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Factors Affecting Real Earning Management: Evidence from Indonesia Stock Exchange

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Abstract

This research aims to analyze the impact of Financial Risk (FR), Information Asymmetric (IA), and Earning Power (EP) on Real Earning Management (REM) of listed trading companies in IDX Indonesia. This study aims to analyze the influence of FR, IA, EP, on REM through Operating Cash Flow, Production expense, and Discretionary Expense. The study employs an unbalanced panel of data set from 2014 to 2018 on the activity of all trading companies (15 in total) as selected samples of 48 feasible samples from 144 existing data. The sample used a non probability sampling method with a purposive sampling technique. This research was classified as causative and tested by multiple linear regression model with cross-sectional analysis. The result indicated a significant impact of FR on REM through PROD and DISX but not through COF. How ever, IA, and EP showed significant impact on REM by means of COF but not go by PROD and DISX..The findings in this study contribute to the users of financial reports particularly the stakeholders in defining the determinants of real earning management practices among firms when it comes to decision making.

Keywords: Financial Risk, Information Asymmetric, Earning Power, Real Earning Management, Indonesia Stock Exchange

JEL Classification Code: G30, G40, M40, M41, M42

1. Introduction

Trading companies are specialized companies that cover all export and import operations and procedures. A trading company buy products in one country and sells them in different countries according to its own distribution network. Indonesia is full of natural resources such as silver, coal, fertile soils, natural gas, petroleum, gold, bauxite, tin, copper, timber, and nickel. In order to stabilize economic growth, Indonesia drive all efforts to reduce the barriers, to attract many investors from around the world to start trading in Indonesia. A company's ability to pay out regular dividends—or cash distributions—goes a long way towards communicating its fundamental strength and sustainability to shareholder. Normally, investors who will decide to invest their capital will do a certain analysis to assess whether the action will provide a favorable dividend, instead of detecting real earnings management (REM). Potential investors are attracted by large real earnings, which is an indicator of the success of a company.

Based on the existing literature, there is an impact of the financial risk (FR), Information Asymmetric (IA), and Earning Power (EP) on Real Earnings Management (REM). This study aims to analyze the influence of FR, AI, EP, on REM through operating cash flow, production expense, and discretionary expense. The study employs an unbalanced panel data set from 2014 to 2018 on the activity of all trading companies (15 in total) with 48 feasible samples of 144 data set. This study uses the abnormal cash flow from operations, abnormal production cost, and abnormal discretionary expenses model (Zhang, Z., 2015) as a proxy for REM.

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2. Literature Review and Hypothesis

2.1. Literature Review

Chae, S. J., Fujitani R., & Nakano, M. (2020), in their study, found that the financial reporting opacity measured by the company's earnings management behavior shows a positive relationship with CRASH, which states that a firm with more opaque financial reporting increases crash risk. These study results indicated that investors' and company stakeholders' decisions are based on organizational financial reports. Mortezaee, M., & Sanji, D. (2016), and Damayanti, A., & Musadieq, M. A. (2017), noticed that financial risk may cause different forms of losses to an entity through unexpected fluctuations in income cash flow and capital changes. Kulapathi, S., Madaphati, S. K., Samineni, R. K., & Puppala, R. B. (2021), by using asymmetric GARCH model, volatility in NSE index returns was checked. The asymmetric parameter (γ) is considered negative, which suggests the survival of leverage effect, i.e., positive information has less impact on useful function than negative surprises. Fatma, N., & Hidayat, W. (2019), showed that, partially, earnings persistence and earnings power affect equity valuation by investors. Earnings persistence has a negative influence, whereas earnings power has a positive influence on equity valuation. Earnings power demonstrates the ability of a firm to increase operating income from assets used. The higher the earnings power owned by the firm, the lower the chances of a profit warning being issued.

Ali, B., & Kamardin, H. (2018), stated that in recent years, increasing attention has been given to real earning management (REM) as an alternative method to accrual-based earning management. Companies have shifted earnings management practices from accruals-based to real activities-based. The study reported different reasons behind this shift such as tightening accounting standards, development of regulations like the SOX Act, a shift in finance sources from internal to external market under the pressure of financial crisis, limitations in using AEM under high audit quality scrutiny, and IFRS mandatory adoption. However, other studies have reported that managers practice both techniques as a substitute or as complementary methods.

Ado, A. B., Ademola, L., Norfadzilah, M., Saheed, R., & Umar A., (2020), explained that earning management may be defined as "reasonable and legal management decision making and reporting intended to achieve stable and predictable financial results". Furthermore, Ghozali, I., Hernawati, R. I., Yuetta, E. N., & Prastiwi, A. (2021), showed that earnings management has a positive effect on the cost of equity capital.

