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# DETERMINANTS OF ERM QUALITY AND ITS IMPACT ON COMPANY VALUE

Nurul HIDAYAH[1]✉, Zubir AZHAR[2], Erna SETIANY[3], Wiwik UTAMI[4], Deden TARMIDI[5]

[1, 3, 4, 5]*Faculty of Economics and Business, Mercu Buana University, Jakarta, Indonesia*
[2]*School of Management, Universiti Sains Malaysia, Penang, Malaysia*

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**Abstract.** Company value results from how well a company has managed its resources to achieve business benefits. However, there are always risks associated with conducting business, and effective risk management (ERM) can help reduce those risks so that they stay in the way of the entity's performance goals. This study examines the factors that affect ERM quality, such as company size, auditor caliber, concentrated ownership, and director oversight, and how this affect business success. Purposive sampling produced a sample of 552-panel data used in this study's research of manufacturing firms in Indonesia and Malaysia. With the aid of STATA software, this study discovered a favorable relationship between auditor quality and ERM and also impact firm size, auditor quality, concentrated ownership, and ERM on company value. The expansion test revealed that while the quality of auditors in Malaysian companies had a positive effect on firm value while those in Indonesia did not, and vice versa, the quality of auditors in Indonesian companies had a stronger positive effect on ERM quality than the quality of auditors in Malaysian companies. In contrast to businesses in Malaysia, monitoring of directors has a beneficial impact on a company's worth in Indonesia.

**Keywords:** company size, auditor quality, concentrated ownership, board of directors monitoring, ERM quality, firm value.

**JEL Classification:** G32, G38, O16.

✉Corresponding author. E-mail: ***nuhi.badawi@gmail.com***

## 1. Introduction

Managing risk is an important concern in a dynamic global environment. However, there has recently been a paradigm shift regarding the risk management perspective. In 2015, the Organization for Economic Cooperation and Development (OECD) presented its main company risk management responsibility recommendations. The functioning of the risk management implemented by the company plays an important role in ensuring the effective management of the company (Grega & Nečas, 2022; Mayer et al., 2019; Shipanga et al., 2022). The effectiveness and usefulness of risk management reporting depend not only on the amount of information provided but also on the quality of disclosure (Beretta & Bozzolan, 2004). Risk disclosure can be beneficial for several reasons: Risk disclosure can improve stakeholder trust and confidence in the organization's management by minimizing knowledge asymmetry between management and external shareholders. How and why companies use the disclosures in annual reports to communicate their exposure to risk and risk management practices is a matter of considerable public interest.

Risk management systems vary between large, small and medium-sized companies, so studying each type of company is important (Hillson, 2009). Agency theorists argue that disclosure of risk information is motivated by a desire to reduce information asymmetry between shareholders and managers; and that disclosing risk information will reduce agency costs (Jensen & Meckling, 1976). Monitoring mechanisms, such as ownership structure, board independence, audit committee independence, duality of leadership and quality of external auditors, drive higher levels of information disclosure (Linsley & Shrives, 2005). In addition, risk management is an important part of the integrated business processes in Corporate Governance to ensure assurance and reliability in achieving company goals (Linsley & Shrives, 2005). The most widely observed phenomenon of business risk in companies is mostly caused by conflicts of interest (Leon & Nugraha, 2020). Hopefully, this will be implemented formally and

structured effectively to assist the implementation of GCG in Indonesian companies.

According to Minister of Finance Regulation No. 142/PMK.010/2009, it has been explained that risk is a potential occurrence of an event and will cause losses, while risk management is a method that is conceptualized in-depth to be a solution to overcome this risk. Then, the decision of the Chairman of BAPEPAM with no. Kep-134/BL/2006 regarding the obligation of issuers of public and private companies to disclose risks in their annual reports in the form of explanations and solutions that have been made to mitigate these risks. The 2017 National Risk Management Survey was conducted by the Indonesian Center for Organizational Risk Management Studies (CRMS), attended by 333 respondents (company professionals in 17 business sectors in Indonesia based on BPS classification), using an online questionnaire regarding risk management practices in their respective companies. Obtaining maturity/maturity level data or how high-risk management is applied shows that the ERM implementation process in Indonesia could have been more optimal, especially in the manufacturing sector.

The fact that many companies have adopted ERM supports the view that ERM will enhance firm performance. Driving this trend is the belief that ERM offers companies a more comprehensive approach to risk management than the traditional silo-based risk management perspective. The increasing rate of adoption and implementation of ERM among companies in different countries and sectors supports the fact that interest in ERM is a growing phenomenon. For example, a 2008 survey conducted by Deloitte of 151 companies (North America – 56, South America – 24, Europe – 68 and others – 3) found an increasing interest in ERM, with the majority of respondents (64% in Europe and 62% in North America) indicated that their interest in ERM was higher than the year before the survey (Deloitte, 2010). By adopting a systematic and consistent approach (or process) for managing all the risks facing an organization, ERM is thought to reduce the risk of failure of the company as a whole and thereby increase the performance and, in turn, the value of the organization. ERM is a strategy developed to identify, manage and evaluate all risks within a company to ensure the achievement of the goals set (Meizaroh & Jurica, 2011). It is important to disclose that risk in a business organization increases with the complexity of operations, making it imperative to introduce competent risk management processes (Berle & Means, 1932).

Corporate Governance, especially the principle of transparency, requires Enterprise Risk Management (Beasley et al., 2005). Mohd-Sanusi et al. (2017) ERM is related to Corporate Governance by increasing accountability and transparency. So, each company is expected to increase the quality and quantity of ERM disclosure. More and more scholars see ERM as a fundamental paradigm for managing the portfolio of risks facing organizations (Beasley et al., 2008; Nocco & Stulz, 2006). Driving this trend is the belief that ERM offers a more comprehensive approach to risk management than the traditional silo-based risk management perspective (Berek et al., 2022). According to COSO (2004), an organization's ERM system should be geared towards achieving (1) Strategy: high-level objectives aligned with and supporting the organization's mission. (2) Operations: effective and efficient use of organizational resources. (3) Reporting: the reliability of the organization's reporting system. (4) Compliance: organizational compliance with applicable laws and regulations.

