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**THE ADOPTION OF IFRS AND ITS EFFECTS ON THE MAGNITUDE  
OF EARNINGS MANAGEMENT IN INDONESIA**

Bachelor Thesis International Bachelor Economics and Business Economics

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Date of Final Version : July 27, 2020

The views stated in this thesis are those of the author and not necessarily those of the supervisor, second assessor, Erasmus School of Economics or Erasmus University Rotterdam.

## **Acknowledgment**

First of all, I would like to express my sincere gratitude to God for blessing me with the opportunity to study at the Erasmus School of Economics, Rotterdam, and guiding me throughout my academic journey with His grace.

Secondly, I would like to appreciate Dr. A. T. Fytraki for her patience and efforts in guiding me in this thesis writing process. I deeply value all her excellent insights, advice, criticism, and helps that have allowed me to sharpen my skills and knowledge as a student.

Thirdly, I would like to dedicate this thesis to my family in Yogyakarta, Indonesia. Especially for Papa and Mama, thank you for your constant supports both morally and financially. I am forever grateful for your eternal love and prayers for me. Thank you for always looking after me even though we are far apart. Also for my siblings, Alvin, Vinny, and Snowy thank you for your endless supports and silent prayers.

Finally, I would like to extend my gratitude to all my friends and colleagues, both at Universitas Gadjah Mada and Erasmus University Rotterdam. Especially for Gaby, Owen, Emir, and Sisil, I sincerely thank you all for being there for me during this tough journey in our final year as undergraduate students. Also for Nathalia and Veronika, thank you for being such great and supportive companions particularly during this past one year. And to the professors, lecturers, and all my networks, thank you for sharing your knowledge and experiences and helping me to become a better version of myself.

Rotterdam, July 2020

Maria Devina Sanjaya

## **Abstract**

We conduct a research study that particularly examines the effect of adopting IFRS on the magnitude of accruals-based earnings management among Indonesian non-financial firms that constitute the Main Board Index (MBX) of Indonesia Stock Exchange (IDX) from 2014 to 2019. The adoption of the international accounting standards itself took place in 2015. To measure the discretionary accruals, we employ the Extended Modified Jones model developed by Yoon et al. (2006). We use the absolute value of the discretionary accruals in this study as we want to focus on the size, not the direction of the accruals. Based on our regression test, we discover that IFRS does not leave a statistically significant impact on the value of absolute discretionary accruals. The value of discretionary accruals, however, shows a declining trend in the post-IFRS period which contradicts our hypothesis. Nevertheless, we cannot derive the conclusion that the decline is caused by IFRS as the regression analysis indicates insignificance. Furthermore, we also find that firm size and leverage have a positive and statistically significant association with discretionary accruals.

**Keywords:** earnings management, IFRS, discretionary accruals, firm size, leverage

## Table of Contents

Chapter 1 Introduction .....	1
1.1. Introduction .....	1
1.2. Research Problem and Motivation .....	1
1.3. Research Objectives .....	2
1.4. Research Methodology .....	3
1.5. Thesis Outline .....	4
Chapter 2 Literature Review and Hypotheses Development .....	5
Chapter 3 Data and Methodology .....	12
3.1. Data Collection .....	12
3.2. Event Window .....	13
3.3. Methodology .....	13
3.1.1. Discretionary Accruals as Proxy of Earnings Management Magnitude .....	13
3.1.2. Discretionary Accruals, IFRS, and Firm-related Variables .....	15
Chapter 4 Results .....	17
4.1. The Extended Modified Jones model .....	17
4.2. IFRS and Firm-specific Factors Effects on Discretionary Accruals .....	21
Chapter 5 Discussion .....	26
Chapter 6 Conclusion and Implications .....	30
References .....	33
Appendices .....	36

## List of Tables

Table 1. Summary of Previous IFRS and Earnings Management Studies .....	7
Table 2. MBX index Constituents .....	12
Table 3. Research sample .....	12
Table 4. Descriptive Statistics of The Extended Modified Jones model .....	17
Table 5. Descriptive Statistics of Discretionary Accruals .....	20
Table 6. Descriptive Statistics: IFRS and Firm-Specific Variables .....	21
Table 7. The Trend of Discretionary Accruals by Years .....	23
Table 8. Analysis of Discretionary Accruals and Firm-specific Factors by Industries .....	24

## List of Figures

Figure 1. Event Window .....	13
Figure 2. Average Absolute Value of Discretionary Accruals (2014-2019) .....	23

# **Chapter 1**

## **Introduction**

### **1.1. Introduction**

The practice of earnings management has long been around across the globe, Indonesia is not an exception. With an established national financial system, companies are expected to follow the rule-based Indonesia Financial Accounting Standards (IFAS) and disclose the financial reports annually just as in any other country. In 2012, the standard setters in Indonesia declared their commitment to improving financial reporting transparency by adopting International Financial Reporting Standards (IFRS) with a 3-years difference, which means that the adopted standard would be the 2009 version. This has been renewed in 2015 with an only 1-year difference. However, moving to a principle-based IFRS may, on the contrary, deteriorate the quality of the financial reports since there are more rooms for management judgments that may involve inaccuracies. Furthermore, the country has long been known to rank low in the Corruption Perceptions Index that may reflect the opportunistic behavior of the people. Therefore, the adoption of IFRS may not necessarily decrease the level of earnings management.

### **1.2. Research Problem and Motivation**

Tighter competitions, managers' opportunistic behaviors, and agency conflicts are common issues among organizations across industries. Yet, these factors are often linked to the rising trend of earnings management by deliberately altering financial reports to mislead some stakeholders. Besides, accounting standards, such as US GAAP and IFRS, are supposed to provide guiding principles to treat accounts fairly and disclose them to the nearest reality. But, ironically, the practice of earnings management often arises due to the loopholes in these standards. Even IFRS, which has been adopted in many countries worldwide, may pose flaws due to its principles-based approach which may induce firms to use more professional judgments and result in inaccurate accounting numbers. As a result, many stakeholders put lower perceived quality against the financial reporting of the suspected companies.

For this research study, we are particularly motivated by three reasons. First, as stated by the Indonesian Institute of Accountants (*Ikatan Akuntansi Indonesia* or IAI), IFRS was embraced into Indonesian accounting systems to reflect a commitment to improving financial reporting quality. This is also in line with the rising demand for transparency

among classes of Indonesian society who have expressed their concern over the trend of opportunistic actions of some public officials who sit on key positions of state-owned companies. The adoption of IFRS is, hence, expected to bring a breath of fresh air to the national financial system which should translate to an improved quality of the financial information delivered. However, the opposite result may also be derived due to the flexibility the IFRS offers which may widen the scope of managerial discretion. Therefore, it entices us to prove whether the new standard will result in a blessing or a curse.

Second, we try to extend the scope of earnings management studies in Indonesia. There have been many research studies conducted under similar topics among EU and other developed countries but not in Asia, let alone Indonesia. Furthermore, given the varying approaches and research methods this topic offers, results from previous studies vary widely. It must also be taken into consideration that other factors and variables including chosen industries, regulations, customs, and cultures may be playing parts in determining the results. Given the extensive range of earnings management research, we want to focus on the use of discretionary accruals as a proxy of earnings management among selected Indonesian companies. The method carried is the Extended Modified Jones model by Yoon et al. (2006) which has only been used in a limited number of studies. Thus, through this setting, it is expected that this research would contribute further perspective to the existing studies.

Lastly, we aim to also contribute to society. This research study is anticipated to provide additional consideration to accounting officials and standard setters. Evidence and results obtained through this study will be of use to determine whether the adoption of IFRS will lead to an improved financial reporting activity or, on the other hand, increased practices of discretionary accruals earnings management. This would prompt related parties to evaluate, and amend if necessary, the current standards and procedures. Furthermore, readers of this study would also gain pieces of knowledge and ideas of the possibility of earnings management in the companies they are interested in. This would help these stakeholders to derive better decisions in investing or lending activities.

### **1.3. Research Objectives**

Given the complexities the adoption of IFRS brings, it is difficult to tell whether the effect on the magnitude of earnings management will decline or, instead, rise. Previous research studies have not shown uniform results as some scholars obtain a negative relationship between IFRS and earnings management (Brad et al., 2014; Fuad and

Wijanarto, 2017) but some indicate the reverse (Jeanjean and Stolowy, 2008; Callao and Jarne, 2010). This paper, thus, tries to focus on discovering the effects of adopting IFRS to the degree of earnings management among Indonesian firms under the Main Board Index (MBX) of Indonesia Stock Exchange (IDX) for the year 2014-2019. This translates to the following main research question:

*What is the effect of adopting IFRS on the magnitude of earnings management among LQ-45 entities for the period of 2014-2019?*

Particularly for this academic paper, the period of 2014 to 2019 will be studied. In 2015, a major change was imposed by the Indonesian Financial Accounting Standards Board (*Dewan Standar Akuntansi Indonesia* or DSAK) to minimize the gap between IFAS and IFRS. Due to this change in accounting standards, the magnitude of earnings management is expected to be affected.

Through an empirical study, we seek to identify and analyze the direction of the relationship between the adoption of IFRS among Indonesian companies and the magnitude of discretionary accruals as the proxy of earnings management among those companies. We also try to indicate the significance of the relationship to further understand whether IFRS will effectively reduce the practice of earnings management, leave no effect or, instead, extend the practice.

#### **1.4. Research Methodology**

To investigate the effects of IFRS and IFAS convergence on the magnitude of earnings management, a quantitative analysis will be used. This analysis is conducted on the MBX index of the Indonesia Stock Exchange (IDX) which comprises 336 companies that are listed on the main board of IDX. These companies, with varied industry backgrounds, most have large market capitalization and are supported by strong fundamental business performance. To understand the earnings management nature of these sample firms, this research would require the use of firm-specific information, which is the earnings performance and other related accounts. This shall be provided by the firm's annual report data. However, additional secondary data that add relevance to the topic would also be obtained through other resources which may include but not limited to recent academic journals, news, or related reports.

As the objects of the research are specific, MBX listed companies, the sampling method will not be random in nature. Instead, a nonprobability sampling design will be used.

According to Sekaran and Bougie (2016), the nonprobability sampling method refers to a method in which the elements of the populations do not have the probability of being chosen attached to them. In particular, a purposive sampling method will be conducted to carry out this research study. Under this method, only specific types of people (or firms) who can provide the desired information will be chosen. In this case, we seek validation from firms that constitute the MBX index from 2014 through 2019.

