

# The Influence of Asymmetric Information on the Cost of Capital with the Earnings Management as Intervening Variable

Nuryaman

Widyatama University, Bandung, Indonesia

Email:nuryaman.nuryaman@gmail.com

**Abstract**—The aim of this research is to provide empirical evidence on the influence of asymmetric information on the cost of equity capital with earnings management as intervening variable. Population and sample of the research are public company manufacturing sector listed in Indonesia Stock Exchange during the year of 2010. Hypothesis testing is conducted by using multiple regression analysis method. The results of this research indicated that: (a) asymmetric information had positive influence on the cost of equity capital; (b) asymmetric information had positive influence on the earnings management; and (c) the research did not prove that the role of earnings management as intervening variable on relation between asymmetric information and the cost of equity capital.

**Index Terms**—asymmetric information, cost of equity capital, earnings management.

## I. INTRODUCTION

Earnings information on the company's financial reports is one of the parameters in the measurement of the performance of the company. Earnings information is often used to assess the potential changes in the economic resources that may be controlled in the future, generate the cash flow from existing resources, and to formulate the consideration of the effectiveness of the company in utilizing additional resources [1].

Earnings information as the part of financial statements often becomes the manipulative target of financial reporting through the action of opportunistic management, in order to maximize their satisfaction. The opportunistic actions are done by selecting certain accounting policies, so that the earnings of company could be organized, raised or lowered according to their desire. The behavior of management to organize the earnings in accordance with his wishes is known by the term of earnings management [2].

U-Thai [3] conducted a comparative research of earnings management practices among countries and Indonesia is included as sample. Based on the average value of score of earnings management, Indonesia is a country on the 10<sup>th</sup> rank from 33 countries as research sample, and considered high. Earnings management

practices could lead to the earnings information that does not longer reflect the real source of economic development of a company, so that the basis of decision-making for economic development, earnings information would lose its relevance.

One of the causes of the occurrence of earnings management practices is the asymmetric information. Richardson (1998) argues that there is a systematic relation between asymmetric information and earnings management level. Asymmetric information arises when managers are more aware of internal information and prospects of the company in the future compared to shareholders and other stakeholders. Asymmetric information would encourage managers to present information, which is not actual; especially if the information relates to the measurement of the managers performance.

Research on the relationship between asymmetric information and earnings management indicates that asymmetric information positive associated with earnings management. In the conditions of high asymmetric information, would open the opportunity for the management of company to use the flexibility to select the methods and the accounting policies to meet the desired earnings targets of the managers [4]-[6].

Financial statement is one means of communication providing information intended to reduce the asymmetric information between management and the owner of the company, however, in practice, this communication often does not run perfectly because of the manager's interests are not always aligned with the interests of the investors [7].

Theoretically, the asymmetric information could affect investors' trust through the estimation of risk by investors. If a stock has high asymmetric information, then investors would assess that the investment has a high risk, due to the costs of equity capital become high and vice versa. Previous research showed that there was positive relationship between asymmetric information and costs of capital [8]-[10].

Dechow *et al.* [11] examines the causes and consequences of earnings manipulation action, in which one of its objectives is to find out the extent of the impact of earnings manipulation on the cost of capital. Comparative analysis on the results among the companies

getting sanctions from the SEC because of alleging manipulation of earnings with other companies, which are, not alleged manipulation of earnings, it could be concluded that the cost of capital of companies getting the sanctions from the SEC is significantly higher than the non-sanctioned company.

In the capital market mechanism, market makers also face the agency problem. Market participants interact in the capital markets, and make transaction of purchase and sale of securities. They do the activities primarily influenced by information they receive, direct or indirect information (insider trading). Dealer or market-makers face a potential loss when transacting with informed traders, because the dealer does not have superior information. To cover losses, dealer would increase earnings (increase its spread) against liquid merchant. So that, asymmetric information between the dealers and the informed traders is reflected on their determined spreads.

The results of previous research in manufacturing industry in Indonesia provide empirical evidence that earnings management have positive and significant influence on the cost of equity capital [5]-[12]. The contrary to result of research, Anthony (2008) which was unable to prove the relationship between the earnings management and the cost of equity capital [10].

