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How does audit committee moderate the relationship between audit firm size, industry specialization, and the cost of equity capital? A comparison of the Ohlson and Capital Asset Pricing Model

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ABSTRACT

The purpose of this study is to examine the moderation effect of the audit committee on the linkages between audit firm size, industry specialization, and the cost of equity capital with firm size and financial leverage as a control variable. This study is one of few that compared the accuracy of Ohlson and Capital Asset Pricing Model in explaining the cost of equity capital and the moderation role of the audit committee. A sample of 123 manufacturing firm-year observations was drawn from Indonesian-listed companies for five years period (2016-2020). The results show that while the audit committees significantly moderate the negative relationship between firm size on the cost of equity capital, there is no significant evidence of the moderation role of the audit committee on the relationship between industry specialization and the cost of equity capital using the Capital Asset Pricing Model. On the contrary, the moderation role of the audit committees on the effect of industry specialization toward the cost of equity capital under Ohlson was supported in the study. Further, it found that the Ohlson has a better performance than the Capital Asset Pricing Model in explaining the cost of equity capital as the Ohlson measurement expressed the role of earnings per share which represent a more real rate of return.

Keywords: Audit Committee; Audit Firm Size; Auditor Industry Specialization; Cost of Equity Capital; Ohlson; Capital Asset Pricing Model

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Introduction

The agency problem between managers and investors is a fundamental issue arising due to information asymmetry, in which managers as agents always have more than principals, namely the shareholders (Nwidobie, 2013). Differences in interests between these parties further increase information asymmetry, one of which is in the form of a financial statement, as it provides accounting information describing a company's financial condition. Hence, the higher the information asymmetry, the higher the risk investors will encounter.

Hajiha & Sobhani (2012) explain that the level of information risk will affect the rate of return on investment. In other words, high risk in financial statements makes investors doubt the information and subsequently expect a higher rate of return. As a result, the cost of equity capital to be provided by the company will increase.

A high-quality audit must be conducted to reduce the financial statements' uncertainty and eliminate the risk in a company's financial information. It is intended to improve the reliability of the company's financial reporting, eliminate information risk, and ultimately decrease the returns demanded by investors (Krishnan & Zhang, 2019). Thus, if the audit is not carried out, investors will likely doubt the information presented in the financial statements. According to Arens (2012), auditing collects and evaluates evidence on measurable information from economic entities. In this regard, investors expect the companies they invest in to be audited by auditors with the best competence and expertise. Based on Ahmad et al. (2014), auditors have mechanisms to detect information distortion, improve information quality to reduce investment risk, and facilitate optimal decision-making. Companies audited by high-quality auditors tend to gain investor confidence in the information presented in the financial statements. Orazalin et al. (2019) define a high-quality audit as financial statements audited by the Big Four-affiliated firms. Hence, financial statements must provide reliable information for users to determine the type of economic decision to make.

A high-quality audit performed by competent auditors will theoretically and empirically lead to lower corporate risk, information asymmetry, and capital cost. The issues of information asymmetry, its impact on financial structures, and the role of auditors are relevant for developing countries, particularly those with poor transparency and disclosure quality (Claessens & Yurtoglu, 2013). Therefore, a qualified audit is necessary to fulfill the demands of companies and investors. DeFond & Zhang (2014) argue that high audit quality adds value to market participants, ensuring that the existing financial statements reflect the

firm's underlying economy. Correspondingly, if the quality of the audit has been met, agency problems can be prevented, given that it is associated with the supervision and control of company management (Huu Nguyen & Thuy Doan, 2020). Thus, auditors are proven to resolve issues by playing their role as a monitor. The effectiveness of the audit supervisory role is further reflected in the client's cost of equity capital.

Audit quality impacts the cost of equity capital by influencing users' decision-making regarding financial statements, which later reduces the required cost (Basiruddin et al., 2014). The present study intended to investigate the impact of audit quality engaging audit firm size and industry specialization on the cost of equity capital (Soesetio et al., 2021; Sugeng et al., 2020). Persakis & Iatridis (2015) examined the impact of earnings management, audit quality, and financial crisis on the cost of capital in 18 developed countries classified into three groups according to the level of investor protection. Their findings reported that the cost of equity correlated negatively with the companies audited by the Big Four auditors across all clusters, regardless of investor protection level. Houqe et al. (2017) further confirmed that hiring higher-quality auditors could reduce the cost of equity capital in the Chinese and Indian markets.

