INFORMATION ASYMMETRY AND COST OF CAPITAL: THE MODERATING EFFECT OF INSTITUTIONAL OWNERSHIP

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ABSTRAK

High information asymmetry will raise suspicions that the company has a high inherent risk, which can reduce the company's value and make it unattractive as an investment asset. Companies with high information asymmetry can affect the increase in the cost of capital. This is because the company needs to offer a high return (cost of capital) so that investors are willing to invest their capital in the company. This study was conducted by testing the effect of information asymmetry on the cost of capital. In addition, this study also tested the moderating role of institutional ownership in strengthening the effect of information asymmetry on the cost of capital. The results of the study prove that information asymmetry has no effect on the cost of capital. The presence of institutional ownership is also known to be unable to strengthen the effect of information asymmetry on the cost of capital. This study contributes to agency theory which highlights the conflict that occurs between shareholders and company management related to information asymmetry.

Keywords: Information Asymetry, Cost of Equity, Institutional Ownership

INTRODUCTION

Companies that are experiencing growth certainly need additional capital to be able to increase their production activities and expand. For public companies, additional capital can be obtained from the issuance of new shares, bonds or bank loans through the capital market and financial markets. Additional capital obtained by the company from the capital market will certainly incur a cost of capital (equity) for the company.

The cost of capital is an important part of a company's capital structure because it reflects investors' return expectations on their investments and how investors view the company's performance (Yusfita & Murwaningsari, 2024). For companies whose performance has a high level of risk, investors certainly expect a high rate of return as compensation for the risk. A high expected rate of return can increase the cost of capital and erode the company's profits. Conversely, companies with a low level of risk usually offer a low rate of return to their investors and potential investors so that they can reduce the cost of capital incurred. Companies

with lower capital costs also have the possibility of returning returns faster (Meilisa & Salim, 2020) because companies can minimize costs and maximize their profits (Setiawan & Daljono, 2014).

One of the factors that can affect the cost of capital in a company is information disclosure. This is because prospective investors and creditors in making investment decisions and fund placement certainly require information related to the company. The information obtained is then analyzed carefully regarding the company's future performance to determine whether the company is able to pay dividends or repay its debts.

The company's financial report is a form of information communication between the company and investors, creditors and other stakeholders who are interested in the condition and existence of the company. The provisions for information disclosure are regulated in Bapepam LK Regulation No. 134/BL/2006. Through this provision, public companies listed on the Indonesia Stock Exchange are required to publish audited financial reports each period, submit a summary of important financial data and disclose other important information. This regulation was issued in order to minimize information asymmetry and provide convenience for investors. The financial report helps investors to act wisely in making investment decisions (Astutik et al., 2018) in order to avoid the risk of loss, but obtain maximum profit.

Information asymmetry is a condition where someone has information that is not known by others. As a result of the excess information owned by someone, the company's performance cannot be monitored by shareholders. In a state of high information asymmetry, shareholders do not have enough information to know whether the financial statements have been modified or not (Choiriah & Gunawan, 2018) and are in a disadvantageous position so that they refrain from investing in stocks that have less information disclosure (He et al., 2013). The financial statements of companies with high information asymmetry will certainly raise suspicions that the company has a high inherent risk so that it can reduce the value of the company and become unattractive as an investment asset. For companies like this, to increase capital from the capital market requires a strategy by offering high returns (cost of capital) for investors so that investors are willing to invest their capital in the company. Conversely, companies with high information disclosure will be more attractive to investors and reduce the company's cost of capital.

Given that information asymmetry about a company can increase the cost of capital and reduce the company's profit, information asymmetry is highly avoided by public companies. Company management strives to provide mandatory and voluntary information regarding the company in order to reduce the information asymmetry so that it is expected to reduce the cost of capital for the company and increase the company's profit. Research on the effect of information asymmetry on the cost of capital is interesting to be carried out further because previous studies have presented diverse facts. Previous research conducted by Choiriah and Gunawan (2018) in the banking sector listed on the IDX found that information asymmetry has a significant positive effect on the cost of capital. Other studies such as those conducted by Astutik et al (2018) on food and beverage sector companies listed in 2015-2018 on the IDX, Muslim & Setiawan (2021) on manufacturing companies listed in 2016-2019, He (2013) on

companies indexed by the S&P/ASX 200 in 2001-2008 found that information asymmetry also had a significant positive effect on the cost of capital. On the other hand, in a study conducted by Panjaitan & Sofian (2022), it was found that information asymmetry had no effect on the cost of capital in companies indexed by the LQ 46 in 2017-2019.