The relation among asymmetric information cost of capital, earnings management practices are interested to be examined. Based on explanation above, previous researchers have been successful to prove the relationship between asymmetric information and the cost of equity capital [8]-[10], as well as the relationship between the asymmetric information and the earnings management practices [4]-[6].

Based on the above description, there is a phenomenon that is: inconsistent result of research on relationship between earnings management and cost of capital, and the possibility that the earnings management could be an intervening variable on the relation between asymmetric information and the cost of equity capital.

## II. OBJECTIVE

This research aims to examine: (1) the influence of asymmetric information on the cost of equity capital; (2) the influence of asymmetric information on the earnings management; (3) the influence of the earnings management on the cost of equity capital; (4) the influence of earnings management as intervening variables on the relationship between asymmetric information and costs of equity capital.

This research is different from previous research, this research attempts to examine the role of variable of earnings management as intervening variable on the relationship between asymmetric information and capital costs.

## III. THEORETICAL FRAMEWORK

### A. Asymmetric Information

Asymmetric information is a situation when the managers have access to information on the prospect of a

company that is not owned by the parties outside the company. According to Scott [2], there are two kinds of asymmetric information: (1) Adverse selection, namely that the managers as well as those insiders find out more about the conditions and the prospects of the company than outside investors and required information by shareholder for decision making are not delivered by managers; (2) Moral Hazard, that is activities conducted by a manager that are not entirely noticed by shareholders and lenders. Therefore, the Manager could perform actions outside the knowledge of shareholders.

There are three approaches in estimation of asymmetric information, namely: (1) According to analyst forecast. This method is used by the Kharisnawaswarmi and Subramanyam (1998), Gilson et al. (1998) in [13], Proxy used was accuracy of analyst predictions over the earning per share (EPS) and prediction of analysts as a measure of the asymmetric information. Problems often arising from this calculation are those analysts often being over-reacting to the positive information and being under-reacting to negative information. (2) Based on investment opportunities, Gilson et al. argued that companies with a high growth rate had a better ability to predict the cash flow in the coming period. The prediction is based on the assets of the company. Some of the widely used proxies are the ratio of market value to book value of equity, market to book value of the asset, the price-earnings ratio. (3) Based on the theory of market microstructure. The widespread attention of this theory is how prices and trading volume could be formed. To see both of these factors are formed through the bid-ask spread stating that there is a component of spread that also contributes the losses experienced by dealers (companies) when conducting transactions with the informed traders.

The bid-ask spread is the difference among the highest purchase prices which the trader (stock trader) is willing to buy a stock with the lowest selling price which the trader is willing to sell the stock. Stoll (1989) in [14] states that the bid ask spread is a function of three components of cost from: 1) inventory holding; 2) order processing; 3) asymmetric information, and the bid-ask spreads could be served as a good proxy for measuring the asymmetric information. In this research the author applies the approach of microstructure theory with proxy of the bid-ask spread, using two proxy, such: 1) variable of stock market price (quotes) measured by the average bid-ask price on the last trading day for one particular year; 2) a variable of return volatility as measured by the daily return of the company [15].

### B. Earnings Management

According to [16] earnings management is a condition in which the management intervenes in the process of preparation of financial statements for external parties in order to level, increase and decrease the earnings reporting. Management could use the concessions of the use of accounting method, make policies (discretionary) that could accelerate or delay the costs and income, so

that the company's earnings is smaller or larger as expected.

There are two points of view of earnings management [17], namely: (1) Earnings management is opportunistic behavior of management to maximize its utilities in relation to compensation, contract debt, and the cost of politics (Opportunistic Earnings Management); (2) Earnings management reviewed from an efficient contracting (Efficient Earnings Management), when earnings management give manager flexibility to protect themselves and company in anticipating the unexpected events that are in the interest of the parties involved in the contract.

