EARNINGS MANAGEMENT AND FIRM VALUE WITH INVESTMENT OPPORTUNITY SET (IOS) AS MODERATING VARIABLE: COMPARATIVE STUDY IN INDONESIA AND MALAYSIA

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Abstract

There is the conflict between management and owners, called agency problems, which arises because of the separation of ownership and management of a firm. Management must enhance firm value. On the other hand, the management wants to achieve their own objectives with ignoring the owner interests. Accounting information that should be the management report to the owners is often used to perform the management's opportunist action, maximizing their own interests by making earnings management. Therefore, necessary to study whether earnings management is carried out by management affect firm value. Earnings management here can be done in two ways, through the real activities manipulation and accrual manipulation (Roychowdhury, 2006). Investment Opportunity Set (IOS) are the opportunity to grow the company's investment decisions in the form of a combination of owned assets and growth option in the future (Myers, 1977). According Kallapur and Trombley (1999), firms with high IOS has greater opportunities to grow in the future compared to companies with low IOS that cause firms with high growth opportunities will have a high information asymmetry between managers with owners and there is the high tendency of managers to manipulate the profit.

This study aims to examine the effect of earnings management, either through the real activities manipulation and accrual activity manipulation, to the value of the company with the IOS as a moderator variable in the Indonesia Stock Exchange. The sampling methods is by purposive sampling, with the criteria are companies that listed in Malaysia and Indonesia Stock Exchange and have complete research variable data 2008. We analyze with moderator regression analysis (MRA).

We found that there is the influence of earnings management, either through the real activities manipulation and accrual activity manipulation, to the value of the company with the IOS as a moderator variable in the Malaysia and Indonesia Stock Exchange.

Keywords: earnings management, firm value, Investment Opportunity Set (IOS)

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1. INTRODUCTION

There is the conflict between management and owners, called agency problems, which arises because of the separation of ownership and management of a firm. Management must enhance firm value. On the other hand, the management wants to achieve their own objectives with ignoring the owner interests. Accounting information that should be the management report to the owners is often used to perform the management's opportunist action, maximizing their own interests by making earnings management. Therefore, necessary to study whether earnings management is carried out by management affect firm value. Earnings management here can be done in two ways, through the real activities manipulation and accrual manipulation (Roychowdhury, 2006).

Investment Opportunity Set (IOS) are the opportunity to grow the company's investment decisions in the form of a combination of owned assets and growth option in the future (Myers, 1977). According Kallapur and Trombley (1999), firms with high IOS has greater opportunities to grow in the future compared to companies with low IOS that cause firms with high growth opportunities will have a high information asymmetry between managers with owners and there is the high tendency of managers to manipulate the profit.

This study aims to examine the effect of earnings management, either through the real activities manipulation and accrual activity manipulation, affect firm value with IOS as a moderator variable in the Indonesia Stock Exchange. The sampling methods is by purposive sampling, with the criteria are companies that listed in Malaysia and Indonesia Stock Exchange and have complete research variable data 2008. We analyze with moderator regression analysis (MRA).

2. HYPOTHESES DEVELOPMENT

Earnings management is the management's intervention to affect earnings, usually for opportunistic reasons (Subramanyam and Wild, 2009). Earnings management consists of two kinds, accrual earnings management and real earnings management. Accrual earnings management is the earnings management made by management to manipulate accruals without any consequences on the cashflow. Real earnings management is the earnings management that affect on cashflow. This method is different from accrual earnings management in which

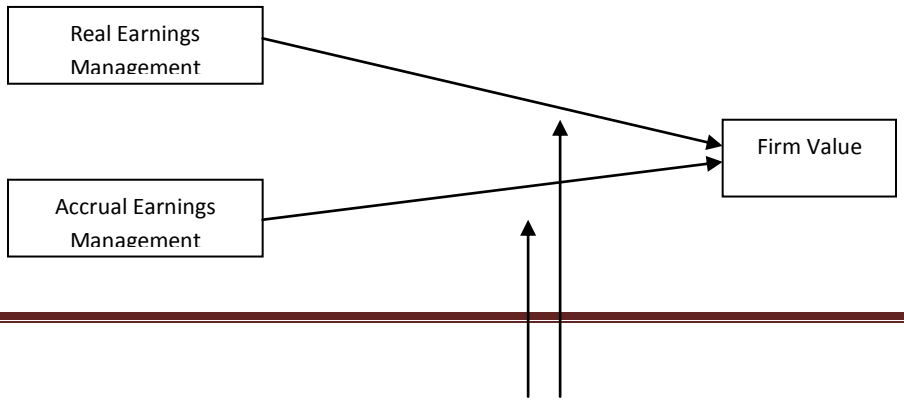
management does earnings management without impacting cash flow (Subramanyam and Wild, 2009).

