EARNINGS MANAGEMENT PRECEDING IPO AND ITS RELATIONSHIP WITH INITIAL FIRM VALUE AT IPO AND POST-IPO FIRM PERFORMANCE

Niken A.S. Kusumawardhani a, Sylvia V. Siregar b

a Email: koesoemawardhanie@yahoo.com
b Department of Accounting, Faculty of Economics, Universitas Indonesia, Depok, Indonesia
Phone: +62-21-7272425, Fax: +62-21-7863558
Email: sylvia.veronica@ui.ac.id

Abstract

This study aims to prove that Initial Public Offering (IPO) firms are involved in earnings management, and also to discover the impact of earnings management to initial firm value at IPO and also to post-IPO average Economic Value added (EVA) growth. This study includes 39 samples of firms doing IPO in Indonesia during 2000-2003 and uses one sample t-test and multiple regression method. The result of this study proves that IPO firms are involved in earnings management, and the earnings management is positively related to initial firm value at IPO and negatively related to post-IPO average EVA growth.

Keywords: earnings management, economic value added, initial public offering, firm value, firm performance

1. INTRODUCTION

Earning is a measure that summarizes overall performance of a firm on an accrual basis. It becomes important since many parties use it as a measurement to evaluate a firm’s performance (Dechow 1994). Though there are other measurements for evaluation, such as stock return, Economic Value Added (EVA), and Cash Flow from Operation (CFO), practitioners and business academics still consider role of earning as a critical one.

Earning is produced by accounting process in which there are rooms for accountant to choose among available acceptable methods. Managers may use their wisdom to decide the timing and amount of expenses and costs incurred within companies (Assih et al. 2005).
Considering the important role of earning within decision-making process in companies, there is a tendency for managers to have their influence on the amount of earning reported with different motives. This is also known as earnings management.

Earnings management is associated with many corporate actions. The existence of earnings management practice during first-time initial public offering (IPO) is the most interesting corporate action that needs further investigation. During 2002-2007, the Supervisory Board for Capital Market and Non-Bank Financial Institution (Badan Pengawas Pasar Modal dan Lembaga Keuangan/Bapepam-LK) has recorded 85 IPO activities in Indonesia. It is a pretty frequent action compared to other corporate actions, such as merger and acquisition.

When a firm issues its shares publicly for the first time, there is high asymmetric information between investors and the issuers. Rao (1993) argued that during pre-IPO period, there was no publicity at all regarding the companies; either in electronic media or mass media. This limited information forced investors to fully rely their evaluation of pre-IPO firm performance to its financial statements and also to assess the possibility of earnings management based on the financial statements. Managers may compose the financial statements by choosing accounting methods or accruals which increase earnings, and high earnings are expected to be highly valued by investors in form of high offering price for stock (Assih et al. 2005). By assuming so, earnings management during pre-IPO period is aimed to boost the price of stock during IPO.

Speaking of performance, there are lots of measures to evaluate performance of companies, one of them is economic value added (EVA). Some literatures argued that EVA is proved to surpass another performance measurement such as CFO, NI, and stock return. EVA is proved to well explain the changes in market value in a much better way than earning does. The movement of EVA for 5 years was able to explain 55% of 5-years-stock price movement, while earning was only able to explain 24% of changes in market value of 5 years period (O’Byrne 1996).

Based on previous studies, in this study we would like to analyze the existence of earnings management practice during period prior to IPO. We also would like to test whether the earnings management is an opportunistic action in order to achieve higher stock price in IPO, or used as a signal for private information regarding companies’ performance in the past and estimated company’s performance in the future. Performance of companies in this study is focused to EVA, considering the limited number of studies using EVA as a benchmark for performance evaluation, especially in the context of earnings management. We also choose EVA because of its superiority compared to other performance measurements.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Earnings management is described as a managerial behaviour in choosing particular accounting policy, or through implementation of selected activities, which aim is to have influence on profit or another specific goal (Scott 2009). According to agency
theory, management always strives to maximize its utility function. Considering that managers have freedom to choose particular accounting policy among the generally accepted principals, it is normal to assume that they will most likely choose the policy which specifically will help them in achieving their goals. Accounting policy in context of earnings management can be classified into two separate groups. First, is selection of particular accounting policies, and the second is usage of discretionary accruals. Discretionary accruals are often used as proxy for earnings management.

One of the motives that become pull factor of earnings management is the motive to utilize the moment of IPO as a condition with advanced level of asymmetric information in order to achieve high level of initial stock prices (Scott 2009). Hughes (1986) proved that information appeared on financial statements, such as net income, would give a signal for investors for predicting the firm’s value. Consequently, management has an incentive to use earnings management as a tool to create higher earning in periods preceding IPO in order to achieve higher initial stock price.

Friedlan (1994) proved that IPO firms tended to implement accounting policy which increased earning through the use of accruals in the latest period of financial statement prior to IPO. Several previous studies (Assih et al. 2005, Amin 2007; and Aharony et al. 1993) also proved that companies managed their earnings in pre-IPO period by using discretionary accruals.

