When is earnings management really good news? Evidences from Indonesia

Felizia Arni Rudiawarni*, Dedhy Sulistiawan and Yie Ke Feliana

Accounting Department,
University of Surabaya,
Jl. Raya Kalirungkut, Surabaya 60293,
East Java, Indonesia
Email: felizia@staff.ubaya.ac.id
Email: dedhy@ubaya.ac.id
Email: yiekefeliana@staff.ubaya.ac.id
*Corresponding author

Abstract: This study aims to examine the impact of earnings management and stock return. The magnitude of accruals and operating cash flows are the important feature that we add to this study. This feature gives deeper analysis of how earnings management affects stock return. We use Indonesian data from 2011 to 2013 as our sample. Three earnings management models are applied for this research: (1) Jones, (2) Modified Jones and (3) Kaznik model. We find that discretionary accruals cannot explain stock return, but after considering the magnitude of accruals and operating cash flow the result is different. Discretionary accruals affect stock return positively, only when accruals are higher than operating cash flow. These findings contribute to earnings management and market-based accounting researches.

Keywords: earnings management; accruals; return.


Biographical notes: Felizia Arni Rudiawarni is a Lecturer at Accounting Department University of Surabaya. She received master degrees in Accounting from University of Surabaya and now she is a doctoral student in accounting at Airlangga University. She is interested in financial accounting, especially in earnings management. She also published articles in several international journals.

Dedhy Sulistiawan is a Lecturer at Accounting Department University of Surabaya. He received Doctoral degree in Accounting from Gajah Mada University. His research interest is market-based-accounting research and behavioural accounting. Now, he is a Head of Accounting Department in University of Surabaya. He has published books and articles in international journals.

Yie Ke Feliana is a Lecturer at Accounting Department University of Surabaya. She received a doctoral degree in Accounting from Airlangga University. Her research interest is financial accounting and corporate governance. Now, she is Vice Rector for Finance and Resources affairs at

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1 Introduction

This study investigates the impact of earnings management to stock return. Previous studies about earnings management have been conducted, such as Jones (1991), Dechow et al. (1995), and Kaznik (1999) and a many more. This study develops those researches by examining the relationship between earnings management and stock return and also adds an important feature to those relationship by considering the magnitude of accruals and operating cash flow.

Relevance is one of the primary qualitative characteristics of financial reporting that usually represented by earnings response coefficient (ERC). Manager as a preparer of financial statement, uses estimation, judgments and certain level of discretion in presenting earnings figure that suit to their objectives, for example: dividend policy is one of management’s motivations to present targeted earnings level (Daniel et al., 2008), meet or beat analysts’ expectation to gain positive reaction from the market (Bartov et al., 2002). Other motivation to report earnings is to attain earnings threshold (Burgstahler and Dichev, 1997; DeGeorge, 1999).

Managers may use earnings management as a strategy to attract investors and potential investors. In examining the relationship between earnings management and investors’ reaction, our study refers to positive accounting theory. The theory assumes that managers use accounting policy and certain level of discretion to achieve targeted earnings level. In this study, we examine management’s motivation to meet targeted earnings level to make firm’s stock become investors’ choice. In order to realise it, managers use earnings management strategy, so that reported earnings can convince market participant about firms’ value. This, in turn stimulates positive investors’ reaction, such as higher stock price, higher return, lower risk and higher return for each unit risk. In summary, it can be concluded that managers use earnings management strategy to make firms’ shares become investors’ choice when they develop their portfolio strategy.

This study contributes to earnings management and market reaction research, because we consider the important aspect of earnings components, which are the proportion of accruals relative to operating cash flow. For firms whose accruals higher than operating cash flow, we believe that these firms use earnings management strategy using accrual component to boost their earnings. This strategy seems work, because investors fixate to earnings information and they fail to differentiate the quality of earnings components (Sloan, 1996).

