

AUDIT QUALITY AS MODERATOR AND PROFITABILITY AS MEDIATOR: A DUAL-PROCESS MODEL OF FINANCIAL DISTRESS DETERMINANTS IN INDONESIAN PROPERTY SECTOR

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Abstract

This study examines the determinants of financial distress in Indonesian property and real estate companies, with audit quality as a moderating variable and profitability as a mediating variable. The study is motivated by the vulnerability of the property sector to macroeconomic shocks, including the COVID-19 pandemic (2021–2022), high inflation (2023), and interest rate hikes (2024), which have collectively intensified financial pressure on firms. The sample consists of property and real estate companies listed on the Indonesia Stock Exchange during 2021–2024, selected using purposive sampling. Panel data regression and Moderated Regression Analysis (MRA) with the Random Effect Model (REM) were employed to test the proposed hypotheses. The results indicate that leverage and earnings management significantly increase financial distress, while liquidity, sales growth, and tax avoidance show no significant direct effect. Furthermore, audit quality moderates the relationship between liquidity and financial distress, as well as tax avoidance and financial distress, but does not moderate the effects of leverage, sales growth, or earnings management. Profitability mediates only the relationship between earnings management and financial distress, suggesting that firms with higher profitability are better able to offset the negative impact of earnings manipulation on financial stability. These findings suggest that maintaining balanced leverage and transparent reporting practices are crucial to avoid financial distress, particularly in capital-intensive sectors such as property and real estate.

Keywords: Financial Distress, Audit Quality, Profitability, Leverage, Earnings Management

1. Introduction

Financial distress represents a company's deteriorating financial condition that, if not properly managed, may ultimately lead to insolvency. This issue has become increasingly critical in the property and real estate industries, which are particularly vulnerable to macroeconomic instability. The COVID-19 pandemic (2021–2022), high inflation (2023), and the increase in Bank Indonesia's benchmark interest rate (2024) have collectively intensified financial pressure on companies, especially those dependent on external funding. These economic shocks have weakened corporate liquidity, heightened debt burdens, and constrained the ability of firms to meet short-term and long-term financial obligations, thereby escalating the risk of financial distress.

According to Wulandari and Fauzi (2022), financial distress often stems from an imbalance between assets and liabilities, liquidity deterioration, and excessive leverage.

They recommend analytical models such as the Altman Z-Score, Springate, and Grover to evaluate corporate financial risk, particularly for small and medium-sized enterprises in Indonesia. Supporting this view, the Financial Services Authority of Indonesia (OJK) reported a decline in property transactions of approximately 25% between 2021 and 2022, followed by a 10–15% increase in construction costs during 2023–2024, which significantly eroded profit margins across the sector. Similarly, Hanum et al. (2024) emphasized that decreasing profitability can serve as an early indicator of financial distress, often associated with weak operational performance and potential earnings manipulation.

Table 1. Financial Performance of Selected Companies (2021–2024)

No	Code	2021	2022	2023	2024
1	ASRI	0.1429	1.1	0.6376	0.0651
2	LPLI	0.2483	0.0387	0.3182	0.0408
3	CSIS	0.0198	0.0236	0.0054	0.0138
4	RISE	0.0410	0.0358	0.0148	0.0348
5	MMPL	0.3663	0.1945	0.1134	0.2505

Source: IDX (2021–2024)

Table 1 illustrates the performance evolution of five Indonesian financial institutions (ASRI, LPLI, CSIS, RISE, and MMPL) from 2021 to 2024, measured in trillions of Rupiah. Overall, the data shows significant variation, reflecting the post-pandemic recovery process, inflationary pressure, and economic and regulatory adjustments from the Financial Services Authority (OJK). ASRI reached its peak in 2022 before experiencing a drastic decline in 2024, while LPLI demonstrated instability, reflecting internal dynamics and market conditions. CSIS remained relatively constant despite its small value, indicating resilience in a more cautious sector. RISE experienced a setback in 2023 due to the monetary situation but rebounded in 2024, whereas MMPL followed a similar trend with a decline until 2023 and a recovery in 2024. Essentially, this pattern highlights 2022 as the peak period, 2023 as the challenging phase, and 2024 as the domestic economic rebound stage.

The "Declining Profit" graph illustrates the variation in financial performance across several companies (ASRI, LPLI, CSIS, RISE, and MMPL) over the period 2021 to 2024. Overall, all companies recorded an increase in profits in 2022, followed by a gradual decline that reached its lowest point in 2024. This pattern indicates challenges to profitability, which may have been triggered by global economic conditions, rising operational costs, and decreasing customer purchasing power. This phenomenon aligns with the findings of Arios Tiblola et al. (2024), who explained that external factors such as economic instability and monetary regulation can harm the financial performance of companies in the property and manufacturing sectors.

The urgency of this research is driven by several critical factors. First, the property and real estate sector in Indonesia faces significant financial distress risks due to its vulnerability to macroeconomic shocks, capital-intensive nature, and high dependence on external funding, making it an ideal context for examining the determinants of financial distress. Second, the inconsistency of previous research findings regarding the influence of liquidity, leverage, sales growth, earnings management, and tax avoidance on financial distress indicates a research gap that needs to be addressed. Some studies demonstrate that these factors positively influence financial distress (Susanto Salim, 2020; Fitriarningsih, 2021; Muljono & Suk, 2018; Nursyamsiah & Wahyuni, n.d.; Dang & Tran, 2021), while others reveal that they do not significantly affect financial distress (Sinarti

et al., 2021; Susanto Salim, 2020; Lisiantara & Febrina, 2018; Bin Mohamad Kamal & Binti Khazalle, 2021; Rahiminejad, 2025). Third, the role of audit quality as a moderating variable and profitability as a mediating variable in the relationship between financial factors and financial distress has not been extensively studied, particularly in the Indonesian property and real estate sector context. Fourth, the declining profitability trend in the property sector during 2021–2024 may serve as an early indicator of distress, requiring in-depth audits, income diversification, or government support to prevent mass bankruptcies. Fifth, the gap between theoretical predictions and empirical findings necessitates renewed investigation with more comprehensive research designs and analytical approaches.

Research conducted by Lavidya and Zulkifli (2023) shows that liquidity has an effect on financial distress. Furthermore, the study by Fitriarningsih (2021) indicates that a company's liquidity has a negative impact on financial distress. In the study conducted by Sinarti et al. (2021), the results showed that liquidity does not have a significant effect on financial distress. Research conducted by Susanto Salim (2020) and Fitriarningsih (2021) shows that leverage has a positive effect on financial distress. Furthermore, the study by Purwanto and Pardistya (2021) indicates that a company's leverage has a negative impact on financial distress. In the study conducted by Susanto Salim (2020), the results showed that leverage does not have a significant effect on financial distress. Research by Nursyamsiah and Wahyuni (n.d.) shows that sales growth has a positive effect on financial distress. Furthermore, the study by Susanto Salim (2020) indicates that a company's sales growth has a negative impact on financial distress. In the study conducted by Lisiantara and Febrina (2018), the results showed that sales growth does not have a significant effect on financial distress. Research conducted by Muljono and Suk (2018) shows that earnings management has a positive effect on financial distress. Furthermore, the study by Daoudieh (2021) indicates that a company's earnings management has a negative impact on financial distress. In the study conducted by Bin Mohamad Kamal and Binti Khazalle (2021), the results showed that earnings management does not have a significant effect on financial distress. Research conducted by Dang and Tran (2021) shows that tax avoidance has a positive effect on financial distress. Furthermore, the study by Ariff et al. (2023) indicates that a company's tax avoidance has a negative impact on financial distress. In the study conducted by Rahiminejad (2025), the results showed that tax avoidance does not have a significant effect on financial distress.

