

Audit Quality and Earnings Management In Indonesian Initial Public Offerings

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Abstract

This study examines the effect of audit quality on earnings management (as measured by discretionary current accruals) for Indonesian IPO firms. Earnings management is measured using current accruals, assuming that the manager has the flexibility and control to the current accruals than long-term accruals. The hypothesis predicts that Indonesian IPO firms with higher quality auditors engage in less earnings management in the periods prior to the IPO date. The sample consists of 62 firms making IPO between 2000 and 2006. The results show that high quality auditors are related to less earnings management in the periods prior to the IPO. Audit quality constrains the extent of earnings management for Indonesian IPO firms and provides more precise information that makes management has less incentive to manage earnings. Cash flows from operating activities and size of the firm have negative and significant effect on the level of current accruals. The study contributes to the literature that audit quality is an important determinant in earnings management practices for Indonesian IPO firms.

Keywords: Audit Quality, Earnings Management, IPO, Accruals.

1. Introduction

Investors in the primary market of stocks (Initial Public Offerings or IPO) are required to use a variety of resources, including accounting and financial information, in order to assess the fair price of the shares offered during the IPO. Anecdotal evidence suggests that one source of relevant information used in assessing the newly issue firm is financial statements contained in the prospectus (Bloch, 1986).

Healy and Wahlen (1990) and Scott (2011), amongst other, assert that IPO setting provides opportunity for earnings management. In addition, Ball and Shivakumar (2008) show that there are two reasons for the existence of earnings management in the IPO, the demands of the market and the firms' response to the rules as a public firm. Earnings management practice during the IPO is a widespread phenomenon (Aharony et al., 1993; Friedlan, 1994; Teoh et al., 1998a; Gumanti, 2001; Zhou and Elder, 2003; Chen et al., 2005; Tykvova, 2006; Ball and Shivakumar, 2008).

The quality of accounting information, including in the case of IPO, will be largely determined by audit firm quality. The auditor is expected to reduce asymmetric information between management and the firms' stakeholders that allow parties outside the firms to verify the validity of the financial statements. High quality audit service should be able to act as a suppressor and has to be the effective deterrent on earnings management. However, given there are many audit firms with different level of capability, we might expect that the service they provide would vary. Accordingly, audit effectiveness and ability to prevent earnings management is believed to vary with the auditor quality. Evidence in Indonesia shows that there is negative relationship between audit quality and earnings management of public manufacturing firms (Sanjaya, 2008; Assih, 2009).

In the IPO context, the evidence is still mixed. Audit quality is able to limit the extent of earnings management, for example, Zhou and Elder (2003), in the USA, and Chen et al. (2005), in Taiwan. Even, Chen et al. assert that for Taiwan IPOs the size of audit firm is regarded as an essential determinant for earnings management. Yet, Luhglatno (2010) concludes that the audit quality is not able to restrict the practice of earnings management in 37 firms making an IPO in Indonesia for periods 2000 to 2006.

Motivated by the studies of Zhou and Elder (2003), Chen et al. (2005), and Luhglatno (2010), this study is aimed to test whether audit quality affects earnings management of firms making IPO in Indonesia Stock Exchange. The model to estimate earnings management follows the current accruals models of Tykvova (2008). This study documents strong evidence that audit quality negatively affects the degree of earnings management. This study also reports that the cash flow from operating activities negatively relate to earnings management.

2. Literature Review and Hypotheses Development

Earnings management arises when management uses financial reporting policies that may affect the economic performance of a firm (Healy and Wahlen, 1999). One of the conditions which allows for the occurrence of an effort to influence the performance of the firm is a market when the shares are traded for the first time as there are limited information available about the firm before the IPO. In addition, management is also motivated by the fact that prior to going public, information relating to the firm has not been known by potential investors, both information related to the operating performance and financial performance. This encourages managers to take advantage to influence the decision of potential investors by managing the level of firm profits, which is known as opportunistic behavior (Teoh et al., 1998b).