The audit committee's involvement as a moderating variable made the present investigation different from the previous studies. It was employed because the effectiveness of its supervisory function could significantly affect the audit quality. Appuhami (2018) discovered that audit committee characteristics such as size, frequency of meetings, and independence correlated significantly and negatively with the cost of equity capital. In addition, this research was conducted in Indonesia, a country with a lower legal environment and investor protection than the countries where the previous studies were conducted. Persakis & Iatridis (2015) corroborated that higher audit quality implied a higher earnings rate in countries with high investor protection. This analysis focused on audit quality, engaging the proxies consisting of audit firm size and industry specialization.

Literature Review

Agency theory recognizes auditing as one of the vital monitoring mechanisms for resolving conflicts of interest and reducing costs. Thus, agency problems must involve audit quality. Vargas-Hernández et al. (2018) consider that agency theory emerges when the owner (principal) begins to delegate managerial functions or decision-making to other individuals (agents). Agency problems can increase the risk when shareholders cannot properly monitor managers due to information asymmetry. Tran (2014) also emphasized that the corporate

governance mechanisms applied by German companies allowed them to reduce agency costs. Based on the nature of risk aversion, rational investors would demand a risk premium to bear agency risks that would likely increase the cost of equity. In this case, a high-quality audit was required through a more significant role of the audit committee to reduce the cost.

Setiawan & Daljono (2014) examined the impact of audit quality on the cost of equity capital in manufacturing companies listed on the Indonesia Stock Exchange. The findings revealed that audited companies that engaged audit firms affiliated with the Big Four had a lower cost of equity capital. This result was supported by Ningsih & Ariani (2016), who discovered that audit quality harmed the cost of equity capital. Anchored in the description above, there was a correlation between the quality of the company's audit and the cost of equity capital.

Coffie et al. (2018) investigated the impact of audit quality on the cost of capital supported by the lending credibility theory to determine the extent to which audit quality reduced the cost of improving business finances in Ghana, involving a total sample of 40 companies in the 2008-2013 period. Data analysis employed panel regression, which was then measured using three equation models: cost of debt, cost of equity, and cost of capital (WACC). The results confirmed that audit quality had a negative coefficient with all three variables of the cost of capital, indicating that the high-quality audit provided more credible and reliable information and increased the company's reported earnings, ultimately reducing the cost of capital.

Cost of Equity Capital

The cost of equity capital is the rate of return that investors demand from the company. They certainly expect the company to provide factual information regarding the existing conditions. Otherwise, there will be risks for which management is responsible for offering them returns. Brigham & Daves (2018) state that the cost of capital is what a company must incur to obtain funds from debt, preferred stock, common stock, or retained earnings to fund an investment or company's operations. The cost of equity capital can be affected by several factors, including earnings quality and information asymmetry.

The present study measured the cost of equity capital by employing two models: the Ohlson and the Capital Asset Pricing Model (CAPM). The Ohlson portrays a residual income model used to estimate the cost of equity capital proposed by Edward Bell Ohlson. It involves a discount rate that investors use to assess future cash flows. It also uses estimated earnings per share. Meanwhile, the Capital Asset Pricing Model (CAPM) is a model describing the

correlation between market risk and the demanded rate of return (Brigham & Daves., 2018). CAPM determines the price of risky securities and the expected return on those assets. The risk premium can be calculated based on the value of the market's expected return (Rm) minus the risk-free rate (Rf). This model incorporates a market beta so that returns can be maximized at a certain level of risk.

Inconsistencies in previous research findings made this topic still relevant to be studied. Hajiha & Sobhani (2012) discovered that audit quality could reduce the cost of equity capital. However, those results were in contrast to Suparno & Kiswara (2013), who found that auditor industry specialization had a positive impact on the cost of equity capital. On the other hand, Susanto & Siregar (2012) concluded that auditor tenure positively affected the cost of equity capital. Therefore, it could be interpreted that several previous studies had administered various procedures to measure audit quality. In addition, the present research was also distinct in the form of the discussion regarding the impact of audit quality on the cost of equity capital using two measurement models, namely the Ohlson model (1995) and the Capital Asset Pricing Model (CAPM) according to Brigham & Daves (2018). To the best of the researcher's knowledge, no study engaged two models to measure the cost of equity capital.

