

THE EFFECT OF DISCLOSURE, ASYMMETRIC INFORMATION, QUALITY OF EARNINGS ON THE COST OF EQUITY CAPITAL IN INDONESIAN PUBLIC COMPANY USING SIMULTANEOUS EQUATION APPROACH

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ABSTRACT

This study aimed to test the effect of Disclosure, Earnings Quality On The Cost Of Equity Capital with Asymmetric Information as an intervening variable. The population in this study are all companies registered at the Indonesian Stock Exchange from 2005 until 2009. Sampling was purposive sampling method. Instrument analysis using Structural Equation Models. In this study used two variables, namely Main variable (Disclosure of information, Asymmetric Information, Quality of earnings and the cost of equity capital) as a controlled variable Financial Leverage, Company Size and Beta. From the research results are expected to prove that the variables Disclosure, Asymmetric Information and Earnings quality influential on Cost of Equity Capital. The study is expected to contribute in the form of empirical evidence that (1) Disclosure to have a negative impact on Cost of Equity Capital (2) asymmetric information has a negative impact on the Cost of Equity Capital (3) Quality of earnings has a negative effect on Cost of Equity Capital (4). Disclosure has a negative effect on asymmetric information (5) Quality of earnings has a negative influence on asymmetric information.

Keywords: Disclosure, Asymmetry Information, Earnings quality, Cost of Equity Capital.

INTRODUCTION

One of the important decisions that (financial) managers encounter in concern with the continual company's operations is financing or capital structure decision, which is a financial decision relating to the composition of debt, preferred stock and common stock used by the company (Prabansari and Kusuma, 2005). Managers have to be able to collect good funds efficiently derived from within and outside the company, meaning that the financial decision is a type of decision minimizing capital costs that the company should bear. Capital costs derived from the financing decision is a direct consequence arising from managers' decisions.

In general, the capital cost component consists of the cost of debt and cost of equity capital. Cost of Debt is return should be supplied by the company to its lenders. Cost of Equity Capital may experience internal increase through retained earnings or internal increase through selling or issuing new equities. Retained earnings are then used for investment (reinvestment) in the company. Retained earnings are used for the capital cost of such investment needs to be considered. To make shareholders to invest their funds into the company, in addition to consider their cost of capital disclosure of financial statements is also required; in this case it is often called as disclosure of information.

The disclosure of accounting information is one of important tools to resolve agency problems between management and owner because it is viewed as an attempt to reduce asymmetric information. There are two types of asymmetric information: first, *Adverse Selection*, closely related to communication problems from the inside (the manager) to outsiders (investors). *Second* is *Moral Hazard*; this problem arises from the difficulty of observing and monitoring efforts to run the company.

When associated with increasing value of the company, when asymmetric information is found, managers can provide investors with signals concerning the condition of the company to maximize the value of company stock. The signal provided can be performed through the disclosure of accounting information.

This study focuses on disclosure variable testing, and quality of profit information on the cost of equity capital using asymmetric information as an intervening variable. This is different from the previous studies using a single independent variable affecting the dependent variable in explaining the phenomenon of cost of equity capital. This is because that information disclosure variable can directly or indirectly affect

the cost of equity capital, through asymmetric information as the intervening variable. Similarly, the quality of earnings information can also directly or indirectly affect the cost of equity capital, through asymmetric information as the intervening variable. Whereas the variables of financial leverage, company size, and beta directly affect the cost of equity capital.

Literature Review and Hypothesis Development

Disclosure and the cost of equity capital

In his study, Botosan (1997) examines whether the disclosure of information is able to reduce the cost of equity capital. He sets an assessment on disclosure that the companies utilize through the use of disclosure index; and he finds that the greater is the level of disclosure that the companies make, and that it is followed by a small number of analysts, the lower the cost of equity capital will be.

Botosan and Plumlee (2000) reinforce the results of Botosan (1997) through the finding that there was a negative relationship between cost of capital and the ranking of annual report disclosure that the analysts make. Easley and O'Hara (2003) make the relationship between enterprise information environment and the cost of capital. In particular, they propose that to reduce its cost of capital, companies are able to adjust their corporate disclosure policies through the announcement of more information to the publics. The results of Mardiyah's study (2004) show that the higher the effects of voluntary disclosure is, the lower the relationship between information symmetry and the Cost of Equity capital will be.