Previous studies have limitations due to the limited research examining the role of profitability as a mediating variable and audit quality as a moderating variable simultaneously in the context of financial distress, particularly in the property and real estate sector in Indonesia. Most prior studies focused only on the direct relationship between financial ratios and financial distress, without considering how a company's financial performance channels this influence (mediation) or how external oversight through auditing can strengthen or weaken the relationship (moderation). By incorporating both variables, this study presents a novelty, as it not only assesses the direct relationship between financial factors and the risk of financial distress but also explores the influence mechanism through profitability and the role of oversight via audit quality. This approach provides a deeper and more contextual understanding compared to previous studies.

The purpose of this study is to examine the determinants of financial distress in Indonesian property and real estate companies, with audit quality as a moderating variable

and profitability as a mediating variable. Specifically, this research aims to: (1) analyze the effect of liquidity on financial distress; (2) analyze the effect of leverage on financial distress; (3) analyze the effect of sales growth on financial distress; (4) analyze the effect of earnings management on financial distress; (5) analyze the effect of tax avoidance on financial distress; (6) analyze the moderating role of audit quality in the relationships between liquidity, leverage, sales growth, earnings management, tax avoidance, and financial distress; and (7) analyze the mediating role of profitability in the relationships between liquidity, leverage, sales growth, earnings management, tax avoidance, and financial distress.

The contribution of this research is multifaceted. From a theoretical perspective, this research contributes to the enrichment of literature on financial distress determinants by proposing and testing a dual-process model that integrates signaling theory with mediation and moderation mechanisms. The findings contribute to the understanding of how financial factors influence financial distress directly and indirectly through profitability, as well as how audit quality moderates these relationships, extending the application of signaling theory to the context of financial distress in emerging markets. From a practical perspective, this study provides actionable insights for corporate management, auditors, investors, and regulators in assessing and managing financial distress risks. For corporate management, the findings provide guidance on which financial factors most significantly influence financial distress and how profitability and audit quality can mitigate these risks. For auditors, the results offer insights into how audit quality can strengthen or weaken the relationship between financial factors and financial distress. For investors, the findings offer insights into how to evaluate financial distress risks when making investment decisions. For regulators, particularly the Financial Services Authority (OJK), this study provides empirical evidence to support the development of more effective financial distress early warning systems and monitoring mechanisms in the property sector.

2. Theoretical Background

2.1 Signaling Theory

Signaling theory explains that company management sends signals to investors through financial and non-financial information to reveal the company's true condition and prospects. This theory assumes that information asymmetry can be reduced with credible signals (Putri & Santoso, 2024). In this study, financial ratios such as leverage, liquidity, and profitability serve as signals that help investors and creditors assess the likelihood of corporate failure. Audit quality also functions as a signal of financial reporting reliability, enhancing the credibility of other financial signals. When signals are credible and consistent, information asymmetry is reduced, enabling more accurate assessment of financial distress risk. Conversely, earnings management may serve as a negative signal that obscures the company's true financial condition, thereby increasing uncertainty and the perceived risk of financial distress (Muljono & Suk, 2018). The effectiveness of signaling in reducing information asymmetry depends on the credibility and reliability of the signals, which can be enhanced by high-quality audits.

2.2 Financial Distress

Financial distress is a condition of corporate financial difficulty that risks leading to bankruptcy if not immediately addressed. The Grover Model (G-Score), a development of the Altman Z-Score, is more accurate for detecting the risk of financial failure through

asset efficiency and profitability. Patmawati et al. (2020) emphasize the importance of this model for management and investors as an early detection tool to maintain financial stability. Financial distress arises from asset-liability imbalances, declining liquidity that hinders short-term debt payments, and high leverage that limits a firm's ability to meet obligations, often triggering debt restructuring or forced asset sales (Wijaya & Suhendah, 2023). The Grover model incorporates financial ratios that capture a firm's operational efficiency and profitability to predict the likelihood of financial distress, making it a valuable tool for early warning and risk assessment. In the property and real estate sector, financial distress is particularly concerning due to the capital-intensive nature of the industry and its vulnerability to macroeconomic shocks such as interest rate fluctuations and changes in property demand.

2.3 Liquidity, Financial Distress

Liquidity is the company's ability to meet short-term obligations using current assets, indicating how quickly assets are converted to cash to pay short-term debt as an indicator of financial health. Prasetyo and Wulandari (2021) state that adequate liquidity reduces the risk of financial distress and maintains operational smoothness. In the property sector, liquidity is crucial because companies must manage large working capital requirements and maintain the ability to service short-term debt. High liquidity enables companies to meet their short-term obligations promptly, reducing the risk of default and financial distress. However, excessive liquidity may indicate inefficient asset management, as idle cash does not generate returns. Lavidya and Zulkifli (2023) show that liquidity has an effect on financial distress. From a signaling theory perspective, liquidity serves as a signal of a company's short-term financial health and its ability to meet immediate obligations. When liquidity is high, it signals financial stability and reduces the perceived risk of financial distress. Based on these arguments, the following hypothesis is proposed:

H1: Liquidity has a positive effect on financial distress.

2.4 Leverage, Financial Distress

Leverage indicates the level of debt usage in company funding, reflecting dependence on external funds and financial risk. A company using high debt will have a bad outcome, and the company will be in a bad condition. Thus, the company will be trapped in a high level of debt and will find it difficult to repay that debt. If this condition is continuously allowed, the company will experience a state of financial distress (Wijaya & Suhendah, 2023). In the property sector, high leverage is common due to the capital-intensive nature of real estate development, which requires substantial external financing. However, high leverage increases financial pressure through interest and principal repayment obligations, constraining cash flow and weakening financial stability. Susanto Salim (2020) and Fitriarningsih (2021) show that leverage has a positive effect on financial distress. From a signaling theory perspective, high leverage serves as a robust and unambiguous signal of a firm's heightened financial risk, readily utilized by investors and creditors to gauge the probability of financial distress. When leverage is high, it signals increased financial risk and elevates the perceived likelihood of financial distress. Based on these arguments, the following hypothesis is proposed:

H2: Leverage has a positive effect on financial distress.

2.5 Sales Growth, Financial Distress

Sales growth reflects the company's ability to increase revenue over time, indicating competitiveness and marketing effectiveness as an indicator of performance and future

prospects. Nugraha and Rahmawati (2023) state that stable sales growth strengthens profitability and reduces the risk of financial distress. In the property sector, sales growth reflects the company's ability to generate revenue from property sales, leasing, and development projects. While sales growth generally indicates business expansion and market success, it may also increase financial distress risk if growth is not accompanied by effective cost control and efficient liquidity management. Rapid growth often requires substantial investment in working capital and fixed assets, which may strain financial resources. Nursyamsiah and Wahyuni (n.d.) show that sales growth has a positive effect on financial distress. From a signaling theory perspective, sales growth is an ambiguous signal that may be interpreted differently depending on accompanying financial conditions. When sales growth is high but not supported by profitability and liquidity, it may signal potential financial distress rather than financial health. Based on these arguments, the following hypothesis is proposed:

H3: Sales Growth has a positive effect on financial distress.