[18]states that the definition of earnings management contains several aspects. The first intervention of earnings management on financial reporting could be done using judgment, such judgment required to estimate a number of future economic events indicated in the financial report, such as estimates of the age of economical and residual value of fixed assets, the responsibility for pension, postponed tax, losses receivable account and decline in value of the asset. In addition, managers have the option of accounting methods, such as the depreciation method and the method of cost. Secondly, the purpose of the earnings management is to mislead stakeholders regarding to the economic performance of the company. It arises when management has access to information that is not accessible by outside parties.

### C. Cost of Capital

Cost of equity in a company is an expected return for investors when they invest their money in the company [19]. Rational investors expect the investment could provide a return that corresponds to the CAPM model covering the risk free return of which they usually earn through investments in risk free securities and risk premium when they invest in risky companies. In other words, the cost of equity only refers to the rate of return of which invest or rights for its investments at a particular company [20].Calculation of the cost of capital is calculated based on a long-term source of funding available for the company. There are four sources of long-term funds, namely: (i) long-term debt, (ii) preferred stock, (iii) common stock, and (iv) earnings balance. The cost of long-term debt is debt costs after present time tax to get long-term funds through loans. Cost of preferred stock is preferred stock dividend divided by the results of the annual sales of preferred stock. Cost of capital stock or equity is the magnitude of the rate that is used by investors for counting expected dividend received in the future.

The measurement of the cost of common stock capital (the cost of equity capital) are affected by valuation models used by the company. There are several valuation models of company, namely: (1) Constant growth valuation model. According to this model, the value of shares equal to the present value of dividends that would be received in the future (assumed at constant growth rates) within the unlimited time and this model is known as the Gordon model; (2) Capital Asset Pricing Model

(CAPM).Based on CAPM model, the cost of common stock capital is the rate of return expected by investors as compensation for the risk that couldnot be diversified as measured by Beta. Beta is a measure of the volatility of the return of a security or a portfolio toward the return of the market. (3) Ohlson Model. [8] Olson modelis used to estimate the value of a company based on the value of equity book plus the present value of abnormal return.

Measuring cost of equity capital used in this research is a model of Capital Asset Pricing Model (CAPM) applied by Komalasari and ZakiBaridwan (2000) in Murni (2003):

$$CEC_{it} = R_{ft} + (R_{Mt} - R_{ft}) \beta$$

Description:CE  $C_{it}$  = Estimation of cost of capital;  $R_{ft}$ =risk free rate of return proxy with the SBI interest rate in one month ;  $\beta$  =Beta of market;  $R_{Mt}$  =market return Rate obtained from the composite stock price index (IHSG) at day t plus IHSG day t-1 divided by IHSG on t-1.

### D. The Relationship between Asymmetric Information and Cost of Capital

Asymmetric information occurs when one of the party's transacting know more information about the company than by others. In the context of Agency theory when the Manager (agent) more aware of internal and prospects information of companies in the future compared to shareholders and other stakeholders (principal) would lead to the occurrence of the asymmetric information. When asymmetric information condition occurs, then any disclosure made by a manager could affect the stock price, because the asymmetric information between more-informed investors and less-informed investors raises transaction costs and reduced liquidity expected in the market for shares of the company. The greater the asymmetric information between market participants would produce larger transaction costs and lower liquidity, return required by the investors rises and stock prices declines.

[20]Diamond *et al.* pointed out that by the disclosure of information, the demands of financial compensation declines as the transaction costs declines, so the bid ask spread is reduced and ultimately the cost of equity capital down. Furthermore, Kim and Varencia in [21] show the model, announcement of earnings in public has reduced the cost of transactions process individually or institutionally as the same information received by the participants. The high cost of the transaction process would reduce the liquidity of the market. Low market liquidity and high asymmetric information would cause the demand for stock declines, stock prices decline and costs of equity capital increase. The reduction of asymmetric information would reduce transaction costs, in which transaction costs are represented by the bid-ask spreads.

The previous researches suggests that support the relationship between disclosure information and capital costs supported by two ideologies. First, greater information disclosure would reduce the asymmetric information so that the demand for the securities stocks

increased and transaction costs decreased, then the cost of equity capital declines [22]-[23]. While [24], based on his research at BEI has found out that asymmetric information has positive relationship with the cost of capital, and the disclosure of information has negative relationship with the cost of equity capital.