Francis, Khurana, and Pereira (2005) provide evidences that the consequences of extensive disclosure for companies with high level of disclosure is a good reduction in cost of debt and the cost of equity capital. Several studies support the evidences that there is influence of disclosure on cost of capital; among others: McNichols and Trueman (1994), Elliot and Jacobson (1994), Coles *et al.* (1995), and Clarkson (1996).

From the aforementioned statement, the hypothesis will be:

H₁ : Disclosure has negative effects on cost of equity capital.

Asymmetric Information and the cost of equity capital

As proposed by Chiang and Venkatesh (1988) in Komalasari (2000), when there is asymmetric information, all investors will encounter with greater bid-ask spread and possibly it is in the wrong side of the trade. As a result, they will expect higher return. Given adverse selection affects all trades, managers exploit signaling to reduce asymmetric information level and cost of equity capital. Signaling can be an effective way for managers to minimize the cost of equity capital.

Theoretically, Ammihud and Mendelson (1986) states that the cost of equity capital will be greater for securities with greater bid-ask spread because investors require higher return in order to cover additional cost that they bear. Accounting disclosure that the companies make may reduce the adverse selection cost of bid-ask spread (asymmetric information) so that the cost of equity capital also declines.

The study of Komalasari (2000) investigates the relationship between asymmetric information and cost of equity capital in which asymmetric information is measured by using bid-ask spread. The results indicate that a positive relationship is found between asymmetric information and the cost of equity capital. Mardiyah (2001) finds a positive correlation between asymmetric information and the cost of equity capital. This identifies that the smaller asymmetric information found among the participants of capital markets is, the smaller, then, the cost of equity capital that the company bears. Murni (2003) finds a positive relationship between asymmetric information and the company's cost of equity capital. This shows that the smaller asymmetric information is, the lower the cost of equity capital will be.

From the above statement, the hypothesis is as the following:

H₂ : The asymmetric information has positive effect on cost of equity capital.

The quality of earnings information and the cost of equity capital

The results Francis *et al.* (2004), shows that earnings quality has a role of reducing the cost of equity capital. The higher the quality of earnings is, the lower the cost of equity capital is. But Mieke Damayanti (2005) identifies that earnings quality does not significantly influence the quality of earnings spread, rather significant effect on Trading Volume Activity, but with a negative direction.

Francis, *et al* (2004) examine whether the seven measures of income (i.e. Accruals Quality, Persistence, Predictability, Smoothness, Relevance, Conservatism and Timeliness) have relationship with the cost of equity by using the data in the United States. In further paper, Francis, *et al* (2005) investigate the relationship of Accruals Quality and the cost of equity and cost of debt.

Leon Wong, 2008 find a strong relation between earnings quality and the Cost of Equity Capital, particularly the total accruals and predictability, and Smoothness. He states that the cost of equity with theoretical proxy shows various results, namely, relationship pattern with measures of quality profit for predictability (predictability). This evidences that the higher quality of earnings is, the lower cost of equity capital will be.

From the above statement, the hypothesis is as the following:

H3 : The Earning Quality provides negative effects on cost of equity capital

Disclosure and asymmetric information

Report is a form of management accountability to investors. Some studies suggest that disclosure reduces asymmetric information between managers and investors. Komalasari (2000) mentions that the agency theory implies the existence of asymmetric information between managers as agents and owners (in this case is the shareholder) as a principal. Asymmetric information arises when managers are more aware of internal information and the company's prospects in the future compared to shareholders and other stakeholders. Related to increased values of the company, in case asymmetric information is found, managers can provide signals concerning the condition of the company to investors for maximizing the values of company stock. The signal can be given through the disclosure of accounting information.