To answer the research question, a method using discretionary accruals as a proxy to determine the degree of earnings management is used. To be specific, the regression model developed by Yoon et al. (2006) is used. This model is based on the first discretionary accruals model introduced by Jones (1991). However, this first model entails several adjustments and modifications due to its limitations. Moreover, as argued by some scholars, the Extended Modified Jones model by Yoon et al. (2006) fits Asian and underdeveloped companies better than the original Jones model. This model assumes that total accruals depend on changes in cash sales revenue, changes in cash expenses, and non-cash expenditures as represented by depreciation and pension benefit expenses. These variables represent the non-discretionary portions of the total accruals.

## **1.5. Thesis Outline**

The following content of this research study is structured as follows. Chapter 2 discusses theories and scholarly journals regarding earnings management and its practices in Indonesia. Hypotheses are developed under this chapter as well. Chapter 3 will introduce the data and methodology to carry the research study. The following results and their interpretation are outlined in Chapter 4. Chapter 5 will present the discussion of the results and will be followed by a conclusion as well as lists of research limitations and suggestions for future studies in Chapter 6. Lastly, there will be references and appendices in the last section of this paper.



## Chapter 2

### Literature Review and Hypotheses Development

Over the past few decades, the finance and accounting sector has gone through several major changes. Several of these are triggered by scandals such as those that involve Enron and WorldCom in the early 2000s. The late discoveries of the accounting manipulations have prompted the financial authorities to issue and enforce stricter rules to avoid similar events. One of the most prominent adjustments is pursued through the issuance of the 2002 Sarbanes-Oxley Act (SOX) to oblige publicly traded companies to disclose and report their financial information in a more transparent manner to improve reliability. Around the same time, IFRS was started to be enforced to more countries, including European Union (EU) countries, with the hope of increased comparability and quality of financial information delivered among companies across the world (Callao and Jarne, 2010). These changes reflect the desire to reduce the practice of earnings management and move to an integrated and transparent financial system.

Earnings management, as defined by Healy and Wahlen (1999), is an activity that involves management judgment in financial reporting and transactions structuring to modify financial figures with the underlying purpose of either misleading some stakeholders regarding the economic reality of the firm or influencing contractual outcomes contingent on the reported accounting numbers. It is often linked to the opportunistic behavior of managers which results from the agent-principal conflict (Fuad and Wijanarto, 2017; Callao and Jarne, 2010). Earnings management, however, is not solely motivated by managers' self-interest. Healy and Wahlen (1999) explained in their article that there are at least three rationales that could induce companies to exercise earnings management. First, managers may be tempted to manipulate earnings figures to fulfill capital market expectations. During management buyout, managers have an incentive to understate earnings (DeAngelo, 1988) while income is purposively increased before initial public offerings (Teoh et al., 1998). Besides, firms may want to alter income accounts to conform to market analysts' predictions (Payne and Robb, 2000; Burgstahler and Eames, 1998). Second, lending and compensation contracts may provide incentives for managers to engage in earnings management practice. It is found that firms in financial distress tend to manage cash flows to avoid violating debt covenants. Managers may also use their discretion to raise income-based bonuses. Finally, the use of earnings management is often exploited to conform with industry-level regulations, to minimize scrutiny from anti-trust officials, or to purposively reduce tax expense (Healy and Wahlen, 1999).

Beyond the previously mentioned motivations, accounting standards may as well provide firms with incentives to perform opportunistic behaviors. Rigid and rules-based accounting systems are commonly assumed to have more restrictions which should narrow the scope of management judgment and discourage managerial discretion. On the contrary, as argued by Jeanjean and Stolowy (2008), a more relaxed principles-based regulation may encourage managers to use subjective judgment and increase earnings management activities. Many European countries used to exercise local rules-based accounting system before the adoption of IFRS, a principles-based regulation, was made mandatory among EU countries after January 1, 2005. A similar policy was also pursued in Australia. Aside from the possibility to extend the scope of management judgment and increased practices of earnings management, these regulatory changes also pose a great challenge to all aspects involved. This would mean that accountants and auditors must learn new expertise to approach the changes properly which, hence, affect the related education and training programs as well (Carmona and Trombetta, 2008). Yet, many believe that IFRS would bring more benefits through improved financial reporting quality.

Adopted by approximately 120 countries, IFRS has now become an international language for financial reporting. For many, the standard has become a choice since it is believed to bring enhancement to the quality of financial reports. Brad et al. (2014) captured this benefit from a study conducted on a small sample of 56 publicly traded firms of the Bucharest Stock Exchange. In their analysis, it is proved that the adoption of IFRS resulted in significant improvement of accounting quality in the year the standard was adopted compared to the pre-adoption values. This was shown by the lower calculated amounts of income-increasing accruals. Interestingly, they also find that firms audited by the Big 4 public accounting firms reported fewer earnings management practices.

A similar discovery was written by Fuad and Wijanarto (2017) in their earnings management study on 438 listed Indonesian manufacturing firms. Cited from the Indonesian Institute of Accountants (*Ikatan Akuntansi Indonesia* or IAI), Indonesia has yet to adopt IFRS and still opt to maintain its own rule-based GAAP, namely IFAS. However, in 2012, the Indonesian Financial Accounting Standards Board (*Dewan Standar Akuntansi Indonesia* or DSAK) declared their commitment to converge with IFRS by applying accounting standards per 2009 version of IFRS. Using the Modified Jones model by Dechow et al. (1995), Fuad and Wijanarto (2017) concluded that the adoption of IFRS in 2012 induces a negative relationship with the use of discretionary accruals as a proxy of earnings management. They further argue that the result is in line with that of Doukakis (2014) which indicates an improvement of overall

quality of financial reports and promotes firms' transparency and reduced information asymmetry. As explained in the article by Jeanjean and Stolowy (2008), the notion that IFRS promotes transparency stems from the fact that it minimizes the amount of discretion in financial reporting compared to the many local GAAPs. With only one applied standard, financial reports will also become more comparable and informative to investors and market analysts. This could aid investors to differentiate which financial reports are higher or lower in quality. By allowing easier comparison, earnings management could, arguably, be decreased as monitoring and evaluating accounting quality could be done cheaper and more pervasive (Barth et al., 1999; Ball, 2006).

There are, however, the evidence against the adoption of IFRS. Several research studies have shown that IFRS, instead of bringing enhancement to accounting quality, increases the frequency of earnings management. Jeanjean and Stolowy (2008) have proven that the introduction of IFRS is not the primary factor to increase earnings quality. They use a threshold approach (Burgstahler and Dichev, 1997; Degeorge et al., 1999) to analyze firms' efforts to avoid losses as proxied by irregularities in the earnings distribution. Samples are collected from 3 IFRS first-time adopter countries: Australia, France, and the UK with 422, 321, and 403 firms from each country, respectively. The result shows that earnings management practices remain stable in both Australia and the UK in the post-IFRS adoption period. In France, however, the post-adoption period shows a rather interesting result as the result indicates that earnings management increases significantly. Callao and Jarne (2010) confirm this as well in their research study. Using a total of 1,408 publicly traded non-financial firms in 11 EU countries, the practice of earnings management was approximated by calculating discretionary accruals according to the Modified Jones model put forward by Dechow et al. (1995). The result indicates that the adoption of IFRS among EU countries has encouraged the use of discretionary accruals to manage earnings which suggest that opportunistic behaviors are enhanced and quality of financial information delivered by firms is severely impacted (Callao and Jarne, 2010).

**Table 1. Summary of Previous IFRS and Earnings Management Studies**

<b>Author (Year)</b>	<b>Number of samples</b>	<b>Independent variables</b>	<b>Dependent variable</b>	<b>Main result</b>
<b>Brad et al. (2014)</b>	56 firms from the Bucharest Stock Exchange	Size, Growth, Eissue, Levier, Asseturn, Dissue, Auditor	ACC <sub>it</sub> which represents accruals divided by total assets	Significant improvement in post-IFRS adoption period as indicated by the lower use of accruals

<b>Jeanjean and Stolowy (2008)</b>	422 of Australian firms, 321 of France firms, and 403 of UK firm	Income before extraordinary items (IBEX), total assets and sales	Income before extra items/Lagged total assets	The practices of earnings management in France intensifies in the Post-IFRS period, but stay the same in Australia and the UK
<b>Callao and Jarne (2010)</b>	1,408 non-financial firms from 11 EU countries	Change in sales, change in accounts receivable, PPE, book to market ratio of the firm, current operating cash flows Firm size (total assets), firm growth (sales variation), leverage (liabilities)	DA <sub>it</sub> or discretionary accruals	Earnings management intensifies after the adoption of IFRS in Europe as shown by the rising value of discretionary accruals
<b>Fuad and Wijanarto (2017)</b>	438 manufacturing firms from the Indonesian Stock Exchange	Total accruals, total assets, change in sales, gross PPE, change in accounts receivable, non-discretionary accruals	DA <sub>it</sub> or discretionary accruals is derived from deducting non-discretionary accruals from total accruals	Discretionary accruals among observed firms decline following the adoption of IFRS

The contradictive results from previous studies could be linked to several rationales. First, each research study focuses only on a certain industry, region, or period. Different methods and numbers of samples were also found across different studies which should prompt varying results. Second, managerial discretion and opportunistic behavior may be hard to observe and control as they are specific to firms. Third, the application of IFRS differs among nations with some opting for immediate and full adoption and the rest with gradual implementation. Barth et al. (2008) argued that for developing countries, the adoption of IFRS may face difficulties as they lack the infrastructure related to the implementation plan.

Concerning the last point of the previous paragraph, Indonesia as a third world country may lack the resources and infrastructure to implement IFRS. Moving from one standard to another does not only affect the interpretation, valuation, and presentation of certain accounts. From a broader perspective, the change would also influence human resources and learning or training curriculum which should adjust as well. Therefore, the standard-setter in the country (DSAK) opted to gradually adopt the new standard instead of fully employing it which might burden

the affected companies. The gap between the past standard with the new one may, however, create loopholes to be used by managers to behave opportunistically. Furthermore, unlike in the USA, many countries, including Indonesia, do not possess a binding regulation such as SOX. As outlined by Barth et al. (2008), the downfall of Enron and WorldCom which was followed by the issuance of the SOX act has successfully reduced firms' preferences to use discretionary accruals as a means to manipulate earnings. The disclosure requirement accompanied by strict supervision from auditors has discouraged companies to utilize accruals to smooth out income performance. Cohen et al. (2008) discovered similar findings in which the establishment of SOX lead to the minimized used of accruals.

