

# The Effect Of Information Asymmetry To Cost Of Equity Capital (Study On Manufacturing Companies Listed In Indonesia Stock Exchange For The Year 2017-2019)

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**Abstract:** This research focuses on the Effect of Information Asymmetry to Cost of Equity Capital in Manufacturing Companies Listed in Indonesia Stock Exchange for the year 2017-2019. The problem faced in this study is fluctuating cost of equity capital. The purpose of this study is to determine the effect of information asymmetry on the cost of equity capital in manufacturing companies listed in the Indonesia Stock Exchange 2017-2019. The method used in this research is explanatory. The result show that information asymmetry has a positive and significant effect on the cost of equity capital. This means that if the asymmetry increases, the cost of equity capital will also increase.

**Keywords:** Information Asymmetry, Cost of Capital, Cost of Equity Capital

## 1. Introduction

Financial reports are a useful source of information as a basis for decision-making for stakeholders. Investors prefer companies that disclose more information about their company, thus they perceive the company risk as low. The cost of equity capital can be identified as the minimum rate of return required by users of equity capital on investment. The higher the required rate of return, the higher the cost of equity capital will be.

Sartono (2000) in Murni (2003: 316) suggests that the cost of equity capital can be defined as the minimum rate of return required by users of their own capital on an investment. The cost of equity capital is the rate of return that must be achieved by the company to obtain the expected return of shareholders (Bodie et al., 2008). The low cost of equity capital in a company indicates the low level of risk the company has, so that the risk return expected by investors will be low. This is in accordance with the principles of high risk high return and low risk low return. Therefore, the cost of equity capital is one of the determining factors for estimating the amount of return expected by investors in investing and is the amount of costs that must be incurred by the company in order to obtain funds from investors.

**Table 1.1**  
Costs of Equity Capital Manufacturing Company 2011-2013

Issuer	Costs of Equity Capital				
	2011	%	2012	%	2013
ALMI	1.147881489	88.55	2.164303345	18.39	2.562309721
AKPI	0.274779759	165.22	0.728779266	57.36	1.146817207
ARNA	0.045867484	1602.45	0.780871822	6.20	0.829270138
AMFG	0.123380589	81.48	0.223916218	-126.68	0.059731731
APLI	0.956098891	-25.77	0.709742584	88.30	1.336442963

Source: processed data

Based on Table 1.1, it can be seen that the cost of equity capital has fluctuated. The cost of equity capital is influenced by information asymmetry, Komalasari (2000) states that information asymmetry occurs because of differences in interests between management and owners of capital. High information asymmetry creates large capital costs. This is consistent with agency theory, the more information is hidden, the higher the risk that must be borne by the owners of capital. Information asymmetry causes information risk to be higher, the high risk of information has an impact on the high cost of equity that will be incurred by the company. Therefore, companies must reduce the level of information asymmetry so that the cost of equity is low. (Khomsiyah, 2003; Indayani and Mutia, 2013; Adle & Akdemir, 2019).

## 2. Objective of the study

This study aims to examine the effect of information asymmetry to cost of equity capital.

## 3. Literatur review

### 3.1. Information Asymmetry

Information asymmetry is inappropriate information between management as an information provider and shareholders, and stakeholders who are generally users of information (Ramadani, 2017). There are two kinds of information asymmetry, adverse selection and moral hazard. (Scott, 2015; Brzica, 2018; ). Adverse selection has similarities in terms of intentionality. Initially adverse selection has an indication of providing information, but because other parties are deemed not knowing, the information is not provided, whereas in moral hazard from the beginning there have been indications not to provide this information to other parties (Scott, 2015). The estimation of information asymmetry can be carried out based on three main categories: analyst forecasts, investment opportunities, and market micro structures theory (Wasilah, 2005). The bid price is the market demand price, this bid price will be used when making a selling transaction, while the ask price is the market offer used when making a buy transaction, and the difference between the bid and ask prices is referred to as the spread (Kusuma, 2014). In measuring the information asymmetry, the authors use the bid ask spread proxy. The bid ask spread is the difference between the bid and ask prices.