Related research Gordon et al. (2009) concluded that the factors that influence ERM are company size and Monitoring of the board of directors affects the company's ERM. Shivaani and Agarwal (2020) also research the effect of corporate competitiveness on risk management. In contrast, Jones et al. (2018) size, profitability, stock market and auditing firms affect risk disclosure. This study analyzes corporate risk management in two different countries, namely Indonesia and Malaysia. This study identifies ERM's determinants that strongly impact firm value and proposes an international framework that comparatively and empirically evaluates how risk management used in Indonesian and Malaysian companies has an important role for companies.

## 2. Literature review

### Stakeholder theory

Stakeholders Understanding stakeholder theory helps one comprehend risk management. According to Jensen (1986), it reduces the risks associated with management and makes managers more responsible. There are internal company mechanisms that are generally enforced by law (e.g., board of directors and general shareholder assemblies), and on the other hand, there are external mechanisms that are mainly based on market forces (e.g., market recovery and auditor market). Stakeholder theory goes beyond and sees it as a classic – of a company. It seeks stakeholders' interests, not shareholders, and broadens the manager's area of responsibility. Stakeholder theory provides new insights into possible reasons for risk management. This theory suggests that managers must manage relationships with stakeholders that make it possible to realize company goals and report responsibility to company owners (Jones & Wicks, 1999).

According to Donaldson and Preston (1995), stakeholder theory has three main visions: descriptive, instrumental and normative. A descriptive vision explains the company's behavior and relationships and how managers should be responsible for the interests of various stakeholders. The vision identifies the values and obligations managers can strategically guide the company (Saputra et al., 2023). Then instrumental vision this theory suggests that managers should manage relationships with stakeholders in a way that allows for realizing company goals

and reporting responsibility to company owners (Jones & Wicks, 1999). Finally, this theory legitimizes actors' interests, not company shareholders and allows escape from classical theory.

### 1) Company size to ERM

Company size describes a company's size determined based on total assets or sales. Ibrahim et al. (2017) research manufacturing companies in Indonesia where company size is reported to affect ERM so that large companies tend to make disclosures to maintain the reputation and trust of stakeholders. Maulani and Rahayu (2015) size influences ERM adoption because large and small companies are found to be likely to implement "ERM" depending on the policies and complexity of respective banking and country regulations regarding business. ERM Systems, Beasley et al. (2005) and Hoyt and Liebenberg (2010) found firm size positively related to ERM adoption. While COSO (2004) also notes the importance of firm size when designing ERM systems.

Handayani and Yanto (2013) and Asmoro et al. (2016) research results explain that company size affects ERM disclosure. Based on this explanation, the hypothesis formulated in this study.

*H1a. Company size affects ERM*

### 2) Firm size to firm value

Company size is assessed from total assets that can be used to capture profitable investment opportunities, such as expanding market share prospects. Research conducted by Hirdinis (2019) shows that company size positively affects company value (Marhaeni & Yanto, 2015). Asante-Darko et al. (2018) concluded that company size does not affect firm value but has a positive relationship with firm value. Meanwhile, Husna and Satria (2019) says that company size positively affects company value. Finally, research by Margono and Gantino (2021) concluded that firmness does not affect firm value.

*H1b. Company size affects firm value*

### 3) Auditor Quality on Enterprise Risk Management (ERM)

According to research conducted by Paino et al. (2015), two criteria, namely external audit work style and communication barriers, have a substantial relationship with external audit dependence on internal audit work. The relationship was stronger with the moderating effect of enterprise risk management (ERM). Bunget et al. (2010) found a substantial relationship between the efficiency of risk management and the level of risk and assurance measured by financial auditors. In other words, effective risk management causes external auditors to assign lower general audit risks and increases their readiness to rely on internal audit work. According to International Standard on Auditing (ISA) 610 (2013), where the risk of material misstatement is low, using the work of the internal audit function to reduce audit risk to an acceptable level and eliminating the need for the external auditor to perform multiple in-person audit tests is likely to reduce audit risk to an acceptable level. An acceptable low level eliminates the need for the external auditor to perform some of the on-site audit tests (Sukma & Hidayah, 2022).

*H2a. Auditor quality affects ERM*

### 4) Auditor quality on company value

Wijaya (2020) explains that audit quality benefits company value in manufacturing companies listed on the Indonesia Stock Exchange. Audit quality is one of the elements that determine business value in developing countries, according to Alsmairat et al. (2018). Companies with good audit quality can reduce the risk of audit failure, fraud, and earnings management. Asthana (2014) explains that audit quality affects investors' earnings quality and firm value assessment. Meanwhile, according to Aobdia et al. (2015) a good audit engagement process can offer value to capital markets in two ways. First, a quality audit sends a signal to uneducated investors that a company is valuable. Second, a thorough audit ensures that the data in the financial statements is accurate. Huang et al. (2014) states that higher-quality audit procedures can increase firm value.

*H2b. Auditor quality affects firm value*

### 5) The concentration of ownership of Enterprise Risk Management

Through management, the ownership structure determines the company's operations flow. Since today's business market is very complex and unpredictable, management is fully responsible for the organization's operations. The company's risk management program is a requirement for management to protect shareholder investment. In addition to lowering the likelihood of further losses, this greatly improves the company's competency. Additionally, it increases business opportunities and creates a secure environment for investors interested in trading company shares (Brustbauer, 2014). The concentration of share ownership, influenced by management control, significantly impacts organizational culture and decision-making. In many circumstances, the company's ownership structure is to blame for a lack of resources and mechanisms to support risk management efforts. A diverse ownership structure with an expert board of directors is recognized as the best in risk management compared to others (Prinsloo et al., 2015).

Furthermore, the findings of Keong (Malik et al., 2023) support the premise that there is a positive relationship between dispersed ownership structure and the adoption of corporate risk management and a negative relationship between managerial ownership and corporate risk management.