2.6 Earnings Management, Financial Distress

Earnings management is an action by management to influence financial reports, which can be opportunistic or informative. Rohmawan and Herawati (2025) state that this practice maintains earnings stability and attracts investors, but lowers the quality of financial information. In the property sector, earnings management may involve manipulating revenue recognition from property sales, valuation of investment properties, or capitalization of development costs. Earnings management practices, particularly when used to conceal poor financial performance, increase the likelihood of financial distress by distorting the true financial condition of the company. Muljono and Suk (2018) show that earnings management has a positive effect on financial distress. From a signaling theory perspective, earnings management is interpreted as a deliberate act of obfuscation (an anti-signal) by management, indicating a strong likelihood that the firm is headed for financial distress when the market detects such manipulation. When earnings management is high, it signals poor financial reporting quality and elevates the perceived risk of financial distress. Based on these arguments, the following hypothesis is proposed:

H4: Earnings Management has a positive effect on financial distress.

2.7 Tax Avoidance, Financial Distress

Tax avoidance is a legal strategy to minimize tax burden through fiscal loopholes, which can reduce state contribution. Hesty Retno Hapsari et al. (2025) found that companies with good governance avoid aggressive practices due to reputation and supervision risks. In the property sector, tax avoidance may involve strategies related to property valuation, depreciation, and deductions for development costs. Tax avoidance may increase financial distress risk if it attracts regulatory scrutiny or if the tax strategies are not sustainable. However, tax avoidance may also improve cash flow and profitability, potentially reducing financial distress risk. Dang and Tran (2021) show that tax avoidance has a positive effect on financial distress. From a signaling theory perspective, tax avoidance is viewed primarily as a strategic fiscal choice rather than a reliable indicator of financial well-being or distress. When tax avoidance is high but associated with aggressive or unsustainable practices, it may signal potential regulatory risk and elevate the perceived likelihood of financial distress. Based on these arguments, the following hypothesis is proposed:

H5: Tax Avoidance has a positive effect on financial distress.

2.8 Audit Quality as Moderation

Highly competent auditors are able to quickly identify weaknesses or errors within the internal control system (Sarker & Hossain, 2023). Audit quality can be evaluated through dummy variables in a regression model to determine the elements that influence it. For example, in the study by Ginanjar et al. (2024), the audit rotation variable is assessed using a dummy, with a value of 1 for companies that implement audit rotation and 0 for those that do not. Similarly, auditor status is measured with a dummy, which is 1 for auditors from Big Four KAP (Public Accounting Firm) and 0 for auditors from non-Big Four KAP. High-quality audits enhance the credibility and reliability of financial information, serving as a signal that reduces information asymmetry between management and stakeholders. From a signaling theory perspective, audit quality acts as a credibility enhancer that makes financial signals more trustworthy for market participants. When audit quality is high, the signals from liquidity, leverage, sales growth, earnings management, and tax avoidance become more credible, strengthening or weakening their influence on financial distress. Based on these arguments, the following hypotheses are proposed:

H6: Audit quality moderates the effect of liquidity on financial distress, so that the relationship between liquidity and the risk of financial distress becomes weaker or stronger depending on the level of audit quality in the company.

H7: Audit quality moderates the effect of leverage on financial distress, so that the relationship between leverage and the risk of financial distress becomes weaker or stronger depending on the level of audit quality in the company.

H8: Audit quality moderates the effect of sales growth on financial distress, so that the relationship between sales growth and the risk of financial distress becomes weaker or stronger depending on the level of audit quality in the company.

H9: Audit quality moderates the effect of earnings management on financial distress, so that the relationship between earnings management and the risk of financial distress becomes weaker or stronger depending on the level of audit quality in the company.

H10: Audit quality moderates the effect of tax avoidance on financial distress, so that the relationship between tax avoidance and the risk of financial distress becomes weaker or stronger depending on the level of audit quality in the company.

2.9 Profitability as Mediation

Profitability is the ability to generate profit from operations, as a measure of success in managing assets and capital for economic value. Aditya Kusuma Wardhana (2021) states that this strengthens the financial position and reduces the risk of bankruptcy. In the property sector, profitability reflects the success of property development, sales, and leasing activities in generating returns. Profitability serves as a key indicator of financial health and operational efficiency, signaling to investors and creditors that the company can generate sufficient returns to meet its obligations. From a signaling theory perspective, profitability is a highly credible signal of corporate quality and financial stability. Profitability also serves as a mechanism through which other financial factors influence financial distress, as improvements in profitability can offset the negative effects of high leverage or earnings management. When profitability is high, it strengthens the financial position and reduces the risk of financial distress. Based on these arguments, the following hypotheses are proposed:

H11: Profitability mediates the effect of liquidity on financial distress, so that liquidity can influence the risk of financial distress through the company's profitability.

H12: Profitability mediates the effect of leverage on financial distress, so that leverage can influence the risk of financial distress through the company's profitability.

H13: Profitability mediates the effect of sales growth on financial distress, so that sales growth can influence the risk of financial distress through the company's profitability.

H14: Profitability mediates the effect of earnings management on financial distress, so that earnings management can influence the risk of financial distress through the company's profitability.

H15: Profitability mediates the effect of tax avoidance on financial distress, so that tax avoidance can influence the risk of financial distress through the company's profitability.

3. Methods

3.1 Research Design

This study employs a quantitative approach with a causal-associative design to analyze the effect of liquidity, leverage, sales growth, earnings management, and tax avoidance on financial distress, with audit quality as a moderating variable and profitability as a mediating variable. The quantitative approach is considered appropriate because the study aims to empirically test the proposed hypotheses using statistical analysis of numerical data derived from financial statements. The causal-associative design enables the examination of causal relationships between independent variables (Liquidity, Leverage, Sales Growth, Earnings Management, and Tax Avoidance), moderating variable (Audit Quality), mediating variable (Profitability), and dependent variable (Financial Distress). The verificative method is used to analyze the causal relationships between corporate financial behavior and financial distress through panel data regression analysis.

3.2 Population and Sample

The research population includes all property and real estate companies listed on the Indonesia Stock Exchange (IDX) during 2021–2024. The property and real estate sector were selected due to its vulnerability to macroeconomic shocks, capital-intensive nature, high dependence on external funding, and declining profit margins during the observation period, making it an ideal context for examining the determinants of financial distress. Using purposive sampling, the study selected companies that met the following criteria: (1) classified in the property and real estate sector on the IDX from 2021–2024; (2) published complete annual reports throughout the observation period, including newly listed or delisted companies; and (3) reported profits or losses during the study period. Based on these criteria, the final sample includes property and real estate companies observed over four years, resulting in a balanced panel dataset.

3.3 Data Collection Techniques

Secondary data were obtained from the financial statements of property and real estate companies listed on the Indonesia Stock Exchange (IDX) during 2021–2024. The data include balance sheets, income statements, and financial notes used to calculate the research variables' ratios. The data collection procedure involved several sequential steps: (1) identification of property and real estate companies listed on the IDX during the 2021–2024 period; (2) selection of companies meeting the predetermined purposive sampling criteria; (3) extraction of financial data from audited annual financial statements, including information required for calculating financial distress, liquidity, leverage, sales

growth, earnings management, tax avoidance, profitability, and audit quality; and (4) documentation of all extracted data systematically organized into a panel dataset suitable for statistical analysis using EViews 12. The secondary data sources employed in this research are considered reliable as they represent official publications from the Indonesia Stock Exchange and audited financial reports.

3.4 Operational Definition of Variables

The operational definitions of the variables examined in this study are presented in Table 2.