In this study, discretionary accrual is a proxy for earnings management. Discretionary accrual can be found in form of total accrual (total accrual earnings management/TAEM) and working capital accrual (working capital accrual earnings management/WCEM). The first hypothesis in this study is:

H1a : Firms doing IPO implement earning-increased earnings management through total discretionary accruals in periods prior to IPO

H1b : Firms doing IPO implement earning-increased earnings management through working capital discretionary accruals in periods prior to IPO

According to Gumanti (2000), go public is one way for growing companies to obtain additional capital to fund their business expansion. Therefore, owner of the companies are expected to convince that their companies have good prospects in the future in order to increase the attractiveness of their shares in the market. By assuming that managers use earnings management as an opportunistic action to obtain the highest profit possible at the IPO, we expect a positive and significant relationship between discretionary accrual variables (either total discretionary accruals or working capital discretionary accruals) and the initial firm value. DuCharme et al. (2001) found positive relationship between discretionary accrual variables (both total and working capital models) with the firm’s value during IPO. Second hypothesis of this study is:

H2a : Earnings management preceding IPO through total discretionary accruals is positively related to initial firm value at IPO

H2b : Earnings management preceding IPO through working capital discretionary accruals is positively related to initial firm value at IPO
If earnings management in pre-IPO period were an opportunistic action to achieve particular goals, then theoretically companies would not be able to retain its after-IPO performance to be as good as of the IPO. The use of discretionary accruals to manage earning has its own fate, which is accruals reverse. If companies recorded accruals in such amount this year so that it would boost reported profit, then in the following periods those accruals would be reversed and decreased reported profit. The use of accruals to manage earnings only enables companies to postpone the recording of lower profit.

Previous researchers proved that there is a significant negative relationship between earnings management in periods prior to IPO with post-IPO firm performance. Teoh et al. (1998) found that firms aggressively managed their earnings prior to IPO would found their average return of stocks decreased sharper compared to the conservative firms. Meanwhile, Assih et al. (2005) concluded that ROA of firms doing earnings management preceding IPO decreased in after-IPO periods. Therefore we estimate the existence of negative relationship between earnings management preceding IPO and proxy of firm performance in this study, which is the average EVA growth. Therefore third hypothesis in this study is as follow:

**H3a**: Earnings management preceding IPO through total discretionary accruals is negatively related to post-IPO average EVA growth

**H3b**: Earnings management preceding IPO through working capital discretionary accruals is negatively related to post-IPO average EVA growth

### 3. RESEARCH METHODOLOGY

#### 3.1. Research Model

Hypothesis 1a and 1b is tested using one sample t-test on discretionary accruals (either total accruals or working capital accruals). While to answer hypothesis 2a-2b, we use linear regression method:

\[ V_{i,t} = a_0 + a_1 \text{CFO}_{i,t-1} + a_2 \text{TAUMA}_{i,t-1} + a_3 \text{TAEM}_{i,t-1} + a_4 \text{RO}_{i} + a_5 \text{GSA}_{i,t-1} + a_6 \text{AU}_{i} + a_7 \text{UW}_{i} + e \]  

\[ V_{i,t} = b_0 + b_1 \text{CFO}_{i,t-1} + b_2 \text{WCUMA}_{i,t-1} + b_3 \text{WCEM}_{i,t-1} + b_4 \text{RO}_{i} + b_5 \text{GSA}_{i,t-1} + b_6 \text{AU}_{i} + b_7 \text{UW}_{i} + e \]

where:

- \( V_{i,t} \) = stock offering price multiplied by number of shares outstanding after IPO
- \( \text{CFO}_{i,t-1} \) = cash flow from operating activities for the latest fiscal year preceding IPO
- \( \text{TAUMA}_{i,t-1} \) = component of non-discretionary accrual, which is total accrual (TAC) minus total discretionary accrual (TAEM)
WCUMA<sub>_i,t-1</sub> = component of non-discretionary accrual, which is working capital accrual (WAC) – working capital discretionary accrual (WCEM)

TAEM<sub>_i,t-1</sub> = component of discretionary accrual from total accrual model

WCEM<sub>_i,t-1</sub> = component of discretionary accrual from working capital accrual model

RO<sub>_i</sub> = \(\alpha + \ln (1-\alpha)\), where \(\alpha\) is proportion of retained shares outstanding by firm’s owner in post-IPO periods

GSA<sub>_i,t-1</sub> = growth of sales during latest fiscal year preceding IPO

AU<sub>_i</sub> = dummy variable for quality of auditor

UW<sub>_i</sub> = dummy variable for quality of underwriter firm

e = regression disturbance or error term

Expectation for each coefficient’s sign is \(a_1 > 0, a_2 > 0, a_3 > 0, a_4 > 0, a_5 > 0, a_6 > 0, a_7 > 0, b_1 > 0, b_2 > 0, b_3 > 0, b_4 > 0, b_5 > 0, b_6 > 0, b_7 > 0\)

