

## The Effect of Enterprise Risk Management and Financial Ratios on The Potential for Financial Distress and its Impact on The Firm Value of Pharmaceutical Companies Listed on The Indonesia Stock Exchange

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### ABSTRACT

*This research analyzes the effect of Enterprise Risk Management (ERM) and financial ratios—liquidity, leverage, and profitability on financial distress potential and firm value in pharmaceutical companies listed on the Indonesia Stock Exchange from 2016 to 2023. Using a quantitative approach, data were collected from 10 companies that consistently published audited annual and financial reports over this period. Secondary data were analyzed using Structural Equation Modeling (SEM) with Smart Partial Least Squares (PLS) software version 4.1.0.9. The results show that Enterprise Risk Management, leverage, and financial distress positively and significantly affect firm value. Conversely, liquidity negatively and significantly affects firm value, while profitability has a negative but insignificant effect. Regarding financial distress, proxied by the Z-Score (where a higher Z-Score means lower financial distress risk), liquidity and profitability have a positive and significant impact, indicating they reduce distress potential. In contrast, leverage and ERM show a negative effect on the Z-Score, suggesting higher leverage and ERM disclosure relate to increased distress risk. The effect of ERM on financial distress is insignificant, while leverage's effect is significant. Indirect effect analysis reveals that liquidity positively and significantly influences firm value through financial distress mediation. Profitability's indirect effect is positive but insignificant, while ERM has a negative and insignificant indirect effect. Leverage negatively and significantly affects firm value through financial distress mediation. These findings underscore the complex relationships between risk management, financial health, and value in the pharmaceutical sector.*

**KEYWORDS** Enterprise Risk Management, liquidity, leverage, profitability, financial distress, firm value.



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### INTRODUCTION

Global and national economic conditions continue to undergo dynamic changes, shrouded in challenges that trigger economic slowdowns in various countries. International institutions project global economic growth for late 2024 to be between 2.6% and 3.2%, with a prognosis of 2.7% to 3.3% for 2025 (Alali, Hall, & Stevenson, 2019). Amid this uncertain global landscape, however, Indonesia's economy demonstrates

remarkable resilience, having grown by 5.05% with controlled inflation of 2.13% as of July 2024, a rate that surpasses that of several other nations (Andono & Mellisa, 2013).

This solid economic performance positively impacts the industrial sector, including the strategically important pharmaceutical industry (Aditikus, Manoppo, & Mangindaan, 2021). Designated as a mainstay sector in the national development master plan, the pharmaceutical industry is crucial for supporting the health system and contributing to the economy, evidenced by a GDP contribution of IDR 61.63 trillion from the chemical and pharmaceutical sectors, which grew 8.01% in the second quarter of 2024 (Anindita, 2023). This GDP achievement is consistent with market data showing the Indonesian pharmaceutical market grew 7.4% in the same period, reaching a total value of IDR 137.487 trillion, with national companies dominating an 80.57% market share (Fadilah & Afriyenti, 2020).

The dominance of local companies is supported by government policies aimed at accelerating independence from imported raw materials and encouraging digital transformation (Budiarto, 2020). These policies are designed not only to increase industrial self-sufficiency but also to strengthen the global competitiveness of local pharmaceutical firms (Burnika, Pahala, & Handarini, 2024). Despite these favorable conditions and supportive policies, pharmaceutical companies operate in a high-risk environment, facing complex threats to their financial stability and long-term sustainability from financial, operational, strategic, and external risks (Candra & Wiratmaja, 2020; Cristofel & Kurniawati, 2021).

These complex risks include uncertainty in the supply and high cost of imported raw materials, stringent quality regulations, expensive research and development, and the costly adaptation of digital technology (Doktoralina et al., 2018). If not managed properly, these factors can trigger financial distress, a condition where a company is unable to fulfill its obligations, characterized by declining financial ratios, profits, and working capital. This distress, if persistent, can lead to bankruptcy and is a primary cause of declining company value, as investors tend to avoid the associated risks.

In the pharmaceutical sector, company value is closely tied to financial stability and performance in the face of dynamic challenges, which is reflected in significant share price fluctuations. For instance, issuers like KAEF and INAF saw their share prices surge during the COVID-19 pandemic due to their role in vaccine and medical supply procurement, only to decline afterward as the urgency subsided and operational challenges emerged. Recent financial statements confirm that these companies have posted losses and carry a considerable debt burden, indicating the financial distress they currently face.

This phenomenon of declining performance and financial distress among pharmaceutical issuers has prompted the need for deeper research. Although previous studies have examined the relationship between Enterprise Risk Management (ERM) and company value in manufacturing, the unique characteristics of the pharmaceutical sector—such as strict regulations, raw material dependency, and post-pandemic dynamics—have not been explored in depth. Therefore, this research aims to specifically

## Effect of Enterprise Risk Management and Financial Ratios on The Potential for Financial Distress and its Impact on The Firm Value of Pharmaceutical Companies Listed on The Indonesia Stock Exchange

investigate the influence of ERM implementation and financial ratios on potential financial distress and its subsequent impact on company value within this distinct and vital industry.

Research conducted by Iswajuni et al. (2018) on manufacturing companies listed on the Indonesia Stock Exchange shows that Enterprise Risk Management has a significant positive influence on company value, which means that the better the implementation of Enterprise Risk Management, the higher the company's value. Similar results were shown in research conducted by Zannah et al. (2023) on companies listed in the Kompas 100 Index; it is known that Enterprise Risk Management has a positive effect on company value.

Other research related to the influence of Enterprise Risk Management on company value conducted by Dinoyu & Septiani (2020) and Solikhah & Hariyati (2018) also showed results that Enterprise Risk Management had a positive effect on company value. Meanwhile, different findings in the manufacturing sector are shown by research from Pamungkas and Maryati (2017) and Pratama (2023), which report that Enterprise Risk Management has no effect on company value. Likewise, research on companies in the consumer goods industry sector conducted by Mariani and Suryani (2018), and service companies in the tourism, hotel, restaurant, and transportation sectors listed in the Indonesian Sharia Stock Index conducted by Munawwaroh et al. (2021) found that Enterprise Risk Management has no effect on company value.

