female directors on boards has a significant negative relationship with EM from the year 2017 to the latest 2021. The remainder of the paper is organised as follows. Section 2 includes the development of study hypotheses as well as existing literature on the implementation of IFRS, COVID-19, corporate boards, and EM. Section 3 explains the research design and data methodology. Section 4 presents and discusses the findings, while Section 5.0 provides a summary and conclusion.

Literature Review and Hypotheses Development
Earnings Management and the International Financial Reporting Standard (IFRS) and the Malaysian Financial Reporting Standard (MFRS)

Schipper (1989) defined earnings management (EM) as a deliberate intervention in the external financial reporting process to achieve some sort of personal gain. Healy & Wahlen (1999) claim that managers use discretion in financial reporting and transaction structuring to change financial reports, either to deceive some stakeholders about the company's true economic performance or to influence the terms of contracts that depend on the reported accounting numbers. In addition, Sun & Rath (2008) define EM as managers using their judgement to conceal true performance to either affect stock performance, profit from the contractual obligations between the firm and the managers, or influence regulatory decisions. According to earlier research, EM is thus characterised as a situation in which managers can manipulate financial reporting to highlight the best aspects of their company. The likelihood that the enterprises would attract stakeholders' attention increased as their performance was portrayed. EM is thus defined by previous research as a situation in which managers can manipulate financial reporting to highlight the best aspects of their company. The likelihood that the enterprises would attract the attention of stakeholders increased as their performance was depicted. Essentially, EM is divided into two categories: real earnings management (REM) and accrual earnings management (AEM). AEM occurs when managers are permitted by GAAP to use their discretion to conceal the true state of the company (Dechow et al., 1995). REM, on the other hand, occurs when managers are successful in modifying reported earnings by changing the timing or structure of an operation, investment, or financing transaction to affect the accounting system's output

Meanwhile, the Financial Reporting Act of 1997 established two independent organisations, the Malaysian Accounting Standard Board (MASB) and the Financial Reporting Foundation (FRF), to create and publish accounting and financial reporting standards in Malaysia to improve the quality of financial statement reporting. The MASB regulated the financial

reporting standards by periodically enhancing them through the standard's obligatory application and revision procedure. The International Financial Reporting Standard (IFRS), now known as the International Accounting Standards (IAS), was closely followed by Malaysia's accounting standard (IFRS). The implementation of the Malaysian Financial Reporting Standard (MFRS) was released by the Malaysian Accounting Standard Board (MASB) in November 2011. The entire convergence will be in place as of January 1, 2012. MFRS 111 Construction Contracts, which focuses on construction companies, is one of the standards.

The construction sectors have unique financial reporting requirements due to their distinctive traits and type of corporate activities. As a result of this differentiation, managers have more opportunities to control their companies' profits. Here are a few examples of managers who take advantage provided by the traits of the construction company: First, since the construction activity requires more than one accounting period to complete, managers can choose when to manage their earnings. Due to the inherent uncertainties in revenue recognition, because it is dependent on estimation throughout the construction period, the manager can manage earnings (MASB, 2007). Additionally, based on the third characteristic, the result of a building project cannot be predicted in the early stages of the project. Last but not least, this industry has a lot of current assets, especially in the area of materials and non-current assets, which indirectly provide great opportunities to manage discretionary accruals through accounts payable, accounts receivable, and depreciation, while the nature of the property industry's sales process has an impact on the recognition and measurement of revenues and expenses (Wan Abdullah, 2012). Therefore, the Construction industry is chosen as a sample company to measure earnings management in this study.

Previous research has shown that they can help to understand the relationship between the adoption of IFRS and earnings management (Mongrut & Winkelried, 2019; Malofeeva, 2018; Wardhani & Anggraenni, 2017; Ferentinou & Anagnostopoulou, 2016; Ahmed et al., 2013). The relationship between these two factors, however, has been the subject of prior research with conflicting results; it can either be favourably or negatively connected. The strong correlation between IFRS adoption and earnings management suggests that IFRS adoption significantly improved or, to put it another way, did not change the level of earnings management. This was demonstrated in a study conducted in a variety of Latin American nations, including Argentina, Brazil, Chile, Colombia, Mexico, and Peru (Mongrut & Winkelried, 2019), Indonesia (Setiawan et al., 2019), and Russia (Malofeeva, 2018), Greek (Ferentinou & Anagnostopoulou, 2016) and Europe (Callao & Jarne, 2010). For instance, studies conducted by Malofeeva (2018); Ahmed et al (2013); Callao & Jarne (2010), who used AEM as a measurement of EM, discovered that the IFRS variable has a strong positive influence on the result of discretionary accruals, demonstrating that earnings management is intensified after IFRS implementation. In a different study, (Ferentinou & Anagnostopoulou, 2016) employed six sample Asian countries—China, Hong Kong, Indonesia, Malaysia, Philippines, and Sri Lanka to examine the relationship between the adoption of IFRS and EM, which is measured by REM. They concluded that IFRS has a favourable impact on EM in developed nations and those with weak governance. Additionally, Setiawan et al (2019) used a sample of 1,127 firm-year data from the Indonesia Stock Exchange to conduct their study.

Empirical results indicate a favourable relationship between IFRS adoption and EM, although earlier literature also expresses the opposing view. As an illustration, Wijayana & Gray (2019) found that IFRS convergence is associated with lower levels of earnings management, particularly in recent years as IFRS has been gradually adopted by publicly traded firms in the region. The study involved a sample of 17 countries in the Asia-Pacific region. Setiawan et al (2019); Anggraeni & Wardhani (2017) employed REM as a measure for EM in the other studies, and they both argued on the negative significant result between the two variables. Additionally, they further highlighted that IFRS has a substantial negative result. In Bangladesh, a developing economy, Hasan & Abdul Rahman (2020) look into the connection between IFRS adoption and accruals earnings management (AEM), discretionary accruals (DA), and real earnings management (REM). This study also examines how corporate governance (CG) strength affects EM as well as the moderating effect CG strength has on the relationship between IFRS adoption and EM. The findings indicate a strong inverse link between IFRS and CGI and EM. Additionally, it has been shown that CG strength modifies the link between IFRS and REM considerably. It means that having a strong CG could aid in achieving the goals of IFRS adoption.

In a study conducted by Khaldoon et al (2019), the authors examined the impact of International Financial Reporting Standards (IFRS) adoption on earning management in China by taking into account the importance of board size and board independence. According to the empirical findings, earning management improved with the adoption of IFRS. Board independence has greatly reduced earnings management in China after the adoption of IFRS, although there is no association between board size and earnings management before and after the adoption of IFRS.

