



THE IMPACT OF COMPANY CHARACTERISTICS TO INCREASE COMPANY VALUE WITH CORPORATE RISK MANAGEMENT AS MEDIATION IN COMPANIES LISTED ON THE IDX IN 2016-2020

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Article Info

Article history:

Received Nov 27, 2023

Revised Nov 02, 2023

Accepted Dec 30, 2023

Keywords:

Company Characteristics,
Increase Company Value,
Corporate Risk Management,
IDX IN 2016-2020

ABSTRACT

The research objectives are based on the research of Bohnert, A., et al., 2023 and Nguyen, Lan, et al. 2021, namely to examine the impact of size and leverage on firm value with enterprise risk management (ERM) as mediation. The sample technique used is purposive sampling, and the data used is secondary data from annual financial report data listed on the Indonesia Stock Exchange from 2016-2020, totaling 15 property and real estate industry sectors. Path analysis and the Sobel test are used in the data analysis technique. The findings indicated that: (1) firm size has a negative and insignificant impact on ERM; (2) leverage has a positive and insignificant impact on ERM; (3) firm value is positively but insignificantly impacted by company size and leverage; and (4) ERM has a negative and insignificant impact on firm value. (5) The impact of firm size and leverage on firm value is not mediated by ERM

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1. INTRODUCTION

Enterprise-wide risk management (ERM) techniques have grown significantly in importance in recent years, especially in the insurance sector. Organizations are becoming more aware of ERM's advantages. Since then, insurers have started to adopt an all-encompassing, enterprise-wide perspective of risk (Beasley et al. 2005; Hoyt and Liebenberg 2015; Ai et al. 2016). According to Standard and Poor's (2016) report, the number of insurers engaging in ERM activities has significantly increased, which has led to an increase in the top two S&P ERM rating categories. The increasing trend and importance of ERM can be attributed to a number of external factors.

Companies are becoming more adept at identifying and quantifying risk, even as globalization and digitization increase the complexity of risks and possible new sources of risk for them. They also increase the interdependencies between various sources of risk and business units. The quick expansion of data is the cause of this. Rating agencies acknowledge the significance of ERM in the insurance industry by incorporating ERM assessment as a component of the overall rating process. Standard & Poor's and AM Best are two rating agencies that take into account how mature a company's overall risk management practices are. These ratings are used to evaluate insurance companies' creditworthiness and financial stability (S&P 2013; Berry-Stoelzle and Xu 2016). As a result, insurance companies are encouraged to participate in ERM initiatives (McShane et al. 2011). Furthermore, regulation is a major factor propelling the development of ERM. For instance, after the financial crisis, lawmakers in the US and Europe enacted stronger laws.

Risk information must be included in an issuer's or public company's annual report in accordance with PSAK 60 on Financial Instruments: Disclosures and the Decree of the Chairman of Bapepam-LK Number KEP-431/BL/2012. This rule mandates the disclosure of data that financial statement users can use to identify the kind and degree of risk

associated with various financial instruments. Risk-related data must be reported in annual reports by all entities, financial and non-financial. The number of required risk management reports is not specified in the regulation (Devi et al., 2017). As mandated by Financial Services Authority Regulation Number: 29/POJK.04/2016 regarding Annual Reports of Issuers or Public Companies, risk information is a mandatory requirement for public companies. Sayilir (2017) reported that the main objective of ERM is to increase and maintain the value of the company.

Firm value is not only impacted by Enterprise Risk Management, but also by factors like size, profitability, and leverage. The company's size is indicated by the quantity of assets it owns. Businesses with substantial asset bases will find it easier and more liberating to manage their resources and carry out other operational duties. These companies can add value because of how simple and adaptable they are. According to a related study that supports this (Rius Witari, 2018), firm value is positively impacted by firm size. Additionally, a company's profitability may have an impact on its worth. The capacity of an organization to make money from the use of its resources is known as profitability. It is possible to distribute or preserve the company's profits (Ambarwati & Vitaningrum, 2021). Leverage is the measure of how much a company's assets are aided by both short- and long-term debt to maximize operations. The Debt to Equity Ratio (DER) is a frequently used debt ratio that represents the proportion of total debt to equity. A ratio called DER is used to assess a company's ability to pay off debt with its available capital. While a high DER can lower the company's value, a low DER can raise it. Put differently, a lower value of high DER means that dividends will be received in smaller amounts (Mandey et al., 2017).