The way to calculate the amount of the bid – ask spread in this study is the following formula:

$$\text{SPREAD}_i, t = (\text{ask}_i, t - \text{bidi}, t) / \{(\text{ask}_i, t + \text{bidi}, t) / 2\} \times 100$$

(Scott, 2015)

Ask<sub>i, t</sub> = the highest ask price for company i's shares that occurred in period t (on the publication date of the annual report)

Bid<sub>i, t</sub> = the lowest bid price for company i's shares that occurred in period t (on the publication date of the annual report)

### 3.2. Cost Of Equity Capital

I Made Sudana (2013: 133) states that the cost of equity capital is the minimum level of income required by the owner of capital, in line with I Made, according to James C (2014: 40) the cost of equity capital is the required return rate of companies that will satisfy all of the capital.

Components of the cost of capital according to I Made Sudana (2013: 133) are as follows:

#### 1) Common stock

Cost of ordinary shares ( $k_e$ ) can be interpreted as the minimum level of income that a company must earn on an investment spent on ordinary shares. The income of ordinary shares is uncertain, therefore in determining the cost of ordinary shares several approaches are used.

#### a) Risk free investment approach plus a risk premium.

$$k_e = R_f + \text{risk premium}$$

#### b) Capital Asset Pricing Approach to Capital (CAPM)

According to the CAPM approach, the expected return on investment in stocks is determined by the risk-free investment income and the market risk premium. The amount of the risk premium in this approach is determined by the size of the systematic risk ( $\beta$ ) of shares. The amount of share income is measured by the formula:

$$R_{it} = R_f + \beta_i (R_{mt} - R_f)$$

Information:

$R_{it}$  = I stock income in period t

$R_f$  = Risk free investment income

$R_{mt}$  = Market revenue in period t

$\beta_i$  = share systematic risk coefficient

The expected income can be formulated as follows:  $E(R_i) = R_f + \{E(R_{mt}) - R_f\}$  because  $E(R_i) = k_e$  thus,  $k_e = R_f + \beta_i \{E(R_{mt}) - R_f\}$

#### c) The expected stock dividend approach

The cost of common stock capital is defined as the discount rate which equates the present value of all dividends per share expected to be received in the future with the current market price of the shares.

$$P_0 = \frac{D_1}{(1+k)^1} + \frac{D_2}{(1+k)^2} + \dots + \frac{D_n}{(1+k)^n}$$

Information:

P<sub>0</sub> = Market price of the stock in the current time period

D<sub>1</sub>D<sub>2</sub> ..... D<sub>n</sub> = expected dividends in periods 1,2, ... n

k<sub>e</sub> = discount rate or expected rate of income

n = period of time

## 2) Special shares

The cost of special share capital is the level of profit required by the special shareholders from an investment that is purchased with special shares. The size of the cost of special share capital is measured by the following formula:

$$k_p = \frac{D}{P_0} \times 100\%$$

Information:

k<sub>p</sub> = preferential share capital cost

D = special stock dividend

P<sub>0</sub> = preferential stock market price

## 3) Retained earnings

The cost of capital for retained earnings is the same as the cost of capital for ordinary shares. The difference is in the cost of emissions. If the company issues issuance costs, while for funds originating from retained earnings, the company does not need to pay issuance costs. Therefore, the cost of capital for retained earnings can be calculated using the following formula:

$$k_r = \frac{D_1}{D_0} + g$$

## 4) Debt

The cost of debt is the level of profit required by the lender on company investments that are financed with debt.

$$P_0 = \sum_{t=1}^n \frac{I_t + P}{(1+kd)^t}$$

Information:

P<sub>0</sub> = market price / selling price of debt securities issued by the company

n = maturity period of the debt

I<sub>t</sub> = the amount of interest paid in period t

P = value of principal repayment of debt in the period

kd = cost of debt capital before tax

## 4. Theoretical framework

Information asymmetry occurs because of differences in interests between management and owners of capital. According to Suwardjono (2005: 74), because management and investors / creditors are parties whose relationship between the two parties is seen as an agency relationship, it is feared that information asymmetry will occur between the two parties and management as the party with more control over information (Hussain et al., 2020; Chico et al., 2019; An et al., 2019; Gungor, 2019).

Managers as company managers are likely to act in accordance with opportunistic characteristics, namely human nature who prioritizes their personal interests (Saendy and Anisykurlillah, 2015). Management tends to make decisions or policies that will benefit themselves at the expense of shareholders. Management considers that shareholders are outsiders of the company so that the return given to investors is a cost that must be incurred by the company.