While the model used to inspect the relationship of earnings management and post-IPO firm performance is as follow:

\[
\text{Avg\Delta EVA} = b_0 + b_1 \text{STAEM} + b_2 \text{SIZE} + b_3 \text{SGR} + e \quad (2a)
\]

\[
\text{Avg\Delta EVA} = a_0 + a_1 \text{SWCEM} + a_2 \text{SIZE} + a_3 \text{SGR} + e \quad (2b)
\]

where:

\(\text{Avg\Delta EVA}\) = value of average EVA growth during \(t\) (year of IPO) through \(t+2\)

\(\text{SWCEM}\) = addition of WCEM<sub>_i,t</sub> and WCEM<sub>_i,t-1</sub>

\(\text{TAEM}\) = addition of TAEM<sub>_i,t</sub> and TAEM<sub>_i,t-1</sub>

\(\text{SIZE}\) = size of firms, reflected by logarithm value of Total Asset in latest fiscal year prior to IPO

\(\text{SGR}\) = sales growth rate during latest fiscal year prior to IPO, calculated as \((\text{Sales}_{t-1} - \text{Sales}_{t-2}) / \text{Sales}_{t-2}\)

Expectation for each coefficient’s sign is \(a_1 < 0, a_2 > 0, a_3 > 0, b_1 < 0, b_2 > 0, b_3 > 0\)

3.2. Definition of Variables


\[
\frac{TAC_{it}}{A_{it-1}} = \alpha \left[ \frac{1}{A_{it-1}} \right] + \alpha [\Delta \text{REV}_{it} - \Delta \text{TR}_{it} / A_{it-1}] + \alpha [\text{PPE}_{it} / A_{it-1}] + \epsilon_{it}
\]

where:

\(TAC_{it}\) = total accrual of firm \(i\) for year \(t\)

\(A_{it-1}\) = total asset of firm \(i\) for year \(t-1\)

\(\Delta \text{REV}_{it}\) = (net sales of firm \(i\) for year \(t\)) – (net receivable of firm \(i\) for year \(t-1\))
\[ \Delta TR_{i,t} = (\text{account receivable of firm } i \text{ for year } t) – (\text{net receivable of firm } i \text{ for year } t-1) \]

\[ \text{PPE}_{i,t} = \text{fixed assets (property, plant, equipment) of firm } i \text{ for year } t \]

\[ \alpha_0, \alpha_1, \text{ and } \alpha_2 = \text{parameters} \]

\[ e_{it} = \text{error term} \]

WCEM represents components of earning managed by means of working capital based on management’s discretion:

\[ \frac{WCA_{i,t}}{A_{i,t-1}} = \beta_0 \left[ \frac{1}{A_{i,t-1}} \right] + \beta_1 [\Delta REV_{it} - \Delta TR_{it}/A_{i,t-1}] + e_{it} \]

where:

WCA_{i,t} = \text{working capital accrual for firm } i \text{ in year } t

2. **Initial Firm Value (V):** it is the result of offering price of stock during IPO multiplied by number of shares offered publicly during IPO. It is calculated in its logarithm value.

3. **Cash Flow from Operating Activities (CFO):** it is the cash flow from firm’s operating activities divided by firm’s total asset in latest fiscal year preceding IPO.

4. **Retained Ownership (RO):** RO is proportion of total shares outstanding retained by firm’s authentic owner after IPO activity.

5. **Quality of Auditor (AU):** it is a dummy variable, which value will be 1 if auditor used by firm is one of the big-five accounting firms in Indonesia (period 2000-2003); and will be zero (0) for non-big five accounting firms.

6. **Quality of Underwriter (UW):** UW is a dummy variable, which value will be 1 if the underwriter used by firm is one of the big-five underwriter firms based on its amount of total issuance of shares (throughout all firms that become sample of this study); and will be zero (0) for non-big five underwriters.

7. **Sales Growth Rate (GSA/SGR):** sales growth rate in this study is the growth of sales in the latest fiscal years prior to IPO.

8. **Post-IPO Firm Performance:** post-IPO firm performance is measured by the average EVA growth for 3 periods, starting from IPO year until 2 years post-IPO period. Majority of average EVA growth this study is calculated by SWA, MAKSI UI, and MarkPlus. The values were regularly published each year from 2000 to 2006 in SWA Magazine. For samples of which the EVA wasn’t available, we calculate it by ourselves based on the same method used by SWA, MAKSI UI, and Mark Plus. To assure the consistency of measurement, we do a correlation test between EVA calculated by SWA, MAKSI UI, and Mark Plus; and EVA that we calculate on our own. The correlation test shows that EVA that we calculated and the ones that calculated by SWA, MAKSI UI, and Mark Plus have a highly significant positive correlation, which is 0.96. Variable of average EVA growth is divided by total assets in latest fiscal year prior to IPO.