Many studies highlight the benefits and effects of Enterprise Risk Management in general without specifically linking it to the potential risk of financial distress and company value, especially in the pharmaceutical sector, which has an inherently high risk. A literature review conducted by Ismiantika et al. (2024) on bankruptcy prediction shows that Enterprise Risk Management, through a holistic approach that considers operational, reputational, and strategic risks, can contribute to the risk picture and predictions of financial distress. The literature review aligns with the results of research conducted by Wijaya et al. (2023) on shipping sector companies, where Enterprise Risk Management has a significant effect on financial distress; thus, shipping industry stakeholders are encouraged to implement Enterprise Risk Management properly to avoid the risk of financial distress.

In research on the prediction of financial distress affecting company value conducted by Silviani et al. (2024) in the property and real estate sectors, financial distress does not affect company value. Several other factors such as liquidity levels, profitability, and leverage levels in the pharmaceutical sector, which have not been comprehensively analyzed, can result in potential financial distress directly or as intervening variables in relation to the impact on company value.

This gap underscores the need for more specific and in-depth research to address how the impact of Enterprise Risk Management implementation and financial ratios affects potential financial distress as well as its impact on corporate value in Indonesia's pharmaceutical sector. This research is expected to fill the knowledge gap or research gap (research gap) that has not been explored by previous studies and, with a better approach,

# Effect of Enterprise Risk Management and Financial Ratios on The Potential for Financial Distress and its Impact on The Firm Value of Pharmaceutical Companies Listed on The Indonesia Stock Exchange

can provide new insights for stakeholders in designing more resilient and adaptive risk management strategies. In addition, the results of this research can also serve as a basis for strategic decision-making to ensure the sustainability of company value amid increasingly dynamic industry challenges.

Based on the background and review of the research gap analysis described, this research aims to: (1) examine the direct effect of Enterprise Risk Management and financial ratios (liquidity, leverage, and profitability) on firm value; (2) analyze the direct effect of Enterprise Risk Management and financial ratios on financial distress potential; (3) investigate the mediating role of financial distress in the relationship between Enterprise Risk Management, financial ratios, and firm value; and (4) provide empirical evidence and practical implications for pharmaceutical companies in Indonesia regarding effective risk management and financial strategies.

## METHOD

This study used an inferential quantitative approach to investigate relationships between variables. Guided by positivist philosophy, it tested predetermined hypotheses by collecting data from a specified sample and analyzing it with statistical techniques. The research focused on Enterprise Risk Management (ERM) disclosure and financial ratios, interpreting results through financial health and company value theories to generalize findings.

Secondary data were obtained from audited financial statements of pharmaceutical companies listed on the Indonesia Stock Exchange from 2016 to 2023. The study observed 10 companies over eight years, yielding 80 observations. Companies were selected through purposive sampling based on continuous listing, consistent report publication, and availability of necessary data.

Key variables included independent variables—ERM disclosure, liquidity, leverage, and profitability; a mediating variable—financial distress measured by the Altman Z-Score; and a dependent variable—firm value measured by Tobin's Q. Data analysis employed Structural Equation Modeling (SEM) using the Partial Least Squares (PLS) method in SmartPLS software. The process involved evaluating the measurement model for validity and reliability, followed by assessing the structural model to test direct and indirect effects via path coefficients and bootstrapping, ultimately assessing the model's predictive power.

## RESULTS AND DISCUSSION

### Data Analysis Results

#### *Testing Measurement Model (Outer Model)*

Measurement model testing (outer model) is divided into 2 (two) types of testing, namely Convergent Validity & Discriminant Validity and Composite Reliability & Cronbach's Alpha Test;

##### a. Convergent Validity

## Effect of Enterprise Risk Management and Financial Ratios on The Potential for Financial Distress and its Impact on The Firm Value of Pharmaceutical Companies Listed on The Indonesia Stock Exchange

The convergent validity value is the value of the loading factor on the latent variable with its indicators (Figure 1). Convergent validity is assessed based on the correlation between the item score or compound score and the construct score calculated with SmartPLS v.4.1.0.9 software (Table 1). Based on the results of the external model analysis shown in the image and table, it can be seen that the outer loading value of the Enterprise Risk Management indicators, liquidity, profitability, financial distress and company value produces a value of 1.00 (one) which indicates that the contribution of the indicator is very strong in forming the latent construct it represents

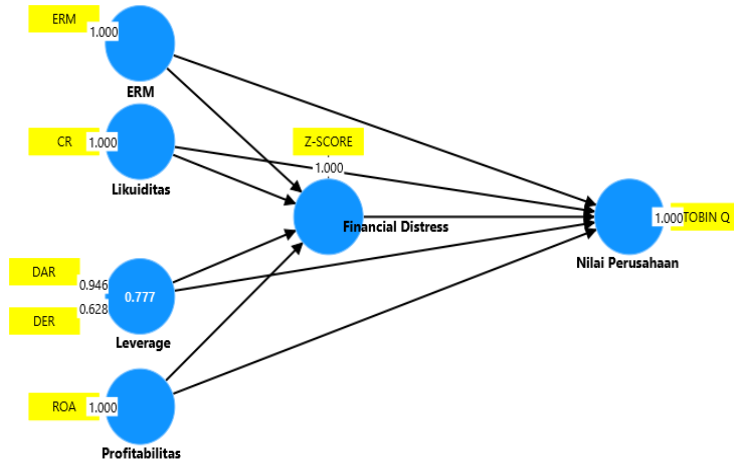


Figure 1. Structure model with PLS – outer loading value

Tabel 1. Outer Loading – matrix

| Variable / Indicator | ERM   | Financial Distress | Leverage | Liquidity | Company Values | Profit | Type       |
|----------------------|-------|--------------------|----------|-----------|----------------|--------|------------|
| CR                   |       |                    |          | 1.000     |                |        | Reflective |
| DAR                  |       |                    | 0.946    |           |                |        | Reflective |
| DER                  |       |                    | 0.628    |           |                |        | Reflective |
| ERM                  | 1.000 |                    |          |           |                |        | Reflective |
| ROA                  |       |                    |          |           |                | 1.000  | Reflective |
| Tobin Q              |       |                    |          |           | 1.000          |        | Reflective |
| Z-Score              |       | 1.000              |          |           |                |        | Reflective |

Source : SmartPLS v.4.1.0.9 data processing results, secondary data processed (2025)

While the outer loading values of the DAR and DER indicators in the leverage variables are 0.946 and 0.628, respectively. Referring to the measurement model evaluation guidelines found by Hair et al., (2022) that the outer loading value  $\geq 0.70$  can be immediately declared valid and maintained in the model, but the outer loading value in the range of 0.40 to 0.70 requires further evaluation by considering the Composite Reliability and Average Variance Extracted (AVE) values as an assessment of the internal consistency and convergent validity of the construct. In the context of this research, the Composite Reliability value of the leverage construct was recorded at 0.773 and the AVE value was 0.644 (Table 2).