When the stock market in a situation of imperfect competition, information asymmetry can affect the company's cost of capital. When the market is in perfect competition with a number of merchants are not many (unlimited), as same as on the Indonesia Stock Exchange, then any investor can affect stock prices, and can affect the slope (upward sloping) demand curve. Investors who have better information company, will have a demand curve is steeper than the demand curve for shares owned by investors who have less information of firm. When information held by different investors (information asymmetry), then the price curve will also show different forms, so that the level of information asymmetry will have an impact on stock prices [25].

Research Hypothesis ( $H_{A1}$ ): Asymmetric information positively effects on the cost of equity capital.

#### E. *The Influence of Asymmetric Information on the Earnings Management*

Ujiyanto (2007) in Utami [10] stated that the agent in a position to have more information about the work environment, capacity, and the company as a whole compared to the principal. Assuming that individuals act to maximize self-interest, then with asymmetric information that he would encourage agents to hide some information that is unknown by the principal. In these kinds of conditions, the principal is often on unprofitable position. In the presentation of accounting information, particularly the preparation of the financial report, agents also have the asymmetric information in order to be more flexible to affect financial reporting to maximize their interests. The objective of financial statements is to provide information concerning to the financial performance. However, because of the asymmetric conditions, then the agent could manipulate accounting figures presented in the financial statements by conducting the earnings management.

Novianty examined the influence of the asymmetric information on the earnings management practices and their impact on the cost of equity capital [5]. The results of the research concluded that the asymmetric information has significant effects on earnings management practices. Earnings management simultaneously has positive influence on the cost of equity capital, the empirical evidence proves that the higher accrual ratio of working capital with the sale on the company's financial statements so the investors would respond to the situation by raising the cost of equity capital.

Research hypothesis ( $H_{A2}$ ): the asymmetric information positively effects on earnings management

#### F. *The Influence of Earnings Management on the Cost of Capital*

Dechow *et al.* (1996) in Utami [12], described the results of his research on the cause and the consequence

of the action of earnings manipulation, in which one of the goals of his research is to know the extent to which the effects of the earnings manipulation on the cost of capital. The motive of management conducts manipulation is to acquire external funding with cheap costs. The proxies used to measure the cost of capital are: (1) the stock price, (2) the bid-ask spread, and the number of analyst following. From the results of the comparative analysis among the companies got sanctions from the SEC because of alleged manipulation of earnings and other companies that did not get sanctions from the SEC (control sample) it could be concluded that the company's cost of capital with the SEC sanctions significantly higher compared to the control sample.

[26] Stolowy and Breton conducted literary research concerning to the manipulation of accounts (account manipulation), covering the earnings management. They explained that the manipulation of accounting was conducted solely based on the management's desire to influence the perception of investors over the company's risks. The higher the level of earnings management showed the higher return stock risk and consequently the investors would raise the cost of equity capital rate.

Research hypothesis ( $H_{A3}$ ): Earnings Management positively effects on the costs of equity capital

#### G. *The Role of Earnings Management as Intervening Variable*

Asymmetric information is the required condition to perform actions of earnings management [27], in this condition, the management has the opportunity to do the earnings management practices. When asymmetric information is high, the management has more private information than the investors, management does not feel worried the earnings management practices would be detected by investors, thereby encouraging management to perform earnings management actions. [4] Richardson found out that the asymmetric information had positive relationship with earnings management.

This earnings management actions directly or indirectly effect on the integrity of the financial statements, so the earnings information reported is not qualified, and have an impact on increasing risk. On high-risk stocks trading would have an impact on the stock price and the cost of equity capital. The higher the level of earnings management indicates the higher return stock risk and consequently investors would raise the cost of equity capital rate. When investors realize that the earnings management practices performed by issuers then he would anticipate the risks by means of raising the required return rate of stock.

Research hypothesis ( $H_{A4}$ ): Earnings management mediates the influence of asymmetric information on the cost of equity capital.