Given that IFRS has a more flexible and open approach to treat transactions, the move from rule-based IFAS as well as the absence of strong and comprehensive rule such as the SOX leads the following hypothesis to be put forward:

**H1: The adoption of IFRS has a positive impact on discretionary accruals**

Jeanjean and Stolowy (2008), however, suggest that the idea of using IFRS as an internationally accepted accounting rule is not sufficient to improve financial reporting quality. The extent to which managerial discretion is exploited does not only depend on accounting standards. There are other factors such as management incentives, national institutional characteristics, and legal enforcement systems that play more important roles than accounting standards alone. The management incentives argument doubt that the adoption of commonly accepted accounting standards will produce more comparable financial reports across firms in different markets or that it will push down opportunistic behaviors (Jeanjean and Stolowy, 2008). Even if the new standard encourages more disclosures, firms and managers may not present useful information if they are not motivated to do so. Furthermore, managers' behaviors in financial reporting would still differ between companies although they share the same standard as there are different reporting incentives (Jeanjean and Stolowy, 2008; Leuz and Oberholzer-Gee, 2006).

Institutional and legal mechanisms also play parts in earnings management practices. Callao and Jarne (2010) find that legal enforcement and investors' protection mechanism have significantly and negatively affected the extent of earnings manipulation. With a strong legal system, it is argued that financial quality can be improved. Further, Burgstahler et al. (2006) confirm that earnings manipulation is more evident among countries with weaker legal enforcement. While investor protection mechanism would restrict managers and other insiders

to deliberately manage earnings figures as their rights to acquire greater private control has been limited by the law (Callao and Jarne, 2010; Leuz et al., 2003). Jeanjean and Stolowy (2008) are also in support of this argument as they believe that a rigid legal system would strongly encourage firms and managers to provide high-quality financial reports after the adoption of IFRS.

While management incentives and external factors including legal enforcement are harder to be measured quantitatively, firms' specific factors may provide easier alternatives to be linked with the use of discretionary accruals. As argued by Callao and Jarne (2010), several variables can be observed. The first variable is the size of the firm. Through the research they carry, it is found that firm size is significantly and positively influencing discretionary accruals. Bigger firms tend to engage in practices of earnings management more than smaller ones as they are more visible to the public and agency problem is more commonly found among them due to the distant nature between management, shareholders and other parties interested to firms' financial information (Watts and Zimmerman, 1990; Scott, 1991). A similar notion is also voiced by Biger and Hoang (2008). In the article, they wrote that large firms tend to have broader options of accounting treatment and at the same time these firms face stronger pressure to achieve targets. Nalarreason et al. (2019) also obtained an identical result. The research they carried was performed using regression analysis on 75 listed manufacturing firms of the Indonesian Stock Exchange. The result indicates that companies' size is positively influencing the practice of earnings management among observed companies. To discover whether a similar result will be obtained on this research, the following hypothesis is formulated:

## **H2: Firm size has positive impacts on discretionary accruals**

The second variable to be observed is the extent to which debt is employed or leverage. A higher level of debt ratio would result in a tighter and more restrictive covenant as creditors are concerned about the possibility of bankruptcy of the firms. To convince such concerns, managers may be encouraged to alter their financial reports to reduce the risks of deviating from debt covenants. Callao and Jarne (2010) hypothesize that the relationship between discretionary accruals and leverage is a priori positive. This was later confirmed in the findings which then interpreted as efforts to avoid violating debt covenants. The results of the research study were also proved to be significant which indicates the importance of leverage in encouraging earnings management. Watts and Zimmerman (1986), through their positive accounting theory, have also argued that managers may be encouraged to smooth out earnings when they are faced with the possibility of violating credit arrangements. This argument is also

supported by the finding from a research study by Nalarreason et al. (2019). It is found that the higher leverage a firm has, the higher level of earnings management is found. These findings lead to the following hypothesis:

**H3: Leverage ratio has positive impacts on discretionary accruals**

## Chapter 3

### Data and Methodology

#### 3.1. Data Collection

For this research, we will use annual report data of companies listed in the Main Board index (MBX) of IDX from the year 2014-2019. By 2019, the index has 336 listed companies and in total 1,673 observations are collected from the Eikon Datastream database. The firms of MBX are grouped to nine major sectors which include agriculture; mining; basic industry and chemicals; miscellaneous industry, consumer goods industry; property, real estate, and construction building; infrastructure, utilities, and transportation; finance; and trade, service, and investment (Table 2). The index is evaluated and updated annually. In this study, however, the firms used as samples are restricted to only 239 in total (Table 3). After adjusting for annual report data availability, we found that 46 companies do not have a complete data set between 2014 and 2019. Thus, they shall be excluded from the research. Furthermore, firms in the finance industry are also excluded as the nature of accruals is very different from other industries. Below is a summary of the sample used in this research study.

**Table 2. MBX Index Constituents**

Sectors	Number of firms
Agriculture	14
Basic industry and chemicals	42
Consumer goods industry	34
Finance	51
Infrastructure, utilities, and transportation	36
Miscellaneous industry	27
Mining	22
Property, real estate, and construction building	48
Trade, services, and investment	62
<b>Total number of firms in MBX</b>	<b>336</b>

**Table 3. Research sample**

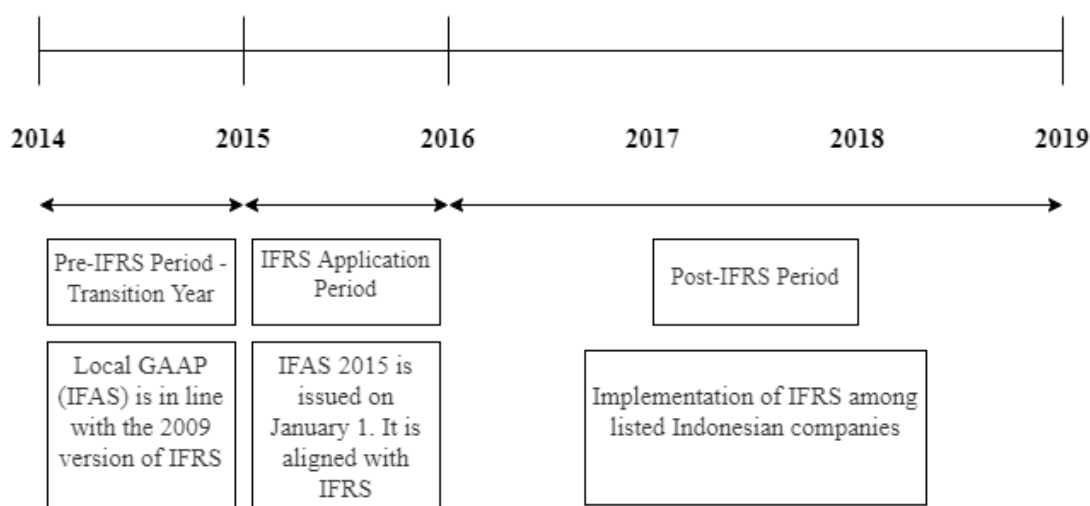
MBX index constituents in 2014-2019	336
Constituents with incomplete annual report data set for 2015-2019	46
Constituents in the finance industry	51
<b>MBX index constituents to be used as a research sample</b>	<b>239</b>



### 3.2. Event Window

For this research, we are particularly interested in studying the effect of adopting IFRS on the practice of earnings management. In the year 2015, DSAK or the accounting standard setters of Indonesia have decided to narrow down the discrepancies of the local GAAP (IFAS) and IFRS by only a 1-year difference, indicating that the local accounting regulation will refer to the 2014 version of IFRS. This decision was an advancement of the initial attempt to adopt IFRS with 3-year regulation discrepancies in the year of 2012. The change was effective from January 1, 2015, and all listed companies will, therefore, have to adhere to the new standard. For this reason, we focus more on the post-IFRS period of 2015 to 2019. The year of 2014, however, is also included in the analysis to make a relevant comparison of the use of discretionary accruals before the adoption took place. Figure 1 below illustrates the periods used in this research study.

**Figure 1. Event Window**



### 3.3. Methodology

#### 3.1.1. Discretionary Accruals as Proxy of Earnings Management Magnitude

To estimate the magnitude of earnings management among the sample, we will use a method that uses discretionary accruals as the proxy of earnings management. Discretionary accruals are derived by deducting non-discretionary accruals from the total accruals. While non-discretionary accruals are obtained by regressing total accruals on several explanatory variables (Yoon et al., 2006). In 1991, Jones introduced a discretionary accruals model that tries to gauge the abnormal accruals of companies in comparison to the industry average. Due to the limitation of the current model, Dechow et

al. (1995) propose to adjust the Jones model by taking into assumption management discretion over revenue. This model, which called the Modified Jones model, gains popularity in earnings management study. This also applies to Indonesia, in which the model became the most employed method to detect accruals earnings management as argued by Suhardianto and Harymawan (2011). However, this Modified Jones model by Dechow et al. (1995) is revealed to be only effective among developed economies. Yoon and Miller (2002) explored the model and found that the Modified Jones model did not fit the analysis of Korean firms. In a further study by Yoon et al. (2006), it is found that the Modified Jones model has poor goodness of fit compared to their developed model. This notion is supported by a study of companies listed in the Dhaka Stock Exchange (DSE) which shows that the explanatory power of the Modified Jones model was only 8.9%, compared to that of Yoon's model which reached 83% (Islam et al., 2011). Alareeni and Aljuaidi (2014) discovered a similar finding in which the model by Yoon et al. (2006) has a higher degree of effectiveness to detect the practice of earnings management in Palestine as compared to the Modified Jones model. Therefore, the following OLS regression based on the extended Modified Jones model developed by Yoon et. al (2006) is adopted in this paper. The model is presented as follows:

$$TA_{it}/REV_{it} = \beta_0 + \beta_1(\Delta REV_{it} - \Delta REC_{it})/REV_{it} + \beta_2(\Delta EXP_{it} - \Delta PAY_{it})/REV_{it} + \beta_3(DEP_{it} + PEN_{it})/REV_{it} + \varepsilon_{it}$$

**Equation (i). The Extended Modified Jones model (Yoon et. al, 2006)**

Where

TA (total accruals) = accounting earnings – cash flow from operations (CFO)

REV = net sales revenue

REC = trade receivables

EXP = sum of the cost of goods sold and selling and general administrative expenses excluding non-cash expenses