Real earnings management practice grow up in the United States since the accounting scandals (Enron and WorldCom) and increased again after the Sarbanes-Oxley Act (SOX) in 2002 (Cohen et.al, 2008). Zang (2007) proved that there is a change in the practice of accrual earnings management and real earnings management. Managers will conduct accrual earnings management at the end of the period when the manager already knew profit before manipulated so they know how much manipulation to achieve the goal. However, this manipulation is very limited because of the audit detection risk. Real earnings management can be done by managers during the current accounting period, either at the beginning of the period or at the end of the period. Real earnings management actually costly than accrual earnings management, but management still do it because this method is more difficult to detect, even by the auditor (Roychowdury, 2006).

Kallapur and Trombley (1999) said that firms with high IOS has greater opportunities to grow in the future compared to companies with low IOS that cause firms with high growth opportunities will have a high information asymmetry between managers with owners and there is the high tendency of managers to manipulate the profit so increase the relationship between earnings management and firm value..

H1: earnings management, either through the real activities manipulation and accrual manipulation, affect the firm value.

H2: earnings management, either through the real activities manipulation and accrual manipulation, affect the firm value with the IOS as a moderator variable. The higher IOS will strengthen the relationship of earnings management and firm value.



IOS

3. RESEARCH METHOD

3.1. Population and Samples

The population is company listed in Indonesia Stock Exchange. The observation period was taken in 2008. However, the data used is the financial years 2006 to 2008 because of the formula used a long-range observation. We used purposive sampling method, in which the selection of the sample was based on the following criteria:

Table 1
Sampling Procedure

No	CriteriaQuantity	Indonesia	Malaysia
1	Public Firm	428	1.256
2	Public firm listed in OSIRIS	374	966
3	Manufactur Industry NAICS 2007 (Primary Code: 31-33)	154	454
4	Uncomplete data	(98)	(420)
5	Final sample firms	56	34

3.2. Data Collection Method

The study uses secondary data obtained from the OSIRIS database. OSIRIS Database is a public company databases and analytical information solutions fully integrated. OSIRIS database produced by Bureau van Dijk Electronic Publishing, SA (Bureau van Dijk Electronic Publishing, 2007[3].

3.3. Variable Measurement

3.3.1. R*eal earnings management measurement*

Real earnings management measurement model Roychowdhury (2006) is used to detect real earnings management in this study. Proxy for real earnings management is abnormal CFO (CFO Abn), kos production of abnormal (Abn PROD), and the cost diskrisionari abnormal (Abn Disc Exp). To capture real earnings management through a third variable in the measurement of comprehensive it will be a variable calculated by combining these three variables.

[3] Researcher accessed OSIRIS database in Faculty of Economics and Businness Gadjah Mada University

1. Abnormal Cash flow (CFO)
   a. Normal Cash Flow:

$$\frac{CFO_{it}}{Assets_{i,t-1}} = k_{1t}\frac{1}{Assets_{i,t-1}} + k_2\frac{Sales_{it}}{Assets_{i,t-1}} + k_3\frac{\Delta Sales_{it}}{Assets_{i,t-1}} + \varepsilon_{it}.$$

   b. Abnormal CFO

      Abn CFO = Act CFO – Normal CFO

2. Abnormal Production Cost
   a. Normal Production Cost

$$\frac{Prod_{it}}{Assets_{i,t-1}} = k_{1t}\frac{1}{Assets_{i,t-1}} + k_2\frac{Sales_{it}}{Assets_{i,t-1}} + k_3\frac{\Delta Sales_{it}}{Assets_{i,t-1}} + k_4\frac{\Delta Sales_{it-1}}{Assets_{i,t-1}} + \varepsilon_{it}.$$

   b. Abnormal Production Cost

      Abn Prod Cost = Act Prod Cost – Normal Prod Cost

3. Abnormal Discretioner
   a. Normal Discretioner

$$\frac{DiscExp_{it}}{Assets_{i,t-1}} = k_{1t}\frac{1}{Assets_{i,t-1}} + k_2\frac{Sales_{i,t-1}}{Assets_{i,t-1}} + \varepsilon_{it}.$$

   b. Abnormal Discretioner

      Abn Disc Exp = Act Disc Exp – Normal Disc Exp

Where,

$CFO_t/Assets_{t-1}$ = Operational cash flow divided by total assets *firm i, year t-1*

$1/Assets_{t-1}$ = Intercept divided by total assets *firm i, year t-1*

$Sales_{t-1}/ Assets_{t-1}$ = Net sales divided by total assets *firm i, year t-1*

$\Delta Sales_{t-1}/ Assets_{t-1}$= Delta sales years t-1 divided by total assets *firm i, year t-1*.