2.2. Research Hypothesis

Based on the theoretical and empirical research of real earning management, the authors set up three research hypotheses on the factors affecting real earnings management.

Financial Risk (FR)

Dang, H. T., Phan, D., Nguyen, T., & Hoang, L. H. T. (2020), reported that financial risks in an enterprise should be evaluated using different tools, and then management can design a plan to control its unexpected and negative effects. Related with these results, this study will construct a hypothesis:

H1: Financial Risk (FR) impact on Real Earning Management (REM) through Abnormal CFO, PROD, DISX.

Information Asymmetric (IA)

Dadbeh, F., & Mogharebi, N. (2013), explained their examination to the effect of information asymmetry on earning management, firm value, corporate diversification, and government, the results indicated that information asymmetry has an effect on earning management. Then, Azemi, N., Afifah, M., Ghani, E. K., & Puspitasari, E. (2017), found that information asymmetry and earnings management have a positive relationship with each other. Related with these results, this study will construct a hypothesis:

H2: Information Asymmetric (IA) impact on Real Earnings Management (REM) through Abnormal CFO, PROD, DISX.

Earning Power (EP)

Onuora, A. C., Okonkwo, F. C., & Okafor, I. (2020), measured earning power following the suggestion of Fatma, N., & Hidayat, W. (2019), and stated that earning power accounts could generate profits (net income) from its core operations. So, earning power has a role to determine whether the firm is worth investing in or not. Related with these results, this study will construct a hypothesis:

H3: Earning Power (EP) impact on Real Earning Management (REM) through Abnormal CFO, PROD, DISX.

3. Research Methods

3.1. Measurement

In this study, independent variables (X_1, X_2, X_3) are the 'cause'. So, its value is independent to other variables. While, dependent variable is the effect. Therefore, its value depends on changes in the independent variable. In this study,

the dependent variable is the Real Earning Management (REM), and Independent variables are Finance Risk (FR) as X_1, Information Asymmetric (IA) as X_2 and Earning Power (EP) as X_3, and Abnormal COF, PROD, and DISX as control variables to examine the impact on dependent variables.

3.2. Data

This study uses secondary data from the IDX (in www.idx.co.id.). Sampling was conducted using purposive sampling which is the method of sampling using certain criteria. Those criteria are, 1) Must be listed on the stock exchange and published audit financial statements are consistent and complete from the year 2014–2018. 2) Must not have incomplete annual report data 3) Must apply Indonesia Rupiah currency in the transaction. Based on the above criteria, 15 firms were selected (see Table 1) from 48 feasible samples of 144 data set were collected (from 2014–2018). After testing the data quality, we found 33 data outliers that must be removed to meet the classical assumption test performance.

4. Empirical Model

The hypothesis test in this research was conducted using multiple regression analysis. The multiple regression equation was used to test the proposed hypothesis. The regression equation of dependent variables is as follows.

4.1. Measurement for Dependent Variable: Real Earnings Management (REM)

Isac, N. S., Rahman, R. A., & Zamria, N. (2013), defined REM as actions managers take that deviate from normal business practices. This study employs three metrics to examine REM, namely abnormal cash flow from operations (REM_CFO), abnormal production costs (RES_PROD), and abnormal discretionary expenses (REM_DISX). Based on the above, the study estimates REM_CFO, REM_PROD, and RES_DISEXP as residuals from the following models, respectively.

4.1.1. Model for REM_CFO

$$CFO_{it}/A_{it-1} = \beta_1[1/A_{it-1}] + \beta_2[Sales_{it}/A_{it-1}] + \beta_3[\Delta Sales_{it}/A_{it-1}] + \varepsilon_{it} \quad [1]$$

Where,
CFO_{it}: cash flow from operations of firm i in period t; A_{it-1} is total assets of firm i in year $t-1$;
$Sales_{it}$: sales of firm i in year t,

Table 1: Selected Company for Sample (*)