PAY = trade payables

DEP = depreciation expenses

PEN = retirement benefit expenses

$\Delta$  = change operator

As explained by Yoon et al. (2006), this model assumes that total accruals depend on three explanatory variables. The first variable,  $(\Delta REV_{it} - \Delta REC_{it})/REV_{it}$ , denotes changes in cash sales revenue. It tries to depict the firms' tendency to escalate reported credit sales toward the end of the fiscal year. The second variable,  $(\Delta EXP_{it} - \Delta PAY_{it})/REV_{it}$ , indicates that firms may not only use revenues to smooth out income, but expenses can be utilized as well. Yoon et al. (2006) further argued that the previous model, Modified Jones model by Dechow et al. (1995), fails to explain the dual features of current accruals through cash sales and cash expenses. The third variable,  $(DEP_{it} + PEN_{it})/REV_{it}$ , portrays the portion of the non-cash expenditure that firms employ. It consists of depreciation expense and unfunded part of pension benefits expenses. This variable tries to capture firms' tendency to use non-cash items to raise, reduce, or smooth out earnings. These three variables are non-discretionary parts of the total accruals. Non-discretionary accruals are assumed to be used to reflect the real situation of firms, hence are not in the scope of management control (Islam et. al, 2011). Therefore, this part of the total accruals is excluded from the analysis. What we are interested in is the estimated residual of the regression model which represents the discretionary accruals as a proxy of earnings management. Yoon et al. (2006) convey the approximation of the residual by the following equation.

$$DA_{it} = TA_{it}/REV_{it} - [b_0 + b_1(\Delta REV_{it} - \Delta REC_{it})/REV_{it} + b_2(\Delta EXP_{it} - \Delta PAY_{it})/REV_{it} + b_3(DEP_{it} + PEN_{it})/REV_{it}]$$

**Equation (ii). Discretionary accruals (Yoon et. al, 2006)**

The above equation shows how discretionary accruals ( $DA_{it}$ ) is obtained by deducting non-discretionary accruals from the total accruals ( $TA_{it}$ ). A positive number derived from the following model indicates earnings management by increasing the reported earnings has occurred. While a negative one would refer to an earnings-decreasing practice (Yoon et. al, 2002). However, in this research, we will use the absolute value of discretionary accruals ( $ABS\_DA$ ) as the main concern is to detect discretionary accruals as a proxy of earnings management practice, not the direction of the practice.

**3.1.2. Discretionary Accruals, IFRS, and Firm-related Variables**

For this research, the main interest is to discover the effect of adopting the 2015 version of IFAS on the magnitude of discretionary accruals. To obtain it, a dummy variable of IFRS will be used. This variable will be employed to help us understand whether the convergence

of IFRS in 2015 IFAS is prominent in influencing the use of discretionary accruals in the particular year of 2015. Furthermore, a Time variable will also be adopted to understand the trend of use of discretionary accruals following the application of the 2015 IFAS in the post-implementation period of 2016-2019. This variable was first introduced by Cohen et al. (2008).

$$\text{Time} = \text{Year } t - \text{Year } 2015$$

**Equation (iii). Time variable formula (Cohen et. al, 2008)**

Furthermore, the third equation will be developed to also test whether firms' specific factors have influences over discretionary accruals. Based on the second and third hypotheses, we will try to uncover the relationship between firm size and leverage with discretionary accruals. The first variable (firm size) will be measured using total assets ( $A_{it}$ ) of the corresponding firms. While the leverage ( $LIAB_{it}$ ) is estimated by the degree to which liabilities are employed as compared to the number of capitals each company employs.

$$ABS\_DA_{it} = \alpha + \beta_1 IFRS + \beta_2 \text{Time} + \beta_3 \frac{A_{it}}{REV_i} + \beta_4 \frac{LIAB_{it}}{REV_i} + \varepsilon$$

**Equation (iv). The Discretionary Accruals Regression Model**

Where

- IFRS = dummy variable that is equal to 1 for the year 2015, and 0 otherwise (to represent the IFRS adoption effect)
- Time = the calendar year minus 2015, excluding 2014 (to represent the IFRS effect for the following period)
- $A_{it}$  = total assets a firm employs as a proxy of firm size
- $LIAB_{it}$  = the volume of liabilities a firm employs as a proxy of firm leverage
- REV = net sales revenue of each current year

For  $A_{it}$  and  $LIAB_{it}$  variables, the amounts are deflated by revenue to avoid the problem of heteroscedasticity. It is expected that the relationship is positive as has been discussed in the literature review. The larger the assets possessed by each firm, the higher the possibilities to engage in earnings management. And similarly, the higher the leverage, the higher the earnings management value will be.

## Chapter 4

### Results

#### 4.1. The Extended Modified Jones model

We first begin the analysis by running the regression of the Extended Modified Jones model by Yoon et al. (2006). This model is used to estimate the non-discretionary parts of the total accruals which later will be used to deduct the total accruals (TA) to obtain the discretionary accruals. Panel A of Table 4 presents the descriptive statistics of the independent variables that constitute the Yoon's earnings management model.

**Table 4. Descriptive Statistics of The Extended Modified Jones model**

<b>Panel A. Full sample from Datastream Database, 2014-2019 (Number of observations = 1,673)</b>					
<b>Independent Variables</b>	<b>25<sup>th</sup> Percentile</b>	<b>Mean</b>	<b>Median</b>	<b>75<sup>th</sup> Percentile</b>	<b>Standard Deviation</b>
<b>T.Accruals</b>	-3.59e+08	-4.35e+08	-4.94e+07	8.06e+07	2.37e+09
<b>delta_REV</b>	-3.44e+07	6.39e+08	1.55e+08	6.73e+08	2.60e+09
<b>delta_REC</b>	-1.52e+07	1.94e+08	2.57e+07	1.72e+08	1.11e+09
<b>delta_EXP</b>	-3.07e+07	5.04e+08	1.12e+08	5.46e+08	2.16e+09
<b>delta_PAY</b>	-2.55e+07	1.06e+08	7658154	9.43e+07	9.04e+08
<b>TA</b>	-.097	-.021	-.027	.033	.603
<b>(ΔREV - ΔREC)/REV</b>	-.046	-.031	.050	.127	1.685
<b>(ΔEXP - ΔPAY)/REV</b>	-.027	-.023	.046	.112	1.716
<b>(DEP + PEN)/REV</b>	.042	.112	.073	.133	.152

All delta variables are denoted in Indonesian Rupiah (IDR). X1, X2, and X3 are expressed as a fraction or percentage of revenue of the current year.

Variable Definitions:

T. Accruals = The difference between net income and net operating cash flows

delta\_REV = The difference of current year net revenue with the previous year

delta\_REC = The difference of current year net accounts receivables with the previous year

delta\_EXP = The difference of current year total expenses (total amount of cost of goods sold (COGS) and selling, general, and administrative expenses (SGA)) with the previous year

delta\_PAY = The difference of current year accounts payables with the previous year

TA = The difference between net income and net operating cash flows deflated by revenue of the current year

(ΔREV - ΔREC)/REV = The difference between changes in revenues and changes in accounts receivables deflated by revenue of the current year

$(\Delta EXP - \Delta PAY)/REV =$	The difference between changes in cash expenses and changes in accounts payables deflated by revenue of the current year
$(DEP + PEN)/REV =$	The amount of non-cash expenses which constitute of depreciation, depletion, and amortization and retirement benefits expenses deflated by revenue

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**Panel B. Panel Regression Results of The Extended Modified Jones model**

Explanatory Variables	Coefficient	Standard Error	t-test	Significance (P-value)
<b>Dependent variable: TA (Total Accruals)</b>				
$(\Delta REV - \Delta REC)/REV$	-0.226	0.055	-4.11	0.000***
$(\Delta EXP - \Delta PAY)/REV$	0.308	0.054	5.65	0.000***
$(DEP + PEN)/REV$	0.021	0.130	0.16	0.872
<b>Constant</b>	-0.023	0.022	-1.04	0.299
<b>R-squared</b>		0.067		
<b>Adj. R-squared</b>		0.065		
<b>F-statistics</b>		33.92		
<b>P-value (F-statistics)</b>		0.000		

\*p<0.1; \*\*p<0.05; \*\*\*p<0.001

Variable Definitions:

$(\Delta REV - \Delta REC)/REV =$	The difference between changes in revenues and changes in accounts receivables deflated by revenue of the current year
$(\Delta EXP - \Delta PAY)/REV =$	The difference between changes in cash expenses and changes in accounts payables deflated by revenue of the current year
$(DEP + PEN)/REV =$	The amount of non-cash expenses which constitute of depreciation, depletion, and amortization and retirement benefits expenses deflated by revenue

Panel B provides the results of the panel regression of the Extended Modified Jones model by Yoon et al. (2006). A significant regression equation was established ( $F(3, 1,419) = 33.92, p < .000$ ) with, however, low R-squared value of .067. This indicates that only 6.7% of the variation of total accruals can be explained by the variation of the three explanatory variables. While 93.3% is influenced by other variables not included in the model. This number, unfortunately, shows that the Extended Modified Jones model by Yoon et al. (2006) does not offer a high degree of goodness of fit. With only a 6.7% variation that can be explained by the model, the estimation of non-discretionary accruals of Indonesian firms would have low reliability. As a result, the magnitude of earnings management which is approximated by the discretionary accruals may not be reliable as well. This finding, thus, contradicts older tests done in other Asian countries such as Korea

(Yoon et al., 2002; Yoon et al., 2006), Bangladesh (Islam et al., 2011), and Palestine (Alareeni and Aljuaidi, 2014).

Yoon's regression model of earnings management has three explanatory variables to predict the total accruals. Firms' total number of accruals is equal to  $-.023 - .226(\Delta\text{REV} - \Delta\text{REC})/\text{REV} + .308(\Delta\text{EXP} - \Delta\text{PAY})/\text{REV} + .021(\text{DEP} + \text{PEN})/\text{REV} + \text{residuals}$ , where the first variable depicts changes in cash sales, the second indicates changes in cash expenses, the third explains non-cash expenses and residuals as the value of discretionary accruals that will be the main concern of our study. Total accruals decrease by 0.226 or 22.6% of revenue, increase by 0.308 (30.8%), and 0.021 (2.01%) for every additional 1% of the change in cash sales, change in cash expenses and use of non-cash expenses, respectively. Of the three variables, only the first two are statistically significant at 1% confidence level. While the third is not significant at any level of confidence.

The first variable is related to firms' efforts to increase earnings by including credit sales (Yoon et al., 2006). This variable has a t-value of negative 4.11 with strong statistical significance towards the dependent variable. This finding implies that the use of front-loading credit sales is very popular amongst the sample firms. By recognizing the sales early, accounting earnings can be increased. This, however, is not followed by an increased amount of cash flow as they are to be settled by the following years. At the expense of this front-loading activities, however, is a reduced total amount of sales to be recognized in the annual report in the subsequent periods.

The second variable suggests a similar notion in which the use of cash expenses is commonly found in Indonesian firms. This variable posits a strong positive relationship with the dependent variable with a calculated standard error of 0.054. By incurring more cost of sales and selling, general and administrative expenses, firms can reduce earnings. A popular rationale for this activity is to lower tax expenses. Rahman et al. (2013) argue that one of the strongest motivations to conduct earnings management is to avoid heavy tax burden. This leads to the very commonly practiced tax avoidance. Larastomo et al. (2016) confirmed that tax avoidance does significantly and positively influence earnings management practices among Indonesian firms listed in the Indonesia Stock Exchange from 2010 to 2014.

