

**THE EFFECT OF SURPLUS FREE CASH FLOW AGENCY
PROBLEM ON EARNINGS MANAGEMENT
MODERATED BY INDEPENDENT COMMISSIONERS
AND AUDIT COMMITTEE MEETING FREQUENCIES**

By:

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175020307141004

MINOR THESIS

Presented in Partial Fulfillment of the Requirements
for the Degree of Bachelor of Economics



**INTERNATIONAL PROGRAM IN ACCOUNTING
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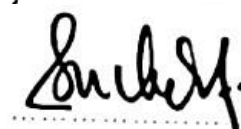
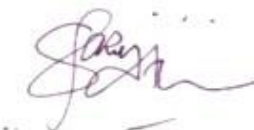
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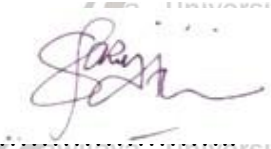
**PENGARUH MASALAH KEAGENAN KELEBIHAN ARUS KAS BEBAS
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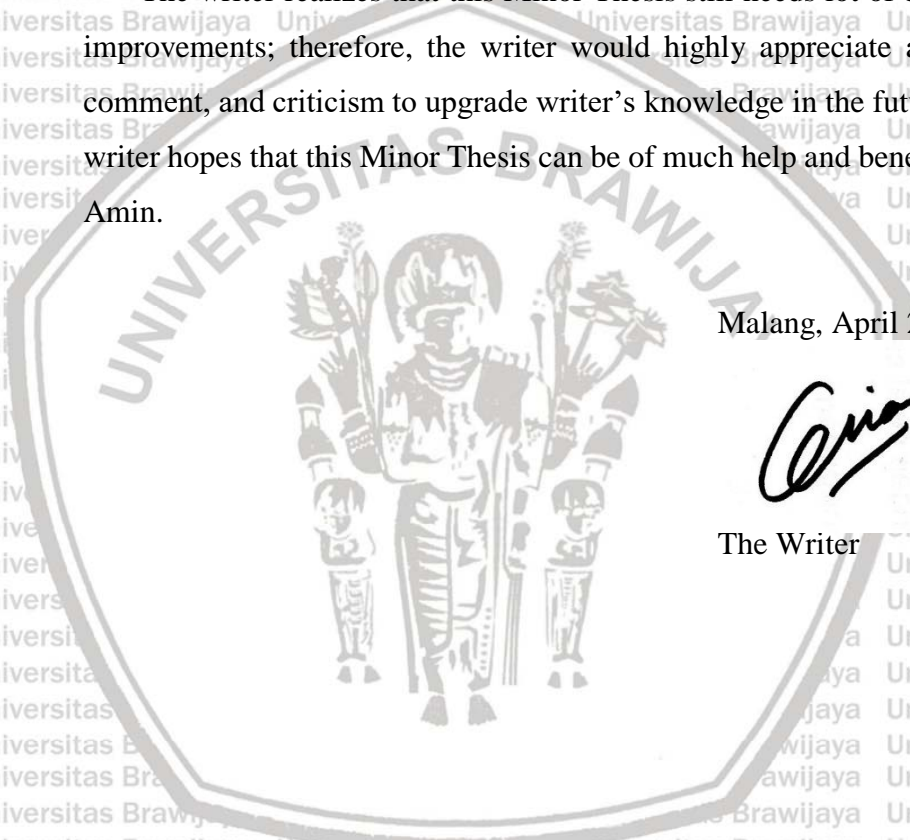
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The Writer



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ABSTRAK

Penelitian ini dilakukan dengan tujuan untuk mengetahui pengaruh yang ditimbulkan dari adanya masalah keagenan arus kas bebas terhadap manajemen laba di perusahaan industry manufaktur yang terdaftar di bursa efek Indonesia, baik sebelum dimoderasi ataupun sesudah dimoderasi. Variabel dalam penelitian ini adalah *Surplus Free Cash Flow Agency Problem (X1)*, sebagai variable independennya; lalu *Independent Commissioners (X2)*, *Audit Committee Meeting Frequencies (X3)*, sebagai variable moderasinya; dan *Earnings Management (Y)* sebagai variable dependennya. Penelitian ini menggunakan pendekatan kuantitatif, yang memungkinkan peneliti untuk mengukur, menilai dan mengetahui hubungan antar variable dalam bentuk numerik dan dengan prosedur statistik. Untuk metode pengumpulan data, penelitian ini menggunakan metode dokumentasi dan literasi. Penelitian ini menggunakan data sekunder yaitu laporan keuangan dan laporan tahunan sebagai sumber data utama. Data sekunder tersebut didapatkan dari website resmi bursa efek Indonesia dan website resmi masing masing perusahaan. Dalam memilih sampel dari populasi, peneliti menggunakan metode pengambilan *purposive sampling*. Oleh karena itu, terdapat beberapa kriteria yang digunakan, seperti; perusahaan manufaktur yang diikutkan dalam sampel harus menerbitkan laporan keuangan dan laporan tahunan selama 5 tahun berturut turut dari 2015-2019 di website resmi BEI, mata uang yang disajikan di laporan keuangan dalam Rupiah, dan perusahaan harus memiliki semua data yang dibutuhkan dalam penelitian ini. Maka, sampel yang digunakan dalam penelitian ini sebanyak 79 sampel. Analisis data yang digunakan dalam penelitian ini terdiri dari; analisis deskriptif, uji asumsi klasik, analisis regresi linear dan analisis regresi dimoderasi yang diolah menggunakan aplikasi SPSS. Hasil dari penelitian ini menunjukkan adanya pengaruh positif signifikan antara hubungan masalah keagenan arus kas bebas dengan manajemen laba, adanya pengaruh negatif signifikan dari variable komisaris independen sebagai variable moderasi, dan adanya pengaruh negatif signifikan dari variable frekuensi rapat komite audit sebagai variable moderasi.

Kata Kunci: Masalah Keagenan Arus Kas Bebas, Komisaris Independen, Frekuensi Rapat Komite Audit, Manajemen Laba.

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ABSTRACT

This research was conducted with the aim of knowing the effect of free cash flow agency problems on earnings management in manufacturing industrial companies listed on the Indonesian stock exchange, both before moderation and after moderation. and Audit Committee Meeting Frequencies. The variables in this study are Surplus Free Cash Flow Agency Problem (X1), as the independent variable; then the Independent Commissioners (X2), Audit Committee Meeting Frequencies (X3), as the moderating variable; and Earnings Management (Y) as the dependent variable. This study uses a quantitative approach, which allows researchers to measure, assess and determine the relationship between variables in numerical form and with statistical procedures. For data collection methods, this study uses documentation and literacy methods. This study uses secondary data, namely financial reports and annual reports as the main data source. Secondary data is obtained from the official website of the Indonesian stock exchange and the official website of each company. In selecting samples from the population, researchers used a purposive sampling method. Therefore, there are several criteria used by researchers, such as; Manufacturing companies included in the sample must publish financial reports and annual reports for 5 consecutive years from 2015-2019 on the official IDX website, the currency presented in the financial statements is in Rupiah, and the company must have all the data needed in this study. So, the sample used in this study was 79 samples. The data analysis used in this study consisted of; descriptive analysis, classical assumption test, linear regression analysis and moderated regression analysis were processed using the SPSS application. The results of this study indicate that there's a positive significant effect on the relationship between surplus free cash flow agency problem on earnings management, there's a negative significant effect of independent commissioners as moderating variable, and there's a negative significant effect of audit committee meeting frequencies as moderating variable.

Keywords: Surplus Free Cash Flow Agency Problem, Independent Commissioners, Audit Committee Meeting Frequencies, Earnings Management.

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CHAPTER I INTRODUCTION

1.1 Background of the Study

Financial reports are source of information about the condition and performance of a company that available for external parties, which can be used to make decisions. This information covers the financial position, performance, and changes in the financial position of a company. One of the important elements in the financial statements that is able to be used to measure management performance is through earnings. Earnings information is obtained through the income statement. The higher the company's profit, the better the company's performance (Agustia, 2013). In addition, earnings information is also used by investors or other parties as an indicator of the efficient use of funds in the company, which is manifested in the rate of return and an indicator for increasing prosperity.

Good or bad company performance can also be seen through the availability of company surplus free cash flow. A high surplus free cash flow indicates a company is able to pay debts to creditors, pay dividends to investors, and grow its business. In more detail, the concept of free cash flow, introduced by Jensen (1986), refers to the sum of the surplus funds available after funding profitable projects. In fields, firm managers tend to use free cash flow as investment rather than give it for dividends (Bukit & Nasution, 2015). Investments that have good prospects will benefit shareholders and vice versa. However, companies with surplus free cash flow usually end up wasting them on unprofitable projects (Jensen, 1986). While, the shareholders prefer the surplus free cash flow to be shared in dividends.

Therefore, the difference between the goals and interests of the company (owner or investor) and the manager will lead to a problem known as the agency problem. Agency problem occurs because the agent does not act in line with the interests of the principal. The actions of owners and managers prioritize their personal goals, which in turn encourage managers to take opportunistic actions to achieve their own goals at the expense of the goals of owners or investors. To conceal the unprofitable project performance, managers may engage in aggressive earnings management practices, which earnings management is an act of opportunistic actions the manager takes. Therefore, the emergence of earnings management practices is triggered by various factors, one of them being the surplus free cash flow agency problem.

Earnings management has been a negative trending topic in accounting literature, which is regarded as a tool for managers to fulfill their interests. There are two situations described by Chung et al. (2005) that are possible to be the reasons. The first one occurs when managers manipulate their earnings upwardly to conceal their unprofitable project performance. The second situation arises when managers opt for downward earnings management to smooth earnings in the following years when the negative impact of sub-optimal investment begins to appear.

There are several earnings management incidents that shocked the business world, such as Enron and Worldcom cases, which caused huge losses for businesses and the accounting profession. The public accounting profession has also received public attention. It provokes public confidence for the failure of Arthur Andersen accounting firm in carrying out the functions of independent attestation. Not only from

abroad, earnings management cases also occurred in Indonesia, such as the case of PT Kimia Farma Tbk. It was proven in 2002 that the suspected net profit inflating case committed by PT Kimia Farma Tbk was revealed in the 2001 financial statements.

In fact, earnings information is still a major concern in measuring the success or failure of a business in achieving predetermined operating goals (Luthan et al., 2016). The behavior of managing profits or earnings certainly has a negative impact on owners and other interested parties. Opportunistic actions taken by management in financial reporting will later reduce the credibility of financial reports and increase the bias of information presented in financial reports, which can mislead users of financial reports so that it will result in losses for its users. Thus, earnings management practice often creates information asymmetry, losses, and the crisis of investor confidence (Kapoor, 2016). Given the impact of losses incurred in an accounting manipulation case, an effective monitoring system is fundamental. The effective monitoring system will be able to prevent or reduce earnings management.

Good corporate governance emerges as an effort to control or overcome opportunistic management behavior. Good corporate governance creates mechanisms and means of control to create efficiency for the company and provide benefits for all parties (stakeholders). Implementing corporate governance is also one of the steps given to realize an increase in company performance through monitoring management performance and ensuring management accountability to shareholders. Currently, many companies understand the importance of implementing corporate governance. Many regulations have regulated companies to implement corporate governance to create the effectiveness of company control.

As specified in General Guidelines for Indonesian Good Corporate Governance, the audit committee helps independent commissioners assuring several jobs such as financial reports are presented fairly, the company's internal control structure is well implemented, and others (Klein, 2002). Besides, they also offer a monitoring mechanism to reduce earnings management practices and ability to control the management from opportunistic behavior effectively. Although characteristics of audit committee of listed companies are clearly specified in the listing requirement, whether companies comply with the Code effectively in controlling earnings management remains an issue. Therefore, an audit committee activities related to the frequencies of meetings is expected to be able to weaken the positive association between surplus free cash flow agency problem and earnings management, considering in the meeting the audit committee will review the accuracy of the financial reporting or discuss any significant issues that have been communicated with management.

In addition, to carry out good corporate governance, companies listed on the stock exchange are also required to have commissioners. Independent commissioner is part of commissioners in the company, which has to supervise managers in carrying out their duties in reporting financial statements and carrying out and implementing the good corporate governance system standards in the company properly and correctly, and independent commissioners must be able to act independently (Prabowo, 2014). In general, the board of commissioners is assigned and given responsibility for monitoring the quality of information contained in financial statements. This is important considering that management is interested in carrying out earnings management which will reduce investor confidence. To overcome this, the board of commissioners is

allowed to have access to company information (Agustia, 2013).

There are differences in previous research results regarding the effect of surplus free cash flow on earnings management. Based on that, researcher's need to do more identification regarding the topic. Thus, one of the reason why researcher need to use moderating variable is to find out the cause of the inconsistencies with previous research results. The previous research results may be influenced by other factors, such factors that may strengthen or weaken the relationship between surplus free cash flow on earnings management. One of the factors that may influence those relationship is the Good Corporate Governance factors such as independent commissioners and audit committee meeting frequencies.

More general, differences in previous research results about the effect of free cash flow on earnings management is become one of the reason why is this research is important in accounting field. As was done by Kono (2013), which states that free cash flow affects earnings management because the existence of free cash flow causes agency problems in the company and can be used to perform earnings management.

Meanwhile, Ghazalie et al. (2015) show that free cash flow has no significant effect on earnings management, especially in public companies in Malaysia.

This research also becomes important because the opportunity for earnings management is higher among companies with high surplus free cash flow. Past studies indicate that companies with high surplus free cash flow face major agency problems (Chung et al., 2005) particularly when the free cash flow is high, but investment opportunities are low. Managers of these companies act opportunistically for personal gain and tend to get involved in unprofitable projects, over investments, and misuse the

funds (Jensen, 1986). Their activities may bring benefits or rewards for themselves and may decrease shareholders' wealth. Managers may employ accounting procedures that increase reported earnings to hide the negative impact of projects, reducing the credibility of the financial statements because the reported numbers do not reflect actual conditions.

The effect of free cash flow on earnings management is moderated with independent commissioners and audit committee meeting frequencies simultaneously as the representation of good corporate governance factors is still rarely tested. Moreover, to the best of the researcher's knowledge, there is still no study that has yet analyzed the effect of surplus free cash flow agency problem on earnings management using the two specific factors of good corporate governance simultaneously as the moderating variables. There is one last motive on the importance of this research. According to SFAC No.1, financial reporting must provide useful information statements that should be transparent and reliable since financial information will be used by potential investors, creditors, and other users in making investment, credit, and other similar rational decisions. Accordingly, this research considers the importance of good corporate governance in this specific research phenomenon and uses it as the moderating variable with a hope that the managers' opportunistic behavior will be minimized, decrease in the agency conflicts decreasing, increase in financial report credibility and transparency, increase disclosure that can limit information asymmetry and able to detect earnings management in the financial report.

Given the important motives of this study in the accounting field., thus, this research was conducted to evaluate the effect of surplus free cash flow agency problem

towards earnings management, especially after being moderated with good corporate governance factors in the manufacturing industry listed in Indonesia Stock Exchange from 2015 until 2019.

1.2 Research Questions

As described previously, the free cash flow has been found to impact earnings management by prior studies with some mixed and inconclusive results. The impact of free cash flow on earnings management can be positive or negative. However, based on theory and previous research results, researchers believe that there is a positive effect of surplus free cash flow agency problem on earnings management.

In public companies, transparency of financial statements is a basic requirement in financial reporting. This is because the scope of responsibility of a public company includes various parties, such as investors, creditors, employees, government, and the general public. These stakeholders will later use the information in the financial statements to compare and assess the financial impact that will arise from the economic decisions they make. Therefore, this study adds some additional measurements to represent good corporate governance, which is used as the moderating variable in this study. By adding the good corporate governance factors, it is hoped that it could give different impact on the relation between surplus free cash flow agency problems on earnings management. Given the issues, the research questions of this study, therefore, are:

1. Does the surplus free cash flow agency problem have a positive effect on earnings management?

2. Can the independent commissioners weaken the positive effect of surplus free cash flow agency problem on earnings management?
3. Can the audit committee meeting frequencies weaken the positive effect of surplus free cash flow agency problem on earnings management?

1.3. Objectives of the Study

The objectives of the current study are:

1. To assess whether the surplus free cash flow agency problem has a positive effect on earnings management.
2. To assess whether the independent commissioners can weaken the positive effect of surplus free cash flow agency problem on earnings management.
3. To assess whether the audit committee meeting frequencies can weaken the positive effect on surplus free cash flow agency problem on earnings management.

1.4 Significance of the Study

The current study is expected to contribute to two aspects: Theory and Practice. The details are as follow:

1. Theoretical Significance

The current study contributes by enhancing and corroborating the previous findings, suggesting the relationship between surplus free cash flow agency problems towards earnings management. More importantly, it adds good corporate

governance factors as an additional moderating variable between surplus free cash flow agency problems on earnings management. This study particularly applied to developing countries, especially in Indonesia.

2. Practical Significance

The current study would also benefit the external parties, including shareholders, government, and public. This would inform them the importance of good corporate governance in a company, especially to face one of the common problems that arise because of surplus free cash flow, which is earnings management. In addition, this study informs whether the company's good corporate governance is efficiently and effectively applied to minimize the impact of surplus free cash flow agency problems towards earnings management.

1.5 Outline of the Study

The remainder of this study is organized as follows. Chapter 2 presents the theoretical framework, literature review, and hypothesis development. Meanwhile, Chapter 3 elaborates the research design or research methods utilized by this study and followed by Chapter 4, which discusses the quantitative findings of this study. Finally, Chapter 5 presents the conclusions, including the implication of findings and limitations of the study and recommendations or suggestions for further research.



CHAPTER II

LITERATURE REVIEW

2.1 Agency Theory

Agency theory is a theory that occurs through the development of accounting research. This theory is a modified form of the development of financial accounting model by adding aspects of human behavior into economic models. Jensen and Meckling (1976) describe an agency relationship occur when one or more persons or the principles employ another person or the agent to perform some services on their behalf, agency theory also stated that company has a collection of a contract between the owner of the resource (principal) and the manager (agent) who took care of the use and control of these resources which include all the things related with company's operation.

Agency theory is usually used to explain certain accounting issues such as conflict of interest (Bukit & Iskandar, 2009). According to the agency theory, the relationship between owners and managers is difficult to create due to their conflicting interests, and those conflicts of interests are frequently happening. A conflict of interest between principal and agent can cause problems known as agency problem that involves an asymmetric information is condition imbalance information for the agent in a position to have more information about the company than the principal. The presence of asymmetric information has led to the possibility of conflict between the principal and agent (Susanto et al., 2017). In short, an agency problem is defined as a problem that occurs because principal is dissatisfied with the outcome of an agent's performance.

One of the reasons why agency problems frequently happen is because the managers will not act in the best interest of the shareholders (Jensen and Meckling, 1976). The manager tends to follow their interest to maximize their benefits. On the other hand, the stockholders as the one who mostly owns the resources, who unable to deeply control the company, also have their own interest on the company's profit.

In addition, agency theory examines how management's behavior could follow the stockholder's interest and reduce the agency cost. According to Eisenhardt (1989), the agency theory uses three assumptions on human behavior, which consists of:

1. Humans are generally concerned with their interests first (self-interest).
2. Humans have limited thinking power about future perceptions (bounded rationality).
3. Humans always avoid risk (risk averse).

Based on the basic assumption of human nature, humans will act opportunistically, prioritizing their own personal interest.

Lastly, the agency theory states that the association between SFCF and the low-growth opportunities was considered the main problem in which executive managers start making investment decisions that would reduce shareholder wealth (Al-Omush et al., 2018). According to agency theory, the economic unit managers in companies with high free cash flow and low growth opportunities investment often tends to invest in additional projects or even projects that have negative net present value (negative NPV) lead to unwise investments of surplus free cash flow. To conceal and cover the effects of investments that do not maximize shareholder wealth, the manager tends to

manipulate the company's earnings which cause high agency costs that conflicts of interest create between the principal and agent (Karimi et al., 2014).

2.2 Surplus Free Cash Flow Agency Problem

Jensen and Meckling (1976) were the first ones to conduct a study regarding the agency theory, yet the idea of SFCF was also originally proposed by Jensen. Jensen defined surplus free cash flow as net cash flows after deducting the needs of positive NPV projects. Also, surplus free cash flow is the surplus cashes due to the implementation of all projects with a positive net present value during a period by the company. (Nouri and Gilaninia, 2017).

More simply, surplus free cash flows are cash that, after covering the investing activities, working capital needs, debt payments in which will be available for/in the company. The company's surplus free cash flow is a factor to measure the company's value and function, and it indicates the cash which the company has it and it is distributable among the investors (Paykani, 2012). In other words, surplus free cash flow is a combination of two free cash flow variables and the growth opportunities that simultaneously show the surplus cash and growth opportunities' effect in performing the earnings management. This variable is determined according to two variables of cash flow and companies' clerical value and demonstrate that although a company has SFCF, it possesses low growth opportunities (Rusmin et al., 2014).

In addition to the accounting concept, surplus free cash flows also represent idle cash flows since it reflects the financial resources at the management's discretion need to allocate. The advantage of the definition was that it indicated how much the actual

free cash flows were available for management to exercise. The surplus free cash flow theory stated that managers of firms with funds in excess or called free cash flow tend to not distribute the cash to shareholders, which contrasts with the expectation of shareholders. Shareholders obviously expect them to invest the surplus free cash flow in profitable investments that will generate high returns in the future. Instead, managers often use surplus free cash flow on investments with negative present values, such as either maintain surplus amounts of cash or invest excessively in real assets (D'Mello and Miranda, 2010).

Jensen (1986) also argued that too much SFCF would result in internal insufficiency and the waste of corporate resources, thus leading to agency costs as a burden of shareholder's wealth. Furthermore, not only Jensen, the research that done by Wang (2010) also proves that a higher level of surplus free cash flows would lead to more of unnecessary administrative waste and inefficiency. The behavior mentioned before surely have a negative impact on the welfare of the shareholders because it may lead to earnings management practices that mislead shareholders to believe that their manager always seeking high profit with their excess cash. In addition, these overinvestments, while maximizing managers' personal utility, will also reduce the firm value (D'Mello and Miranda, 2010).

Based on the agency theory, agency problems emerge because of the difference in interest between the insider and the outsider, both are likely to maximize their interest and this problem is related to the firm's free cash flow usage. Conflicts of interest that occur among the parties that exist in the firm cause the surplus free cash flow not always to be fully distributed to the shareholders. The insider is the party who

can control the firm effectively, while the outsiders have less ability to control.

Therefore, the managers desire to increase their power through control over greater resources that boosted the insider to invest in an attempt to enlarge the firm (Jensen, 1986). Consequently, the insider conducts harmful behavior in terms of excessive investment by using the firm's surplus free cash flow.

Hence, surplus free cash flow will provide opportunities and encouragement for the insider to invest. Chung et al. (2005a) state that investment projects benefit personal insiders more because the insider is able to choose to invest in unprofitable projects for their interest. As a result, the firm might be in a low growth position. In addition, the absence of monitoring by the outsider leads the insider to hide information regarding the activities in financial statements or to hide the manipulation of accounting numbers.

An outsider is a group of stakeholders with no information access within the company (Fakhroni, et al., 2018).

Based on surplus free cash flow agency theory, it is obvious that when surplus free cash flow increases, managers will have the incentive to engage in projects that have a negative return (Jensen, 1986). Thus, managers may undertake non-optimal actions such as making value-destroying investments that result in increased agency costs, a reduction of firm value, and senior executives being pushed into a vulnerable situation. Therefore, the insider behaves opportunistically, which is contrary to the objectives of the firm which maximizing the value for all shareholders. Accordingly, the firm policy taken by the insider results in decision-making is likely to become harmful such as investing excess (investment inefficiency) by using the firm's surplus free cash flow (Fakhroni et al., 2018).

Jensen (1986) linked the agency problem with surplus free cash flows so that management might abuse the surplus free cash flows with their authority, when the investment opportunities were not readily available to the firm. Therefore, surplus free cash flows to management were agency costs to shareholders (Wang, 2010). In addition, SFCHF associated with low-growth opportunities has been identified as a significant agency problem where managers make expenditures that reduce shareholder wealth.