No	Code	Company Name	Core of Business
1	AKRA	AKR Corporindo Tbk.	Logistic and Supply Chain (petroleum, chemical, etc.)
2	CSAP	Catur Sentosa Adiprana Tbk.	Distributor and Retail Company
3	EPMT	Enseval Putra Megatrading Tbk.	Health Care Distributor
4	ERAA	Erajaya Swasembada Tbk.	Distribution and Trading Of Telecommunication
5	INTD	Inter Delta Tbk.	Trade Service and Investment
6	LTLS	Lautan Luas Tbk.	Trading Basic Specially Chemical
7	MAPI	Mitra Adiperkasa Tbk.	Retail/Department Store, F&B
8	MICE	Multi Indocitra Tbk.	Distribution (baby product equipment and Pregnant Mother
9	MIDI	Midi Utama Indonesia Tbk.	Retail of Consumer Product
10	RALS	Ramayana Lestari Sentosa Tbk.	The Sale garment and accessories
11	SDPC	Millennium Pharmacon International Tbk.	Distribution and Trading Pharmacy Product
12	TELE	Tiphone Mobile Indonesia Tbk.	Trading of Mobile Phone
13	TGKA	Tigaraksa Satria Tbk.	Trading in Consumer Product
14	TURI	Tunas Ridean Tbk.	Trade Service Investment, Whole Sale durable & non-durable good
15	UNTR	United Tractors Tbk.	Trade Service Investment, Whole Sale durable & non-durable good.

(*) Sources: www.IDX.co.id.

ΔSales$_{it}$: Sales of firm i in year t less sales of firm i in year $t-1$;

ε_{it}: a residual term that captures the level of abnormal cash flow of firm i in year t.

4.1.2. Model for REM_PROD

$$\text{PROD}_{it}/A_{it-1} = \beta_1[1/A_{it-1}] + \beta_2[\text{Sales}_{it}/A_{it-1}]$$
$$+ \beta_3[\Delta\text{Sales}_{it}/A_{it-1}] \qquad [2]$$
$$+ \beta_4[\Delta\text{Sales}_{it-1}/A_{it-1}] + \varepsilon_{it}$$

Where,

product: the sum of Cost of Goods Sold and change in inventory of firm i in year t;

ΔSales$_{it-1}$: sales of firm i in year $t-1$ less sales of firm i in year $t-2$; and all other variables are as previously defined.

4.1.3. Model for REM_DISX

$$\text{DISXP}_{it}/A_{it-1} = \beta_1[1/A_{it-1}] + \beta_2[\text{Sales}_{it-1}/A_{it-1}] + \varepsilon_{it} \qquad [3]$$

Where,

DISEXP$_{it}$: Sum of Research and Development (R&D) expenses and Selling, General & Administrative (SG&A) expenses of firm i in year t; and all other variables are as previously defined.

4.2. Measurement for Independent Variable, Financial Risk (FR), Information Asymmetric (IA), Earning Power (EP)

4.2.1. Model for FR

$$\text{DFL} = \frac{\Delta \text{Percentage change in EPS}}{\Delta \text{Percentage change in EBIT}} \qquad [4]$$

Where,

DFL is the ratio between percentage change of EPS on EBIT at year 1.

4.2.2. Model for IA

$$\text{Bid-Ask. S} = \frac{\text{Ask}_i - \text{Bid}_{i,t}}{\{(\text{Ask}_i + \text{Bid}_{i,t})/2\}} \qquad [5]$$

Where,

Bid-Ask Spread is the difference between bid price for a security and offer price. It represents the difference between highest price of buyer's willing to pay (bid) for security and lowest price a firm i at year t is willing to accept.

4.2.3. Model for EP

$$\frac{\text{Earning}_{st}}{\text{outstanding share}_t} = \alpha + \beta_1 \frac{\text{Earning}_{st-1}}{\text{outstanding share} + \varepsilon} \qquad [6]$$

Where,

EP is a ratio between profit before the firms' extra-ordinary component in year $t(t-1)$ and total weighted average outstanding share in year $t(t-1)$.

5. Empirical Results and Findings

5.1. Descriptive Analysis

Table 2 shows the descriptive statistics for the full sample observations. From the result, Abnormal Production Cost (Abn_REMPROD) shows the highest mean, 22 percent of sample firms engage in REM through (Abn_REMPROD) compared to the other two proxies for REM. The mean value for FR is 9 percent.

Descriptive statistics describe data as seen from the mean, standard deviation, variance, max, min, sum, range of kurtosis, and skewness. The results of data testing are used to perform descriptive statistical analysis using Eviews 9. For the information presented in Table 2 above, the descriptive statistical explanation of each research variable is as follows.

5.2. Real Earnings Management through Cash Flow from Operation (REMCFO)

Abn_REMCFO is the dependent variable for REM which is carried out through CFO and its mean value of -0.06096 is lower than standard deviation value of 0.052473. This is due to a significant change in numbers between companies, so data is not well distributed. As shown in Table 3, the maximum value of Abn_REMCFO (0.043744) is owned by MAPI in 2018, while the minimum value of Abn_REMCFO (-0.14813) is owned by CSAP happened in 2016. The maximum value shows that the company has the greatest potential to achieve REM through CFO, while the minimum value shows that the company has smallest potential.