## IV. RESEARCH METHODS

### A. *Population and Sample*

The population in this research is the manufacturing company listed in BEI during the year period of 2010, in

which the company had complete financial reports and published. Based on data from the Indonesia Stock Exchange (BEI) manufacturing company which published financial reports and acted as the population of this research during the year period of 2010, there were 202 companies.

Sampling techniques in this research is the purposive sampling. Samples are taken as many as 150 manufacturing companies listed on the BEI on the year period of 2010. The specified criteria for the selection of the sample: (1) Manufacturing companies were listed on the Indonesia Stock Exchange (BEI) in year period of 2010 and published financial reports consistently and completely during the year period of 2010; (2) Manufacturing companies that did not restructure (merger) in the year period of 2010.

### B. Methods of Data Collection

The research used secondary data obtained from sources outside the company; the source of the data was in the form of annual financial reports of listed manufacturing companies in BEI in 2010 and price data and trading volume of the stock. The researchers searched the required information for this research by visiting the website of BEI (www.idx.co.id) or downloaded the financial report.

### C. Operational Variable

Research variables used in the research were asymmetric information (quotes and volatility of return) as the independent variable (X), size, growth, market to book value equity and debt to equity ratio as the control variables and earnings management (Y1), as well as the cost of equity capital (Y2) as the dependent variable

#### 1) Asymmetric information

Asymmetric information in this research would be measured by using the bid-ask spread that is the difference between the highest purchase price and the lowest selling price of shares traded. Bid-ask spreads could be proxied with quotes and standard deviation of return (Richardson, 1998). In detail, the asymmetric information variable is defined as follows:

##### a) Quotes (QU)

Quotes is the price of the stock market as measured by the average of bid-ask price on the last trading day for one particular year (Stoll, 1978). The Data is taken during 1 (one) year.

##### b) The volatility of return (VR)

Volatility of return variables reflects the volatility of the company's revenue defined as the coefficient of variation of the earnings (Welker, 1995). These variables are measured by using the deviation standard of the monthly price of the stock company for 1 (one) year.

#### 2) The control variable

##### a) Company size (Size)

This variable shows the magnitude of company size during a certain period, as measured by using the log total assets.

##### b) DebtEquityRatio (DER)

This variable reflects the ratio of debt to equity of a company. This variable is measured by using the value of long term debt divided by the value of equity book for 1 (one) year.

#### 3) Earnings Management (ML)

This variable is measured by using the discretionary accounting accrual as a function of the difference of the real accrual accounting ( $TACC_{it}$ ) minus the expected accrual accounting ( $NDTACC_{it}$ ). The following methods are steps used by Jones (1991) in his calculation.

a) Calculation of total accruals (TAC) by using the formula:

$$TACC_{it} = EBXT_{it} - OCF_{it}$$

b) Calculation of the non-discretionary total accruals (NDTACC) using the formula:

$$NDTACC_{it}/TA = \alpha_0 + \alpha_1 (\Delta REV_{it}/TA - \Delta REC_{it}/TA) + \alpha_2 (PPE_{it}/TA)$$

c) Calculation of the discretionary accruals (DACC) by using the formula:

$$DACC_{it} = TACC_{it} - NDTACC_{it}$$

Description:  $TACC_{it}$  = Total Accruals of company i in t period ;  $EBXT_{it}$  = Earning Before Extraordinary Items of the company i in t period ;  $OCF_{it}$  = Operating Cash Flow of the company i in t period ;  $REV_{it}$  = Revenue of company i in t period ;  $REC_{it}$  = Receivable company i in t period ;  $PPE_{it}$  = Property, plant and equipment (value of fixed assets or gross) of company i in t period ;  $\varepsilon_t$  = error = discretionary accrual or managed accounting accrual

#### 4) The cost of equity capital

It is the cost incurred to finance spending source (source of financing). Cost of capital is calculated on the basis of a long-term source of funding available for companies (Mardiyah, 2002). This variable is measured by using a model of the Capital Asset Pricing Model (CAPM) as applied by Komalasari and Zaki Baridwan (2000):

$$CEC_{i,t} = R_{ft} + (R_{Mt} - R_{ft}) \beta$$

Description:  $CEC_{i,t}$  = Estimated cost of capital ;  $R_{ft}$  = risk free rate of return (risk free rate) that proxy with the SBI interest rate in one month;  $\beta$  = Beta of Market;  $R_{Mt}$  = Market return rate obtained from the composite stock price index (IHSG) on day t plus IHSG on day t-1 divided by IHSG on t-1.