$COGS_{it}/ Assets_{t-1}$ = Cost of Good Sold year t divided by total assets *firm i, year t-1*

$\Delta INVit_1/ Assets_{t-1}$= Delta receivable *divided by* total asset *firm i, year t*

$Prod_t$ = Production cost, *firm i, year t*

$DiscExp_t$ = *discretionary expenditure , firm i, year t, that is sum of advertising expense, R&D expense, SG&A expenses*

e = *error*

3.3.2. *Accrual Earnings Management*

We used *Modified Jones Model* to measure *discretionary accruals* (Dechow et al., 1995).

1. *Total Accrual*

$$TACC_{it} = EBXT_{it} - CFO_{it} \dots\dots\dots\dots (1)$$

2. Estimated Total *accrual* yang diestimasi

$$\frac{TACC_{it}}{TA_{i,t-1}} = \alpha_1 \ \frac{1}{TA_{i,t-1}} + \alpha_2 \ \frac{\Delta REV_{it}}{TA_{i,t-1}} + \alpha_3 \ \frac{PPE_{it}}{TA_{i,t-1}} + e \dots\dots\dots\dots (2)$$

3. *Non discretionary accrual*

$$NDACC_{it} = \alpha_1 \ \frac{1}{TA_{i,t-1}} + \alpha_2 \ \frac{\Delta REV_{it} - \Delta REC_{it}}{TA_{i,t-1}} + \alpha_3 \ \frac{PPE_{it}}{TA_{i,t-1}} \dots\dots\dots\dots (3)$$

4. *Discretionery accrual*

$$DACC_{it} = \frac{TACC_{it}}{TA_{i,t-1}} - NDACC_{it} \dots\dots\dots\dots (4))$$

Where,

$DACC_{it}$ = *Discretionary Accruals, firm i, year t*

$NDACC_{it}$ = *Non Discretionary Accruals, firm i, year t*

$TACC_{it}$ = Total accrual, *firm i, year t*

TA_{it-1} = Total asset, *firm i, year t*

$EBXT_{it}$ = Net income before *extraordinary item, firm i, year t*

CFO_{it} = Cash flow from operational, *firm i, year t*

ΔRev_t = Delta Revenue, *firm i, year t*

PPE_t = Net Fixed Asset , *firm i, year t*

ΔRec_t = Delta Receivable, *firm i, year t*

e = *error*

3.3.3. Firm Values

Price to book value or PBV illustrate how much the market value of shares of a company's book value. the higher this ratio means that the market believes the prospects for the company.

$$PBV = \frac{\text{Stock Price}}{\text{BV}}$$

Book Value (Book Value / BV) is the ratio of the price computed by dividing the total net assets (assets - debt) to total shares outstanding.

$$BV = \frac{\text{Total Equity}}{\text{The amount of share}}$$

3.3.4. Investment Opportunity Set (IOS) Measurement

IOS is proxied by the PE Ratio. OSIRIS Database provides data on PER and thus no need for a recount.

3.3.4. Control Variable : Firm Size

This study used firm size as a control variable. The bigger the company, the greater the earnings management undertaken by management because of the demands of the investors and creditors larger than smaller firm, greater management's expectations would be a bonus gained and greater opportunities for earnings management. Firm size is proxied by the natural logarithm of assets (Asset Ln).

3.4. Regression Model

This research examines the effect of earnings management, either through the real activities manipulation and accrual activity manipulation, to the value of the company with the IOS as a moderator variable in the Indonesia Stock Exchange in Malaysian and Indonesia Stock Exchange. The research included firm size as a control variable. These regression models of this study:

$FV = a_0 + a_1 REM + a2 AEM + a3 Size + + e$

$FV = a_0 + a_1$ REM + a2 AEM + a3 IOS + a4 Size + a5 REM*IOS + a6 AEM*IOS + e

Where,

FV : firm value

REM : real earnings management

AEM : accrual earnings management

IOS : investment opportunity set

Size : firm size

e : error term

4. ANALYSIS

Before drawing conclusions on the results of the above regression, first we tested the classical assumptions. Classical assumption test showed that the residuals were normally distributed. Testing *multicollinearity* assumptions are met by looking *multicollinearity* VIF and tolerance value. Data used in this analysis do not indicate *multicollinearity*. Testing autocorrelation assumptions are met. The data did not show any symptoms of autocorrelation as indicated by the test results Durbin-Watson statistic (DW test). Here are the results of the study sample descriptive statistics. Testing heterocedasticity assumptions are met. The data did not show any symptoms of heteroscedasticity. This is exemplified by the relationship between all the independent variables on the absolute error term is not significant.