Table 2. Composite Reliability and AVE Values

| Variabel | Composite Reliability (rho_a) | Composite Reliability (rho_c) | Average Variance Extracted (AVE) |
|----------|-------------------------------|-------------------------------|----------------------------------|
|----------|-------------------------------|-------------------------------|----------------------------------|

# Effect of Enterprise Risk Management and Financial Ratios on The Potential for Financial Distress and its Impact on The Firm Value of Pharmaceutical Companies Listed on The Indonesia Stock Exchange

|          |       |       |       |
|----------|-------|-------|-------|
| Leverage | 0.773 | 0.777 | 0.644 |
|----------|-------|-------|-------|

Source : SmartPLS v.4.1.0.9 data processing results, secondary data processed (2025)

Both met the minimum recommended criteria (Composite Reliability > 0.70 and AVE > 0.50) as listed in the literature. Thus, the DER indicator that has an outer loading of 0.628 can still be maintained in the model because the overall leverage construct has met the criteria of convergent reliability and validity.

## b. Discriminant Validity

Discriminant Validity is a concept in SEM (Structural Equation Modeling) analysis that is used to measure the extent to which a construct (latent variable) in a research model is completely empirically different and not highly correlated with other constructs in the measurement model. Discriminant validity is important to ensure that a construct is unique, does not overlap with other constructs and is able to represent phenomena that are not covered by other constructs in the same model (Hair et al., 2022).

In the context of this research, the measurement of discriminant validity is carried out based on 3 (three) approach criteria;

### 1) Fornell-Larcker Criterion

Fornell-Larcker is one of the widely used methods to assess discriminant validity, this method compares the square root of the Average Variance Extracted (AVE) of a construct with the latent correlation between that construct and other constructs. Technically, discriminant validity is achieved when the square root value of a construct is greater than its highest correlation with another construct. In this research, the calculation of AVE values and other construct correlation values was obtained from the results of smartPLS v.4.1.0.9 software data processing (Figure 2).

| Discriminant validity - Fornell-Larcker criterion |        |                    |          |            |                  |                |
|---------------------------------------------------|--------|--------------------|----------|------------|------------------|----------------|
|                                                   | ERM    | Financial Distress | Leverage | Likuiditas | Nilai Perusahaan | Profitabilitas |
| ERM                                               | 1.000  |                    |          |            |                  |                |
| Financial Distress                                | 0.153  | 1.000              |          |            |                  |                |
| Leverage                                          | -0.165 | -0.904             | 0.803    |            |                  |                |
| Likuiditas                                        | 0.167  | 0.884              | -0.732   | 1.000      |                  |                |
| Nilai Perusahaan                                  | 0.216  | 0.057              | 0.067    | 0.018      | 1.000            |                |
| Profitabilitas                                    | 0.075  | 0.668              | -0.658   | 0.408      | -0.023           | 1.000          |

Figure 2. Results of the Fornell Larcker discriminant validity test

Based on the results of the discriminatory validity test with the Fornell-Larcker approach, 5 (five) constructs were obtained that had met the criteria of discriminant validity, while 1 (one) construct (leverage) had not met the criteria of discriminant validity. This can be seen from the latent correlation value between the leverage construct and financial distress (0.904) which is greater than the square root of AVE leverage of 0.803. This condition has the potential for empirical overlap between the two constructs.

Through an in-depth investigation process, the researcher identified that the similarity was caused by the DER (Debt to Equity Ratio) indicator in the leverage construct which has a measurement concept that is almost similar to the X4 variable in

## Effect of Enterprise Risk Management and Financial Ratios on The Potential for Financial Distress and its Impact on The Firm Value of Pharmaceutical Companies Listed on The Indonesia Stock Exchange

the Z-score formula in the financial distress construct. The X4 variable measures the ratio between equity and total liabilities, so it can technically produce a data pattern similar to a DER. Despite this, the researchers chose to retain both constructs in the model, taking into account the theoretical basis and substantial differences in their respective conceptual definitions.

Specifically, the leverage construct represents the company's policy in structuring a capital structure which is generally measured through ratios such as DER or DAR, while the financial distress construct describes the financial health condition of the company that is under pressure and in this research it is measured by the Altman Z-score approach which pays attention to various aspects such as profitability, liquidity, and solvency

The researcher has also evaluated the outer loading value of the leverage indicator and found that the DER and DAR indicators have high loading values and meet the recommended threshold ( $\geq 0.708$ ), so it can be concluded that these indicators have a significant contribution in validly forming leverage constructs.

Furthermore, the literature review conducted shows that there is a clear separation of theoretical concepts between leverage and financial distress. Leverage is understood as a result of management's decisions regarding the composition of the company's financing, while financial distress is a consequence of extreme financial pressure that can threaten business continuity. This view is in line with the thinking put forward by Outecheva (2007) and Altman (1968) who stated that despite the close relationship between the two, leverage and financial distress are different constructs theoretically and empirically.

### 2) Heterotrait-Monotrait (HTMT) Ratio

Heterotrait-Monotrait (HTMT) is a modern approach developed to test the validity of discriminants that are accurate compared to the old method (Fornell-Larcker). Similar to the previous approach, HTMT is also used to test whether the constructs in the model are correct from other constructs. Based on commonly used guidelines, an HTMT value of  $\leq 0.85$  indicates an excellent discriminating rate, while an HTMT value of  $\leq 0.90$  is still acceptable. Conversely, if the HTMT value exceeds the limit ( $\geq 0.90$ ) it can be concluded that there is a problem with discriminant validity because the constructs in the model are difficult to distinguish statistically (Henseler et al., 2015). In this research, there was an HTMT value of more than  $\geq 0.90$  (Figure 4.3)

| Discriminant validity - Heterotrait-monotrait ratio (HTMT) - Matrix |       |                    |          |            |                  |                |
|---------------------------------------------------------------------|-------|--------------------|----------|------------|------------------|----------------|
|                                                                     | ERM   | Financial Distress | Leverage | Likuiditas | Nilai Perusahaan | Profitabilitas |
| ERM                                                                 |       |                    |          |            |                  |                |
| Financial Distress                                                  | 0.153 |                    |          |            |                  |                |
| Leverage                                                            | 0.208 | 1.127              |          |            |                  |                |
| Likuiditas                                                          | 0.167 | 0.884              | 0.933    |            |                  |                |
| Nilai Perusahaan                                                    | 0.216 | 0.057              | 0.094    | 0.018      |                  |                |
| Profitabilitas                                                      | 0.075 | 0.668              | 0.782    | 0.408      | 0.023            |                |