### D. Methods of Data Analysis

The data obtained during the research process is then analyzed and interpreted further to get more detailed results, to answer the existing problems in this research.

The Analysis Model used to examine the hypotheses in this research was a model of multiple regression analysis.

The regression equation model is as follows:

$$Y_1 = \alpha_1 + b_1X_1 + c_1X_3 + d_1X_4 + e \dots \dots \dots (3.1)$$

$$Y_1 = \alpha_2 + b_2X_2 + c_2X_3 + d_2X_4 + e \dots \dots \dots (3.2)$$

$$Y_2 = \alpha_3 + b_3X_1 + c_3X_3 + d_3X_3 + e \dots \dots \dots (3.3)$$

$$Y_2 = \alpha_4 + b_4X_2 + c_4X_3 + d_4X_4 + e \dots \dots \dots (3.4)$$

$$Y_2 = \alpha_5 + b_5X_1 + f_1Y_1 + c_5X_3 + d_5X_4 + e \dots \dots \dots (3.5)$$

$$Y_2 = \alpha_6 + b_6X_2 + f_2Y_1 + c_6X_3 + d_6X_4 + e \dots (3.6)$$

Description:  $X_1$  = Quates;  $X_2$  = Volatility return;  $X_3$  = Company Size;  $X_4$  = Debt to Equity Ratio;  $Y_1$  = Earnings Management;  $Y_2$  = Costs of Equity Capital;  $e$  = Residual Error

## V. RESULT AND DISCUSSION

According to the Table I can be described that bid-ask price variable (quates) sample firms have an average of 0.00213 (0.213%) with a standard deviation of 0.0025, mean of volatility return company 0.017 with a standard deviation of 0.163. The average value of discretionary accrual = 0.08 (8 %). The average of cost of capital (COC) 0.0723 with standard deviation 0.291. The average of log total asset = 0.0097, and the average of leverage (DER) = 0.41 with a standard deviation is 1.71.

TABLE I. DESCRIPTIVE STATISTICS

	N	Min.	Max.	Mean	Std. Deviation
QU	152	1.0000	9.85000E2	2.135749E2	2.53331E2
VR	152	.0000	2.01200	.0176447	.16326
SIZE	152	.0000	9.75950E2	2.132572E2	2.60120E2
DER	152	-8.78	12.83	.4107	1.71722
DACC	152	.000	5.268E5	8.79278E2	5.6694E4
COC	152	-1.58	2.00	.0723	.29193
Valid N	152				

Notes : QU= QUATES: Bid-ask price= Information asymmetry; VR: Volatility return= information asymmetry; SIZE: Log total assets = Firm Size; DER: Debt to Equity Ratio= leverage; DACC: Discretionary accrual= Earnings management; COC: Cost of Capital = Cost of equity capital.

The result of simultaneously regression model shows that the adjusted R square of 0.213 means that the DER, SIZE, and QUATES simultaneously effect on the costs of equity capital (COC). Noticing F test shows the level of significance of 0.056, so the independent variables effect simultaneously at the level of significance of 0.1, and analysis could proceed.

TABLE II. TEST OF CLASSICAL ASSUMPTIONS

Variable	VIF-COC	VIF-DACC
Quates	1.003	1.0002
V.Return	1.002	1.0001
Size	1.001	1.0003
DER	1.003	1.0004

To obtain the regression results in an efficient and accurate, the data must be free from violations of classical assumptions. Based on the three criteria test data underlying the classical assumptions obtained the following results: Table II seem variance inflation factor values (VIF) of less than 10 (VIF <10). So we can conclude the analysis model does not occur multicollinearity.

Heteroscedasticity test use Glejser test [20]. In Table III it appears that all the regression coefficients of independent variables are not significant, because the value of SIG > 0.05. It can be concluded not happen heteroscedasticity.