Audit Firm Size and Cost of Equity Capital

Companies that conduct audits are undoubtedly concerned about the audit firm size. Management and investors expect the best audit quality to make economic decisions. In this context, audit firm size is a corporate governance mechanism to protect investors' rights and detect fraud committed by company management (Gaaya et al., 2017). Investors are more confident in the quality of information on companies audited by the Big Four audit firms, so the demanded risk premium can be low and eventually reduce the cost of equity capital (Alzoubi, 2018). In Indonesia, audit firms affiliated with the Big Four are considered large companies and can provide good audit quality. The audit firm size plays a role in determining the quality of a company's financial statements. Large audit firms are reliable for making accurate and reliable audits to maintain client trust (Panjaitan & Chariri, 2014). Besides, they can provide higher-quality audit services than smaller ones (Rezaei & Shabani, 2014).

Cano Rodríguez & Sánchez Alegría (2012) concluded that private companies being audited by the Big Four auditors managed to achieve lower costs of debt, implying that the shift from non-Big Four to the Big Four auditors led to fewer earnings management. Iatridis (2012) further revealed that companies audited by high-quality auditors with institutional

differences significantly affected the costs of agency and company equity. It was reinforced by the findings of Mali & Lim (2021), in which companies audited by the Big Four auditors gained a lower risk perception from investors, making them require a lower cost of capital. Thus, the first hypothesis of this study was as follows:

H_1: The size of the audit firm within the Big Four companies had an impact on the cost of equity capital for both the Ohlson Model and the Capital Asset Pricing Model.

Industry Specialization and Cost of Equity Capital

Minutti (2013) concluded that industry specialization could improve audit quality. Sun dan Liu (2013) also stated that auditor industry specialization positively affected the quality of a company's accounting. This notion was reinforced by Bills et al. (2014), who examined and assessed the impact of auditor specialization in industry, independence, and methods used to detect fraud in 50 companies registered in Indonesia. The findings indicated that the auditor industry specialization and its independence had a significant impact on the application of audit methods in detecting fraud and improving audit quality.

Jayaraman et al. (2014) revealed that audit specialists could provide a higher-quality audit. They were proven to have a more comprehensive knowledge of the audited company with a particular type of business. If investors perceived a higher audit quality by employing industry-specialist auditors, lower information risk was associated with higher accrual-based earnings and lower cost of equity capital.

Previous research findings have also corroborated that industry specialist auditors could lower the cost of equity capital. Gaver & Utke (2019) proved that auditors who had just obtained a specialist designation demonstrated a level of audit quality similar to non-specialist auditors and generally lower than experienced specialists. In this regard, a decrease in risk could reduce a company's cost of equity capital. In other words, auditors with the same industry specialization increased their knowledge and expertise in auditing clients, subsequently improving their quality. Auditor industry specialization refers to an auditor's industry-specific knowledge and expertise from extensive audits in any industry (Krishnan et al., 2013). Improving audit quality through industry specialization could reduce the cost of equity capital. Krishnan et al. (2013) disclosed a significant negative correlation between auditor industry specialization and the firm's cost of capital. The more specialized the auditor in a particular industry, the lower the cost of capital demanded by financiers and lenders. Based on these arguments, the second hypothesis of the present research was as follows:

H_2: Industry specialization had an impact on the cost of equity capital for both the Ohlson Model and the Capital Asset Pricing Model.

Audit Firm Size, Audit Committee, and Cost of Equity Capital

Inconsistent findings made this issue undoubtedly worthy of research. Hence, researchers must employ the audit committee as a moderating variable, referring to research by Ulhaq et al. (2021) on the audit committee's role in the correlation between audit quality and the cost of equity. Therefore, it plays a critical role in improving the audit quality of a company. The audit committee consists of financial and accounting experts and members with executive backgrounds and industry expertise (Choi et al., 2020). Pham et al. (2012) discovered that companies with better board and audit committee independence incurred lower costs of equity in Australia. In addition, Dao et al. (2013) found that the cost of equity capital was lower in enterprises employing more experienced audit committee members in the United States, thereby reducing the cost of equity capital. The audit committee is responsible for governance oversight of the financial reporting process and the authority to recruit, compensate, and remove independent auditors. An audit committee that implements a good supervisory function will reduce agency costs. Reduction of agency costs indicates that the information asymmetry contained becomes smaller as a result of reducing the cost of equity capital. Therefore, the researcher examines the role of the audit committee in moderating the correlation between audit firm size and the cost of equity capital. Therefore, researchers examined the audit committee's role in moderating the correlation between audit firm size and the cost of equity capital. Based on the explanations above, the third hypothesis of this research was as follows:

H_3: Audit committee moderated the relationship between audit firm size and the cost of equity capital for both the Ohlson Model and Capital Asset Pricing Model.

