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The Effect of Information Asymmetry, Business Diversification on the Cost of Equity Capital with Managerial Ownership as a Moderating Variable

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Abstract

The purpose of this study was to examine the effect of information asymmetry and business diversification on the cost of equity capital. The research sample was obtained by 48 mining companies listed on the Indonesia Stock Exchange (IDX). This study uses verification research with a quantitative approach. The method of analysis is panel data regression. The results showed that information asymmetry had a positive effect on the cost of equity capital. Business diversification and managerial ownership have a negative effect on the cost of equity capital. Information asymmetry and business diversification moderated by managerial ownership affect the cost of equity capital. Firm size as a control variable has a positive effect on the cost of equity capital.

Keywords
information asymmetry; diversification; cost of equity capital; ownership managerial; firm size

I. Introduction

Today's economic competition requires companies to develop their business by expanding their business operations and innovation according to trends with the support of the capital structure of investors. The capital market can attract funds from investors to develop their business, by issuing stocks or bonds. Financial statements can be used by investors to assess the company's performance as well as consideration for investing. Submission of information by companies through annual financial reports is important for investors.

Economic growth is generally defined as the development of activities in the economy that causes goods and services produced in society to increase and the prosperity of society increases. (Sukirno, 2015). Economic growth is a continuous process of increasing per capita output in the long run. (Hakim, et al. 2021).

Economic growth is still an important goal in a country's economy, especially for developing countries like Indonesia. Economic growth must also be followed by positive changes in the context of improving the welfare and prosperity of the people who are mandated by the 1945 Constitution. Therefore, economic development is still the focus of development in Indonesia and is an indication of the success of development. Economic growth is a process of increasing the production capacity of an economy that is realized in the form of an increase in national and regional income. (Magdalena and Suhatman, 2020)

The main goal of the company is to maximize the value of investors, while investors expect to obtain dividends and an optimal rate of return on their investment (Wahyuningtyas & Anugraini, 2019). The mining sector is one of those that has a role in the country that is able to provide business opportunities in exploring resources. The mining sector makes a major contribution to increasing economic activity and export earnings.

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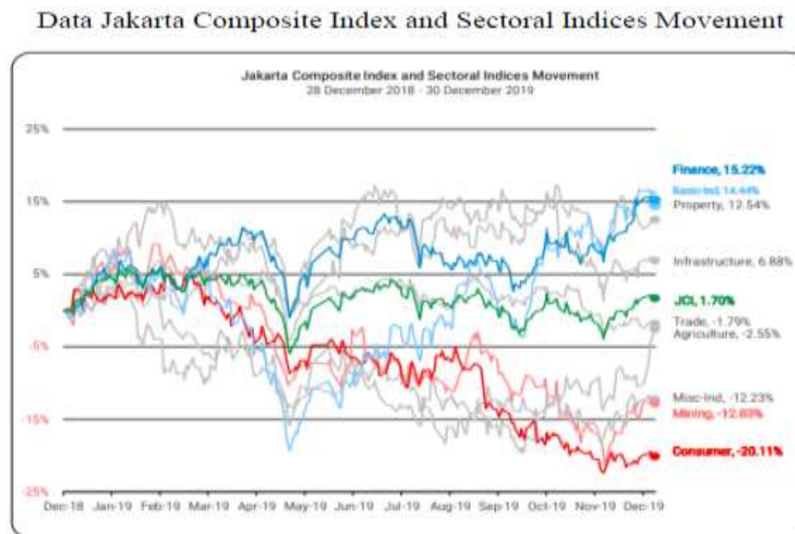

Figure 1. *Jakarta Composite Index data*
Source: IDX Statistics, 2019

Figure 1 shows that in 2019 the JCI in the mining sector decreased by -12.83%. An important indicator for investors is the movement of the stock index because it can assess and determine investment decisions by investors.