Growth in a company's stock price is a sign of its development and, naturally, this will translate into a higher company value, particularly in the industrial sector (Larasati, A., 2023). One of the main economic sectors that contributes significantly to a nation's GDP is the industrial sector. The property and real estate industry sector exhibits a positive trend within the Indonesian context. Right now, the business world is the most discussed industry on a national and worldwide level (Fadhilah, 2012). The real estate and property industry is one of the growing factors. Between 2014 and 2016, Indonesia's real estate and property industry saw a rise in business development. This is because Indonesia's economy has grown by 6.5%. 2018–2019 will see a very high increase in the growth of properties and real estate (Asriman, 2019).

The phenomenon of stock prices in Indonesia is closely linked to their volatility. The Jakarta Composite Index (JCI) increased by 20% in 2017 after standing at 15.3% the previous year. January was the best month for the Indonesian stock market in terms of monthly performance. In the beginning of 2018, the JCI recorded a return of 3.93%. Investor enthusiasm peaked in January after the JCI increased by 6.78% in December 2017. But the JCI saw a negative return in 2018, falling by 2.54%. The JCI then corrected by roughly 2.6% in 2018. Officially, trading on the 2018 stock market ended at 6,194.4 (cnbcindonesia.com by Kevin, 2019).

The property and real estate industry itself sees fluctuations or ups and downs in share prices. According to Hans Kwee, Investment Director at Saran Mandiri, the property and real estate index fell by 5.67% in 2017. This information was cited from IDX data. PT Pakuwon (PWON), one of them, dropped 2.4% to Rp 610 per share. Additionally, there was a decrease in the shares of PT Jaya Real Property Tbk (1.19%) to Rp825 per share and PT Metropolitan Kentjana Tbk (MKPI) up to 3.16 percent at Rp24,500 per share. Summarecon Agung, meanwhile, is trading at Rp830 per share (Mutmainah, 2017). The study aims to ascertain the influence of firm characteristics (size and leverage) on firm value through the use of enterprise risk management (ERM) as a mediator. It draws its foundation from the research conducted by Bohnert, A., et al., 2017, and Nguyen, Lan, et al., 2021.

2. LITERATURE REVIEW

Firm Size and Enterprise Risk Management

Based on research by Aggarwal and Padhan (2017) and Saona and Martín (2016), we calculate the firm size using the natural logarithm of total assets. According to a number of recent studies, there is a significant positive correlation between firm size and value (Dang et al., 2019; Aggarwal & Padhan, 2017; Sampurna & Romawati, 2020; Anton, 2016). According to Hirdinis (2019), a larger company will subsequently have a higher value, lending support to this viewpoint. However, studies by Shah and Khalidi (2020), Saona and Martín (2016), and Obradovich and Gill (2013) indicate that firm value is negatively impacted by company size. In contrast, research by Mule et al. (2015) and Endri and Fathony (2019) indicates that company size has no significant effect on firm value. According to Colquitt et al. (1999); Golshan and Rasid (2012), larger companies are better able to support the administrative costs of ERM programs due to their larger institutional size. They can also allocate the fixed costs of risk management expenditures across various business units, as noted by Berry-Stoelzle and Xu (2016) and Bohnert et al. (2017). It is more likely that larger companies will adopt ERM because they are more likely to experience financial distress and have more volatile operating cash flows. Here is the hypothesis.