However, some studies discovered no connection between EM and the adoption of MFRS. Said (2019), for instance, conducted research using panel data from 2000 to 2018 of the 19,869 firm-year observations from 791 Canadian enterprises, using AEM as a metric for EM. He suggested that adopting IFRS has no direct impact on earnings management among publicly listed enterprises in his sample, even though the aggregate result appeared to be negative but was minor. The researcher's findings are in line with evidence from Ferentinou & Anagnostopoulou (2016), who found no significant relationship between IFRS adoption and REM, particularly in developing nations, nations with sound governance, and nations that adopted the big-bang strategy, meaning they already had sound accounting standards and practises before the IFRS was adopted (for example Hong Kong and Philipines). As a result, the literature generally indicates that EM is unlikely to be impacted before or after the years of IFRS adoption.

Earnings Management and the COVID-19 Pandemic
The global COVID-19 pandemic is regarded as the twentieth century's most serious social, economic, and health issue. The COVID-19 pandemic has slowed global economic activity in addition to causing human deaths and the illness itself due to its unusual effects and the measures taken by governments to prevent it from spreading. Unprecedented levels of widespread unemployment, a decline in economic activity, and erratic price swings across numerous financial markets have all been brought on by the epidemic. The effects of COVID-19 have already been felt by the business (Barai & Dhar, 2021). The COVID-19 outbreak influenced the output and profitability of most businesses because most of their operations

were halted during the nationwide lockdown enforced by numerous governments, which resulted in the cancellation of flights and a decline in demand. During a crisis and presumably a pandemic, businesses may employ accounting procedures to improve worsening balance sheets and income statements (Ozili, 2021). Due to the current economic situation, accounting information measurements are becoming less accurate, making opportunistic accounting judgments more appealing to those seeking immediate benefits (Ryu & Chae, 2022).

According to Lassoued & Khanchel's (2021) analysis of a sample of 2,031 businesses from 15 different European nations, the European businesses were better equipped to control their revenues during the pandemic than they had been during the years before. Further investigation revealed strong income-increasing earnings management for 2020, indicating a chance of reporting losses at an acceptable level. This suggests that the financial reports were less trustworthy during the COVID-19 pandemic. In addition, Ryu & Chae (2022) investigated whether distribution and service companies in Korea were still able to give reliable information and preserve the quality of their accounting records. According to their findings, distribution and service companies managed their earnings more in the post-COVID-19 era than they did in the prior period, a sign that they were mindful of the uncertainty of future business success while the pandemic persisted.

Meanwhile, Xiao & Xi (2021) investigated the relationship between the COVID-19 outbreak and the Chinese listed firms' earnings management practices. In enterprises in the most badly affected regions, the study's findings showed a rise in accrual-based earnings management (AEM) and a sharp fall in real activity-based earnings management (REM). Furthermore, Liang (2022) provides evidence that following the COVID-19 epidemic, earnings management of listed businesses in China considerably increased. In the sample with a greater asset-liability ratio, stronger growth, and higher profitability, this effect is more noticeable. According to further analysis, COVID-19's effects on high financing limits will cause listed businesses to control their earnings to a greater extent. According to research done in Croatia by Susak (2020), changes in the regulatory framework during the extraordinary pandemic circumstances had a statistically significant positive effect on the relationship between earnings management and financial reporting delay, suggesting that financial reporting delays following regulatory changes during the pandemic could be attributed to earnings management activities.

It is important to draw attention to some previous Malaysian studies because the current study's goal is to examine the level of earnings management following the adoption of IFRS and the COVID-19 epidemic, indicating a sign of controlled earnings management activities. As an illustration, Ayedh et al (2019) used a final sample of 1,170 firm-years listed on Bursa Malaysia in their study. Examining EM behaviour in Malaysia during the 2008 financial crisis and determining whether IFRS adoption had an impact on EM during the time of the global financial crisis are the key goals of this project. The implementation of IFRS, they indicated at the study's conclusion, may be able to lessen the use of EM practises during a financial crisis. In a recent study, Garrett et al (2020) investigate whether the adoption of IFRS in Malaysia had any impact on Earnings Management procedures. Their findings revealed that, following the full convergence of IFRS, there had been a downward tendency in earnings management across the Malaysian industrial sector. Furthermore, Ismail et al (2013) had already endorsed

the idea that earnings declared during the time following the implementation of IFRS are linked to lower earnings management and higher value relevance. Nevertheless, until this point in time, there is limited literature concerning the impact of COVID-19 and IFRS adoption on earnings management in the Malaysian capital market.

Although several studies have been conducted on the relationship between corporate governance and earnings management, the issues that prior research has addressed are generally applicable to well-developed capital markets, particularly those in the United States and the United Kingdom (Mardessi & Fourati, 2020; Saona et al., 2019; Dechow et al., 1995). Few studies, on the other hand, have directly addressed the relationship in emerging countries and focused during the normal economic situation rather than during the crisis (Biswas et al., 2022; Gulzar & Zongjun, 2011; Khalil & Ozkan, 2016; Klein, 2002; Nazir & Talat, 2018; Abbadi et al., 2016). Furthermore, there is no agreement on the significance of board composition in reducing earnings management.

To address the above arguments, this study proposes the following hypotheses:
H1: There is a significant difference between earnings management practices in Malaysia after the adoption of IFRS.
H2: There is a significant difference between earnings management practices before and during the COVID-19 pandemic.
H3: There is a significant relationship between corporate board composition and earning management practices in Malaysia

Research Methodology
This study examines the most recent sample of construction firms listed on Bursa Malaysia between 2017 and 2021. Companies with inadequate data are excluded from this study. The final sample consists of 650 firm-year observations in total. Data about the board of directors are taken from annual reports of each company that are available on the Bursa Malaysia website, while financial data is taken from the Refinitive Eikon Datastream . Panel data regression analysis is employed in this study.

Measurement for Dependent Variable: Accruals Earnings Management
This study used a well-known earnings management model, the Modified Jones Model by Dechow et al. (1995), to investigate the level of earnings management of Malaysian construction enterprises during the time after the introduction of MFRS and the period of the COVID-19 pandemic.

$$TACC_{it} = NI_{it} - CFFO_{it} \tag{1}$$

$$NDAC_{it} = \alpha i \,[1/TA_{it-1}] + \beta 1\,[(\Delta REV_{it} - \Delta REC_{it})/TA_{it-1}] + \beta 2 PPE_{it}/TA_{it-1} \tag{2}$$

$$TACC_{it}/TA_{it-1} = \alpha i \,[1/TA_{it-1}] + \beta 1\,[(\Delta REV_{it} - \Delta REC_{it})/TA_{it-1}] + \beta 2 PPE_{it}/TA_{it-1} + \varepsilon it \tag{3}$$

$$DACC_{it} = \varepsilon it = TACC_{it}/TA_{it-1} - NDAC_{it} \tag{4}$$

Where $DACC_{it}$ is the discretionary accruals in year t, $TACC_{it}$ is the total accruals in year t, $NDAC_{it}$ is the nondiscretionary accruals in year t, TA_{it-1} is the total assets in year t-1, NI_{it} is the net income in year t, $CFFO_{it}$ is the net cash flow from operations in year t, εit is the error term in year t, and i is the individual firm in year t. The coefficients in equation 2 for each year are applied in equation 3 for each company accordingly. DACC is the error term in equation 3.