Research examining the relationship between disclosure and asymmetric information involved those of Gonedes (1980), Verrecchia (1983, 1990), Lev (1989), Raman and Tripathy (1993), Brooks (1994), Greenstein and Sami (1994), Welker (1995), Krinsky and Lee (1996), Lang and Lundholm (1997), Bartov and Bodnar (1996), Healy *et al.* (1999), and Leuz and Verrecchia (2000), propose that the disclosure has the potential to reduce asymmetric information. Declining asymmetric information will lead to a reduction in transaction costs, where transaction costs are represented by bid-ask spread. Even if disclosure is costly due to market consequences, managers perform the trade-offs of these costs by benefiting from broad disclosure when reducing asymmetric information (Verrecchia, 1983, 1990).

Eligiana Ndas Pega Ora, (2006), Pingyang Gao (2008), identifies no negative relationship between disclosure quality and asymmetric information is available. It shows that high quality disclosures will reduce asymmetric information. With higher asymmetric information, shareholders do not have sufficient information to know whether the financial statements, particularly income has been manipulated or not. The regulator of capital market is able to reduce this asymmetric information through the issuance of minimum requirement of disclosure that the companies listed on stock exchange should make. This indicates that the higher the disclosure is, the lower the asymmetric information will be.

From the aforementioned statement, the hypothesis is as the following:

H4 : *Disclosure* provides negative effects on asymmetric information.

The Quality of Earnings Information and Asymmetric Information

The idea from Easley and O'Hara's (2004) which contains the "information risk " is rising because of asymmetric information is non-diversifiable. Lev (1988) emphasize that the existence of asymmetric information can have devastating together - as well as individual investors in the form of low participation, high transaction costs, thin markets and the declining of trade gains. The impacts could be more severe when approaching the expenditure information when the benefits obtained with informed traders is large

and can lead to market failure (Glosten and Milgrom, 1985).

Tumirin (2003) examined the accounting information quality and operating cash flow with asymmetric information affect asset growth, firm size, leverage, liquidity, earnings variability, trading volume, stock price and beta pasar. The research found the assets growth, leverage, earnings variability and beta-market have a positive effect on asymmetric information. While the firm size, liquidity, trading volume and stock prices negatively affect the asymmetric information.

Mieke Damayanti (2007), found that earnings quality does not significantly effect to the quality of earnings spread but significant effect on Trading Volume Activity but with a negative direction. Measuring the earnings quality from Neil Bhattacharya (2007) is the accruals quality metric used by Francis, LaFond, Olsson and Schipper (2004, 2005, hereinafter abbreviated as Flos). Neil Bhattacharya (2007) provided empirical evidence that the adverse effect of low earnings quality is a form of asymmetric information is higher, which results in higher trading costs and ultimately lead to the cost of capital is higher.

Mullahs, Aulia Nur (2009), found that there was a significant influence between the asymmetry of information on the earnings quality. This indicated that the higher of the asymmetric level between internal company information with outsider, so profits which is informed by the company's will be assessed less qualified. This showed that the higher quality of earnings, the lower the asymmetric information

From the statement above, the hypothesis as follows:

H5 : The quality of earnings information negatively affect the asymmetric information.

Financial leverage and cost of equity capital

Financial leverage is the proportion of debt used by company as its capital, or indicate how much the company's assets financed with debt. The higher the financial leverage indicates that the increase in total debt is greater than the increase in total assets. The greater of total debt means the highest financial risk or risk the company's failure to restore the debt. Therefore, financial leverage has a positive effect on the cost of equity capital. If the company uses more debt, the greater the load remains in the form of installments of interest and principal installments to be paid. Financial leverage is advantageous if the income received from use of these funds is greater than its fixed expenses. Financial leverage does not hurt if the company can earn income as much as fixed expenses to be paid. So we can say that if the financial leverage level is greater so the company's financial risk will be higher.

Pratomo, 2008, showed that the risk level is partially positive effect on cost of equity capital on the Food and Beverages companies which are listing on the JSE 2005-2006. Even, risk level has a dominant influence on the cost of equity capital.