Industry Specialization, Audit Committee, and Cost of Equity Capital

In this investigation, researchers examined the audit committee that moderated the impact of industry specialization on the cost of equity capital. Appuhami (2018) found that a sufficiently equipped audit committee signified the credibility of an effective monitoring process, thereby reducing the cost of equity capital in Australia. According to Li et al. (2012), the audit firm size represents the resources and powers to effectively carry out monitoring and reporting responsibilities. Furthermore, Khemakhem & Naciri (2015) revealed that companies with independent boards and audit committees required lower costs of equity in

European countries. Therefore, researchers considered incorporating the audit committee as a moderating variable in the present research. Moreover, Basiruddin et al. (2014) claimed that industry specialization harmed the ex-ante cost of equity.

H_4: Audit committee moderated the relationship between industry specialization and the cost of equity capital for both the Ohlson Model and the Capital Asset Pricing Model.

Methods

The study population comprises all companies listed on the Indonesia Stock Exchange (IDX) for the financial years 2016 to 2020, with a total of 769 firms. After eliminating non-manufacture firms and selecting only manufacturing firms that have audited financial statements and annual reports publicly available, a total of 168 firms remained. We then delete manufacturing firm observations that do not disclose information regarding their share prices, debt, assets, and equity properly. A total sample of 123 manufacturing firm-year left for the final sample. Table 1 describes the sample selection procedure of the study.

For the comparative measurement of the cost of equity capital model which is the Ohlson and Capital Asset Pricing Model, we are using two linear regression models. The first model that is used to investigate the association between audit firm size, industry specialization, the moderation role of the audit committee, and cost of equity capital using the Ohlson model can be described as in equation 1. Thus, the second model in the study that is used to explain the relationship between audit firm size, industry specialization, the moderation role of the audit committee, and cost of equity capital using the Capital Asset Pricing Model can be seen in equation 2.

Table 1. Selection Procedure for The Final Sample

Selection Procedure	**Amount**
Companies listed on the IDX (Indonesia Stock Exchange) during the 2016-2020 periods.	769
Manufacturing companies listed on the IDX (Indonesia Stock Exchange) during the 2016-2020 periods.	171
Companies that have not issued Financial Statements on December 31.	(3)
Companies that have not disclosed information regarding debts, assets, etc.	(15)
Companies that have not disclosed information of complete share price data.	(30)
Number of sample(s)	123

Table 2. Variable Measurement

Variable	Measurement
Audit Firm Size (AFZ)	denoted 1 if the firm is audited by a Big Four auditor, 0 otherwise
Industry Specialization (AIS)	(No. Audit Firm Clients / No. Issuers) x100%
Audit Committee (ACM)	(No. Audit Committee / No. Board of Commissioners) x 100%
Firm Size (FSZ)	Ln (Total Assets)
Leverage (LEV)	Total Debt / Total Assets
Cost of Equity Capital Ohlson (COEC_OHL)	$r = (Bt + X_{t+1} – Pt) / Pt$ Where: r = Cost of Equity Capital Bt = Book Value per Share Period t Pt = Share Price period t X_{t+1} = Earnings per Share Period t+1
Cost of Equity Capital CAPM (COEC_CAPM)	$r = r_{RF} + b (RP_M)$ Where: r = Cost of Equity Capital r_{RF} = Risk-Free Rate of Return RP_M = Market Risk Premium b = Beta Coefficient of Stock

$$COEC\_CAPM = \alpha + \beta_1 AFZ + \beta_2 AIS + \beta_3 ACM + \beta_4 AFZ*ACM + \beta_5 AIS*ACM + \beta_6 FSZ + \beta_7 LEV + e \quad (1)$$

$$COEC\_CAPM = \alpha + \beta_1 AFZ + \beta_2 AIS + \beta_3 ACM + \beta_4 AFZ*ACM + \beta_5 AIS*ACM + \beta_6 FSZ + \beta_7 LEV + e_i \quad (2)$$