Measurement for Dependent Variable: Real Earnings Management
Companies that manage earnings upwards are likely to experience one or more of the following accounting consequences, according to Roychowdhury (2006); Cohen & Zarowin (2008): (i) unusually low cash flow from operations as a result of expanding price concessions or granting lenient credit terms to speed up sales for the current period; (ii) unusually low discretionary expenses as a result of aggressively cutting back on R&D, advertising, and SG&A costs to improve earnings for the current period; and (iii) unusually high production costs as a result of lowering Cost of Goods Sold (COGS) to raise operating margin for the current period. In line with earlier studies, this study uses three measures to assess REM, including abnormal cash flow from operations (REM CFO), abnormal production costs (REM PROD), and abnormal discretionary expenses (REM DISEXP). The study estimates REM CFO, REM PROD, and REM DISEXP as the residual from the following models, respectively, following (Roychowdhury, 2006; Cohen and Zarowin, 2010).

Model for REM CFO
$$CFO_{it} / A_{it-1} = \beta_1 [1/A_{it-1}] + \beta_2 [Sales_{it}/A_{it-1}] + \beta_3 [\Delta Sales_{it}/A_{it-1}] + \varepsilon_{it} \qquad (1)$$
where CFO_{it} is Cash flow from operation of firm i in period t, A_{it-1} is Total assets of firm i in year t-1; $Sales_{it}$ is Sales of firm i in year t, $\Delta Sales_{it}$ is Sales of firm i in year t less Sales of firm i in year t-1; ε_{it} is a residual term that captures the level of abnormal cash flow of firm i in year t.

Model for REM PROD
$$PROD_{it}/A_{it-1} = \beta_1 [1/A_{it-1}] + \beta_2 [Sales_{it}/A_{it-1}] + \beta_3[\Delta Sales_{it}/A_{it-1}] + \beta_4[\Delta Sales_{it-1}/A_{it-1}] + \varepsilon_{it} \qquad (2)$$
where $PROD_{it}$ is the sum of cost of goods sold and change in inventory of firm i in year t; $\Delta Sales_{it-1}$ is Sales of firm i in year t-1 less sales of firm i in year t-2; and all other variables are as previously defined.

Model for REM DISEXP
$$DISEXP_{it}/A_{it-1} = \beta_1 [1/A_{it-1}] + \beta_2 [Sales_{it-1}/A_{it-1}] + \varepsilon_{it} \qquad (3)$$
where $DISEXP_{it}$ is the sum of Research and Development (R&D) expenses and Selling, General & Administrative (SG&A) expenses of firm i in year t; and all other variables are as previously defined.

To combine the three real activities manipulation measures into a single proxy, REM, their sums are calculated as follows:
$$REM = REM\ CFO + REM\ PROD + REM\ DISEXP \qquad (4)$$

Measurement for Independent Variables
The main objective of this study is to examine the impact of IFRS adoption and COVID-19 on the level of earnings management. In addition, this study measures the relationship between board composition and earnings management. It is a common practice to control the effect of other influential parameters on earnings management. According to previous studies such by Liang, (2022); Ryu & Chae (2022); Lassoued & Khanchel (2021), and Xiao & Xi (2021), size (SIZE); leverage (LEV); and financial performance (Return on Assets, ROA), growth (MTB) and liquidity (LIQ) will be used in the regression models.

To test the hypothesis, the following empirical models are estimated

$$AEM = \alpha + \beta 1 BSIZE + \beta 2 BFEMALE + \beta 3 BIND + \beta 4 AC + \beta 5 ACE + \beta 6 SIZE + \beta 7 LEV + \beta 8 ROA + \beta 9 MTB + \beta 10 LIQ + e \quad (1)$$

$$REM = \alpha + \beta 1 BSIZE + \beta 2 BFEMALE + \beta 3 BIND + \beta 4 AC + \beta 5 ACE + \beta 6 SIZE + \beta 7 LEV + \beta 8 ROA + \beta 9 MTB + \beta 10 LIQ + e \quad (2)$$

Where:

AEM is Accruals Earnings Management proxy by Discretionary Accruals figure; REM is Real Earnings Management for real activities of earnings management, for control variables; BSIZE is the number of directors on boards; BFEMALE is the number of female director on boards, BIND is the number of Independence Directors on board, AC is the number of director on Audit Committee, ACE is the number of director on Audit Committee that has the expertise, BIG4 is if the firm auditor is from the Big Four accounting firm, SIZE is the firm size measured by log Total Assets; LEV is debt to equity ratio proxy for debt covenant, ROA is a return on asset proxy for firm performance calculated by dividing net income with total equity, MTB is the market to book value as a proxy for growth, and LIQ is the liquidity level of the firm calculated by dividing current assets over current liability.

Results and Discussion

Table 1 presents the descriptive statistics for AEM, REM, board characteristics, and firm characteristics as control variables from 2012 – 2021.

Table 1
Descriptive Statistics

	Minimum	Maximum	Mean	Std. Deviation
AEM	-5.4871	2.3553	-0.2573	0.4421
REM	-1.4500	36.8600	0.3297	1.6233
REMCFO	-0.5916	9.1605	0.6272	0.6830
REMPROD	-0.7611	36.6270	0.2400	1.5180
REMDISEXP	-4.8858	1.5750	-0.5376	0.4723
BSIZE	4.00	13.00	6.9062	1.5688
BFEMALE	0.00	3.00	0.7077	0.8256
BIND	1.00	8.00	3.3138	0.8847
AC	2.00	6.00	3.1954	0.5180
ACE	0.00	3.00	1.2169	0.4378
BIG4	0.00	1.00	0.4200	0.4939
SIZE	4.00	7.36	5.6201	0.6199
LEV	-203.34	2117.90	72.2908	154.1137
ROA	-99.28	37.62	1.6990	8.1526
MTB	-1.32	9.25	0.8230	0.7754
LIQ	0.16	271.54	3.2084	11.4438

Note:

This table presents the descriptive statistics of both AEM and REM models for a final sample of 650 firm-year observations. All the variables with Skewness and Kurtosis higher than positive 1 and lower than negative 1 had been transformed to achieve the assumption of Normality for multiple linear regression analysis.