Financial Risk (FR)

FR is an independent variable and its mean value of 0.354210 is smaller than its standard deviation value of 7.444750. This is due to a significant change in numbers between companies, so data is not well distributed. As seen in Table 3, the maximum value of FR (14.82239) is owned by LTLS in 2016, while the minimum value of FR (-46.0682) is owned by AKRA/the AKR in 2017. The maximum value

Tabel 2: Descriptive Statistics

Abnormal	Mean	Median	Maximum	Minimum	Std. Dev.	Skewness
ABN_REMCFOAB AAABN_REMCFO	−0.06096	−0.0643	0.043744	−14813	0.052473	0.292587
FR	0.354210	0.983693	14.82239	−46.0682	7.444750	−4.97626
AI	0.579453	0.468466	1.633178	0.025974	0.367552	1.359658
EP	5.508364	11.33628	172.6485	−61.6726	33.34376	2.115073
ABN_REMPROD	0.220721	0.242347	0.467865	−0.29865	0.195800	−0.65171
FR	0.098916	0.904059	14.82239	−46.0682	7.545374	−4.71756
AI	0.528330	0.449336	1.633178	0.025974	0.344092	1.499113
EP	8.895177	14.18344	531.3425	−854.918	176.4445	−1.56343
ABN_REMDISX	−0.081379	−0.190741	0.376442	−0.363474	0.221975	0.836635
FR	0.215519	0.897818	14.82239	−46.06824	7.418672	−4.97443
AI	0.551198	0.474293	1.514314	0.025974	0.314205	1.271136
EP	6.150830	9.956283	172.6485	−61.67256	33.45037	2.115954

Table 3: The Equations of Regression Results

Variable	Abn_REMCFO		Abn_REMPROD		Abn_REMDISX	
	Coefficient Prob.		Coefficient Prob.		Coefficient Prob.	
C	−0.085284	0.0000	0.228267	0.0002	−0.077048	0.2729
FR	0.000369	0.6685	0.007648	0.0021	0.009587	0.0004
IA	0.037643	0.0436	−0.038488	0.3759	0.000619	0.9921
EP	0.000431	0.0303	−0.000115	0.1308	0.000819	0.1353

is obtained by a company that has largest FR compared to other companies with minimum value, that has smallest FR.

Information Asymmetric (IA)

IA is an independent variable and its mean value of 0.579453 is greater than its standard deviation value of 0.367552, which indicates that the data is well distributed. As seen in table 3, the maximum value of IA (1.633178) is owned by MAPI/Mitra Adiperkasa Tbk in 2018, while the minimum value of IA (0.025974) is owned by INTD/the company Inter DeltaTbk in 2014. The maximum value is obtained by a company that has largest IA compared to other companies with minimum value, that has smallest IA level.

Earnings Power (EP)

EP is the independent variable and its mean value of 5.508364 is smaller than its standard deviation value of 33.34376. This is due to a significant change in numbers between companies so data is not well distributed. As seen in table 3, the maximum value of EP (172.6485)

is owned by ERAA in 2018, while the minimum value of EP (−61.6726) is owned by ERAA in 2014. The maximum value is obtained by a company that has largest EP compared to other companies with minimum value that has smallest EP.

5.3. Real Earning Management through Production Costs (REMPROD).

Abn_REMPROD is dependent variable for real REM which is carried out through PROD and its mean value of 0.220721 is greater than standard deviation value of 0.195800 which as well distributed data. As seen in Table 3, the maximum value of Abn_REMPROD (0.467865) is owned by TURI in 2015, while the minimum value of Abn_REMPROD (−0.29865) is owned by AKRA in 2017. The maximum value is obtained by company that has greatest potential to achieved real earnings management through PROD, while company with minimum value has smallest potential to achieve it.

Financial Risk (FR)

FR is an independent variable and its mean value of 0.098916 is smaller than its standard deviation value of 7.545374. This is due to a significant change in numbers between companies which, so data not well distributed. As seen in Table 3, the maximum value of FR (14.82239) is owned by LTLS in 2016, while minimum value of FR (−46,0682) is owned by AKRA in 2017. The maximum value is obtained by company that has largest FR compared to other companies with minimum value that has smallest FR.

Information Asymmetric Information (IA)

IA is an independent variable and its mean value of 0.528330 is greater than its standard deviation value of 0.344092, which shows that the data is well distributed. As seen in Table 3, maximum value of IA (1.633178) is owned by MAPI in 2018, while minimum value of IA (0.025974) is owned by INTD in 2014. The maximum value shows that the company has the largest IA compared to other companies, while company with minimum value that has smallest IA.