Previous studies have documented earnings management in IPO market. Aharony et al. (1993) find higher intensity of earnings management for small-scale enterprises in the US IPOs. Friedlan (1994) and Teoh et al. (1998a) show that firms inflate earnings level before they went public. Bauwhede and Willekens (2003) conclude that firms in Belgium perform earnings management to avoid a decline in profit or loss as well as to reduce taxes. Kamel (2012) documents earnings management practices of firms prior to making IPO in Egypt. Gumanti (2001) examines Indonesian IPOs from 1995-1997 and documents that earnings management is found in the period of two years before the firm went public. Yet, Warganegara and Indriastari (2009) do not find 28 Indonesian IPOs that went public from 2001-2006 manage their earnings upward.

Auditor reputation is often used as a proxy of audit quality. Auditor reputation is based on the users' trust on audit service. Sanjaya (2008) states that large scale auditors have more incentive to avoid their reputation damage compared to small scale ones, so they are expected to perform better audit service. Large scale audit firms has large scale human resources so that they can obtain more skilled employees. High-quality auditors are often assumed to be able to prevent and reduce accounting malpractices and report errors as well as irregularities that are material than low-quality auditors. In addition, high quality auditors are expected to possess the expertise, skills, resources, experience, and encouragement to separate the components of noise information, and can improve the degree of discretionary accruals information through prevention of aggressive accrual reporting and managers' opportunistic behavior.

Zhou and Elder (2003), in the United States, and Chen et al. (2005), in Taiwan, show evidence supporting the hypothesis that audit quality is very important to limit earnings management at the time the firm makes an IPO. This is consistent with the statement that audit quality could limit the extent of earnings management.

Tendeloo and Vanstraelen (2008) study private firms in six European countries and conclude that there are audit quality differences of Big 4 and non-Big-4 accounting firms in limiting earnings management. Bauwhede and Willekens (2003) in Belgium also document that the Big-6 auditors may limit earnings management. Gerayli et al. (2011) in Iran also report negative relationship between audit quality and earnings management.

In Indonesia, few studies are directed to examine the effect of audit quality on the degree of earnings management in the IPO market. Luhglatno (2010) examines 37 IPOs in 2000-2006 and does not find that audit quality reduces the degree of earnings management. In the context of non IPO firms, Sanjaya (2008) reports that the quality of audit firms indicated by the public accounting firm affiliated with Big-4 is able to prevent and reduce earnings management.

For all these reasons, it seems clear that audit quality is inversely associated with the degree of earnings management. Referring to this argument, this study predicts that audit quality is negatively associated with the degree of earnings management of Indonesian IPO firms (H_1).

The extent of cash generating from operating activities can be viewed as an indicator whether a firm can generate adequate cash to fulfill the obligation, sustain its operating ability, pay dividends or pursue new investments without relying on external financing. Cash flows from operating activities reflect the real financial condition received or issued by the firm and difficult to manipulate by using any accounting approach. In IPO setting, Chen et al. (2005) report that

operating cash flows are negatively related to the degree of earnings management. Aussenegg et al. (2009) find evidence that operating cash flows is able to reduce earnings management of 4,745 firms in Europe for period 1995-2005. According to these findings, the study predicts that operating cash flows is negatively associated with the degree of earnings management of Indonesian IPO firms (H₂).

Three variables are used as control variables, namely firm size, profit change, and financial leverage. The actions or policies of large firm with relatively larger scale and wider ownership will have greater impact on the public interest than small firm. Chen et al. (2005) document large firms have lower intention to manage earnings because they generally receive strict supervision from investors and financial analysts. In addition, Aharony et al. (1993) suggest that small IPOs engage in more earnings management than larger IPOs. Thus, study predicts that the size of the firm is negatively associated with the degree of earnings management of Indonesian IPO firms.

Burgstahler and Dichev (1997) report that managers perform earnings management in order to avoid a decrease in profits and avoid losses. Therefore, changes in earnings can be used as an indication that earnings management has been performed by managers. This argument leads to the prediction that earnings change is positively associated with the degree of earnings management of Indonesian IPO firms.

The debt covenants hypothesis states that, in order to avoid debt covenant violations, managers would perform earnings management (Watts and Zimmermann, 1986). DeFond and Jiambalvo (1994) in the US. This indicates that managers are trying to show that the previous year's performance is better. Thus, this study predicts that leverage is positively associated with the degree of earnings management in Indonesian IPO firms.

3. Data and Methods

Data are collected from the prospectus of firm that went public at the Indonesian Stock Exchange in 2000-2006. Sample firms are determined using the following criteria.