There is a way for managers to hide their inefficiency in using the firm's surplus free cash flow. In order to disguise the negative effects of such investment, managers are used likely to manipulate earnings to increase productivity. Such manipulation may lead to a false picture of the financial status of the company; this makes it possible to do better financing an inefficient market, cash benefits, and more non-cash to be followed for managers. In addition, using the accounting discretion to increase reported earnings is another way to disguise the effects of their behavior related to non-wealth-maximizing investments (Rusmin et al., 2014).

Management will try to cover these losses that come from the return of unprofitable projects that were funded using surplus free cash flow by using earnings management. In a study by Chung et al. (2005a) examine the relationship between free cash flow surplus and external supervision on earnings management. It was revealed that the surplus free cash flow has a positive relationship with earnings management. In addition, Prajaya (2016) also believes that the surplus of free cash flow has a positive effect on earnings management.

To summarize, in a situation where a company has high surplus free cash flow, but there are low growth opportunities, agency problems may be created or occur.

Managers may engage in earnings management to show a better performance for the company, covering up their unwise usage of the firm's surplus free cash flow. As a result, the published financial data do not present a true economic picture of the company since the manager increases or decreases the reported earnings. It leads to non-optimal decision making by shareholders (Bukit and Iskandar, 2009).

2.3 Earnings Management

Earnings management is an act of managers who choose policies accounting to achieve some specific objectives, and accounting policies referred to is the use of accruals in preparing the reports. According to Sugiri (1998), the narrow definition of earnings management is the behavior of managers to "play" with the discretionary accruals component in determining the number of earnings. According to Scott (2011), the four patterns of earnings management, namely:

a. Taking a Bath

The first earnings management pattern is by reporting earnings in the current period with a very low or very high value as seen from the company's condition.

b. Income Minimization

The second earnings management pattern is like Taking a Bath but not as bad as Taking a Bath pattern. In this pattern, the earnings in the current period are reported to be lower than the actual earnings.

c. Income Maximization

This third earnings management pattern is the opposite of the Income Minimization pattern. On this pattern, the company report higher earnings than the actual earnings in the current period.

d. Income Smoothing

This fourth earnings management pattern is a pattern that is often used, namely by smoothing reporting earnings for external reporting, especially for investors, because investors usually like company profits which are relatively stable in each period.

In agency theory, the company's performance that has been achieved by management is informed to the shareholders in the form of financial statements.

Management is the party who knows best about all company information. This is what encourages management to do the management earnings actions, namely by presenting higher or lower than the actual earnings because earnings information is related to management compensation. Scott (2011) states several motivations for earnings management, namely:

a. Bonus Purposes:

Managers who have information on the company's net income will act accordingly opportunistic to do earnings management by maximizing the current earnings.

b. Political Motivation

Earnings management is used to reduce the reported earnings of a public company.

Companies tend to reduce their reported earnings due to public pressure, resulting

in the government imposing stricter regulations.

c. Taxation Motivation

The motivation for tax savings is the most obvious motivation for earnings management. Various accounting methods are used in order to save income tax.

d. CEO Change

CEOs who are approaching retirement will tend to increase income to increase bonuses. If the company's performance is poor, the CEO will maximize revenue so as not to be laid off.

e. Initial Public Offering (IPO)

Companies that are going to go public do not have market value and cause managers to carry out earnings management in the hope of increasing the company's stock price.

f. The Importance of Providing Information to Investors

Information about company performance must be conveyed to investors so that earnings reporting needs to be presented to continue to judge that the company is in good standing.

In short, earnings management occurs when managers use judgment in financial reporting and preparation of transactions to change financial reports, thereby misleading stakeholders about the company's economic performance or affecting outcomes related to contracts that depend on the accounting figures reported (Dewi, 2016).

2.4 Good Corporate Governance

The concept of a good corporation is developed in line with the public's demand for a healthy, transparent, and responsible business life. Thus, corporate governance is a system that is used to directly control the company's business activities. Also, corporate governance contains an understanding of the regulations of duties of every division and their responsibilities to other parties who might have different interests in the company. Of course, corporate governance also includes the relationship between the stakeholders involved and covers the company's objectives. The parties involved in corporate governance are shareholders, management, and the board. As for other stakeholders are employees, suppliers, customers, banks and other creditors, regulators, the environment, and the community (Agustia, 2013).

Therefore, corporate governance is one of the steps needed to be done to increase the company performance by monitoring management performance and ensuring management accountability to stakeholders or shareholders (Prabowo, 2014). In order to carry out good corporate governance, a listed company is required to have an independent commissioner and an audit committee. To achieve Good Corporate Governance (GCG) based on the 2006 National Committee on Governance Policy, five principles should be followed, including:

1. Transparency

To maintain objectivity in running a business, companies must provide material and relevant information in a way that is easily accessible and understood by stakeholders.

2. Accountability

A company must be accountable for its performance in a transparent and fair manner. Therefore, the company must be managed properly, measured, and in accordance with the interests of the company by taking into account the interests of shareholders and other stakeholders.

3. Responsibility

Companies must comply with laws and regulations and carry out responsibility for the community and the environment so that long-term business continuity can be maintained and gain recognition as a good corporate citizen.

4. Independency

To facilitate the implementation of the principles of good corporate governance, companies must be managed independently so that each organ of the company does not dominate each other and cannot be intervened by other parties.

5. Fairness

In carrying out its activities, the company must pay attention to the interests of shareholders and other stakeholders based on the principles of fairness and equality.

In addition, companies must also meet the requirements in terms of corporate structure in order to implement GCG mechanisms. These structures include, among others, the general meeting of shareholders (GMS), the Board of Commissioners, the Board of Directors, the Audit Committee, Audit Quality and so on. The audit committee is a committee that oversees the financial reporting process (Miko &

Kamardin, 2015). In accordance with Agency Problems, the audit committee can minimize agency cost which occurs because of Agency Problems. Scholars opined that agency problems usually exist because of:

1. Asymmetric Information

A situation where one party (agent) possesses more, or more detailed, information than the other (stakeholder).

2. Conflict of Interest

This conflict occurs among the goals of the principal and goals of the agent. For instance, the principal objective is wealth maximization while the manager's objective is the sustainability of the business (Eisenhardt, 1989). Therefore, Jensen and Meckling (1976) stated that agency problems exist between principal and agent because of the differences of objectives.

In terms of the characteristics of the board of directors and corporate ownership in GCG mechanisms, they should enhance the fairness among the different stakeholders in the business which leads to minimizing the agency problems (Lo et al., 2010). For example, independent directors should ensure that financial decisions are made in the best interests of all shareholders and should not result in earnings or cash flows that are biased toward the managers, controlling shareholders, nor the minority shareholders (Lo et al., 2010). Furthermore, the governance mechanisms should also ensure that a firm's long-term reputation is not ruined.

In relation to earnings management, financial statements are prepared and used by management to accountable to stakeholders. Accountability is measured from the

financial performance achieved by the management, which is reflected in the profit-loss generated. However, sometimes management tends to manipulate the earnings in order to meet the stakeholder's wants which leads to the distortion of financial statements and greater information asymmetry, and a general erosion of confidence in the firms will occur (Lo et al., 2010).

Thus, from various studies, the GCG mechanism has a significant influence on earnings management. It is necessary to monitor the behavior or policy management so that the earnings management is not arbitrarily made by the company's management (Luthan et al., 2016). Previous research also suggests that GCG could serve as an effective mechanism to alleviate and constrained management's opportunistic behaviors which will improve a company's reporting quality, and increase the firm value (Marra et al., 2011).

Therefore, GCG supported by strong regulation, can avoid financial disclosure from any possible misstatements (Puspitaningrum & Atmini, 2012). The argument underlying this is that when the company had established a mechanism GCG, especially along with strong regulation, then the behavior of management to manage earnings tends to be reduced, due to monitoring and control by such mechanism, in this case, are the independent commissioners and the audit committee meeting frequencies.

Yet, the debate over the occurrence influence among corporate governance and earnings management, that supposedly able to assure that top management will act in the interest of stockholders needs to be re-examined, especially in order to see the relevance of these two things at this current time.

2.5 Independent Commissioners

Independent commissioners are part of the company, who supervise managers in carrying out their duties in reporting financial statements and to properly and correctly carry out and implement the Good Corporate Governance (GCG) system standards in the company. Independent commissioners must also be able to act independently. The General Guidelines for Indonesian Good Corporate Governance states that the function of the board of commissioners is to ensure that the company has carried out its social responsibility, considers the interests of various company stakeholders, and monitors the effectiveness of the implementation of good corporate governance. The independent board of commissioners is directly elected by shareholders in the general meeting of shareholders (GMS) (Amelia and Hernawati, 2016).

According to Rahmawati (2013), independent commissioners are members of the board of commissioners who have no financial, management, share ownership and/or controlling holders or other relationships that can affect their ability to act independently. According to Tiswiyanti (2012), independent commissioners are members of the board of commissioners who are not affiliated with management, other board of commissioners, and controlling shareholders, also free from business relationships that affect their ability to act independently. Independent commissioners are proxied by using the percentage indicator for commissioners from outside the company with all company board members.

The existence of an independent commissioner is very important because in the practice of financial reporting, transactions that contain conflict of interest are often

found ignoring the interests of public shareholders (minority shareholders) and other stakeholders, especially in companies in Indonesia that use public funds in their business financing. The possibility that management has its interests will lead to what is called earnings management, which raises agency problems. Surely, agency problems will reduce the investor confidence in the company's financial reports (Luthan et al., 2016). Thus, to overcome this, the board of commissioners is allowed to have access to company information. However, the board of commissioners does not have authority in the company because the board of directors is responsible for conveying information related to the company to the board of commissioners. That's why independent commissioners play an important role in monitoring the accounting process. They can increase the reliability of the financial statements and ensure the application of internal control system. Moreover, the independent commissioners could also decrease management's opportunities to hold certain information for their interests (Pradipta, 2019).

Relating to the size or proportion of the independent commissioners and earnings management. Companies consisting of larger independent boards of commissioners tend to have strong control over management decisions so that earnings management actions or opportunistic behavior management can be minimized. Therefore, the composition of the board of commissioners may also affect management in preparing the financial statements through its role in carrying out the supervisory functions in order to achieve a good quality of reports.

Several previous studies have shown that independent commissioners have a close relationship with earnings management. Reviani & Sudantoko (2012) stated that

independent commissioners could have a significant negative effect on earnings management. The reason is that the proportion of independent commissioners in the company is able to reduce earnings management that occurs within the company.

However, previous research by Nekhili et al. (2016) stated that the board independence or independent commissioners has no significant impact on earnings management.

Thus, based on the theory and research of several previous researchers, it can be assumed that the level of the independent board of commissioners in a company is very important and influential in minimizing earnings management in the company, where the higher the level of independent commissioners in the company the better it is to supervise managers in committing fraud, on the contrary, the lower the level of the independent board of commissioners in the company the weaker the supervision of fraudulent practices by managers.

2.6 Audit Committee Meeting Frequencies

One of the prerequisites for implementing good corporate governance (GCG) in Indonesian public companies is the existence of an audit committee within the company organization. The audit committee is one part of the corporate governance mechanism in exercising internal control because it has a significant and strategic role in maintaining the credibility of the financial reporting process, which is adequate to prevent the occurrence of earnings manipulation by management in the company and for the implementation of GCG (Agustia, 2013). Based on financial service authority regulation number 55/ PJOK.04/ 2015 article 1, an audit committee is defined as a committee formed by and responsible to the Board of Commissioners in helping carry

out the duties and functions of the Board of Commissioners.

Based on Financial Service Authority regulation number 55/ PJOK.04/ 2015 article 10, In carrying out its functions, the Audit Committee has duties and responsibilities that at least include:

1. Conduct a review of the financial information that will be issued by the Issuer or Public Company to the public and/or authorities, including financial reports, projections, and other reports related to the financial information of the Issuer or Public Company;
2. Conduct a review of compliance with laws and regulations relating to the activities of the Issuer or Public Company;
3. Provide independent opinion in the event of disagreements between management and accountants for the services rendered;
4. Provide recommendations to the Board of Commissioners regarding the appointment of an Accountant based on independence, the scope of the assignment, and service fees;
5. To review the implementation of the audit by the internal auditor and supervise the implementation of follow-up actions by the Board of Directors on the findings of the internal auditor;
6. To review the risk management implementation activities carried out by the Board of Directors, if the Issuer or Public Company does not have a risk monitoring function under the Board of Commissioners;
7. Examine complaints relating to the accounting and financial reporting processes of Issuers or Public Companies;

8. Examining and providing advice to the Board of Commissioners regarding potential conflicts of interest of the Issuer or Public Company; and
9. Maintaining the confidentiality of documents, data, and information of the Issuer or Public Company.

The existence of an audit committee is important for the management of a company.

The audit committee is meant to keep up investors' trust and interests by performing several functions. The existence of an audit committee may be considered as a quality indicator of the board of directors' control. This function of the audit committee is expected to resolve problems arising from information asymmetry. The audit committee plays a key role in overseeing, monitoring, and advising the management of an organization in implementing internal accounting control systems and the preparation of financial statements (Badolato et al., 2014). In addition, it may also reduce the opportunistic behavior of management which leads to earnings management by supervising the implementation of the external audit (Luthan et al., 2016).

Therefore, an audit committee activities related to the frequencies of meetings is expected to be able to weaken the positive association between surplus free cash flow agency problem and earnings management, considering in the meeting the audit committee will review the accuracy of the financial reporting or discuss any significant issues that have been communicated with management.

Similarly, the audit committee meeting frequencies is also viewed as one of factor that could encourage effective governance (Wang & Campbell, 2012). The greater the number of audit committee meeting frequencies, the greater its ability to be

more active in conducting more frequent evaluations which might will be able to monitoring the company and minimize any management practices (Kamarudin et al., 2012). Research on the audit committee meeting frequencies has been conducted in Indonesia, but the studies have not shown consistent results. Lin et al. (2006) show that the more active the audit committee in conducting formal meetings showed a decrease in the level of earnings management. However, the results of this study are contrary to Pamudji et al. (2009) stated that the number of audit committee meetings is not able to significantly decrease the earnings management practices.

In sum, previous research has discovered that the audit committee meeting frequencies might plays an important factor that contributes to a higher quality of financial reporting, decreases the likelihood of fraudulent reporting, and decreases the level of earnings management (Bukit & Nasution, 2015). Thus, governance mechanisms such as audit committees with high meeting frequencies might able to significantly monitor and control the earnings management practices conscientiously, particularly when firms have high free cash flow.

2.7 Manufacturing Companies Listed in Indonesia Stock Exchange

One of the extraordinary achievements that are usually become the companies or businesses goals is when a company can offer its shares and it can be purchased by the general public. The companies that able to do such things are known as public companies. There are a lot of steps or requirements that need to be fulfilled by the companies before they can sell their shares to public. The process of offering shares of a private company to the public in a new stock issuance so that the general public can

purchase them through the Stock Exchange for the first time is called IPO - Initial Public Offering. However, not just any company may conduct an IPO, or go public so that its shares can be traded on the Indonesia Stock Exchange. Many conditions must be met and a series of processes that public companies must go through.

In Indonesia alone, there are 709 companies that have gone public, and their shares can be traded. All public companies on the Indonesian Stock Exchange (IDX) are classified into 9 sectors. The 9 sectors based on the industrial classification established by IDX is called JASICA (Jakarta stock exchange industrial classification).

The 9 sectors include;

1. agriculture,
2. mining,
3. basic industry and chemicals,
4. miscellaneous industries,
5. consumer goods industry,
6. property, real estate, and building construction,
7. infrastructure, utilities, and transportation,
8. finance, and
9. trade, service, and investment.

Therefore, the researcher decided to take data samples and conduct research on listed companies on IDX.

However, the focus of this research is specifically on non-financial services such as manufacturing, which includes the industrial sector, the chemical sector and

the consumption sector. Data samples were taken from manufacturing companies listed on IDX. This is because manufacturing companies are attracted by most investors, and from several cases, earnings management practices are often found in manufacturing companies.

Researchers took samples from all sectors of manufacturing companies, especially companies that submit financial reporting periods for 2015-2019. The results of this study are based on the latest financial conditions in the company. The selection of manufacturing companies is also based on considerations of homogeneity in their production activities and this industrial group is relatively larger when compared to other industrial groups on the IDX (Rahim, 2014).

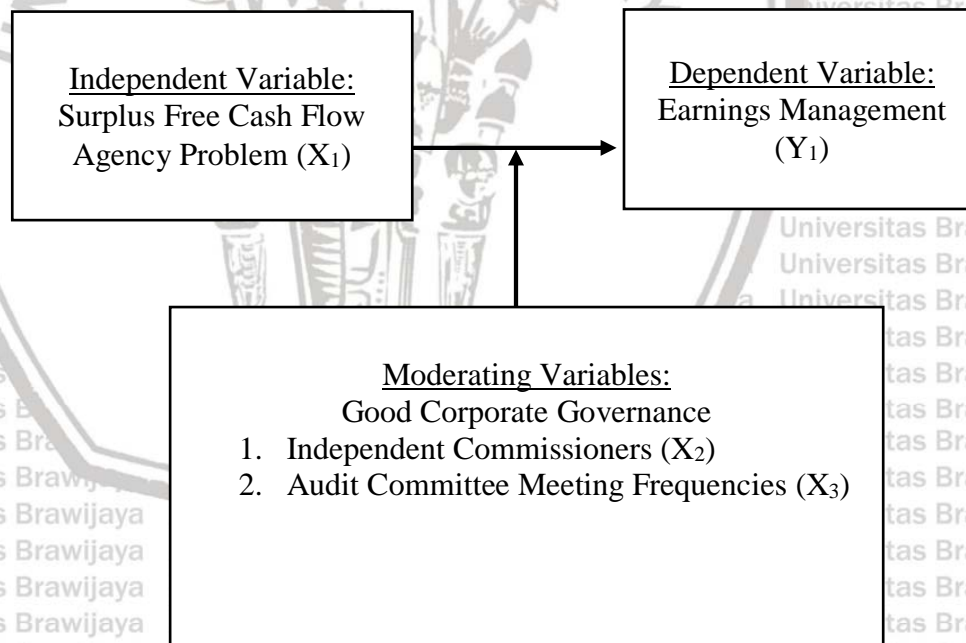
2.8 Research Framework

In short, the effect of surplus free cash flow agency problems with earnings management on companies is summarized in the following figure below. The theory that underlies the relationship is the Agency Theory. Based on the agency theory, surplus free cash flow in a company will cause the occurrence of agency problem in a company. Thus, through the presence of Good Corporate Governance (GCG) factors such as independent commissioners, and audit committee meeting frequencies, the impact of agency problems may be reduced.

It is also important to note that the occurrence of surplus free cash flow in a company may not always be a good sign, especially for the principal, since a negative impact afterward may occur. Indeed, surplus free cash flows could render a firm with investment opportunities that could generate more value for the firm, and that is the

positive impact. However, most of the time, the manager will invest the cash in unprofitable projects and manipulate the earnings in order to perform a good financial report for the principal, which is called earnings management. Thus, the chance of management to perform earnings management is high. Especially if the effect of surplus free cash flow occurs.

This study used GCG factors as the moderating variable. GCG factors may minimize the impact of agency problems that leads to reducing earnings management in the company. The figure below incorporates factors or variables that are discussed in this study and influence each other.



2.9 Previous Studies & Hypotheses Development

This section briefly reviews and explains the prior studies that examine the effect between surplus free cash flow with earnings management moderated with Good Corporate Governance factors. The findings of previous studies would be useful for the current study. They help to provide the foundation for the relationship between variables and from which hypotheses can be developed (Sekaran and Bougie, 2013).

The following studies contain arguments regarding the influences between variables.

Jensen (1986) states that managers in companies with high SFFC and low growth opportunities will tend to invest or engage in projects with small or negative NPVs. These projects generally will provide personal benefits to managers and will have a negative impact on shareholders. This situation has led to the emergence of a surplus free cash flow agency problem. Jensen (1993) empirically examined and confirmed that there is a relationship between the agency problem and SFCF, which specifically in his research, it became the main reason the investment returns in the US fell. In addition to SFCF, Jensen also argued that the self-interest motive of management was an important factor that becomes the foundation of the occurrence of agency problems among the principal and agent, but it also leading to the occurrence of agency costs. Another argument that stated a positive effect between SFCF and agency problems also comes from Al-Dhamari and Ismail (2014). They stated that their research result to some extent supports the surplus free cash flow agency theory. In surplus free cash flow agency theory, firms with high free cash flow but low growth opportunities are more likely to experience a reduction in their firm's value.

Regarding the effect between SFCF with earnings management, management will use earnings management to cover the losses that come from the return of unprofitable projects funded using surplus free cash flow. Managers may engage in earnings management to show a better performance for the company, which will also cover up their unwise usage of the firm's surplus free cash flow

The results of this study are in line with Agustia (2013) which found that free cash flow has a significant negative effect on earnings management. This study indicates that the higher the free cash flow, the lower the earnings management. Companies that have high free cash flow indicate that the company is better able to survive in a bad situation because it has the opportunity to invest and spend capital in order to maintain its ongoing operations. On the contrary, Dewi (2016) in her studies stated that free cash flow has a positive effect on earnings management, which means that the higher the company's free cash flow, the higher the earnings management practice will be. However, to the best of researcher knowledge, there are still no past studies discussing the effect of surplus free cash flow agency problem on earnings management.

H1: There is a positive effect of Surplus Free Cash Flow Agency Problem on Earnings Management.

There are also several studies discussing the effect of good corporate governance factors towards earnings management, whether the results are positive or negative influence. Such as the effect of independent commissioners on earnings management. Based on the theory and previous research, it can be assumed that the level of the independent board of commissioners in a company is very important and influential in minimizing earnings management in the company, where the higher the level of independent commissioners in the company the better it is to supervise managers in committing fraud.

Past studies done by Susanto, Pradipta, & Djashan (2017) stated that an independent board of commissioners could reduce earnings management problems that arise as the effect of free cash flow. However, other studies done by Prabowo (2014) found out that there is a partial positive influence between independent commissioners on earnings management. He stated that the board of commissioners from outside of the company could cause problems in coordination which causes a decrease in the supervisory function, it may interfere with independent commissioners in making decisions. On the opposite, studies were done by Agustia (2013) and Amelia & Hernawati (2016) stated that independent commissioners have no significant effect on earnings management. This proves that the independent commissioners in the company have not worked independently.

H2: Independent Commissioners weaken the positive effect of Surplus Free Cash Flow Agency Problem on Earnings Management.

The second factor of good corporate governance used in this study is audit committee meeting frequencies. Audit committee with high meeting frequencies might plays an important factor that contributes to a higher quality of financial reporting, decreases the likelihood of fraudulent reporting, and decreases the level of earnings management (Bukit & Nasution, 2015). Thus, audit committees with high meeting frequencies are expected to be able to monitor and control the earnings management practices conscientiously, particularly when firms have high free cash flow or high employee diff.

Studies by Lin et al. (2006) found that audit committee meeting frequencies does reduce the extent of earnings management in the presence of free cash flow. The evidence shows that the greater the audit committee meeting frequencies, the greater its ability to be more active in conducting more frequent evaluations which might will be able to monitoring the company and minimize any management practices. On the other hand, studies by Pamudji et al (2009) stated the number of audit committee meetings is not able to significantly decrease the earnings management practices.

H3: Audit Committee Meeting Frequencies weaken the positive effect of Surplus Free Cash Flow Agency Problem on Earnings Management.

Companies with surplus free cash flow tend to be the cause of agency problems that encourage the managers to manipulate the earnings on their financial reports in order to hide their earnings results regarding their investment on negative NPV projects. But, previous studies believe that Good Corporate Governance (GCG) factors such as independent commissioners and audit committee meeting frequencies should

have been able to reduce or detect the manager's fraud by using their knowledge and ability on monitoring and evaluating the manager's actions (Pradipta, 2019). Therefore, the study of agency theory and the effect that occur afterward has been an important subject in corporate finance (Wang, 2010).

Thus, from Reviani & Sudantoko (2012) studies, it can be assumed that the level of the independent commissioners and audit committee meeting frequencies in a company is very important and influential in minimizing earnings management in the company, where the higher the number of independent commissioners or the more independent the audit committee in the company, the better the manager's supervision.

There are several motives on the importance of this study in the accounting field. First, there are different research results regarding the effect of surplus free cash flow and earnings management. In addition, the effect of free cash flow on earnings management that is moderated with good corporate governance factors is still rarely tested. Next, to the best of researcher knowledge, there is still no studies discussing the effect of surplus free cash flow agency problem towards earnings management moderated by independent commissioners and the audit committee meeting frequencies.