Accruals Earnings Management (AEM) and Real Earnings Management (REM), EM metrics, and the composition of the board of directors in terms of size, gender, independence, audit committee, and experience are all included. Additionally, control variables firm characteristics, such as firm size (SIZE), leverage (LEV), performance (ROA), growth (MTB), and liquidity (LIQ), are reported in the data. The average AEM values of -0.2573 suggest that most businesses use income-decreasing accruals to manage their earnings. However, the average REM values and REM metrics of 0.3297 to 0.6272 suggest that some businesses use income-increasing techniques to manage their earnings through real activities of earnings management. These findings suggest that earnings management is being practiced by Malaysian construction firms and their managers have incentives to manipulate corporate profitability both up and down for purposes, such as managers' compensation and income tax savings. The findings support the evidence provided by (Xiao & Xi, 2021; Ryu & Chae, 2022; Lassoued & Khanchel, 2021; Ayedh et al., 2019; Liang, 2022; Susak, 2020).

The mean of BSIZE 6.9062 suggests that the average number of corporate board members for construction companies listed on Bursa Malaysia is roughly 7. The mean size for BFEMALE of 0.7077 indicates that the average number of female directors appointed to corporate boards is 1. This indicates that there may not be many female directors selected for corporate boards of Malaysian construction companies. The BIND means of 3.3138 shows that there are typically 3 independent directors nominated to corporate boards. The mean of 3.1954 of AC indicates that on average there are 3 members of the audit committee being appointed which comply with the suggestions by MCCG2000. As required by Bursa Malaysia, the average of ACE 1.2169 indicates that at least one member of the audit committee is proficient in financial accounting. Only 42% of the construction companies listed on Bursa Malaysia employ large accounting and auditing firms, according to the BIG4 mean of 0.4200. The average LEV of 72.2908 indicates that Malaysian construction firms are heavily indebted. This shows that the businesses favour debt financing over equity financing.

Table 2
Yearly Descriptive Statistics

	Minimum	Maximum	Mean	Std Dev
AEM2012	-1.4108	0.7914	-0.3841	0.3491
AEM2013	-1.3997	0.6912	-0.3127	0.3510
AEM2014	-0.8347	0.3814	-0.2513	0.2914
AEM2015	-1.7065	0.6008	-0.1461	0.3855
AEM2016	-3.7907	2.3553	-0.2308	0.6313
AEM2017	-1.2662	0.3926	-0.2643	0.3041
AEM2018	-5.4871	0.3551	-0.3194	0.7168
AEM2019	-1.0353	0.7658	-0.2481	0.3152
AEM2020	-1.0008	2.2831	-0.1685	0.4226
AEM2021	-2.3547	0.6539	-0.2487	0.4202
REM2012	-0.4565	36.8601	1.0527	4.5750
REM2013	-1.4483	4.2524	0.4200	0.6920
REM2014	-0.5590	2.2020	0.3789	0.4757
REM2015	-0.9102	1.8609	0.3166	0.4902
REM2016	-1.0629	9.9829	0.3094	1.3450
REM2017	-0.8022	4.9415	0.2309	0.7996

REM2018	-1.2328	3.3101	0.2486	0.5844
REM2019	-0.9048	3.0525	0.1587	0.4822
REM2020	-0.5942	1.4259	-0.0022	0.3457
REM2021	-0.6769	7.3925	0.1831	0.9908

Note:
This table presents the yearly descriptive statistics of both AEM and REM models for a final sample of 650 firm-year observations.

The annual descriptive data for all the earnings management variables used from the years 2012 to 2021 are shown in Table 2. The findings show that the means for AEM and REM are getting closer to zero each year. This demonstrates that the mean EM values are getting lower each year after Malaysia adopted IFRS. This indicates that the adoption of IFRS mitigates earnings management. Figure 1 presents the yearly means graph for both AEM and REM for the year 2012 to 2021. The yearly mean indicates that the figure decreased after the year 2012 which is the full convergence of IFRS in Malaysia. Both graphs are decreasing in both ways and become closer to zero. However, for the AEM, the graph indicates an increasing trend and a turning point in the year 2018. This situation happens probably due to many enforcements done by the Malaysian government due to the crisis such as the Malaysian Code of Corporate Governance. Unfortunately, in the year 2020 when the COVID-19 outbreak hit globally and is regarded as the greatest social, economic, and health problem of the twenty-first century, both mean for AEM and REM increase and the results for One sample T-test in Table 3 confirm that both figures are significantly different from zero. Therefore, this result supports Hypothesis 1.

To examine if there is a significant change in the amount of earnings management in the sample between the pre-pandemic period and during the pandemic period, Paired sample T-tests are conducted. Table 4 presents the Paired sample T test for two years (2018–2019) before the pandemic and two years (2020-2021) during the pandemic. As the comparison of means between the periods previously indicated, there is a difference between the observations which is less than the confidence level of 5% that is most used in research (Pallant, 2020). This supports the study's hypothesis that the use of earnings management has changed during the pandemic. This suggests that earnings management appears to be associated with the period of the financial crisis. Therefore this result supports Hypothesis 2 and is consistent with (Liang, 2022).

The trend for these situations is presented in the following figure 1.
Table 3
One-Sample Test

	Mean	**Std. Deviation**	**T**	**Sig. (2-tailed)**
AEM	-.2574	.4387	-14.947	0.000
REM	.3297	1.6105	5.215	0.000
REMCFO	.6273	.6776	23.581	0.000
REMPROD	.2401	1.5061	4.060	0.000
REMDISEXP	-.5376	.4686	-29.228	0.000