Figure 3. Heterotrait Monotrait (HTMT) discriminant validity test results

Based on the results of the HTMT calculation through smartPLS software, the results were obtained that there were HTMT test results that exceeded the limit, namely leverage to financial distress (1.127) and leverage to liquidity construct (0.933). Both of these values exceed the recommended threshold ( $> 0.90$ ) which indicates a potential empirical overlap between constructs and can be interpreted as an indication that the constructs are not yet statistically discriminatory.

Nevertheless, the researcher decided to maintain the constructs of leverage, financial distress, and liquidity in the model by considering the strong theoretical justification of the conceptual differences between the constructs that leverage is a representation of a company's capital structure decisions, i.e. the extent to which the company finances its operations through debt as opposed to equity.

The financial ratios of DER and DAR reflect long-term funding structures (Brigham & Houston, 2021), while financial distress as an indicator of extreme deterioration in financial health conditions that can lead to bankruptcy, and are measured comprehensively using the Altman Z-score model or other indicators that combine liquidity, profitability, and leverage.

According to Altman (1968) and Outecheva (2007), financial distress is a potential result of a combination of several financial risk factors, not simply the result of high levels of leverage. On the other hand, liquidity reflects the company's short-term ability to meet its current obligations, and is measured through ratios such as Current Ratio or Quick Ratio. The main focus is on the availability of current assets relative to current liabilities (Ross et al., 2022).

Although there is empirically high correlation that can be explained by the similarity of the elements of calculating certain financial ratios, conceptually the three constructs measure different financial dimensions. This is in line with the multidimensional approach in the corporate finance literature, where liquidity, leverage, and financial distress are analyzed separately as determinants or determinants of a company's financial performance and risk (Hill et al., 2010).

In addition, the outer loading value of the indicators in each construct met the suggested criteria ( $\geq 0.708$ ), indicating that the indicators were valid in representing the respective constructs. Therefore, the researcher argues that the construct remains theoretically feasible and relevant to be maintained in the research model.

### 3) Cross Loading

Cross loading is one of the discriminant validity test methods in the PLS-SEM model used to ensure that each indicator measures the construct that is supposed to be measured, not another construct. The loading value of the indicator to the construct itself must be higher than the loading value of other constructs. The results of the discriminant validity test with the cross loadings approach showed that most of the indicators had the



## Effect of Enterprise Risk Management and Financial Ratios on The Potential for Financial Distress and its Impact on The Firm Value of Pharmaceutical Companies Listed on The Indonesia Stock Exchange

highest loading values on their own constructs (blue). This shows that these indicators have the greatest contribution to their main construct compared to the other constructs in the model (Figure 4)

| Discriminant validity - Cross loadings |        |                    |          |            |                  |                |
|----------------------------------------|--------|--------------------|----------|------------|------------------|----------------|
|                                        | ERM    | Financial Distress | Leverage | Likuiditas | Nilai Perusahaan | Profitabilitas |
| CR                                     | 0.167  | 0.884              | -0.732   | 1.000      | 0.018            | 0.408          |
| DAR                                    | -0.168 | -0.930             | 0.946    | -0.737     | 0.060            | -0.711         |
| DER                                    | -0.074 | -0.386             | 0.628    | -0.352     | 0.050            | -0.203         |
| ERM                                    | 1.000  | 0.153              | -0.165   | 0.167      | 0.216            | 0.075          |
| ROA                                    | 0.075  | 0.668              | -0.658   | 0.408      | -0.023           | 1.000          |
| TOBIN Q                                | 0.216  | 0.057              | 0.067    | 0.018      | 1.000            | -0.023         |
| Z-SCORE                                | 0.153  | 1.000              | -0.904   | 0.884      | 0.057            | 0.668          |

Figure 4. Results of the Cross Loading discriminant validity test

However, there is special attention to the Z-Score indicator which empirically has a high load not only on the construct itself of financial distress (1,000) but also shows a very high correlation between the construct of leverage (-0.904) and liquidity (0.884). This phenomenon has the potential for an empirical overlap between these constructs. The high correlation of Z-Score with leverage can be explained by the composition of indicators in the Z-Score model which does include financial leverage elements, such as the ratio of equity to total debt (X4). Meanwhile, the high correlation of the Z-Score with liquidity reflects the dimensions of the Z-Score components which also include liquidity ratios (such as Working Capital to Total Assets).

Although these values indicate a potential problem of discriminant validity, it is important to underline that each construct still has a different conceptual basis. The Z-Score is used as a representation of financial distress conditions, which theoretically reflect the overall level of financial health and potential bankruptcy of a company (Altman, 1968). On the other hand, leverage is focused on the capital structure, while liquidity reflects a company's ability to meet its short-term obligations.

Thus, despite the empirical proximity between the constructs at a certain indicator level, conceptually and theoretically each construct is still distinguishable and feasible to be maintained in the structural model of the research. This decision is in line with the approach in structural equation modeling (SEM) which prioritizes a combination of theoretical justification and empirical results in maintaining model validity (Hair et al., 2019)

### **Reality Test**

The construct reliability test is measured by the composite reliability and Cronbach's alpha of the block of indicators that measure the construct. Cronbach's Alpha is a measure of internal reliability based on the assumption that all indicators in a single construct have the same weight or contribution, while Composite Reliability is a measure of internal reliability that calculates the consistency of indicators by taking into account the load of each indicator, making it more realistic and accurate than Cronbach's Alpha, especially in SEM (Structural Equation Modeling) analysis. Constructs are declared

reliable if they have a composite reliability value of  $> 0.70$  and Cronbach's alpha  $> 0.70$ . The following are the composite reliability values and Cronbach's alpha (Table 3)