The balance of interests between shareholders and managers can be aligned with the concentration of ownership. This balance of interests will reduce agency conflicts. This agency conflict occurs because management compared to shareholders or founders has internal information and future opportunities that will be obtained by the company for personal interests and benefits (Gunafi et al., 2024). One form of ownership concentration is institutional ownership. Institutional investors are an important source of capital with enormous financial strength and investment potential, access to information and stronger professional capacity (Huo et al., 2021). The role played by institutional investors in company development is to monitor the performance results of managers (Gunafi, 2024) and significantly influence company management (Choi et al., 2020). With the influence of institutional investors on company management, information asymmetry can be reduced by providing periodic financial reports by managers to company owners (Choiriah & Gunawan, 2018). Previous research conducted by Choiriah and Gunawan (2018) in the banking sector listed on the IDX found that the existence of institutional ownership can have a significant negative effect on information asymmetry on the cost of capital.

The problem in this study is whether information asymmetry can affect the cost of capital and whether institutional ownership can strengthen the influence of information asymmetry on the cost of capital. This study aims to empirically test the effect of information asymmetry on the cost of capital and to test the moderating role of institutional ownership on the effect of information asymmetry on the cost of capital.

Agency Theory

This agency problem is explained in agency theory as a condition in which there is a separation of the relationship between the owner and the manager in a company. The owner of the company as the party who gives the mandate is called the principal, while the party who receives the mandate and is responsible for managing the company's assets is called the agent (Jensen and Meckling., 1976). Conflict between agents and principals will arise when there is a difference of interest where the agent should play a role in the welfare of the principal, but tends to prioritize personal interests so as to sacrifice the interests of the principal.

Information asymmetry can reduce the value of a company. This can happen when investors hold their funds against company shares because they do not get enough information to make investment decisions. In relation to increasing the value of the company, when information asymmetry occurs, managers can signal the condition of the company to investors in order to maximize the value of the company's shares (Choiriah & Gunawan, 2018). Transparency of information, both mandatory and voluntary information by management (agents) and company owners (principals) will improve company performance which will then increase the value of the company.

Pecking Order Theory

The pecking order theory was introduced by Myers & Majluf (1984). This theory states that financial costs will increase if there is information asymmetry. Information asymmetry arises when a company raises capital by issuing shares. When shares are issued, investors assume that managers are taking advantage of the information they have regarding the company and value the company's shares higher than the company's value. This condition makes investors provide a low estimate of the shares. High information asymmetry and low stock prices imply a high cost of capital (Muslim & Setiawan, 2021).

The Effect of Information Asymmetry on the Cost of Capital

Agency theory implies the existence of information asymmetry between managers as agents and shareholders as principals. Information asymmetry arises when managers know more internal information and future prospects of the company than shareholders and other stakeholders (Mahawyahrti et al., 2018). This condition creates an imbalance of information between company managers and investors (Yulianto & Aryati, 2022) and causes managers to gain benefits for personal gain by falsifying information in financial reports (Ashkhabi & Agustina, 2015). Companies with high information asymmetry will certainly raise doubts for investors because they are considered to have high investment risks. High risk results in high expected returns for investors and high capital costs for the company. Previous research conducted by Choiriah and Gunawan (2018) in the banking sector listed on the IDX found that information asymmetry has a significant positive effect on capital costs. Other studies such as those conducted by Astutik et al (2018), Muslim & Setiawan (2021) and He (2013) found that information asymmetry also has a significant positive effect on the cost of capital. Conversely, in a study conducted by Panjaitan & Sofian (2022), it was found that information asymmetry had no effect on the cost of capital in LQ 46 indexed companies in 2017-2019.