Where:

α	= Constant	COEC_OHL	= Cost of equity capital of OHLSON
$\beta_{1,2,3,4,5,6,7}$	= Coefficient	COEC_CAPM	= Cost of equity capital of CAPM
AFZ	= Audit firm size		
AIS	= Industry specialization		
ACM	= Audit Committee		
FSZ	= Firm size		
LEV	= Leverage		
e_i	= Standard error		

We follow prior literature and use two models to capture the cost of equity capital which is the Ohlson Model (1995) and the Capital Asset Pricing Model (CAPM) by Brigham & Daves (2018). The Ohlson model depicts firm value as a linear function of the book value of equity and the present value of future expected abnormal earnings. Although the model allows for imperfect product markets for a limited period, it assumes perfect capital markets. Firm value can be re-expressed as a linear function of equity book value, net income, dividends, and other information under additional assumptions of linear information dynamics. Ohlson (1995) explains that the two extreme scenarios emerging from constraining assumptions regarding the durability of abnormal earnings are balance sheet-based and earnings-based valuation models. Wonglimpiyarat (2018) and Vendrame et al. (2018) added that CAPM is an intriguing financial model for estimating the return on investments. The model is frequently applied to determining what the fair price of stocks should be, with the required rate of return depending on factors including market risk premium, stock volatility (beta), and compensation for the time value of money. The required rate of return would be lower for companies that invest in low-risk assets since shareholders would expect it. However, while investing in riskier assets, the shareholders would demand a greater needed rate of return.

In addition, while an audit firm's industry specialization is measured based on the percentage of audit firm clients in an industry to the total number of companies in that industry, audit committee and firm size is determined by the percentage of an audit committee member to the number of board of commissioners (Al-Janadi et al., 2016; Aljaaidi, 2013) and coded 1 if the firm is audited by a Big Four auditor, 0 otherwise
(Shan & Troshani, 2019; Sawan & Alsaqqa, 2013). The bigger audit committee and audit firm size are expected to lead to better monitoring practices and higher earning quality since the committee will have much more expertise and greater ability to detect and monitor the financial reporting process, which leads to less earning management practice and higher earning quality. Further, this study employs the natural logarithm of total assets and the ratio of long-term debt to total assets to examine firm size and leverage (Shan & Troshani, 2019; Dong et al., 2016). The bigger firm size will result to poor earning quality due to the business and operation complexity (Razani & Xia, 2017). Table 2 shows the measurement of each variable.

Table 3 displays the descriptive statistics of the processed data. It shows that the dependent variable, COEC_OHL, had a mean score of -0.677 with a standard deviation of 6.420. The maximum value of COEC_OHL was 18.260, and the minimum was -57.020. On

the other hand, another dependent variable, COEC_CAPM, obtained a mean score of 0.034 with a standard deviation of 0.069. The maximum value of COEC_CAPM was 0.160, while the minimum was -0.950. The moderating variable, AFZ*ACM, had a mean score of 0.292 with a standard deviation of 0.421. The maximum value of AFZ*ACM was 2, and the minimum was 0. Meanwhile, the moderating variable of AIS*ACM had a mean score of 0.493 with a standard deviation of 0.486. The maximum value of AIS*ACM was 2, and the minimum was 0. The control variable of LEV had a mean score of 0.560 with a standard deviation of 0.578. The maximum value of LEV was 5.170, and the minimum was 0. Meanwhile, the following control variable, FSZ, had a mean score of 12.066 with a standard deviation of 0.766. The maximum value of FSZ was 14.230, and the minimum was 9.030. In addition, researchers conducted an additional test to determine the impact of the year 2020 on this study but found no significant differences in the results of descriptive statistics.