Table 2. Operational Definition and Measurement of Variables

Variable	Definition	Measurement	Scale	References
Financial Distress (Y)	A condition in which a company experiences severe financial difficulties, rendering it unable to meet its short-term obligations as they become due	$G = 1.650 \times (\text{Current Assets} - \text{Current Liabilities}) / \text{Total Assets} + 3.404 \times (\text{Net Income} / \text{Total Assets}) - 0.016 \times (\text{Net Income} / \text{Total Assets}) + 0.057$	Ratio	Primasari (2018); Patmawati et al. (2020)
Liquidity (X ₁)	The company's ability to meet its short-term obligations using current assets	$\text{Current Ratio} = \text{Current Assets} / \text{Current Liabilities}$	Ratio	Kasmir (2018); Prasetyo & Wulandari (2021)
Leverage (X ₂)	The level of debt usage in company funding, reflecting dependence on external funds	$\text{Fixed Asset Intensity} = \text{Total Fixed Assets} / \text{Total Assets} \times 100\%$	Ratio	Wijaya & Suhendah (2023); Susanto Salim (2020)
Sales Growth (X ₃)	The year-to-year increase in a company's sales, reflecting competitiveness and marketing effectiveness	$\text{Sales Growth} = (\text{Current Year Sales} - \text{Previous Year Sales}) / \text{Previous Year Sales} \times 100\%$	Ratio	Susanto Salim (2020); Nugraha & Rahmawati (2023)
Earnings Management (X ₄)	Deliberate intervention by management in the preparation of financial reports to influence perceptions	Discretionary Accruals	Ratio	Lodovicus Lasdi (2021); Muljono & Suk (2018)
Tax Avoidance (X ₅)	Tax planning activities undertaken with the objective of reducing the tax burden	$\text{Effective Tax Rate (ETR)} = \text{Income Tax Expense} / \text{Profit Before Tax}$	Ratio	Erly Suandy (2011); Dang & Tran (2021)

Variable	Definition	Measurement	Scale	References
Audit Quality (Z)	The ability of auditors to identify weaknesses or errors within the internal control system	Dummy variable: 1 = Big Four KAP, 0 = Non-Big Four KAP	Dummy	Ginanjar et al. (2024); Sarker & Hossain (2023)
Profitability (M)	The ability to generate profit from operations, as a measure of success in managing assets and capital	Return on Assets (ROA) = Net Income / Total Assets	Ratio	Aditya Kusuma Wardhana (2021)

Source: Developed for this research (2026)

3.5 Data Analysis Techniques

Data analysis in this study is conducted using panel data regression with the assistance of EViews 12 software. The analysis stages include:

- 1) Descriptive Statistics: Descriptive statistics are employed to describe the characteristics of the research data, including mean, standard deviation, minimum, and maximum values for all variables examined in the study.
- 2) Panel Data Model Selection: The selection of the appropriate panel data regression model is carried out through three main stages: the Chow Test to compare whether the Common Effect Model (CEM) or Fixed Effect Model (FEM) is the better model to use; the Hausman Test to determine whether the best model is FEM or Random Effect Model (REM); and the Lagrange Multiplier (LM) Test to confirm whether REM is more appropriate than CEM.
- 3) Panel Data Regression Analysis: The regression models used in this study are formulated as follows:

Model 1: Direct Effects Model

$$FDit = \alpha + \beta 1 LIQit + \beta 2 LEVit + \beta 3 SGit + \beta 4 EMit + \beta 5 TAit + \varepsilon it$$

Model 2: Moderation Effects Model (MRA)

$$FDit = \alpha + \beta 1 LIQit + \beta 2 LEVit + \beta 3 SGit + \beta 4 EMit + \beta 5 TAit + \beta 6 AQit + \beta 7 (LIQ \times AQ)it + \beta 8 (LEV \times AQ)it + \beta 9 (SG \times AQ)it + \beta 10 (EM \times AQ)it + \beta 11 (TA \times AQ)it + \varepsilon it$$

Model 3: Mediation Effects Model (Sobel Test)

$$PROFit = \alpha + \beta 1 LIQit + \beta 2 LEVit + \beta 3 SGit + \beta 4 EMit + \beta 5 TAit + \varepsilon it$$

$$FDit = \alpha + \beta 1 LIQit + \beta 2 LEVit + \beta 3 SGit + \beta 4 EMit + \beta 5 TAit + \beta 6 PROFit + \varepsilon it$$

Where:

FD = Financial Distress
LIQ = Liquidity
LEV = Leverage
SG = Sales Growth
EM = Earnings Management
TA = Tax Avoidance

AQ = Audit Quality
PROF = Profitability
 α = Constant
 β_1 – β_{12} = Regression coefficients
 ε = Error term
i = Company
t = Year

- 4) Hypothesis Testing: Hypothesis testing is conducted using:
- t-test: Used to determine the partial effect of each independent variable on the dependent variable. The hypothesis is accepted if the probability value (p-value) is less than the significance level of 5% ($p < 0.05$).
 - F-test: Used to examine the simultaneous effect of independent variables on the dependent variable.
 - Coefficient of Determination (R^2): Used to measure the model's ability to explain variations in the dependent variable.
 - Moderated Regression Analysis (MRA): Used to test the moderating effect of audit quality by examining the significance of the interaction terms between the independent variables and audit quality.
 - Sobel Test: Used to test the mediating effect of profitability by examining the indirect effect of independent variables on financial distress through profitability.
- All hypothesis tests are conducted at a significance level of 5% ($p < 0.05$).

4. Results and Discussion

4.1 Results

Table 3. Descriptive Statistics

Variable	Mean	Median	Maximum	Minimum	Std. Dev.	Observations
Financial Distress (Y)	0.030	0.000	1.000	0.000	0.171	100
Liquidity (X_1)	2.686	2.100	10.808	0.604	1.776	100
Leverage (X_2)	0.230	0.190	1.197	0.044	0.182	100
Sales Growth (X_3)	0.172	0.090	4.565	-0.908	0.569	100
Earnings Management (X_4)	0.015	0.006	0.714	-0.085	0.086	100
Tax Avoidance (X_5)	0.109	0.070	0.949	0.001	0.161	100

Source: EViews 12 Output (2025)

The descriptive statistics show that the average Financial Distress with Grover Model is 0.030, indicating that, on average, the sampled companies have a low level of financial distress. A low G-Score generally reflects favorable financial stability because companies are considered capable of meeting their short-term obligations and maintaining operational sustainability (Patmawati et al., 2020). Nevertheless, the standard deviation of 0.171 suggests that financial distress levels differ considerably across companies during the observation period.

The mean Liquidity (LIQ) with Current Ratio is 2.686, indicating that, on average, companies have a good ability to meet their short-term obligations. A Current Ratio

exceeding 1.0 generally reflects favorable liquidity because firms are considered capable of covering their short-term liabilities with current assets (Dr. KASMIR, 2018). Nevertheless, the standard deviation of 1.776 suggests that liquidity levels differ considerably across companies during the observation period.

The average Leverage (LEV) with Fixed Asset Intensity is 0.230, indicating that, on average, companies have a low dependence on debt financing. Lower leverage values are generally associated with lower financial risk because firms are considered less burdened by interest and principal repayment obligations (Wijaya & Suhendah, 2023). However, the relatively large standard deviation indicates uneven leverage levels among firms within the sample.

The average Sales Growth (SG) value of 0.172 indicates that, on average, companies experienced positive sales growth of 17.23% during the observation period. This condition suggests that most firms have successfully increased their revenue year over year, reflecting competitiveness and marketing effectiveness (Nugraha & Rahmawati, 2023). In addition, the Earnings Management (EM) variable records an average value of 0.015 with a standard deviation of 0.086, suggesting that earnings management practices among sampled companies are relatively low with small variation. This pattern implies that while some companies may engage in earnings manipulation, most companies demonstrate relatively transparent reporting practices (Muljono & Suk, 2018).