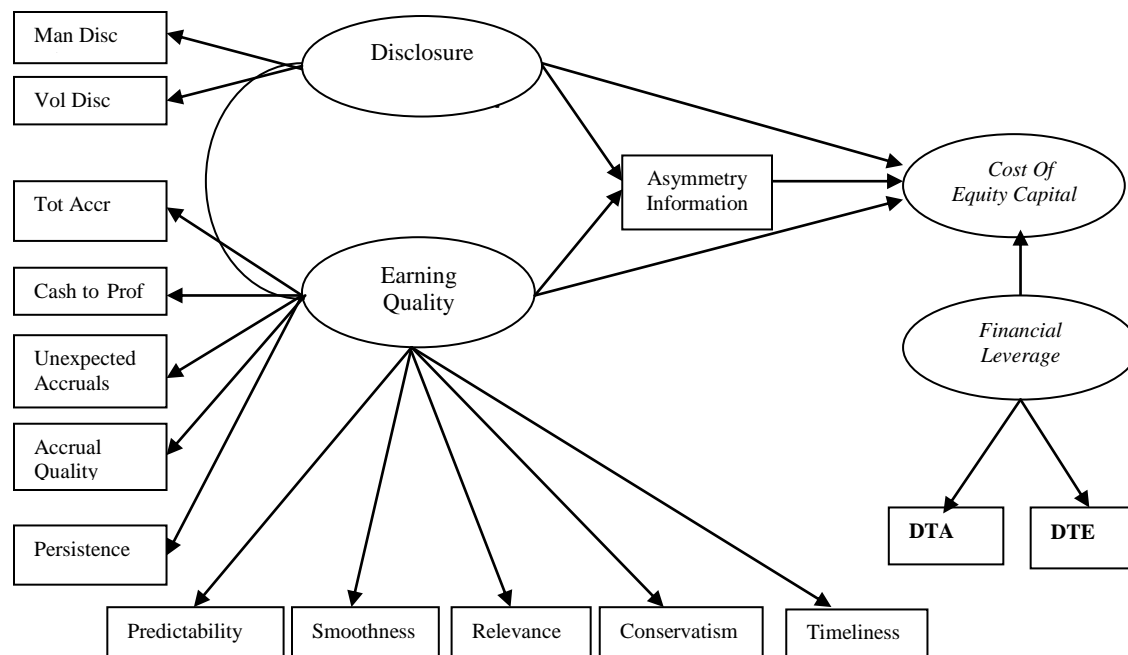
Firm Size

The proxy of firm size is total corporate assets, such as those used in previous research conducted by Mardiyah (2001). Fitriany (2001) stated that the total assets of the firm shows a firm size more than the equity market value

Beta

Beta explains the market risks of stock. The higher the beta, the higher stocks risk and the higher the stock return. The higher return will increase the firm value, which will lower the cost of equity capital. Thus beta is expected has negative effect to cost of equity capital. Beta stocks in this study using corrected beta data available in Indonesia Stock Exchange. The method used for beta correction is a method of Scholes and Williams.

Research Framework



RESEARCH METHOD

Research Population and Sample

The population in this study are all companies listed on the Indonesia Stock Exchange from 2005 until 2009. The sampling technique is the purposive random sampling. The criteria are the companies that:

1. Listed on the Indonesia Stock Exchange from 2005 until 2009
2. Published audited financial statements ending 31 December.
3. Have complete firm's data with the variables that will be used in this study.

Research Variables and Operational Definition

There are two variables, endogenous and exogenous variables. Endogenous variable is the cost of equity capital and the exogenous variables are disclosure, asymmetric information and the quality of earnings information

Cost Of Equity Capital

To estimate the cost of equity capital we use the Capital Asset Market Price (CAPM) This method is often used to calculate cost of equity capital or the expected rate of return, which was developed by Sharpe (1964). Linters (1965), and Mossin (1966). The calculation formula is:

$$COEC = R_f + (R_m - R_f) \beta$$

Description:

COEC = *Cost Of Equity Capital*
 R_f = *risk free interest rate*
 R_m = *expected market return*
 β = *beta coefisient*

Disclosure

The information disclosed in annual reports can be grouped into 2, mandatory disclosure and voluntary disclosure.

1) Mandatory Disclosure

Mandatory disclosure is a information disclosure that is ruled by the Capital Market Supervisory Agency of Indonesia. This rule is minimum disclosure requirements for public companies. Rules on disclosure standards for companies that have made a public offering and public company that is, the Decision of the Chairman of the Capital Market Supervisory Agency and Financial Institution Number: Kep-134/bl/2006 About the Obligation to Submit Annual Report for Public Company, which applies to all company that has made a public offering and public company.