Adriani (2013; Akin, 2019; Manamela & Molapo, 2019) and Eid (2015) state that information asymmetry has an effect on the cost of equity capital and shows the result of a positive effect of information asymmetry on the cost of equity capital. This research is also supported by Ifonie (2010), who states that there is a significant positive effect of information asymmetry on the cost of equity capital that must be incurred by the company, a similar thing was stated by Nuryaman (2014), that every time there is an increase in information asymmetry owned by the company, then the cost of equity capital that must be issued or the rate of return expected by investors will also increase.

## 5. Research model



The hypothesis in this study is that information asymmetry has an effect on the cost of equity capital

## 7. Research methodology

This research used explanatory method.

### 1) Population and Sample

The population in this study were 148 manufacturing companies listed on the Indonesia Stock Exchange in 2017-2019. The sampling technique used in this study is non-probability sampling with a purposive sampling approach.

The criteria for the companies sampled in this study are as follows:

- Manufacturing companies listed on the Indonesia Stock Exchange during 2017-2019.
- Manufacturing companies that report complete and consecutive financial information during 2017-2019.
- Financial reports are reported in rupiah currency.

Based on the purposive sampling method obtained 59 manufacturing companies.

### 2) Data Collection Techniques

The data collection technique used is documentation. This study used secondary data in the form of annual financial reports of manufacturing companies listed on the IDX in 2017-2019. The annual report is obtained through the IDX website ([www.idx.co.id](http://www.idx.co.id)).

### 3) Variable Operational

The independent variable in this study is information asymmetry (X), while the dependent variable is the cost of equity capital (Y). To measure the variables in this study, the operationalization of the variables was arranged as follows:

**Table 3.1 Operationalization of Variables**

Variable	Concept	Indicator	Scale
Independent variable: Information Asymmetry (X)	In calculating the amount of the bid – ask spread in this study using a formula derived from (Scott, 2015).	The bid ask spread is the difference between the bid and ask prices, so it is called the bid ask spread.  $SPREAD_{i,t} = (ask_{i,t} - bid_{i,t}) / \{(ask_{i,t} + bid_{i,t}) / 2\} \times 100$	Ratio
Dependent Variable Cost of Equity Capital (Y)	According to the CAPM approach, the expected income from investing in shares is determined by the risk-free investment income and the market risk premium (I Made Sudana (2013: 133)).	The amount of the risk premium in this approach is determined by the size of the systematic risk ( $\beta$ ) of shares. The amount of share income is measured by a formula:  $R_{it} = R_f + \beta_i(R_{mt} - R_f)$	Ratio

#### 4) Data Analysis Techniques

a) Panel Data Regression Analysis, panel data technique is carried out because it combines the types of cross-section and time series data. The regression model estimation method using panel data can be done through three approaches, namely: Common Effect Model or Pooled Least Square (PLS), Fixed Effect Model (FE), and Random Effect Model (RE). The equation model in this approach is as follows:

$$Y_{it} = \alpha + X_{it} \beta_{it} + \varepsilon_{it}$$

(Basuki and Prawoto, 2016)

Information:

Y = Cost of Equity Capital

$\alpha$  = Constant

X = Information Asymmetry

$\beta$  = Regression Coefficient

$\varepsilon$  = Error

i = Cross Section (Manufacturing Company)

t = Time Series (2017-2019)

Determination of the best model between the common effect, fixed effect, and random effect uses two model estimation techniques to obtain the right model in estimating panel data regression. The techniques used are the Chow test (F Test), the Hausman test, and the Lagrange multiplier test (Widarjono, 2009).

b) Correlation analysis, is an analysis to determine the level of closeness of the relationship between 2 variables, namely the independent variable (X) and the dependent variable (Y).

c) t-Test, the t statistical test shows how far the influence of one independent variable individually in explaining the dependent variable (Sekaran, 2013). Tests were carried out using a significant level of 0.05 ( $\alpha = 5\%$ ). The t test is a hypothesis testing to determine the effect of information asymmetry on the cost of equity capital.

d) Coefficient determination, the coefficient of determination test is carried out to measure the ability of the model to explain the variation in the dependent variable.

## 8. Result and discussion

**Table 8.1 Chow Test Result**

Redundant Fixed Effects Tests  
Equation: EQ01  
Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	7.972525	(58,117)	0.0000
Cross-section Chi-square	283.169962	58	0.0000

Source output Eviews 9, 2021

Table 8.1 shows that the value for Prob. The cross-section Chi-square is 0.0000, this value is less than 0.05. The results of the Chow test conclude that this research model uses a fixed effect model.