9. **Accumulation of Earnings Management Prior to IPO:** earnings management in periods prior to IPO is measured by STAEM (component of earnings management...
from total accrual) and SWCEM (component of earnings management form working capital accrual). Both variables are derived form following equations:

$$\text{STAEM} = \text{TAEM}_{t-1} + \text{TAEM}_{t-2}$$

$$\text{SWCEM} = \text{WCEM}_{t-1} + \text{WCEM}_{t-2}$$

3.3. Selection of Samples

Criteria of issuers eligible to become sample for this study are: 1) Firms doing IPO during year 2000-2003, 2) not classified as firms in financial industry, real estate, and property, 3) end of accounting period is December 31, 4) audited financial statements during 1998-2005 are available, 5) possesses data of stock offering price multiplied by number of shares issued during IPO, 6) has value of EVA which is publicized in SWA magazine, beginning from IPO year to 2 years post-IPO period (2000-2005) with minimum 2 observation periods, 7) possesses complete data of external auditors and underwriters used during IPO, and 8) has value of beta accessible in Reuters. Eventually there are 39 samples from various industries used in this study.

4. RESEARCH FINDINGS

4.1. Descriptive Statistics

As can be seen from Table 1, mean value of total discretionary accrual is increasing during t-2 to t-1. This increasing pattern also found in working capital accrual. While for mean value of total discretionary accrual (TAEM), we can see a decrease in period t-2 to t-1. Positive mean values of TAEM indicate the existence of earnings management practice toward profit-increasing result by firms doing IPO. Meanwhile, for discretionary working capital accrual, there is an increase in WCEM throughout period t-2 to t-1. This increase indicates that IPO firms tend to manage their earnings, either by means of total accrual or working capital accrual.

In Table 2 we conclude that samples used in this study have a very wide range, either in number of shares offered or price of initial stock. We can also conclude that 64% of samples used the services of auditors categorized as The Big Five, while only 43% of samples used the service of big-five underwriter (classification according to this study).

As we can see in Table 3, there is a significant decrease in the average value of EVA during period t through t+2. This indicates that earnings managements in periods prior to IPO can’t guarantee post-IPO firm performance. This decrease probably is also caused by lack of knowledge regarding EVA, since its measurement hadn’t been implemented widely in 2000-2003, making it as a measurement that managers tend to ignore. Based on the firm’s size, which is reflected by logarithm value of firm’s total assets, we can conclude that the samples are in relatively similar size.
4.2. Hypothesis Testing Results

4.2.1. Earnings Management Preceding IPO

Table 4 shows the test result for hypothesis 1a and 1b. We do not reject hypothesis 1a, so we can conclude that the income-increasing earnings management practice by means of discretionary total accruals in periods prior to IPO does exist.

On the contrary, by using discretionary working-capital accruals (WCEM) in a year prior to IPO, this hypothesis doesn’t gain much support (reject hypothesis H1b). It indicates that management doesn’t use the component of working capital accrual to manage earnings in periods prior to IPO.

Compared to the result of testing for hypothesis 1a, result of testing for hypothesis 1b shows that management prefers to use total accrual, which involves not only working capital accrual but also components outside working capital as well. The possibility is that managers do not manage earnings on a short-term basis by means of working capital accrual, because they don’t want to be quickly detected if they did it through short-term working capital accruals. Therefore, managers prefer to use their discretion by means of total accrual. This result is supported by previous studies by Friedlan (1994), Assih et al. (2005), Amin (2007), and Aharony et al. (1993). This finding also proves that managers strongly tend to manage earnings, especially through total discretionary accrual in periods prior to IPO.

4.2.2. The Relationship of Earnings Management Preceding IPO and Firm Initial Value

Equation 1a is tested using 35 samples, and equation 1b is 36 samples. Prior to regression, both equations have been tested for classic assumptions of regression, covering heteroscedasticity, autocorrelation, multicollinearity, and normality.

Model of variables influencing value of IPO firms by means of total accrual has an adjusted R-square of 38.7% (Table 5). F probability shows that this model is wholly significant. Independent variable that becomes focus of this equation, which is total discretionary accrual (TAEM), has a significant positive relationship to firm initial value during IPO. The conclusion is that we do not reject hypothesis 2a. TAEM is the manifestation of management’s discretion to choose over acceptable accounting methods to achieve specific goals through the disclosure of information in financial statements.

From the Opportunistic Earnings Management (OEM) point of view, the positive relationship between TAEM and firm initial value (V) indicates that firms manage their earnings for opportunistic goal, which is to boost earnings during IPO activity. While from the perspective of Informative Earnings Management (IEM), earnings management preceding IPO can be regarded as a signal or a promise related to firm performance in the future. If management managed earning according to IEM theory, then managers would use private information to give prediction to the users of financial statements regarding the real earning power possessed by the firm. The disclosure of private information by managements in financial statements by means of total discretionary accruals would be positively responded in form of trust that future investors would give to the shares price offered by issuers.
Gul et al. (2003) stated that if earnings management was performed to disclose inside information to investors, then the long-run actual performance would be similar to reported performance, thus the investors would increase their trust to the performance reported by firms. On the contrary, if earnings management were performed to defer the recording of firm’s bad performance, then the long-run actual performance would differ from reported performance, and the investors would distrust management report on financial statements. The question of whether earnings management in hypothesis 2a is based on IEM or OEM motive will be answered through testing of hypothesis 3a and 3b.