*H3a. Ownership concentration affects ERM*

#### 6) Concentration of ownership of the company's value

Vintilă and Gherghina (2014) says that firm value is determined using Tobin's Q ratio, which is modified to consider the diversity of sample industry memberships. We look at the holdings of the first, second, and third largest shareholders, as well as the sum of the holdings of the two largest shareholders and the sum of the holdings of the three largest shareholders. Consequently, the findings support the lack of influence of the first largest shareholder on firm value, whereas the second largest shareholder has a beneficial impact on firm value. We find a favorable influence by looking at the ownership of the third largest stakeholder.

*H3b. Ownership concentration affects firm value*

#### 7) Board of directors monitoring of Enterprise Risk Management (ERM)

According to Gordon et al. (2009), board monitoring can impact the ERM-firm performance relationship. Furthermore, according to Owens and Megginson (2000), supervision at every management level, including the company's board of directors, impacts the successful implementation of ERM. CRMS (2017) found in a survey that corporate directors in Indonesia have the highest level of risk management responsibility. According to the study findings, the director significantly impacts the ERM process. Consequently, experts believe that the monitoring role of directors will impact the relationship between ERM and firm value due to their considerable influence. Since directors are responsible for risk management, they will considerably impact the ERM within the organization.

*H4a. Board of directors monitoring influences ERM*

#### 8) Board of directors monitoring of corporate values

According to Fama and Jensen (1983), outside directors provide a way to oversee management actions by increasing the focus on business performance. However, it has been discovered that board monitoring has a detrimental effect on firm value (Holmstron, 2005; Faleye et al., 2011). The result demonstrates that strict board oversight is unnecessary for shareholders to succeed. According to Byun and colleagues (2013) (Salehi et al., 2022) controlling shareholders' direct ownership moderates the association between intensive board oversight and firm valuation. The impact of intensive board oversight on firm value diminishes when there is a wider disparity between control rights of controlling shareholders and cash flow rights.

*H4b. The board of director's monitoring affects the company's value*

#### 9) Enterprise Risk Management (ERM) on company value

To establish an effective risk management plan, ERM identifies and assesses the collective risks that affect firm value and implements an enterprise-wide risk management strategy to manage those risks (Meulbroek, 2002). It is reasonable to anticipate that corporate management will ensure that no significant negative events will occur by keeping good control to enhance company performance and increase the likelihood of organizational success (Merchant & Van der Stede, 2011). ERM implementation has a considerable impact on business performance, according to Ping and Muthuveloo (2015) research. Furthermore, the relationship between ERM adoption and firm performance was found to be influenced by BOD monitoring, firm size, and firm complexity. The conclusions of this study help organizations better understand their ERM implementation and highlight areas of development within each element of the ERM process. ERM is associated with significantly higher Tobin's Q scores, according to Hoyt and Liebenberg (2010). The findings show that the company's risk management system benefits company management and performance, Ghazieh and Chebana (2021).

*H5b. ERM affects Firm Value*

## 3. Research methods

The research design in this study is (1) a comparative descriptive related to ERM quality between Indonesian and Malaysian companies and (2) a causal relationship between ERM quality and firm value in manufacturing companies registered in Indonesia and Malaysia (Figure 1).

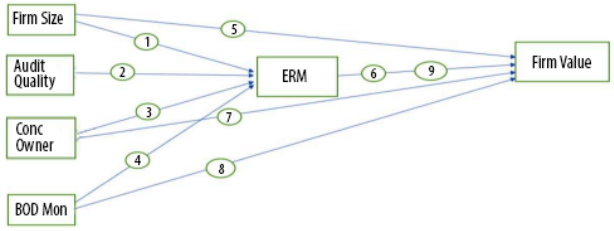


**Figure 1.** Research framework

This study has four components to measure ERM implementation: strategy, operations, reporting and compliance. Independent variables include four variables of Company Size as measured by Ln total assets, Auditor Quality is measured by a value of 1 if audited by the big four KAPs (Tarmidi & Murwaningsari, 2019; Tarmidi et al., 2019; Tarmidi et al., 2021), and otherwise, Ownership Concentration is measured by the number of shares owned by shareholders above 20%, and Board of Directors Monitoring is measured by the number directors divided by log sales while the Tobins Q formula measures company value (Tarmidi & Murwaningsari, 2019).

**Table 1.** Descriptive statistics (source: data processed results, 2023)

| Variable | FV | ERM | SIZE | OWN | BODM | DAR | ROA |
|---|---|---|---|---|---|---|---|
| Min | 0.0005 | 0.5210 | 19.9732 | 0.0001 | 0.0679 | 0.0002 | –1.7541 |
| Max | 1160.7470 | 97.6692 | 34.0380 | 1.4744 | 0.6611 | 700.4174 | 65.7467 |
| Mean | 10.0178 | 2.9294 | 28.1587 | 0.6591 | 0.2040 | 4.5135 | 0.3342 |
| Std. Dev | 76.5104 | 4.4234 | 1.8923 | 0.2958 | 0.0904 | 48.7850 | 4.0641 |

*Note:* FV = Firm Value, ERM = Enterprise Risk Management, Size = Corporate Size, OWN = Owner Concentration, BODM = Director Monitoring, DAR = Leverage, ROA = Profitability.

## 4. Research results and discussion

### Descriptive statistics

Based on purposive sampling, 552-panel data were processed and analyzed using STATA software, as shown in the following table (Table 1).

The following is a descriptive description of the data:

a) On average, the Firm Value is 10.0178, which indicates that the analysis unit's share value is 10X compared to the book value, which has a positive value.

b) On average, the ERM value of the analysis unit is 2.9294, which indicates that the strategy used by the unit of analysis is quite high, although on average, it still has a large gap between the minimum and maximum strategy values.

c) On average, the number of company assets, which indicates company size, is high so that it approaches the maximum value of assets from the unit of analysis.

d) On average, the OWN value is 0.6591, which explains that the unit of analysis is owned by the majority shareholder on an average of 65.91%.

e) On average, the BODM value is 0.2040, which explains that the Monitoring of the board of directors at a company is in a moderate position, meaning it is not too weak but not too intense.

f) On average, the level of leverage of companies with the DAR indicator is 4.5135, which is quite low compared to the range of DAR values from the unit of analysis.

g) On average, the profitability level of companies with ROA indicators is 0.3342, which is quite low compared to the ROA range of all analysis units.