**Table 8.2 Hausman Test Results**

Correlated Random Effects - Hausman Test  
Equation: EQ01  
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	5.287141	1	0.0121

Source output Eviews 9, 2021

The test results in Table 8.2 show that the Prob. by using a random cross-section amounted to 0.0121. This value indicates a value  $<0.05$ . The results of the Hausman test concluded that this research model uses a fixed effect model, so in this study it does not perform the lagrange multiplier test because after using the Chow test and the Hausman test the results show that the regression model uses the fixed effect model.

The test results for the fixed effect model equation are as follows:

**Table 8.3 Fixed Effect Regression Model**

Dependent Variable: Y  
Method: Panel Least Squares  
Date: 03/28/21 Time: 00:36  
Sample: 2017 2019  
Periods included: 3  
Cross-sections included: 59  
Total panel (balanced) observations: 177

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.119477	0.016986	3.101946	0.0306
X	1.668105	0.020179	6.316842	0.0017

#### Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.761573	Mean dependent var	0.021259
Adjusted R-squared	0.605138	S.D. dependent var	0.014996
S.E. of regression	0.015137	Akaike info criterion	-5.946766
Sum squared resid	0.032010	Schwarz criterion	-5.910877
Log likelihood	262.7888	Hannan-Quinn criter.	-5.932211
F-statistic	6.100389	Durbin-Watson stat	2.385681
Prob(F-statistic)	0.000000		

Source output Eviews 9, 2021

The regression model equation in this study is as follows:

$$Y = 0.119477 + 1.668105 X + \varepsilon$$

The constant value 0.11477 states that if there is no increase in the value of the information asymmetry variable, the variable value of the cost of equity capital is 0.119477. The value of the information asymmetry regression coefficient is 1.668105, which states that each addition of one value to the information asymmetry variable will give an increase in the score of 1.668105.

**Table 8.4 Correlation Analysis**

	Information Asymmetry	Cost Of Equity Capital
Information Asymmetry	1	0,62394415515
Cost Of Equity Capital	0,62394415515	1

Source output Eviews 9, 2021

Table 8.4 shows a positive correlation between the tested variables. The level of relationship between information asymmetry and the cost of equity capital is 0.62394415515. This value is in the strong relationship category.

**Table 8.5 t-Test Result**

Dependent Variable: Y  
Method: Panel Least Squares  
Date: 03/28/21 Time: 00:36  
Sample: 2017 2019  
Periods included: 3  
Cross-sections included: 59  
Total panel (balanced) observations: 177

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.119477	0.016986	3.101946	0.0306
X	1.668105	0.020179	6.316842	0.0017

Source output Eviews 9, 2021

Table 8.5 shows that the value for Prob. of the information asymmetry is 0.0017, the value is less than 0.05. The t-statistic value of third party funds is 6.316642, this value is greater than the t-table, which is 1.97. The results of the t test are related to the effect of information asymmetry on the cost of equity capital, both seen from the Prob value. and the t-statistic shows that information asymmetry has a significant effect on the cost of equity capital in manufacturing companies listed on the IDX during 2017-2019.

**Table 8.6 Result of the Coefficient of Determination**

Effects Specification

Cross-section fixed (dummy variables)			
R-squared	0.761573	Mean dependent var	0.021259
Adjusted R-squared	0.605138	S.D. dependent var	0.014996
S.E. of regression	0.015137	Akaike info criterion	-5.946766
Sum squared resid	0.032010	Schwarz criterion	-5.910877
Log likelihood	262.7888	Hannan-Quinn criter.	-5.932211
F-statistic	6.100389	Durbin-Watson stat	2.385681
Prob(F-statistic)	0.000000		

Source output Eviews 9, 2021

Table 8.6 shows that the coefficient of determination shown by the R-squared value is 0.761573, meaning that information asymmetry can explain (contribute) to the cost of equity capital by 76.15% while the remaining 23.85% is explained by variables outside the research model.

## 9. Conclusion

Information asymmetry has a significant effect on the cost of equity capital in manufacturing companies listed on the IDX during 2017-2019. This means that the smaller the information asymmetry that occurs among capital market participants, the lower the cost of equity capital, conversely, the greater the information asymmetry that occurs among capital market participants, the greater the cost of equity capital.

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