Table 4

Paired Sample Test

		Mean	Std. Deviation	Std. Error Mean	t	Sig. (2-tailed)
Pair 1	AEMBEFORE AEMDURING	-.08046	.44489	.03963	-2.030	.044
Pair 2	REMBEFORE REMDURING	.11356	.51014	.04545	2.499	.014
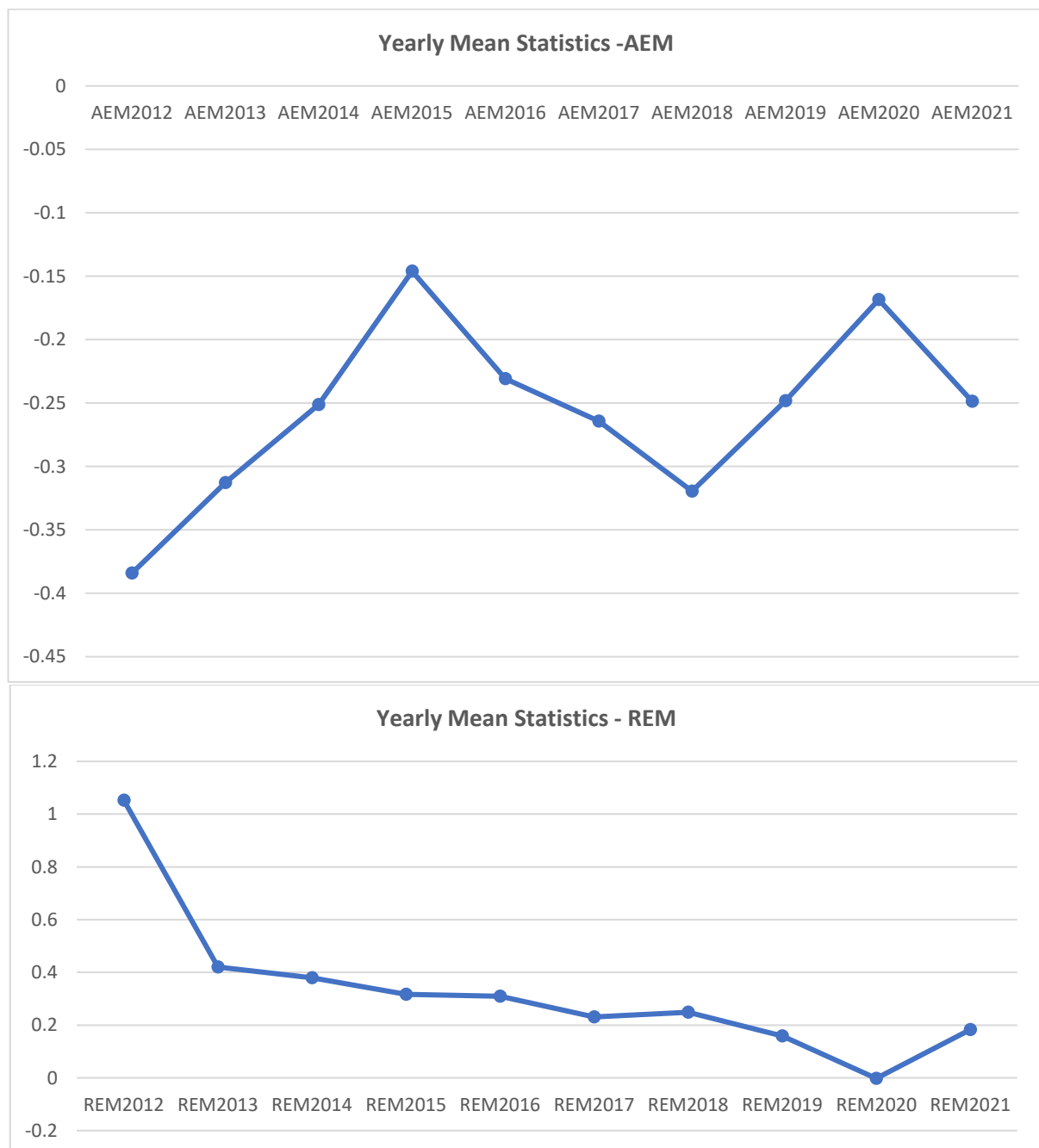
Figure 1: Yearly Mean Statistics

Table 5

Pearson Correlation

Panel A

	AEM	BSIZE	BFE	BIND	AC	ACE	BIG4	SIZE	LEV	ROA	MTB	Q
AEM	1.000											
BIZE	.085**	1.000										
BFE	-.014	.386**	1.000									
BIND	.165***	.421**	.130**	1.000								
AC	.176***	.161**	.033	.347**	1.000							
ACE	.108***	.115**	.039	.011	.010	1.000						
BIG4	-.109**	.198**	.199***	.100**	-.020	.084**	1.00					
SIZE	.234***	.436**	.271**	.329**	.146**	.178**	.266**	1.000				
LEV	.121***	.306**	.042	.316**	.144**	.166**	.204**	.538**	1.000			
ROA	.129***	.150**	.068**	.029	.068**	-.026	-.073**	.229**	.002	1.000		
MTB	.103***	-.013	-.122**	.072**	.095**	.146**	-.092*	-.032	.043	.120**	1.000	
LIQ	.192***	-.092**	.102**	-.113**	.043	-.032	-.094**	-.166**	-.524**	.151**	.029	1.000

Panel B

	REM	BSIZE	BFE	BIND	AC	ACE	BIG4	SIZE	LEV	ROA	MTB	Q
REM	1.000											
BIZE	.070**	1.000										
BFE	-.070**	.386**	1.000									
BIND	-.028	.421**	.130**	1.000								

AC	-.009**	.161***	.033	.347***	1.000						
ACE	.065	.115**	.039	.011	.010	1.000					
BIG4	.027	.198***	.199***	.100***	-.020	.084	1.000				
SIZE	-.027	.436***	.271***	.329***	.146***	.178**	.266**	1.000			
LEV	.005	.306***	.042	.316***	.144***	.166***	.204***	.538***	1.000		
ROA	.386***	.150***	.068***	.029	.068**	-.026**	-.073**	.229**	.002	1.000	
MTB	.167***	-.013	-.122***	.072**	.095***	.146***	-.092*	-.032	.043	.120**	1.000
LIQ	.005	-.092***	.102**	-.113***	.043	-.032	-.094***	-.166***	-.524***	.151**	.029	1.000

Note:
This table shows the results for correlation analysis for all models for a sample of 650 firm-year observations.
***Significant at the 1% level, **Significant at the 5% level, *Significant at the 10% level

The pair-wise Pearson correlation parameters and p-values for all the variables used in this study are shown in Table 5. Panel A of the table shows that there is a significant correlation between AEM and BSIZE, BIND, AC, ACE, and BIG4. This implies that there is a correlation between AEM and the appointment of female directors, which may have an impact on EM activities by firms. All control variables are correlated with EM. The correlation results for REM with all the variables are shown in panel B. Significant negative correlations exist between BSIZE, BIND, ACE and REM. Additionally, there is a negative correlation between REM and SIZE, ROA, and MTB. To verify the relationship, multiple linear regression analyses are carried out and shown in the following table 6.

Table 6

Regression results Pooled Data

		AEM	REM	REMCFO	REMPROD	REMDISEXP
Variables						
Constant		-1.533***	2.180***	1.744***	1.192*	-1.098***
BSIZE		-.007	.104**	.058***	.080***	-.034***
BFEMALE		-.044**	-.171**	-.120***	-.150**	.076***
BIND		.042*	-.062	-.120***	-.052	.088***
AC		.065**	-.071	-.068	-.091	.069**
ACE		.064*	.265**	.100*	.113	-.017
BIG4		-.139***	.335***	.084*	.344***	-.041
SIZE		.160***	-.498***	-.203***	-.272**	.065*
LEVERAGE		.000***	.000	.000**	8.991E-5	.000
ROA		.001	.085***	.037***	.095***	-.028***
MTB		.026	.219***	.085***	.202***	-.051**
LIQUIDITY		.012***	-.007	.000	-.007	.001
R-square		.187	.173	.256	.275	.284
Adjusted	**R-**	.173	.196	.243	.262	.272
square						
F-statistics		13.321***	15.341***	19.878***	21.919***	22.933***

Note:

This table shows the model summary of each Earnings Management value for a sample of 650
firm-year observations.

AEM is Accruals Earnings Management proxy by Discretionary Accruals figure; REM is Real
Earnings Management for real activities of earnings management, REMCFO is real earnings
management through abnormal cash flow from operations, REMPROD is real earnings
management through abnormal production costs, REMDISEXP is real earnings management
through abnormal discretionary expenses.