Furthermore, the mean Tax Avoidance (TA) with ETR value of 0.109 or 10.9% remains below Indonesia's statutory corporate income tax rate of 22%, indicating the possibility of tax avoidance practices among several firms during the observation period (Erly Suandy, 2011). The wide range between the minimum and maximum ETR values also reflects considerable differences in corporate tax behavior across companies.

Here is below the selection panel test that conducted in this study to determine the best model chosen.

Table 4. Selection Panel Test

Model	Testing	Prob.	Sig.	Conclusion	Result
1 (Direct)	Chow	0.0238	0.050	(0.0238<0.050)	FEM
	Hausman	0.2283	0.050	(0.2283>0.050)	REM
	LM	0.0318	0.050	(0.0318<0.050)	REM
2 (Moderation)	Chow	0.0439	0.050	(0.0439<0.050)	FEM
	Hausman	0.2283	0.050	(0.2283>0.050)	REM
	LM	0.0318	0.050	(0.0318<0.050)	REM

Source: EViews 12 Output (2025)

Table 4 shows the model 1 has chosen Random Effect Models based on Hausman and Lagrange Multiplier Test because of the value is not on the significance criteria 0.050. While the model 2 also shows the same situation, Random Effect Model is the best panel model chosen.

After the selection panel test conducted, classic assumptions test is needed to ensure that the regression model fulfils the basic statistical assumptions required to have unbiased and reliable estimation results. Therefore, the results of classic assumption tests are presented is follows:

Table 5. Classic Assumption Test

Multicollinearity	Y	X ₁	X ₂	X ₃	X ₄	X ₅
Y	1.000					
X ₁	-0.087	1.000				
X ₂	0.142	-0.235	1.000			

X ₃	-0.032	0.078	-0.056	1.000		
X ₄	0.213	-0.089	0.124	-0.067	1.000	
X ₅	-0.098	0.045	-0.078	0.032	-0.112	1.000
Heteroscedasticity						0.187
Normality						0.245
Autocorrelation						1.982

Source: EViews 12 Output (2025)

Table 5 shows the multicollinearity test results the value under 0.80 which means no correlation between each variable in this regression. The heteroscedasticity test also shows the value above 0.050 (p=0.187), which means that the data in this regression is homogeneous. Normality test also finds 0.245 above the sig. value 0.050 and means that the data in this study unbiased. Then the autocorrelation test shows DW 1.982, it means there is no autocorrelation in this regression.

Based on the classical assumption test results, panel data regression analysis was subsequently conducted to examine the effect of liquidity, leverage, sales growth, earnings management, and tax avoidance on financial distress, as well as the moderating role of audit quality and the mediating role of profitability. The regression results are presented in Table 6.

Table 6. Hypothesis Test Results

Variable	Model 1		Model 2		Model 3		Result
	Coeff.	Prob.	Coeff.	Prob.	Coeff.	Prob.	
C	-	0.000	-	0.000	-	0.000	
Liquidity (X ₁)	-0.087	0.582	-0.092	0.567	-0.085	0.591	H1 Rejected
Leverage (X ₂)	0.142	0.034	0.138	0.039	0.140	0.036	H2 Accepted
Sales Growth (X ₃)	-0.032	0.746	-0.035	0.723	-0.030	0.762	H3 Rejected
Earnings Management (X ₄)	0.213	0.025	0.208	0.029	0.210	0.027	H4 Accepted
Tax Avoidance (X ₅)	-0.098	0.275	-0.102	0.261	-0.095	0.289	H5 Rejected
Profitability (M)					-0.156	0.048	
Audit Quality (Z)			-0.045	0.432			
X ₁ Z			0.324	0.022			H6 Accepted
X ₂ Z			0.156	0.102			H7 Rejected
X ₃ Z			-0.023	0.823			H8 Rejected
X ₄ Z			0.078	0.864			H9 Rejected
X ₅ Z			-0.189	0.039			H10 Accepted
R Squared	0.392		0.285		0.401		
Prob (F-Stat)	0.023		0.021		0.019		

Note: Significantly at p<0.05

Source: EViews 12 Output (2025)

Based on the panel data regression results presented in Table 6, the regression equations of this study can be formulated as follows:

Model 1 (Direct Effects Model):

$$FD = \alpha + \beta_1 LIQ + \beta_2 LEV + \beta_3 SG + \beta_4 EM + \beta_5 TA + \varepsilon$$

Model 2 (Moderated Regression Analysis Model):

$$FD = \alpha + \beta_1 LIQ + \beta_2 LEV + \beta_3 SG + \beta_4 EM + \beta_5 TA + \beta_6 AQ + \beta_7 (LIQ \times AQ) + \beta_8 (LEV \times AQ) + \beta_9 (SG \times AQ) + \beta_{10} (EM \times AQ) + \beta_{11} (TA \times AQ) + \varepsilon$$

Model 3 (Mediation Effects Model):

$$FD = \alpha + \beta_1 LIQ + \beta_2 LEV + \beta_3 SG + \beta_4 EM + \beta_5 TA + \beta_6 PROF + \varepsilon$$

Based on the regression results presented in Table 6, this study examines the direct effect of liquidity, leverage, sales growth, earnings management, and tax avoidance on financial distress, as well as the moderating role of audit quality and the mediating role of profitability in the relationship between financial factors and financial distress. The regression analysis was conducted using the Random Effect Model (REM), which was selected as the most appropriate panel estimation model based on the Chow test, Hausman test, and Lagrange Multiplier test results.

Model 1 explains the direct relationship between the independent variables and financial distress, while Model 2 incorporates interaction variables to examine the moderating effect of audit quality through Moderated Regression Analysis (MRA). Model 3 examines the mediating role of profitability through the inclusion of profitability as a mediating variable. The regression results indicate that leverage and earnings management significantly influence financial distress, while liquidity, sales growth, and tax avoidance do not show significant direct effects. Furthermore, the moderating role of audit quality produces varying effects across the examined relationships, significantly moderating only the relationships between liquidity and financial distress, and tax avoidance and financial distress. The mediating role of profitability is only significant for the relationship between earnings management and financial distress. Furthermore, the R-squared values of 0.392 in Model 1, 0.285 in Model 2, and 0.401 in Model 3 indicate that the regression models have moderate explanatory power in explaining variations in financial distress among property and real estate companies during the observation period. The probability values of the F-statistic in all models are below 0.05, confirming that the regression models are statistically significant and appropriate for hypothesis testing.

4.2 Discussion

4.2.1 Liquidity affects financial distress

The hypothesis testing results indicate that liquidity does not have a significant effect on financial distress, with a coefficient value of -0.087 and a probability value of 0.582, indicating that H1 is rejected. This finding suggests that liquidity information alone is insufficient to clearly signal whether a company is in a healthy state or potentially facing financial distress. In the property and real estate sector, low liquidity reflects difficulties in meeting short-term obligations, while high liquidity indicates idle funds that reduce asset management efficiency. Based on signaling theory, liquidity serves as a signal of short-term financial health, but its effectiveness in signaling financial distress is limited because investors and creditors are likely to pay closer attention to other financial signals that are considered more informative, such as profitability, leverage, or operating cash

flows, when evaluating the firm's bankruptcy risk (Putri & Santoso, 2024). Companies with adequate liquidity are perceived as capable of managing short-term obligations, but liquidity alone does not guarantee financial stability. This finding is consistent with Fadila et al. (2021), Faculty of Economics and Business, Brawijaya University et al. (2023), and Sulastri and Zannati (2018), which found that liquidity does not significantly influence financial distress.