- Firms in the financial sector are not included in the sample selection to avoid industries with specific rules that may affect the level of discretionary current accruals (DCA).
- Firms must have audited financial statements of at least three periods to calculate the discretionary component of current accruals.
- The firm has to be the sub-sectors with at least four other firms in the same sub-sector to estimate the value of non-discretionary current accruals (NDCA).

Earnings management is measured using the same approach as Tykvova (2008), which focuses on current accruals. It is based on the assumption that the manager has the flexibility and control to the current accruals higher than long-term accruals (See for example, Teoh et al., 1998a; Dechow et al., 1995). In the context of IPO, the time series approach as initiated by Jones (1991) is quite difficult to apply in IPO firms in Indonesia because financial statements contained in the prospectus consists of two to three financial years, on average.

To estimate the value of NDCA of IPO firms (firms i,t), the NDCA components of other firms (firms k), which are in the same sub-sector of the industry with the firm's IPO (sub sector j) in the same year as the year goes public firm IPO (year t), are used. NDCA components of the firms in the sub-sector j are used to calculate the regression coefficients for the firm's IPO.

DCA is calculated using the following steps:

- Current Accruals* (CA) is measured as follows (Eq. 1):

$$CA_t = \Delta (\text{Current Assets} - \text{Cash}) - \Delta (\text{Current Liabilities} - \text{Current portion of long term liabilities})$$

- NDCA component of firm k in the same sub-sector (sub-sector j) as of IPO firm for year t , is calculated using the following equation (Eq. 2):

$$\frac{CA_{jk,t}}{TA_{jk,t-1}} = \alpha_{j,t,0} \frac{1}{TA_{jk,t-1}} + \alpha_{j,t,1} \frac{\Delta REV_{jk,t}}{TA_{jk,t-1}} + \varepsilon_{jk,t}$$

where:

$CA_{jk,t}$ = *urrent accruals* firm k in the sub sector j for year t ,

$TA_{jk,t-1}$ = Total assets of firm k in the sub sector j for previous year ($t-1$),

$\Delta REV_{jk,t}$ = Change in revenues of firm k in the sub sector j for year t compared to revenues in year $t-1$,

$\alpha_{j,t,0}$, $\alpha_{j,t,1}$ = Coefficient of NDCA's components for firm k in the sub sector j .

- NDCA of IPO firm for year t is calculated using the coefficients obtained in (Eq. 2) with the following equation

(Eq. 3)

$$NDCA_{j,t} = \alpha_{j,t,0} \frac{1}{TA_{j,t-1}} + \alpha_{j,t,1} \frac{\Delta REV_{j,t} - \Delta TR_{j,t}}{TA_{j,t-1}}$$

where:

$NDCA_{j,t}$ = value of non-discretionary current accruals of IPO firm in the sub sector j of year t .

$TA_{j,t-1}$ = Total assets of IPO firms in the sub sector j for previous of year ($t-1$).

$\Delta REV_{j,t}$ = Change in revenues of IPO firm in the sub sector j for year t compared to revenues of year $t-1$.

$\Delta TR_{j,t}$ = Change of account receivable of IPO firm in the sub sector j of year t compared to account receivable of year $t-1$.

$\alpha_{j,t,0}$ $\alpha_{j,t,1}$ = Coefficient of NDCAs components for firm k in the sub sector j from Eq. 2.

Changes in account receivables are used as component in calculating the firm's DCA because there is a possibility that issuers manipulate the value of credit sales in an effort to show strong sales at the year of the IPO (Dechow et al., 1995).

d. DCA of IPO firm of year t in sub-sector j is calculated as follows (Eq. 4):

$$DCA_{j,t} = \frac{CA_{j,t}}{TA_{j,t-1}} - NDCA_{j,t}$$

where:

$DCA_{j,t}$ = discretionary current accruals of IPO firm in sub-sector j for year t .

$CA_{j,t}$ = current accruals of IPO firm in sub-sector j for year t .