H₁: Firm size positively affects enterprise risk management



Leverage and Enterprise Risk Management

According to Hoyt and Liebenberg (2011), firms may choose to raise leverage as a result of rising risk appreciation. The probability of lower returns and financial distress is higher with greater leverage, as are the associated costs. Accordingly, companies with more clout undertake ERM initiatives in an effort to lessen these opportunities (Pagach and Warr, 2010; Gol-shan and Rasid, 2012; Baxter et al., 2013). According to Meulbroek (2002), Beasley et al. (2008), Liebenberg and Hoyt (2003), Gol-shan and Rasid (2012), have a positive influence on firm value. With the aid of ERM, firms can present the right corporate strategy to the capital market, trustworthy risk handling, or adequate risk policies, and thus, receive better debt conditions. Greater leverage is associated with increased financial risk, leading to fewer resources to implement an adequate ERM program (Baxter et al. (2013)). The hypothesis is as follows: H₂: Leverage positively affects enterprise risk management

Firm Size And Firm Value

The size of the company's assets is one benchmark that illustrates the size of the business. According to Karo et al. (2021), the company's size is a direct indicator of its operating and investment activities, both at high and low levels. In this study, the term "firm size" refers to the size of the company as measured by the total value of its assets. More investors are likely to be interested in a company with a larger staff size. This is so because circumstances at large corporations are typically more stable. Investors may be drawn to purchase company stock due to its stability. One of the reasons for the rise in the capital market price of the company's shares is this condition. Large corporations are held in high regard by investors. It is anticipated by investors that the company will be able to pay dividends. A rise in the price of company shares on the capital market may be influenced by an increase in demand for them Husna & Satria (2019). The findings of Husna & Satria's (2019) and Mudjijah et al.'s (2019) studies indicate that company size positively impacts firm value. Here's the hypothesis:

H₃: Firm size positively affects firm value

Leverage and Firm Value

Leverage is a metric used to quantify the extent to which a business depends on creditors to fund its assets. A high leverage company is one that heavily depends on outside loans to fund its assets. Businesses with lower levels of leverage fund a larger portion of their assets with their own funds (Riyanto, 2008). According to stakeholder theory, a company's obligation to use its available financial resources to pay off debt increases with its level of leverage, which forces the company to do so. Leverage is a metric used to determine how much debt is used for investment financing. The more leverage there is, the more reliant the business is on its creditors. Companies with higher levels of debt tend to be speculative and risky (Karo et al., 2021). The hypothesis is as follows

H₄: Leverage positively affects firm value

Enterprise Risk Management and Firm Value

Enterprise risk management, or ERM for short, has grown significantly in the last few years. In 2004 the Committee of Sponsoring Organizations of the Treadway Commission, or COSO, defined ERM as "a process influenced by an entity's board of directors, management, and other personnel, implemented in strategy setting and throughout the enterprise, designed to identify potential events that could affect the entity, and manage risks to match its risk appetite, to provide reasonable assurance that the organization will succeed." So, when a company implements ERM, it aims to take into account risk for the entire organization, which encompasses all business units and all kinds of risks. The traditional risk management (TRM) approach, on the other hand, is compartmentalized and silo-based.

Businesses can gain a comprehensive understanding of all the risks facing the organization as a whole by implementing ERM, which enables them to identify and control all internal risks (Meulbroek 2002; Nocco and Stulz 2006; Farrell and Gallagher 2015; Bohnert et al. 2017). To attain a more organized and proactive risk-reward viewpoint, a comprehensive risk management strategy can be applied. (Meulbroek 2002; Nocco and Stulz 2006; Rochette 2009; Hoyt and Liebenberg 2011; Lechner and Gatzert 2017) include risks of loss as well as opportunities with possible gains because of this. This makes it possible to evaluate the organization's overall risk profile more accurately. Furthermore, risk management may be a component of long-term corporate decision-making (Hoyt and Liebenberg 2011; Bohnert et al. 2017).