Result and Discussion

This study conducted a classical assumption test consisting of the tests of normality, heteroskedasticity, autocorrelation, and multicollinearity. Based on the results, having met the criteria for each test, it could be interpreted that all classical assumption tests had been carried out well to continue this research. Researchers also completed three types of hypothesis testing, namely simultaneous testing (F-test), partial testing (t-test), and coefficient of determination (R^2) testing. Table 4 presents the F-test results of the dependent variables of COEC_OHL and COEC_CAPM. The industry specialization variable measured using the dummy variable was referred to as SPEC. The results of the F-test on the dependent variable of COEC_OHL showed a significance value of 0.000 < 0.05, indicating that the independent, control and moderating variables had a simultaneous impact on the dependent variable. Furthermore, the results of the F-test on the dependent variable of COEC_CAPM also obtained a significance value of 0.020 < 0.05, suggesting that the independent, control and moderating variables also had an impact on the dependent variable simultaneously. Therefore, researchers concluded that the F-test had been well performed for the regression model.

Based on Table 4, the R^2 testing carried out involving the dependent variable of COEC_OHL obtained an R^2 value of 0.712, by which the independent variables consisting of audit firm size and industry specialization could explain 71.2% of the dependent variable, namely the cost of equity capital, while other variables explained the rest. Furthermore, on the dependent variable of COEC_CAPM, the value of R^2 was 0.045, implying that the

independent variables consisting of audit firm size and industry specialization could only explain 4.5% of the dependent variable in the form of the cost of equity capital, while other variables explained the rest.

Table 3. Descriptive Statistics

Variable	N	Mean	Std. Dev.	Minimum	Maximum
AFZ	615	0.395	0.490	0	1
AIS	615	0.607	0.489	0	1
ACM	615	0.827	0.363	0	2
COEC_OHL	615	-0.677	6.420	-57.020	18.260
COEC_CAPM	615	0.034	0.069	-0.950	0.160
FSZ	615	12.066	0.766	9.030	14.230
LEV	615	0.560	0.578	0	5.170
AFZ*ACM	615	0.292	0.421	0	2
AIS*ACM	615	0.493	0.486	0	2

Table 4. Hypothesis Testing

Variables	COEC_OHL		Decision	COEC_CAPM		Decision
	Coefficient	Sig.		Coefficient	Sig.	
AFZ	-2.513	0.002	H_1 Accepted	0.034	0.034	H_1 Accepted
AIS	-9.464	0.003	H_2 Accepted	0.010	0.871	H_2 Rejected
AFZ*ACM	1.273	0.156	H_3 Rejected	-0.051	0.004	H_3 Accepted
AIS*ACM	12.709	0.000	H_4 Accepted	0.023	0.716	H_4 Rejected
ACM	-3.843	0.000		-9.003	0.850	
FSZ	1.244	0.000		-0.003	0.425	
LEV	-9.756	0.000		0.000	0.980	
F (ANOVA)		0.000			0.020	
Adj. R^2		0.712			0.045	

The results of the t-test on the dependent variable of COEC_OHL showed that the AFZ variable obtained a t-score significance value of 0.002 < 0.05, indicating that H_1 was accepted. Thus, it could be concluded that the audit firm size affiliated with the Big Four had a negative impact on the cost of equity capital. It was because the auditors involved in carrying out procedures were more competent and credible, so the information obtained was

reliable and able to improve audit quality. Therefore, investors could estimate the information risk on the company, leading to a decrease in the cost of equity capital. Meanwhile, the AIS variable obtained a t-score value of 0.003 < 0.05, suggesting that H_2 was accepted. With a significance value of 0.15, the moderating variable of ACM weakened the correlation between AFZ and COEC_OHL. Therefore, H_3 was rejected because the obtained value was 0.156 > 0.05. It confirmed that the emergence of the audit committee on the audit firm size further weakened the correlation between audit firm size and the COEC_OHL. Afterward, the t-test results showed that the moderating variable of the audit committee strengthened the correlation between AIS and COEC_OHL with a significance value of 0.000 < 0.05, indicating that H_4 was accepted. According to the explanations above, researchers interpreted that the audit committee could not moderate the negative correlation between audit firm size and the cost of equity capital. Besides, the audit committee also moderated the negative correlation between industry specialization and the cost of equity capital when the Ohlson model was applied.