Audit quality (AUDIT) is measured as the auditor employed by IPO firm, whether it is from Indonesian Accounting Firm (IAF) affiliated with Big-5 or non-Big-5 KAP. Firms audited by IAF affiliated with Big-5 was given a score of 1 and zero for otherwise. This study uses Big-5 as a proxy for audit quality, because it uses data from 2000, where in 2000 and 2001 some firms employed IAF affiliated with Arthur Andersen. Operating cash flows is the value of operating cash flows in year t standardized by total assets of previous year ($t-1$). Year t is the full latest financial statements contained in the prospectus. The size of the firm is measured using the natural logarithm of total firm sales at the end of year t (Chen et al., 2005). Changes in profit is measured using dummy variable, where a score 1 is given if the earnings of year t is greater than the profit of the previous year and 0, if otherwise (Chen et al., 2005). Leverage is calculated as the ratio of total liabilities to total assets.

Multiple regression was used to examine the effect of independent variables on the dependent variable with the following models:

$$DCA_i = \beta_0 + \beta_1 AUDIT_i + \beta_2 OCF_i + \beta_3 FS_i + \beta_4 PC_i + \beta_5 LEV_i + \varepsilon_i$$

where DCA is discretionary current accruals, $AUDIT$ is audit quality, OCF is operating cash flows, FS is firm size, PC is profit change, LEV is leverage.

4. Results and Discussion

From 112 firms that conducted an IPO between 2000 and 2006, there were 62 firms or 55.4% meeting the criteria. A total of 50 IPO firms did not meet the selection criteria, i.e., 41 firms in financial sector, six firms with insufficient data, and three firms in the industry with less than four existing firms. The number of IPO firms audited by firm affiliated with the Big-5 accounting firms is 56.5% compared to 43.5% of non-Big-5.

Table 1 presents the descriptive statistics of variables. It can be seen that firms audited by non-Big-5 accounting firms have on average lower DCA than firms audited by Big-5 ($t = 2.323$, $p = 0.023$). Firms audited by the Big-5 accounting firms have on average higher operating cash flows than firms audited by non-Big-5 ($t = 2.244$, $p = 0.029$). IPO firms audited by accounting firm affiliated with Big-5 accounting firms on average have higher total sales than their counterparts ($t = 3.219$, $p = 0.002$). In terms of financial risk, the debt level of IPO firms audited by non-Big-5 accounting firms is qualitatively similar with firms audited by Big-5 ($t = 0.752$, $p = 0.455$).

Table 1. Descriptive Statistics of Variables

Panel A: Firms employing Big-5 (n=35)					t-test for difference
	Minimum	Maximum	Average	Stand. Dev.	
DCA	-7.52	1.34	-0.64	1.88	2.323*
OCF	-0.21	2.75	0.18	0.48	2.244*
FS	9.43	12.50	11.26	0.78	3.219**
LEV	0.04	1.94	0.55	0.33	0.752
Panel B: Firms employing non Big-5 (n=27)					
DCA	-1.28	9.03	0.56	2.19	
OCF	-1.03	0.43	-0.06	0.35	
FS	8.86	12.70	10.59	0.83	
LEV	0.05	3.01	0.64	0.56	

Note: **, * indicate that the t-test for mean difference is significant at 1% and 5%, respectively. DCA = discretionary current accruals, OCF = operating cash flows, FS = firm size, LEV = level of leverage.

The results of multiple regression are shown in Table 2 of which there are three models in relation to the hypotheses testing. The three regression models generate consistent results. Audit quality is significantly and negatively associated to earnings management ($t = -2.064$, $p = 0.044$). Operating cash flows have negative effect ($t = -3.945$; $p = 0.000$), and firm size has positive effect on earnings management ($t = 1.777$, $p = 0.044$). Profit change and leverage are not determinants of earnings management in Indonesian IPOs.

Table 2. Results of Linear Regression

Variable	Predicted Sign	Model 1	Model 2	Model 3
AUDIT	-	-1.081 (-2.064)*	-1.073 (-2.073)*	-0.781 (-2.012)*
OCF	-	-2.276 (-3.945)**	-2.279 (-3.984)**	-2.077 (-3.955)**
FS	-	0.541 (1.777)*	0.535 (1.783)*	0.538 (1.860)*
PC	+	0.405 (0.616)	0.441 (0.710)	-
LEV	+	-0.104 (-0.185)	-	-
Adj R ²		0.232	0.245	0.252
F-value (p-value)		4.695 (p=0.001)	5.961 (p=0.000)	7.847 (p=0.000)

Note: **, * indicate significant at 1% and 5%, respectively. t-values are presented in parentheses.

AUDIT = audit quality, OCF = operating cash flows, FS = firm size, PC = profit change, LEV = level of Leverage.