Companies should designate senior managers to the management board, such as a CRO or a committee of risk management experts, in order to meet the requirements of an adequate risk management system (Liebenberg and Hoyt 2003; Nair et al. 2014; Gatzert and Martin 2015). Given the importance of ERM to business strategy, it ought to be a top-down, department-led process overseen by a single risk management division. To guarantee effective coordination, the organization as a whole must have a strong risk culture and a sufficient level of risk awareness (Dickinson 2001; COSO 2009; Hoyt and Liebenberg 2011; Lechner and Gatzert 2017). ERM can therefore lessen or completely eliminate the risk of financial distress or even bankruptcy, as well as the possibility of "costly-lower-tail" (very large losses) (Meulbroek 2002; Hoyt and Liebenberg 2011; Farrell and Gallagher 2015; Lechner and Gatzert 2017).

Therefore, ERM has a positive impact on a company's shareholder value (Meulbroek 2002; Hoyt and Liebenberg 2011; Bohnert et al. 2017). Hoyt and Liebenberg (2008, 2011), McShane et al. (2011), Baxter et al. (2013), Farrell and Gallagher (2015), Ai et al. (2016) (examining the combined impact of high-quality ERM and product line diversification), Bohnert et al. (2017), and Lechner and Gatzert (2017) all found a positive and significant relationship between ERM and firm shareholder value. The hypothesis is as follow:

H₅: Enterprise Risk Management positively affects firm value

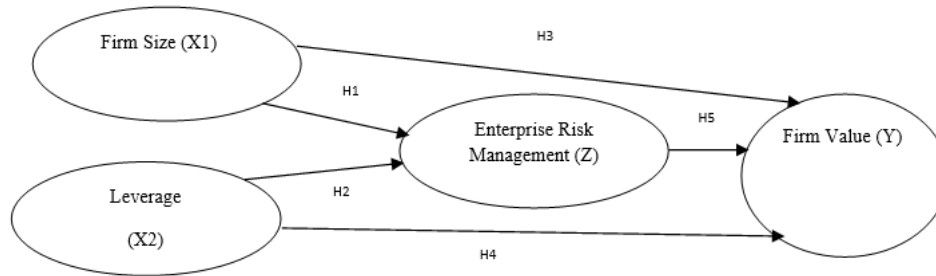


Figure 1. Conceptual Framework

H3

3. METHODOLOGY

Descriptive verification research methods are used in this study to gather, process, analyze, and interpret data in order to describe the veracity of the facts and explain the relationship between the variables under investigation (Sugiyono, 2019). The secondary data used was collected from the 2016–2020 annual financial reports of manufacturing companies listed on the Indonesia Stock Exchange within the real estate industry sector.

Purposive sampling was used in this study to remove sample members based on the requirement that companies in the real estate sector listed on the IDX have complete financial statement data spanning the years 2016 to 2020. The company actively released its financial statements between 2016 and 2020 in accordance with the research variable data that researchers required. Following purposive sampling, a sample of 15 companies that satisfied the criteria was obtained.

Table 1. operational definition of variables

Variables	Meaning	Determined By	Scale
Firm Size	A figure that illustrates how big a company is based on the asset value.	Ln (Total Asset)	ratio
Leverage	One of the corporate capital loan sources that's utilized to get the best possible returns	Debt To Equity Ratio = Total Debt/ Total Equity	Ratio
Enterprise Risk Management (ERM)	The goal of identifying, evaluating, and managing risks in all business operations is to increase productivity and effectiveness.	$EMIDI = \frac{\sum ij Ditem}{\sum ij ADitem}$ <p>Keterangan:</p> <p>ERMDI = Enterprise Risk Mangement Disclosure Index</p> <p>$\sum ij Ditem$ = Total skor item ERM yang diungkapkan</p> <p>$\sum ij ADitem$ = Total item ERM yang seharusnya diungkapkan</p>	Ratio
Firm Value	The price a buyer is willing to pay if the company is sold.	<p>Price Book Value (PBV)</p> <p>= Stock Price per Share / Book Vale Per Share</p>	Ratio

		$= \frac{\text{harga per lembar saham}}{\text{nilai buku per lembar saham}}$	
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4. FINDING AND DISCUSSION