Earnings Power (EP)

EP is independent variable and its mean value of 8.895177 is smaller than its standard deviation value of 176.4445. This is due to a significant change in numbers between companies, so data is not well distributed. As seen in table 3, the maximum value of EP (531.3425) is owned by UNTR in 2018, while the minimum value of EP (−854,918) is owned by UNTR in 2014. The maximum value is obtained by company that has largest EP compared to other companies with minimum value that has smallest EP.

5.4. Real Profit Management through Discretionary Costs (REM_DISX)

Abn_REMDISX is the dependent variable for real earnings management (REM) through discretionary costs (advertising, sales, general and administrative expenses) and Mean Value of −0.081379 is smaller than its e standard deviation value of 0.221975. This is due to a significant change in numbers between companies, so data is not well distributed. As seen in Table 3, maximum value of Abn_REMDISX (0.3676442) is owned by TELE in 2017, while the minimum value of Abn_REMDISX (−0.363474 is owned) by AKRA in 2016. The maximum value is obtained by company that has greatest potential to achieve REM through DISX while the minimum value shows that the company has the smallest potential.

Financial Risk (FR)

FR is an independent variable and its mean value of 0.215519 is smaller than its standard deviation value of 7.418672. This is due to a significant change in numbers

between companies, so data is not well distributed. As seen in Table 3, the maximum value of FR (14.82239) is owned by LLT in 2016, while the minimum value of FR (−46,0682) is owned by AKRA in 2017. The maximum value is obtained by company that has largest FR compared to other companies with minimum value is obtained by company that has smallest FR.

Information Asymmetric (IA)

AI is an independent variable and its mean value of 0.551198 is greater than its standard deviation value of 0.314205 which shows that data is well distributed. As seen in table 3, the maximum value of IA (1.514314) is owned by INTD in 2018, while minimum value of IA (0.025974) is owned by INTD in 2014. The maximum value shows that the company has largest AI, while minimum value obtained by company that has smallest AI.

Earnings Power (EP)

EP is the independent variable and its mean value of 6.150830 is smaller than its standard deviation value of 33.45037. This is due to a significant change in numbers between companies, so data is not well distributed. As seen in table 3, maximum value of EP (172.6485) is owned by ERAA in 2018, while the minimum value of EP (−61.6726) is owned by ERAA in 2014. The maximum value shows that the company has largest EP, while the minimum value shows that the company has the smallest EP.

5.5. Findings

In this study, hypothesis testing will use multiple regression analysis consisting 15 companies as selected samples of 48 feasible sample from 144 data set were collected (from 2014–2018). The equation used in this study for real earnings management is as follows

$$Abn\_REM = \alpha + \beta_1 FR + \beta_2 IA + \beta_3 EP + \varepsilon$$

The analysis of the multiple regression model is presented in Table 3.

In Table 3, the regression equation developed some equation models such as,

$$Abn\_REM\ CFO = -0.085284 + 0.000369\ FR \\ + 0.037643\ AI + 0.000431\ EP + \varepsilon$$

Whereas, by 1% increase in the average level of REM, means that there are an increase FR level by 0.0369%, IA level by 3.764%, and EP level by 0.0431%. This means there is a significant positive association

$$Abn\_REM\ PROD = 0.228267 + 0.007648\ FR \\ - 0.038488\ AI - 0.000115\ EP + \varepsilon$$

Whereas, by 1% increase in the average level of REM, there will be an increase FR level by 0.7648%, IA level decreases by 3.8488%, and EP level decreases by 0.1151%. This means there is no significant positive association

$$\text{Abn\_REM DISX} = -0.077048 + 0.009587 \text{ FR} + 0.000619 \text{ AI} + 0.000819 \text{ EP} + \varepsilon$$

Whereas, by 1% increase in the average level of REM, there will be an increase FR level by 0.9587%, IA level increases by 0.0619%, and EP level increases by 0.0819%. This means there is a significant positive association.

6. Conclusion

Based on the results of this study, there is a significant positive impact of FR, IA and EP on REM through PROD and DISX but not by mean COF. There is a significant impact of IA on REM through COF but not go by PROD and DISX. Finally, there is a significant impact of EP on REM through COF but not through PROD and DISX. The results of this study can be implicated for companies and investors, namely for companies - it is expected that companies must pay attention to factors that impact REM significantly as well as pay attention to factors that do not impact on REM or factors that are less significant. On the other hand, investors must make capital investment decisions by looking at real earning management so that investors make appropriate and profitable investments

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