CHAPTER III

RESEARCH METHOD

3.1 Research Design

This study uses a quantitative method for examining the relationship between variables. Quantitative research is defined as an approach conducted by researchers to test the theory by examining the relationships among the predetermined variables experienced by particular populations (Creswell, 2014). In addition, quantitative data is data in the form of numbers. The variables in this study can be operationalized and measured so that they can be analyzed through the use of statistical tools (Creswell, 2014), and finally enable the researchers to draw conclusions from the result of the statistical analysis.

3.2 Population and Samples

The population and samples used in this study are the Indonesian manufacturing firms listed on Indonesian Stock Exchange (IDX) from the period 2015-2019. Firstly, the reason why this study decided to take a sample from the population in the manufacturing industry is that companies in the manufacturing industry have characteristics that make them different from banking or financial service companies, it is because the financial reporting of manufacturing companies is not much influenced by various existing government regulations so that it rarely changes. Thus, this sample becomes relevant to be used in this study.

Moreover, the justification behind the period selected from 2015 to 2019 for the samples is that the longer time used is expected to provide more insights into the

result of this study and the current literature (Gordini & Rancati, 2017). The researcher believes that the past five years would be able to illustrate the most relevant situation regarding the issue discussed above. Therefore, the data used in this study could be useful to reflect the recent information and conditions of the sampled companies. In addition, this study selected a specific industry, and because each industry is unique and different in terms of regulations and characteristics. Then, the generalization of the results from this study will only be applicable to the same industry.

In selecting the samples from the population, the researcher used a Purposive Sampling Method in order to obtain a representative sample according to the specified criteria. Therefore, the researcher applied several criteria or judgments before determining the samples that would be used. The criteria are:

1. Manufacturing companies must be listed on IDX from the year 2015-2019. Companies do not publish their financial statements and annual reports for 5 years in a row will be excluded.
2. The currency used in the financial statements is expressed in Rupiah.
3. The companies have all the data needed in this study.

Companies that do not satisfy the above criteria were excluded from the samples immediately as their lack of information or unavailability of required data would distort the statistical analysis and results of this study. Therefore, the number of samples used in this study is 79 samples.

3.3 Data Collections: Type and Source of Data

This study uses secondary data as the main source of data. The secondary data is defined as the data, which is not directly collected or made by the researcher from the primary source such as questionnaires (Sekaran & Bougie, 2013). Rather, it is collected and made by someone or organization other than the researchers, such as books, database, and reports. This study mainly obtains the required data from Indonesian Stock Exchange (IDX) database. The data comprises the annual reports and financial reports of the Indonesian firms. Data collection methods in this study are documentation and literature methods. With these methods, the supporting documents are studied in order to obtain the information needed. These documents include annual reports, journals, articles, and other supporting documents.

3.4 Variable

There are several variables used by this study to analyze and examine whether there is relationship between them. The set of variables used in this study consists of an independent variable, a dependent variable, and moderating variables.

1. Independent Variables

The independent variable used in this study is surplus free cash flow agency problem.

Surplus Free Cash Flow Agency Problem

Surplus free cash flow is a net cash flow that has been reduced by cash requirements to finance the company's investment needs. A large amount of

surplus free cash flow of the company causes serious agency problems.

However, the SFCF agency problem is a dummy variable, which is 1 for companies that have SFCF above the sample average, and the probability of growth (proxied by the price to book ratio) are below the sample mean for each year of observation. While 0 for companies that do not have SFCF agency problems. A company is said to have SFCF agency problems if the company has high SFCF but low growth opportunities. Thus, SFCF is measured using a measure developed by Lehn and Poulsen (1989), which is also used by Chung et al. (2005), as follows:

$$SFCF = \frac{(INC_{it} - TAX_{it} - INTEXP_{it} - PSDIV_{it} - CSDIV_{it})}{TA_{i,t-1}}$$

Explanation:

- SFCF : Surplus free cash flow
- INC : Operating income before depreciation
- TAX : Total taxes
- INTEXP : Interest expense
- PSDIV : Preferred stock dividends
- CSDIV : Common stock dividends
- TA : Total assets at the beginning of the fiscal year

Then, the opportunity to grow is proxied by the price to book ratio (PBR). A high PBR indicates that investors perceive the company to have a high growth opportunity. Therefore, the growth opportunity is measured by the ratio between price per share and book value per share as used by Chung et al. (2005). PBR shows the difference between the market value of equity and the book value of equity. The greater the ratio, the greater the growth opportunity value.

$$PBR_{it} = \frac{PRICE_{it}}{BV_{it}}$$

Explanation:

PBR_{it} : Price-to-book-ratio firm i for the fiscal year-ending in year t

$PRICE_{it}$: Stock price of firm i for the fiscal year-ending in year t

BV_{it} : Book value of equity per share of a firm I for the fiscal year-ending in year t

2. Dependent Variable

The dependent variable in this study is earnings management.

Earnings management

Earnings management is defined as an attempt by company managers to intervene or influence the information in the financial statements with the aim of tricking stakeholders who want to know the company's performance and condition (Sulistiyanto, 2008). Earnings management in this study is measured



using discretionary accruals through the model of Kothari et al. (2005), as

follows:

$$TACC_{it} = EBX_{it} - OCF_{it}$$

where

$TACC_{it}$: Total accruals for firm i at the end of year t

EBX_{it} : Earnings before extra-ordinary items for firm i at the end of year t

OCF_{it} : Operating cash flow for firm i at the end of year t

By using the equation mentioned above, total accruals for the firm at the end of each year can be determined. Thus, the regression coefficient can be calculated using following regression:

$$TACC_{it}/TA_{it-1} = a_1 (1/TA_{it-1}) + a_2 [(\Delta REV_{it} - \Delta REC_{it})/TA_{it-1}] + a_3 (PPE_{it}/TA_{it-1}) + a_4 (ROA_{it-1}) + \varepsilon_{it}$$

where

$TACC_{it}$: Total accruals for firm i at the end of year t

TA_{it-1} : Total assets for firm i at the end of year t - 1

ΔREV_{it} : The change in revenue for firm i between years' t and t - 1

ΔREC_{it} : The change in receivables for firm i between years' t and t - 1

PPE_{it} : Gross property, plant and equipment for firm i at the end of year t

ROA_{it-1} : Return on assets for firm i at the end of year t - 1



By using the regression coefficient above, the nondiscretionary accruals value can be calculated by using the following formula:

$$NDACC_{it} = a_1 (1/TA_{it-1}) + a_2 [(\Delta REV_{it} - \Delta REC_{it}) / TA_{it-1}] + a_3 (PPE_{it} / TA_{it-1}) + a_4 (ROA_{it-1})$$

where

$NDACC_{it}$: Nondiscretionary accruals for firm i at the end of year t

TA_{it-1} : Total assets for firm i at the end of year t – 1

ΔREV_{it} : The change in revenue for firm i between years' t and t – 1

ΔREC_{it} : The change in receivables for firm i between years' t and t – 1

PPE_{it} : Gross property, plant and equipment for firm i at the end of year t

ROA_{it-1} : Return on assets for firm i at the end of year t – 1

After calculating the nondiscretionary accruals, the discretionary accruals for the company for each year can be determined using the following equation:

$$DACC_{it} = TACC_{it} - NDACC_{it}$$

where

$DACC_{it}$: Discretionary accruals for firm i at the end of year t

$TACC_{it}$: Total accruals for firm i at the end of year t

$NDACC_{it}$: Nondiscretionary accruals for firm i at the end of year t

This research use income increasing earnings management and income decreasing earnings management. This research gives more attention to the degree of the earnings management rather than to the direction of the earnings management. Thus, the discretionary accruals result of the sample are converted into an absolute number. In more detail, in order to avoid any determination which stated that income decreasing earnings management shown as a low number of earnings management while the income increasing earnings management shown as a high number of earnings management, the discretionary accruals result is needed to be converted to an absolute number. In short, its needed to be converted because the number used for data processing should not reflect any direction or sign whether it is negative or positive.

3. Moderating Variable

The moderating variable used in this study is Good Corporate Governance factors, which include; Independent Commissioners and Audit Committee Meeting Frequencies.

a. Independent Commissioners

The independent commissioner variable can be measured by dividing all members of the independent commissioner to the total board of commissioners in the sample company. The data scale used is the ratio. Guna and Herawaty (2010) with the following formula:

$$\text{Composition of independent commissioners} = \frac{\text{The number of members of the board of independent commissioners}}{\text{All members of the board of commissioners}}$$

b. Audit Committee Meeting Frequencies

Based on the BAPEPAM-LK Nomor : Kep-643/BL/2012, the audit committee must conduct regular meetings at least 4 times a year. In this study, the indicator used is a numerical measurement, which is seen from the nominal number of meetings held by the audit committee in one year. The more frequent meetings the company holds, the more effective the audit committee will be in supervising company managers so they don't do things that benefit themselves.

3.5 Data Analysis Method

In analyzing the data, this study uses multiple regression analysis. The analyses consist of descriptive analysis, classical assumptions, multiple regression analysis, and moderated regression analysis.

1. Descriptive Analysis

Descriptive statistical analysis was only used to present and analyze data accompanied by calculations in order to clarify the circumstances or characteristics of the data concerned. The measurements used by this descriptive statistic include the number of samples, the minimum value, the

maximum value, the average value (mean), and standard deviation (Ghozali, 2011).

2. Linear Regression Analysis

Simple regression analysis or linear regression analysis is used in a situation where one independent variable is hypothesized to affect one dependent variable. A simple linear regression equation represents a straight line. Linear regression analysis is a multivariate technique that is used very often in business research (Sekaran & Bougie, 2013).

a. Regression Equations

The regression equation is used to determine the form of the relationship between the independent variable and the dependent variable.

b. Coefficient of Determination (R^2)

The coefficient of determination is used to calculate the influence or contribution of independent variables to the dependent variable.

3. Moderated Regression Analysis

Moderated Regression Analysis (MRA) or interaction test is a special application of multiple linear regression where the regression equation contains an element of interaction (multiplication of two or more independent variables)

(Liana, 2009). Thus, the hypothesis of this study is tested using the following model equation:

$$Y = \alpha_1 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_1 X_2 + \beta_5 X_1 X_3 + e$$

Explanation:

Y : Earnings Management

α : Constant

$\beta_{1, 2, 3, 4, 5}$: Regression Coefficient

X₁ : Surplus Free Cash Flow Agency Problem

X₂ : Independent Commissioners

X₃ : Audit Committee Meeting Frequencies

e : Error

In addition, this study also uses a rule of thumb for the acceptance and rejection of hypotheses. The hypothesis testing carried out using a significance level of 0.05 ($\alpha = 5\%$). If the significance level is < 0.05 , then H_0 is rejected, and H_1 is accepted, or there is a significance effect. On the opposite, if the significance level is > 0.05 , then H_0 is accepted, and H_1 is rejected, or there is no significance effect.

4. Classical Assumption Test

a. Normality Test

The normality test aims to determine whether the confounding or residual variables have a normal distribution. As a basis, the t test and F test assume that the residual value follows a normal distribution. If this assumption is violated, the regression model is considered invalid by the number of samples. In addition, the normality test aims to test whether, in the



regression model, confounding or residual variables have a normal distribution.

b. Multicollinearity Test

The multicollinearity test aims to test whether the regression model found a correlation between independent variables (Ghozali, 2011). A good regression model should not have a correlation between the independent variables. If the independent variables are mutually correlated, then these variables are not orthogonal (independent variables whose correlation value between independent variables is equal to zero). One way to determine whether there is multicollinearity in a regression model is to look at the tolerance value and VIF (Variance Inflation Factor), namely:

- If the tolerance value is > 0.10 and $VIF < 10$, it means that there is no multicollinearity in the study.
- If the tolerance value is < 0.10 and $VIF > 10$, it means that there is multicollinearity in the study.

c. Heteroscedasticity Test

The heteroscedasticity test aims to test whether in the regression model there is an inequality of variance from the residuals of one observation to another. If the variance is constant, it is called homoscedasticity, and if it is different, there is a heteroscedasticity problem. A good regression model is where a homoscedasticity or heteroscedasticity does not occur.

CHAPTER IV

RESULTS AND DISCUSSIONS

In this section, the results of descriptive analysis, classical assumptions, linear regression analysis, and moderated regression analysis are provided and discussed. The application used to process and calculate the data is SPSS for Windows. Moreover, the population of this study is all the manufacturing companies listed on IDX from 2015 until 2019. The number of samples used in this study is 79 samples. In addition, the type of variables used in this study is dependent variable, independent variable, and moderating variables. The dependent variable used in this study is Earnings Management (EM), the independent variable used in this study is Surplus Free Cash Flow Agency Problem (SFCFAP), and the moderating variables used in this study are Independent Commissioners (ICO) and Audit Committee Meeting Frequencies (AUCO).

4.1 Descriptive Statistics

The results of descriptive statistical analysis are useful to describe the summary of variables used in this study. Descriptive statistics describe the maximum, minimum, means, standard deviations, and variance of the variables. It is expected to provide additional insights or information to the study regarding the effect between Surplus Free Cash Flow Agency Problem on Earnings Management that is moderated by Independent Commissioners and Audit Committee Meeting Frequencies on Indonesian listed manufacturing firms. The results of the research data can be seen in the following table.

Table 4.1
Descriptive Statistics

Research Variables	N	Minimum	Maximum	Mean	Std. Deviation	Frequency	Percent
There's no Surplus Free Cash Flow Agency Problem						285	72.2
There's Surplus Free Cash Flow Agency Problem						110	27.8
Earnings Management	395	-0.535	0.595	-0.067	0.142		
Independent Commissioners	395	0.200	0.800	0.407	0.101		
Audit Committee Meeting Frequencies	395	2	22	6.42	3.633		

Source: Appendix 6

Based on Table 4.1, the results of descriptive statistics as follows:

1. There are 285 data or 72.2% that don't have Surplus Free Cash Flow Agency Problem.
2. There are 110 data or 27.8% that have Surplus Free Cash Flow Agency Problem. Data that categorized to have Surplus Free Cash Flow Agency Problem is data that have Surplus Free Cash Flow above the mean (0,008 for 2015, 0,031 for 2016, 0,031 for 2017, 0,017 for 2018, 0,039 for 2019) and Price to Book Ratio below the mean (3,011 for 2015, 3,454 for 2016, 3,163 for 2017, 3,574 for 2018, 4,069 for 2019).
3. The Earnings Management variable has minimum score at -0.535, maximum score at 0.595, mean score at 0.067, and the standard deviation is 0.142.

4. The Independent Commissioners variable has minimum score at 0.200, maximum score at 0.800, mean score at 0.407, and the standard deviation is 0.101.

5. The Audit Committee Meeting Frequencies variable has minimum score at 2, maximum score at 22, mean score at 6.42, and the standard deviation is 3.633.

4.2 Linear Regression Analysis

Linear regression analysis aims to obtain an overview of the influence of the independent variables on the dependent variable both as a whole (simultaneously) and individually (partially). The variables are Surplus Free Cash Flow Agency Problem as the independent variable and Earnings Management as the dependent variable. The regression model is obtained as in Table 4.2.

Table 4.2
Linear Regression Result

Research Variables	Coefficients	t	Sig.	R ²
(Constant)	-0.077			
Surplus Free Cash Flow Agency Problem	0.036	2.294	0.022	0.013

Source: Appendix 7

The results of the linear regression equation between the Surplus Free Cash Flow Agency Problem variable on Earnings Management are presented as follows.

$$EM = a + b1 \text{ SFCFAP} + e$$

$$EM = -0.077 + 0.036 \text{ SFCFAP} + e$$

Explanation:

SFCFAP : Surplus Free Cash Flow Agency Problem

EM : Earnings Management

From this equation, it can be described as follows:

1. The constant value (a) of -0.077 indicates that without the effect of SFCFAP, the EM value is -0.077.
2. The SFCFAP coefficient value of 0.036 and significant value at 0.022 indicates a positive significant effect between SFCFAP on EM, meaning that any increase in the SFCFAP value will have an effect on the increase in the EM prediction value. It means that the higher the SFCFAP, the higher the EM.

The coefficient of determination is used to calculate the influence or contribution of independent variables to the dependent variable. From the analysis in (table 4.2), it was obtained the adjusted R (coefficient of determination) of 0.013. It means that 1.3% of the Earnings Management variable will be affected by the independent variables, namely Surplus Free Cash Flow Agency Problem. At the same time, the remaining 98.7% of the Earnings Management variable will be affected by other variables which are not discussed in this study.

4.3 Moderated Regression Analysis

Moderated Regression Analysis (MRA) or interaction test is a special application of linear multiple regression where the regression equation contains an element of interaction (multiplication of two or more independent variables). The following shows

the results of multiple linear regressions between SFCFAP and EM moderated by ICO and AUCO. The regression model is obtained as in Table 4.3.

Table 4.3
Moderation Regression Result

Research Variables	Coefficients	t	Sig.	R2
(Constant)	-0.094			
Surplus Free Cash Flow Agency Problem	0.224			
Independent Commissioners	0.047			
Surplus Free Cash Flow Agency Problem*Independent Commissioners	-0.315	-2.061	0.040	0.42
Audit Committee Meeting Frequencies	0.000			
Surplus Free Cash Flow Agency Problem*Audit Committee Meeting Frequencies	-0.009	-2.104	0.036	

Source: Appendix 8

The results of the moderated regression equation are presented as follows.

$$EM = a + b_1 \text{ SFCFAP} + b_2 \text{ ICO} + b_3 \text{ SFCFAP} * \text{ICO} + b_4 \text{ AUCO} + b_5 \text{ SFCFAP} * \text{AUCO} + e$$

$$EM = -0.094 + 0.224 \text{ SFCFAP} + 0.047 \text{ ICO} - 0.315 \text{ SFCFAP} * \text{ICO} + 0.000 \text{ AUCO} - 0.009 \text{ SFCFAP} * \text{AUCO} + e$$

Explanation:

SFCFAP : Surplus Free Cash Flow Agency Problem

EM : Earnings Management

ICO : Independent Commissioners

AUCO : Audit Committee Meeting Frequencies

From this equation, it can be described as follows:

1. The constant value (a) of -0.094 indicates that without the effect of the SFCFAP, the EM value is -0.094.
2. The variable ICO has coefficient value at -0.315 and significant value at 0.040 indicates a negative significant effect of ICO as moderating variable on the relationship between SFCFAP on EM, meaning that any increase in ICO as moderating variable, it will have an effect on weaken the relationship between SFCFAP on EM.
3. The variable AUCO has coefficient value at -0.009 and significant value at 0.036 indicates a negative significant effect of AUCO as moderating variable on the relationship between SFCFAP on EM, meaning that any increase in AUCO as moderating variable, it will have an effect on weaken the relationship between SFCFAP on EM.

The coefficient of determination is used to calculate the influence or contribution of independent variables to the dependent variable. From the analysis (table 4.3), it was obtained the adjusted R (coefficient of determination) of 0.042. It means that 4.2% of the relationship between Earnings Management variable and Surplus Free Cash Flow Agency Problem will be affected by the moderating variables, namely Independent Commissioners and Audit Committee Meeting Frequencies. At the same time, the remaining 95.8% of the Earnings Management variable will be affected by other variables which are not discussed in this study.

4.4 Classical Assumptions of Regression

These classical assumptions must be tested to meet the use of linear regression.

There are several types of classic regression assumption testing used by the researcher, such as the normality test, multicollinearity test, and heteroscedasticity test. The test results that have been presented have met the requirements.

4.4.1 Normality Test

This test is conducted to determine whether the residual value is normally spread or not. To test the normality assumption used the Kolmogorov-Smirnov test. If the value is sig. (*p-value*) > 0.05, then H_0 is accepted, which means normality is met. The results of the normality test can be seen on Appendix 9. From the calculation results, the sig value is 0.068 or greater than 0.05; then the requirement is accepted, namely that the normality assumption is met.

4.4.2 Multicollinearity Test

The multicollinearity test was conducted to determine that there was no very strong relationship or a perfect linear relationship, or it could also be said that the independent variables were not interrelated. The method of testing is to compare the Tolerance value obtained from multiple regression calculations. If the tolerance value < 0.1, then multicollinearity occurs. The multicollinearity test results can be seen in Table 4.4.

Table 4.4
Multicollinearity Test Results

Research Variables	Collinearity Statistics	
	Tolerance	VIF
Surplus Free Cash Flow Agency Problem	0.996	1.004
Independent Commissioners	0.989	1.011
Audit Committee Meeting Frequencies	0.993	1.007

Source: Appendix 9

Based on Table 4.4, here are the test results of each independent variable:

1. Tolerance for SFCFAP is 0.996
2. Tolerance for ICO is 0.989
3. Tolerance for AUCO is 0.993

The test results show that the overall tolerance value is > 0.1 , so it can be concluded that there is no multicollinearity between the independent variables. The

multicollinearity test can also be done by comparing the VIF (Variance Inflation Factor) value with the number 10. If the VIF value > 10 , then multicollinearity occurs. Following are the test results for each independent variable:

1. VIF for SFCFAP is 1.004
2. VIF for ICO is 1.011
3. VIF for AUCO is 1.007

From the test results, it can be concluded that there is no multicollinearity between the independent variables. Thus, the assumption test for the absence of multicollinearity can be fulfilled.

4.4.3 Heteroscedasticity Test

The heteroscedasticity test is used to determine whether there is an inequality in the residual deviation value due to the size of the value of one of the independent variables or there is a difference in the value of the variety with the increasing value of the independent variable. To test the heteroscedasticity assumption, the Glejser test were used. The results of the heteroscedasticity test can be seen in Appendix 9.

The results of the heteroscedasticity test using the Glejser test obtained a significance value of the SFCFAP variable of 0.562, the ICO variable of 0.111, and the AUCO variable of 0.549 so that the significance value of each independent variable was more than 0.05 ($p > 0.05$) meaning that there was no heteroscedasticity problem in the model so that the assumption of heteroscedasticity is met.

4.5 Hypothesis Test

Hypothesis testing in this study used moderated regression analysis. This analysis was used to test whether there was an influence between the Earnings Management variable explained by the Surplus Free Cash Flow Agency Problem variable with Independent Commissioners and Audit Committee Meeting Frequencies moderation.

Table 4.5
Hypothesis Testing Results

Hypothesis	Statements	t	Explanation
H1	There is a positive effect of Surplus Free Cash Flow Agency Problem on Earnings Management.	2.294	H1 Accepted
H2	Independent Commissioners weaken the positive effect of Surplus Free Cash Flow Agency Problem on Earnings Management.	-2.061	H2 Accepted
H3	Audit Committee Meeting Frequencies weaken the positive effect of Surplus Free Cash Flow Agency Problem on Earnings Management.	-2.104	H3 Accepted

The results of the hypothesis test are described as follows:

1. The effect of SFCFAP on EM obtained a regression coefficient of 0.036 with a significance value of 0.022. These results indicate a significance value of less than 0.05 (sig <0.05). It is stated that there is a positive and significant effect between SFCFAP on EM.
2. The effect of SFCFAP with ICO moderation on EM obtained a regression coefficient of -0.315 with a significance value of 0.040. These results indicate a significance value of more than 0.05 (sig > 0.05). It is stated that there is a negative significant effect between of ICO as moderating variable on the relationship between SFCFAP on EM.
3. The effect of SFCFAP with AUCO moderation on EM obtained a regression coefficient of -0.009 with a significance value of 0.036. These results indicate a significance value of less than 0.05 (sig <0.05). It is stated that there is a

negative significant effect of AUOCO as moderating variable on the relationship between SFCFAP on EM.

4.6 Discussions

Based on the statistical analysis presented in previous sections, a discussion regarding those results are further elaborated and presented in this section. The discussions involve the effect between Surplus Free Cash Flow Agency Problem on Earnings Management and the effect between Surplus Free Cash Flow Agency Problem on Earnings Management moderated with Independent Commissioners and Audit Committee Meeting Frequencies, which already been measured by several data analysis methods above.

4.6.1 Surplus Free Cash Flow Agency Problem Significantly Affect Earnings Management

The following section specifically elaborates and discusses the findings regarding the effect between Surplus Free Cash Flow Agency Problem and Earnings Management.