Table 1

Descriptif Statistic Indonesia

	REM	AEM	IOS	Size	REM*IOS	AEM*IOS	FV
Mean	-0.13275	0.10527	8.2526	11.09864	3.649421	0.735032	1.152117
Median	0.745131	0.089239	6.57	10.85223	1.332747	0.719308	0.843108
Max	2.683142	0.396053	33.7	14.63236	83.64758	2.383797	5.150117
Min	-6.91961	-0.06524	1.41	7.715124	-47.1953	-0.30596	0.182848
Std dev	2.37762	0.10551	7.3934	1.526426	23.43871	0.676315	0.974831

Table 2

Descriptif Statistic Malaysia

	REM	AEM	IOS	Size	REM*IOS	AEM*IOS	FV
Mean	0.20155	-0.01	14	12.35031	8.233529	-0.4746	2.04591
Median	0.41822	-0.01	8.4	12.20039	3.508827	-0.1451	1.221772
Max	4.08728	0.24	70	15.95779	259.7906	1.335928	12.5508
Min	-5.3002	-0.2	2.9	9.819018	-98.4253	-4.43944	0.3562
Std dev	1.81944	0.1	14	1.310467	50.59345	1.295481	2.58738

These regression results for hypotheses 1 earnings management affecting firm value:

Tabel 3
Result Hypothesis 1 Indonesia

Variable	Coeficient	Sig	Conclusion
REM	1.24	0.019	Significant
AEM	4.93	0.007	Significant
SIZE	5.97	0.000	Significant
Constanta	-5,321	0.000	

Tabel 4
Result Hypothesis 1 Malaysia

Variable	Coeficient	Sig	Conclusion
REM	4.98	0.011	Significant
AEM	3.26	0.006	Significant
SIZE	7.29	0.002	Significant
Constanta	-7.72	0.000	

From the table above, we can know that in Indonesia and Malaysia, the earnings management, both REM and AEM, affect the firm value. The firm size also affects the firm value.

These results are confirm with Rachmawati and Triatmoko (2007) and Rachmawati (2011), which stated that earnings management has positive effect on firm value, but contrary with Herawati (2008) which stated that earnings management has negative effect on firm value. Managements manage earnings to give a positive signal for the investors about their firm performance so the naive investor will have positive reactions and increases the firm value.

These regression results for hypothesis 2 earnings management, either through the real activities manipulation and accrual manipulation, affect the firm value with the IOS as a moderator variable:

Table 5
Result Hypotheses 2 Indonesia

Variable	Coeficient	Sig	Conclusion
REM	2.13	0.015	Significant
AEM	5.31	0.006	Significant
IOS	3.84	0.021	Significant
REM*IOS	6.83	0.013	Significant
AEM*IOS	8.11	0.002	Significant
SIZE	4.31	0.000	Significant
Constanta	-4,98	0.000	

Table 6
Result Hypotheses 2 Malaysia

Variable	Coeficient	Sig	Conclusion
REM	3.16	0.007	Significant
AEM	1.23	0.014	Significant
IOS	3.92	0.012	Significant
REM*IOS	0.77	0.036	Significant
AEM*IOS	2.91	0.029	Significant
SIZE	8.34	0.000	Significant
Constanta	-6.63	0.000	

From the table above, we know that in Indonesia and Malaysia, IOS affects the relationship between earnings management and firm value. The findings confirm with the argument from Kallapur and Trombley (1999). Firms with high IOS has greater opportunities to grow in the future compared to companies with low IOS that cause firms with high growth opportunities will have a high information asymmetry between managers with owners and there is the high tendency of managers to manipulate the profit so increase the relationship between earnings management and firm value.

5. CONCLUSION

Indonesia and Malaysia, the earnings management, both REM and AEM, affect the firm value. The firm size also affects the firm value. These results are confirm with Rachmawati and Triatmoko (2007) and Rachmawati (2011), which stated that earnings management has positive effect on firm value, but contrary with Herawati (2008) which stated that earnings management has negative effect on firm value. Managements manage earnings to give a positive signal for the investors about their firm performance so the naive investor will have positive reactions and increases the firm value.

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