Through enterprise risk management (ERM), the data analysis technique employing path analysis seeks to investigate the effects of firm size and leverage on firm value. Based on two regression equations, the path analysis calculation steps are organized as follows:

$$Z = a + b_1X_1 + b_2X_2 + e_1$$

$$Y = a + b_3X_1 + b_4X_2 + b_5Z + e_2$$

Keterangan:

X_1 : Firm Size

X_2 : Leverage

Z : Manajemen Risiko Perusahaan (ERM)

Y : Firm Value

a : Constant Regression

$b_1..b_5$: Coefficient of Regression

e : error

Utilizing the t test to test the direct effect hypothesis and the Sobel Test with a significance level of 0.05 to test the indirect effect (mediating effect).

FINDING

Classical Assumption Test

Based on data processing with the SPSS version 24 program, the following classical assumption test results are presented including multicollinearity test, heteroscedasticity test, autocorrelation test, and normality test.

Tabel 2. Results of Classic Assumption Test

Classic Assumption Test	Test results	Conclusions
Multicollinearity Test	<i>Tolerance</i> (0, 995; 0,985;988) > 0,1 <i>VIF</i> (1,005; 1,015;1,012) < 10	No multicollinearity
Heteroscedasticity Test	p- value (0,073; 0,948;0,425) > 0,05	No heteroscedasticity
Test	p- value (0,058) > 0,05	No autocorrelation
Normality test	p- value (0,140) > 0,05	Normal residuals

Source: Secondary data processed, 2023

The above-mentioned classical assumption test results demonstrate that the model has normal residuals and no issues with autocorrelation, heteroscedasticity, multicollinearity, or heteroscedasticity.

Path Analysis Results

Path analysis aims to examine the effect of firm size and leverage on firm value through enterprise risk management (ERM). The results of testing each hypothesis can be explained as follows.

1. Direct Effect Hypothesis Test

The results of the direct effect test are presented in the table below.

Tabel 3. Hypothesis Testing for Direct Effects

Hypothesis	Direct effect	Path coefficients (β)	Standard Error	t-value	p-value	Conclusions
H1	$X_1 \rightarrow Z$	-0,027	0,006	-0,234	0,816	H1 Rejected
H2	$X_2 \rightarrow Z$	0,105	0,212	0,892	0,375	H2 Rejected
H3	$X_1 \rightarrow Y$	0,324	0,130	2,906	0,005	H3 Accepted
H4	$X_2 \rightarrow Y$	0,029	0,044	4,315	0,795	H4 Rejected
H5	$Z \rightarrow Y$	-0,130	2,577	-1,164	0,248	H5 Rejected

Source: Secondary data processed, 2023

Based on the research results, hypothesis testing can be explained below.

a. Hypothesis testing 1

Based on the results of regression analysis, the tcount value $(-0.234) < t \text{ table } (1.96)$ or p value $(0.816) > 0.05$ is obtained. This means that company size has a negative and insignificant effect on firm value. Thus hypothesis 1 is rejected.

b. Hypothesis Testing 2

Based on the results of the regression analysis, the tcount value $(0.892) < t \text{ table } (1.96)$ or p value $(0.375) > 0.05$. This means that leverage has a positive and insignificant effect on firm value. Thus hypothesis 2 is rejected.

c. Hypothesis Testing 3

Based on the results of the regression analysis, the tcount value $(2.906) > t \text{ table } (1.96)$ or p value $(0.005) < 0.05$ is obtained. This means that company size has a significant positive effect on firm value. Thus hypothesis 3 is accepted.

d. Hypothesis Testing 4

Based on the results of the regression analysis, the tcount value $(0.261) < t \text{ table } (1.96)$ or p value $(0.795) > 0.05$. This means that leverage has a positive and insignificant effect on firm value. Thus hypothesis 4 is rejected.

e. Hypothesis Testing 5

Based on the results of regression analysis, the tcount value $(-1.164) < t \text{ table } (1.96)$ or p value $(0.248) > 0.05$. This means that enterprise risk management (ERM) has a negative and insignificant effect on firm value. Thus hypothesis 5 is rejected.