Our article is presented as follow. The second section discusses hypothesis development. The third section presents research methodology, including earnings management models used in this study. The fourth section analyses the results. The last section concludes.
2 Hypothesis development

Accruals and operating cash flow are two components that develop earnings. Moreover, there are two accounting principles that affect earnings, there are revenue recognition and matching principles. Based on those principles, accruals are considered have a capability to mitigate timing and matching problems that is inherent in cash flow so that earnings are believed more related to future performance (Dechow, 1994).

Healy (1985) believes that managers perform earnings management through accruals. Accruals consist of discretionary and non-discretionary components. Discretionary accruals are accruals in which managers have the ability to exercise some control (Scott, 2015). In this case, it seems that using accruals stimulate another problem, since accruals give managers some discretion of using policy, judgment and estimation in reporting earnings. These conditions stimulate managers to execute earnings management through discretionary accruals since it is hard to detect (Scott, 2015). For the reason that accrual earnings management is hard to reveal, many studies use different methodology to find out how much earnings management conducted by the firms, such as Jones Model (Jones, 1991), Modified Jones Model (Dechow et al., 1995), Kaznik Model (Kaznik, 1999) and many more.

The motivation of earnings management are ranging from either opportunistically manipulating earnings or signalling private information to capital market (Dechow, 1994). Even though the intention behind earnings management is hard to determined, but vast majority of earnings management researches focus on opportunistic motivation to engage in earnings management (Cruz and Luiz, 2015). In relation to capital market reactions, earnings management is a strategy used by managers to get positive reaction from the market. Earnings is very important information, so investors are fixated by earnings information (Sloan, 1996). Market participants positively (negatively) react when top managements announce reported earnings that can (cannot) meet or beat market expectation (Burgstahler and Dichev, 1997; Bartov et al., 2002).

Given the increasing attention to earnings (as a product of accounting process), managers are stimulated to report an aggressive earnings to meet investors expectation (Chan et al., 2006). Subramanyam (1996) and Beaver and Engel (1996) also discuss the relationship between earnings management and stock return. They find positive reaction between earnings management and stock return. These results are consistent with Beneish and Vargus (2002), in which they observe that income-increasing accruals leading to positive market reaction in the short run. Supporting those ideas, we present our hypothesis as follow.

H1: Earnings management affects stock return.

Expanding those ideas, many studies give evidence that the ability of earnings management to predict stock return produce mixed evidence (Cruz and Luiz, 2015). It seems that managers have to consider other factors when they decide to use earnings management strategy to increase stock return, because it does not apply in all situations. Ching et al., (2006) present evidence that stock market is not fooled by the use of discretionary accruals to manage earnings. The study of Baber et al. (2006) reveal that market participants are aware of the incentives of mangers to manage reported earnings, and they adjust for the earnings management when they provided with the information to do so. Arni and Sulistiawan (2015) provide findings that income-increasing strategies generally stimulate negative effect to stock valuation, but, specifically, an income
increasing strategy using account receivable generates positive impact to stock valuation. Their findings imply that different methods of earnings management generate different impacts to investors’ behaviour.

Earnings component expresses more detail information than earnings information only. Bowen et al. (1987) break earnings into accrual and cash (or funds) flow components. They show that innovations in both components are statistically significant related to the abnormal stock returns of reporting firms (Lalepour, 2013). DuCharme and Malatesta (2004) provide evidence that normal accruals contain more information than just earnings information. Earnings quality can be expanded by reporting earnings components; which are operating cash flow and accruals. Operating cash flow results from continuing operation, they are less likely to reverse and are less subject to error and bias (Sloan, 1996). It can be concluded that earnings that are contained more operating cash flow than accruals are more persistent, and so, they have better earnings quality.