Table 3. Construct Values Reliability and Validity

| Variabel           | Cronbach's Alpha | Composite Reliability (rho a) | Composite Reliability (rho c) | Average Variance Extracted (AVE) |
|--------------------|------------------|-------------------------------|-------------------------------|----------------------------------|
| ERM                | 1.000            | 1.000                         | 1.000                         | 1.000                            |
| Liquidity          | 1.000            | 1.000                         | 1.000                         | 1.000                            |
| Leverage           | 0.509            | 0.773                         | 0.777                         | 0.644                            |
| Profitability      | 1.000            | 1.000                         | 1.000                         | 1.000                            |
| Financial Distress | 1.000            | 1.000                         | 1.000                         | 1.000                            |
| Company Values     | 1.000            | 1.000                         | 1.000                         | 1.000                            |

Source : SmartPLS v.4.1.0.9 data processing results, secondary data processed (2025)

The reliability and validity of the constructs in this research were tested using three main indicators, namely Cronbach's Alpha, Composite Reliability (CR), and Average Variance Extracted (AVE). These three indicators are used to ensure that each construct in the model has an adequate level of internal consistency and is able to accurately represent latent variables.

Based on the results of the analysis obtained from data processing using SmartPLS software (Table 3), all constructs in the model have a Composite Reliability value that is above the minimum threshold. This shows that the constructs have met the criteria of good internal reliability.

Although Cronbach's Alpha value on the leverage construct of 0.509 is below standard ( $< 0.7$ ), the composite reliability value ( $\rho_a = 0.773$  and  $\rho_c = 0.777$ ) and AVE of 0.644 indicate that the construct remains reliable and statistically valid. It should be noted that Cronbach's Alpha is conservative because it assumes a uniform contribution of indicators, so in the context of PLS-SEM the use of Composite Reliability is more relevant and accurate to assess internal consistency. In addition, all constructs also show an Average Variance Extracted (AVE) value which is above the minimum value of 0.5 which indicates that more than 50% of the variance of the indicator has been successfully explained by their respective constructs. This indicates that the model has met the requirements of convergent validity, so that the indicators used can be considered appropriate in measuring the construct in question.

Thus, it can be concluded that all constructs in this research model have met the established reliability and validity criteria, are still maintained and are suitable for use in further structural testing.

## Hypothesis Test

A hypothesis is a temporary statement about the relationship between two or more variables that can be tested empirically. This research uses the Structural Equation Modeling (SEM) approach based on Partial Least Squares (PLS-SEM), hypothesis testing is carried out through path coefficient analysis which is tested for significance through p-value and t-statistics (Figure 5)

# Effect of Enterprise Risk Management and Financial Ratios on The Potential for Financial Distress and its Impact on The Firm Value of Pharmaceutical Companies Listed on The Indonesia Stock Exchange

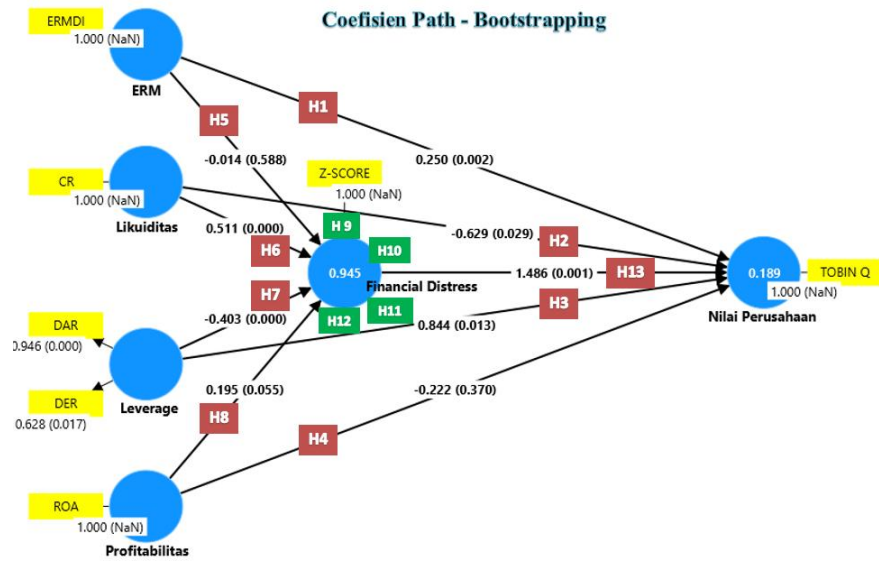


Figure 5. Bootstrapping path coefficient

The path coefficient in PLS-SEM shows the influence, direction and strength of relationships between variables in the structural model. The value of the coefficient ranges from -1 to +1, the positive value indicates a unidirectional relationship (if the independent variable increases, then the dependent variable also increases) and the negative value indicates the opposite relationship (the increase in the independent variable causes a decrease in the dependent variable), the closer the absolute value of 1, the stronger the relationship between the two variables (Table 4)

Table 4. Hypothesis test results – Direct effect bootstrapping

| No                                       | Path Coefficients  | Indicator | Path Coef (O) | T-Stat | P-Value |
|------------------------------------------|--------------------|-----------|---------------|--------|---------|
| <b>(Y) Company Value (Tobins'Q)</b>      |                    |           |               |        |         |
| H1                                       | ERM                | ERMDI     | 0.250         | 3.176  | 0.002   |
| H2                                       | Liquidity          | CR        | -0.629        | 2.186  | 0.029   |
| H3                                       | Leverage           | DAR, THE  | 0.844         | 2.481  | 0.013   |
| H4                                       | Profitability      | LENGTH    | -0.222        | 0.897  | 0.370   |
| H13                                      | Financial Distress | Z-Score*  | 1.486         | 3.179  | 0.001   |
| <b>(Z) Financial Distress (Z-Score)*</b> |                    |           |               |        |         |
| H5                                       | ERM                | ERMDI     | -0.014        | 0.542  | 0.588   |
| H6                                       | Liquidity          | CR        | 0.511         | 5.731  | 0.000   |
| H7                                       | Leverage           | DAR, THE  | -0.403        | 3.527  | 0.000   |
| H8                                       | Profitability      | LENGTH    | 0.195         | 1.917  | 0.055   |

\*Financial Distress variable in proxy with Z-Score indicator (Altman Z-Score 1993),

The Z-Score is negatively correlated with financial distress, the lower the Z-Score the higher the potential for financial distress, the greater the Z-Score the better the company's finances (safe zone)