The use of non-cash expenses, on the contrary, is not significant in contributing to the value of total accruals. In addition, it has a positive relationship with total accruals which suggests that the sample firms have not been able to employ non-cash items such as depreciation, depletion, amortization, and retirement benefit expenses to manage income.

This is similar to the result obtained in research by Alareeni and Aljuaidi (2014) on Palestinian firms. Yoon et al. (2006) in their research found that these non-cash expenses are also insignificant and positively associated with total accruals amongst income-increasing companies. They took this finding as an indication that the non-cash expenses were not effectively employed to manage earnings by the income-increasing firms

**Table 5. Descriptive Statistics of Discretionary Accruals**

<b>Residuals</b>	<b>25<sup>th</sup> Percentile</b>	<b>Mean</b>	<b>Median</b>	<b>75<sup>th</sup> Percentile</b>	<b>Standard Deviation</b>
<b>DA</b>	-.078	.000	-.010	.048	.614
<b>ABS_DA</b>	.027	.168	.064	.153	.590
<b>P_DA</b>	.023	.187	.058	.152	.804
<b>N_DA</b>	-.153	-.152	-.069	-.031	.323

All residual variables are expressed as a fraction or percentage of revenue of the current year.

Variable Definitions:

DA = Discretionary accruals calculated as the residuals of the Extended Modified Jones model

ABS\_DA = The absolute value of discretionary accruals

P\_DA = The positive value of discretionary accruals

N\_DA = The negative value of discretionary accruals

The main part that we are particularly interested in, however, lies in the residuals of the model that are used as a proxy of the discretionary accruals (DA). The average value of DA is very small that it is rounded to zero. Interestingly, we discover that the average value of positive discretionary accruals (P\_DA) is higher than the negative one (N\_DA). P\_DA has a mean of 0.187 while N\_DA only has 0.152. However, the number of observations of P\_DA is lower than that of N\_DA with 640 and 783, respectively. This suggests that from 2014 to 2019, income decreasing activities are more frequently conducted than income increasing practices, but at a lower magnitude. While for the income increasing activities, it can be assumed that managers are deviating the accounting earnings at a larger magnitude. The direction of discretionary accruals, however, will not be discussed further as we are more interested in analyzing the effect of IFRS on the magnitude of accounting discretion regardless of whether it is positive or negative. Therefore, we will use ABS\_DA. In its absolute value, the discretionary accruals have an average of 0.168. This number indicates that, on average, firms that constitute the MBX index of the year 2014 to 2019 are exercising managerial discretion to alter earnings figure by approximately 16.8% of that year's revenue.



## 4.2. IFRS and Firm-specific Factors Effects on Discretionary Accruals

Under this section, we will analyze each of the hypotheses after obtaining the value of ABS\_DA which has been calculated previously. The result of the panel regression analysis to study the effect of employing IFRS on discretionary accruals, as well as the influences of firm size and leverage, is presented in Table 6.

**Table 6. Descriptive Statistics: IFRS and Firm-Specific Variables**

<b>Panel A. Panel Regression Results (<math>ABS\_DA = \alpha + \beta_1 IFRS + \beta_2 Time + \beta_3 A/REV + \beta_4 LIAB/REV</math>)</b>				
<b>Explanatory Variables</b>	<b>Coefficient</b>	<b>Standard Error</b>	<b>t-test</b>	<b>Significance (P-value)</b>
<b>Dependent variable: ABS_DA (Absolute value of Discretionary Accruals)</b>				
<b>IFRS</b>	.048	.033	1.47	0.142
<b>Time</b>	-.007	.007	-0.91	0.362
<b>A/REV</b>	.060	.002	24.76	0.000***
<b>LIAB/REV</b>	.021	.007	3.15	0.002***
<b>Constant</b>	-.027	.019	-1.44	0.150
<b>R-squared</b>	0.484			
<b>Adj. R-squared</b>	0.483			
<b>F-statistics</b>	332.56			
<b>P-value (F-statistics)</b>	0.000			
<b>*p&lt;0.1; **p&lt;0.05; ***p&lt;0.001</b>				
<b>Effect size</b>	0.15			
<b>Required sample</b>	129			
<b>Actual sample</b>	239			
<b>Actual power (post hoc)</b>	0.999			
<b>Variable Definitions:</b>				
ABS_DA =	The absolute value of discretionary accruals calculated by the Yoon's Model			
IFRS =	A dummy variable equal to 1 if the year is 2015			
Time =	A trend variable calculated by deducting the current year with 2015			
A/REV =	The value of total assets deflated by revenue of the current year to represent the firm size			
LIAB/REV =	The value of total liabilities deflated by revenue of the current year to represent leverage			

### **Panel B. Multicollinearity Test by Measuring VIF**

	<b>Explanatory Variables</b>			
	<b>IFRS</b>	<b>Time</b>	<b>A/REV</b>	<b>LIAB/REV</b>
<b>VIF</b>	1.19	1.20	1.83	1.83
<b>Mean VIF</b>	1.51			

VIF = Variance inflation factor (VIF < 10 indicating no serious multicollinearity problem)

We discover that the panel regression model has a strong significance ( $F(3, 1,419) = 332.56, p < .000$ ) with an R-squared value of 0.484. This number proposes a notion that the four independent variables used in the model can explain, by approximately, 48.4% of the variance of the dependent variable. Furthermore, using a statistical program G\*Power, we found that with expected Cohen's effect size (f-squared) of 0.15, the number of samples needed to run the regression would be 129 in the a priori test. With that determined number of samples, the corresponding calculated actual power of the a priori test equals 0.951 which implies that the probability of exercising Type II error — failing to reject a false hypothesis — is very small as the value is approaching 1.00. In the actual regression test, we have more sample firms used at 239 which leads to the increased actual power of the post hoc test at 0.999. In addition, Panel B of Table 6 also provides VIF value for all predictors. With an average value of less than 2, the model does not possess any serious multicollinearity problems.

The panel regression model that is shown in Table 6, Panel A above tries to predict the magnitude of earnings management as estimated by the absolute value of discretionary accruals (ABS\_DA) based on four variables: IFRS, Time, A/REV, and LIAB/REV. The aggregate equation derived from running the regression test is presented as follows:

$$ABS\_DA = \alpha + .048(IFRS) - .007(Time) + .06(A/REV) + .021(LIAB/REV) + \varepsilon$$

The first and second variables are correlated with the first hypothesis. IFRS variable, in particular, tries to explain the effect of the adoption period on the value of discretionary accruals, holding other independent variables constant. The variable IFRS contribute an addition of .048 for every observation that occurred in the year of 2015. Other than that, it would be zero. The Time variable is used to study the trend of ABS\_DA in the post-IFRS period. On the contrary to the first variable, it deducts the value of ABS\_DA by .007 for every 1-year time difference between the current year after IFRS adoption and the year IFRS was adopted, ceteris paribus. The larger the yearly difference, the larger the effect on ABS\_DA. The third one is an estimation of firm size using total assets figures divided by revenue. It relates to the second hypothesis that tries to uncover the relationship between the size of firms with the magnitude of discretionary accruals. Holding other predictors constant, the value of ABS\_DA increases by .06 for every value increase of assets divided by revenue. The fourth and the last variable is an approximation of a firm's leverage. This variable is used for discovering the effect of employing more liabilities against the use of discretionary accruals. ABS\_DA will increase by .021 if liabilities

divided by revenue increases by 1-point value, holding other variables constant. For this model, only the A/REV and LIAB/REV variables are significant at 1% while the first two cannot be held significant.

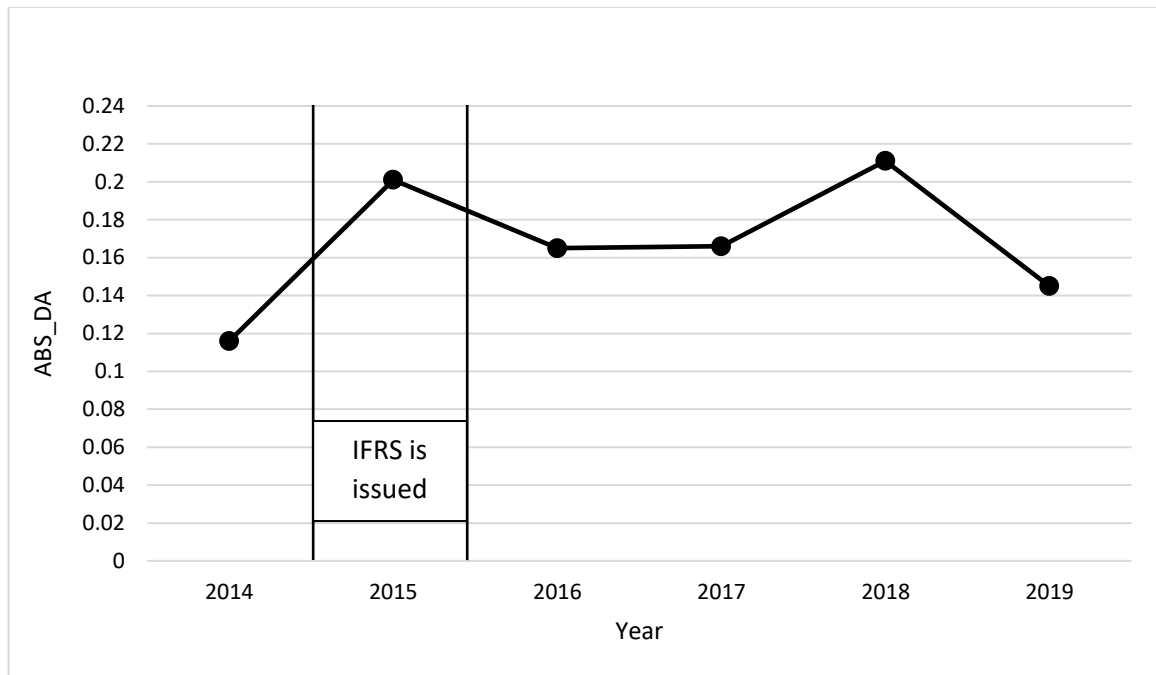
The first hypothesis of this study shall be rejected as the variable IFRS and Time do not have significance towards the value of ABS\_DA. While it is true that the variable IFRS is positively related to ABS\_DA, the p-value suggests that the effect is not statistically significant (t-value = 1.47, p>0.1). As can be seen in Table 6, in 2015 the average value of ABS\_DA increased significantly if compared to the previous year. In 2014, managers of all firms used in the sample exercised managerial discretion to alter earnings numbers by approximately 11.6% of the revenue of that particular year. The value increased in 2015 with a presented value of around .201 or 20.1% of the year's revenue. However, the change could be induced by other external factors that are not explained under this research but occurred coincidentally within the period of the adoption of IFRS.