Based on the explanation above, the hypothesis can be concluded:

H1: Information Asymmetry Has a Significant Effect on the Cost of Equity

Institutional Ownership Moderates the Effect of Information Asymmetry on the Cost of Equity

Institutional ownership is the proportion of share ownership by institutional investors in a company. Institutional investors usually consist of governments, banks, investment and insurance companies, institutions or foundations and other companies. Institutional investors with a higher proportion of shares will act as effective supervisors and decision makers for the interests of the company. Institutional investors also play an important role in the corporate governance process and improve the quality of accounting information (Niu et al., 2013), play an important role in shaping managerial behavior (Hshieh et al., 2019) and controlling earnings management behavior (Fan & Hu, 2013). Acting as supervisors of company management, of course, parties with institutional ownership will significantly influence company management (Choi et al., 2020). With the influence of institutional investors on company management, information asymmetry can be reduced by providing periodic financial reports by managers to company owners (Choiriah & Gunawan, 2018). Previous research conducted by Choiriah and Gunawan (2018) in the banking sector listed on the IDX found that the existence of institutional ownership can have a significant negative effect on information asymmetry on capital costs.

Based on the explanation above, the following hypothesis can be concluded:

H2: Institutional Ownership Strengthens the Effect of Information Asymmetry on Cost of Equity
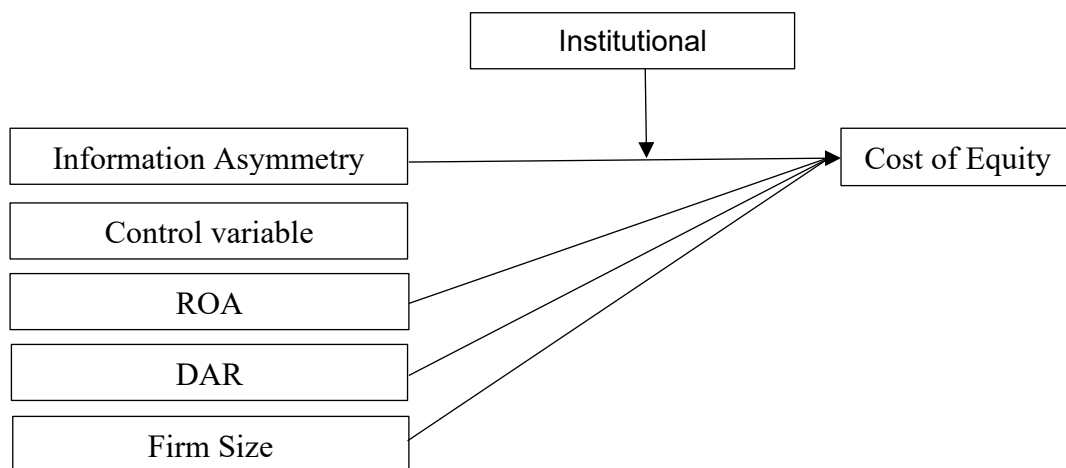
Conceptual Framework

Figure 1. Research Model

METHODS

Research Approach

This research approach is a quantitative approach (positivism) in associative form with the aim of understanding the relationship of variables, either two variables or more than two variables. Explanatory research in this study is intended to explain events (phenomena) that occur in practice.

Data Types and Sources

The data in this study were obtained from reports published by banking companies annually on the IDX platform during the 2021-2023 period.

Population and Research Sample

The population of this research was conducted by taking the population of banking companies that went public in the Indonesian Capital Market during 2021-2023. The total population during the observation period was 46 banks. The technique for determining samples is done using the purposive sampling method. Sample companies that met the criteria did not experience losses, published financial reports, did not experience delisting during the observation year. The sample that met the criteria in this study amounted to 46 banks.

Operational Variables and Variable Measurement
Dependent Variable
Cost of Equity

The cost of capital in this study is proxied by CAPM. Measurement with CAPM is commonly used by researchers who conduct research with the cost of capital variable (Ingram & Margetis, 2010). This model was introduced by Markowitz (1952) and Sharpe (1964).