For board composition, BSIZE is the number of directors on boards; BFEMALE is the number
of female directors on boards, BIND is the number of Independence Directors on board, AC is
the number of director on Audit Committee, ACE is the number of director on Audit
Committee that has expertise, BIG4 is if the firm auditor is from the Big Four accounting firm.
For control variables, SIZE is the firm size measured by log Total Assets; LEV is the debt-to-
equity ratio proxy for debt covenant, ROA is a return on asset proxy for firm performance
calculated by dividing net income with total equity, MTB is the market to book value as a
proxy for growth, and LIQ is the liquidity level of the firm calculated by dividing current assets
over current liability.

***Significant at the 1% level, **Significant at the 5% level, *Significant at the 10% level

Table 6 presents the results of regression analysis between AEM, REM, and REM metrics with
all the variables measured in this study from the year 2012 to 2021. The results indicate that
AEM, REM, REMCFO, and REMPROD are negatively related to BFEMALE at a 5% significant
level which is consistent with (Gull et al., 2018; Thiruvadi and Huang, 2011; Orazalin, 2020;
Damak, 2018; Saona et al., 2019; Kyaw et al., 2015; Arun et al., 2015). The results suggest that
having female directors on board is effective in mitigating earnings management. In addition,
there is a significant negative relationship between AEM and BIG4 at a 1% level. This suggests
that the size of the accounting firm which symbolizes the level of auditor expertise effectively
controls corporate earnings management. The results of the current study are consistent with

those of Ryu & Chae (2022); Lassoued & Khanchel (2021); Xiao & Xi (2021); Becker et al (1998)'s investigation, which discovered comparable evidence of a higher accounting conservatism among Big 10 auditing companies than among non-Big 10 auditing firms. They contend that when auditing listed businesses, the Big 10 auditing firms have additional incentives to safeguard their reputation and integrity against potential legal action. However, a contradict result is obtained for REM, REM CFO and REMPROD, where there is significant positive relationship with BIG4. This indicates that the BIG4 auditors are not successful in reducing earnings management through real activities of businesses. There is a negative relationship between REM, REMCFO, REMPROD and BIND. However, only REMPROD is found to be significantly related to BIND. This indicates that the management of real earnings is mitigated by the presence of independent directors on company boards. Meanwhile there is a negative relationship between AEM and ACE, but not significant. The mixed results indicate that the board's independent directors can mitigate accruals earnings management but not fully mitigate real earnings management. This mixed bag of outcomes is consistent with (Xiao & Xi, 2021).

Among the control variables, the SIZE is found to have a significant positive relationship with AEM and a significant negative relationship with REM, REMCFO, and REMPROD. This indicates that the bigger the size of a construction firm the more likely the level of accruals earnings management. This suggests that the level of accruals earnings management increases with the size of a construction firm. This finding is consistent with (Liang, 2022). Contrary to AEM, a company's real earnings management level decreases as its size increases. As a corporation expands in size, it becomes more difficult for management to make decisions that are at odds with the interests of the organization's stakeholders. It is further noted that larger businesses must deal with more complex and expensive political issues and there is increased pressure on large firm management to meet stakeholders' expectations of earnings Watts and Zimmerman (1978) and Pincus & Rajgopal, (2002), there is increased pressure on large firm management to meet stakeholders' expectations of earnings. These findings are consistent with that of (Ryu & Chae, 2022; Lassoued & Khanchel, 2021).

The LEV regression coefficient is significantly positive at the 1% level for AEM and 5% level for REMCFO, indicating that the higher the debt-to-equity ratio of listed construction companies, the more likely they are to engage in aggressive earnings management behaviors. This is in line with Lassoued & Khanchel (2021); Jiang et al (2008), who argue that businesses with higher levels of leverage are more driven to employ earnings management strategies to stay inside the bounds of their loan covenants. The regression coefficient of ROA is significantly positive at the 1% level, indicating that the higher the return on total assets ratio, the more likely it is that earnings can be managed. This finding is consistent with (Ryu & Chae, 2022; Lassoued & Khanchel, 2021). The findings indicate that MTB has a significant positive relationship with REM, REMCFO, and REMPROD. This implies that a construction company is more likely to engage with real earnings management when the growth level is greater. Regarding LIQ, it is discovered that only AEM has a significant positive relationship with liquidity level. This illustrates that the higher the liquidity level of a construction company the more likely it is to participate in accruals earnings management.

Table 7 presents the results of the regression analysis for the period before the pandemic (2018-2019) and during the pandemic (2020-2021) using two methods of earnings management, AEM, and REM. Consistent with the main findings (pooled data analysis) of the current study, there is a significant relationship between board composition and control variables with EM for the period before and during the pandemic COVID-19. There is a

negative relationship between REM before the pandemic and AEM during the pandemic with BIND. This indicates that the level of earnings management is mitigated by the presence of independent directors on company boards. Meanwhile, there is a negative relationship between AEM and ACE, but not significant. Furthermore, before the pandemic, there was a significant negative relationship between AEM and BIG4 at the 1% level. This implies that the size of an accounting firm, which represents the level of audit expertise, effectively controls corporate accruals earnings management but not real earnings management.

Table 7
Regression results Before and During COVID-19

	AEM Before [2018-2019]	REM Before [2018-2019]	AEM During [2020-2021]	REM During [2020-2021]
Variables				
Constant	-1.914***	.577	-1.637***	.268***
BSIZE	-.032	.065*	.041	-.001
BFEMALE	-.069	-.139**	-.143***	.028**
BIND	.044	-.098*	-.043	.010
AC	.056	-.058	.048	.015
ACE	-.099	.176**	.046	.031*
BIG4	-.293***	.126	-.071	.023
SIZE	.280***	-.084	.231***	-.038**
LEVERAGE	.001**	.000	-.023	-.019
ROA	.005	.044***	-2.959E-6	9.421E-5*
MTB	.060	.081	.015***	.000
LIQUIDITY	.050**	.002	.045	-.006
R-square	.275	.294	.200	.155
Adjusted R-square	.206	0.228	0.124	.075
F-statistics	4.003***	4.402***	2.632***	1.931**

Note:
This table shows the model summary of each Earnings Management value during the period before the pandemic (2018-2019) and the pandemic (2020-2021).
***Significant at the 1% level, **Significant at the 5% level, *Significant at the 10% level

For the period before and during the pandemic, SIZE is found to have a significant positive relationship with AEM. This suggests that the level of accruals earnings management increases as a construction firm grows in size. On the other hand, there is a significant negative relationship between SIZE and REM during the pandemic. The LEV regression coefficient is significantly positive at the 1% AEM before the pandemic, indicating that the higher the debt-to-equity ratio of listed construction companies, the more likely they are to engage in aggressive earnings management. The ROA regression coefficient is significantly positive at a 1 % level for REM before the pandemic.
This indicates that the higher the return on total assets ratio, the more likely it is that real earnings can be managed during the pandemic COVID-19. According to the findings, MTB has a significant positive relationship with REM during the pandemic. This implies that when growth rates are higher, a construction company is more likely to engage in real earnings management. Only AEM has a significant positive relationship with liquidity level in terms of

LIQ for the period before the pandemic. This demonstrates that the higher a construction company's liquidity level, the more likely it is to participate in accruals earnings management.