Meanwhile, the Time variable, which is used to understand the trend of ABS\_DA following the adoption of IFRS in 2015, shows that it is negatively related to ABS\_DA but with no significance as well (t-value = -.91, p>0.1). The average value of ABS\_DA does not continuously increase over time as predicted in the first hypothesis (Figure 2). Instead, it declines immediately in the year after the adoption (0.165), increases again in 2018 (0.211) but drops significantly by 2019 (0.145). This shows that in 2019, the value of discretionary accruals exercised as an effort to manage earnings was only 14.5% of the revenue of that particular year. It is 0.056 points lower than in the year of 2015 at 0.201. This indicates that, overall, accrual-based earnings management decreased over the post-IFRS period as depicted in Figure 2. Yet, the decrease may not relate to the employment of IFRS due to the insignificance. Therefore, the first hypothesis that predicts a positive relationship between IFRS and accrual-based earnings management following the adoption of the standard shall be, once again, rejected.

**Table 7. The Trend of Discretionary Accruals by Years**

<b>ABS_DA</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
<b>Mean</b>	.116	.201	.165	.166	.211	.145
<b>Std. Deviation</b>	.196	.954	.407	.354	.867	.295

**Figure 2. Average Absolute Value of Discretionary Accruals (2014-2019)**



Furthermore, we also examine the relationships between firm-specific determinants and discretionary accruals. The determinants of our concern are the firm size which is estimated using total assets deflated by revenue and leverage as computed by total liabilities employed divided by revenue. The result of the panel regression analysis is shown in Table 6. From the analysis, we can find that both variables are positively associated with the discretionary accruals value as expected in the second and third hypotheses. Moreover, both A/REV (t-value = 24.76,  $p < 0.01$ ) and LIAB/REV (t-value = 3.15,  $p < 0.01$ ) are statistically significant. This means that the second and third hypotheses are accepted.

**Table 8. Analysis of Discretionary Accruals and Firm-specific Factors by Industries**

	Industry	N	Mean values		
			ABS_DA	A/REV	LIAB/REV
1	Agriculture	96	.200	3.162	1.819
2	Basic industry and chemicals	248	.069	1.463	.699
3	Consumer goods industry	191	.053	1.121	.487
4	Infrastructure, utilities, and transportation	214	.263	3.643	2.069
5	Mining	140	.096	2.086	1.061
6	Miscellaneous industry	153	.093	1.655	.933
7	Property, real estate, and construction building	256	.354	6.279	1.889
8	Trade, services, and investment	344	.159	2.045	1.012
	<b>Total</b>	1,643			

Table 8 presents the industry classification of the average values of ABS\_DA as the dependent variable and A/REV and LIAB/REV as the independent variables. We can see that firms with the highest asset employment belong to the property, real estate, and construction building industry. The industry has the mean value of assets deflated by revenue at 6.279. As expected from the regression result, this industry has the most intensive earnings management practice as shown by the mean value of ABS\_DA of 0.354. This indicates that, during 2014-2019, the accounting discretion exercised is equal to 35.4% of the revenue. The industry with the most liabilities is also revealed to have a high average value of ABS\_DA. This is in line with our hypothesis. It is found that infrastructure, utilities, and transportation industry has the highest mean value of liabilities employed. The average value of LIAB/REV shown in Table 8 for this industry equals to 2.069. According to our regression model, higher leverage should lead to a higher degree of earnings management. This is depicted by the table which shows that the infrastructure industry has an average of 0.263, which is the second-highest value after the property and real estate industry. The value suggests that the magnitude of accrual-based earnings management used by firms in this industry is around 26.3% of the revenue in the period of 2014-2019. The second and third most leveraged industries are property, real estate, and construction building, and agriculture, and these industries are also revealed to have fairly high ABS\_DA value.

## **Chapter 5**

### **Discussions**

We initiate our study by running a regression test on the Extended Modified Jones model to obtain the discretionary values as the proxy of earnings management of our samples. The dependent variable TA, which represents total accruals, shows a negative average as expected. Companies usually have negative accruals as they incur pre-paid accounts before satisfying the obligations or recognize substantial non-cash expenses. This is in line with the findings put forward by Yoon et al. (2002) and Cohen et al. (2008). The following step is to derive the residual value of the model. We discovered a zero mean value of the residual, which depicts the discretionary accruals. Although the mean value is zero on average, we found that Indonesian firms tend to state higher earnings than lower ones as indicated by the higher value of positive discretionary accruals compared to the negative one. Cohen et al. (2008) reported similar results in which US firms also appeared to be involved more in income-increasing activities. However, our average value of ABS\_DA after adopting IFRS reaches 0.178. This is significantly higher to prior studies such as reported by Doukakis (2014) at 0.055, Cohen et al. (2008) at 0.11, and Fuad and Wijanarto (2017) at 0.108. The large average value, however, seems to not be related to the adoption of IFRS in 2015 as our empirical model fails to suggest a statistically significant result of variables IFRS and Time. This contradicts our hypothesis that IFRS will positively impact the magnitude of earnings management among Indonesian firms.

The insignificance of the variables IFRS and Time indicates that the changes in discretionary accruals cannot be solely explained by the adoption of the IFRS. Doukakis (2014) postulated a similar finding in his study in which mandatory IFRS adoption appeared to have no significance towards the level of accrual-based earnings management. Yet, it contrasts the study of Fuad and Wijanarto (2017) who found a significant and negative association of IFRS and discretionary accruals following the first wave of IFRS implementation in Indonesia in 2012. In the second wave in 2015, however, the association does not exist as shown by the insignificance of our findings. Houqe et al. (2012) discovered that IFRS led to decreased accounting quality following the mandatory adoption. However, they also argued that the finding might not hold in the long run as other factors may contribute further. This notion is also supported by Ahmed et al. (2013) who contended that the IFRS effect on earnings management is subject to many factors. They specifically described that, over time, the IFRS implementation guidelines as well as the standard's users' familiarity might increase.

Moreover, important variables such as national and institutional structures often change and leave inevitable impacts on the practice of earnings management. Similarly, Jeanjean and Stolowy (2008) also argued that the implementation of IFRS alone would not be sufficient to significantly influence discretionary accruals. With or without the presence of IFRS, management incentives, and multiple national and institutional factors are argued to have larger control over financial reporting efforts than a single accounting regulation.

Considering the results of several prior studies, our findings suggest that omitted variable bias may have been incurred. Although we incorporate two statistically significant firm-specific variables of size and leverage, including national legal and economic variables might have added higher relevance to explain the behaviors of the discretionary accruals. Leuz et al. (2003), for example, hypothesized and proved that the magnitude of earnings management could be reduced if a country possessed strong investor protection. Established investor protection could limit managers and other insiders to excessively control financial performance to mark up their benefits. Houque et al. (2012) also provided similar findings in which IFRS would significantly influence accounting quality if the adoption was accompanied by strong protection to investors. Besides investor rights protection, Byard et al. (2011) and Holthausen (2009) discovered that IFRS alone would not affect financial reporting activities significantly if strong legal enforcement does not exist. Cohen et al. (2008), for example, reports that in the post-SOX period, accrual-based earnings management decline. This explains how a strong and binding law could inhibit the use of accruals although IFRS is not yet adopted into the US system. Indonesia, however, does not have a provenly strong legal system to limit opportunistic behaviors that could harm external investors.

Furthermore, Leuz and Oberholzer-Gee (2006) argued that Indonesian firms do not sufficiently disclose their financial performance, which could indicate weak investor protection. The result of their study also indicated that suspicious political ties with the government have provided incentives to reduce the level of mandatory disclosure as it will reduce the opportunity of insiders to exploit private control benefits which could lead to public scrutiny. State-owned enterprises (SOEs) or non-SEO firms that have close ties with the government are revealed to overperform and disclose less (Leuz and Oberholzer-Gee, 2006). Harymawan et al. (2020) reported that SOEs in Indonesia tend to dominate the property, real estate, and construction building and infrastructure, utilities, and transportation industries. Also, SOEs have significantly higher financial performance. Interestingly, we find supporting evidence that may confirm this. As can be seen in Table 8 that presents industry classification of the average values of ABS\_DA, A/REV, and LIAB/REV, we can see that industries with

the highest accrual-based earnings management activities are property, real estate, and construction building and infrastructure, utilities, and transportation industries. They have an average ABS\_DA value of 0.354 and 0.263, consecutively. This may indicate that due to the weak legal enforcement, managers of firms with closer ties to the government can exploit their financial performance for private benefits and have lower disclosure incentives which could deteriorate relationships with investors. Unfortunately, we did not consider this in the research and, thus, accurate measures of legal enforcement regime and investor rights protection were not taken into the measurement.

Moreover, the study period of our research is focused on the advancement of IFRS rather than the first-time adoption effect. Byard et al. (2011) find that the adoption of international accounting standards of IFRS that do not differ significantly from the previous local GAAP will not result in substantial changes in financial performance. The same notion is also voiced in the study by Ahmed et al. (2013). They argue that the impact of IFRS on accounting quality is still debatable as it depends on whether it is of higher or lower quality compared to the domestic accounting standards. Indonesia converged the local accounting standards (IFAS) with IFRS for the first time in 2012. The adopted version had a 3-year regulatory difference before it was renewed in 2015. However, the difference between the 2012 and 2015 versions could also be of no significance since the 2015 standard only reported a total of 12 amendments and issuance of new standards (Appendix 5). Yet, once again, we could not infer a decisive statement on this since we do not measure this possibility into account in our research.

The findings, however, still suggest that firm-specific variables are relevant and useful in predicting the degree of earnings management. For the firm size hypothesis, this confirms that the larger the firms as estimated by the total assets possessed, the larger the accounting discretion will be. This could be linked to the fact that larger firms have more public exposure, including expectations from market experts as well as from the public. Therefore, managerial discretion is often exercised to alter the number of earnings to satisfy targets (Biger and Hoang, 2008). Moreover, agency problem is often more pronounced among big firms as the relationship between shareholders and management is more distant which leads to more possibilities of information asymmetries (Watts and Zimmerman, 1990; Scott, 1991). Our finding appears to be in line with Callao and Jarne (2010) who also confirmed that both assets and liabilities are strongly related to discretionary accruals among European firms. Nalarreason et al. (2019) provided comparable results in which firm size is statistically significant to predict earnings management among Indonesian manufacturing companies.