Cost of Equity = Rf + βi +[E(Rm) - Rf]

Independent Variable
Information Asymmetry

Information asymmetry as an independent variable in this study is proxied by the bid-ask spread. The bid-ask spread is the difference between the highest purchase price and the lowest selling price. The bid-ask spread calculation formula based on Suhendah's research (2012) is as follows:

SPREADi, t = (Aski, t - Bidi, t)/ {(Aski, t + Bidi, t)/2} X 100

Moderating Variables
Institutional Ownership

Ownership of shares in a company by institutions other than the public. According to research by Lyu and Zhang (2015), the institutional ownership variable is measured by the formula:

Institutional Ownership = $\dfrac{\text{Number of Institutional Shares}}{\text{Total Shares Outstanding}}$

Control Variables
Return on Assets

This study uses the control variable Financial Performance with the proxy Return on Assets (ROA). ROA is the result of dividing net profit by the bank's total assets. ROA indicates the potential of the issuer in generating profits in the future. The institutional ownership variable is calculated by the formula:

ROA = $\dfrac{\text{Earning After tax}}{\text{Total Assets}}$

Debt To Assets Ratio

Debt to asset ratio (DAR) is a variable that defines how much of a company's debt is funded by loans or credit. The DAR variable is calculated by the formula:

DAR = $\dfrac{\text{Total Debt}}{\text{Total Assets}}$

Firm Size

The size of this research entity refers to the size of the company that differentiates small companies from large companies. Determination of size can be written as follows:

Firm size = Ln (total assets).

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Data Analysis Methods

The method of data analysis in this research begins with descriptive analysis, testing of classical assumption and regression analysis on panel data. In this study, the statistical tool used is Eviews version 10.

Moderation Effect or Hypothesis Test

The research hypothesis is tested by panel data regression analysis of common effect, fixed effect and random effect. The best model is selected by Chow test and Hausman test. The form of statistical equation in this study is:

$$BM = \alpha + \beta 1 AI + \beta 2 ROA + \beta 3 DAR + \beta 4 TA + \varepsilon \qquad (1)$$
$$BM = \alpha + \beta 5 AI + \beta 6 ROA + \beta 7 DAR + \beta 8 TA + \beta 9 KI + \varepsilon \qquad (2)$$
$$BM = \alpha + \beta 10 AI + \beta 11 ROA + \beta 12 DAR + \beta 13 TA + \beta 14 KI + \beta 15 AI*KI \qquad (3)$$

Information:
AI   = Information Asymmetry
ROA   = *Return on Assets*
DAR   = *Debt to Assets Ratio*
TA   = Total Assets
BM   = Cost of Equity
KI   = Institutional Ownership
α   = Constant
β   = Coefficient of each variable
ε   = Error

Equation one is used to test the first hypothesis, then equations two and three test the moderating variables contained in the second hypothesis. One-way testing is applied to the hypothesis of this study to test the effect of information asymmetry variables on the cost of equity variable is the t-test with a significance level of 5%. The decision to accept or reject hypothesis two can be seen from the significance value of the $\beta 6$ coefficient of the interaction (AI * KI).

RESULTS AND DISCUSSION
Model Specification Test Results
Chow Test

The Chow test is intended to select the Common Effect Model (CEM) or Fixed Effect Model (FEM) as the best model, the decision of which is based on the probability value (p) for Cross-Section F and Chi Square.

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Table 1. Chow Test Results

Effects Test	Statistics	d.f	Prob.
Cross-section F	5,355136	(19,35)	0.0000
Cross-section Chi-square	94,691038	19	0.0000

Source: Eviews data processing (2025)

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Hausman Test

The Hausman test is conducted to select the best model between the Fixed Effect Model (FEM) or Random Effect Model (REM) with decision making based on the probability value (p) for random Cross-Section.

Table 2. Hausman Test Results

Test Summary	Chi-Sq. Statistik	Chi-Sq. d.f	Prob.
Cross-section random	7,477802	5	0.01875

Source: Eviews data processing (2025)

Based on table 2 above, it can be seen that the results of the Hausman Test produce a random Cross-Section probability (p) value of 0.01875. This is in accordance with the criteria if the probability is > 0.05, then the Hausman test that has been carried out produces the best Random Effect Model model and the Lagrange Multiplier Test must be carried out.