Hypothesis:

To recall, the first hypothesis formulated in this study is **“There is a positive effect of Surplus Free Cash Flow Agency Problem on Earnings Management.”**

Given that the statistical results show a positive significant relationship between Surplus Free Cash Flow Agency Problem and Earnings Management, thus the researcher accepts the hypothesis above.

Ever since Jensen and Mecking (1976) explained the agency theory, they stated that the self-interest motive of management could incur other problems in the form of earnings manipulation that called earnings management. The company that has a high surplus of free cash flow, trigger, or tend to unwisely used by the manager in the form of investing in projects that has negative NPV. In the future, there is a huge possibility that the company will face a loss in their earnings regarding those past negative NPV investment projects. Therefore, most of the time, management will use earnings management in order to conceal the results from past negative NPV investment projects.

Past studies by Nouri and Gilaninia (2017) and Chung et al. (2005) stated that the SFCF has a significant and positive effect on earnings management, which means companies with high SFCF use earnings management to camouflage the earnings impact of non-value-maximizing investments and other expenditures. The reason for this matter is that companies, which have SFCF, are those companies that, from one side, have surplus free cash and, on the other hand, have fewer growth opportunities.

Companies that have an SFCF and have low growth opportunities tend to face a problem that is called agency problems. Agency problems emerge because of the difference of interest between the insider and the outsider, both are likely to maximize their own interest, and this problem is related to the firm's free cash flow usage. Thus, managers may engage in earnings management to show a better performance for the company, which will also cover up their unwise usage on the firm's surplus free cash flow.

Although there are still no past studies that discussed the effect of Surplus Free Cash Flow Agency Problem on Earnings Management. After combining the previous similar topic of past studies results and the agency theory as researcher's references, the researcher believes and agrees that the results of this study, which state that there is a significant positive influence between surplus free cash flow agency problem and earnings management, also emerge because the company's with high SFCF and low growth opportunities will cause the occurrence of the agency problem. Managers tend to use the SFCF for negative NPV projects which will encourage the management to practice earnings management in order to conceal the results from negative NPV projects.

4.6.2 Independent Commissioners Significantly Moderates Surplus Free Cash Flow Agency Problem with Earnings Management

The following section specifically elaborates and discusses the findings regarding the effect of Independent Commissioners as the moderating variable on the relationship between Surplus Free Cash Flow Agency Problem towards Earnings Management.

Hypothesis:

The second hypothesis formulated in this study is “**Independent Commissioners weaken the positive effect of Surplus Free Cash Flow Agency Problem on Earnings Management.**” Given that the statistical results show a negative significant influence of Independent Commissioners moderating the relationship between Surplus Free Cash Flow Agency Problem towards Earnings Management, thus the researcher accepts the hypothesis above.

The existence of an independent commissioner is important because, in the practice of financial reporting, transactions that contain conflict of interest are often found ignoring the interests of public shareholders (minority shareholders) and other stakeholders. The conflict of interest that rises is called agency problems. The possibility that management has its own interests will lead to what is called earnings management (Luthan et al., 2016). To overcome this situation, the board of commissioners is allowed to have access to company information. It is why Independent commissioners play an important role in monitoring the accounting process. Moreover, the independent commissioners could also decrease management's opportunities to hold certain information for their own interests (Pradipta, 2019).

Past studies by Susanto et al. (2017) stated that independent commissioners could reduce earnings management problems arising from free cash flow. The reason being that they could oversee the opportunistic behavior of managers that arises from free cash flow problems. Opportunistic behavior in the form of earnings management.

There are still no past studies that discussed the effect of Independent Commissioners as moderating variable on the relationship between Surplus Free Cash Flow Agency Problem towards Earnings Management. After combining the previous similar topic of past studies results and the agency theory as researcher's references, the researcher believes and agrees that the results of this study, which there is an significant negative influence of independent commissioners as moderating variable to the positive relationship between surplus free cash agency

problem on earnings management, it occur because the independent commissioners with their independency should be able to work independently and optimally in overseeing the management's opportunistic behavior, which will be able to reduce the negative impact that might occur because of surplus free cash flow agency problem, which is earnings management.

4.6.3 Audit Committee Meeting Frequencies Significantly Moderates

Surplus Free Cash Flow Agency Problem with Earnings Management

The following section specifically elaborates and discusses the findings of the effect of Audit Committee Meeting Frequencies as moderating variable on the relationship between Surplus Free Cash Flow Agency Problem on Earnings Management.

Hypothesis:

The third hypothesis formulated in this study is “**Audit Committee Meeting Frequencies weaken the positive effect of Surplus Free Cash Flow Agency Problem on Earnings Management.**” Given that the statistical results show a negative significant influence of Audit Committee Meeting Frequencies in moderating the relationship between Surplus Free Cash Flow Agency Problem on Earnings Management, thus the researcher accepts the hypothesis above.

The audit committee meeting frequencies is considered as a factor that able to encourage an effective corporate governance (Wang & Campbell, 2012). It is stated that the greater the number of audit committee meeting frequencies, the greater its ability to be more active in conducting more frequent evaluations which

might will be able to monitoring the company and minimize any management practices (Kamarudin et al., 2012). Therefore, an audit committee activities related to the frequencies of meetings is expected to be able to weaken the positive association between surplus free cash flow agency problem and earnings management, considering in the meeting the audit committee will review the accuracy of the financial reporting or discuss any significant issues that have been communicated with management.

Past studies by Lin et al. (2006) found that audit committee meeting frequencies does reduce the extent of earnings management in the presence of free cash flow. The evidence shows that the greater the audit committee meeting frequencies, the greater its ability to be more active in conducting more frequent evaluations which might will be able to monitoring the company and minimize any management practices.

However, there is still no past studies that discussed the effect of the Audit Committee Meeting Frequencies as moderating variable on the relationship between Surplus Free Cash Flow Agency Problem towards Earnings Management. After combining the previous similar topic of past studies results and the agency theory as researcher's references, the researcher believes and agrees that the results of this study which state there is a significant negative influence of audit committee meeting frequencies as moderating variable to the positive relationship of surplus free cash agency problem on earnings management. It occurs because the more frequent meetings the audit committee holds, the more effective the audit committee will be in supervising company

managers in order to being able to detect any management opportunistic behavior.

In the other hand, it's also means that the more meetings that are held by the audit committee, the better audit committee in minimizing the existence of earnings management practices carried out by company managers.



CHAPTER V

CONCLUSIONS AND SUGGESTIONS

5.1 Conclusions

This study was conducted to determine which independent variables have an effect on Earnings Management. In particular, it tested whether earnings management is positively or negatively affected by SFCFAP, Independent Commissioners, and Audit Committee Meeting Frequencies. The research sample were manufacturing companies listed on the Indonesia Stock Exchange (IDX) in 2015-2019.

In addition, the independent variable used is Surplus Free Cash Flow Agency Problem (X_1). The moderating variables used are Independent Commissioners (X_2), and Audit Committee Meeting Frequencies (X_3), while the dependent variable used is Earnings Management (Y). After data collection, data processing through a series of tests, and analysis of test results, it can be concluded that:

1. Based on the test results, it was found that Surplus Free Cash Flow Agency Problem (X_1) shows a positive significant effect on Earnings Management. It means that the higher the Surplus Free Cash Flow Agency Problem, the higher the Earnings Management.
2. Based on the test results, it is found that Independent Commissioners (X_2) show a negative significant effect in moderating the relationship between Surplus Free Cash Flow Agency Problem and Earnings Management. It means that the Independent Commissioners could significantly weaken the positive relationship between Surplus Free Cash Flow Agency Problem and Earnings Management.

3. Based on the test results, it is found that the Audit Committee Meeting Frequencies (X_3) shows a negative significant effect in moderating the relationship between Surplus Free Cash Flow Agency Problem and Earnings Management. It means that the Audit Committee Meeting Frequencies could significantly weaken the positive relationship between Surplus Free Cash Flow Agency Problem and Earnings Management.

5.2 Limitations

The limitation in this study is that researcher did not consider the external factors that may influence the company's performance and value, such as macroeconomic factors. Macroeconomic factors consist of interest rates, inflation, and fiscal policy. The researcher cannot consider these macroeconomic factors because of the difference of period that can lead to differences in the level of each factor, such as different period makes the interest rate or inflation rate different. In addition, researchers cannot consider macroeconomic factors because there is not yet a calculation to consider macroeconomic factors into each variable used in this study.

5.3 Suggestions

Based on the above conclusions, some suggestions can be put forward, which are expected to benefit the company and other parties. The suggestions given include:

1. Future researchers could increase the sample of the study that is used, not only using the manufacturing companies' industry, but also combine more past studies.

2. Future researchers should not only consider the recent time span or time frame to justify the selection of the sample but also consider the likeness of events that occur in the selected time frame as it may affect the statistical results of the study.

3. Future researchers are recommended to use or add other independent variables or moderating variables that may affect earnings management, such as audit quality.

Given that, the independent variable and moderating variables in this study are considered by the researcher as variables that have an important influence on Earnings Management. Thus, the results of this study can be used as a reference for further researchers to develop this study by considering other variables outside the variables that have been included in this study.

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APPENDIX

APPENDIX 1

LIST OF POPULATION AND SAMPLES

No	Code	Companies	2015	2016	2017	2018	2019
1	ADES	Akasha Wira International Tbk.	√	√	√	√	√
2	ADMG	Polychem Indonesia Tbk.	D	D	D	D	D
3	AGII	Aneka Gas Industri Tbk.	√	√	√	√	-
4	AISA	Tiga Pilar Sejahtera Food Tbk.	√	√	√	-	√
5	AKPI	Argha Karya Prima Industry Tbk	√	√	√	-	√
6	ALDO	Alkindo Naratama Tbk.	√	√	√	√	√
7	ALKA	Alakasa Industrindo Tbk.	√	√	√	√	√
8	ALMI	Alumindo Light Metal Industry Tbk.	√	√	√	√	√
9	ALTO	Tri Banyan Tirta Tbk.	√	√	√	√	√
10	AMFG	Asahimas Flat Glass Tbk.	√	√	√	√	√
11	AMIN	PT. Ateliers Mecaniques D'Indonesie Tbk.	√	√	√	√	-
12	APLI	Asiaplast Industries Tbk.	√	√	√	√	√
13	ARGO	Argo Pantes Tbk	D	D	D	D	D
14	ARKA	Arkha Jayanti Persada Tbk.	√	√	√	-	√
15	ARNA	Arwana Citramulia Tbk.	√	√	√	√	√
16	ASII	Astra International Tbk.	√	√	√	√	√
17	AUTO	Astra Otoparts Tbk.	√	√	√	√	√
18	BAJA	Saranacentral Bajatama Tbk.	√	√	√	√	√
19	BATA	Sepatu Bata Tbk.	√	√	√	√	√
20	BIMA	Primarindo Asia Infrastructure Tbk.	-	√	√	√	√
21	BOLT	Garuda Metalindo Tbk.	√	√	√	√	√
22	BRAM	Indo Kordsa Tbk.	D	D	D	D	D
23	BRNA	Berlina Tbk.	√	√	-	√	√
24	BRPT	Barito Pacific Tbk.	D	D	D	D	D
25	BTEK	Bumi Teknokultura Unggul Tbk.	√	√	√	√	√
26	BTON	Betonjaya Manunggal Tbk.	√	√	√	√	√
27	BUDI	Budi Starch & Sweetener Tbk.	√	√	√	√	√
28	CBMF	Cahaya Bintang Medan Tbk.	√	√	-	-	-
29	CCSI	Communication Cable Systems Indonesia Tbk.	√	√	-	-	√
30	CEKA	Wilmar Cahaya Indonesia Tbk.	√	√	√	√	√
31	CINT	Chitose Internasional Tbk.	√	√	√	√	√



32	CNTX	Century Textile Industry Tbk.	√	√	-	√	-
33	COCO	Wahana Interfood Nusantara Tbk.	√	√	-	-	√
34	CPIN	Charoen Pokphand Indonesia Tbk.	√	√	√	√	√
35	CPRO	Central Proteina Prima Tbk.	√	√	√	√	-
36	CTBN	Citra Tubindo Tbk.	D	D	D	D	D
37	DLTA	Delta Jakarta Tbk.	√	√	√	√	√
38	DMND	Diamond Food Indonesia Tbk.	√	√	-	-	√
39	DPNS	Duta Pertiwi Nusantara Tbk.	√	√	√	-	√
40	DVLA	Darya-Varia Laboratoria Tbk.	√	√	√	√	√
41	EKAD	Ekadharna International Tbk.	√	√	√	√	√
42	ENZO	Morenzo Abadi Perkasa Tbk.	√	√	√	√	-
43	EPAC	PT Megalestari Epack Sentosaraya Tbk.	√	√	√	-	-
44	ERTX	Eratex Djaja Tbk.	D	D	D	D	D
45	ESIP	Sinergi Inti Plastindo Tbk.	√	√	√	-	√
46	ESSA	Surya Esa Perkasa Tbk.	D	D	D	D	D
47	ESTI	Ever Shine Tex Tbk.	D	D	D	D	D
48	ETWA	Ever Shine Tex Tbk.	√	√	√	√	-
49	FASW	Fajar Surya Wisesa Tbk.	-	√	√	√	√
50	FOOD	Sentra Food Indonesia Tbk.	-	√	√	√	√
51	FPNI	Lotte Chemical Titan Tbk.	√	√	√	√	-
52	GDST	Gunawan Dianjaya Steel Tbk.	√	√	√	√	√
53	GDYR	Goodyear Indonesia Tbk.	D	D	D	D	D
54	GGRM	Gudang Garam Tbk.	√	√	√	√	√
55	GGRP	Gunung Raja Paksi Tbk.	√	√	√	-	√
56	GJTL	Gajah Tunggal Tbk.	√	√	√	√	√
57	GOOD	Garudafood Putra Putri Jaya Tbk.	√	√	√	√	√
58	HDTX	Panasia Indo Resources Tbk.	√	√	√	√	√
59	HMSP	H.M. Sampoerna Tbk.	√	√	√	√	√
60	ICBP	Indofood CBP Sukses Makmur Tbk.	√	√	√	√	√
61	IFII	Indonesia Fibreboard Industry Tbk.	√	√	√	-	√
62	IGAR	Champion Pacific Indonesia Tbk.	√	√	√	√	√
63	IKAN	Era Mandiri Cemerlang Tbk.	√	√	-	-	√
64	IKBI	Sumi Indo Kabel Tbk.	√	√	√	√	-
65	IMAS	Indomobil Sukses Internasional Tbk.	√	√	√	√	√
66	IMPC	Impack Pratama Industri Tbk.	√	√	√	√	√
67	INAF	Indofarma Tbk.	√	√	√	√	√
68	INAI	Indal Aluminium Industry Tbk.	√	√	√	√	√

69	INCF	Indo Komoditi Korpora Tbk.	√	√	√	√	√
70	INCI	Intanwijaya Internasional Tbk.	√	√	√	√	√
71	INDF	Indofood Sukses Makmur Tbk.	√	√	√	√	√
72	INDR	Indo-Rama Synthetics Tbk.	D	D	D	D	D
73	INDS	Indospring Tbk.	√	√	√	√	√
74	INKP	Indah Kiat Pulp & Paper Tbk.	D	D	D	D	D
75	INOV	Inocycle Technology Group Tbk.	√	√	-	√	√
76	INRU	Toba Pulp Lestari Tbk.	D	D	D	D	D
77	INTP	Indocement Tunggal Prakarsa Tbk.	√	√	√	√	√
78	IPOL	Indopoly Swakarsa Industry Tbk	D	D	D	D	D
79	ISSP	Steel Pipe Industry of Indonesia Tbk.	D	D	D	D	D
80	ITIC	Indonesian Tobacco Tbk.	√	√	-	-	√
81	JECC	Jembo Cable Company Tbk.	√	√	√	√	√
82	JKSW	Jakarta Kyoei Steel Works Tbk.	√	√	√	√	√
83	JPFA	Japfa Comfeed Indonesia Tbk.	√	√	√	√	√
84	KAEF	Kimia Farma Tbk.	√	√	√	√	√
85	KBLI	KMI Wire & Cable Tbk.	√	√	√	√	√
86	KBRI	Kertas Basuki Rachmat Indonesia Tbk.	√	√	√	√	-
87	KDSI	Kedawang Setia Industrial Tbk.	√	√	√	√	√
88	KEJU	Mulia Boga Raya Tbk.	√	√	-	-	√
89	KIAS	Keramika Indonesia Assosiasi Tbk.	√	√	√	√	√
90	KICI	Kedaung Indah Can Tbk	√	√	√	√	√
91	KINO	Kino Indonesia Tbk.	√	√	√	√	√
92	KLBF	Kalbe Farma Tbk.	√	√	√	√	√
93	KMTR	Kirana Megatara Tbk.	√	√	√	√	-
94	KPAL	Steadfast Marine Tbk.	√	√	-	-	-
95	KPAS	Cottonindo Ariesta Tbk.	√	√	-	-	√
96	KRAH	Grand Kartech Tbk.	√	√	√	√	-
97	KRAS	Krakatau Steel (Persero) Tbk.	√	√	√	√	-
98	LION	Lion Metal Works Tbk.	√	√	√	√	√
99	LMPI	Langgeng Makmur Industri Tbk.	√	√	√	√	√
100	LMSH	Lionmesh Prima Tbk.	√	√	√	√	√
101	MAIN	Malindo Feedmill Tbk.	√	√	√	√	√
102	MASA	Multistrada Arah Sarana Tbk.	D	D	D	D	D
103	MBTO	Martina Berto Tbk.	√	√	√	√	√
104	MERK	Merck Tbk.	√	√	√	-	√
105	MLBI	Multi Bintang Indonesia Tbk.	√	√	√	√	√

106	MLIA	Mulia Industrindo Tbk.	√	√	√	√	√
107	MRAT	Mustika Ratu Tbk.	√	√	√	√	√
108	MYOR	Mayora Indah Tbk.	√	√	√	-	√
109	MYTX	Asia Pacific Investama Tbk.	√	√	√	√	-
110	NIKL	Pelat Timah Nusantara Tbk.	D	D	D	D	D
111	NIPS	Nipress Tbk.	√	√	√	-	-
112	PANI	Pratama Abadi Nusa Industri Tbk.	√	√	-	√	√
113	PBRX	Pan Brothers Tbk.	D	D	D	D	D
114	PEHA	Phapros Tbk.	√	√	-	√	√
115	PICO	Pelangi Indah Canindo Tbk.	√	√	√	√	√
116	POLU	Golden Flower Tbk.	√	√	√	-	√
117	POLY	Asia Pacific Fibers Tbk.	D	D	D	D	D
118	PRAS	Prima Alloy Steel Universal Tbk.	√	√	√	√	√
119	PSDN	Prasidha Aneka Niaga Tbk.	√	√	√	-	√
120	PTSN	Sat Nusapersada Tbk.	D	D	D	D	D
121	PURE	Trinitan Metals and Minerals Tbk.	√	√	√	-	√
122	PYFA	Pyridam Farma Tbk.	√	√	-	√	√
123	RICY	Ricky Putra Globalindo Tbk	√	√	√	√	√
124	RMBA	Bentoel Internasional Investama Tbk.	√	√	√	√	√
125	ROTI	Nippon Indosari Corpindo Tbk.	√	√	√	√	√
126	SAMF	Saraswanti Anugerah Makmur Tbk.	√	√	√	-	√
127	SBAT	Sejahtera Bintang Abadi Textile Tbk.	√	√	√	-	-
128	SCCO	Supreme Cable Manufacturing & Commerce Tbk.	√	√	√	√	√
129	SCNP	Selaras Citra Nusantara Perkasa Tbk.	√	√	√	-	-
130	SCPI	Merck Sharp Dohme Pharma Tbk.	√	√	√	-	√
131	SIDO	Industri Jamu dan Farmasi Sido Muncul Tbk.	√	√	√	√	√
132	SINI	Singaraja Putra Tbk.	√	√	√	-	√
133	SIPD	Sreeya Sewu Indonesia Tbk.	√	√	√	√	√
134	SKBM	Sekar Bumi Tbk.	√	√	√	√	√
135	SKLT	Sekar Laut Tbk.	√	√	√	√	√
136	SLIS	Gaya Abadi Sempurna Tbk.	√	√	-	-	√
137	SMBR	Semen Baturaja (Persero) Tbk.	√	√	-	√	√
138	SMCB	Solusi Bangun Indonesia Tbk.	√	√	√	√	√
139	SMGR	Semen Indonesia (Persero) Tbk.	√	√	√	√	√
140	SMKL	Satyamitra Kemas Lestari Tbk.	√	√	√	-	√
141	SMSM	Selamat Sempurna Tbk.	√	√	√	√	√
142	SOFA	Boston Furniture Industries Tbk.	√	√	-	-	-

143	SOHO	Soho Global Health Tbk.	√	√	-	-
144	SPMA	Suparma Tbk.	√	√	√	√
145	SRIL	Sri Rejeki Isman Tbk.	D	D	D	D
146	SRSN	Indo Acidatama Tbk.	√	√	√	√
147	SSTM	Sunson Textile Manufacture Tbk.	√	√	√	√
148	STAR	Buana Artha Anugerah Tbk.	√	√	√	√
149	STTP	Siantar Top Tbk.	√	√	-	√
150	SULI	SLJ Global Tbk.	D	D	D	D
151	TALF	Tunas Alfin Tbk.	√	√	-	√
152	TBLA	Tunas Baru Lampung Tbk.	√	√	√	√
153	TBMS	Tembaga Mulia Semanan Tbk.	D	D	D	D
154	TCID	Mandom Indonesia Tbk.	√	√	√	√
155	TFCO	Tifico Fiber Indonesia Tbk.	D	D	D	D
156	TIRT	Tirta Mahakam Resources Tbk.	√	√	√	√
157	TKIM	Pabrik Kertas Tjiwi Kimia Tbk.	D	D	D	D
158	TOTO	Surya Toto Indonesia Tbk.	√	√	√	√
159	TOYS	Sunindo Adipersada Tbk.	√	√	-	-
160	TPIA	Chandra Asri Petrochemical Tbk.	D	D	D	D
161	TRIS	Trisula International Tbk.	√	√	√	√
162	TRST	Trias Sentosa Tbk.	√	√	√	√
163	TSPC	Tempo Scan Pacific Tbk.	√	√	√	√
164	UCID	Uni-Charm Indonesia Tbk.	√	√	-	√
165	ULTJ	Ultra Jaya Milk Industry & Trading Company Tbk.	√	√	√	√
166	UNIC	Unggul Indah Cahaya Tbk.	√	√	-	√
167	UNIT	Nusantara Inti Corpora Tbk.	√	√	√	√
168	UNVR	Unilever Indonesia Tbk.	√	√	√	√
169	VOKS	Voksel Electric Tbk.	√	√	√	√
170	WIIM	Wismilak Inti Makmur Tbk.	√	√	√	√
171	WSBP	Waskita Beton Precast Tbk.	-	√	√	√
172	WTON	Wijaya Karya Beton Tbk.	√	√	√	√
173	YPAS	Yanaprima Hastapersada Tbk.	√	√	√	√
174	ZONE	Mega Perintis Tbk.	√	√	-	√

*NOTES:

D = Currency expressed in dollars

√ = Financial and Annual reports are available

- = Financial and Annual reports are unavailable



APPENDIX 2

TOTAL ACCRUALS RESULTS

(in thousands of rupiah)