Data Indeks IDX High Dividend 20

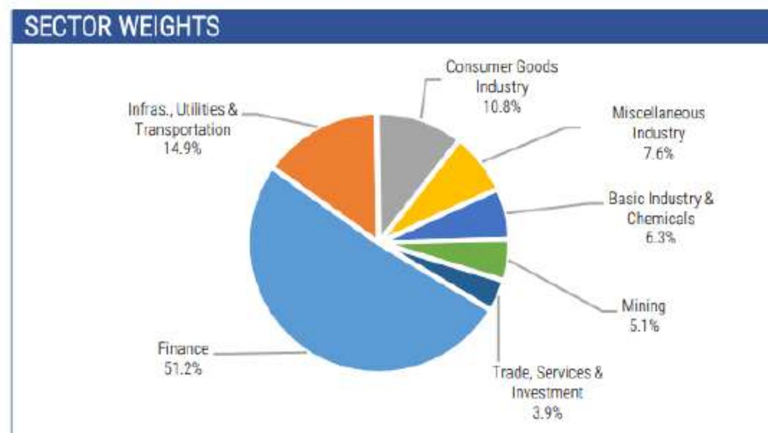

Figure 2. *IDX High Dividend Index 20*
Source: IDX Statistics, 2019

Figure 2 shows each sector that pays dividends. The finance sector as the sector that distributed the most dividends reached 51.2%, while the mining sector distributed dividends of 5.1%. When companies distribute dividends in small amounts, investors become less interested in investing in the sector, because any increase in the amount of dividend policy will have an impact on increasing the number of share prices.(Irvan, 2019).

The cost of equity capital is one of the costs incurred by the company to obtain funds for selling shares (Hermuningsih, 2012). The cost of equity capital is identified as investors' expectations of the return of funds provided to the company(Barvidi, 2015). This cost is related to investment risk, to understand the risk in investing by disclosing information(Dewi & Kelselyn, 2019). Company funds obtained from investors must be used efficiently and

effectively, because for companies corporate funding must be met at a reasonable cost. according toHorne & Wachowicz (2008) Companies must control and minimize the cost of capital in order to generate profits that can prosper investors.

Information asymmetry related to the problem *moral hazard* when managers have personal interests that can harm investors. Information asymmetry occurs when there is a problem from the imbalance of information held between managers and investors, where managers obtain information on the future continuity of the company compared to investors.(Ifonie, 2012). It is feared that managers are motivated to modify financial statements to commit fraud and want to appear to have good performance because of the authority and responsibility related to company information they have so that managers are easier to modify in order to achieve their welfare or prosperity.(Rahmawati et al., 2012). StudyLambert et al., (2011)stated that the higher the information asymmetry between managers and investors, the higher the cost of equity capital issued by the company. Meanwhile, according toWilliam He et al., (2006) the lack of information owned by investors results in investment risk and high investors demand an optimal rate of return on the given investment so that information asymmetry increases the cost of equity capital.

According to Anthony & Govindarajan, (2015)Agency theory is related to the principal (investor) and agent (management) of the contract or agreement, namely the investor gives the authority and responsibility to the manager to manage the company. The occurrence of agency can be caused by the agent's interest as a manager not acting for the welfare of the principal's interests but his personal interests for short purposes. Meanwhile, signal theory is concerned with positive or negative information provided to external parties, such as disclosures in financial statements(Wuladari & Atmini, 2012).

Business diversification is one strategy to expand business segments. according toLi & Wong (2003)diversification strategy is carried out to create value and maximize profits. Diversification in related or unrelated business segments can open up new investment opportunities(Symmetrical & Darmawan, 2017). Business diversification can be done by means of mergers or opening new business lines with the aim of maximizing the level of profit from the number of segments, sizes and types of business. StudyHann et al., (2013)argues that the company's diversification strategy has more than one business segment so that the risk will be spread to various other business units and can minimize the cost of equity capital. While ResearchNahda & Asri, (2017) business diversification has an effect on the cost of equity capital.

Managerial ownership is top management such as directors or commissioners who own shares in the company as well as company owners or investors. Managerial ownership of a stock can reduce agency theory, because the presence of management can unite the interests of top management and investors and position themselves as the owner of the company and share the benefits and risks of the decisions taken. (Nurjanati & Rodoni, 2015). StudyNugroho et al., (2015)shows that managerial information can detect investment risk in minimizing the cost of equity capital. But researchDewi & Kelselyn, (2019) shows that managerial ownership cannot moderate the information asymmetry on the cost of equity capital.