CFO as control variable is proved to have a positive and significant influence on firm initial value during. This finding is supported by DuCharme et al. (2001) and Hughes (1986). TAUMA variable shows a positively significant relationship with firm initial value. Non-discretionary total accrual is total accrual formed by factors other than management’s discretion (beyond management’s capacity or control); that’s why high non-discretionary accrual might appear as a result of firm’s high growth rate. High growth rate is considered as promising factor and would be regarded as a signal of good performance in the near future. This result is also supported by DuCharme et al. (2001).

Insignificant relationship is found between another control variable, which is RO, and initial firm value. This result is different from previous studies by DuCharme et al. (2001), Petersen (2007), or Scholes (1972). But according to Pardede (2006), there are only 3 main factors included in factual consideration for IPO, which are valuation of firms through ratio calculation and projection of financial statements, comparison of initial stock price among firms within same industry classification, and also the expense of underwriter.

As it has been predicted, GSA variable shows a significant and positive relationship with V. Sales growth rate is a good signal for amount of earning and dividend distributed by firms in the future. This positive relationship was also found by DuCharme et al. (2001). For auditor variable, the regression result shows a significant and positive relationship. This is because auditors with good reputation will increase the quality of financial statements, so that the financial statements can better represent or give more proper signal regarding the real quality of the firm. This finding is supported by Beatty (1989) in DuCharme et al. (2001).

The last control variable is underwriter (UW). The result shows a significant and positive relationship between UW and V. This positive relationship is possible because generally firms use underwriters with good reputation and quality to convince future investors that the asymmetric information condition has been reduced with maximum effort. This finding supports previous studies by DuCharme et al. (2001) and also Balvers et al. (1998). Model of variables influencing value of IPO firms by means of working capital accrual has an adjusted R-square of 33% (Table 6). Additionally, F probability also shows that this model as a whole is significant.

The variable that becomes main focus of this study, which is the discretionary working capital accrual, is proved to be insignificantly influencing initial firm value at IPO (reject hypothesis 2b). This finding is not similar to study by DuCharme et al. (2001). Possible explanation for the insignificant relationship between WCEM and V in this study
is because managements prefer not to manage earnings on a short-term period prior to IPO by means of working capital accrual, but they choose to focus on managing total earnings. This finding is consistent with result of testing for hypothesis 1b. Firms doing IPO generally receive much attention from investors, so it is normal for them to avoid doing earnings management by means of short-term working capital accrual, because it will make them detected sooner in the next periods.

Control variable CFO is proved to significantly influence the value of IPO firms (V). The explanation for this relationship is similar to previous explanation on equation using TAUMA and TAEM. Non-discretionary working capital (WCUMA) has a negative coefficient, but it is insignificantly affecting the value of IPO firms. This finding does not align with previous study by DuCharme et al. (2001). Possible explanation for insignificant relationship between WCUMA and V is because management can’t count on non-discretionary working capital formed through firm’s operating activities as a signal for firm’s growth.

Variable of retained ownership also shows an insignificant relationship with V. This finding is similar to finding on previous model (model 1: TAUMA and TAEM). Additionally, insignificant relationship is also found between sales growth rate (GSA) and V. This is not similar to the finding on previous model and also to study by DuCharme et al. (2001). Meanwhile, both variables of auditor and underwriter show a consistent result with regression result on equation 1. Both variables have positive and significant relationships with firm’s value at IPO.

4.2.3. Relationship of Accumulation of Earnings management Preceding IPO to Firm’s Post-IPO EVA

After excluding outliers from samples, equation 2a is tested using 38 samples while equation 2b is tested using 35 samples. Model of variables determining post-IPO firm’s average EVA growth rate by means of SWCEM has an R-square of 36.7%. F probability in this equation shows that the model significantly explains relationships between dependent and independent variables as a whole.

Independent variable that becomes focus of this equation is STAEM as a proxy of accumulated earnings management (result of TAEM_{t-1} added by TAEM_{t-2}). STAEM has a negative coefficient and is proved to have a significant influence on average EVA growth rate (do not reject H3a). This negative relationship convinces that earnings management through total discretionary accrual (STAEM) in several periods prior to IPO is an opportunistic behaviour, which aims to achieve highest offering price as possible. Earnings management in periods prior to IPO only boosts high stock offering price, but the earning doesn’t represent the firm’s actual performance during IPO. Therefore, in periods after IPO we will see accruals reverse which forces post-IPO firm performance to decrease; which reflected in the decrease of average EVA growth. This finding is similar to those of DuCharme et al. (2001), where STAEM had a negative relationship with post-IPO firm performance (the proxy is ROE).

Control variable of firm size has a positive relationship with average EVA growth. This finding meets our expectation. Firms with more assets are supposed to better utilize
its resources to generate higher Net Operating Profit After-Tax (NOPAT). Higher NOPAT leads the firms to possess higher EVA. Moreover, bigger firms enjoy the advantage of cheaper borrowing cost, which in time will lead to higher level of EVA. This finding is supported by Jung et al. (2003).