Table 5. Indirect Effect

| No  | Path Coefficients                                  | Path Coef (O) | T-Stat | P-Value |
|-----|----------------------------------------------------|---------------|--------|---------|
| H9  | ERM → Financial Distress → Company Value           | -0.020        | 0.451  | 0.652   |
| H10 | Leverage → Financial Distress → Company Value      | -0.599        | 2.176  | 0.030   |
| H11 | → Liquidity Financial Distress → Company Value     | 0.760         | 2.890  | 0.004   |
| H12 | Profitability Financial → Distress → Company Value | 0.290         | 1.170  | 0.242   |

# Effect of Enterprise Risk Management and Financial Ratios on The Potential for Financial Distress and its Impact on The Firm Value of Pharmaceutical Companies Listed on The Indonesia Stock Exchange

Source : SmartPLS v.4.1.0.9 data processing results, secondary data processed (2025)

Based on the data from the direct effect hypothesis test above, it was found that several exogenous variables have a positive relationship with endogenous variables as shown by the Enterprise Risk Management variables, leverage and financial distress have a positive effect on company value and liquidity and profitability variables on financial distress with a significance value of  $p < 0.05$  and  $p < 0.1$ .

In addition to the influence of positive relationships, several variables were also found to have a negative relationship with different levels of significance such as the effect of liquidity on company value and leverage on financial distress which had a negative and significant influence while profitability on company value and Enterprise Risk Management on financial distress also had a negative but insignificant effect ( $p > 0.1$ )

Meanwhile, based on the results of the indirect effect analysis, it shows that despite having different relationship directions, Enterprise Risk Management (negative relationship direction) and profitability (positive relationship direction) on company value through intervening financial distress (Z-Score) both do not have a statistically significant influence, while leverage (negative relationship) and liquidity (positive relationship) on company value through intervening financial distress (Z-Score) both had a significant influence ( $p < 0.05$ ).

## Discussion

Based on the results of path coefficient analysis of both direct and indirect influences between variables, a summary of the results of hypothesis testing and its significance criteria can be prepared (Table 6) so that it can be concluded, developed and supported further discussion of the relationship between variables in the research model

Table 6. Table summary and hypothesis conclusions

| No                               | Path Coefficients                                         | Coef.         | Criteria *                      | p-value      | Result                          | Hypothesis      |
|----------------------------------|-----------------------------------------------------------|---------------|---------------------------------|--------------|---------------------------------|-----------------|
| (Y) Company Value (Tobins'Q)     |                                                           |               |                                 |              |                                 |                 |
| H1                               | ERM                                                       | 0.250         | $p < 0.10$                      | 0.002        | $p < 0.10$                      | Accepted        |
| H2                               | Liquidity                                                 | -0.629        | $p < 0.10$                      | 0.029        | $p < 0.10$                      | Accepted        |
| H3                               | Leverage                                                  | 0.844         | $p < 0.10$                      | 0.013        | $p < 0.10$                      | Accepted        |
| <b>H4</b>                        | <b>Profitability</b>                                      | <b>-0.222</b> | <b><math>p &lt; 0.10</math></b> | <b>0.370</b> | <b><math>p &gt; 0.10</math></b> | <b>Rejected</b> |
| H13                              | Fin. Distress                                             | 1.486         | $p < 0.10$                      | 0.001        | $p < 0.10$                      | Accepted        |
| (Z) Financial Distress (Z-Score) |                                                           |               |                                 |              |                                 |                 |
| <b>H5</b>                        | <b>ERM</b>                                                | <b>-0.014</b> | <b><math>p &lt; 0.10</math></b> | <b>0.588</b> | <b><math>p &gt; 0.10</math></b> | <b>Rejected</b> |
| H6                               | Liquidity                                                 | 0.511         | $p < 0.10$                      | 0.000        | $p < 0.10$                      | Accepted        |
| H7                               | Leverage                                                  | -0.403        | $p < 0.10$                      | 0.000        | $p < 0.10$                      | Accepted        |
| H8                               | Profitability                                             | 0.195         | $p < 0.10$                      | 0.055        | $p < 0.10$                      | Accepted        |
| <b>H9</b>                        | <b>ERM → Financial Distress → Company Values</b>          | <b>-0.020</b> | <b><math>p &lt; 0.10</math></b> | <b>0.652</b> | <b><math>p &gt; 0.10</math></b> | <b>Rejected</b> |
| H10                              | → Liquidity Financial Distress → Company Value            | 0.760         | $p < 0.10$                      | 0.030        | $p < 0.10$                      | Accepted        |
| H11                              | Leverage → Financial Distress → Company Value             | -0.599        | $p < 0.10$                      | 0.004        | $p < 0.10$                      | Accepted        |
| <b>H12</b>                       | <b>Profitability Financial → Distress → Company Value</b> | <b>0.290</b>  | <b><math>p &lt; 0.10</math></b> | <b>0.242</b> | <b><math>p &gt; 0.10</math></b> | <b>Rejected</b> |

Effect of Enterprise Risk Management and Financial Ratios on The Potential for Financial Distress and its Impact on The Firm Value of Pharmaceutical Companies Listed on The Indonesia Stock Exchange

\*Significance criteria  $\alpha = 0.10$

$$FD = c_1; ERM + \gamma_2 \cdot LIQ + \gamma_3 \cdot LEV + \gamma_4 \cdot PROF + \zeta_1$$

$$FD = -0.014 \cdot ERM + 0.511 \cdot LIQ - 0.403 \cdot LEV + 0.195 \cdot PROF + \zeta_1$$

$$FV = \beta_1; FD + \beta_2 \cdot ERM + \beta_3 \cdot LIQ + \beta_4 \cdot LEV + \beta_5 \cdot PROF + \zeta_2$$

$$FV = 1.486 \cdot FD + 0.250 \cdot ERM - 0.629 \cdot LIQ + 0.844 \cdot LEV - 0.222 \cdot PROF + \zeta_2$$

The following is the analysis and elaboration of each hypothesis;

1. The Influence of Enterprise Risk Management on Company Value (H1)

The hypothesis test (H1) results confirm that Enterprise Risk Management (ERM) has a positive and significant effect on firm value, as evidenced by a path coefficient of 0.250, a t-statistic of 3.176, and a p-value of 0.002. This provides empirical evidence that a higher level of ERM disclosure in the annual report enhances the company's perceived value among investors and stakeholders. Aligning with signal theory, this finding indicates that quality risk management disclosure acts as a positive signal of sound corporate governance and future prospects. A robust ERM implementation reflects the company's capability to identify, measure, and manage risks comprehensively, thereby fostering investor confidence in its stability and sustainable performance. In an increasingly complex business environment, ERM disclosure adds value by improving transparency and accountability, which in turn strengthens the company's intrinsic and market value. It is concluded that enhanced ERM disclosure is a crucial strategy for increasing firm value in the long term, as effective risk management boosts investor confidence and reflects superior governance.