EBXit	OCFit	TACCit
80.858.590.000	50.796.252.000	30.062.338.000
270.538.700.440	555.511.840.614	- 284.973.140.174
- 53.613.905.767	1.749.582.272.593	1.695.968.366.826
341.346.000.000	366.837.000.000	- 25.491.000.000
1.196.254.796	24.587.547.474	- 23.391.292.678
74.225.510.161	111.918.147.182	- 37.692.637.021
- 9.338.743.080	27.344.372.141	18.005.629.061
5.822.534.834	- 1.520.287.645	4.302.247.189
1.850.392.000.000	1.707.438.000.000	142.954.000.000
30.401.400.924	100.935.448.358	- 70.534.047.434
- 55.212.703.852	- 39.316.274.672	- 94.528.978.524
52.790.235.852	80.061.208.533	- 27.270.972.681
129.166.716.157	47.011.856.454	82.154.859.703
17.623.914.396	25.782.575.358	- 8.158.660.962
4.258.600.000.000	5.049.117.000.000	- 790.517.000.000
925.458.000.000	1.452.924.000.000	- 527.466.000.000
6.888.594.650	41.864.462.623	- 34.975.867.973
- 182.088.161.649	- 42.053.692.493	- 224.141.854.142
808.326.453	10.910.801.951	- 10.102.475.498
- 65.454.226.000	26.280.191.000	- 39.174.035.000
36.224.000.000	26.040.000.000	10.184.000.000
25.420.359.845	4.055.527.244	21.364.832.601
146.466.000.000	96.860.000.000	49.606.000.000
102.342.342.230	168.614.370.234	- 66.272.028.004
36.575.844.922	23.809.570.988	12.766.273.934
35.505.451.118	23.809.570.988	11.695.880.130
104.177.380.000	214.166.823.000	- 109.989.443.000
6.458.516.000.000	3.200.820.000.000	3.257.696.000.000
10.355.007.000.000	811.163.000.000	9.543.844.000.000
44.822.031.348	20.774.545.294	24.047.486.054
3.025.095.000.000	3.485.533.000.000	- 460.438.000.000
- 8.678.482.954	1.011.148.821	- 9.689.631.775
4.867.347.000.000	4.213.613.000.000	653.734.000.000
317.826.292.023	72.552.345.084	245.273.946.939
2.083.402.901.121	2.456.995.428.106	- 373.592.526.985



16.454.000.000.000	26.290.000.000.000	-	9.836.000.000.000
279.235.000.000	866.768.000.000	-	587.533.000.000
128.895.612.000	19.631.483.000	-	109.264.129.000
7.780.730.500	10.815.166.100	-	3.034.435.600
-	2.639.975.210	-	35.848.025.641
113.330.084.272	62.480.105.460	-	50.849.978.812
-	8.573.318.114	-	784.799.117.431
210.434.540.000	21.550.154.000	-	188.884.386.000
10.400.015.460	-	15.908.439.689	-
116.753.268.219	46.127.980.815	-	70.625.287.404
296.054.000.000	66.225.000.000	-	229.829.000.000
49.582.224.293	5.512.017.512	-	44.070.206.781
12.382.694.616	134.156.890.685	-	121.774.196.069
446.088.000.000	536.111.000.000	-	90.023.000.000
-	155.911.654.000	-	211.691.266.000
-	24.345.726.797	-	11.384.467.878
-	362.030.918.107	-	205.597.582.102
175.127.000.000	533.786.000.000	-	358.659.000.000
-	42.597.342.144	-	85.999.470.922
15.504.788.000	-	76.732.543.000	-
-	865.431.603	-	16.167.875.835
25.314.103.403	135.020.261.491	-	109.706.158.088
334.369.585.006	-	686.135.441.847	-
171.784.021.770	458.415.942.291	-	286.631.920.521
-	9.880.781.293	-	33.677.132.098
271.896.802	-	6.161.891.324	-
37.448.445.764	61.186.196.427	-	23.737.750.663
252.972.506.074	175.966.862.348	-	77.005.643.726
3.968.046.308	16.467.774.299	-	12.499.727.991
496.909.000.000	919.232.000.000	-	422.323.000.000
1.045.990.311	-	8.272.888.090	-
277.107.966	16.054.543.972	-	7.226.897.779
437.475.000.000	432.896.000.000	-	15.777.436.006
200.783.000.000	-	383.109.000.000	-
544.474.278.014	120.781.612.127	-	4.579.000.000
529.218.651.807	778.361.981.647	-	182.326.000.000
131.081.111.587	62.869.126.110	-	423.692.665.887
385.953.128	24.744.623.459	-	249.143.329.840
192.045.199.000	246.625.414.000	-	68.211.985.477
1.933.819.152	110.641.662.962	-	24.358.670.331
159.119.646.125	197.980.124.011	-	54.580.215.000
		-	108.707.843.810
		-	38.860.477.886



-	10.462.177.146	29.295.185.872	-	18.833.008.726
	306.885.570	33.093.380.375	-	32.786.494.805
	6.565.707.419	134.284.985.659	-	127.719.278.240
	17.979.509.000	384.621.003.000	-	366.641.494.000
	279.777.368.831	414.702.426.418	-	134.925.057.587
	99.931.854.409	49.190.107.633	-	50.741.746.776
	260.444.000.000	333.042.000.000	-	72.598.000.000
	24.940.363.700	49.685.387.363	-	24.745.023.663
	88.771.061.003	95.618.365.174	-	6.847.304.171
	34.875.088.122	34.234.428.082	-	640.660.040
	5.571.166.686	1.794.007.269	-	7.365.173.955
	2.217.856.000.000	4.157.137.000.000	-	1.939.281.000.000
	307.115.218.370	84.490.481.400	-	222.624.736.970
	3.991.596.875	87.280.999.316	-	83.289.402.441
	73.808.772.770	63.688.738.725	-	10.120.034.045
	32.451.700.016	17.576.405.476	-	14.875.294.540
	90.585.509.314	8.289.910.044	-	82.295.599.270
	3.800.464.000.000	3.546.113.000.000	-	254.351.000.000
	2.804.370.000.000	2.753.605.000.000	-	50.765.000.000
	40.862.997.030	85.536.484.701	-	44.673.487.671
	261.657.000.000	25.239.000.000	-	286.896.000.000
	5.355.091.978	6.871.373.245	-	1.516.281.267
	288.990.128.000	251.605.232.000	-	37.384.896.000
	56.019.000.000	119.156.000.000	-	63.137.000.000
	4.361.852.873	97.291.055	-	4.459.143.928
	36.956.000.000	287.744.000.000	-	250.788.000.000
	248.026.599.376	176.087.317.362	-	71.939.282.014
	23.756.169.548	39.761.184.974	-	16.005.015.426
	23.756.169.548	39.761.184.974	-	16.005.015.426
	145.119.664.000	187.475.539.000	-	42.355.875.000
	6.586.081.000.000	6.937.650.000.000	-	351.569.000.000
	12.530.201.000.000	14.076.579.000.000	-	1.546.378.000.000
	43.822.031.348	23.774.545.294	-	20.047.486.054
	3.635.216.000.000	4.584.964.000.000	-	949.748.000.000
	6.713.301.745	4.896.207.231	-	1.817.094.514
	4.984.305.000.000	7.175.603.000.000	-	2.191.298.000.000
	207.150.366.829	11.867.374.074	-	195.282.992.755
	2.353.923.940.687	2.159.833.281.176	-	194.090.659.511
	19.804.000.000.000	19.407.000.000.000	-	397.000.000.000
	522.056.000.000	1.059.369.000.000	-	537.313.000.000
	42.039.071.000	19.176.233.000	-	22.862.838.000



3.787.737.459	15.815.166.143	-	8.034.435.643
17.601.900.105	17.103.256.597	-	498.643.508
112.403.967.737	147.030.558.657	-	34.626.590.920
9.206.488.520	118.811.023.397	-	109.604.534.877
132.822.083.000	184.371.203.000	-	51.549.120.000
13.396.024.158	16.058.112.684	-	2.662.088.526
322.034.555.156	383.175.671.680	-	61.141.116.524
356.491.000.000	26.556.000.000	-	329.935.000.000
30.657.914.643	3.493.277.047	-	27.164.637.596
13.280.003.916	82.494.120.808	-	69.214.116.892
474.499.000.000	582.843.000.000	-	1.057.342.000.000
9.039.563.000	234.571.143.000	-	225.531.580.000
26.500.565.763	20.444.874.139	-	46.945.439.902
13.049.000.000	26.050.000.000	-	13.001.000.000
284.584.000.000	983.560.000.000	-	1.268.144.000.000
81.063.430.679	266.413.599.145	-	185.350.168.466
11.056.051.000	114.821.748.000	-	103.765.697.000
28.988.504.757	2.138.273.411	-	26.850.231.346
33.794.866.940	239.192.778.741	-	205.397.911.801
634.819.524.892	3.034.905.406.375	-	2.400.085.881.483
282.148.079.843	79.247.536.911	-	202.900.542.932
10.932.426.503	16.763.181.683	-	27.695.608.186
90.886.646.674	138.783.218.372	-	229.669.865.046
25.213.015.324	13.169.891.854	-	12.043.123.470
271.597.947.663	198.050.928.789	-	73.547.018.874
6.933.035.457	17.977.995.613	-	11.044.960.156
982.129.000.000	1.248.469.000.000	-	266.340.000.000
5.549.465.678	16.529.433.188	-	22.078.898.866
160.045.873.393	194.253.220.963	-	34.207.347.570
480.525.000.000	462.656.000.000	-	17.869.000.000
621.011.000.000	391.986.000.000	-	229.025.000.000
162.059.596.347	264.194.256.792	-	102.134.660.445
545.493.536.262	491.655.348.447	-	53.838.187.815
106.290.306.868	136.703.864.740	-	30.413.557.872
860.775.734	30.168.393.183	-	29.307.617.449
254.509.268.000	259.851.506.000	-	5.342.238.000
49.556.367.334	193.436.286.326	-	143.879.918.992
340.593.630.534	522.526.634.709	-	181.933.004.175
15.752.958.422	42.265.424.796	-	58.018.383.218
462.555.307	36.390.716.827	-	35.928.161.520
17.367.399.212	317.962.543.661	-	335.329.942.873



13.924.298.000	145.628.143.000	-	131.703.845.000
124.467.558.054	370.617.213.073	-	246.149.655.019
24.823.789.672	373.368.308.766	-	348.544.519.094
15.667.000.000	299.081.000.000	-	283.414.000.000
383.238.397.027	10.904.672.310	-	372.333.724.717
118.231.212.160	245.599.197.741	-	127.367.985.581
24.486.490.201	52.474.094.986	-	27.987.604.785
11.105.502.256	6.005.724.423	-	5.099.777.833
2.463.628.000.000	1.624.465.000.000	-	839.163.000.000
81.993.317.740	51.605.876.745	-	30.387.440.995
2.871.754.742	31.357.855.008	-	28.486.100.266
72.086.531.613	88.100.059.088	-	16.013.527.475
36.812.068.077	51.365.012.507	-	14.552.944.430
23.733.362.393	12.507.667.355	-	11.225.695.038
1.837.668.000.000	2.781.805.000.000	-	944.137.000.000
919.239.000.000	770.662.000.000	-	148.577.000.000
65.755.214.997	61.261.640.106	-	4.493.574.891
93.299.775.305	17.868.868.446	-	111.168.643.751
13.265.533.955	15.388.660.677	-	2.123.126.722
41.521.427.000	265.893.212.000	-	224.371.785.000
38.623.000.000	87.199.000.000	-	48.576.000.000
2.488.684.521	6.225.044.449	-	3.736.359.928
40.965.000.000	69.285.000.000	-	28.320.000.000
104.374.073.339	208.851.008.007	-	104.476.934.668
64.041.340.293	33.220.121.814	-	30.821.218.479
50.391.169.819	78.486.685.676	-	28.095.515.857
148.312.987.000	230.738.193.000	-	82.425.206.000
7.703.622.000.000	8.204.579.000.000	-	500.957.000.000
12.483.134.000.000	15.376.315.000.000	-	2.893.181.000.000
47.056.065.297	115.201.632.290	-	68.145.566.993
3.531.220.000.000	5.174.368.000.000	-	1.643.148.000.000
28.184.275.168	33.053.446.183	-	61.237.721.351
5.039.068.000.000	6.507.803.000.000	-	1.468.735.000.000
121.129.837.575	240.312.298.590	-	119.182.461.015
2.442.945.312.378	2.008.316.536.066	-	434.628.776.312
22.636.000.000.000	23.285.000.000.000	-	649.000.000.000
452.879.000.000	394.229.000.000	-	58.650.000.000
49.765.449.000	47.680.636.000	-	2.084.813.000
11.905.385.694	17.805.531.871	-	5.900.146.177
12.538.097.901	9.669.781.404	-	2.868.316.497
100.792.356.256	98.702.358.157	-	2.089.998.099



2.619.777.972.185	-	601.612.476.031	-	3.221.390.448.216
171.603.140.000		85.948.536.000		85.654.604.000
22.357.849.014		61.278.615.330	-	38.920.766.316
326.702.929.037	-	65.871.447.329		260.831.481.708
1.203.759.000.000		122.802.000.000		1.080.957.000.000
-	16.596.579.161	-	1.995.105.496	-
14.427.701.711		212.819.926.508	-	198.392.224.797
563.302.000.000		446.032.000.000		117.270.000.000
47.534.072.000		243.550.943.000	-	196.016.871.000
62.849.581.665		5.602.423.448	-	68.452.005.113
354.925.000.000	-	54.375.000.000		409.300.000.000
758.045.000.000		818.464.000.000	-	1.576.509.000.000
92.280.117.234		131.771.691.225	-	39.491.573.991
17.698.567.000		85.865.101.000	-	68.166.534.000
1.001.385.942	-	12.654.191.609	-	11.652.805.667
38.199.681.742		229.411.066.077	-	191.211.384.335
1.000.330.150.510	-	2.413.798.672.493	-	1.413.468.521.983
340.458.859.391		556.143.968.917	-	215.685.109.526
-	14.500.028.420	-	27.114.919.034	-
-	42.843.793.031	-	160.428.734.408	-
12.198.889.550		44.384.663.571	-	32.185.774.021
331.707.917.461		5.241.243.654		326.466.673.807
-	31.140.558.174	-	16.797.834.611	-
1.322.067.000.000		1.331.611.000.000	-	9.544.000.000
-	1.283.332.109	-	10.355.155.394	-
166.204.959.339		68.692.517.377		97.512.441.962
533.799.000.000		640.695.000.000	-	106.896.000.000
954.357.000.000		1.917.900.000.000	-	963.543.000.000
179.126.382.068		363.708.428.317	-	184.582.046.249
557.339.581.996		544.164.330.634		13.175.251.362
40.589.790.851		194.599.188.956	-	154.009.398.105
1.062.124.056		4.295.116.078	-	3.232.992.022
279.772.635.000		342.202.126.000	-	62.429.491.000
113.639.539.901		320.252.084.705	-	206.612.544.804
269.730.298.809	-	70.250.625.762		199.479.673.047
-	23.709.833.744	-	25.549.790.980	-
594.726.798		78.783.737.756	-	78.189.010.958
46.284.759.301		147.184.447.849	-	193.469.207.150
107.221.262.000		16.883.236.000		90.338.026.000
136.301.090.897		295.922.456.326	-	159.621.365.429
-	51.669.856.459	-	444.151.604.001	-



60.809.000.000	216.818.000.000	-	156.009.000.000
22.999.120.591	14.299.851.349	-	8.699.269.242
158.891.252.212	356.764.910.588	-	197.873.658.376
95.494.861.660	10.125.713.239	-	85.369.148.421
28.516.296.605	25.560.227.579	-	2.956.069.026
4.599.333.000.000	5.035.954.000.000	-	436.621.000.000
74.342.725.782	61.219.347.295	-	13.123.378.487
86.838.297.236	6.606.782.082	-	80.231.515.154
45.825.707.894	2.010.760.208	-	43.814.947.686
45.487.260.497	132.356.154.811	-	86.868.894.314
52.671.480.479	12.092.574.806	-	40.578.905.673
1.241.944.000.000	1.984.532.000.000	-	742.588.000.000
2.433.191.000.000	1.840.529.000.000	-	592.662.000.000
69.631.528.292	88.557.902.537	-	18.926.374.245
71.893.063.455	19.687.681.719	-	91.580.745.174
4.030.205.213	1.984.921.568	-	2.045.283.645
294.923.154.000	367.904.123.000	-	72.980.969.000
58.903.000.000	146.588.000.000	-	87.685.000.000
3.151.162.906	531.708.506	-	2.619.454.400
49.780.000.000	26.016.000.000	-	23.764.000.000
100.378.388.775	287.259.686.428	-	186.881.297.653
16.605.424.232	9.774.374.433	-	6.831.049.799
63.508.941.729	131.839.301.387	-	68.330.359.658
203.324.139.000	26.628.428.000	-	176.695.711.000
7.968.008.000.000	11.224.700.000.000	-	3.256.692.000.000
13.629.251.000.000	20.193.483.000.000	-	6.564.232.000.000
92.570.914.640	7.395.470.836	-	85.175.443.804
5.206.867.000.000	4.653.375.000.000	-	553.492.000.000
112.242.865.670	6.591.999.142	-	105.650.866.528
6.350.788.000.000	5.935.829.000.000	-	414.959.000.000
179.025.676.787	104.743.680.332	-	74.281.996.455
2.552.706.945.624	2.770.775.949.459	-	218.069.003.835
28.839.000.000.000	27.692.000.000.000	-	1.147.000.000.000
747.442.000.000	678.469.000.000	-	68.973.000.000
76.036.631.000	40.450.899.000	-	35.585.732.000
24.143.812.178	49.583.922.599	-	25.440.110.421
3.789.729.800	885.231.753	-	2.904.498.047
92.358.780.614	58.409.108.583	-	33.949.672.031
899.142.385.580	2.240.811.709.699	-	3.139.954.095.279
94.495.682.000	7.444.003.000	-	87.051.679.000
23.709.195.859	29.898.620.061	-	6.189.424.202

Universitas Brawijaya	276.292.254.502	Universitas Brawijaya	89.354.164.341	Universitas Brawijaya	186.938.090.161
Universitas Brawijaya	141.251.000.000	Universitas Brawijaya	76.310.000.000	Universitas Brawijaya	217.561.000.000
Universitas Brawijaya	7.358.134.969	Universitas Brawijaya	17.330.565.028	Universitas Brawijaya	9.972.430.059
Universitas Brawijaya	16.723.266.880	Universitas Brawijaya	170.012.017.007	Universitas Brawijaya	153.288.750.127
Universitas Brawijaya	651.298.000.000	Universitas Brawijaya	542.647.000.000	Universitas Brawijaya	108.651.000.000
Universitas Brawijaya	126.773.341.000	Universitas Brawijaya	227.388.878.000	Universitas Brawijaya	100.615.537.000
Universitas Brawijaya	33.021.220.862	Universitas Brawijaya	7.723.486.943	Universitas Brawijaya	40.744.707.805
Universitas Brawijaya	25.934.000.000	Universitas Brawijaya	116.511.000.000	Universitas Brawijaya	90.577.000.000
Universitas Brawijaya	827.985.000.000	Universitas Brawijaya	404.517.000.000	Universitas Brawijaya	1.232.502.000.000
Universitas Brawijaya	82.232.722.269	Universitas Brawijaya	224.285.334.887	Universitas Brawijaya	142.052.612.618
Universitas Brawijaya	38.735.092.000	Universitas Brawijaya	31.387.997.000	Universitas Brawijaya	7.347.095.000
Universitas Brawijaya	36.477.174.515	Universitas Brawijaya	12.639.503.604	Universitas Brawijaya	49.116.678.119
Universitas Brawijaya	63.193.899.099	Universitas Brawijaya	118.453.889.096	Universitas Brawijaya	55.259.989.997
Universitas Brawijaya	1.103.472.788.182	Universitas Brawijaya	1.818.103.331.586	Universitas Brawijaya	714.630.543.404
Universitas Brawijaya	486.640.174.453	Universitas Brawijaya	733.378.642.718	Universitas Brawijaya	246.738.468.265
Universitas Brawijaya	9.041.326.115	Universitas Brawijaya	30.780.019.664	Universitas Brawijaya	39.821.345.779
Universitas Brawijaya	76.001.730.866	Universitas Brawijaya	1.088.089.208.381	Universitas Brawijaya	1.012.087.477.515
Universitas Brawijaya	44.842.442.824	Universitas Brawijaya	68.151.118.594	Universitas Brawijaya	23.308.675.770
Universitas Brawijaya	535.085.322.000	Universitas Brawijaya	171.669.100.000	Universitas Brawijaya	363.416.222.000
Universitas Brawijaya	46.390.704.290	Universitas Brawijaya	29.060.369.596	Universitas Brawijaya	75.451.073.886
Universitas Brawijaya	1.224.807.000.000	Universitas Brawijaya	1.412.515.000.000	Universitas Brawijaya	187.708.000.000
Universitas Brawijaya	2.256.476.497	Universitas Brawijaya	5.750.378.923	Universitas Brawijaya	8.006.855.420
Universitas Brawijaya	105.468.744.587	Universitas Brawijaya	67.756.473.097	Universitas Brawijaya	37.712.271.490
Universitas Brawijaya	663.849.000.000	Universitas Brawijaya	846.389.000.000	Universitas Brawijaya	182.540.000.000
Universitas Brawijaya	764.380.000.000	Universitas Brawijaya	84.833.000.000	Universitas Brawijaya	849.213.000.000
Universitas Brawijaya	173.049.442.756	Universitas Brawijaya	193.367.434.215	Universitas Brawijaya	20.317.991.459
Universitas Brawijaya	540.378.145.887	Universitas Brawijaya	389.088.123.975	Universitas Brawijaya	151.290.021.912
Universitas Brawijaya	51.142.850.919	Universitas Brawijaya	140.978.069.476	Universitas Brawijaya	89.835.218.557
Universitas Brawijaya	506.523.774	Universitas Brawijaya	5.360.499.842	Universitas Brawijaya	4.853.976.068
Universitas Brawijaya	338.129.985.000	Universitas Brawijaya	342.493.551.000	Universitas Brawijaya	4.363.566.000
Universitas Brawijaya	110.686.883.366	Universitas Brawijaya	133.733.783.003	Universitas Brawijaya	23.046.899.637
Universitas Brawijaya	253.995.332.656	Universitas Brawijaya	133.493.168.560	Universitas Brawijaya	120.502.164.096
Universitas Brawijaya	1.112.037.917	Universitas Brawijaya	14.880.768.388	Universitas Brawijaya	13.768.730.471
Universitas Brawijaya	173.591.040	Universitas Brawijaya	30.736.659.689	Universitas Brawijaya	30.563.068.649
Universitas Brawijaya	32.736.482.313	Universitas Brawijaya	70.390.895.931	Universitas Brawijaya	103.127.378.244
Universitas Brawijaya	18.469.014.000	Universitas Brawijaya	243.459.904.000	Universitas Brawijaya	224.990.890.000
Universitas Brawijaya	221.853.474.024	Universitas Brawijaya	479.788.528.325	Universitas Brawijaya	257.935.054.301
Universitas Brawijaya	325.010.593.783	Universitas Brawijaya	253.724.256.753	Universitas Brawijaya	71.286.337.030
Universitas Brawijaya	173.715.000.000	Universitas Brawijaya	45.608.000.000	Universitas Brawijaya	219.323.000.000
Universitas Brawijaya	8.556.193.779	Universitas Brawijaya	18.517.650.964	Universitas Brawijaya	9.961.457.185
Universitas Brawijaya	200.335.000.295	Universitas Brawijaya	368.988.791.699	Universitas Brawijaya	168.653.791.404



2.334.154.897	79.605.539.441	77.271.384.544
1.078.867.413	25.034.751.120	23.955.883.707
3.615.390.000.000	3.400.173.000.000	215.217.000.000
149.902.584.428	115.559.223.532	34.343.360.896
21.414.219.012	- 60.367.965.848	38.953.746.836
60.649.376.118	110.401.909.570	49.752.533.452
34.392.474.366	- 66.131.822.016	31.739.347.650
20.169.371.175	11.868.109.959	8.301.261.216
1.883.349.000.000	3.530.772.000.000	1.647.423.000.000
1.854.970.000.000	1.879.537.000.000	24.567.000.000
53.034.379.616	258.033.801.758	204.999.422.142
489.269.672.904	- 45.225.708.260	534.495.381.164
18.576.744.403	- 5.608.946.676	24.185.691.079
177.348.436.000	312.988.282.000	135.639.846.000
86.023.000.000	184.178.000.000	98.155.000.000
7.294.562.216	8.147.131.727	852.569.511
81.329.000.000	271.140.000.000	189.811.000.000
214.147.120.992	453.147.999.966	239.000.878.974
6.586.220.485	1.955.633.127	4.630.587.358
128.863.892.653	198.145.077.505	69.281.184.852
219.199.794.000	272.538.844.000	53.339.050.000
10.800.102.000.000	11.174.403.000.000	374.301.000.000
13.932.030.000.000	17.145.967.000.000	3.213.937.000.000
103.273.133.280	105.224.199.992	1.951.066.712
5.736.489.000.000	7.398.161.000.000	1.661.672.000.000
65.502.295.554	- 9.617.956.093	75.120.251.647
6.588.662.000.000	13.344.494.000.000	6.755.832.000.000
534.040.428.097	17.379.083.127	516.661.344.970
2.513.242.403.090	2.502.968.822.391	10.273.580.699
23.279.000.000.000	19.175.000.000.000	4.104.000.000.000
730.113.000.000	1.072.057.000.000	341.944.000.000
27.844.967.000	48.742.952.000	20.897.985.000
23.049.137.049	24.834.511.428	1.785.374.379
145.335.537.132	- 6.642.849.130	138.692.688.002
51.117.350.525	93.837.385.857	42.720.035.332
65.180.072.693	- 615.124.627.663	680.304.700.356
96.163.296.000	179.820.473.000	83.657.177.000
14.401.548.408	81.232.352.743	66.830.804.335
383.537.749.647	- 35.053.662.077	348.484.087.570
275.514.000.000	- 140.424.000.000	415.938.000.000
44.781.308.279	3.664.810.110	41.116.498.169