Earnings increases triggered by higher accruals indicate lower earnings persistence, which leads to lower earnings quality. Earnings quality concerns with the financial health and the capability of informed earnings and it redirects the company’s exact earnings to predict future earnings (Piyawiboon, 2015). That is why earnings quality is expected to reduce mispricing. Firms that show a higher value of earnings quality measure are expected to be less mispriced on average (Pierotti and Wagenhofer, 2014). Firms with higher accruals comparing to their operating cash flow in earnings are indicated to perform earnings management. In this case, actually, operating cash flow has better capability to predict future profitability rather than accruals. Since earnings quality is low, stock price are usually mispriced and managers can use earnings management as a strategy to gain positive reaction from market participants. This argument is supported by Collins and Hribar (2000). They find out that market tends to overestimate the persistence of accrual component, so they tend to overprice accruals in the current year.

Using the idea of the magnitude of earnings components, we expect positive relation between earnings management to market performance. Our second hypothesis is presented as follow.

\[ H_2: \text{Earnings management positively affects stock returns for firms whose earnings contains more accruals than operating cash flow.} \]

3 Data and methodology

This research analyses Indonesian Listed Company from 2011 to 2013, except for banking and financial institutions industries. Our financial data are collected from Indonesia Stock Exchange, while market data are obtained from Yahoo Finance. Indonesian stock market has lower accounting quality (Fan and Wong, 2002) comparing to several stock markets in other South-East Asian countries. By analysing the phenomenon, this study contributes to earnings management studies in developing countries. This is the contextual aspect of this study. If earnings information has low impact to investors, then earnings managements also produce low stimulation to the market.

Excess return (EXRET) is used to represent stock return, and we use market-adjusted return. This excess return is calculated as the difference between stock return and market return.
Earnings management is represented by discretionary accruals. Discretionary accruals (DACC) are the residual value of total accruals (TACC) minus non-discretionary accruals (NDAC).

Total Accruals (TACC) are calculated by subtracting operating cash flow from earnings (TACC = EARN – OCF). These are three models that are selected to decompose total accruals into non-discretionary and discretionary accruals:

1. Jones Model (Jones, 1991)

\[
TACC_{it} = \alpha_0 + \alpha_1 \Delta REV_{it} + \alpha_2 PPE_{it} + e_{it}
\]

2. Modified Jones (Dechow et al., 1995)

TACC for Modified Jones is the same with Jones Model (Jones, 1991), unless NDAC as the fitted value of TACC models are modified by:

\[
NDAC_{it} = \alpha_0 + \alpha_1 [\Delta REV_{it} - \Delta REC_{it}] + \alpha_2 PPE_{it} + e_{it}
\]

3. Kaznik Model (Kaznik, 1999)

\[
TACC_{it} = \alpha_0 + \alpha_1 \Delta REV_{it} + \alpha_2 PPE_{it} + \alpha_3 OCF_{it} + e_{it}
\]

where:
- TACC = total accruals (EARN_t – OCF_t)
- \(\Delta REV\) = change in revenue from year \(t-1\) to year \(t\) (REV_t – REV_{t-1})
- \(\Delta REC\) = change in receivable from year \(t-1\) to year \(t\) (REC_t – REC_{t-1})
- PPE = gross property, plant, and equipment in year \(t\)
- OCF = operating cash flow from statement of cash flow.

All variables are scaled by beginning total assets. Nondiscretionary accruals (NDAC) are fitted value from above models and discretionary accruals (DAC) are defined as the residuals. DEC_t is a dummy variable that represent the magnitude of accrual relative to operating cash flow. DEC_t is 1 (0) when total accrual is higher (lower) than operating cash flow. The Model is presented below:

\[
EXRET_t = \beta_0 + \beta_1 DEC_t + \beta_2 DACC_t + \beta_3 DEC_t * DACC_t + \beta_4 \ln(TA_{t-1}) + \beta_5 OCF_t + \beta_6 DUM\_YEAR_t + \epsilon_t
\]

where:
- EXRET_t = Excess Return in year \(t\).
- DEC_t = Dummy variable that equals one (zero) for firms with total accruals higher (lower) than operating cash flow in year \(t\).
- DACC_t = (Jones/Dechow/Kaznik): Discretionary Accruals in year \(t\) using Jones/Dechow/Kaznik model.
- LN_TA_{t-1} = Natural logarithm of total assets in year \(t-1\).
- OCF_t = Operating cash flow in year \(t\)
- DUM\_YEAR_t = dummy year.
4 Results and discussion