2. The effect of liquidity on company value (H2)

The hypothesis test results indicate that liquidity exerts a negative and significant effect on firm value, as shown by a path coefficient of -0.629, a t-statistic of 2.186, and a p-value of 0.029. Contrary to the general expectation that liquidity positively influences value, this finding can be explained through Agency Theory and Trade-off Theory (Jensen, 1986). Excess cash flow, or overly high liquidity, can lead to the misuse of funds for managerial self-interest or inefficient investments in unprofitable projects, a phenomenon known as over-investment, which ultimately reduces company value (Ferreira & Vilela, 2024). Furthermore, investors may interpret high liquidity as a negative signal, indicating a lack of profitable growth opportunities and lower future growth expectations, thereby leading to a lower valuation of the company. It is therefore concluded that higher liquidity actually decreases firm value.

3. The effect of leverage on the company's value (H3)

The hypothesis test reveals that leverage has a significant positive effect on firm value, demonstrated by a path coefficient of 0.844, a t-statistic of 2.481, and a p-value of 0.013. While intuitively seen as a value-deteriorating factor, financial literature explains that leverage can enhance company value through tax savings benefits, as debt interest is tax-deductible; if managed healthily, leverage can increase a company's worth (Kraus & Litzenberger, 1973). Furthermore, from the perspectives of signaling theory and agency theory, debt can act as a signal of managerial confidence and a control tool to prevent overinvestment or unproductive spending. It is concluded that higher leverage increases

## Effect of Enterprise Risk Management and Financial Ratios on The Potential for Financial Distress and its Impact on The Firm Value of Pharmaceutical Companies Listed on The Indonesia Stock Exchange

company value, as the optimal use of debt strengthens the capital structure and facilitates business expansion.

### 4. The effect of profitability on company value (H4)

The statistical results, showing a path coefficient of -0.222 with a t-value of 0.897 and a p-value of 0.370, indicate that profitability has a negative and insignificant effect on firm value. Although theoretical models suggest that profitability, such as ROA, should enhance company value, a negative relationship can occur in practice. This can arise when market investors do not perceive the achieved profitability as a signal of sustainable growth, especially if high profits stem from non-operational activities like the sale of assets or from cost-cutting measures rather than improved operational performance (Koller et al., 2020). Furthermore, a key contributing factor is suboptimal profit retention policies, where companies hold large profits without clear directives for their use in expansion, strategic investment, or dividend distribution; this can be interpreted by investors as a sign of weak growth prospects or managerial inefficiency, leading to a negative market perception of the company's governance and performance. It is therefore concluded that high profitability does not guarantee an increase in firm value without a proper profit management strategy, as investors may doubt the quality and sustainability of the reported earnings.

### 5. The Effect of Enterprise Risk Management on Financial Distress (H5)

The statistical results, with a path coefficient of -0.014, a t-value of 0.542, and a p-value of 0.588, indicate that Enterprise Risk Management (ERM) has an insignificant effect on financial distress and exhibits a very weak, almost ineffectual negative relationship. While theory posits that robust ERM implementation, reflected in a high ERM Disclosure Index (ERMDI), should increase the Altman Z-Score and thereby reduce financial distress risk, the findings of this study show the opposite technical relationship: higher ERM disclosure is associated with a lower Z-Score, which technically indicates an increased potential for financial distress. This suggests that the current implementation of ERM within the sampled pharmaceutical companies may not be strong or effective enough to mitigate financial difficulties, potentially due to factors such as the quality of ERM execution, a lack of understanding of industry-specific risks, or suboptimal governance support. Consequently, it is concluded that ERM has a negative and insignificant effect on financial distress, meaning that while the observed trend points in an adverse direction, the implementation of ERM has not been demonstrated to have a statistically significant impact on altering a company's risk of financial distress (Ghozali (2018; Hidayat, 2018; Maharani, 2020).

### 6. The effect of liquidity on financial distress (H6)

The results of the H6 hypothesis test indicate that liquidity has a significant positive effect on financial distress, as evidenced by a path coefficient of 0.511, a t-statistic of 5.731, and a p-value of 0.000. It is crucial to clarify the terminology, as the financial distress variable in this model is measured by the Altman Z-Score, where a higher score indicates a lower risk of financial distress. Therefore, this positive path coefficient signifies that a higher liquidity ratio increases the Z-Score, thereby minimizing

the company's potential for financial distress. This finding aligns with liquidity theory, which posits that cash and current assets act as a financial buffer against cash flow uncertainty and short-term obligations (Brigham & Houston, 2019), and with the principles of the Z-Score model, where liquidity is a key component in predicting bankruptcy (Altman, 1968). It is concluded that higher liquidity strengthens the company's financial position, raises the Z-Score, and significantly reduces the level of financial distress.

7. The effect of leverage on financial distress (H7)

The hypothesis test results demonstrate that leverage has a significant negative effect on financial distress, with a path coefficient of -0.403, a t-statistic of 3.527, and a p-value of 0.000. Given that financial distress is measured by the Altman Z-Score—where a higher value indicates a lower risk of distress—this negative relationship signifies that higher leverage leads to a lower Z-Score, thereby increasing the risk of financial distress. This finding is consistent with capital structure theory, which posits that an excessive reliance on debt escalates interest expenses and default risk, ultimately worsening a company's financial health (Modigliani & Miller, 1963). It is therefore concluded that a higher leverage ratio significantly increases the potential for financial distress by diminishing the company's Z-Score and its capacity to maintain long-term financial stability.

8. The effect of profitability on financial distress (H8)

The hypothesis test results indicate that profitability has a positive and significant influence on financial distress, as shown by a path coefficient of 0.195, a t-statistic of 1.917, and a p-value of 0.055. Since financial distress is measured by the Altman Z-Score—where a higher value signifies a healthier financial state and a lower risk of distress—this positive relationship demonstrates that companies with higher profitability tend to have higher Z-Scores, indicating more stable financial conditions and a reduced risk of financial distress. This finding aligns with established financial theory, which states that firms with higher profits possess a greater capacity to meet their financial obligations and withstand economic pressures, thereby being better shielded from the risk of financial distress (Ross et al., 2018).