TABLE III. HETEROSCEDASTISITY TEST

Independent variable	COC
Quates	0.25
Volatility	0.18
Size	0.22
DER	0.33

For normality test using the Kolmogorov-Smirnov (Singgih Santosa, 2002), testing criteria is if the number of significance (SIG) > 0.05, then the data were normally distributed. After testing the significance of the SIG > 0.05, thus the research data were normally distributed.

TABLE IV. COEFFICIENTS

	Unstand. Coeff.		Stand. Coeff.		
Model	B	Std. Error	Beta	T	Sig.
A	.100	.036		2.749	.007
QU	.00178	.000924	.174	1.928	.065
SIZE	-.000036	.0002	-.146	-1.826	.070
DER	-.026	.014	-.152	-1.891	.061

Note: Dependent variable = COC; A = constant; QU: Quates = bid ask price; Size = log total assets; DER = debt to equity

As presented in Table IV above, the table shows that the coefficients of the regression Quates variables are 0.00178 with significance level of 0.065. The coefficient is marked positive indicating the direction of the positive relationship, in accordance with the hypothesized theory. Noticing the level of significance, then the first hypothesis stating that the asymmetric information positively effects on the costs of capital is acceptable on the level of significance of 0.1. The result of this research means that asymmetric information condition has an impact on the high cost of equity capital.

TABLE V. COEFFICIENTS

	Unstand. Coeff.		Stand. Coeff.		
Model	B	Std. Error	Beta	t	Sig.
A	.117	.031		3.809	.000
SIZE	.000	.000	-.144	-1.781	.077
DER	-.026	.014	-.154	-1.920	.057
VR	.002	.144	.001	.014	.989

Notes: Dependent variable = COC; a = constant; Size = Log total sales; DER = Deb to equity; VR = volatility return

As presented in Table V above, the table shows that the regression coefficient of the variable Volatility Return as proxy of asymmetric information is 0.002 with significance level of 0.989. The coefficient marked positive indicating the direction of the positive relationship, in accordance with the hypothesized theory.

Noticing to the level of significance 0.05, the coefficient is not significant.

TABLE VI. COEFFICIENTS

Model	Unstand. Coeff.		Stand. Coeff.		Sig.
	B	Std. Error	Beta	t	
A	14480.42	7177.44		2.017	.045
SIZE	-4.34	17.831	-.020	-.244	.808
DER	228.78	2700.67	.007	.085	.933
QU	-22.73	18.320	-.102	-1.241	.217

Notes: Dependent variable=DACC; a=constant; Size=Log total sales; DER= Deb to equity; QU: Quates=bid ask price

As presented in Table VI above, the table shows that the regression coefficient variable Quates as proxy of asymmetric information is -22.732 with the significance level 0.217. The coefficients marked negative indicating a negative relationship direction, is incompatible with the hypothesized theory. Noticing the level of significance, the second hypothesis stating that the asymmetric information positively effects on earnings management are not acceptable on the level of significance of 0.1.

TABLE VII. COEFFICIENTS

Model	Unstand. Coeff.		Stand. Coeff.		Sig.
	B	Std. Error	Beta	T	
A	8982.407	5710.687		1.573	.118
SIZE	-12.138	16.777	-.056	-.723	.471
DER	455.620	2531.500	.014	.180	.857
VR	125346.65	26730.809	.361	4.689	.000

Notes: Dependent variable=DACC; a=constant; Size=Log total sales; DER= Deb to equity; VR=Volatility return

As presented in Table VII above, the table shows that the regression coefficient of the variable Volatility return as proxy of asymmetric information is 125346.6, with the significance level of 0.000. The coefficient marked positive indicates that the direction of the positive relationship, in accordance with the hypothesized theory. Noticing the level of significance of 0.000, then the second hypothesis stating that the asymmetric information positively effect on earnings management are acceptable at the level of significance of 0.01. This means that the asymmetric information has motivated earning management practices in financial reporting.