Lagrange Multiplier Test

The Lagrange multiplier test is carried out to select the best model between the Random Effect Model (REM) or the Common Effect Model (CEM) with decision making based on the Breusch-Pagan (BP) probability (p) value.

Table 3. Lagrange Test

	Prob.
Breusch-Pagan	0.0000

Source: Eviews data processing (2025)

Based on table 3 above, it can be seen that the results of the Lagrange Multiplier Test produce a probability value (p) of Breusch-Pagan (BP) of 0.000. This is in accordance with the criteria if the probability is <0.05, then based on the Lagrange Multiplier Test that has been carried out, the best model is the Random Effect Model.

Classic Assumption Test

The equation that has met the classical assumption is the equation that uses the GLS method (Gujarati and Porter, 2009). The Eviews statistical program has used the GLS method estimation model on the Random Effect Model (REM) while the Fixed Effect Model (FEM) and Common Effect (CEM) use OLS. The equation in this study uses the Random Effect Model (REM), so it is assumed to have met the classical assumption and no longer needs to be tested for classical assumptions.

Model Interpretation

Multiple linear regression analysis shows the relationship between independent variables and dependent variables. Referring to this study, this study uses independent variables Information Asymmetry (AI), Return on Assets (ROA), Debt to Assets Ratio

(DAR) (X3), Total Assets (TA) and Institutional Ownership (KI) and dependent variables Cost of Capital (BM).

Tabel 4. Multiplier Linear Regression Analysis Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.001622	0.083260	0.019484	0.9845
X1	1.29E-05	5.13E-05	0.250634	0.8030
X2	-0.202751	0.030166	-6.721117	0.0000
X3	0.010254	0.014482	0.708026	0.4819
X4	0.000782	0.002416	0.323685	0.7474

Source: Eviews data processing (2025)

Based on the table above, the multiple linear regression equation model is as follows:

$Y = 0.0016 + 1.28675AI - 0.2027ROA + 0.0102DAR + 0.0007TA + \varepsilon$…………(1)

Tabel 5. Hasil Analisis Regresi Linear Berganda (variabel Moderasi)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.002049	0.082467	-0.024847	0.9803
X1	1.32E-05	5.08E-05	0.260962	0.7951
X2	-0.201193	0.030015	-6.702981	0.0000
X3	0.010326	0.014270	0.723637	0.4724
X4	0.000806	0.002380	0.338691	0.7362
Z	0.004465	0.010646	0.419428	0.6766

Source: Eviews data processing (2025)

Based on the table above, the multiple linear regression equation model is as follows:

$Y = -0.0020 + 1.3245AI - 0.2011ROA + 0.0103DAR + 0.0008TA + 0.0044KI + \varepsilon$..(2)

Tabel 6. Hasil Analisis Regresi Moderasi

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.008700	0.074555	-0.116698	0.9075
X1	0.000155	0.000113	1.365072	0.1780
X2	-0.207522	0.028234	-7.350015	0.0000
X3	0.009867	0.012993	0.759389	0.4510
X4	0.000925	0.002147	0.431007	0.6682
Z	0.011333	0.011593	0.977558	0.3327
X1Z	-0.002936	0.002085	-1.407795	0.1650

Source: Eviews data processing (2025)

Based on the table above, the multiple linear regression equation model is as follows:

$Y = -0.0087 + 0.0001AI - 0.2075ROA + 0.0098DAR + 0.0009TA + 0.0113KI - 0.0029AiKI + \varepsilon$…….(3)

Hypothesis Testing Results

The results of testing with panel data regression show the best model, namely REM (Random Effect Model), which is shown from the results of the Chow test model specification test, the Hausman test and the LM test. In the random effect model, the significance value of the t test can be known. Significant value if known <0.05, then the conclusion is that the hypothesis is accepted. The t value is used to conclude that

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the variable X (independent) has an effect on the variable Y (dependent). Table 7 shows that the Information Asymmetry variable has a significance value of 0.7951 (>0.05) and a regression coefficient of 1.32 so that the Information Asymmetry variable can be said to have no significant effect on the cost of equity variable.