9. The Effect of Enterprise Risk Management (ERM) on Company Value through Intervening Financial Distress (H9)

Based on the analysis of the specific indirect effect, it was found that the influence of Enterprise Risk Management (ERM) on firm value through the intervening variable of financial distress (measured by Z-Score) has a negative and statistically insignificant relationship, as indicated by a path coefficient of -0.020, a T-statistic of 0.451, and a p-value of 0.652. Theoretically, ERM is expected to mitigate financial distress by comprehensively managing risks, yet these findings suggest that the implemented ERM has not been effective in improving the company's financial health as reflected in the Z-Score. This ineffectiveness could be due to an ERM system that is not fully integrated into the company's overall risk management framework or its inability to address key risks impacting solvency and short-term financial stability. Given that a higher Z-Score

## Effect of Enterprise Risk Management and Financial Ratios on The Potential for Financial Distress and its Impact on The Firm Value of Pharmaceutical Companies Listed on The Indonesia Stock Exchange

signifies a lower risk of distress, the negative path coefficient implies that ERM has not been able to strongly reduce financial risk to subsequently enhance firm value. These results align with previous research, such as that by Hoyt & Liebenberg (2011), which posits that ERM's success in creating value is not direct but rather materializes through long-term enhancements in risk culture, operational efficiency, and strategic decision-making, benefits which may not be immediately empirically apparent without mature implementation and integrated performance measurement.

### 10. The effect of liquidity on company value through the intervening variable financial distress (H10)

The test results demonstrate that liquidity has a positive and significant influence on firm value through the improvement of financial condition as measured by the Z-Score, with a path coefficient of 0.760, a t-statistic of 2.890, and a p-value of 0.004. This indicates that higher liquidity raises the Z-Score, signifying healthier company finances and a lower level of financial distress, which ultimately increases firm value. In the context of this research, where a higher Z-Score reflects a lower risk of financial difficulty, the positive influence of liquidity reflects its ability to enhance financial health by enabling the company to meet short-term obligations and withstand crises, thereby strengthening its financial position and the market's positive perception. These findings align with corporate finance theory that identifies liquidity as a buffer against bankruptcy risk (Brigham & Houston, 2019) and support previous studies confirming liquidity as a key factor in minimizing financial stress and supporting corporate value stability (Ross et al., 2022).

### 11. The effect of leverage on company value through the variable intervening financial distress (H11)

The results of the indirect path analysis indicate that leverage has a negative and significant effect on firm value through the mediating variable of financial distress, with a coefficient of -0.599, a t-statistic of 2.176, and a p-value of 0.030. This finding demonstrates that increased leverage significantly lowers a company's value by elevating the risk of financial distress, which is measured by the Z-Score where a higher value indicates a lower level of financial difficulty; consequently, the negative effect of leverage on the Z-Score means that high leverage decreases the Z-Score, thereby increasing financial distress and negatively impacting firm value. These results align with traditional capital structure theory and corroborate previous studies, confirming that a high debt burden increases the likelihood of financial stress and bankruptcy, which in turn erodes investor confidence and diminishes company value, underscoring the need to monitor excessive leverage as it can deteriorate a company's financial health and damage its market valuation.

### 12. The Effect of Profitability on Company Value through Intervening Variables of Financial Distress Potential (H12)

The analysis reveals that profitability does not exert a significant indirect influence on firm value through financial distress, as evidenced by a path coefficient of 0.290 with a t-statistic of 1.170 and a p-value of 0.242, which is above the significance



threshold. While the positive direction of the relationship holds theoretical meaning—suggesting that increased profitability has the potential to improve financial health (as measured by a higher Z-Score) and thus reduce the risk of distress—this effect is not strong enough in the context of this research sample to significantly impact company value. This lack of a significant mediating effect may be attributed to external factors such as industry uncertainty, operational inefficiencies, or suboptimal cost structures that hinder profitability's effectiveness in creating robust financial stability. These findings align with the view of Altman et al. (2000) and Brigham & Houston (2019) that profitability is not the sole determinant of firm value, and its impact on financial risk must be considered alongside other factors like risk management, capital structure, and overall liquidity.

13. The effect of financial distress on the value of the company (H13)

The test results demonstrate that financial distress has a positive and significant effect on firm value, with a path coefficient of 1.486, a t-statistic of 3.179, and a p-value of 0.001, indicating statistical significance at the 99% confidence level. Since financial distress is measured by the Altman Z-Score, which has an inverse relationship with the actual level of financial difficulty, this positive influence means that a higher Z-Score—reflecting a healthier financial condition—directly leads to a higher company value. This finding aligns with signal theory, as a robust financial state sends a positive signal to investors and stakeholders, thereby enhancing the company's market valuation (Brigham & Houston, 2019). Consequently, companies with high Z-Scores, which typically exhibit stable financial performance, healthy capital structures, and good profitability, are perceived as having promising long-term prospects, which boosts investor confidence and ultimately increases firm value.

## CONCLUSION

This research examined the influence of Enterprise Risk Management (ERM) and financial ratios—liquidity, leverage, and profitability—on the potential for financial distress and its subsequent impact on the value of pharmaceutical companies listed on the Indonesia Stock Exchange, while also exploring financial distress as an intervening variable. ERM disclosure was assessed based on the COSO ERM 2004 framework as reflected in company annual reports. Financial ratios included current ratio (liquidity), debt-to-asset and debt-to-equity ratios (leverage), and return on assets (profitability), with financial distress measured by the Altman Z-Score and firm value by Tobin's Q. Using a quantitative approach and Partial Least Squares Structural Equation Modeling (PLS-SEM), the study simultaneously tested structural and measurement models. The findings revealed significant effects of ERM and financial ratios on financial distress and firm value, confirming financial distress's role as a mediating variable. Future research could extend this study by incorporating additional factors such as corporate governance, market conditions, or non-financial risks to deepen understanding of risk management's impact on firm performance in the pharmaceutical sector.

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Effect of Enterprise Risk Management and Financial Ratios on The Potential for Financial Distress and its Impact on The Firm Value of Pharmaceutical Companies Listed on The Indonesia Stock Exchange

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