Table 1 presents descriptive statistics. We use firms listed in Indonesia Stock Exchange and based on data availability, there are 719 firms year used in this study. Table 1 presents descriptive data. Those are minimums, maximums, means and standard deviations of each variable used in our research. TACCt (Total Accruals in year t scaled by beginning total asset) yields a range from –72.462 to 11.23. OCFt, and LNTA_{t-1} also presented in the same way.

Discretionary accruals (DACCt) are composed using three models of earnings management. The mean value for DACCt based on Jones, Modified Jones and Kaznik Models are 0.1872, 0.173 and 0.02 respectively. DECt is the important feature that is added to this study. We add DECt as moderating variable to examine its ability to affect the relation between DACCt and EXRETt.

Table 1 indicates that in average, EXRETt produce positive return. Excess return of firms in year t presents a range from –0.941 to 10.229 with the mean is 0.227. Those data are pooled data from 2011 to 2013.

We predict that earnings management is one of important factors that lead to positive return. In order to make firms’ stocks become investors’ choice, managers boost earnings through earnings management. However, in our study, by using LNTA_{t-1} and OCFt as controlling variable, the results present that earnings management does not affect stock return. The results are not tabulated. So, H1 is not supported.

Table 2 shows the results of our tests. Earnings management affects stock return when earnings component is dominated by accruals. Discretionary accruals generate higher return for companies that have higher accruals than its operating cash flow. The coefficient of DECt * DACCt is positive and statistically significant at 1%. All of those
earnings management models tend to produce similar interpretation. By using Jones Model, $DEC_t \times DACC_t$ produce positive $t$-value (4.895). For Modified Jones and Kaznik models, $t$-value are 6.191 and 6.576 respectively. In this article, we present the robust results. Three models of earnings management stimulate market performance. Therefore, $H_2$ is supported.

Table 2  Earnings management to stock return

<table>
<thead>
<tr>
<th>Coefficient</th>
<th>$t$</th>
<th>Coefficient</th>
<th>$t$</th>
<th>Coefficient</th>
<th>$t$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>1.291</td>
<td>2.307***</td>
<td>1.034</td>
<td>1.853*</td>
<td>1.147</td>
</tr>
<tr>
<td>$DEC_t$</td>
<td>-0.038</td>
<td>-0.522</td>
<td>-0.012</td>
<td>-0.161</td>
<td>0.021</td>
</tr>
<tr>
<td>$DACC_t$</td>
<td>-0.001</td>
<td>-0.205</td>
<td>-0.001</td>
<td>-0.194</td>
<td>-0.308</td>
</tr>
<tr>
<td>$DEC_t \times DACC_t$</td>
<td>0.370</td>
<td>4.895***</td>
<td>0.044</td>
<td>6.191***</td>
<td>0.047</td>
</tr>
<tr>
<td>$LNTAt_{-1}$</td>
<td>-0.040</td>
<td>-2.035**</td>
<td>-0.031</td>
<td>-1.596*</td>
<td>-0.035</td>
</tr>
<tr>
<td>$OCF_t$</td>
<td>-0.006</td>
<td>-0.739</td>
<td>-0.006</td>
<td>-0.737</td>
<td>-0.007</td>
</tr>
<tr>
<td>Year 2011</td>
<td>0.041</td>
<td>0.497</td>
<td>0.057</td>
<td>0.701</td>
<td>0.034</td>
</tr>
<tr>
<td>Year 2012</td>
<td>0.103</td>
<td>1.243</td>
<td>0.120</td>
<td>1.468</td>
<td>0.101</td>
</tr>
<tr>
<td>$F$</td>
<td>4.514</td>
<td>6.612</td>
<td></td>
<td>7.326</td>
<td></td>
</tr>
<tr>
<td>Adjusted $R^2$</td>
<td>0.033</td>
<td>0.052</td>
<td></td>
<td>0.058</td>
<td></td>
</tr>
</tbody>
</table>