For the LIAB/REV variable, we can infer from the analysis that the higher the leverage, the higher the ABS\_DA value would be. This result is similar to the finding by Callao and Jarne (2010). Doukakis (2014) also discovered that highly leveraged firms engaged in more earnings management practices. It is argued that the use of accounting discretions in highly leveraged firms is strongly related to the incentive to avoid violating debt covenants. Older research by Sweeney (1994) also suggested a matching result in which the article documented evidence that the management of firms with high default risk tended to conduct income-increasing activities more than the control firms.

## **Chapter 6**

### **Conclusion and Implications**

We carried this research study to examine the effect of mandatory adoption of IFRS on the practice of accrual-based earnings management among Indonesian companies. Corporate variables which included firm size and leverage were also studied to determine their relevance in explaining the degree of earnings management. Our research was conducted on a sample of listed non-financial firms of the MBX index of the Indonesia Stock Exchange from 2014 to 2019.

Our analysis found that IFRS only marginally positively related to discretionary accruals. It does not have strong statistical significance to indicate any association with the dependent variable of discretionary accruals. Also, the Time variable is negatively related to the discretionary accruals value in the post-IFRS period, but it has no statistical significance as well. Therefore, our first hypothesis that states that IFRS positively influence discretionary accruals value is rejected. This finding suggests that the discretionary accruals are more likely to be influenced by other variables that are not analyzed and discussed in our study. For example, Indonesia is known to have a weak legal system that opportunistic behaviors are often discovered late. The variable investor protection and legal enforcement as in Callao and Jarne (2010) could have been used to prove whether it significantly influenced the discretionary accruals.

Although IFRS may have no significance to impact the practice of earnings management, we discover that firm size and leverage positively drive the value of discretionary accruals at a statistically significant value. This finding leads us to the conclusion that the larger a firm is as estimated by the total assets it employs, the more accounting discretion it will exercise. A similar notion can be derived for the leverage effect which has strong statistical significance as well. Our result points to evidence of a positive relationship between leverage and the dependent variable which implies that higher leverage leads to a higher value of discretionary accruals. Firms that tend to have heavy assets and liabilities employment are revealed to be more intensively engaged in earnings management practices than those with less. In our sample, these firms belong to the property, real estate and construction building and infrastructure, utilities, and transportation industries. These findings suggest that the second and third hypotheses are accepted.

This research study was, however, subject to several limitations. First, our analysis was restricted to study the effect of adopting IFRS on the degree of earnings management using

discretionary accruals to indicate the anomaly. We did not differentiate the value of the accruals to the current and long-term. This restricted us to understand the details of the accruals management techniques. Furthermore, the study of real earnings management which might explain the decrease of discretionary accruals value following the adoption of IFRS was not explored under this research. Cohen et al. (2008) and Azizah (2017), for example, found that there were tradeoffs between the use of discretionary accruals and real activities after accounting regulation was strengthened. Second, we might have committed omitted variable bias as we failed to explain the relationship between IFRS and earnings management variables. Due to the limited variables used under this research, other relevant factors that could have explained the behavior of discretionary accruals better were omitted. These could include variables introduced by Cohen et al. (2008), Callao and Jarne (2010), Fuad and Wijanarto (2017), and Biger and Hoang (2008) such as the choice of auditors, investors protection and legal enforcement, profitability, managerial stock ownership, and so on. This deficiency, thus, might motivate other researchers to study and fill in the gap. Finally, we realized that there were insufficient prior studies under the same topic conducted in Indonesia. This disallowed us to find the relevant basis of supporting evidence of the insignificance of the IFRS variable. Moreover, our study was one of the only few that used the Extended Modified Jones model by Yoon et al. (2006) but the model did not fit Indonesian firms well as shown by the low value of R-squared. The incompatibility of the model might lead to lower accuracy of the discretionary accruals value. This, however, provided opportunities for scholars and experts to design a better fitting model for Indonesian firms and might lead to further research to obtain more representative results.

On the other hand, our results also provide several contributions and suggestions. First, our research confirmed that earnings management existed in Indonesian firms even in the post-IFRS period. The mean value of absolute discretionary accruals is 0.168 that indicates that, on average, the accounting earnings that have been altered reached 16.8% of the net revenue, which is high. This should provide a basis for financial reporting regulatory evaluation to strengthen the rules to minimize future earnings management activities and increase transparency. A possible law reformation could also be offered to establish improved legal enforcement that further restrict managerial opportunistic behaviors. Second, the study could be of use to users of annual reports which include but not limited to investors, creditors, and auditors. The results suggested that external parties should be more aware of the possibilities of earnings management which could impede investors and creditors to obtain the most representative report of firms. Also, despite the limitation in auditing all available data of a

company, auditors could establish a higher degree of integrity to detect and minimize excessive use of accounting discretion.

## References

- Ahmed, A. S., Neel, M., & Wang, D. (2013). Does mandatory adoption of IFRS improve accounting quality? Preliminary evidence. *Contemporary accounting research*, 30(4), 1344-1372.
- Alareeni, B., & Aljuaidi, O. (2014). The modified Jones and Yoon models in detecting earnings management in Palestine Exchange (PEX). *International Journal of Innovation and Applied Studies*, 9(4), 1472.
- Azizah, W. (2018). Trend and Tradeoff Between Accrual Earnings Management and Real Earnings Management in Indonesia. *Media Riset Akuntansi, Auditing & Informasi*, 17(2), 159-172.
- Ball, R. (2006). International Financial Reporting Standards (IFRS): pros and cons for investors. *Accounting and business research*, 36(sup1), 5-27.
- Barth, M. E., Landsman, W. R., & Lang, M. H. (2008). International accounting standards and accounting quality. *Journal of accounting research*, 46(3), 467-498.
- Biger, N., & Hoang, Q. (2008). Managerial Ownership, Firm Size, and Earnings Management. *International Journal of Finance*, 20(1).
- Brad, L., Dobre, F., Țurlea, C., & Brașoveanu, I. (2014). The Impact of IFRS Adoption in Romania upon the Earnings Management of the Bucharest Stock Exchange Entities. *Procedia Economics And Finance*, 15, 871-876. DOI: 10.1016/s2212-5671(14)00550-4
- Burgstahler, D. C., Hail, L., & Leuz, C. (2006). The importance of reporting incentives: Earnings management in European private and public firms. *The accounting review*, 81(5), 983-1016.
- Burgstahler, D., & Dichev, I. (1997). Earnings management to avoid earnings decreases and losses. *Journal of accounting and economics*, 24(1), 99-126.
- Burgstahler, D., & Eames, M. (1998). Management of Earnings and Analysts' Forecasts. *Unpublished working paper, University of Washington*.
- Byard, D., Li, Y., & Yu, Y. (2011). The effect of mandatory IFRS adoption on financial analysts' information environment. *Journal of accounting research*, 49(1), 69-96.
- Callao, S., & Jarne, J. I. (2010). Have IFRS affected earnings management in the European Union?. *Accounting in Europe*, 7(2), 159-189.
- Carmona, S., & Trombetta, M. (2008). On the global acceptance of IAS/IFRS accounting standards: The logic and implications of the principles-based system. *Journal of Accounting and Public Policy*, 27(6), 455-461.
- Chandra, T. (2015). Impacts of Indonesia's 2014 Presidential Election towards Stock Prices on Indonesia Stock Exchange. *International Journal of Business and Management*, 10(7), 172.

- Cohen, D. A., Dey, A., & Lys, T. Z. (2008). Real and accrual-based earnings management in the pre-and post-Sarbanes-Oxley periods. *The accounting review*, 83(3), 757-787.
- DeAngelo, L. E. (1988). Managerial competition, information costs, and corporate governance: The use of accounting performance measures in proxy contests. *Journal of accounting and economics*, 10(1), 3-36.
- Dechow, P. M., Sloan, R. G., & Sweeney, A. P. (1995). Detecting earnings management. *Accounting review*, 193-225.
- DeGeorge, F., Patel, J., & Zeckhauser, R. (1999). Earnings management to exceed thresholds. *The Journal of Business*, 72(1), 1-33.
- Deloitte IAS Plus. (2020). Financial reporting framework in Indonesia. Retrieved 14 April 2020, from <https://www.iasplus.com/en/jurisdictions/asia/indonesia>
- Doukakis, L. C. (2014). The effect of mandatory IFRS adoption on real and accrual-based earnings management activities. *Journal of Accounting and Public Policy*, 33(6), 551-572.
- Fuad, & Wijanarto, W. (2017). How mandatory IFRS adoption changes firms' opportunistic behavior: Empirical evidence from the earnings management perspective. *Academy Of Accounting And Financial Studies Journal*, 21(2), 1-10.
- Harymawan, I., Nasih, M., Suhardianto, N., & Shauki, E. (2020). How does the presidential election period affect the performance of the state-owned enterprise in Indonesia?. *Cogent Business & Management*, 7(1), 1750330.
- Healy, P., & Wahlen, J. (1999). A Review of the Earnings Management Literature and its Implications for Standard Setting. *SSRN Electronic Journal*. DOI: 10.2139/ssrn.156445
- Houqe, M. N., van Zijl, T., Dunstan, K., & Karim, A. W. (2012). The effect of IFRS adoption and investor protection on earnings quality around the world. *The International journal of accounting*, 47(3), 333-355.
- IAI. Pengertian Standar Akuntansi Keuangan (SAK). Retrieved 14 April 2020, from <http://www.iaiglobal.or.id/v03/standar-akuntansi-keuangan/sak>
- Islam, M. A., Ali, R., & Ahmad, Z. (2011). Is the modified Jones model effective in detecting earnings management? Evidence from a developing economy. *International Journal of Economics and Finance*, 3(2), 116-125.
- Jeanjean, T., & Stolowy, H. (2008). Do accounting standards matter? An exploratory analysis of earnings management before and after IFRS adoption. *Journal Of Accounting And Public Policy*, 27(6), 480-494. DOI: 10.1016/j.jaccpubpol.2008.09.008
- Jones, J. J. (1991). Earnings management during import relief investigations. *Journal of accounting research*, 29(2), 193-228.
- Larastomo, J., Perdana, H. D., Triatmoko, H., & Sudaryono, E. A. (2016). Pengaruh tata kelola perusahaan dan penghindaran pajak terhadap manajemen laba pada perusahaan manufaktur di Indonesia. *Esensi: Jurnal Bisnis dan Manajemen*, 6(1), 63-74.