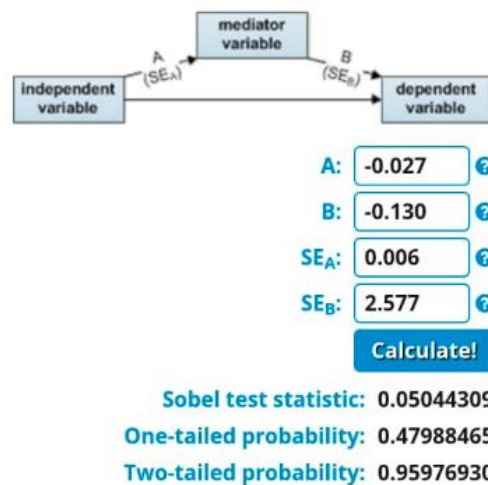
Hypothesis Test for Mediation Effect

The mediation test aims to test the position of the mediating variable in the model. Testing the effect of mediation in hypothesis 4 uses the Sobel Test. Calculations for the Sobel Test use an online calculator (www.danielsoper.com).

1) The Impact of Firm Size on Firm Value through ERM

Tabel 4. Results of Sobel Test 1

Path	Standardized Coefficients	Standard Error	Sobel test statistic	Probability (Two-tailed)
X1→Z	A = -0,027	SE _A = 0,006	0,050	0,960
Z→Y	B = -0,130	SE _B = 2,577		

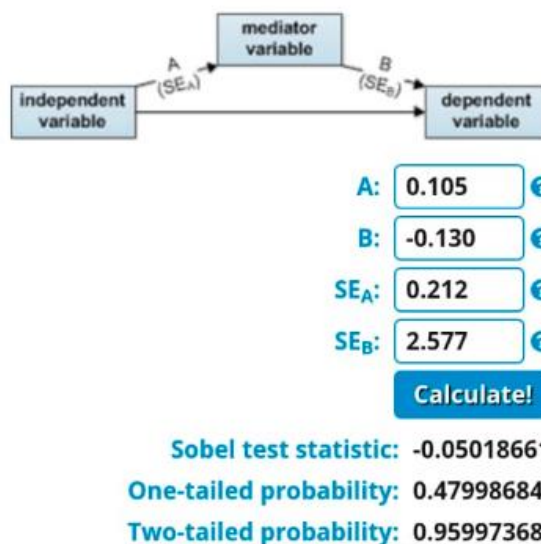


The Sobel 1 test results show the tcount $(0.050) < t \text{ table } (1.96)$ and p value (two-sided test probability) $0.960 > 0.05$. These results indicate that the indirect effect of firm size on firm value through enterprise risk management is not significant.

2) The Impact of Leverage on Firm Value through ERM

Tabel 5. Results of Sobel Test 2

Path	Standardized Coefficients	Standard Error	Sobel test statistic	Probability (Two-tailed)
X2→Z	A = 0,105	SE _A = 0,212	-0,050	0,960
Z→Y	B = -0,130	SE _B = 2,577		



Sobel 1 test results show the tcount $(-0.050) < t_{table} (1.96)$ and p value (two-sided test probability) $0.960 > 0.05$. These results indicate that the indirect effect of leverage on firm value through enterprise risk management is not significant.

DISCUSSION

The results of this study show that enterprise risk management disclosure is negatively and marginally impacted by the size of the company. The enterprise risk management is inversely correlated with the company size, as indicated by the negative direction of the coefficient of this variable. The research of Gol-shan and Rasid (2012), Colquitt et al. (1999), Karo et al. (2021), (Berry-Stoelzle and Xu (2016); Bohnert et al. (2017)) is not consistent with this finding. The likelihood of adopting ERM is higher for larger companies because they are more likely to experience financial distress and have more erratic operational cash flow. One can determine the size of the company by looking at all of its assets. Greater information regarding Enterprise Risk Management Disclosure is typically available for larger businesses than for smaller ones.