Sales growth rate negatively affects average EVA growth. This result fails to meet our expectation. Logical explanation of this finding is that earnings management is used to accelerate the recognition and recording of sales. For firms who manage earnings through acceleration of sales recording and recognition, recorded sales are an inseparable part of discretionary accrual, which becomes proxy for earnings management in this study. Consequently, post-IPO firm performance will decrease in regard to accelerated sales recording in periods prior to IPO.

In table 8, we can see an insignificant yet positive relationship between SWCEM and average EVA growth during 2 years from IPO year (reject hypothesis 3b). This finding is consistent with the result of significance test between WCEM and IPO firm value. The insignificance of relationship between SWCEM and average EVA growth is possible because in samples of this study, managements don’t manage earnings through working capital component. As explained before, there is reluctance from managements to manage earning through working capital component since they do not want to be easily detected. This is similar to study by DuCharme et al. (2001).

Meanwhile, two other control variables, which are firm size and sales growth rate, show similar result to previous one. Firm size is proved to have a significantly positive relationship with post-IPO firm performance, while sales growth rate has a significantly negative relationship as in equation 1.

5. CONCLUSION

The study of 39 firms doing IPO in Indonesia during 2000-2003 concludes that firms perform income-increasing earnings management through total discretionary accrual in one period preceding IPO. But this study fails to prove that firms manage their earnings in periods prior to IPO by means of discretionary working capital accrual. Managements prefer to use total discretionary accrual because it has longer term compared to discretionary working capital accrual.

This study concludes that earnings management in periods prior to IPO is an opportunistic action to achieve highest gain as possible from IPO. This study finds that there is a positive relationship between total discretionary accrual (TAEM) and firm initial value during IPO. Nevertheless, this study doesn’t find significant relationship between discretionary accruals from working capital (WCEM) and firm’s initial value during IPO. Possible explanation is because firms in Indonesia manage their earnings through total accruals instead of working capital accruals. The second conclusion that supports the statement of earnings management as an opportunistic action comes from the negative relationship between accumulated earnings management in 2 years prior to IPO (STAEM and SWCEM) and average post-IPO EVA growth during 3 years beginning from IP year.
This study has several limitations. First, it uses a relatively short observation period of earnings management, which is a year prior to IPO; and only uses 39 samples. Future studies should expand the period of observation and increase number of samples. Furthermore, the study could be more developed by not only testing the discretionary accruals in a year prior to IPO, but also to several previous periods. This is important considering the fact that earnings management cannot be performed only in a single reporting period. The other limitation is because it only uses one variable for performance measurement, which is EVA. Using only one measurement to evaluate firm performance is considered inadequate to draw a representative conclusion concerning the relationship of earnings management and firm’s post-IPO performance. To calculate the EVA itself is a difficult task, while to obtain value of EVA calculated by independent parties is also a challenging one. Considering those facts, and not to forget that there are other measures for firm performance beside EVA, future researchers are expected to use other measurements to evaluate post-IPO firm performance. The other limitation is related to variety of industry involved in this study. This study doesn’t involve firms in banking and real estate industry, therefore the conclusion of this study can’t be generalized to all industries. Future study should involve IPO firms from banking and real estate industry by using a more appropriate earnings management model. Finally, the limitation of this study also relies on its observation period, which is 2000-2003. The changes of macroeconomic condition during 2000-2003 may cause bias to conclusion of this study.

REFERENCES


**APPENDIX**

**Table 1: Descriptive Statistics – Accruals**

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<thead>
<tr>
<th>Variable</th>
<th>T</th>
<th>Minimum</th>
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<td>-5,708</td>
<td>86,041</td>
</tr>
<tr>
<td>TAUMA</td>
<td>t-1</td>
<td>-0.5980</td>
<td>0.7842</td>
<td>-0.0950</td>
<td>0.1970</td>
</tr>
<tr>
<td>TAEM</td>
<td>t-1</td>
<td>-0.9574</td>
<td>1.9751</td>
<td>0.1538</td>
<td>0.4356</td>
</tr>
<tr>
<td></td>
<td>t-2</td>
<td>-1.562</td>
<td>13.3324</td>
<td>0.5683</td>
<td>2.3161</td>
</tr>
<tr>
<td>WCUMA</td>
<td>t-1</td>
<td>-0.3079</td>
<td>6.1294</td>
<td>0.3140</td>
<td>1.1460</td>
</tr>
<tr>
<td>WCEM</td>
<td>t-1</td>
<td>-5.6949</td>
<td>1.0597</td>
<td>0.0642</td>
<td>1.1199</td>
</tr>
<tr>
<td></td>
<td>t-2</td>
<td>-96.2471</td>
<td>2.8287</td>
<td>-3.0773</td>
<td>15.5675</td>
</tr>
</tbody>
</table>

TAC = total accruals (in million rupiah). WCA = working capital accrual (in million rupiah). TAEM is component of total discretionary accrual. TAUMA = component of total non-discretionary accrual, obtained from Total Accrual – TAEM. WCUEM is component of discretionary working capital accrual, while WCUMA is component of non-discretionary working capital accrual.
Table 2: Descriptive Statistics – Initial Value of IPO Firms