Company size is seen from the size of the company on the company's total assets, stock market value and others (Waluyo et al., 2015). In addition, the size of the company shows the activities of the company owned. According to Rika (2018) the larger the size of the company, the greater the costs incurred by the company in conveying information to investors or the greater the cost of equity capital.

II. Research Methods

This study uses verification research with a quantitative approach. Research data is secondary data sourced from stock transaction data and annual financial reports. Samples were taken by purposive sampling technique bytaking into account certain criteria, including: (1) mining companies listed on the Indonesia Stock Exchange for the 2015-2019 period (2) mining companies whose listing years are above 2015 and (3) mining companies whose data are incomplete in issuing annual reports over a period of time observations in 2015-2019 then obtained a number of 48 samples of companies that meet certain criteria.

The measurement of the business diversification variable as proxied by the Herfindahl Index is based on each business segment produced in 5 years. If the HERFit value is above 1 or equal to 1, it means that the company is not diversified or has a single segment, and vice versa, the smaller the HERFit value, it can be said that the company is diversifying its business.(Chen & Yu, 2012).

III. Results and Discussion

Prior to the regression testing, there were three tests carried out including (1) the Chow test which showed that this model had *probability*(p-value) Chi-square is 0.0074 <0.05 with a significance value of 5%, which means that the significance result refers to the fixed effect model. (2) Hausman test shows that the model has a random cross-section probability (p-value) of 0.0010 < 0.05 with a significance of 5%, which means that the significance results refer to the fixed effect model. While (3) the Lagrange Multiplier test shows a probability value (p-value) > a significance of 5% (0.1862 > 0.05) which means that the result of the significance value leads to a fixed effect. Based on the results of the three tests, the fixed effect method is suitable for the regression model.

Table 1. Regression Test Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-79.68464	146.9477	-0.542265	0.5883
X1	2.279045	4.250212	0.536219	0.5924
X2	-36.60062	11.67275	-3.135561	0.0020
M	-460.8266	197.6886	-2.331073	0.0208
X1_M	65.34544	28.33001	2.306581	0.0222
X2_M	577.3859	207.9796	2.776167	0.0061
K	5.236536	7.149047	0.732480	0.4648
R-squared	0.282626	Mean dependent var		4.930766
Adjusted R-squared	0.078213	SD dependent var		24.31889
SE of regression	23.34850	Akaike info criterion		9.334051
Sum squared resid	101398.4	Schwarz criterion		10.11719
Likelihood logs	-1066,086	Hannan Quinn Criter.		9.649600
F-statistics	1.382621	Durbin-Watson stat		2.075218
Prob (F-statistic)	0.060394			

Based on table 1 there is a regression equation as follows:
Y= -79.68464 + 2.279045 AI - 36.60062 DB –
460.8266 KM + 65.34544 AI*KM +577.3859 DB*KM + 5.236536 UP

In the linear regression equation above, it shows that if information asymmetry, business diversification, managerial ownership, information asymmetry are moderated by managerial ownership, business diversification is moderated by managerial ownership, and company size has their respective values of coefficients with an increase of one unit, the cost of equity capital increases by one unit assuming there are other factors in a constant state.

There are several results from the assumption test including (1) the Jarque-Bera method in the normality test that the value of probability(0.00000 < 0.05) is smaller than alpha, indicating that it is not normally distributed because the panel data assumed that the data has been fulfilled and the number of observations is more than 30 observation members (2) The value of the Centerd VIF of each independent variable is below 10, which means that there is no multicollinearity (3) Durbin-Watson in autocorrelation test obtained dU and 4-dU values (1.831 < 2.075218 < 2.169) showed no autocorrelation (4) Heteroscedasticity test using Glejser test obtained Obs*R-squared value of 6.710261 > 0.05 which means there is no heteroscedasticity problem (5) The adjusted R Square value from the coefficient of determination test is 0.282 or 28%, indicating that there is an influence between the variables and the rest is influenced by other things that are not examined at 71.74%.