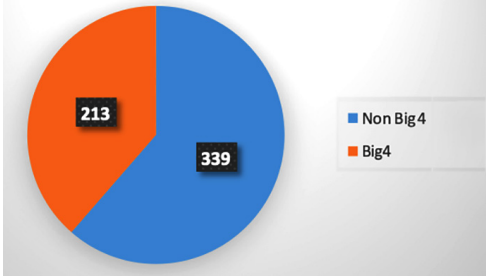


**Figure 2.** Descriptive statistics of audit quality (source: Data processed results, 2023)

Then to describe audit quality can be explained in Figure 2. Big4 KAP audits 213 financial statement data as an indication of audit quality, while as many as 339 financial statement data were not audited by Big4 KAP, so it is indicated as the absence of audit quality.

### Model Fit Test

The advantage of panel data compared to other types of data is the selection of a model that follows the existing data (Gujarati, 2012) because panel data combines *time series* and *cross-section* data.

**Table 2.** Model conformity test (source: data processed results, 2023)

| Number | Test | Indicator | Value | Results |
|---|---|---|---|---|
| 1 | Chow | Prob >F < 0.05 = Fixed Effect, Prob > F > 0.05 = Common Effect | Prob > F = 0.0000 | Fixed Effect |
| 2 | LM | Prob > chibar2 < 0.05 = Random Effect, Prob > F > 0.05 = Common Effect | Prob > chibar2 = 0.0000 | Random Effect |
| 3 | Hausman | Prob >chi2 < 0.05 = Fixed Effect, Prob>F > 0.05 = Random Effect | Prob > chi2 = 0.0600 | Random Effect |

Table 2 summarizes the results of the model fit test process according to statistical rules using STATA. The test process is described as follows:

1) Chow Test

The Chow test was conducted to compare *Common Effect* and *Fixed Effect best*. The indicator used in the Chow Test is the Prob > F value. If the Prob > F value is greater than the significance value of 0.05, then *Common Effect* is better than *the Fixed Effect* and vice versa. For example, Table 2 shows that the Prob > F value is 0.0000, which is less than 0.05, so the *Fixed Effect* is better than *Common Effect*.

2) LM Test

The LM test was conducted to compare *Common Effect* with *Random Effect*. The indicator is that if the Prob > chibar2 value is less than the significance level of 0.05, then the *Random Effect* model is better. If it is the other way around, then *the Common effect* is better. For example, Table 2 shows that the Prob > chibar2 value is 0.0000 below 0.05, so *Random Effect* is better than *Common Effect*.

3) Hausman Test

Hausman test was conducted to compare *Fixed Effect* with *Random Effect*. The indicator is if the Prob > chi2 value is less than 0.05 from the significance level, then the *Fixed Effect* model is better. If it is the other way around, then *Random effect* is better. For example, Table 2 shows that the Prob>chi2 value is 0.0600, lower than 0.05, so *Random Effect* is better than *the Fixed Effect*.

Based on the results, *Random Effect* is a better model to use in the regression test of this study.

### *Classic Assumption Test*

Based on the model suitability test on research data, namely the Random Effect Model (FEM), the General Least Square (GLS) is used to estimate the effect of the independent variables on the dependent variable (Zulfikar, 2018). Next, a classic assumption test is performed to test panel data using STATA. The classic assumption tests for the Random Effects Model through the General Least Square (GLS) approach are normality, heteroscedasticity and multicollinearity tests. The autocorrelation test is also not required to be carried out in the panel data test because the nature of the cross-section is more representative of the nature of panel data, while the nature of the time series is not so dominant even though it still exists (Ekananda, 2015).

**Table 3.** Classical assumption test results (source: STATA outputs, 2023)

| Number | Test | N | Indicator | Value | Results | Action |
|---|---|---|---|---|---|---|
| 1 | Normality | 552 | P-Value > 0.05 | 0.086 | Passed | Ok |
| 2 | Heteroscedasticity | 552 | Prob > chi2 > 0.05 | 0.0810 | Passed | Ok |
| 3 | Multicollinearity | 552 | VIF < 10 | 1.05–2.53 | Passed | Ok |

1) Normality test

If the P-Value is less than the significance level of 0.05, it indicates abnormal symptoms. For example, Table 3 shows that the P-Value is 0.086, higher than 0.05, so the research data pass the normality test.

2) Heteroscedasticity Test

If the Prob > chi2 value is less than the significance level of 0.05, it indicates the occurrence of heteroscedasticity or a violation of the homoscedasticity assumption. For example, Table 3 shows that the Prob > chi2 value is 0.0810, greater than 0.05, so the research data does not pass the heteroscedasticity test.

3) Multicollinearity Test

If there is no VIF value greater than 10, the model meets the non-multicollinearity assumption (Ghozali, 2001). Table 3 shows that all VIF values for each variable are not greater than 10 because the range of VIF values for each variable is between 1.05 to 2.53, so it can be said that the model passes the multicollinearity test.