2) Voluntary Disclosure

Voluntary disclosure is the information disclosed in annual reports over the information to be disclosed in accordance with the regulations that have been issued. This voluntary disclosure is recommended and the practice is depend on the issuer. Voluntary disclosure items list in the annual report was developed based on the Botosan disclosure items (Botosan, 1997) and the disclosure items required by Bapepam regulations concerning annual report (Kep-134/bl/2006)

Asymmetric Information

Research in Indonesia that was use the adjusted spread model is Diantamala (2000), Khomsiyah (2003), and Fachrial Andadi (2006). So this study uses a spread that is used by previous researchers. The study uses the relative bid-ask spread that defined as:

$$\text{SPREAD}_{i,t} = (\text{ask}_{i,t} - \text{bid}_{i,t}) / \{(\text{ask}_{i,t} + \text{bid}_{i,t})/2\} \times 100$$

Which :

Ask_{i,t} = the highest firm stock *ask* price in t period

Bid_{i,t} = the lowest firm stock *bid* price in t period

Earning Quality

This study used proxy in accordance with used by Leo Wong (2008), the formula is :

$$1) \quad \text{Total Accruals} = \text{Earning After Taxes} - \text{Operating cashflow}$$

$$2) \quad \text{Unexpected Accruals} = - \text{Operating cashflow} / \text{Earning After Taxes}$$

$$3) \quad \text{Cash-to-Profit} = \text{TAC}_t = \beta_0 + \beta_1 (\Delta \text{Sales}_t - \text{Rec}_t) + \beta_2 \text{TAC}_{t-1} + \varepsilon_t$$

$$4) \quad \text{Accruals Quality} = \beta_0 + \beta_1 \text{OCF}_{t-1} + \beta_2 \text{OCF}_t + \beta_3 \text{OCF}_{t+1} + \varepsilon$$

$$5) \quad \text{Persistence} = \text{NPATB}_t = \beta_0 + \beta_1 \text{NPATB}_{t-1} + \varphi_t$$

$$6) \quad \text{Predictability} = \beta_0 + \beta_1 \text{Earnings}_{t-1} + \gamma_t$$

$$7) \quad \text{Smoothness} = \sigma(\text{NPATB}) / \sigma(\text{OCF})$$

$$8) \quad \text{Relevance} = R_t = \beta_0 + \beta_1 \frac{\text{EPS}_t}{P_{t-1}} + \beta_2 \frac{\Delta \text{EPS}}{P_{t-1}} + \varepsilon$$

$$9) \quad \text{Conservatism} = \frac{\text{EPS}_t}{P_{t-1}}$$

$$10) \quad \text{Timeliness} = - R^2 \text{ from Regresi Konservation}$$

Financial Leverage

- 1) Debt to Total asset ratio = $\frac{\text{Total Debt}}{\text{Total Assets}}$
- 2) Debt to To Equity ratio = $\frac{\text{Long Term Debt}}{\text{Equity}}$

Analysis Technique

In this study, the test is conducted using Structural Equation Modelling. The formula is :

$$Y_1 = \beta_{1.1} \cdot X_1 + \beta_{1.2} X_2 + \beta_{1.3} X_3 + \varepsilon$$

$$Y_2 = \beta_{2.1} \cdot X_1 + \beta_{2.2} \cdot X_2 + \beta_{1.3} X_3 + \delta_{2.1} Y_1 + \varepsilon$$

X1 = Disclosure

X2 = Earning Quality

X3 = Financial leverage

Y1 = Asymmetry Information

Y2 = Cost of equity capital

Model Evaluation

Evaluation to assumption

- 1) Normalitas dan linierity
- 2) Outliers
- 3) Multikolinierity

Criteria Goodness of fit Evaluation

Goodness of Fit Index	Cut-Off Value
Chi-Square (χ^2)	1 - 2.
Significance Probability	≥ 0.05
RMSEA	≤ 0.08
GFI	≥ 0.90
AGFI	≥ 0.90

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