14.272.043.949	-	162.794.506.729	-	148.522.462.780
618.116.000.000		677.867.000.000	-	59.751.000.000
189.082.238.000		175.969.808.000		13.112.430.000
-	7.383.289.239	33.552.221.386	-	40.935.510.625
79.776.000.000		223.478.000.000	-	143.702.000.000
499.052.000.000	-	53.247.000.000		445.805.000.000
131.005.670.940		112.951.558.986		18.054.111.954
42.829.128.000		10.927.791.000		31.901.337.000
-	51.742.898.055	7.895.681.075	-	59.638.579.130
38.911.968.283		112.801.524.233	-	73.889.555.950
806.148.752.926		26.265.454.496		779.883.298.430
510.711.733.403		1.126.052.429.214	-	615.340.695.811
3.488.737.738		57.946.283.372	-	54.457.545.634
-	83.843.800.594	94.459.968.552	-	178.303.769.146
41.484.677.098		28.509.352.358		12.975.324.740
15.890.439.000	-	1.853.834.642.000	-	1.837.944.203.000
-	41.669.593.909	18.147.515.192	-	59.817.109.101
1.206.059.000.000		1.334.524.000.000	-	128.465.000.000
131.836.668	-	6.529.917.745	-	6.398.081.077
208.249.125.401		169.486.566.476		38.762.558.925
807.689.000.000		836.914.000.000	-	29.225.000.000
661.034.000.000		1.125.423.000.000	-	464.389.000.000
145.149.344.561		126.569.066.962		18.580.277.599
595.154.912.874		889.775.270.261	-	294.620.357.387
27.328.091.481		199.249.244.086	-	171.921.152.605
676.975.255		5.147.594.606	-	4.470.619.351
317.815.177.000		274.364.533.000		43.450.644.000
101.465.560.351		155.508.121.580	-	54.042.561.229
303.593.922.331		128.284.278.362		175.309.643.969
16.266.732.177		33.552.722.613	-	49.819.454.790
1.951.111.404		75.582.953.903	-	73.631.842.499
7.961.966.026		20.790.922.347	-	12.828.956.321



APPENDIX 3

NONDISCRETIONARY ACCRUALS RESULTS

(in thousands of rupiah)

TAit-1	TACCit/TAit-1	1/TAit-1	(REVit-RECit)/TAit-1	(PPEit)/TAit-1	ROAit	NDACCit
2.227.042.590.000	0,0135	0,000000000000045	0,0066	0,7609	0,0067	-0,0854
2.142.894.276.216	-0,1330	0,000000000000047	0,0250	0,8500	0,0614	-0,0913
3.217.113.857.871	0,5272	0,000000000000031	0,0452	0,2267	0,0248	-0,0245
3.946.125.000.000	-0,0065	0,000000000000025	-0,0035	0,4619	0,1087	-0,0436
273.126.657.794	-0,0856	0,000000000000366	-0,0567	0,8062	0,0314	-0,0958
1.259.938.133.543	-0,0299	0,000000000000079	-0,2722	0,7023	0,1830	-0,0635
959.445.449.616	0,0188	0,000000000000104	-0,0332	0,2600	-1,7295	-0,1655
174.088.741.855	0,0247	0,000000000000574	-0,1046	0,0756	0,0412	-0,0183
20.841.795.000.000	0,0069	0,000000000000005	0,0571	0,5446	0,0721	-0,0557
411.736.182.748	-0,1713	0,000000000000243	0,0179	0,2346	0,1052	-0,0241
1.357.932.144.522	-0,0696	0,000000000000074	-0,2131	0,5242	-0,0115	-0,0591
350.619.526.939	-0,0778	0,000000000000285	-0,1073	0,1896	0,1437	-0,0159
893.663.745.450	0,0919	0,000000000000112	0,2690	0,2596	0,0169	-0,0328
147.755.842.523	-0,0552	0,000000000000677	0,1378	0,3281	0,0652	-0,0493
28.884.635.000.000	-0,0274	0,000000000000003	-0,0836	0,4782	0,1915	-0,0377
15.758.959.000.000	-0,0335	0,000000000000006	0,0453	0,4321	0,0228	-0,0469
960.332.553.887	-0,0364	0,000000000000104	0,0542	0,4197	0,0388	-0,0468
2.268.246.639.101	-0,0988	0,000000000000044	-0,0873	0,6187	0,0332	-0,0666
141.034.984.628	-0,0716	0,000000000000709	-0,5125	0,2916	0,0568	-0,0407
3.530.183.618.000	-0,0111	0,000000000000028	0,0846	0,5161	-0,0219	-0,0607
502.990.000.000	0,0202	0,000000000000199	0,1518	0,5654	0,0476	-0,0655
133.831.888.816	0,1596	0,000000000000747	-0,0759	0,3669	-0,0082	-0,0590
2.476.982.000.000	0,0200	0,000000000000040	-0,1002	0,6913	0,0079	-0,0765
1.284.150.037.341	-0,0516	0,000000000000078	-0,1187	0,1721	0,0263	-0,0179
370.186.989.798	0,0345	0,000000000000270	0,1052	0,4297	0,0793	-0,0493
370.186.989.798	0,0316	0,000000000000270	0,8791	0,4297	0,0015	-0,0624
1.241.239.780.000	-0,0886	0,000000000000081	0,1297	0,2081	0,0589	-0,0218
58.234.278.000.000	0,0559	0,000000000000002	0,0903	0,3453	0,0839	-0,0328
28.380.630.000.000	0,3363	0,000000000000004	0,2065	0,2213	0,2635	-0,0062
300.450.150.000	0,0800	0,000000000000333	0,0326	0,6019	0,6907	-0,0218
25.029.488.000.000	-0,0184	0,000000000000004	1,2613	0,2619	0,0958	-0,0334
623.002.100.394	-0,0156	0,000000000000161	-0,0197	0,2332	0,0020	-0,0296
86.007.251.000.000	0,0076	0,000000000000001	-0,0029	0,2918	0,0530	-0,0284
1.863.380.544.823	0,1316	0,000000000000054	-0,1215	0,5406	0,0637	-0,0555



12.439.267.396.015	-0,0300	0,000000000000008	0,0471	0,3166	0,1531	-0,0240
236.027.000.000.000	-0,0417	0,000000000000000	-0,0729	0,1767	0,0861	-0,0123
14.387.568.000.000	-0,0408	0,000000000000007	7,2695	0,2438	0,0801	-0,0880
774.891.087.000	0,1410	0,000000000000129	0,1836	0,3029	0,0877	-0,0318
377.972.512.100	-0,0080	0,000000000000265	0,1618	0,2383	0,7948	0,0272
104.537.589.283	0,3429	0,000000000000957	-0,6142	0,1238	2,8462	0,1895
911.610.972.034	0,0558	0,000000000000110	-0,0859	0,4609	0,3294	-0,0277
23.473.796.788.460	0,0334	0,000000000000004	-0,0724	0,1957	0,0003	-0,0212
1.064.129.232.000	0,1775	0,000000000000094	0,1655	0,3723	0,0143	-0,0442
250.070.069.170	-0,0220	0,000000000000400	-0,0024	0,0762	0,0202	-0,0167
1.340.881.252.563	0,0527	0,000000000000075	0,1594	0,4139	0,0521	-0,0453
2.041.336.000.000	-0,1126	0,000000000000049	-0,1493	0,5652	-0,0551	-0,0671
1.286.827.899.805	0,0342	0,000000000000078	0,0395	0,6680	0,0726	-0,0710
1.172.012.468.004	-0,1039	0,000000000000085	-0,1436	0,2885	0,0087	-0,0322
1.757.634.000.000	-0,0512	0,000000000000057	0,0907	0,4412	0,1852	-0,0370
7.194.498.904.000	0,0294	0,000000000000014	0,0356	0,7690	0,0128	-0,0853
1.236.807.511.653	-0,0289	0,000000000000081	-0,0053	0,4715	-0,0088	-0,0551
2.799.604.621.544	-0,0559	0,000000000000036	-0,1414	0,3094	0,0022	-0,0339
17.199.304.000.000	-0,0209	0,000000000000006	0,5142	0,8388	0,0328	-0,0958
2.091.957.078.669	0,0207	0,000000000000048	0,0472	0,6882	0,0206	-0,0767
464.949.206.000	-0,1317	0,000000000000215	0,0863	0,2702	0,0185	-0,0347
716.491.912.027	0,0214	0,000000000000140	0,0613	0,2768	0,0262	-0,0328
3.261.285.495.052	-0,0336	0,000000000000031	-0,0033	0,6443	0,0189	-0,0710
1.202.607.464.432	-0,2925	0,000000000000083	1,7732	0,8210	-0,0022	-0,1100
3.802.658.881.174	-0,0754	0,000000000000026	-0,1952	0,5253	0,1669	-0,0444
320.882.480.510	0,0742	0,000000000000312	-0,4098	0,5195	-0,0343	-0,0644
443.046.469.330	-0,0133	0,000000000000226	-0,0263	0,5330	-0,0058	-0,0651
521.920.090.728	-0,0455	0,000000000000192	0,2228	0,0135	0,0611	-0,0035
3.012.778.637.568	0,0256	0,000000000000033	0,1010	0,2263	0,0815	-0,0206
808.892.238.344	-0,0155	0,000000000000124	-0,0662	0,3236	-0,0011	-0,0385
2.231.051.000.000	-0,1893	0,000000000000045	-0,0537	0,5675	0,3784	-0,0344
500.138.658.228	-0,0144	0,000000000000200	-0,0451	0,1412	0,0148	-0,0190
1.557.960.734.712	-0,0101	0,000000000000064	-0,2390	0,1838	-0,0583	-0,0244
2.820.273.000.000	0,0016	0,000000000000035	-0,0095	0,3411	0,1490	-0,0272
7.328.419.000.000	-0,0249	0,000000000000014	-0,3866	0,6049	0,0461	-0,0606
1.863.679.837.324	0,2273	0,000000000000054	0,1664	0,4844	0,0724	-0,0512
5.609.556.653.195	-0,0444	0,000000000000018	0,1012	0,2882	0,9230	0,0382
1.334.544.790.387	0,0511	0,000000000000075	0,1387	0,2486	0,0867	-0,0241
440.522.832.644	-0,0553	0,000000000000227	0,0224	0,7431	0,0004	-0,0885
997.443.167.000	-0,0547	0,000000000000100	-0,5031	0,1056	0,2768	0,0119
2.282.666.078.493	-0,0476	0,000000000000044	-0,0849	0,6341	0,0491	-0,0671



1.656.007.190.010	-0,0235	0,000000000000060	-0,0273	0,1920	0,0773	-0,0166
773.663.346.934	0,0243	0,000000000000129	-0,0259	0,4442	-0,0195	-0,0539
775.917.827.931	-0,0423	0,000000000000129	-0,0954	0,4077	0,0005	-0,0476
1.249.763.660.131	-0,1022	0,000000000000080	0,1925	0,3188	0,0041	-0,0389
2.883.143.132.000	-0,1272	0,000000000000035	0,0197	0,5636	0,0295	-0,0243
2.706.323.637.034	-0,0499	0,000000000000037	-0,0028	0,6809	0,0881	-0,0118
2.189.037.586.057	-0,0232	0,000000000000046	1,1403	0,3207	-0,0175	-0,0151
4.270.275.000.000	-0,0170	0,000000000000023	0,0098	0,8244	0,0620	-0,0320
308.620.387.248	-0,0802	0,000000000000324	0,2426	0,7525	0,0031	-0,0145
1.601.346.561.573	-0,0043	0,000000000000062	0,1064	0,5362	0,0589	-0,0087
946.448.936.464	0,0007	0,000000000000106	-0,3792	0,2330	-0,0097	-0,0108
183.501.650.442	-0,0401	0,000000000000545	-0,0909	0,0648	0,0334	0,0637
24.532.331.000.000	-0,0791	0,000000000000004	0,3663	0,4593	0,0888	0,0026
796.767.646.172	0,2794	0,000000000000126	0,0375	0,4453	0,0433	-0,0018
1.183.934.183.257	0,0703	0,000000000000084	-0,1144	0,6367	-0,0570	-0,0551
383.936.040.590	0,0264	0,000000000000260	0,2812	0,1839	0,1201	0,0585
1.330.259.296.537	0,0112	0,000000000000075	-0,1630	0,1805	0,0965	0,0280
169.546.066.314	0,4854	0,000000000000590	0,0661	0,7581	0,0654	0,0334
27.638.360.000.000	0,0092	0,000000000000004	-0,0975	0,5298	0,1412	0,0127
17.159.466.000.000	0,0030	0,000000000000006	0,1361	0,4378	0,0481	-0,0115
1.177.093.668.866	-0,0380	0,000000000000085	-1,2654	0,3437	0,0060	-0,0213
2.124.390.696.519	-0,1350	0,000000000000047	0,0323	0,6221	-0,0979	-0,0712
133.782.751.041	-0,0113	0,000000000000747	-0,1265	0,4627	0,0050	0,0476
3.962.068.064.000	0,0094	0,000000000000025	0,1214	0,4939	-0,0171	-0,0361
653.224.000.000	-0,0967	0,000000000000153	0,2844	0,5728	0,0472	-0,0045
139.809.135.385	-0,0319	0,000000000000715	-0,0143	0,3338	0,1818	0,1153
3.265.953.000.000	-0,0768	0,000000000000031	0,1850	0,5425	0,0500	-0,0150
1.485.826.210.015	0,0484	0,000000000000067	0,4067	0,1454	0,0718	0,0250
328.807.494.765	-0,0487	0,000000000000304	0,0610	0,5529	0,0916	0,0265
382.807.494.765	-0,0418	0,000000000000261	0,5920	0,4749	0,0766	0,0258
1.376.278.237.000	-0,0308	0,000000000000073	0,0503	0,2940	0,0680	0,0116
63.505.413.000.000	-0,0055	0,000000000000002	0,0843	0,3228	0,1026	0,0145
38.010.724.000.000	-0,0407	0,000000000000003	0,1557	0,1814	0,2436	0,0737
350.200.130.000	0,0572	0,000000000000286	0,4845	0,5078	0,1211	0,0408
26.560.624.000.000	-0,0358	0,000000000000004	0,0996	0,2679	0,1047	0,0193
648.899.377.240	0,0028	0,000000000000154	-0,0338	0,2262	-0,0122	-0,0037
91.831.526.000.000	-0,0239	0,000000000000001	0,0299	0,2799	0,0592	0,0019
3.211.234.658.570	0,0608	0,000000000000031	-0,0179	0,3806	0,0968	0,0109
13.696.417.381.439	0,0142	0,000000000000007	0,1583	0,3326	0,1689	0,0380
245.435.000.000.000	0,0016	0,000000000000000	-0,0336	0,1762	0,0628	0,0097
14.339.110.000.000	-0,0375	0,000000000000007	-7,2872	0,2510	0,0191	-0,0608



795.257.974.000	0,0287	0,000000000000126	-0,1891	0,2761	0,1602	0,0487
357.981.312.200	-0,0224	0,000000000000279	0,1378	0,2656	0,0201	0,0191
99.558.394.760	0,0050	0,000000000001004	-0,4013	0,1142	-0,0287	0,0846
918.617.353.270	-0,0377	0,000000000000109	0,1736	0,4643	0,0940	0,0137
24.860.957.839.497	0,0044	0,000000000000004	-0,2855	0,1555	0,0003	-0,0120
1.358.464.081.000	-0,0379	0,000000000000074	0,2300	0,3009	0,1326	0,0349
300.617.691.700	-0,0089	0,000000000000333	-0,0146	0,0733	0,0297	0,0401
1.551.799.840.976	-0,0394	0,000000000000064	0,0076	0,3713	0,0624	0,0032
1.944.326.000.000	-0,1697	0,000000000000051	-0,3071	0,4983	-0,1828	-0,0942
1.531.742.052.164	-0,0177	0,000000000000065	-0,0694	0,5856	0,0311	-0,0227
1.198.193.867.892	-0,0578	0,000000000000083	0,0232	0,2775	0,0096	-0,0066
2.220.108.000.000	0,4763	0,000000000000045	-0,0178	0,3249	0,1978	0,0513
7.125.800.277.000	-0,0317	0,000000000000014	0,0163	0,8502	-0,0202	-0,0633
1.180.228.072.164	-0,0398	0,000000000000085	0,0069	0,7583	-0,0209	-0,0499
2.246.770.166.899	-0,0058	0,000000000000045	0,1511	0,3719	-0,1410	-0,0686
17.321.565.000.000	-0,0732	0,000000000000006	-0,0238	0,9588	0,0089	-0,0617
2.185.464.365.772	-0,0848	0,000000000000046	0,1783	0,0101	-0,0197	-0,0015
574.073.314.000	-0,1808	0,000000000000174	-0,0477	0,3833	0,0216	-0,0007
763.168.027.178	0,0352	0,000000000000131	0,0110	0,3167	-0,0011	-0,0081
3.357.359.499.954	-0,0612	0,000000000000030	-0,0602	0,6033	0,0077	-0,0357
4.332.409.010.247	-0,5540	0,000000000000023	-0,6853	0,4461	0,0243	-0,0243
4.456.097.502.805	0,0455	0,000000000000022	0,1627	0,4980	0,0368	-0,0176
279.189.768.587	-0,0992	0,000000000000358	-0,0037	0,5502	-0,0353	-0,0122
495.390.442.927	-0,4636	0,000000000000202	0,7675	6,1799	0,0006	-0,3937
574.346.433.075	0,0210	0,000000000000174	0,0628	0,2315	0,0585	0,0233
3.236.224.076.311	0,0227	0,000000000000031	0,2448	0,3111	0,0548	0,0029
793.093.512.600	-0,0139	0,000000000000126	-0,0690	0,3299	0,0049	-0,0080
2.100.853.000.000	-0,1268	0,000000000000048	0,2437	0,6083	0,2184	0,0412
497.090.038.108	-0,0444	0,000000000000201	-0,1604	0,1302	0,0022	0,0118
1.536.244.634.556	-0,0223	0,000000000000065	0,1911	0,1918	0,0002	-0,0048
2.796.111.000.000	0,0064	0,000000000000036	0,1052	0,3760	0,1464	0,0298
9.283.775.000.000	0,0247	0,000000000000011	0,2707	0,5895	0,0159	-0,0315
2.082.096.848.703	-0,0491	0,000000000000048	-0,0512	0,4492	0,2492	0,0607
6.284.729.099.203	0,0086	0,000000000000016	0,1374	0,2875	0,0804	0,0110
1.342.700.045.391	-0,0227	0,000000000000074	-0,1071	0,2461	0,0968	0,0240
460.539.382.206	-0,0636	0,000000000000217	-0,0240	0,6694	0,0009	-0,0227
1.038.321.916.000	-0,0051	0,000000000000096	-0,7593	0,0927	0,1603	0,0542
2.553.928.346.219	-0,0563	0,000000000000039	-0,0076	0,5330	0,0008	-0,0319
1.773.144.328.632	-0,1026	0,000000000000056	0,0005	0,1819	0,0649	0,0161
721.884.167.684	-0,0804	0,000000000000139	-0,1031	0,4410	-0,0161	-0,0218
729.020.553.284	-0,0493	0,000000000000137	-0,0874	0,4162	0,0004	-0,0144



1.533.708.564.241	-0,2186	0,000000000000065	0,0294	0,2776	0,0048	-0,0102
2.615.909.190.000	-0,0503	0,000000000000038	-0,0293	0,6107	0,0065	0,1494
2.919.640.858.718	-0,0843	0,000000000000034	-0,0261	0,6828	0,0911	0,1749
2.153.030.503.531	0,1619	0,000000000000046	0,4112	0,2995	-0,0421	0,0891
5.504.890.000.000	0,0515	0,000000000000018	0,0249	0,7391	0,0416	0,1838
382.461.777.452	0,9735	0,000000000000261	0,0529	0,6851	0,0626	0,1995
1.543.216.299.146	-0,0825	0,000000000000065	0,1018	0,5402	0,0554	0,1456
982.626.956.424	0,0285	0,000000000000102	0,4195	0,2044	0,0368	0,0804
117.290.628.918	0,0435	0,000000000000853	0,1950	0,0939	-0,0304	0,1163
24.204.994.000.000	0,0347	0,000000000000004	0,4582	0,4616	0,0904	0,1386
702.508.630.708	0,0433	0,000000000000142	0,0940	0,5194	0,3855	0,1815
968.234.349.565	-0,0294	0,000000000000103	0,4816	0,8300	-0,0031	0,2286
439.465.673.296	-0,0364	0,000000000000228	-0,0653	0,2413	0,1439	0,0931
1.339.032.413.455	-0,0109	0,000000000000075	-0,1781	0,1695	0,0267	0,0437
269.351.381.344	0,0417	0,000000000000371	0,2652	0,5046	0,2982	0,2001
30.150.580.000.000	-0,0313	0,000000000000003	-0,0307	0,4968	0,1317	0,1310
19.251.026.000.000	0,0077	0,000000000000005	-1,1694	0,4510	0,1405	0,0745
1.142.273.020.550	0,0039	0,000000000000088	1,6949	0,3998	0,0308	0,1773
1.859.669.927.962	-0,0598	0,000000000000054	-0,0442	0,6591	-0,1480	0,1465
162.828.169.250	-0,0130	0,000000000000614	0,4171	0,3430	0,0332	0,1665
3.826.862.840.000	-0,0586	0,000000000000026	0,0484	0,5328	0,0710	0,1392
767.479.000.000	-0,0633	0,000000000000130	-0,0744	0,6231	0,0667	0,1662
139.809.135.385	-0,0267	0,000000000000715	0,1119	0,3229	-0,0292	0,1534
2.931.807.000.000	-0,0097	0,000000000000034	-0,0298	0,6357	0,0126	0,1556
1.425.964.152.418	-0,0733	0,000000000000070	0,0913	0,1489	0,1781	0,0645
399.336.626.636	0,0772	0,000000000000250	0,1321	0,6170	0,0498	0,1840
463.288.593.970	-0,0606	0,000000000000216	0,1442	1,0747	0,0359	0,2889
1.531.265.558.000	-0,0538	0,000000000000065	0,0712	0,2586	0,0884	0,0804
62.951.634.000.000	-0,0080	0,000000000000002	0,1096	0,3401	0,0987	0,0958
42.508.277.000.000	-0,0681	0,000000000000002	0,1082	0,1621	0,2904	0,0725
370.245.134.305	-0,1841	0,000000000000270	-0,1621	0,4626	0,0760	0,1397
28.901.948.000.000	-0,0569	0,000000000000003	0,0345	0,2810	0,1150	0,0805
709.959.168.088	-0,0863	0,000000000000141	0,0229	0,2128	0,0086	0,0674
82.174.515.000.000	-0,0179	0,000000000000001	0,0210	0,4806	0,0564	0,1215
3.284.504.424.358	-0,0363	0,000000000000030	-0,0956	0,3797	0,0640	0,0964
12.336.009.210.657	0,0352	0,000000000000008	-0,0353	0,4331	0,1417	0,1171
261.855.000.000.000	-0,0025	0,000000000000000	0,0888	0,1848	0,0669	0,0546
14.612.274.000.000	0,0040	0,000000000000007	0,0472	0,2414	0,0354	0,0639
804.742.917.000	0,0026	0,000000000000124	-0,0268	0,2721	0,0491	0,0818
387.981.312.196	-0,0152	0,000000000000258	0,0352	0,3151	0,0081	0,1044
92.041.274.561	0,0312	0,000000000001086	-0,3241	0,1194	0,1970	0,1482