Conclusion

The objective of this study is to investigate how earnings management has changed since IFRS was implemented as well as how COVID-19 has affected companies listed in the construction industry in Bursa Malaysia. Additionally, this study investigates how the qualities of a corporate board (board size, female directors, board independence, audit committee, and audit committee with expertise) affect how well financial reporting. The results indicate that after the IFRS was fully convergence in Malaysia in the year 2012, the level of earnings management is decreasing from year to year.

Based on the findings, it can be concluded that the level of earnings management will significantly change in 2020, the year of the global COVID-19 pandemic. As a result, it implies that COVID-19 has impacted both company performance and earnings management. Additionally, it is determined that board size, the proportion of female directors, the audit committee, and the level of experience of audit committee members have a significant negative relationship with the degree of EM as a proxy for financial reporting quality. This implies that having female directors on corporate boards is a practical method of EM mitigation in Malaysia. Adding more members to the audit committee, particularly those with knowledge in accounting and financial reporting, also helps to lower EM. This suggests that a viable strategy for EM mitigation in Malaysia is having female directors on corporate boards. Additionally, increasing the number of members on the audit committee and the number of them with experience in accounting and financial reporting aids in reducing EM.

This study provides additional insight into the significance of having a larger board with a female director and more audit committee members with relevant experience. These factors may positively impact management choices and the quality of financial reporting. Therefore, the H1 and H2 hypotheses are accepted in this investigation. In the meantime, there is a strong correlation between EM and all the control variables for firm characteristics, including size, leverage, profitability, growth, and liquidity. This research adds to the body of knowledge indicating women are more risk-averse, cautious, and ethical than men, which is consistent with earlier research. The results so highlight and further illuminate the significance of having women on corporate boards and the benefits that relate to it. Therefore, it is important to underline the importance of gender diversity on the board because having more women on it could boost public confidence. In addition to using the most recent and thus most relevant data, the study improves on previous research on the factors that will reduce earnings management, which would subsequently improve the quality of financial reports. This study adds to the body of literature and knowledge by concentrating on accruals and real earnings management in construction businesses. Construction companies have a very unusual business structure, which gives managers greater options to manage their companies' earnings. To maintain excellent governance, quality, and dependability of reported financial reporting in Malaysia, regulatory bodies in Malaysia must constantly evaluate rules and regulations and enforce them.

Acknowledgement

References

Abbadi, S. S., Hijazi, Q. F., & Al-Rahahleh, A. S. (2016). Corporate governance quality and earnings management: Evidence from Jordan. *Australasian Accounting, Business and Finance Journal*, *10*(2), 54–75. https://doi.org/10.14453/aabfj.v10i2.4

Ahmed, A. S., Neel, M. J., & Wang, D. (2013). Does Mandatory Adoption of International Financial Reporting Standards Improve Accounting Quality? Preliminary Evidence. *SSRN Electronic Journal*, *December*. https://doi.org/10.2139/ssrn.1460859

Ayedh, A. M., Fatima, A. H., & Mohammad, M. H. S. (2019). Earnings management in malaysian companies during the global financial crisis and the coincidental effect of IFRS adoption. *Australasian Accounting, Business and Finance Journal*, *13*(1), 4–26. https://doi.org/10.14453/aabfj.v13i1.2

Barai, M. K., & Dhar, S. (2021). COVID-19 pandemic: Inflicted costs and some emerging global issues. *Global Business Review*, 1–20. https://doi.org/10.1177/0972150921991499

Becker, C. L., DeFond, M. L., Jiambalvo, J., & Subramanyam, K. R. (1998). The effect of audit quality on earnings management. *Korea International Accounting Review*, *null*(38), 43–74. https://doi.org/10.21073/kiar.2011..38.003

Biswas, S., Bhattacharya, M., Sadarangani, P. H., & Jin, J. Y. (2022). Corporate governance and earnings management in banks: An empirical evidence from India. *Cogent Economics and Finance*, *10*(1). https://doi.org/10.1080/23322039.2022.2085266

Callao, S., & Jarne, J. I. (2010). Have IFRS affected earnings management in the European Union?. *Accounting in Europe, 7*(2), 159-189.

Chen, H., Chen, J. Z., Lobo, G. J., & Wang, Y. (2011). Effects of audit quality on earnings management and cost of equity capital: Evidence from China. *Contemporary Accounting Research*, *28*(3 (Fall 2011)), 892–925. https://doi.org/10.1111/j.1911-3846.2011.01088.x

Chi, C. W., Hung, K., Cheng, H. W., & Lieu, P. T. (2015). Family firms and earnings management in Taiwan: Influence of corporate governance. *International Review of Economics & Finance*, *36*, 88–98. https://doi.org/10.1016/j.iref.2014.11.009

Cohen, D. A., & Zarowin, P. (2008). *Accrual-based and real earnings management activities around seasoned equity offerings*.

Datastream International. (2022). Available: Refinitiv Workspace.

Dechow, P. M., Sloan, R. G., & Sweeney, A. P. (1995). Detecting earnings management. *Accounting Review*, *70*(2), 193–225. https://ssrn.com/abstract=5520

Fama, E. F., & Jensen, M. C. (1983). Separation of ownership and control. *Journal of Law and Economics*, *26*(2), 301–325.

Ferentinou, A. C., & Anagnostopoulou, S. C. (2016). Accrual-based and real earnings management before and after IFRS adoption: The case of Greece. *Journal of Applied Accounting Research.*

Garrett, K. W. C., Mohamad, S., Shafie, R. Bin, & Sadiq, M. (2020). International financial reporting standards and earnings management: Comparative study of pre-post full

convergence of IFRS in Malaysia. *Journal of Critical Reviews*, *7*(2), 85–89. https://doi.org/10.31838/jcr.07.02.17

Gull, A. A., Nekhili, M., Nagati, H., & Chtioui, T. (2018). Beyond gender diversity: How specific attributes of female directors affect earnings management. *British Accounting Review*, *50*(3), 255–274. https://doi.org/10.1016/j.bar.2017.09.001

Gulzar, M. A., & Zongjun, W. (2011). Corporate governance characteristics and earnings management: Empirical evidence from Chinese listed firms. *International Journal of Accounting and Financial Reporting*, *1*(1), 133. https://doi.org/10.5296/ijafr.v1i1.854