Notes: Variable definitions: TACC$_t$: Total accruals in year $t$ scaled by beginning total assets. OCF$_t$: Operating cash flow in year $t$. $LNTAt_{-1}$: Natural logarithm of total assets in year $t-1$. DACC$_t$ (Jones/Dechow/Kaznik): Discretionary Accruals in year $t$ using Jones/Modified Jones/Kaznik model. DEC$_t$: Dummy variable that equals one (zero) for firms with total accrual higher (lower) than operating cash flow in year $t$. EXRET$_t$: Stock return in year $t$ after adjusted by market return in year $t$. *, **, *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Our results imply that the magnitude of earnings components is a moderating effect to explain the relation between earnings management and market performance. For firms with total accrual higher than operating cash flow, earnings management is an important strategy to boost stock return. Based on the basic value relevance studies, in average, good news produces positive reaction. Further analysis is conducted by splitting sample based on their profitability because the majority of the studies used profitability as a key dimension of firm performance (Sajilan et al., 2015). By assuming earnings expectation of investors is zero, we split our sample based on positive and negative net income (Table 3).

Based on Table 3, we discover that earnings management for firms with higher accruals than operating cash flow affects stock return when companies present positive earnings (Table 3 Panel A). Conversely, in negative earnings firms, stock return is not explained by $DACC_t$, $DEC_t$, and $DACC_t \times DEC_t$ (Table 3 Panel B). These results are examined by using three models of earnings management stated above. The results are robust across the models. From the result of Table 3, it is shown that stock return cannot be explained by merely discretionary accruals or operating cash flow alone. In other words, accrual earnings management strategy to increase stock return does not apply to all condition. However, the proportion from those two earnings components has the ability to affect stock return (in this case higher proportion of accruals relative to
operating cash flow). This result is consistent with Collins and Hribar (2000) which also find that market tends to overestimate the persistence of accrual component, so they tend to overprice accruals in the current year.

Table 3  Earnings management to excess return for profit and loss firms

<table>
<thead>
<tr>
<th></th>
<th>Jones Model</th>
<th>Modified Jones Model</th>
<th>Kaznik Model</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coefficient</td>
<td>t</td>
<td>Coefficient</td>
</tr>
<tr>
<td><strong>Panel A: Profit Firms (Positive Net Income)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>1.201</td>
<td>2.046**</td>
<td>1.071</td>
</tr>
<tr>
<td>DEC_{it}</td>
<td>-0.017</td>
<td>-0.231</td>
<td>0.034</td>
</tr>
<tr>
<td>DA_{it}</td>
<td>-0.001</td>
<td>-0.222</td>
<td>-0.001</td>
</tr>
<tr>
<td>DEC_{it} * DA_{it}</td>
<td>0.514</td>
<td>5.804***</td>
<td>0.046</td>
</tr>
<tr>
<td>SIZE_{i,t-1}</td>
<td>-0.035</td>
<td>-1.717**</td>
<td>-0.031</td>
</tr>
<tr>
<td>OCF_{it}</td>
<td>-0.007</td>
<td>-0.922</td>
<td>-0.007</td>
</tr>
<tr>
<td>Year2011</td>
<td>0.003</td>
<td>0.032</td>
<td>0.011</td>
</tr>
<tr>
<td>Year2012</td>
<td>0.051</td>
<td>0.608</td>
<td>0.061</td>
</tr>
<tr>
<td>F</td>
<td>5.915</td>
<td>7.327</td>
<td></td>
</tr>
<tr>
<td>Adjusted R^2</td>
<td>0.53</td>
<td>0.67</td>
<td></td>
</tr>
<tr>
<td><strong>Panel B: Loss Firms (Negative Net Income)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>4.01</td>
<td>1.952*</td>
<td>3.425</td>
</tr>
<tr>
<td>DEC_{it}</td>
<td>-0.283</td>
<td>-0.68</td>
<td>-0.269</td>
</tr>
<tr>
<td>DA_{it}</td>
<td>-0.001</td>
<td>-0.223</td>
<td>0.05</td>
</tr>
<tr>
<td>DEC_{it} * DA_{it}</td>
<td>0.477</td>
<td>1.04</td>
<td>0.074</td>
</tr>
<tr>
<td>SIZE_{i,t-1}</td>
<td>-0.147</td>
<td>-1.968**</td>
<td>-0.13</td>
</tr>
<tr>
<td>OCF_{it}</td>
<td>0.161</td>
<td>0.375</td>
<td>0.515</td>
</tr>
<tr>
<td>Year2011</td>
<td>0.148</td>
<td>0.533</td>
<td>0.263</td>
</tr>
<tr>
<td>Year2012</td>
<td>0.275</td>
<td>0.921</td>
<td>0.404</td>
</tr>
<tr>
<td>F</td>
<td>1.039</td>
<td>1.032</td>
<td></td>
</tr>
<tr>
<td>Adjusted R^2</td>
<td>0.003</td>
<td>0.071</td>
<td></td>
</tr>
</tbody>
</table>