## Hypothesis Test

Table 4 shows that the data analyzed has an F value of 0.0001, explaining that this research model is fit or feasible. The R-Square value of 0.0484 explains that the variables Size, Audit Quality, OWN, BODM, DAR, and ROA can explain 4.84% of ERM, and other variables outside this study explain the remaining 95.16%. The results of the t-test in explaining the hypothesis are as follows:

**Table 4.** Regression test model 1

| Model 1 : ERM = $\beta_0$ + $\beta_1$SIZE + $\beta_2$AUDIT + $\beta_3$OWN + $\beta_4$BODM + $\beta_5$DAR + $\beta_6$ROA + $\varepsilon$ | | | | | |
|---|---|---|---|---|---|
| Variable | Coef. | t-stat | Sig. | | Results |
| SIZE -> ERM | 0.04773 | 0.41 | 0.680 | | Rejected |
| AUDIT -> ERM | 1.01612 | 2.38 | 0.018 | ** | Accepted |
| OWN -> ERM | 0.40268 | 0.55 | 0.582 | | Rejected |
| BODM -> ERM | –0.60166 | –0.26 | 0.796 | | Rejected |
| DAR -> ERM | –0.01838 | –3.10 | 0.002 | *** | |
| ROA -> ERM | 0.30290 | 4.26 | 0.000 | *** | |
| N | 552 | | | | |
| F | 0.0001*** | | | | |
| R-Square | 0.0484 | | | | |

*Note:* ERM = Enterprise Risk Management, Size = Corporate Size, AUDIT = Auditor Quality, OWN = Owner Concentration, ODM = Director Monitoring, DAR = Leverage, ROA = Profitability.
Information: * Significant 10%, ** Significant 5%, *** Significant 1%.

a) The results of hypothesis 1a testing show a sig value of 0.680, which means that Size has no significant effect on ERM, so H1 is rejected.
b) The results of hypothesis 2a testing show a sig value of 0.018, meaning that auditor quality significantly affects ERM, so H2 is accepted. With a positive coefficient value, it indicates that auditor quality has a positive effect on ERM.
c) The results of hypothesis 3a testing show a sig value of 0.582, meaning that OWN has no significant effect on ERM, so H3 is rejected.
d) The results of hypothesis 4a testing show a sig value of 0.796, meaning that BODM has no significant effect on ERM, so H4 is rejected.
e) The results of the t-test show that with a sig value of 0.002 and a coefficient of –0.01838, it explains that DAR has a significant negative effect on ERM, while with a sig value of 0.000 and a coefficient of 0.30290, it explains that ROA has a positive effect on ERM.

Table 5 shows that the data analyzed has an F value of 0.0000, explaining that this research model is fit or feasible. The R-Square value of 0.8000 explains that the variables Size, Auditor Quality, OWN, BODM, ERM, DAR, and ROA can explain 80% of FV, and other variables outside this study explain the remaining 20%. The results of the t-test in explaining the hypothesis are as follows:

**Table 5.** Regression test model 2

| Model 2: FV = $\beta_0$ + $\beta_1$SIZE + $\beta_2$AUDIT + $\beta_3$OWN + $\beta_4$BODM + $\beta_5$ERM + $\beta_6$DAR + $\beta_7$ROA + $\varepsilon$ | | | | | |
|---|---|---|---|---|---|
| Variable | Coef. | t-stat | Sig. | | Results |
| SIZE -> FV | –9.94491 | –9.11 | 0.000 | *** | Accepted |
| AUDIT -> FV | 10.96716 | 2.60 | 0.009 | *** | Accepted |
| OWN -> FV | 15.05595 | 2.17 | 0.030 | ** | Accepted |
| BODM -> FV | –1.46560 | –0.07 | 0.947 | | Rejected |
| ERM -> FV | 0.63390 | 2.15 | 0.032 | ** | Accepted |
| DAR -> FV | 0.75900 | 18.50 | 0.000 | *** | |
| ROA -> FV | 7.78670 | 15.61 | 0.000 | *** | |
| N | 552 | | | | |
| F | 0.0000*** | | | | |
| R-Square | 0.8000 | | | | |

*Note:* FV = Firm Value, ERM = Enterprise Risk Management, Size = Corporate Size, AUDIT = Auditor Quality, OWN = Owner Concentration, ODM = Director Monitoring, DAR = Leverage, ROA = Profitability.
Information: * Significant 10%, ** Significant 5%, *** Significant 1%.

f) The results of hypothesis 1b testing show a sig value of 0.000, which means that Size significantly affects FV, so H1b is accepted. A negative coefficient value indicates that Size negatively effect FV.
g) The results of hypothesis 2b testing show a sig value of 0.009, meaning that audit quality significantly affects FV, so H2b is accepted. A positive coefficient value indicates that audit quality positively affects FV.
h) The results of hypothesis 3b testing show a sig value of 0.030, meaning that OWN significantly affects FV, so H7 is accepted. With a positive coefficient value, it indicates that OWN has a positive influence on FV.
i) The hypothesis 4b test results show a sig value of 0.947, meaning that BODM has no significant effect on FV, so H8 is rejected.
j) The hypothesis 5b test results show a sig value of 0.032, meaning that ERM significantly affects FV, so H9 is accepted. With a positive coefficient value, it indicates that ERM has a positive influence on FV.
k) The results of the t-test show that with a sig value of 0.000 and a coefficient of 0.75900, it explains that DAR has a significant positive effect on FV, while with a sig value of 0.000 and a coefficient of 7.78670, it explains that ROA has a positive effect on ERM.

## Expansion Test

Expansion tests were carried out to analyze the effect of Size, Auditor Quality, OWN, BODM, DAR, and ROE on ERM as model 1 and also analyze the effect of Size, Audit, OWN, BODM, ERM, DAR, and ROE on FV as model 2, with data from countries namely Indonesia and Malaysia.

**Table 6.** Model 1 expansion test

| Model 1: ERM = $\beta_0$ + $\beta_1$SIZE + $\beta_2$AUDIT + $\beta_3$OWN + $\beta_4$BODM + $\beta_5$DAR + $\beta_6$ROA + $\varepsilon$ | | | | | | |
|---|---|---|---|---|---|---|
| | INDONESIA | | | MALAYSIA | | |
| | Coefficient | Prob t-stat | | Coefficient | Prob t-stat | |
| SIZE | 0.03637 | 0.504 | | –0.09114 | 0.713 | |
| AUDIT | 0.44486 | 0.039 | ** | 1.41987 | 0.094 | * |
| OWN | 0.69155 | 0.100 | | 0.82091 | 0.535 | |
| BODM | 2.00726 | 0.188 | | –8.21019 | 0.167 | |
| DAR | –0.00844 | 0.796 | | –0.01565 | 0.085 | * |
| ROA | 0.10414 | 0.791 | | 0.29792 | 0.006 | *** |
| N | 300 | | | 252 | | |
| R-Square | 0.1802 | | | 0.0561 | | |
| Prob F | 0.0142 | ** | | 0.0241 | ** | |

*Note:* ERM = Enterprise Risk Management, Size = Corporate Size, AUDIT = Auditor Quality, OWN = Concentration Ownership, ODM = Director Monitoring, DAR = Leverage, ROA = Profitability.
Information: * Significant 10%, ** Significant 5%, *** Significant 1%.