Based on table 1, hypothesis testing shows that the Fcount value is smaller than the Ftable value (1.382621 <2.138), which means that there is no significant effect of information asymmetry (AI), business diversification (DB) and managerial ownership (KM), information asymmetry moderated by managerial ownership (AI*KM), moderated diversification of managerial ownership (DB*KM), and firm size (UP) simultaneously on the cost of equity capital (BM) . while the partial test shows that (1) the first hypothesis is rejected stating that information asymmetry has a positive but not partially significant effect on the cost of equity capital (2) the second and third hypotheses are accepted, stating that business diversification and managerial ownership have a negative and significant directional effect. partial to the cost of equity capital (3) the fourth hypothesis is accepted stating managerial ownership moderates the effect of information asymmetry on the cost of equity capital (5) the fifth hypothesis is rejected,

Based on the first hypothesis, which means that the information asymmetry between managers and investors that occurs is getting smaller, then the optimal rate of return on the given investment is getting smaller in accordance with the explanation of agency theory. StudyNingsih & Ariani (2016) shows the higher the information asymmetry between the principal and the agent, the higher the investor's expectation of the required return, in other words the cost of equity capital increases, which is in accordance with the explanation of agency theory that the higher the agent covers information to the principal, the higher the investment risk that occurs. This finding is in line withLambert et al., (2011), Armstrong et al., (2011) states that information asymmetry that occurs within the company has an influence on the cost of equity capital. StudyIfonie, (2012) before investing investors consider other things and when the company issues new common stock it is done to cover operational debt.

Based on the second hypothesis, which means that more diversified companies can reduce owner risk and investment risk because the company has more than one line of business so that the level of return required by investors decreases. Business diversification can increase the advantage of market power, ease of obtaining loan funds and reduced business risk because risks are spread across several different business segments (Kusumawardhani, 2018). StudyElyasiani & Wang, (2009)Diversification of the company is able to reduce the risk of the owner of the company, because the risk is spread over several business segments, the risk is directly proportional to the required profit so as to reduce the cost of equity capital. In addition, researchFranco et al., (2010) Business diversification

measured by the Herfindahl index shows that the more diversified a company has in several business segments, the lower the cost of equity capital.

Based on the third hypothesis, which means that the higher the share ownership owned by the management, it can equate the desire with investors so as to reduce the level of return required by investors. StudyNurjanati & Rodoni, (2015) share ownership owned by management makes it easier to disclose transparent financial statements, the ownership of shares owned can unite the interests between management and investors so that managers feel the positive or negative impact of decisions taken when the ownership of shares owned is getting bigger, the more disclosure of financial statement information so the lower the risk that occurs can reduce the cost of equity capital. In line with Nugroho et al. (2015) share ownership owned by management can increase the confidence in the information held in making decisions to detect investment risk. Study Dakhlaoui & Gana (2020) Managerial owned shares have an influence on the cost of equity capital.

Based on the fourth and fifth hypotheses, which means that managerial ownership is able to moderate information asymmetry and business diversification on the cost of equity capital. When there is information inequality between managers and investors, managerial ownership is able to balance information between management and investors and equate management's interests with investors so as to reduce the level of return required by investors, supports agency theory which discusses betweenprincipal with agent (Nurjanati & Rodoni, 2015). The diversification strategy is the management's choice to expand business segments and maximize profits, with the ownership of shares owned by management, it can equalize the position of management with investors and improve the performance of management to meet the wishes of management thereby reducing investment risk and expectations of returns on investment by investors.(Goranova et al., 2007).

Company size or the size of a company can provide benefits for investors and affect the ability to deal with risks that occur (Embong et al., 2012). The more the scale of the companylarge, the cost of equity capital increases (Rika, 2018). Study Listyandari, (2020) states that the size of the company can influence the investment to determine the level of return required by the investor.

IV. Conclusion

This study found that information inequality that occurs can increase the optimal rate of return on a given investment. Business diversification has an effect on reducing the cost of equity capital, this is because diversification can reduce owner risk. Managerial ownership of shares has an effect on lowering the cost of equity capital, which can equate the interests of:*principal*with agents. Managerial ownership is able to moderate information asymmetry and business diversification towards the cost of equity capital. Firm size has an influence in increasing the cost of equity capital.

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