According to the study's findings, corporate risk management benefits from leverage in a small but meaningful way. The leverage variable's coefficient indicates a positive direction, indicating that a company's risk management increases with leverage. The research of Karo et al. (2021); (Pagach and Warr (2010); Gol-shan and Rasid (2012); Baxter et al. (2013)) is supported by this finding. Higher leverage raises the possibility of lower returns and financial distress, as well as the associated costs. Consequently, companies with more clout undertake ERM initiatives in an effort to lessen this likelihood. Leverage can be decreased by businesses that have ERM programs in place to lower the risk of debt default (Hoyt and Liebenberg, 2011; Gol-shan and Rasid, 2012). According to Baxter et al. (2013), higher leverage is linked to higher financial risk, which results in fewer resources available to establish a suitable ERM program. A high degree of profit will always come with a high level of risk when it comes to investing.

The study's conclusions indicate that firm value is significantly positively impacted by company size. The positive direction of the coefficient for the company size variable indicates that a larger company will have a higher value. This outcome is consistent with the data that, on average, over the course of the five years of research (from 2016 to 2020), the larger the company, the more likely it is that it will grow in line with its annual growth in company value. This result is consistent with studies by Dang et al., 2019; Aggarwal & Padhan, 2017; Sampurna & Romawati, 2020; Anton, 2016; these studies show that company size can have a positive impact on firm value. Firm value is higher for larger companies. This is based, in theory, on how simple it is for big businesses to get outside funding. Compared to small businesses, there will be fewer transaction costs. Big businesses are more likely to draw notice and focus, which encourages them to put strong systems and procedures in place for management. Larger businesses can support performance with greater financial strength, which can impact the firm's value.

Leverage has a small but positive impact on firm value, according to the study's findings. This result validates the study by Suwardika & Mustanda (2017), which shows that a company's value increases with its leverage value. Using debt to boost the company's value is the right move if income tax is applicable to the business. This can occur because paying back interest on loans can lessen the amount of money that needs to be set aside for taxes. These actions can also raise the EAT value, which raises the company's profit and improves its standing in the eyes of the market.

This result is consistent with studies by Sjahruddin & Jannah (2022) and Dharmaputra, Rustiarini, & Dewi (2022) which found no relationship between leverage and firm value. It is harder for businesses to obtain new loans when they have high leverage or a lot of debt because lenders are concerned that the businesses won't be able to pay off their debts with their current assets.

This study concludes that the value of a company is negatively and negligibly impacted by enterprise risk management, or ERM. The value of the company will decline in proportion to the level of risk management practiced. According to Iswajuni et al. (2018), disclosure of enterprise risk management has a negative impact on firm value. This finding is consistent with their research. This study reveals that the company did not inform stakeholders about the risk management of the company as it was reported in the financial statements, which has a negative impact. Investors in Indonesia are also unable to recognize the disclosure of enterprise risk management as positive news that can boost firm value due to a lack of information about risk management. This has to do with the way enterprise risk management disclosures are currently made: they are optional, and non-financial sector companies are not subject to any regulations governing disclosures; as a result, the company's disclosures appear to be made haphazardly, with little regard for the accuracy of the data or the implications for the business.

Enterprise risk management does not appear to be a mediating factor in the relationship between firm size, leverage, and firm value, according to study findings. This finding implies that company size and leverage value, without the need for corporate risk management, will have a more direct and significant impact on the growth in value of manufacturing companies in the basic and chemical industry sectors listed on the Indonesia Stock Exchange.

5. CONCLUSIONS

The study's findings indicate that: (1) corporate risk management is negatively and negligibly impacted by company size. (2) Leverage positively and marginally affects corporate risk management (3) A company's size significantly increases its value. Leverage has a negligible and positive impact on firm value, while corporate risk management has a negligible and negative impact. (6) The impact of firm size and leverage on firm value is not mediated by corporate risk management. Because there may be very little data, many results differ from those of earlier studies. Researchers can add capital structure variables, industry type, growth opportunities, and institutional ownership to any company listed on the Indonesia Stock Exchange.

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