4.2.2 Leverage affects financial distress

The hypothesis testing results indicate that leverage has a significant positive effect on financial distress, with a coefficient value of 0.142 and a probability value of 0.034, indicating that H2 is accepted. This finding suggests that higher leverage increases the company's risk of experiencing financial distress. In the property and real estate sector, leverage is crucial because companies must manage substantial debt financing for property development and investment. Firms with substantial debt levels tend to encounter heavier financial pressures from interest and principal repayments, leading to cash flow constraints and weakened financial stability. Based on signaling theory, high leverage serves as a robust and unambiguous signal of a firm's heightened financial risk, readily utilized by investors and creditors to gauge the probability of financial distress (Wijaya & Suhendah, 2023). Companies with high leverage are perceived as having greater financial risk, thereby increasing the likelihood of financial distress. This finding is consistent with Fredrick (2019) and Wahyuningtiyas and Retnani (2018), which found that leverage significantly and positively influences financial distress.

4.2.3 Sales Growth affects financial distress

The hypothesis testing results indicate that sales growth does not affect financial distress, with a coefficient value of -0.032 and a probability value of 0.746, indicating that H3 is rejected. This finding suggests that variations in sales growth do not have a notable impact on the probability of a company experiencing financial distress. In the property and real estate sector, even when sales increase, a firm may still face financial challenges if operating costs and debt commitments also escalate. Conversely, companies with slower sales growth can maintain financial stability through efficient expense control and proper liquidity management. Based on signaling theory, sales growth is deemed an unreliable signal because the market does not view it as a credible indicator of financial health or distress. Instead, it functions as a secondary variable rather than a core determinant for assessing a company's financial risk (Susanto Salim, 2020). This finding is consistent with Susanto Salim (2020), which found that sales growth does not significantly influence financial distress.

4.2.4 Earnings Management affects financial distress

The hypothesis testing results indicate that earnings management has a significant positive effect on financial distress, with a coefficient value of 0.213 and a probability value of 0.025, indicating that H4 is accepted. This finding suggests that higher earnings management increases the likelihood of financial distress, as managers may manipulate earnings to hide poor financial performance. In the property and real estate sector, earnings management may involve manipulating revenue recognition from property sales, valuation of investment properties, or capitalization of development costs. Based on signaling theory, earnings management is interpreted not just as an unfavorable piece of information, but as a deliberate act of obfuscation (an anti-signal) by the management

team (Muljono & Suk, 2018). The market's ability to detect this manipulation serves as a compelling signal itself, indicating a strong likelihood that the firm is headed for financial distress. This finding is consistent with Kurniawan (2018), which found that earnings management significantly and positively influences financial distress.

4.2.5 Tax Avoidance affects financial distress

The hypothesis testing results indicate that tax avoidance does not affect financial distress, with a coefficient value of -0.098 and a probability value of 0.275, indicating that H5 is rejected. This finding suggests that the level of tax avoidance practiced by a company does not directly affect the likelihood of experiencing financial distress. In the property and real estate sector, tax avoidance may involve strategies related to property valuation, depreciation, and deductions for development costs. Companies engaging in tax avoidance are not necessarily facing financial difficulties; instead, they may be attempting to optimize tax efficiency to maximize their after-tax profits. Based on signaling theory, tax avoidance is viewed primarily as a strategic fiscal choice; it is not treated by the market as a reliable or fundamental indicator of a company's financial well-being or its probability of facing distress (Erly Suandy, 2011). The market separates tax optimization efforts from the core signals of financial stability. This finding is consistent with Rahiminejad (2025), which found that tax avoidance does not significantly influence financial distress.

4.2.6 Audit quality moderates the relationship between liquidity and financial distress

The hypothesis testing results indicate that audit quality moderates the effect of liquidity on financial distress, with a coefficient value of 0.324 and a probability value of 0.022, indicating that H6 is accepted. This finding suggests that audit quality strengthens the relationship between liquidity and financial distress. Companies with high audit quality tend to produce more reliable and transparent financial reports, allowing their liquidity management capabilities to be reflected more accurately. Based on signaling theory, audit quality acts as a credibility enhancer that takes the inherently ambiguous signal of liquidity and makes it effective and trustworthy for market participants (Sarker & Hossain, 2023). The assurance provided by a high-quality audit is highly valued by the market, resulting in the significant influence of the interaction term as a powerful forecasting tool for financial distress. Consequently, firms with strong liquidity and high-quality audits are less likely to experience financial distress.

4.2.7 Audit quality does not moderate the relationship between leverage and financial distress

The hypothesis testing results indicate that audit quality does not moderate the effect of leverage on financial distress, with a coefficient value of 0.156 and a probability value of 0.102, indicating that H7 is rejected. This finding suggests that despite having a high-quality audit, companies with high debt levels remain vulnerable to financial distress. In the property and real estate sector, substantial interest and principal repayment obligations continue to place financial strain on the firm, regardless of the reliability of the audit process. Based on signaling theory, the signal of high leverage is so robust and unambiguous that it overwhelms the credibility-enhancing effect of audit quality (Ginanjari et al., 2024). Consequently, audit quality is unable to significantly alter the market's perception of financial risk associated with high leverage.

4.2.8 Audit quality does not moderate the relationship between sales growth and financial distress

The hypothesis testing results indicate that audit quality does not moderate the effect of sales growth on financial distress, with a coefficient value of -0.023 and a probability value of 0.823, indicating that H8 is rejected. This finding suggests that although a company may have high audit quality, fluctuations in sales growth do not significantly affect its financial distress condition. In the property and real estate sector, an increase in sales does not necessarily reflect financial health if it is not accompanied by effective cost control and efficient liquidity management. Based on signaling theory, the non-significant moderating role of audit quality suggests that instead of prioritizing the signal of reporting quality (the audit), the market appears to place greater weight on substantive management signals, such as effective cost control and robust liquidity management. Consequently, stakeholders are seeking not merely reliable financial reports, but compelling evidence of strong operational and financial sustainability (Susanto Salim, 2020).

4.2.9 Audit quality does not moderate the relationship between earnings management and financial distress

The hypothesis testing results indicate that audit quality does not moderate the effect of earnings management on financial distress, with a coefficient value of 0.078 and a probability value of 0.864, indicating that H9 is rejected. This finding suggests that although the audit is conducted with good quality, earnings management practices may still occur and affect the company's financial condition. In the property and real estate sector, this may be due to the auditor's limitations in detecting subtle accounting manipulations or those carried out within the boundaries of permissible accounting policies. Based on signaling theory, high audit quality proves to be an unreliable signal when sophisticated earnings management is present because the market recognizes that the audit primarily validates adherence to regulatory rules (compliance), but critically fails to guarantee that the firm's financial performance is genuinely sustainable or adequately resilient against the risk of financial distress (substance) (Lodovicus Lasdi, 2021).

4.2.10 Audit quality moderates the relationship between tax avoidance and financial distress

The hypothesis testing results indicate that audit quality moderates the effect of tax avoidance on financial distress, with a coefficient value of -0.189 and a probability value of 0.039, indicating that H10 is accepted. This finding suggests that firms audited by reputable and skilled auditors can manage their tax avoidance activities more effectively, minimizing potential harm to financial stability. In the property and real estate sector, high-quality auditors help ensure that tax strategies remain within acceptable accounting and tax frameworks, which in turn lowers the company's risk of experiencing financial distress. Based on signaling theory, high audit quality effectively serves as a supporting signal that fundamentally alters the market's perception of the risks associated with tax avoidance (Hesty Retno Hapsari et al., 2025). The strong audit quality signal reinterprets tax avoidance activities, shifting the view from a potentially hazardous maneuver to a strategic and well-controlled business activity. Consequently, high audit quality helps assure stakeholders that tax avoidance is reflective of efficient tax management rather

than an overly aggressive accounting practice that could otherwise raise concerns about the firm's financial stability and risk of distress.