TABLE VIII. COEFFICIENTS

Model	Unstand. Coeff.		Stand. Coeff.		Sig.
	B	Std. Error	Beta	t	
A	.101	.037		2.740	.007
SIZE	.000	.000	-.147	-1.825	.070
DER	-.026	.014	-.152	-1.883	.062
QU	.0015832	.0008346	.163	1.897	.071
DACC	-9.538E-8	.000	-.019	-.229	.819

Notes: Dependent variable=COC; a=constant; Size=Log total sales; DER= Deb to equity; QU: Quates= bid ask price; Dacc=discretionary accrual

Based on the Table VIII above it appears that the coefficient variable of DACC (-9.538-E-8) are marked negative with the significance level of 0.819, it could be concluded that the third hypothesis stating that there is a positive relationship between the DACC and COC could not be supported. The conclusion is that the DACC has no effect on the COC and the hypothesis stating that there is the influence of the earnings management on the capital costs is not acceptable.

Further analysis shows that the regression coefficient of quates is lower than before, when variable DACC and Variable quates get into regression simultaneously to the COC. The presence of earnings management has reduced the coefficient of relationship between Quates and COC, in accordance with the theory that variable of earnings management could act as an intervening variable, however, as the relationship between DACC and COC is not significant, it could be concluded that earnings management as intervening variable of the relationships between Quates and capital costs could not be supported, the fourth hypothesis is not acceptable.

TABLE IX. COEFFICIENTS

Model	Unstand. Coeff.s		Stand. Coeff.		Sig.
	B	Std. Error	Beta	T	
A	.119	.031		3.811	.000
SIZE	.000	.000	-.145	-1.793	.075
DER	-.026	.014	-.154	-1.909	.058
VR	.022	.155	.012	.139	.890
DACC	-1.555E-7	.000	-.030	-.350	.727

Analysis is followed by using the variable of volatility return. Corresponding to coefficients and significance of return Volatility has no effect on the COC, likewise DACC has no relationship with the COC. So the result is the same that earnings management are not able to be intervening variable in the relationship between the asymmetric information and COC.

Based on Table IX above it appears that the coefficient variable of DACC (-1.555-E-8) are marked negative with the significance level of 0.727, it could be concluded that the third hypothesis stating that there is a positive relationship between the DACC and COC, could not be supported. The conclusion is that the DACC has no effect on the COC and the hypothesis stating that there is influence of the earnings management on capital costs is not acceptable.

Further analysis shows that the regression coefficients of return Volatility has higher than before, when variable DACC and Variable quates get into regression simultaneously to the COC. The presence of the earnings management has increased the relationship coefficient of return volatility and the COC, is not in accordance with the theory that earnings management could be act as intervening variable. Then it could be inferred that the earnings management as intervening variable on the relationship of return volatility and costs of capital could not be supported, and the fourth hypothesis is not acceptable.

## VI. CONCLUSION

The aim of this research is to examine the influence of asymmetric information on the cost of equity capital, and the influence of earnings management as intervening variables on the relationship between asymmetric information and costs of equity capital. Based on the results of data analysis could be concluded as:

- 1) Asymmetric information influence positively to the costs of equity capital. The higher the asymmetric information, the higher the cost of equity capital. High asymmetric information impacts on the high transaction costs and declining demand for shares/ market liquidity reduces so that the costs of equity capital stock increase.
- 2) The asymmetric information positively effects on the earnings management. The condition of asymmetric information has provided opportunities for management to do earnings management practice.
- 3) Earnings management is not proven to have effect on the cost of capital, and earnings management is not proven acting as intervening variable on the relationship between asymmetric information and the cost of equity capital.

Further research could be conducted again by attempting to use another proxy of asymmetric information and earnings management. In addition to using accrual discretion, earnings management could also use proxy of real activity.

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**Nuryaman** is Currently a senior lecturer at Widyatama University. He is Doctor of Accounting. He Received His Doctor from The Padjadjaran University, Indonesia. He is a member of The Indonesian Institute of Accountants (IAI), With wide-ranging research interests, he has published articles in several conference event and journals on his research both nationally and internationally. Dr. Nuryaman's current research interests focus on Corporate Governance, Financial Accounting, and issues in Management accounting.