Model 1 expansion test described in Table 6 explains that research model 1 with the company analysis unit in Indonesia is better than the company analysis unit in Malaysia, with an R-Square value of 18.02% compared to 5.61%. The effect of audit quality on the financial statements of companies in Indonesia is stronger than that of audit quality on the financial statements of companies in Malaysia.

The model 2 expansion test described in Table 7 explains that the research model 2 with the company analysis unit in Malaysia is better than the company analysis unit in Indonesia, with an R-Square value of 89.46% compared to 77.07%. Company size in Indonesia has the same negative

**Table 7.** Model 2 expansion test

| Model 2: FV = $\beta_0$ + $\beta_1$SIZE + $\beta_2$AUDIT + $\beta_3$OWN + $\beta_4$BODM + $\beta_5$ERM + $\beta_6$DAR + $\beta_7$ROA + $\varepsilon$ | | | | | | |
|---|---|---|---|---|---|---|
| | INDONESIA | | | MALAYSIA | | |
| | Coefficient | Prob t-stat | | Coefficient | Prob t-stat | |
| SIZE | –15.17235 | 0.000 | *** | –4.56435 | 0.000 | *** |
| AUDIT | 11.40838 | 0.105 | | 8.93985 | 0.017 | ** |
| OWN | 23.98916 | 0.092 | * | –4.69921 | 0.417 | |
| BODM | 168.10600 | 0.001 | *** | –11.35350 | 0.652 | |
| ERM | 0.86436 | 0.673 | | 0.71656 | 0.004 | *** |
| DAR | 0.34169 | 0.773 | | 0.69471 | 0.000 | *** |
| ROA | 13.98102 | 0.326 | | 7.38137 | 0.000 | *** |
| N | 300 | | | 252 | | |
| R-Square | 0.7707 | | | 0.8946 | | |
| Prob F | 0.0000 | *** | | 0.0000 | *** | |

*Note:* FV = Firm Value, ERM = Enterprise Risk Management, Size = Corporate Size, AUDIT = Auditor Quality, OWN = Concentration Ownership, ODM = Director Monitoring, DAR = Leverage, ROA = Profitability.
Information: * Significant 10%, ** Significant 5%, *** Significant 1%.

effect as Malaysia's in influencing firm value. Meanwhile, audit quality only significantly affects the unit of analysis in Malaysia and vice versa. OWN and ODM only significantly affect the unit of analysis in Indonesia, while in Malaysia, it does not.

### Difference Test

The difference test was carried out in analyzing panel data belonging to the unit of analysis in Indonesia and the unit of analysis in Malaysia, and this difference test is useful in analyzing what is happening in each country represented by the unit of analysis.

**Table 8.** Difference test

| | Z | Prob>\|Z\| | Results |
|---|---|---|---|
| FV | 9.021 | 0.000 | Significant Difference |
| SIZE | 5.481 | 0.000 | Significant Difference |
| AUDIT | –0.309 | 0.758 | Non Significant Difference |
| OWN | 11.912 | 0.000 | Significant Difference |
| BODM | –17.451 | 0.000 | Significant Difference |
| ERM | 4.620 | 0.000 | Significant Difference |
| Information: Indonesia = 300, Malaysia = 252 | | | |

Based on Table 8, it is known that apart from the different number of panel data between the unit of analysis in Indonesia and the unit of analysis in Malaysia, all panel data averages for each variable are also different except for audit quality. Therefore, differences in data between Indonesia and Malaysia imply that trends in each country are different regarding management strategy in ERM, company value in the market, and ODM and OWN, which are also different. This difference ultimately answers the different results of the expansion test between the unit of analysis in Indonesia and the unit of analysis in Malaysia, explained in the previous sub-chapter.

Of course, even though Indonesia and Malaysia are often allied countries, economic policy, organizational climate, and investor behavior have characteristics that cannot be identical. Nevertheless, the difference in these results can be a reference for further research, so expansion tests should always be carried out for research that analyzes units of analysis in different countries.

The results of this different test appear in the results of the expansion tests conducted both in model 1, which analyzes the effect of company size, auditor quality, concentrated ownership and Monitoring of directors on ERM, as well as in model 2, which analyzes the effect of company size, auditor quality, concentrated ownership and ERM to company value. Of the 9 hypotheses defined, different results were found between the main regression test and the expansion test. In addition, the analysis results are different due to differences in panel data between companies in Indonesia and Malaysia.

## 5. Discussion

### Effect of company size on ERM

The hypothesis test results did not find the effect of company size on ERM or Enterprise Risk Management. The size of the number of assets the company owns does not necessarily mean that management has a good strategic risk management strategy. The ability of management in the analysis unit to make policies means that they could be more qualified, as evidenced by their assets or resources. The strategies must show a better direction or align with the company's many assets.

The absence of the effect of company size on ERM in this study is not in line with stakeholder theory, where when a company has high assets, management policies in the form of ERM are also high, and the results of this study are also inconsistent with Handayani and Yanto (2013), Asmoro et al. (2016), and Maulani and Rahayu (2015) who in his research found the effect of company size on ERM. The different results in this study were allegedly due to the wide range of values between the minimum and maximum ERM values, which explains that the quality of the ERM performed between units of analysis is very different. However, these results still apply to the main regression test, sensitivity, to the expansion between Indonesia and Malaysia.