<table>
<thead>
<tr>
<th>Variable</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>V</td>
<td>7.8</td>
<td>2,527.77</td>
<td>127.82</td>
<td>404.38</td>
</tr>
<tr>
<td>CFO</td>
<td>-315.7</td>
<td>314.55</td>
<td>19.442</td>
<td>89.93</td>
</tr>
<tr>
<td>TAUMA</td>
<td>-0.5980</td>
<td>0.7842</td>
<td>-0.0950</td>
<td>0.1970</td>
</tr>
<tr>
<td>TAEM_{t-1}</td>
<td>-0.9574</td>
<td>1.9751</td>
<td>0.1538</td>
<td>0.4356</td>
</tr>
<tr>
<td>WCUMA</td>
<td>-0.3079</td>
<td>6.1294</td>
<td>0.3140</td>
<td>1.1460</td>
</tr>
<tr>
<td>WCEM_{t-1}</td>
<td>-5.6949</td>
<td>1.0597</td>
<td>0.0642</td>
<td>1.1199</td>
</tr>
<tr>
<td>RO</td>
<td>-1.7000</td>
<td>0.0000</td>
<td>-0.6121</td>
<td>0.4124</td>
</tr>
<tr>
<td>GSA</td>
<td>-0.4100</td>
<td>32.2400</td>
<td>2.2936</td>
<td>5.8087</td>
</tr>
<tr>
<td>AU</td>
<td>0.0000</td>
<td>1.0000</td>
<td>0.6410</td>
<td>0.4860</td>
</tr>
<tr>
<td>UW</td>
<td>0.0000</td>
<td>1.0000</td>
<td>0.4359</td>
<td>0.5024</td>
</tr>
</tbody>
</table>

V = stock offering price multiplied by number of shares sold to public during IPO (in billion rupiah). CFO = cash flow from operating activities (in billion rupiah). TAUMA = total non-discretionary accrual. TAEM = total discretionary accrual. WCUMA = non-discretionary working capital accrual. WCEM = discretionary working capital accrual. RO = retained ownership. GSA = sales growth rate. AU and UW are dummy variables for auditors and underwriters. AU = 1 if auditor used is categorized as Big Five Auditor Firm in Indonesia (2000-2003), or = 0 for other than Big Five. UW = 1 if underwriter used is classified as big-five underwriter based on value of total emission; and = 0 for other than big-five underwriter.

Table 3: Descriptive Statistics – Post-IPO Firm Performance

<table>
<thead>
<tr>
<th>Variable</th>
<th>t</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>EVA</td>
<td>t</td>
<td>-264.27</td>
<td>111.61</td>
<td>-11.83</td>
<td>50.05</td>
</tr>
<tr>
<td></td>
<td>t+1</td>
<td>-167.90</td>
<td>167.02</td>
<td>-21.92</td>
<td>52.01</td>
</tr>
<tr>
<td></td>
<td>t+2</td>
<td>-548.82</td>
<td>263.21</td>
<td>-19.47</td>
<td>111.54</td>
</tr>
<tr>
<td>STAEM</td>
<td>t</td>
<td>-1.739</td>
<td>13.739</td>
<td>0.7221</td>
<td>2.4381</td>
</tr>
<tr>
<td>SWCEM</td>
<td>t</td>
<td>-95.187</td>
<td>3.237</td>
<td>-3.0130</td>
<td>15.4405</td>
</tr>
<tr>
<td>SIZE</td>
<td>t</td>
<td>9.8640</td>
<td>12.7610</td>
<td>11.0143</td>
<td>0.6653</td>
</tr>
<tr>
<td>SGR</td>
<td>t</td>
<td>-0.4070</td>
<td>32.2420</td>
<td>2.2936</td>
<td>5.8091</td>
</tr>
</tbody>
</table>

EVA = variable of firm performance which becomes dependent variable in this study (in billion rupiah). STAEM = accumulation of total discretionary accruals of firms during period t-1 and t-2. SWCEM = accumulation of discretionary working capital accruals of firms during period t-1 and t-2. SIZE = size of firms proxied by logarithm value of firm’s total assets. SGR = sales growth rate variable.

Table 4: Testing Result of Earnings Management Preceding IPO

<table>
<thead>
<tr>
<th>Variable</th>
<th>t-value</th>
<th>Prob. (1 tailed)</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAEM</td>
<td>2.205</td>
<td>0.017**</td>
<td>Do not reject H1a</td>
</tr>
<tr>
<td>WCEM</td>
<td>0.939</td>
<td>0.176</td>
<td>Reject H1b</td>
</tr>
</tbody>
</table>

** Significant for α=5%
### Table 5: Regression Result – Model 1: Firms Initial Value During IPO

**Equation 1:**

\[ V = a_0 + a_1 \text{CFO} + a_2 \text{TAUMA} + a_3 \text{TAEM} + a_4 \text{RO} + a_5 \text{GSA} + a_6 \text{AU} + a_7 \text{UW} + u_{i,t} \]