Notes: Variable definitions: TACC_{it}: Total accruals in year t scaled by beginning total assets. OCF_{it}: Operating cash flow in year t. LNTA_{i,t-1}: Natural logarithm of total assets in year t-1. DACC_{it} (Jones/Dechow/Kaznik): Discretionary Accruals in year t using Jones/Modified Jones/Kaznik model. DEC_{it}: Dummy variable that equals one (zero) for firms with total accrual higher (lower) than operating cash flow in year t. EXRET_{it}: Stock return in year t after adjusted by market return in year t. *, **, *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

SIZE as a controlling variable negatively affect stock return. It shows that the larger the size of the firm, the smaller excess return will be. Analysts are focus more to larger firms, so information from larger firms are relatively more observable and reflected in stock price than those from smaller firms. With the same information content, information from smaller firms will bring higher impact to the market rather than information that comes from larger firms.
When is earnings management really good news?

Our results show that market participants employ discretionary accruals data to evaluate market performance when (1) the gap between net income and operating cash flow is higher, and (2) firms produce profit. Bad economic condition decreases earnings relevancy (Swanson, et al., 2003); it means that accruals become less reliable (Bernard and Stober, 1989).

5 Conclusion

Our article has reexamined researches concerning the impact of earnings components to market performance. We present evidence that discretionary accruals are not an important factor to boost stock price. After adding an important feature, this study reports unique findings. Discretionary accruals are the important factor to improve stock return when earnings are dominated by accruals than operating cash flow. The higher accrual means that the gap between net income and operating cash flow is higher. For profit firms, accrual items that can be affected by management policies produce higher return.

Our findings give benefit to earnings management studies. Contextual aspect of the relation between earnings management and stock return is explained by our data. Using additional feature, the magnitude of accruals relative to cash flow, as an important part of our study, we present that earnings management in firms with dominant operating cash flow is not important for investors, especially when firm produce loss. Conversely, for firms that produce profit and dominant accruals relative to cash flow, this study suggests that those firms may improve shareholders’ wealth by using discretionary accruals.

Some caveats apply to this article that can be an avenue for future studies. First, we only consider return in current period. For future researches, return can be extended to future return, considering there is accrual reverse in earnings management. Second, this study only considers return that is affected by earnings management strategy, in which for the next studies, it can be examined risk based return as its dependent variable. Risk based return may influence the choice of investors for their portfolio strategy. The third, using the idea of Lin et al. (2015), future researches can be developed by using R&D expenditure, financing policy and default risk as important variables. The last, this article does not consider the adoption of IFRS as discussed in Kouki (2015). The use of IFRS implementation as an important moderating variable may produce more valuable findings.

References