- Leuz, C., & Oberholzer-Gee, F. (2006). Political relationships, global financing, and corporate transparency: Evidence from Indonesia. *Journal of financial economics*, 81(2), 411-439.
- Leuz, C., Nanda, D., & Wysocki, P. D. (2003). Earnings management and investor protection: an international comparison. *Journal of financial economics*, 69(3), 505-527.
- Nalarreason, K. M., Sutrisno, T., & Mardiaty, E. (2019). Impact of leverage and firm size on earnings management in Indonesia. *International Journal of Multicultural and Multireligious Understanding*, 6(1), 19-24.
- Payne, J. L., & Robb, S. W. (2000). Earnings management: The effect of ex-ante earnings expectations. *Journal of Accounting, Auditing & Finance*, 15(4), 371-392.
- Rahman, M. M., Moniruzzaman, M., & Sharif, M. J. (2013). Techniques, motives, and controls of earnings management. *International Journal of Information Technology and Business Management*, 11(1), 22-34.
- Scott, T. W. (1991). Pension disclosures under SFAS No. 87: theory and evidence. *Contemporary Accounting Research*, 8(1), 62-81.
- Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill-building approach*. John Wiley & Sons.
- Suhardianto, N., & Harymawan, I. (2011). A decade of earnings management researches in Indonesia. *Asia Pacific Journal of Accounting and Finance*, 2(1), 90-119.
- Sweeney, A. P. (1994). Debt-covenant violations and managers' accounting responses. *Journal of Accounting and Economics*, 17(3), 281-308.
- Teoh, S. H., Welch, I., & Wong, T. J. (1998). Earnings management and the long-run market performance of initial public offerings. *The journal of finance*, 53(6), 1935-1974.
- Watts, R. L., & Zimmerman, J. L. (1990). Positive accounting theory: a ten-year perspective. *Accounting review*, 131-156.
- Watts, R., and Zimmerman, J. (1986) *Positive Accounting Theory* (Englewood Cliffs, NJ: Prentice-Hall).
- Yoon, S. S., Miller, G., & Jiraporn, P. (2006). Earnings management vehicles for Korean firms. *Journal of International Financial Management & Accounting*, 17(2), 85-109.
- Yoon, S., & Miller, G. (2002). Cash from operations and earnings management in Korea. *The International Journal Of Accounting*, 37(4), 395-412. DOI: 10.1016/s0020-7063(02)00193-0

## Appendices

### 1. Table 1. Adjusted MBX Constituents

Sectors	Number of firms
Agriculture	14
Basic industry and chemicals	36
Consumer goods industry	28
Finance	0
Infrastructure, utilities, and transportation	31
Miscellaneous industry	22
Mining	20
Property, real estate, and construction building	37
Trade, services, and investment	51
<b>Total number of firms in MBX</b>	<b>239</b>

### 2. Table 2. Descriptive Statistics of the Data Items Used in The Extended Modified Jones Model

Data Items	25 <sup>th</sup> Percentile	Mean	Median	75 <sup>th</sup> Percentile	Standard Deviation
<b>Net Income</b>	1.45e+07	6.79e+08	1.57e+08	5.51e+08	2.21e+09
<b>CFO</b>	1.04e+07	1.11e+09	2.13e+08	7.85e+08	3.93e+09
<b>REV</b>	1.16e+09	8.72e+09	2.99e+09	8.53e+09	1.86e+10
<b>REC</b>	1.44e+08	1.67e+09	4.92e+08	1.45e+09	4.83e+09
<b>EXP</b>	8.08e+08	6.93e+09	2.27e+09	6.82e+09	1.49e+10
<b>PAY</b>	7.50e+07	1.09e+09	2.57e+08	9.59e+08	2.91e+09
<b>DEP</b>	3.75e+07	5.61e+08	1.30e+08	4.09e+08	1.71e+09
<b>PEN</b>	2.18e+07	2.73e+08	6.31e+07	2.15e+08	7.26e+08

Variable Definitions:

- Net Income = Annual earnings before extra items and preferred dividends
- CFO = Annual net cash flow from operating activities
- REV = Annual net sales
- REC = The annual total amount of accounts receivables
- EXP = The annual total amount of cost of goods sold (COGS) and selling, general, and administrative expenses (SGA)
- PAY = The annual total amount of accounts payables
- DEP = The annual total amount of depreciation, depletion, and amortization
- PEN = The annual total amount of retirement benefits expenses

### 3. Table 3. Descriptive Statistics of The Variables Used in the ABS\_DA Panel Regression Model



<b>Independent Variables</b>	<b>25<sup>th</sup> Percentile</b>	<b>Mean</b>	<b>Median</b>	<b>75<sup>th</sup> Percentile</b>	<b>Standard Deviation</b>
<b>IFRS</b>					.350
<b>Time</b>					2.000
<b>A/REV</b>	.889	2.750	1.446	2.881	5.899
<b>LIAB/REV</b>	.325	1.222	.668	1.458	2.169

IFRS and Time are dummy and trend variables, respectively. A/REV and LIAB/REV are expressed as fractions or percentages of revenue.

Variable Definitions:

IFRS = A dummy variable equal to 1 if the year is 2015

Time = A trend variable calculated by deducting the current year with 2015

A/REV = The value of total assets deflated by revenue of the current year to represent the firm size

LIAB/REV = The value of total liabilities deflated by revenue of the current year to represent leverage

#### 4. Table 4. ABS\_DA by Industry and Year

<b>No</b>	<b>Industry</b>	<b>N</b>	<b>ABS_DA</b>						
			<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>Mean value</b>
1	Agriculture	96	.084	.085	.286	.173	.182	.383	.200
2	Basic industry and chemicals	248	.060	.069	.095	.069	.064	.062	.069
3	Consumer goods industry	191	.058	.076	.037	.042	.049	.054	.053
4	Infrastructure, utilities, and transportation	214	.179	.270	.221	.309	.356	.239	.263
5	Mining	140	.086	.130	.106	.087	.074	.095	.096
6	Miscellaneous industry	153	.048	.095	.076	.112	.095	.130	.093
7	Property, real estate, and construction building	256	.269	.605	.347	.390	.283	.227	.354
8	Trade, services, and investment	344	.087	.136	.147	.104	.374	.098	.159
<b>Total</b>		1,643							

#### 5. Table 5. Changes in 2015 IFAS

<b>IFAS</b>	<b>IFRS Equivalent</b>	<b>Impacted Item</b>

IFAS 1	IAS 1 – Presentation of Financial Statements	<ol style="list-style-type: none"> <li>1. The title of Statement of Comprehensive Income is changed into Statement of Profit or Loss and Other Comprehensive Income</li> <li>2. Disclosure of other comprehensive income (OCI) is separated into items that are recyclable and not recyclable</li> </ol>
IFAS 24	IAS 19 – Employee Benefits	<ol style="list-style-type: none"> <li>1. Recognition of actuarial gains and losses are renamed ‘remeasurements’</li> <li>2. Recognition of past service costs/curtailment will occur in the plan amendment period</li> <li>3. Less flexibility in presenting pension expense in the income statement</li> <li>4. More disclosure requirements regarding the employee benefits and its related accounts and treatments</li> <li>5. The distinction between short- and long-term benefits is based on the period the payment is expected</li> <li>6. Taxes and expenses related to employee benefit plans should be included in return on assets</li> <li>7. Termination benefit recognition is renewed</li> <li>8. Risk features of the benefit plans are renewed</li> </ol>
IFAS 46	IAS 12 – Income Taxes	<ol style="list-style-type: none"> <li>1. Taxable profit under IFAS 46 will only be the net amount</li> <li>2. Deferred income tax asset/liability that is not related to point (1) will not be presented in the balance sheet</li> <li>3. The non-income tax charge will be added back to expenses and presented accordingly in the income statement</li> </ol>
IFAS 50 and 60	IAS 32 – Presentation of Financial Instruments	<ol style="list-style-type: none"> <li>1. Clarification of financial instruments offset requirements</li> <li>2. Disclosure requirements of the offsetting transaction are increased</li> </ol>
IFAS 60	IFRS 13 – Fair Value Measurement IFAS 68	<ol style="list-style-type: none"> <li>1. Renewed disclosure requirements for transferred assets that are not derecognized</li> <li>2. Renewed disclosure requirements for transferred assets that are derecognized. This applies only when entities are said to have “continuing involvement.”</li> </ol>
IFAS 55	IAS 39 – Financial Instruments:	<ol style="list-style-type: none"> <li>1. Changes to terms of debt instruments which include call option and prepayment features</li> </ol>

	Recognition and Measurement	2. Amendment to treatments of discontinued hedge instruments
Interpretation of Financial Accounting Standards (IFAS*) 26	IFRIC 9 – Reassessment of Embedded Derivatives	<ol style="list-style-type: none"> <li>1. Embedded derivatives are required to be reassessed when the entity becomes a party to the contract</li> <li>2. However, the reassessment occurs only when the contractual terms have significantly changed, and the fair value of the financial assets have been reclassified</li> </ol>
IFAS 65	IFRS 10 – Consolidated Financial Statements	<ol style="list-style-type: none"> <li>1. Replaces regulations regarding control and consolidation under IFAS 4 and separate financial statements under IFAS* 7</li> <li>2. Definition of control in the context of consolidated entities is renewed</li> <li>3. Assists in determining to participate and voting rights as well as agent-principal relationships</li> </ol>
IFAS 66	IFRS 11 – Joint Arrangements	<ol style="list-style-type: none"> <li>1. Replaces IFAS 12</li> <li>2. Classifies joint arrangements into two: joint operations (replaces the ‘jointly controlled assets’ and ‘interests in joint ventures’ from IFAS 12) and joint ventures</li> </ol>
IFAS 67	-	<ol style="list-style-type: none"> <li>1. Provides disclosure requirements for IFAS 65 and IFAS 66</li> <li>2. Entities are obliged to disclose significant judgments and assumptions in regards to IFAS 65 and 66; interests in subsidiaries; interests in joint arrangements and associates</li> </ol>
IFAS 68	IFRS 13 – Fair Value Measurement	<ol style="list-style-type: none"> <li>1. The standard does not apply to IFAS 30 and 53</li> <li>2. The definition of fair value is renewed</li> <li>3. Includes assumption regarding principal or most advantageous market, market participants, highest and best use value, and bid and ask prices</li> <li>4. Establishes a three-level hierarchy of fair value</li> <li>5. Increased disclosure requirements</li> </ol>
IFAS 48	IAS 36 – Impairment of Assets	<ol style="list-style-type: none"> <li>1. Results from the establishment of IFAS 68</li> <li>2. Increased disclosure requirements regarding the recoverable amount of cash-generating units</li> </ol>

Source: Pinnarwan, D., Lau, I., Cuizon, H., Lolita, O., & Jayanti, D. (2014). A Practical Guide to the New Indonesian Financial Accounting Standards 2015. *PricewaterhouseCoopers Indonesia*.