<table>
<thead>
<tr>
<th>Variable</th>
<th>Expectation</th>
<th>Coefficient</th>
<th>t-Statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>+</td>
<td>10,048</td>
<td>0,765</td>
<td>0,000 ***</td>
</tr>
<tr>
<td>CFO</td>
<td>+</td>
<td>0,877</td>
<td>1,810</td>
<td>0,082 *</td>
</tr>
<tr>
<td>TAUMA</td>
<td>+</td>
<td>1,256</td>
<td>2,252</td>
<td>0,033 **</td>
</tr>
<tr>
<td>TAEM</td>
<td>+</td>
<td>1,73</td>
<td>2,352</td>
<td>0,026 **</td>
</tr>
<tr>
<td>RO</td>
<td>+</td>
<td>0,134</td>
<td>0,956</td>
<td>0,347</td>
</tr>
<tr>
<td>GSA</td>
<td>+</td>
<td>0,041</td>
<td>2,154</td>
<td>0,040 **</td>
</tr>
<tr>
<td>AU</td>
<td>+</td>
<td>0,368</td>
<td>2,908</td>
<td>0,007 ***</td>
</tr>
<tr>
<td>UW</td>
<td>+</td>
<td>0,311</td>
<td>2,518</td>
<td>0,018 **</td>
</tr>
</tbody>
</table>

Adjusted R-Squared = 0,387, Prob. F = 0,003649*

*** Significant for \( \alpha = 1\% \)
** Significant for \( \alpha = 5\% \)
* Significant for \( \alpha = 10\% \)

### Table 6: Regression Results – Model 2: Firms Initial Value During IPO

**Equation 2:**

\[ V = b_0 + b_1 \text{CFO} + b_2 \text{WCUMA} + b_3 \text{WCEM} + b_4 \text{RO} + b_5 \text{GSA} + b_6 \text{AU} + b_7 \text{UW} + u_{i,t} \]

<table>
<thead>
<tr>
<th>Variable</th>
<th>Expectation</th>
<th>Coefficient</th>
<th>t-Statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>+</td>
<td>10,023</td>
<td>0,442</td>
<td>0,000</td>
</tr>
<tr>
<td>CFO</td>
<td>+</td>
<td>0,201</td>
<td>1,087</td>
<td>0,086 *</td>
</tr>
<tr>
<td>WCUMA</td>
<td>+</td>
<td>-0,001</td>
<td>-0,001</td>
<td>0,999</td>
</tr>
<tr>
<td>WCEM</td>
<td>+</td>
<td>0,021</td>
<td>0,127</td>
<td>0,899</td>
</tr>
<tr>
<td>RO</td>
<td>+</td>
<td>-0,092</td>
<td>-0,515</td>
<td>0,610</td>
</tr>
<tr>
<td>GSA</td>
<td>+</td>
<td>0,006</td>
<td>0,528</td>
<td>0,601</td>
</tr>
<tr>
<td>AU</td>
<td>+</td>
<td>0,425</td>
<td>2,623</td>
<td>0,014 **</td>
</tr>
<tr>
<td>UW</td>
<td>+</td>
<td>0,293</td>
<td>2,048</td>
<td>0,050 **</td>
</tr>
</tbody>
</table>

Adjusted R-Squared = 0,330, Prob. F = 0,008447*

** Significant for \( \alpha = 5\% \)
* Significant for \( \alpha = 10\% \)
Table 7: Regression Result – Model 1: Post-IPO Firm Performance

<table>
<thead>
<tr>
<th>Variable</th>
<th>Expectation</th>
<th>Coefficient</th>
<th>t-Statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>10,354</td>
<td>0,213</td>
<td>0,832</td>
<td></td>
</tr>
<tr>
<td>STAEM</td>
<td>-</td>
<td>-0,655</td>
<td>-2,638</td>
<td>0,013 **</td>
</tr>
<tr>
<td>SIZE</td>
<td>+</td>
<td>0,002</td>
<td>0,048</td>
<td>0,096 *</td>
</tr>
<tr>
<td>SGR</td>
<td>+</td>
<td>-0,045</td>
<td>-2,534</td>
<td>0,016 **</td>
</tr>
</tbody>
</table>

Adjusted R-Squared = 0,485, Prob. F = 0,000011*

*** Significant at $\alpha = 1$
** Significant at $\alpha = 5$
* Significant at $\alpha = 10$

Table 8: Regression Results – Model 2 - Post-IPO Firm Performance

<table>
<thead>
<tr>
<th>Variable</th>
<th>Expectation</th>
<th>Coefficient</th>
<th>t-Statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>4,446</td>
<td>0,069</td>
<td>0,945</td>
<td></td>
</tr>
<tr>
<td>SWCEM</td>
<td>-</td>
<td>0,001</td>
<td>0,719</td>
<td>0,477</td>
</tr>
<tr>
<td>SIZE</td>
<td>+</td>
<td>0,003</td>
<td>0,049</td>
<td>0,096 **</td>
</tr>
<tr>
<td>SGR</td>
<td>+</td>
<td>-0,025</td>
<td>-4,613</td>
<td>0,001 ***</td>
</tr>
</tbody>
</table>

Adjusted R-Squared = 0,367, Prob. F = 0,000617*

*** Significant at $\alpha = 1$
** Significant at $\alpha = 10$