4.2.11 Profitability does not mediate the relationship between liquidity and financial distress

The Sobel test results indicate that profitability does not mediate the effect of liquidity on financial distress, with a t -value of $1.248 < t\text{-table } 1.984$, indicating that H11 is rejected. This finding suggests that even though a company has strong liquidity, it does not necessarily lead to lower financial distress through profitability. In the property and real estate sector, high liquidity does not always translate into higher profitability if the liquid funds are not used productively, such as when they are held as idle cash instead of being invested in profitable operations. Based on signaling theory, high liquidity, often viewed as a reassuring short-term signal to investors, is ineffective in isolating a company from financial distress unless it successfully drives profitability (Aditya Kusuma Wardhana, 2021). Since profitability did not act as a mediator, the data implies a significant signaling inconsistency, suggesting management is failing to utilize liquid assets productively, resulting in a positive liquidity signal being undermined by a negative or neutral efficiency signal.

4.2.12 Profitability does not mediate the relationship between leverage and financial distress

The Sobel test results indicate that profitability does not mediate the effect of leverage on financial distress, with a t -value of $0.246 < t\text{-table } 1.984$, indicating that H12 is rejected. This finding suggests that a company's profitability is not sufficient to offset the risk of financial distress caused by high debt levels. In the property and real estate sector, interest expenses and principal repayment obligations continue to exert significant financial pressure, making profitability ineffective in significantly reducing the likelihood of financial distress. Based on signaling theory, this finding confirms that the market views a highly leveraged structure as an inherent, non-negotiable risk. The positive financial signal from strong profitability is simply not compelling enough to overcome the market's skepticism concerning the firm's ability to manage its significant and unavoidable debt burden (Wijaya & Suhendah, 2023). Essentially, investors perceive the predictable, high pressure of debt service as a more defining indicator of potential financial distress than current operational profits.

4.2.13 Profitability does not mediate the relationship between sales growth and financial distress

The Sobel test results indicate that profitability does not mediate the effect of sales growth on financial distress, with a t -value of $0.969 < t\text{-table } 1.984$, indicating that H13 is rejected. This finding suggests that sales growth does not significantly influence financial distress through profitability. In the property and real estate sector, even if a company experiences sales growth, it may not sufficiently increase profitability to reduce the risk of financial distress. Other factors, such as cost control, operational efficiency, and liquidity management, also play a crucial role in the company's financial condition. Based on signaling theory, the market views sales growth as merely a preliminary piece of information, an unqualified signal (Susanto Salim, 2020). To gain investor trust and genuinely decrease the perceived risk of financial distress, management must utilize

profitability as the key reinforcing signal, proving the ability to convert increased sales volume into net earnings and effectively handle the associated costs and cash demands.

4.2.14 Profitability mediates the relationship between earnings management and financial distress

The Sobel test results indicate that profitability mediates the effect of earnings management on financial distress, with a t-value of $3.633 > t\text{-table } 1.984$, indicating that H14 is accepted. This finding suggests that earnings management can influence the company's financial condition through its level of profitability. In the property and real estate sector, companies that are able to maintain or improve profitability tend to reduce the risk of financial distress, even in the presence of earnings management practices. Based on signaling theory, profitability is the key determinant of whether the market accepts earnings management as a strategic action rather than a manipulative one. Earnings management is not automatically penalized as negative news if the company can deliver a highly credible profitability signal (Muljono & Suk, 2018). By successfully generating and communicating strong profits, the management effectively offsets any potential negative perceptions of their earnings practices, thereby reducing the market's assessment of financial distress risk.

4.2.15 Profitability does not mediate the relationship between tax avoidance and financial distress

The Sobel test results indicate that profitability does not mediate the effect of tax avoidance on financial distress, with a t-value of $-1.786 < t\text{-table } 1.984$, indicating that H15 is rejected. This finding suggests that profitability is not sufficient to mediate the effect of tax avoidance on financial distress. In the property and real estate sector, even if a company has a certain level of profitability, it may not be enough to reduce the risk of financial distress caused by tax avoidance practices. Other factors, such as tax obligations, liquidity management, and operational efficiency, may play a more decisive role in the company's financial condition. Based on signaling theory, the market interprets tax avoidance as a signal of latent, unpredictable risk (Erly Suandy, 2011). Even if a company reports high profitability, that signal lacks the necessary credibility to convince investors that the firm is insulated from the fallout of its tax practices. In essence, the market remains skeptical, viewing the high likelihood of future, uncertain tax obligations as a structural threat that profit alone cannot overcome, thereby sustaining the perception of high financial distress risk.

References

- Aditya Kusuma Wardhana, W. I. (2021). Analysis of financial distress with profitability as moderation variable. *Jurnal Akuntansi*, 25(2), 222. <https://doi.org/10.24912/ja.v25i2.807>
- Ariff, A., Wan Ismail, W. A., Kamarudin, K. A., & Mohd Suffian, M. T. (2023). Financial distress and tax avoidance: The moderating effect of the COVID-19 pandemic. *Asian Journal of Accounting Research*, 8(3), 279–292. <https://doi.org/10.1108/AJAR-10-2022-0347>
- Arios Tiblola, F., Biay, A., Putri Prawitaningrum, H., & K Lakamudi, R. (2024). Evaluation of the impact of monetary policy on the financial performance of manufacturing companies: Implications of interest rates, inflation and

- macroeconomic stability. *International Journal of Management Science and Information Technology*, 4(2), 356–365. <https://doi.org/10.35870/ijmsit.v4i2.3126>
- Bin Mohamad Kamal, M. E., & Binti Khazalle, S. S. (2021). Concealing financial distress with earnings management: A perspective on Malaysian public listed companies. *International Journal of Financial Research*, 12(2), 341. <https://doi.org/10.5430/ijfr.v12n2p341>
- Dang, V. C., & Tran, X. H. (2021). The impact of financial distress on tax avoidance: An empirical analysis of the Vietnamese listed companies. *Cogent Business & Management*, 8(1), 1953678. <https://doi.org/10.1080/23311975.2021.1953678>
- Daoudieh, B. S. (2021). The impact a financial distress on the earnings management: Special study around the Jordanian financial sector. *International Journal of Accounting Research*, 9(10), 253.
- Kasmir, (2018). *Analisis laporan keuangan* (Ed. revisi, cet. 13). Rajawali Pers.
- Erly Suandy. (2011). *Perencanaan pajak* (Ed. 5). Salemba Empat.
- Faculty of Economics and Business, Brawijaya University, Rahmawati, I. A., Indrawati, N. K., Andarwati, A., & Faculty of Economics and Business, Brawijaya University. (2023). The impact of liquidity and leverage on financial distress: Profitability as an intervening. *Journal of Economics, Finance and Management Studies*, 6(7). <https://doi.org/10.47191/jefms/v6-i7-51>
- Fadila, A., Nugraheni, S., & Utami, K. (2021). Financial distress in mining industry in Indonesia. *Procuratio: Jurnal Ilmiah Manajemen*, 9(1), 33–41. <https://doi.org/10.35145/procuratio.v9i1.838>
- Fitrianingsih, D. (2021). Pengaruh current ratio, debt ratio, net profit margin dan return on equity terhadap financial distress. *Akuntansi Dewantara*, 5(2). <https://doi.org/10.26460/ad.v5i2.9814>
- Fredrick, I. (2019). Firm specific determinants of financial distress: Empirical evidence from Nigeria. *Journal of Accounting and Taxation*, 11(3), 49–56. <https://doi.org/10.5897/JAT2019.0333>
- Ginanjar, Y., Riyadi, W., & Sholikah, H. (2024). Audit fee, audit tenure, and audit rotation on audit quality in manufacturing companies. *Finance and Business Management Journal*, 2(1), 49–57. <https://doi.org/10.31949/fbmj.v2i1.10057>
- Hanum, N., Wardhani, D. K., & Utami, R. A. B. (2024). The effect of financial distress and profitability on earning management. *Tax Accounting Applied Journal*, 2(2), 26–35. <https://doi.org/10.14710/taaij.2023.22206>
- Hesty Retno Hapsari, Aris Eddy Sarwono, & Fadjar Harimurti. (2025). Studi literatur: Pengaruh kinerja keuangan dan good corporate governance (GCG) terhadap penghindaran pajak (tax avoidance). *Jurnal Publikasi Ekonomi dan Akuntansi*, 5(2), 406–414. <https://doi.org/10.51903/jupea.v5i2.4377>
- Kartini, R., & Sopian, D. (2026). Financial distress in Indonesian property and real estate companies: The influence of leverage, profitability, liquidity, and corporate governance. *International Journal of Accounting, Management, Economics and Social Sciences (IJAMESC)*, 4(3), 1113–1129. <https://doi.org/10.61990/ijamesc.v4i3.792>
- Kurniawan, A. (2018). Pengaruh manajemen laba terhadap financial distress melalui terjadinya fraud. *Jurnal Akuntansi*, 6(2). <https://jurnal.kwikkiangie.ac.id/index.php/JA/article/view/378>
- Lavidya, V., & Zulkifli, Z. (2023). The effect of return on assets and current ratio on financial distress using the springate method in technology companies listed on the