### Effect of auditor quality on ERM

The hypothesis test results found a positive effect of auditor quality on ERM or Enterprise Risk Management. To reduce the possibility of fraudulent reporting, and opportunistic behavior in general, boards may demand investment in higher quality control and risk management practices and purchase higher quality audit services. These results explain that the auditor's higher quality in preparing financial statements encourages the creation of a risk management strategy in the company. Audit results assist management in evaluating past performance and making business plans and strategies for the future.

This study's results align with Paino et al. (2015), who also found a positive effect of audit quality on ERM. Paino et al. (2015) explained that two criteria, namely external audit work style and communication barriers, have a substantial relationship with external audit dependence on internal audit work. The relationship was stronger with the moderating effect of enterprise risk management (ERM). Bunget et al. (2010) found a substantial relationship between the efficiency of risk management and the level of risk and assurance measured by financial auditors. In other words, effective risk management causes external auditors to assign lower general audit risks and increases their readiness to rely on internal audit work. In addition, the external auditor's ability to perform some on-site audit tests would likely reduce audit risk to an acceptable level and eliminate the need for the external auditor to perform multiple on-site audits.

Even so, companies in Indonesia making ERM policies are more influenced by auditor quality than Malaysian companies, meaning that the auditor's role in carrying out their duties in reviewing the process of preparing financial statements in Indonesia is higher than that of companies in Malaysia. Auditors affiliated with Big4 are considered to be of higher quality in the audit process than the opinions issued by companies in Indonesia, which impacts management's ERM policies.

## Effects of concentrated ownership on ERM

The hypothesis test results did not find the effect of Concentrated Ownership on ERM or Enterprise Risk Management. The owner's size does not necessarily mean management has a good strategic risk management strategy. The ability of management in the unit of analysis to make policies means that it needs to be more qualified, as evidenced by the ownership of large and small shares. The strategy taken needs to show a better direction. Even though today's business market is very complex and unpredictable, management is fully responsible for the organization's operations. The company's risk management program is a requirement for management to protect shareholder investment. In addition to lowering the likelihood of further losses, this greatly improves the company's competency. Additionally, it increases business opportunities and creates a secure environment for investors interested in trading company shares (Brustbauer, 2014).

These results do not support Prinsloo et al. (2015) and Keong et al. (2020) (Malik et al., 2023) that the concentration of share ownership, influenced by management control, significantly impacts organizational culture and decision-making. For monitoring purposes, large shareholders rely more on internal governance mechanisms where they can exercise certain controls rather than increasing the scope of external audits. Desender and Lafuente (2011). Ownership concentration also has a positive and statistically significant effect on ERM adoption. This result remains the same when expansion tests are carried out between units of analysis in Indonesia and Malaysia, meaning that the majority shareholder in both Indonesia and Malaysia is not able to encourage management to carry out good risk management; this could be due to a lack of knowledge or ability of the majority shareholder the importance of risk management in the companies they own, or because of the high information asymmetry as described in agency theory so that internal company information is not obtained explicitly by investors.

## The effect of board of directors monitoring on ERM

The hypothesis test results did not find the effect of Directors' Monitoring on ERM or Enterprise Risk Management. The size of the Directors' Monitoring does not necessarily mean that management has a good strategic risk management strategy. The ability of the management in the analysis unit to make policies means that they need to be more qualified, as evidenced by the Monitoring of the Board of Directors, big and small; in fact, the strategy taken needs to show a better direction. One might see outside directors as more concerned with the quality of financial and non-financial reports than ERM management in that directors face a greater conflict of interest. Ishak and Nor (2017), based on the Malaysian Code on Corporate Governance (MCCG) (Securities Commission, 2007, 2012), clearly states the roles and responsibilities of the Board of Directors for risk management activities. The Board of Directors, as the main governance structure in an organization, has a significant role in implementing risk management in a company. The role of management and board oversight functions in the risk appetite activities for the organization, and the effectiveness of the oversight function of the board is very important, but when the role of the Board of Directors is not effective, the Board of Directors cannot monitor and manage risks.

Furthurmore, O'Sullivan et al. (1997) shows that businesses with boards that are more likely to include non-executive members are more likely to monitor director and officer insurance than businesses with boards that are less likely to include non-executives. According to this, companies with higher non-executive representation may choose more thorough controls, risk management, and audits (internal or external). Companies with independent boards and concentrated ownership show the highest levels of ERM. This research is not linear with the statement that companies embrace ERM to manage risk across entities. Not linear with Beasley et al. (2005) that board independence is associated with a greater ERM adoption stage. Rating agencies, such as Standard and Poor's and Moody's, are examining how managers control and track the risks facing their firms (Prinsloo et al., 2015; Standard & Poor's, 2005), and Gordon et al. (2009), concluded that board monitoring could have a major impact on ERM firms. Furthermore, according to Owens and Megginson (2000), supervision at every management level, including the company's board of directors, impacts the successful implementation of ERM.

This result was in line with when expansion was carried out between companies in Indonesia and Malaysia. Monitoring directors on quality risk management policies also did not have a positive effect. This result is suspected to be due to the directors' need for more awareness, knowledge, and ability to manage existing risks. It is also strengthened by the weak influence of shareholders in encouraging management in the risk management process, both in companies in Indonesia and Malaysia.

## The effect of company size on firm value

The hypothesis test results found a negative effect of firm size on firm value. High asset values reduce the value of the company. Investors negatively assess high asset values because it is considered that management cannot utilize their resources for business activities, or they are worried

that the dividend distribution process will not run smoothly, so they get the negative sentiment. Even though, in theory, investors are happy with companies with a high number of assets, and this does not happen in the unit of analysis. The same result occurred when expansion was carried out between companies in Indonesia and companies in Malaysia, and this produced the same outcome – a high number of assets as a measure of company size had a detrimental impact on ERM.

The finding of a negative effect of company size on company value differs from the research of Hirdinis (2019), Husna and Satria (2019), who found the opposite, where company size has a positive effect on company value.