1.206.089.567.283	0,0017	0,000000000000083	-0,0013	0,5076	0,0946	0,1394
25.633.342.258.679	0,1257	0,000000000000004	-0,0125	0,1810	-0,0003	0,0431
1.587.210.576.000	0,0540	0,000000000000063	0,0934	0,3576	0,0689	0,1028
350.617.691.606	-0,1110	0,000000000000285	0,0845	0,2675	0,0310	0,1003
1.871.422.416.044	0,1394	0,000000000000053	0,2339	0,5578	0,1069	0,1592
1.619.757.000.000	0,6674	0,000000000000062	0,1378	1,4632	-0,1031	0,3516
1.596.466.547.662	-0,0116	0,000000000000063	-0,0167	0,5408	-0,0199	0,1331
1.288.683.925.066	-0,1539	0,000000000000078	0,2863	0,2508	0,0097	0,0808
2.254.740.000.000	0,0520	0,000000000000044	0,1852	0,3180	0,1942	0,1077
7.723.578.677.000	-0,0254	0,000000000000013	0,0368	0,5048	0,0017	0,1237
1.165.093.632.823	-0,0588	0,000000000000086	0,0206	0,7695	-0,0239	0,1914
2.567.211.000.000	-0,1594	0,000000000000039	-0,0094	0,3567	0,0058	0,0895
19.763.133.000.000	-0,0798	0,000000000000005	-0,0089	0,8096	-0,0145	0,1922
2.158.852.415.950	-0,0183	0,000000000000046	0,0613	0,0104	0,0373	0,0136
717.149.704.000	-0,0951	0,000000000000139	0,0495	0,2953	0,0169	0,0889
815.997.477.795	-0,0143	0,000000000000123	-0,0636	0,3109	0,0339	0,0879
3.290.596.332.518	-0,0581	0,000000000000030	0,0239	0,6054	0,0101	0,1499
13.734.267.485.212	-0,1029	0,000000000000007	0,1026	0,2293	0,0425	0,0640
4.663.078.318.968	-0,0463	0,000000000000021	0,2796	0,5746	0,0399	0,1551
280.257.664.992	-0,1485	0,000000000000357	-0,0371	0,5201	-0,0360	0,1564
4.879.715.095.300	-0,0417	0,000000000000020	0,0121	0,6225	-0,0171	0,1497
639.701.164.511	-0,0503	0,000000000000156	-0,1436	0,1979	0,0463	0,0624
4.612.562.541.064	0,0708	0,000000000000022	0,0289	0,3659	0,0446	0,0954
810.364.824.722	-0,0592	0,000000000000123	0,0155	0,3235	0,0083	0,0917
2.275.038.000.000	-0,0042	0,000000000000044	0,0233	0,5996	0,3913	0,1881
483.037.173.864	-0,0241	0,000000000000207	0,0093	0,1301	-0,0112	0,0519
1.668.210.094.478	0,0585	0,000000000000060	0,1040	0,1832	0,0758	0,0619
2.987.614.000.000	-0,0358	0,000000000000033	-0,0157	0,4067	0,1522	0,1153
12.596.824.000.000	-0,0765	0,000000000000008	0,1581	0,4916	0,0443	0,1293
2.185.101.038.101	-0,0845	0,000000000000046	0,0581	0,4415	0,0686	0,1196
6.585.807.349.438	0,0020	0,000000000000015	0,0348	0,3013	0,0734	0,0824
1.353.634.132.275	-0,1138	0,000000000000074	-0,1482	0,2311	0,0867	0,0656
432.913.180.371	-0,0075	0,000000000000231	-0,0098	0,6645	0,0020	0,1827
1.197.796.650.000	-0,0521	0,000000000000083	0,0244	0,0751	0,1898	0,0467
2.477.272.502.538	-0,0834	0,000000000000040	0,1159	0,5001	0,0204	0,1306
2.449.935.491.586	0,0814	0,000000000000041	0,3502	0,6887	0,0848	0,1918
649.654.335.962	-0,0758	0,000000000000154	-0,1152	0,4513	-0,0260	0,1166
690.187.353.961	-0,1133	0,000000000000145	0,0317	0,4209	0,0008	0,1171
1.381.633.321.120	-0,1400	0,000000000000072	-0,0009	0,3527	-0,0114	0,0907
2.745.325.833.000	0,0329	0,000000000000036	0,1083	0,6120	0,0045	-0,0079
4.559.573.709.411	-0,0350	0,000000000000022	0,0473	0,4874	0,0405	-0,0074



2.376.281.796.928	0,1652	0,000000000000042	0,4310	0,2711	-0,0089	0,0160
6.267.816.000.000	-0,0249	0,000000000000016	0,0855	0,9478	-0,0019	-0,0181
398.698.779.619	-0,0218	0,000000000000251	0,1183	0,7353	0,7616	0,0207
1.601.346.561.573	-0,1236	0,000000000000062	0,1673	0,4968	0,0715	0,0008
946.448.936.464	-0,0902	0,000000000000106	0,0383	0,2073	-0,0272	0,0004
183.501.650.442	0,0161	0,000000000000545	0,1946	0,0547	0,0511	0,0321
24.532.331.000.000	-0,0178	0,000000000000004	0,1715	0,4803	0,0891	-0,0004
796.767.646.172	0,0165	0,000000000000126	0,1047	0,4663	0,0961	0,0018
1.286.954.720.465	-0,0623	0,000000000000078	0,2542	0,7216	0,0021	-0,0018
513.022.591.574	0,0854	0,000000000000195	0,0012	0,2610	0,1264	0,0055
1.213.916.545.120	-0,0716	0,000000000000082	0,0502	0,1874	0,0263	0,0021
303.788.390.330	0,1336	0,000000000000329	0,2952	0,5758	0,0606	0,0158
28.863.676.000.000	-0,0257	0,000000000000003	0,0057	0,5071	0,0661	-0,0099
19.959.548.000.000	0,0297	0,000000000000005	0,2129	0,4183	0,0399	0,0017
1.328.291.727.616	-0,0142	0,000000000000075	0,1019	0,4030	0,0473	-0,0003
1.767.603.505.697	-0,0518	0,000000000000057	0,0165	0,6399	-0,0547	-0,0139
161.163.426.840	0,0127	0,000000000000620	0,0902	0,3323	0,0829	0,0244
4.072.245.477.000	-0,0179	0,000000000000025	0,3622	0,5139	0,0096	0,0066
840.236.000.000	-0,1044	0,000000000000119	-0,0002	0,5323	0,0438	-0,0067
149.420.009.884	0,0175	0,000000000000669	-0,1801	0,2881	0,0162	0,0123
2.939.456.000.000	0,0081	0,000000000000034	-0,0117	0,6367	0,0121	-0,0142
1.392.636.444.501	-0,1342	0,000000000000072	-0,4501	0,1436	0,0893	-0,0199
476.577.841.605	0,0143	0,000000000000210	-0,0158	0,5393	0,1303	-0,0013
660.917.775.322	-0,1034	0,000000000000151	0,2803	0,9344	0,0604	-0,0009
1.640.886.147.000	0,1077	0,000000000000061	0,0261	0,2406	0,0881	0,0006
66.759.930.000.000	-0,0488	0,000000000000001	0,1935	0,3409	0,1115	0,0045
43.141.063.000.000	-0,1522	0,000000000000002	0,1843	0,1689	0,2679	0,0129
576.963.542.579	0,1476	0,000000000000173	0,3727	0,4593	0,0620	0,0161
31.619.514.000.000	0,0175	0,000000000000003	0,0943	0,3397	0,1027	-0,0005
780.669.761.787	-0,1353	0,000000000000128	-0,0731	0,1721	-0,0435	-0,0037
88.400.877.000.000	0,0047	0,000000000000001	0,0452	0,4908	0,0522	-0,0081
3.237.595.219.274	0,0229	0,000000000000031	0,0938	0,4397	0,0577	-0,0031
16.616.239.416.335	-0,0131	0,000000000000006	0,0307	0,3763	0,1346	-0,0034
295.830.000.000.000	0,0039	0,000000000000000	0,0856	0,1952	0,0657	0,0014
14.762.309.000.000	0,0047	0,000000000000007	0,1239	0,2370	0,0304	0,0015
855.691.231.000	0,0416	0,000000000000117	0,0290	0,2805	0,0568	0,0011
465.965.155.745	-0,0546	0,000000000000215	0,2388	0,3471	0,0231	0,0128
89.327.328.853	0,0325	0,000000000000119	-0,0693	0,1327	0,1277	0,0433
1.188.798.795.362	0,0286	0,000000000000084	0,0995	0,5223	0,0768	-0,0020
31.440.443.615.533	0,0999	0,000000000000003	0,0114	0,2252	0,0640	-0,0029
1.927.985.352.000	0,0452	0,000000000000052	0,5101	0,3054	0,0824	0,0221



432.298.300.093	-0,0143	0,000000000000231	0,0436	0,2199	0,0394	0,0075
3.013.760.616.985	0,0620	0,000000000000033	0,1848	0,3163	0,1007	0,0057
3.458.737.000.000	-0,0629	0,000000000000029	0,2276	0,7651	0,3294	0,0035
1.542.243.721.302	-0,0065	0,000000000000065	0,1034	0,6260	-0,0101	-0,0077
1.371.570.948.138	-0,1118	0,000000000000073	0,3686	0,2291	0,0094	0,0158
2.443.341.000.000	0,0445	0,000000000000041	0,1675	0,3122	0,2011	0,0082
5.186.685.608.000	-0,0194	0,000000000000019	-0,1320	0,7878	0,0090	-0,0244
1.109.383.971.111	-0,0367	0,000000000000090	0,0197	0,8038	-0,0566	-0,0164
2.239.699.000.000	-0,0404	0,000000000000045	0,2619	0,3926	-0,1622	0,0004
19.626.403.000.000	-0,0628	0,000000000000005	0,0693	0,7882	-0,0406	-0,0167
2.175.660.855.114	-0,0653	0,000000000000046	0,1267	0,6284	0,0404	-0,0059
652.726.454.000	0,0113	0,000000000000153	0,0749	0,3436	0,0258	0,0024
856.299.056.455	-0,0574	0,000000000000117	0,2735	0,3013	0,0036	0,0110
3.332.905.936.010	-0,0166	0,000000000000030	0,0697	0,7608	0,0089	-0,0135
14.919.548.673.755	-0,0479	0,000000000000007	0,2166	0,3168	0,0657	0,0051
7.067.976.095.043	-0,0349	0,000000000000014	0,2251	0,4171	0,0383	0,0026
303.542.864.533	-0,1312	0,000000000000329	0,2841	0,4389	-0,0438	0,0156
5.306.055.112.389	-0,1907	0,000000000000019	0,0721	0,3130	-0,0083	-0,0035
544.968.319.987	-0,0428	0,000000000000183	0,9160	0,5486	0,0105	0,0394
6.096.148.972.533	0,0596	0,000000000000016	0,3254	0,5438	0,0293	0,0043
834.548.374.286	-0,0904	0,000000000000120	0,1267	0,3122	-0,0396	0,0024
2.510.078.000.000	-0,0748	0,000000000000040	-0,0118	0,6072	0,4575	-0,0002
497.354.419.089	-0,0161	0,000000000000201	-0,0371	0,1201	-0,0025	0,0035
2.110.166.496.595	0,0179	0,000000000000047	0,1455	0,2051	0,0669	0,0061
3.158.198.000.000	-0,0578	0,000000000000032	0,0484	0,4919	0,1599	-0,0035
14.024.486.000.000	0,0606	0,000000000000007	-0,0488	0,4584	0,0584	-0,0115
2.361.807.189.430	-0,0086	0,000000000000042	-0,0058	0,4229	0,0733	-0,0066
7.434.900.309.021	0,0203	0,000000000000013	-0,4383	0,3055	0,0708	-0,0262
1.225.712.093.041	-0,0733	0,000000000000082	-0,0596	0,2611	0,0323	-0,0049
426.384.622.878	-0,0114	0,000000000000235	-0,0022	0,6285	0,0025	-0,0056
1.340.842.765.000	-0,0033	0,000000000000075	0,0659	0,0673	0,1836	0,0101
2.434.617.337.849	-0,0095	0,000000000000041	0,1473	0,5012	0,0458	-0,0019
4.014.244.589.706	0,0300	0,000000000000025	0,1548	0,4193	0,0648	0,0004
605.643.301.307	-0,0227	0,000000000000165	0,1461	0,4410	-0,0422	0,0020
614.705.038.056	-0,0497	0,000000000000163	0,0494	0,4559	0,0010	-0,0019
1.529.874.782.290	-0,0674	0,000000000000065	-0,0954	0,3247	-0,0321	-0,0108
3.070.410.492.000	-0,0733	0,000000000000033	-0,0220	0,5081	0,0349	0,1442
4.393.810.380.883	-0,0587	0,000000000000023	0,1114	0,5782	0,0444	0,1710
2.781.666.374.017	-0,0256	0,000000000000036	-1,4655	0,2008	-0,0131	-0,0794
8.432.632.000.000	-0,0260	0,000000000000012	-0,0066	0,7103	0,0219	0,1757
503.177.499.114	-0,0198	0,000000000000199	0,0220	0,5741	-0,0083	0,2380



1.652.905.985.730	-0,1020	0,000000000000060	0,0991	0,4838	0,0961	0,1878
901.181.796.270	0,0857	0,00000000000111	-0,1851	0,2122	-0,1141	0,0493
217.362.960.011	-0,1102	0,00000000000460	0,0060	0,0407	0,1237	0,3052
27.645.118.000.000	0,0078	0,00000000000004	0,1642	0,4925	0,1567	0,1872
853.267.454.400	0,0402	0,00000000000117	0,0238	0,5470	0,0768	0,2188
1.351.861.756.994	-0,0288	0,00000000000074	0,1907	0,7864	-0,0494	0,2196
570.197.810.698	-0,0873	0,00000000000175	-0,0033	0,2583	0,0742	0,1810
1.400.683.598.096	-0,0227	0,00000000000071	0,1690	0,1587	0,0375	0,1048
391.362.697.956	0,0212	0,00000000000256	-0,0344	0,4532	0,1299	0,2864
27.788.562.000.000	-0,0593	0,00000000000004	0,0269	0,5067	0,0448	0,1364
23.038.028.000.000	-0,0011	0,00000000000004	0,1065	0,4578	0,0966	0,1522
1.391.416.464.512	-0,1473	0,00000000000072	-0,0616	0,4228	0,0555	0,1499
1.704.424.579.208	-0,3136	0,00000000000059	0,0187	0,4645	-0,0584	0,1182
160.027.280.153	-0,1511	0,00000000000625	-0,4103	0,3228	0,0274	0,3842
4.335.844.455.000	-0,0313	0,00000000000023	0,1376	0,5268	0,0634	0,1690
881.275.000.000	-0,1114	0,00000000000113	0,0293	0,4601	0,0716	0,1956
154.088.747.766	0,0055	0,00000000000649	0,0507	0,2612	0,0206	0,4247
3.392.980.000.000	-0,0559	0,00000000000029	0,1250	0,5332	0,0166	0,1556
1.168.956.042.706	-0,2045	0,00000000000086	-0,4842	0,1671	0,0721	0,0647
491.382.035.136	0,0094	0,00000000000204	0,0688	0,5137	0,0318	0,2459
833.933.861.594	-0,0831	0,00000000000120	0,2686	1,1866	0,0510	0,3800
1.682.821.739.000	-0,0317	0,00000000000059	0,0717	0,2335	0,1111	0,1330
69.097.219.000.000	-0,0054	0,00000000000001	0,2144	0,3672	0,1013	0,1420
46.602.420.000.000	-0,0690	0,00000000000002	-0,0122	0,1566	0,2678	0,1336
758.846.556.031	-0,0026	0,00000000000132	0,3053	0,4717	0,1091	0,2482
34.367.153.000.000	-0,0484	0,00000000000003	0,1052	0,3300	0,1345	0,1361
648.016.880.325	-0,1159	0,00000000000154	0,1267	0,2029	-0,1899	0,0728
96.537.796.000.000	-0,0700	0,00000000000001	0,0379	0,4462	0,0660	0,1300
3.592.164.205.408	0,1438	0,00000000000028	0,2558	0,6012	0,0258	0,1860
18.146.206.145.369	0,0006	0,00000000000006	0,0685	0,4225	0,1260	0,1519
344.711.000.000.000	0,0119	0,00000000000000	-0,0057	0,1808	0,0819	0,0708
15.889.648.000.000	-0,0215	0,00000000000006	0,0076	0,2211	0,0467	0,0716
876.856.225.000	-0,0238	0,00000000000114	-0,0721	0,2792	0,0881	0,1510
584.733.176.234	-0,0031	0,00000000000171	-0,1608	0,3036	0,0409	0,1618
98.190.640.839	1,4125	0,000000000001018	-0,1491	1,5832	0,0154	0,9059
1.312.376.999.120	-0,0326	0,00000000000076	0,0144	0,4561	0,0730	0,1735
41.044.311.290.764	-0,0166	0,00000000000002	0,0077	0,2746	0,0201	0,0720
2.102.146.140.000	-0,0398	0,00000000000048	-0,1448	0,2707	0,0500	0,0920
567.956.245.715	-0,1177	0,00000000000176	-0,1811	0,1669	0,0442	0,1326
3.244.821.647.076	0,1074	0,00000000000031	-0,0730	0,2706	0,0777	0,0999
3.747.570.000.000	-0,1110	0,00000000000027	-0,1408	0,7070	-0,0383	0,1482



1.635.543.021.515	-0,0251	0,000000000000061	-0,1233	0,6489	0,0044	0,1710
1.539.602.054.832	-0,0965	0,000000000000065	0,0521	0,1897	0,0103	0,0873
2.801.203.000.000	-0,0213	0,000000000000036	-0,0267	0,2781	0,2096	0,1569
5.263.726.099.000	0,0025	0,000000000000019	-0,3257	0,8286	0,0220	0,1761
1.109.843.522.344	-0,0369	0,000000000000090	0,0551	0,8055	-0,0299	0,2269
2.187.879.000.000	-0,0657	0,000000000000046	0,5866	0,3914	0,0105	0,1739
18.667.187.000.000	0,0239	0,000000000000005	0,0107	0,8285	-0,0423	0,1773
2.282.845.632.924	0,0079	0,000000000000044	0,0440	0,6303	0,0347	0,1844
686.777.211.000	0,0465	0,000000000000146	0,0765	0,3332	0,0497	0,1806
275.031.024.800	-0,2168	0,000000000000364	-1,4306	0,9498	-0,1396	0,2265
4.284.901.587.126	-0,0172	0,000000000000023	-0,0193	0,6349	0,0145	0,1609
15.222.388.589.914	0,0512	0,000000000000007	0,0768	0,3772	0,0683	0,1219
8.881.778.299.672	-0,0693	0,000000000000011	0,0061	0,3391	0,0471	0,1012
330.955.269.476	-0,1645	0,000000000000302	-0,0223	0,3664	-0,0325	0,2338
5.165.236.468.705	-0,0345	0,000000000000019	-0,0576	0,3287	0,0153	0,0855
1.157.884.379.902	0,0112	0,000000000000086	0,0951	0,2678	0,0391	0,1314
11.329.090.864.000	-0,1622	0,000000000000009	0,0120	0,8191	0,0292	0,2033
786.704.752.983	-0,0760	0,000000000000127	0,1756	0,3273	-0,0629	0,1375
2.889.501.000.000	-0,0445	0,000000000000035	-0,0501	0,5396	0,4228	0,2917
511.887.783.867	-0,0125	0,000000000000195	-0,0421	0,1072	-0,0042	0,1251
2.485.382.578.010	0,0156	0,000000000000040	-0,0377	0,2274	0,0348	0,0829
3.337.628.000.000	-0,0088	0,000000000000030	0,0716	0,4773	0,1877	0,2006
16.339.916.000.000	-0,0284	0,000000000000006	0,0122	0,3973	0,0440	0,1112
2.445.143.511.801	0,0076	0,000000000000041	0,0205	0,3837	0,0678	0,1365
7.869.975.060.326	-0,0374	0,000000000000013	0,0595	0,3012	0,0666	0,1056
1.255.573.914.558	-0,1369	0,000000000000080	-0,0092	0,2621	0,0394	0,1166
419.701.649.147	-0,0107	0,000000000000238	0,0000	0,5915	0,0012	0,2648
1.523.517.170.000	0,0285	0,000000000000066	-0,0644	0,0559	0,2371	0,1290
2.482.337.567.967	-0,0218	0,000000000000040	-0,0666	0,6863	0,0391	0,1863
4.165.196.478.857	0,0421	0,000000000000024	0,1418	0,3994	0,0577	0,1387
562.174.180.897	-0,0886	0,000000000000178	-0,1514	0,4452	0,0022	0,1845
615.956.006.710	-0,1195	0,000000000000162	-0,2555	1,1242	0,0003	0,3202
1.442.350.608.575	-0,0089	0,000000000000069	-0,1525	0,3252	-0,0237	0,0886



APPENDIX 4

DISCRETIONARY ACCRUALS

Year	Code	TACCit/ TAit-1	NDACCit	DACCit
2015	ALKA	0,0135	-0,0854	0,0989
2015	ROTI	-0,1330	-0,0913	-0,0417
2015	ALMI	0,5272	-0,0245	0,5517
2015	AMFG	-0,0065	-0,0436	0,0371
2015	APLI	-0,0856	-0,0958	0,0101
2015	ARNA	-0,0299	-0,0635	0,0335
2015	BAJA	0,0188	-0,1655	0,1842
2015	BTON	0,0247	-0,0183	0,0430
2015	CPIN	0,0069	-0,0557	0,0626
2015	EKAD	-0,1713	-0,0241	-0,1472
2015	GDST	-0,0696	-0,0591	-0,0105
2015	IGAR	-0,0778	-0,0159	-0,0618
2015	INAI	0,0919	-0,0328	0,1247
2015	INCI	-0,0552	-0,0493	-0,0059
2015	INTP	-0,0274	-0,0377	0,0104
2015	JPFA	-0,0335	-0,0469	0,0135
2015	KDSI	-0,0364	-0,0468	0,0104
2015	KIAS	-0,0988	-0,0666	-0,0322
2015	LMSH	-0,0716	-0,0407	-0,0310
2015	MAIN	-0,0111	-0,0607	0,0496
2015	ADES	0,0202	-0,0655	0,0858
2015	KICI	0,1596	-0,0590	0,2187
2015	BUDI	0,0200	-0,0765	0,0965
2015	CEKA	-0,0516	-0,0179	-0,0337
2015	CINT	0,0345	-0,0493	0,0838
2015	SMGR	0,0316	-0,0624	0,0940
2015	DVLA	-0,0886	-0,0218	-0,0668
2015	GGRM	0,0559	-0,0328	0,0888
2015	HMSP	0,3363	-0,0062	0,3425
2015	TOTO	0,0800	-0,0218	0,1019
2015	ICBP	-0,0184	-0,0334	0,0150
2015	MBTO	-0,0156	-0,0296	0,0140
2015	INDF	0,0076	-0,0284	0,0360
2015	KINO	0,1316	-0,0555	0,1871
2015	KLBF	-0,0300	-0,0240	-0,0060
2015	ASII	-0,0417	-0,0123	-0,0293