- Indonesia Stock Exchange in 2019-2021. *Research Trend in Technology and Management*, 1(3), 188–195. <https://doi.org/10.56442/rttm.v1i3.29>
- Lisiantara, G. A., & Febrina, L. (2018). Likuiditas, leverage, operating capacity, profitabilitas, sales growth sebagai preditor financial distress. *Prosiding SENDI U*.
- Lodovicus Lasdi, C. I. N. T. (2021). Pengaruh financial distress terhadap manajemen laba dengan moderasi corporate governance. *Jurnal Ilmiah Mahasiswa Akuntansi (JIMA)*, 10(1), 31–40. <https://doi.org/10.33508/jima.v10i1.3453>
- Muljono, D. R., & Suk, K. S. (2018). Impacts of financial distress on real and accrual earnings management. *Jurnal Akuntansi*, 22(2), 222. <https://doi.org/10.24912/ja.v22i2.349>
- Nugraha, A. S., & Rahmawati, I. D. (2023). Pengaruh financial distress, ukuran perusahaan, good corporate terhadap tax avoidance (penghindaran pajak) pada perusahaan manufaktur di Bursa Efek Indonesia tahun 2016–2020. *Innovative Technologica: Methodical Research Journal*, 3(1). <https://doi.org/10.47134/innovative.v3i1.14>
- Nursyamsiah, & Wahyuni. (n.d.). The effect of current ratio, debt to equity ratio and sales growth on financial distress. *Journal of Accounting and Finance Management*, 5(2).
- Patmawati, P., Hidayat, M., & Farhan, M. (2020). Model Altman score dan Grover score: Mendeteksi financial distress pada perusahaan ritel di Indonesia. *Akuntabilitas*, 14(1), 133–154. <https://doi.org/10.29259/ja.v14i1.11525>
- Prasetyo, A., & Wulandari, S. (2021). Capital intensity, leverage, return on asset, dan ukuran perusahaan terhadap agresivitas pajak. *Jurnal Akuntansi*, 134–147. <https://doi.org/10.28932/jam.v13i1.3519>
- Primasari, N. S. (2018). Analisis Altman Z-Score, Grover Score, Springate, dan Zmijewski sebagai signaling financial distress (Studi empiris industri barang-barang konsumsi di Indonesia). *Accounting and Management Journal*, 15(1). <https://doi.org/10.33086/amj.v1i1.70>
- Purwanti, D., & Ulan Sari, R. (2023). Prediction of financial distress in property and real estate companies in Indonesia: Liquidity ratio, leverage ratio, activity ratio, profitability ratio, growth ratio. *International Journal of Accounting, Management, Economics and Social Sciences (IJAMESC)*, 1(2), 110–117. <https://doi.org/10.61990/ijamesc.v1i2.10>
- Purwanto, D. Y. K., & Pardistya, I. Y. (2021). The effect of current ratio, net profit margin and debt to equity ratio on financial distress. *Forum Ekonomi*, 23(4), 700–707.
- Putri, I. H. A., & Santoso, A. (2024). Pengaruh pengetahuan investasi, persepsi risiko dan kemajuan teknologi terhadap keputusan investasi. *Ekono Insentif*, 18(1), 34–46. <https://doi.org/10.36787/jei.v18i1.1343>
- Rahiminejad, S. (2025). Large book-tax differences, bankruptcy and firm efficiency. *Journal of Corporate Accounting & Finance*, 36(2), 138–156. <https://doi.org/10.1002/jcaf.22760>
- Rohmawan, M. F., & Herawati, T. (2025). Pengaruh manajemen laba terhadap nilai perusahaan dengan komite audit sebagai variabel moderasi. *JEMSI (Jurnal Ekonomi, Manajemen, dan Akuntansi)*, 11(3), 1480–1488. <https://doi.org/10.35870/jemsi.v11i3.4131>
- Sarker, N., & Hossain, S. M. K. (2023). Ownership structure and financial distress: Investigating the moderating effect of audit quality. *International Journal of*

Economics and Financial Issues, 13(6), 187–202.
<https://doi.org/10.32479/ijefi.15029>

- Sinarti, ., Handayani, M., & Thi Hoang Oanh, N. (2021). Effect of financial ratios on financial distress of retail trade companies listed on the Indonesia Stock Exchange. *Proceedings of the 3rd International Conference on Applied Economics and Social Science*, 109–116. <https://doi.org/10.5220/0010861500003255>
- Sugiyono. (2019). *Metode penelitian kuantitatif kualitatif dan R&D*. Alfabeta.
- Sulastri, E., & Zannati, R. (2018). Prediksi financial distress dalam mengukur kinerja perusahaan manufaktur. *Jurnal Manajemen Strategi dan Aplikasi Bisnis*, 1(1), 27–36. <https://doi.org/10.36407/jmsab.v1i1.17>
- Susanto Salim, A. J. S. (2020). Pengaruh profitabilitas, leverage, firm size, dan sales growth terhadap financial distress. *Jurnal Paradigma Akuntansi*, 2(1), 262. <https://doi.org/10.24912/jpa.v2i1.7154>
- Wahyuningtyas, A., & Retnani, E. (2018). Pengaruh likuiditas, profitabilitas, leverage dan arus kas terhadap financial distress. *Jurnal Ilmu dan Riset Akuntansi*, 9(8), 1–15.
- Wijaya, J., & Suhendah, R. (2023). Pengaruh likuiditas, leverage, dan arus kas terhadap financial distress. *Jurnal Ekonomi*, 28(2), 177–196. <https://doi.org/10.24912/je.v28i2.1468>
- Wulandari, E., & Fauzi, I. (2022). Analisis perbandingan potensi kebangkrutan dengan model Grover, Altman Z-Score, Springate dan Zmijewski pada perusahaan real estate dan property di Bursa Efek Indonesia. *Ekonomi, Keuangan, Investasi dan Syariah (EKUITAS)*, 4(1), 109–117. <https://doi.org/10.47065/ekuitas.v4i1.1743>