Hasan, M. T., & Abdul Rahman, A. (2020). The role of corporate governance on the relationship between IFRS adoption and earnings management: Evidence from Bangladesh. *International Journal of Financial Research*, *11*(4), 329–345. https://doi.org/10.5430/ijfr.v11n4p329

Healy, P. M., & Wahlen, J. M. (1999). A review of the earnings management literature and its implications for standard setting. *Accounting Horizons*, *13*(4), 365–383. https://doi.org/10.2308/acch.1999.13.4.365

Jensen, M. C., & Meckling, W. H. (2019). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Corporate Governance: Values, Ethics and Leadership*, 77–132. https://doi.org/10.2139/ssrn.94043

Khaldoon, A., Ahmad, A., & Wei, H. (2019). The role of board characteristics on the relationship between International Financial Reporting Standards (IFRS) adoption and earnings management: Evidence from China. *Journal of Accounting and Taxation*, *11*(9), 145–154. https://doi.org/10.5897/jat2019.0357

Khalil, M., & Ozkan, A. (2016). Board independence, audit quality and earnings management: Evidence from Egypt. *Journal of Emerging Market Finance*, *15*(1), 84–118. https://doi.org/10.1177%2F0972652715623701

Klein, A. (2002). Audit committee, board of director characteristics, and earnings management. *Journal of Accounting and Economics*, *33*(06), 375–400. http://www.sciencedirect.com/science/article/pii/S0165410102000599

Kyaw, K., Olugbode, M., & Petracci, B. (2015). Does gender diverse board mean less earnings management? *Finance Research Letters*, *14*, 135–141. https://doi.org/10.1016/j.frl.2015.05.006

Lassoued, N., & Khanchel, I. (2021). Impact of COVID-19 pandemic on earnings management: An evidence from financial reporting in European firms. *Global Business Review*, *November*. https://doi.org/10.1177/09721509211053491

Liang, B. (2022). *The impact of COVID-19 on earnings management of listed companies*. *10*(2), 53–60.

Malofeeva, T. N. (2018). The impact of IFRS adoption on earnings management in Russia. *European Research Studies Journal*, *21*(2), 147–164. https://doi.org/10.35808/ersj/991

Mardessi, M. S., & Fourati, M. Y. (2020). The impact of audit committee on real earnings management: Evidence from Netherlands. *Corporate Governance and Sustainability Review*, *4*(1), 33–46. https://doi.org/10.22495/cgsrv4i1p3

Mongrut, S., & Winkelried, D. (2019). Unintended effects of IFRS adoption on earnings management: The case of Latin America. *Emerging Markets Review*, *38*(April 2018), 377–388. https://doi.org/10.1016/j.ememar.2018.11.004

Nazir, M. S., & Talat, A. (2018). Impact of corporate governance on discretionary earnings management: A case of Pakistani firms. *Pakistan Economic and Social Review*, *56*(1), 157–184.

Orazalin, N. (2020). Board gender diversity, corporate governance, and earnings management: Evidence from an emerging market. *Gender in Management*, *35*(1), 37–60. https://doi.org/10.1108/GM-03-2018-0027

Ozili, P. K. (2021). Accounting and financial reporting during a pandemic. *New Challenges for Future Sustainability and Wellbeing*, *105183*, 87–93. https://doi.org/10.1108/978-1-80043-968-920211005

Peasnell, K. V., Pope, P. F., & Young, S. (2005). Board Monitoring and Earnings Management: Do Outside Directors Influence Abnormal Accruals? *Journal of Business Finance & Accounting*, *32*(7/8), 1311–1346. https://doi.org/10.1111/j.0306-686X.2005.00630.x

Roychowdhury, S. (2006). Earnings management through real activities manipulation. *Journal of Accounting and Economics*, *42*(3), 335–370. https://doi.org/10.1016/j.jacceco.2006.01.002

Ryu, H., & Chae, S. J. (2022). The impact of COVID-19 on earnings management in the distribution and service industries. *Journal of Distribution Science*, *20*(4), 95–100. https://doi.org/10.15722/jds.20.04.202204.95

Said, K. (2019). The impact of IFRS adoption on earnings management: Results from Canada. *Journal of Economics and Business*, *2*(3). https://doi.org/10.31014/aior.1992.02.03.107

Saona, P., Muro, L., San Martin, P., & Baier-Fuentes, H. (2019). Board of director's gender diversity and its impact on earnings management: An empirical analysis for select european firms. *Technological and Economic Development of Economy*, *25*(4), 634–663. https://doi.org/10.3846/tede.2019.9381

Schipper, K. (1989). Earnings Management. *Accounting Horizons*, *3*(4), 91–102.

Setiawan, D., Taib, F. M., Phua, L. K., & Chee, H. K. (2019). IFRS and earnings management in Indonesia: The effect of independent commissioners. *International Journal of Business and Society*, *20*(1), 37–59.

Sun, L., & Rath, S. (2008). Fundamental determinants, opportunistic behavior and signaling mechanism: An integration of earnings management perspectives. *International Review of Business Research Papers*, *4*(4), 406–420.

Susak, T. (2020). The effect of regulatory changes on relationship between earnings management and financial reporting timeliness: The case of COVID-19 pandemic. *Zbornik Radova Ekonomskog Fakultet Au Rijeci*, *38*(2), 453–473. https://doi.org/10.18045/zbefri.2020.2.453

Thiruvadi, S., & Huang, H. W. (2011). Audit committee gender differences and earnings management. *Gender in Management*, *26*(7), 483–498. https://doi.org/10.1108/17542411111175469

Damak, T. S. (2018). Gender diverse board and earnings management: evidence from French listed companies. *Sustainability Accounting, Management and Policy Journal*, *9*(3), 289–312. https://doi.org/10.1108/SAMPJ-08-2017-0088

Wan Abdullah, W. R. (2012). *Earnings management: Evidence concerning Shariah-approved companies in Malaysia* [Lincoln University New Zealand]. https://researcharchive.lincoln.ac.nz/handle/10182/5483

Wan Ismail, W. A., Kamarudin, K. A., Van Zijl, T., & Dunstan, K. (2013). Earnings quality and the adoption of IFRS-based accounting standards: Evidence from an emerging market. *Asian Review of Accounting*, *21*(1), 53–73. https://doi.org/10.1108/13217341311316940

Wardhani, R., & Anggraenni, M. D. (2017). The effect of leverage and IFRS convergence on earnings management through real activities manipulation in Asia. *Asian Journal of*

Business and Accounting, *10*(1), 87–125.

Wijayana, S., & Gray, S. J. (2019). Institutional factors and earnings management in the Asia-Pacific: is IFRS adoption making a difference?. *Management International Review*, *59*(2), 307–334.

Xiao, H., & Xi, J. (2021). *The COVID-19 and earnings management : China ' s evidence*. *13*(June), 59–77. https://doi.org/10.5897/JAT2020.0436