## Effect of auditor quality on firm value

The hypothesis test results found a positive effect of audit quality on Firm Value or firm value. These results explain the level of investor confidence in the results of financial report audits conducted by Big4, not on the value of financial reports but rather on the accuracy of the information that has been reviewed by qualified auditors so that this information can be used in investment policies in the future. Companies with high audit quality can minimize the risk of audit failure, prevent fraud and reduce corporate earnings management. Audit quality assures the credibility of the information presented in the financial statements. Then the information in the financial statements becomes the basis for users to provide a more precise and accurate value to the company.

Aobdia et al. (2015) stated that audit quality helps inform uninformed investors about a company's basic value. The capital market positively reacts if the company moves from a low-quality auditor to a higher-quality auditor. Audit quality is one of the elements determining business value in developing countries, but these results do not support the research from Alsmairat et al. (2018). Asthana (2014) states that audit quality affects firm value. Huang et al. (2014) states that higher-quality audit procedures can increase firm value. Wijaya (2020) explains that audit quality benefits company value in manufacturing companies listed on the Indonesia Stock Exchange.

Even so, different results were found when expansion was carried out between companies in Indonesia and Malaysia. Only investors in companies in Malaysia have a positive reaction to the quality of auditors, so it has an impact on high firm value, while investors in companies in Indonesia do not react, so there is no effect on firm value. These results explain that investors in Malaysia have high confidence in audit quality compared to investors in Indonesia.

## Effect of concentrated ownership on firm value

According to the findings of the hypothesis test, concentrated ownership has a beneficial impact on firm value. The management's policies are better when Concentrated Ownership is high since employees have a strong sense of ownership. Consequently, the company's worth rises, inspiring confidence in investors.

Even so, different results were found in the expansion test, where the positive effect of concentrated ownership only occurred in companies in Indonesia, while it did not occur in companies in Malaysia. These results explain that the role of the majority shareholder in encouraging management in Indonesian companies at every policy decision is quite high and impacts the approval of other investors, resulting in high company value.

## Effect of board of directors monitoring on firm value

The hypothesis test results did not find the effect of Directors' Monitoring on Firm Value or Company Value. It can be interpreted that the size of the Board of Directors Monitoring cannot influence investors to adopt investment policies on the entity so that the company's value does not impact the value of the existing Board of Directors Monitoring. Board of directors' management monitoring can decrease firm value, largely due to the costs involved in coordinating the decision-making process (Yermack, 1996), while Carter et al. (2010) explained that the diversity of directors is associated with an increase in value. Larger boards are generally valued at the destructive cost of resolving conflicts and coordinating communications and decisions.

These results do not agree with Fama and Jensen (1983) that the way to monitor management actions is to increase the focus on business performance. Board monitoring negatively impacts a company's value (Holmstron, 2005; Faleye et al., 2011). As board size increases, the firm value decreases, but at a decreasing rate indicating that the relationship between board size and firm value is not strictly linear. This result is also not in line with Byun et al. (2013) (Salehi et al., 2022), which explains that direct ownership of controlling shareholders moderates the relationship between intense board monitoring and company valuation. The impact of intensive board oversight on firm value diminishes when there is a wider disparity between control rights of controlling shareholders and cash flow rights.

Different results were found in the expansion analysis between companies in Indonesia and companies in Malaysia, where the high Monitoring of directors at companies in Indonesia increased the company's value, while in Malaysia, this did not happen. These results explain that corporate investors in Indonesia have high confidence in the performance of directors in supervising company management to improve company performance, so the more often or the higher the Monitoring of directors in companies in Indonesia, investors tend to be interested in management performance in the future so that it has an impact on increasing the value of the company.

## The influence of ERM on firm value

The hypothesis test results found a positive effect of ERM on firm value. Investors are interested in entities that have a good risk management strategy. Companies with a good risk management strategy are allegedly able to manage business activities well from upstream to downstream, so they are expected to provide maximum business profits so that the probability of investment returns is also high. It encourages investors to invest so that, ultimately, it increases the company's value. In order to establish an effective risk management plan, ERM is a management process that requires enterprise management to identify and assess the collective risks that affect firm value and implement a company-wide risk management strategy to manage those risks (Meulbroek, 2002).

The results of this study support Merchant and Van der Stede (2007), Ghazieh and Chebana (2021), and Hoyt and Liebenberg (2011), which explain that the implementation of ERM has a significant impact on company performance, according to the findings of this study the role of oversight is strengthened by an internal control system which is highlighted specifically. Pérez-González and Yun (2013) evaluated firm value and found that active risk management policies increase firm value.

Different results were found in the expansion test between companies in Indonesia and companies in Malaysia, where only in companies in Malaysia was ERM found to have a positive effect on firm value, while it did not occur in companies in Indonesia. These results indicate that investors in Malaysia have high knowledge, understanding, and confidence in the impact of risk management on the progress of the company's business, so the risk management policies implemented by companies in Malaysia are given a positive reaction from investors in the form of high corporate value.

## 6. Conclusions

Based on several explanations related to the results and discussions carried out, the research shows that the Firm Size Factor influences Enterprise Risk Management, this states the need for a higher quality risk management strategy in managing company assets. The quality of auditors in companies shows excellent results in fraud prevention so that it can encourage the creation of quality risk management principles in companies. Ownership concentration has no effect on Enterprise Risk Management, the size of shares owned does not have an impact on the presence of risk management, in fact, the need for investment protection for shareholders. Meanwhile, the supervision of the directors has no impact on the existence of enterprise risk management, this indicates that the size of the supervisory structure of the directors has no impact if there is no strategy and regular supervision. Company size has a negative effect on company value, this indicates that monitoring of company assets is not optimal for the company's business activities. Audit quality affects firm value, indicating that the audit policy carried out by the company is very appropriate to prevent fraud in financial reporting and reduce the impact of earnings management. Ownership concentration has an impact on firm value which states that employees have better management policies and can increase investor confidence. The supervision of the directors does not have an impact on the value of the company, which is a measure of the supervision of the directors that has not been maximized on investment determination policies. For enterprise risk management, it affects the value of the company so that by implementing a risk management strategy, it means that the ability to manage the company determines the level of investment for investors.

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