The study reports negative effect of quality of audit on earnings management of firms making an IPO in the Indonesia Stock Exchange. This is consistent with Zhou and Elder (2003) and Chen et al. (2005). This evidence asserts that high-quality audit can reduce the presence of earnings management practices in Indonesian IPO firms. The results of the study is different compared to Luhglatno (2010) who reports that the audit quality is not associated with the degree of earnings management. The difference in the measurement of audit quality and earnings management estimation model can be the cause of the difference in the results. In other words, it seems that the results are sensitive to variables measurement, both discretionary accruals and audit quality.

Operating cash flows has significant effect on earnings management. The result supports Chen et al. (2005) and Aussenegg et al. (2009). These findings reinforce the belief that the cash flow from operating activities reflect the real firm's ability to generate funds. That is, if the cash flow from operating activities of the firm is high, the motivation to manage earnings will decline in real terms because the firm is able to generate sufficient funds so it does not need to perform earnings management. The reverse happens when the cash flow from operating activities is low, the management will be motivated to show the performance improvement by conducting earnings management.

The study finds that firm size has positive and significant effect on earnings management. This means that larger IPO firms tend to perform earnings management. Warganegara and Indriastari (2009) show that large IPO firms have greater abnormal accruals than small ones. The finding reported here contradicts to Chen et al. (2005) and Sanjaya

(2008), who report negative influence. This finding also conflicts with Aharony et al. (1993) who advocate that smaller IPO firms have higher intensity of earnings management than larger ones. Previous studies generally employed either total assets or gross proceeds from the issue. This study uses total sales under consideration that earnings management and other operating components are directly related with the firm's sales. Ritter (1984) states that small-scale IPO, in this case is the gross value of the offer, are riskier than large-scale, so the motivation to report higher earnings will tend to be stronger (Aharony et al. 1993).

Changes in income has positive but not significant coefficient. This is in line with Chen et al. (2005) who examine Taiwanese IPOs. However, Burgstahler and Dichev (1997) conclude that managers try to avoid a decrease in profits and avoid losses by conducting earnings management of US corporations. The difference in the results of the study suggests that changes in the rate of profit is not always due to the firms' earnings management practices, but it can occur because by the time of going public, the firm improves its performance resulting in higher sales and profits, in an effort to attract potential investors.

Leverage has negative coefficient but insignificant. The finding reported here shall be treated with caution as the study find that there are many firms having total liabilities greater than their total assets, especially for firms making IPO during 2000-2002. This happens because many prospective IPO firms were unable to perform better as a result of financial crisis experience by Indonesia. The firms' long term liabilities exceed their assets as the firms have liabilities in US dollar. During that time, Rupiah was depreciated badly, making the firms' debt triple the value of previous figures. This has made many firms recorded their total debts exceeded their total assets, making their equity becomes negative. This study has not considered the effects of negative equity in the period prior to the IPO.

5. Conclusion

This study analyzes whether audit quality reflected from the auditors affiliated with the Big-5 and non-Big-5 reduces earnings management practices of firms making IPOs in the period 2000-2006 at the Indonesian Stock Exchange. Tests on 62 IPO firms show that audit quality is negatively related to earnings management. That is, audit quality can reduce the degree of earnings management when firm made IPO. The study also finds that operating cash flows have negative effect on earnings management and firm size has positive effect. While earnings changes and leverage do not have significant effect.

Referring to the results of the study, some limitations are identified. First, this study only measures the quality of audits based on whether or not the firm is affiliated with one of the Big-5. Audit quality can also be seen from several indicators, such as the auditor's opinion in its audit report, the auditor's level of experience, audit tenure, and industry specialization or auditor independence. Future study may consider to use these measures.

Second, this study uses the model to estimate discretionary current accruals without prior testing whether the model is most appropriate for the conditions in Indonesia. However, the use of which model is most appropriate should have to accommodate the accuracy or appropriateness of the model with the environment in which earnings management is detected. In addition, in calculating DCA components, this study uses regression estimates from other firms that are in the same sub-sector with the IPO firms. This may result the value of the IPOs' DCA do not necessarily represent the actual value because the condition of each firm is different, although there are in the same sub-sector of the industry. Future research may accommodate the scale or magnitude of the firm in considering the model used for regression or sector-based, not sub-sector based.

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