Furthermore, the t-test on the dependent variable of COEC_CAPM demonstrated that the AFZ variable obtained a t-score of 0.034 < 0.05, indicating that H_1 was accepted. Thus, it could be concluded that the audit firm size affiliated with the Big Four harmed the cost of equity capital. Meanwhile, the AIS variable obtained a t-score of

0.871 > 0.05, suggesting that H_2 was rejected. It also implied that industry specialization did not hurt the cost of equity capital. Subsequently, the moderating variable of the audit committee strengthened the correlation between AFZ and COEC_CAPM because the significance value of 0.004 < 0.05 indicated that H_3 was accepted. Furthermore, the results of the t-test on the dependent variable of COEC_CAPM confirmed that the moderating variable of the audit committee strengthened the correlation between AIS and COEC_CAPM, but H_4 was rejected due to the significant value of 0.716 > 0.05.

Based on the tests being carried out, the regression analysis results corroborated that the audit firm size had a negative impact on the cost of equity capital using the Ohlson and CAPM models. It was consistent with an investigation by Vincent & Borja (2015), which proved that large audit firms offered a lower cost of equity. However, industry specialization only hurt the cost of equity capital under the Ohlson model and had no impact on the CAPM. Therefore, researchers concluded that industry specialization was very sensitive to the cost of equity capital. In some conditions, it could not describe the measure of audit quality and ultimately affected the study results. These findings were in line with previous research by Krishnan et al. (2013), in which they found a significant negative correlation between auditor

industry specialization and the firm's cost of capital. In addition, researchers interpreted the approach and characteristics used for the Ohlson model and the Capital Asset Pricing Model (CAPM) in measuring the cost of equity capital. In the context of this study, the findings were affected by the Ohlson model in measuring the cost of equity capital using the perspective of the share price and earnings per share as an indicator, resulting in a more real rate of return. Meanwhile, the CAPM model assessed the cost of equity capital using stock beta with the perspective of market sensitivity. Stock beta is an unstable measure, making it unable to reflect the volatility of the firm's real rate of return, in line with research by Fama et al. (1992). This is reinforced by research Kumar & Kumar (2012) that stated Ohlson model has greater predictive power and higher accuracy (Neophytou et al., 2004).

Furthermore, Elton (1999) emphasized that the market beta alone was insufficient to explain the expected returns. Rossi (2016) expressed the opinion of academics that the CAPM is inadequate to use due to its inability to explain the risk-return trade-off. Then reinforced by Fernandez (2015) considers the assumptions and conclusions of the CAPM unrealistic. Therefore, the CAPM model is unreliable and is aligned with the result of the study. Then McNulty et al. (2002) find three central shortcomings of CAPM, namely, the validity of beta, the reliance on historical data, and the indifference of the holding period. Although this study showed better results when using the Ohlson model than the CAPM. However, this study can only explain the results and characteristics of each model, so it cannot be concluded that one model is superior to the other. Then, the cost of equity capital as measured by any model has the nature of estimation or approximation. Botosan and Plumlee (2002) stated forecasts to calculate the expected cost of equity capital. Therefore, researchers cannot accurately determine the value of the cost of equity capital.

Conclusion and Suggestion

The conclusion that could be drawn from this study was that the audit firm size harmed the cost of equity capital in the Ohlson and CAPM models. Meanwhile, industry specialization harmed the cost of equity capital in the Ohlson model but not in the CAPM model. Afterward, the audit committee did not moderate the negative correlation between audit firm size and the cost of equity capital in the Ohlson model but moderated it in the CAPM model. Furthermore, the audit committee moderated the negative correlation between audit firm size and the cost of equity capital in the CAPM model. However, it did not moderate the negative correlation between industry specialization and the cost of equity capital. Anchored on the present research findings, researchers argued that a more significant

number of audit committees was expected to promote a better supervisory function yet did not lead to a lower cost of equity capital. Based on the description above, it could be interpreted that the attributes being engaged to measure the audit quality were very sensitive to the results obtained, which could affect the cost of equity capital. Likewise, each independent variable moderated by the audit committee had weaknesses.

This research had several limitations, making its findings unable to be generalized to all companies, including the study only employed manufacturing companies as research samples, they had different characteristics that could affect research results, and only considered the information contained in financial statements and annual reports. In addition, the study only engaged two proxies to measure audit quality, so future studies were expected to consider other relevant proxies. Lastly, the study only involved the audit committee as a moderating variable, which undoubtedly had limitations on the significance of its correlation with independent and dependent variables. In subsequent investigations, other moderating variables were expected to be incorporated in determining the correlation between variables.

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