Moderation testing can be seen through the R^2 value in equation 2 which is the main effect and equation 3 is the main effect and interaction. The R^2 value of equation 2 is 0.563108 while equation 3 has an R^2 value of 0.594874. This means that the Institutional Ownership variable can moderate Information Asymmetry on Capital Costs. In addition, equation 1, equation 2 and equation 3 with an F value of 0.0000 (below 5%) so it can be concluded that the Institutional Ownership variable can moderate Information Asymmetry on Capital Costs.

Table 7. Panel Data Regression Test Results

Keterangan	Variabel	Coeficient	Significance	Statistic t	Adj. R²	Sig. F
Equality 1 (hypothesis 1)	Constant	0.0016	0.9845	0.019484		
	Information Asymetry	1.29E05	0.8030	0.250634	0.560766	0.0000
	ROA	-0.2027	0.0000	-6.721117		
	DAR	-0.0102	0.4819	0.708026		
	Total Assets	0,0007	0.7474	0.323685		
Equality 2 (Hypothesis 2)	Constant	-0.0020	0.9803	-0.023847		
	Information Asymetry	1.32E-05	0.7951	0.260962	0.563108	0.0000
	ROA	-0.2011	0.0000	-6.702981		
	DAR	0.0103	0.4724	0.723637		
	Total Assets	0.0008	0.7362	0.338691		
	Institutional Ownership	0.0044	0.4192	0.419428		
Equality 3 (Hypothesis 2)	Constant	-0.0087	0.9075	-0.116698		
	Information Asymetry	0.0001	0.1780	1.365072		
	ROA	-0.2075	0.0000	-7.350015		
	DAR	0.0098	0.4510	0,759389		
	Total Assets	0.0009	0.6682	0.431007	0.594874	0.0000
	Institutional Ownership	0.0113	0.3327	0.977558		
	AI*KI	-0.0029	0.1650	-1.407795		

Source: Eviews data processing (2025)

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Discussion
The Impact of Information Asymmetry on the Cost of Capital

The first hypothesis of this study assumes that Information Asymmetry significantly affects the cost of capital. The output of this test shows that hypothesis one is rejected. This is because it has a t-statistic value of 0.2506 with a Prob. value (significance) of 0.8030 (> 0.05) and it can be concluded that the Capital Cost variable is not significantly influenced by Information Asymmetry. The results of this study are in line with the research conducted by Riswandari (2023) & Muslim & Setiawan (2021), but contradict the results of the research conducted by Sutarman et al. (2022) & Dewi et al. (2020).

The Role of Institutional Ownership in Moderating the Effect of Information Asymmetry on the Cost of Capital.

Institutional investors can be governments, banks, investment and insurance companies, institutions or foundations and other companies. Companies with higher institutional investors will act as effective supervisors and decision makers of interests for the company and improve the quality of accounting information (Niu et al., 2013). The results of the moderation test show that Institutional Ownership can moderate the effect of Information Asymmetry on the Cost of Capital. The results of this study are in line with research conducted by Choiriah and Gunawan (2018) in the banking sector listed on the IDX, it is known that the existence of institutional ownership can have a significant negative effect on information asymmetry on the cost of capital.

CONCLUSION

This study produces empirical evidence that shows the cost of capital is influenced by information asymmetry. The institutional ownership added in this study as a moderating variable is intended to strengthen the influence of information asymmetry on the cost of capital. Empirically, this study provides evidence that information asymmetry cannot affect the cost of capital variable. The presence of Institutional Ownership which is an institutional shareholder is also known to not be able to strengthen the influence of information asymmetry on the cost of capital. Of course, this will be detrimental to investors who usually have less information than management, because supervisors (ownership institutions) cannot influence company management to provide the information needed so that investors can make the right decisions in determining whether to buy company shares or not. The results of this study contribute to agency theory, namely related to the conflict between shareholders (company owners) and company management in terms of the availability of important information to make investment decisions.

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