2015	AUTO	-0,0408	-0,0880	0,0471
2015	BATA	0,1410	-0,0318	0,1728
2015	ULTJ	-0,0080	0,0272	-0,0352
2015	IMPC	0,3429	0,1895	0,1535
2015	BOLT	0,0558	-0,0277	0,0834
2015	IMAS	0,0334	-0,0212	0,0546
2015	JECC	0,1775	-0,0442	0,2217
2015	UNVR	-0,0220	-0,0167	-0,0054
2015	KBLI	0,0527	-0,0453	0,0980
2015	HDTX	-0,1126	-0,0671	-0,0455
2015	PRAS	0,0342	-0,0710	0,1053
2015	RICY	-0,1039	-0,0322	-0,0717
2015	SMSM	-0,0512	-0,0370	-0,0142
2015	MLIA	0,0294	-0,0853	0,1148
2015	ALTO	-0,0289	-0,0551	0,0262
2015	SIPD	-0,0559	-0,0339	-0,0220
2015	SMCB	-0,0209	-0,0958	0,0749
2015	SPMA	0,0207	-0,0767	0,0974
2015	SRSN	-0,1317	-0,0347	-0,0970
2015	TIRT	0,0214	-0,0328	0,0541
2015	TRST	-0,0336	-0,0710	0,0374
2015	JSKW	-0,2925	-0,1100	-0,1825
2015	WTON	-0,0754	-0,0444	-0,0310
2015	YPAS	0,0742	-0,0644	0,1385
2015	BTEK	-0,0133	-0,0651	0,0518
2015	TRIS	-0,0455	-0,0035	-0,0420
2015	KAEF	0,0256	-0,0206	0,0462
2015	LMPI	-0,0155	-0,0385	0,0231
2015	MLBI	-0,1893	-0,0344	-0,1548
2015	MRAT	-0,0144	-0,0190	0,0046
2015	VOKS	-0,0101	-0,0244	0,0142
2015	SIDO	0,0016	-0,0272	0,0288
2015	TBLA	-0,0249	-0,0606	0,0357
2015	TCID	0,2273	-0,0512	0,2785
2015	TSPC	-0,0444	0,0382	-0,0826
2015	WIIM	0,0511	-0,0241	0,0752
2015	UNIT	-0,0553	-0,0885	0,0332
2015	DLTA	-0,0547	0,0119	-0,0666
2015	INDS	-0,0476	-0,0671	0,0195
2015	SCCO	-0,0235	-0,0166	-0,0069
2015	SSTM	0,0243	-0,0539	0,0783

2015	STAR	-0,0423	-0,0476	0,0054
2015	INAF	-0,1022	-0,0389	-0,0633
2016	ALKA	-0,1272	-0,0243	-0,1028
2016	ROTI	-0,0499	-0,0118	-0,0380
2016	ALMI	-0,0232	-0,0151	-0,0081
2016	AMFG	-0,0170	-0,0320	0,0150
2016	APLI	-0,0802	-0,0145	-0,0657
2016	ARNA	-0,0043	-0,0087	0,0044
2016	BAJA	0,0007	-0,0108	0,0115
2016	BTON	-0,0401	0,0637	-0,1038
2016	CPIN	-0,0791	0,0026	-0,0817
2016	EKAD	0,2794	-0,0018	0,2813
2016	GDST	0,0703	-0,0551	0,1254
2016	IGAR	0,0264	0,0585	-0,0321
2016	INAI	0,0112	0,0280	-0,0168
2016	INCI	0,4854	0,0334	0,4520
2016	INTP	0,0092	0,0127	-0,0035
2016	JPFA	0,0030	-0,0115	0,0145
2016	KDSI	-0,0380	-0,0213	-0,0167
2016	KIAS	-0,1350	-0,0712	-0,0638
2016	LMSH	-0,0113	0,0476	-0,0590
2016	MAIN	0,0094	-0,0361	0,0455
2016	ADES	-0,0967	-0,0045	-0,0921
2016	KICI	-0,0319	0,1153	-0,1472
2016	BUDI	-0,0768	-0,0150	-0,0618
2016	CEKA	0,0484	0,0250	0,0235
2016	CINT	-0,0487	0,0265	-0,0752
2016	SMGR	-0,0418	0,0258	-0,0676
2016	DVLA	-0,0308	0,0116	-0,0424
2016	GGRM	-0,0055	0,0145	-0,0200
2016	HMSP	-0,0407	0,0737	-0,1144
2016	TOTO	0,0572	0,0408	0,0164
2016	ICBP	-0,0358	0,0193	-0,0550
2016	MBTO	0,0028	-0,0037	0,0065
2016	INDF	-0,0239	0,0019	-0,0257
2016	KINO	0,0608	0,0109	0,0499
2016	KLBF	0,0142	0,0380	-0,0238
2016	ASII	0,0016	0,0097	-0,0080
2016	AUTO	-0,0375	-0,0608	0,0233
2016	BATA	0,0287	0,0487	-0,0200
2016	ULTJ	-0,0224	0,0191	-0,0416

2016	IMPC	0,0050	0,0846	-0,0796
2016	BOLT	-0,0377	0,0137	-0,0514
2016	IMAS	0,0044	-0,0120	0,0165
2016	JECC	-0,0379	0,0349	-0,0729
2016	UNVR	-0,0089	0,0401	-0,0489
2016	KBLI	-0,0394	0,0032	-0,0426
2016	HDTX	-0,1697	-0,0942	-0,0755
2016	PRAS	-0,0177	-0,0227	0,0050
2016	RICY	-0,0578	-0,0066	-0,0511
2016	SMSM	0,4763	0,0513	0,4250
2016	MLIA	-0,0317	-0,0633	0,0316
2016	ALTO	-0,0398	-0,0499	0,0101
2016	SIPD	-0,0058	-0,0686	0,0628
2016	SMCB	-0,0732	-0,0617	-0,0115
2016	SPMA	-0,0848	-0,0015	-0,0833
2016	SRSN	-0,1808	-0,0007	-0,1801
2016	TIRT	0,0352	-0,0081	0,0433
2016	TRST	-0,0612	-0,0357	-0,0255
2016	JSKW	-0,5540	-0,0243	-0,5297
2016	WTON	0,0455	-0,0176	0,0631
2016	YPAS	-0,0992	-0,0122	-0,0870
2016	BTEK	-0,4636	-0,3937	-0,0699
2016	TRIS	0,0210	0,0233	-0,0023
2016	KAEF	0,0227	0,0029	0,0199
2016	LMPI	-0,0139	-0,0080	-0,0059
2016	MLBI	-0,1268	0,0412	-0,1680
2016	MRAT	-0,0444	0,0118	-0,0563
2016	VOKS	-0,0223	-0,0048	-0,0174
2016	SIDO	0,0064	0,0298	-0,0234
2016	TBLA	0,0247	-0,0315	0,0562
2016	TCID	-0,0491	0,0607	-0,1098
2016	TSPC	0,0086	0,0110	-0,0024
2016	WIIM	-0,0227	0,0240	-0,0466
2016	UNIT	-0,0636	-0,0227	-0,0410
2016	DLTA	-0,0051	0,0542	-0,0593
2016	INDS	-0,0563	-0,0319	-0,0244
2016	SCCO	-0,1026	0,0161	-0,1187
2016	SSTM	-0,0804	-0,0218	-0,0586
2016	STAR	-0,0493	-0,0144	-0,0349
2016	INAF	-0,2186	-0,0102	-0,2084
2017	ALKA	-0,0503	0,1494	-0,1998

2017	ROTI	-0,0843	0,1749	-0,2592
2017	ALMI	0,1619	0,0891	0,0728
2017	AMFG	0,0515	0,1838	-0,1323
2017	APLI	0,9735	0,1995	0,7740
2017	ARNA	-0,0825	0,1456	-0,2282
2017	BAJA	0,0285	0,0804	-0,0519
2017	BTON	0,0435	0,1163	-0,0728
2017	CPIN	0,0347	0,1386	-0,1040
2017	EKAD	0,0433	0,1815	-0,1382
2017	GDST	-0,0294	0,2286	-0,2581
2017	IGAR	-0,0364	0,0931	-0,1296
2017	INAI	-0,0109	0,0437	-0,0545
2017	INCI	0,0417	0,2001	-0,1584
2017	INTP	-0,0313	0,1310	-0,1624
2017	JPFA	0,0077	0,0745	-0,0667
2017	KDSI	0,0039	0,1773	-0,1734
2017	KIAS	-0,0598	0,1465	-0,2063
2017	LMSH	-0,0130	0,1665	-0,1795
2017	MAIN	-0,0586	0,1392	-0,1978
2017	ADES	-0,0633	0,1662	-0,2295
2017	KICI	-0,0267	0,1534	-0,1801
2017	BUDI	-0,0097	0,1556	-0,1652
2017	CEKA	-0,0733	0,0645	-0,1378
2017	CINT	0,0772	0,1840	-0,1068
2017	SMGR	-0,0606	0,2889	-0,3496
2017	DVLA	-0,0538	0,0804	-0,1342
2017	GGRM	-0,0080	0,0958	-0,1038
2017	HMSP	-0,0681	0,0725	-0,1406
2017	TOTO	-0,1841	0,1397	-0,3237
2017	ICBP	-0,0569	0,0805	-0,1373
2017	MBTO	-0,0863	0,0674	-0,1536
2017	INDF	-0,0179	0,1215	-0,1394
2017	KINO	-0,0363	0,0964	-0,1327
2017	KLBF	0,0352	0,1171	-0,0819
2017	ASII	-0,0025	0,0546	-0,0571
2017	AUTO	0,0040	0,0639	-0,0599
2017	BATA	0,0026	0,0818	-0,0792
2017	ULTJ	-0,0152	0,1044	-0,1197
2017	IMPC	0,0312	0,1482	-0,1171
2017	BOLT	0,0017	0,1394	-0,1377
2017	IMAS	0,1257	0,0431	0,0825



2017	JECC	0,0540	0,1028	-0,0488
2017	UNVR	-0,1110	0,1003	-0,2113
2017	KBLI	0,1394	0,1592	-0,0198
2017	HDTX	0,6674	0,3516	0,3158
2017	PRAS	-0,0116	0,1331	-0,1448
2017	RICY	-0,1539	0,0808	-0,2347
2017	SMSM	0,0520	0,1077	-0,0557
2017	MLIA	-0,0254	0,1237	-0,1491
2017	ALTO	-0,0588	0,1914	-0,2501
2017	SIPD	-0,1594	0,0895	-0,2490
2017	SMCB	-0,0798	0,1922	-0,2720
2017	SPMA	-0,0183	0,0136	-0,0319
2017	SRSN	-0,0951	0,0889	-0,1839
2017	TIRT	-0,0143	0,0879	-0,1022
2017	TRST	-0,0581	0,1499	-0,2080
2017	JSKW	-0,1029	0,0640	-0,1670
2017	WTON	-0,0463	0,1551	-0,2013
2017	YPAS	-0,1485	0,1564	-0,3049
2017	BTEK	-0,0417	0,1497	-0,1914
2017	TRIS	-0,0503	0,0624	-0,1127
2017	KAEF	0,0708	0,0954	-0,0246
2017	LMPI	-0,0592	0,0917	-0,1508
2017	MLBI	-0,0042	0,1881	-0,1923
2017	MRAT	-0,0241	0,0519	-0,0760
2017	VOKS	0,0585	0,0619	-0,0035
2017	SIDO	-0,0358	0,1153	-0,1511
2017	TBLA	-0,0765	0,1293	-0,2058
2017	TCID	-0,0845	0,1196	-0,2040
2017	TSPC	0,0020	0,0824	-0,0804
2017	WIIM	-0,1138	0,0656	-0,1793
2017	UNIT	-0,0075	0,1827	-0,1902
2017	DLTA	-0,0521	0,0467	-0,0988
2017	INDS	-0,0834	0,1306	-0,2140
2017	SCCO	0,0814	0,1918	-0,1104
2017	SSTM	-0,0758	0,1166	-0,1924
2017	STAR	-0,1133	0,1171	-0,2304
2017	INAF	-0,1400	0,0907	-0,2307
2018	ALKA	0,0329	-0,0079	0,0408
2018	ROTI	-0,0350	-0,0074	-0,0276
2018	ALMI	0,1652	0,0160	0,1492
2018	AMFG	-0,0249	-0,0181	-0,0068



2018	APLI	-0,0218	0,0207	-0,0425
2018	ARNA	-0,1236	0,0008	-0,1244
2018	BAJA	-0,0902	0,0004	-0,0906
2018	BTON	0,0161	0,0321	-0,0160
2018	CPIN	-0,0178	-0,0004	-0,0174
2018	EKAD	0,0165	0,0018	0,0146
2018	GDST	-0,0623	-0,0018	-0,0606
2018	IGAR	0,0854	0,0055	0,0799
2018	INAI	-0,0716	0,0021	-0,0736
2018	INCI	0,1336	0,0158	0,1177
2018	INTP	-0,0257	-0,0099	-0,0158
2018	JPFA	0,0297	0,0017	0,0280
2018	KDSI	-0,0142	-0,0003	-0,0140
2018	KIAS	-0,0518	-0,0139	-0,0379
2018	LMSH	0,0127	0,0244	-0,0117
2018	MAIN	-0,0179	0,0066	-0,0245
2018	ADES	-0,1044	-0,0067	-0,0977
2018	KICI	0,0175	0,0123	0,0053
2018	BUDI	0,0081	-0,0142	0,0223
2018	CEKA	-0,1342	-0,0199	-0,1143
2018	CINT	0,0143	-0,0013	0,0157
2018	SMGR	-0,1034	-0,0009	-0,1025
2018	DVLA	0,1077	0,0006	0,1071
2018	GGRM	-0,0488	0,0045	-0,0533
2018	HMSP	-0,1522	0,0129	-0,1650
2018	TOTO	0,1476	0,0161	0,1315
2018	ICBP	0,0175	-0,0005	0,0180
2018	MBTO	-0,1353	-0,0037	-0,1316
2018	INDF	0,0047	-0,0081	0,0128
2018	KINO	0,0229	-0,0031	0,0260
2018	KLBF	-0,0131	-0,0034	-0,0097
2018	ASII	0,0039	0,0014	0,0025
2018	AUTO	0,0047	0,0015	0,0032
2018	BATA	0,0416	0,0011	0,0405
2018	ULTJ	-0,0546	0,0128	-0,0674
2018	IMPC	0,0325	0,0433	-0,0107
2018	BOLT	0,0286	-0,0020	0,0306
2018	IMAS	0,0999	-0,0029	0,1028
2018	JECC	0,0452	0,0221	0,0230
2018	UNVR	-0,0143	0,0075	-0,0218
2018	KBLI	0,0620	0,0057	0,0563

2018	HDTX	-0,0629	0,0035	-0,0664
2018	PRAS	-0,0065	-0,0077	0,0012
2018	RICY	-0,1118	0,0158	-0,1275
2018	SMSM	0,0445	0,0082	0,0362
2018	MLIA	-0,0194	-0,0244	0,0050
2018	ALTO	-0,0367	-0,0164	-0,0203
2018	SIPD	-0,0404	0,0004	-0,0408
2018	SMCB	-0,0628	-0,0167	-0,0461
2018	SPMA	-0,0653	-0,0059	-0,0594
2018	SRSN	0,0113	0,0024	0,0088
2018	TIRT	-0,0574	0,0110	-0,0684
2018	TRST	-0,0166	-0,0135	-0,0031
2018	JSKW	-0,0479	0,0051	-0,0530
2018	WTON	-0,0349	0,0026	-0,0375
2018	YPAS	-0,1312	0,0156	-0,1468
2018	BTEK	-0,1907	-0,0035	-0,1872
2018	TRIS	-0,0428	0,0394	-0,0822
2018	KAEF	0,0596	0,0043	0,0553
2018	LMPI	-0,0904	0,0024	-0,0928
2018	MLBI	-0,0748	-0,0002	-0,0746
2018	MRAT	-0,0161	0,0035	-0,0196
2018	VOKS	0,0179	0,0061	0,0118
2018	SIDO	-0,0578	-0,0035	-0,0543
2018	TBLA	0,0606	-0,0115	0,0720
2018	TCID	-0,0086	-0,0066	-0,0020
2018	TSPC	0,0203	-0,0262	0,0465
2018	WIIM	-0,0733	-0,0049	-0,0684
2018	UNIT	-0,0114	-0,0056	-0,0058
2018	DLTA	-0,0033	0,0101	-0,0133
2018	INDS	-0,0095	-0,0019	-0,0076
2018	SCCO	0,0300	0,0004	0,0297
2018	SSTM	-0,0227	0,0020	-0,0248
2018	STAR	-0,0497	-0,0019	-0,0478
2018	INAF	-0,0674	-0,0108	-0,0566
2019	ALKA	-0,0733	0,1442	-0,2175
2019	ROTI	-0,0587	0,1710	-0,2297
2019	ALMI	-0,0256	-0,0794	0,0538
2019	AMFG	-0,0260	0,1757	-0,2017
2019	APLI	-0,0198	0,2380	-0,2578
2019	ARNA	-0,1020	0,1878	-0,2898
2019	BAJA	0,0857	0,0493	0,0365

2019	BTON	-0,1102	0,3052	-0,4154
2019	CPIN	0,0078	0,1872	-0,1794
2019	EKAD	0,0402	0,2188	-0,1785
2019	GDST	-0,0288	0,2196	-0,2484
2019	IGAR	-0,0873	0,1810	-0,2683
2019	INAI	-0,0227	0,1048	-0,1275
2019	INCI	0,0212	0,2864	-0,2652
2019	INTP	-0,0593	0,1364	-0,1957
2019	JPFA	-0,0011	0,1522	-0,1533
2019	KDSI	-0,1473	0,1499	-0,2972
2019	KIAS	-0,3136	0,1182	-0,4318
2019	LMSH	-0,1511	0,3842	-0,5353
2019	MAIN	-0,0313	0,1690	-0,2002
2019	ADES	-0,1114	0,1956	-0,3069
2019	KICI	0,0055	0,4247	-0,4192
2019	BUDI	-0,0559	0,1556	-0,2115
2019	CEKA	-0,2045	0,0647	-0,2692
2019	CINT	0,0094	0,2459	-0,2365
2019	SMGR	-0,0831	0,3800	-0,4630
2019	DVLA	-0,0317	0,1330	-0,1647
2019	GGRM	-0,0054	0,1420	-0,1474
2019	HMSP	-0,0690	0,1336	-0,2026
2019	TOTO	-0,0026	0,2482	-0,2508
2019	ICBP	-0,0484	0,1361	-0,1844
2019	MBTO	-0,1159	0,0728	-0,1887
2019	INDF	-0,0700	0,1300	-0,2000
2019	KINO	0,1438	0,1860	-0,0422
2019	KLBF	0,0006	0,1519	-0,1513
2019	ASII	0,0119	0,0708	-0,0589
2019	AUTO	-0,0215	0,0716	-0,0931
2019	BATA	-0,0238	0,1510	-0,1748
2019	ULTJ	-0,0031	0,1618	-0,1648
2019	IMPC	1,4125	0,9059	0,5066
2019	BOLT	-0,0326	0,1735	-0,2060
2019	IMAS	-0,0166	0,0720	-0,0886
2019	JECC	-0,0398	0,0920	-0,1318
2019	UNVR	-0,1177	0,1326	-0,2503
2019	KBLI	0,1074	0,0999	0,0075
2019	HDTX	-0,1110	0,1482	-0,2592
2019	PRAS	-0,0251	0,1710	-0,1961
2019	RICY	-0,0965	0,0873	-0,1838



2019	SMSM	-0,0213	0,1569	-0,1783
2019	MLIA	0,0025	0,1761	-0,1737
2019	ALTO	-0,0369	0,2269	-0,2638
2019	SIPD	-0,0657	0,1739	-0,2396
2019	SMCB	0,0239	0,1773	-0,1534
2019	SPMA	0,0079	0,1844	-0,1765
2019	SRSN	0,0465	0,1806	-0,1341
2019	TIRT	-0,2168	0,2265	-0,4433
2019	TRST	-0,0172	0,1609	-0,1781
2019	JSKW	0,0512	0,1219	-0,0706
2019	WTON	-0,0693	0,1012	-0,1705
2019	YPAS	-0,1645	0,2338	-0,3983
2019	BTEK	-0,0345	0,0855	-0,1201
2019	TRIS	0,0112	0,1314	-0,1202
2019	KAEF	-0,1622	0,2033	-0,3655
2019	LMPI	-0,0760	0,1375	-0,2135
2019	MLBI	-0,0445	0,2917	-0,3362
2019	MRAT	-0,0125	0,1251	-0,1376
2019	VOKS	0,0156	0,0829	-0,0673
2019	SIDO	-0,0088	0,2006	-0,2093
2019	TBLA	-0,0284	0,1112	-0,1396
2019	TCID	0,0076	0,1365	-0,1289
2019	TSPC	-0,0374	0,1056	-0,1430
2019	WIIM	-0,1369	0,1166	-0,2535
2019	UNIT	-0,0107	0,2648	-0,2755
2019	DLTA	0,0285	0,1290	-0,1005
2019	INDS	-0,0218	0,1863	-0,2080
2019	SCCO	0,0421	0,1387	-0,0967
2019	SSTM	-0,0886	0,1845	-0,2731
2019	STAR	-0,1195	0,3202	-0,4398
2019	INAF	-0,0089	0,0886	-0,0975



APPENDIX 5
COEFFICIENTS RESULTS

Year 2015

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
1 (Constant)	,042	,038		1,108	,271
x1	-2439812157,405	9001413590,733	-,034	-,271	,787
x2	-,009	,017	-,060	-,536	,594
x3	-,111	,075	-,170	-1,491	,140
x4	,078	,039	,238	1,973	,052

a. Dependent Variable: y

Year 2016

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
1 (Constant)	-,025	,022		-1,154	,252
x1	10472525229,007	7363439697,421	,148	1,422	,159
x2	,007	,016	,048	,452	,653
x3	-,068	,020	-,358	-3,394	,001
x4	,348	,178	,205	1,956	,054

a. Dependent Variable: y



Year 2017

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
1 (Constant)	-,130	,042		-3,097	,003
x1	10423410698,779	8880256297,493	,129	1,174	,244
x2	,041	,060	,074	,682	,497
x3	,239	,073	,369	3,292	,002
x4	,100	,185	,060	,541	,590

a. Dependent Variable: y

Year 2018

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
1 (Constant)	-,018	,020		-,907	,367
x1	4119399461,123	4526296415,048	,107	,910	,366
x2	,049	,042	,133	1,154	,252
x3	-,024	,040	-,072	-,611	,543
x4	,029	,066	,051	,446	,657

a. Dependent Variable: y

Year 2019

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
1 (Constant)	-,198	,036		-5,558	,000
x1	54364679939,930	10491496216,621	,492	5,182	,000
x2	,095	,061	,147	1,578	,119
x3	,228	,064	,333	3,548	,001
x4	,366	,200	,172	1,827	,072

a. Dependent Variable: y



APPENDIX 6

4.1 Descriptive Statistics

Table 4.1

SFCFAP

	Frequency	Percent	Valid Percent	Cumulative Percent
0	285	72.2	72.2	72.2
Valid 1	110	27.8	27.8	100.0
Total	395	100.0	100.0	

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
AUCO	395	2	22	6.42	3.633
ICO	395	.200	.800	.40781	.101854
EM	395	-.53530	.59580	-.0670820	.14240383
Valid N (listwise)	395				



APPENDIX 7

4.2 Linear Regression Analysis

4.2.1 Regression Equation

Tabel 4.2

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.077	.008		-9.206	.000
	SFCFAP	.036	.016	.115	2.294	.022

a. Dependent Variable: EM

4.2.2 Coefficient of Determination (R²)

Table 4.3

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.115 ^a	.013	.011	.14163937

a. Predictors: (Constant), SFCFAP



APPENDIX 8

4.3 Moderated Regression Analysis

4.3.1 Regression Equation

Table 4.4

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-.094	.039		-2.382	.018
SFCFAP	.224	.071	.707	3.144	.002
AUCO	.000	.002	-.010	-.157	.875
1 SFCFAP.AUCO	-.009	.004	-.219	-2.104	.036
ICO	.047	.083	.034	.569	.570
SFCFAP.ICO	-.315	.153	-.432	-2.061	.040

a. Dependent Variable: EM

4.3.2 Coefficient of Determination (R²)

Table 4.5

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.206 ^a	.042	.030	.14024378

a. Predictors: (Constant), SFCFAP.ICO, AUCO, ICO, SFCFAP.AUCO, SFCFAP

APPENDIX 9

4.4 Classical Assumptions of Regression

4.4.1 Normality Test

Table 4.6

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		395
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	.14084345
Most Extreme Differences	Absolute	.065
	Positive	.065
	Negative	-.050
Kolmogorov-Smirnov Z		1.299
Asymp. Sig. (2-tailed)		.068

a. Test distribution is Normal.

b. Calculated from data.

4.4.2 Multicollinearity Test

Table 4.7

Coefficients^a

Model		Collinearity Statistics	
		Tolerance	VIF
1	SFCFAP	.996	1.004
	AUCO	.993	1.007
	ICO	.989	1.011

a. Dependent Variable: EM

4.4.3 Heteroscedasticity Test

Table 4.8

Glejser Test^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.078	.023		3.423	.001
1 SFCFAP	-.006	.011	-.029	-.581	.562
AUCO	-.001	.001	-.030	-.600	.549
ICO	.077	.048	.081	1.599	.111

a. Dependent Variable: Absolute Residual

