Jurnal Minds: Manajemen Ide dan Inspirasi
Vol. 12, No. 2 (December) 2025: 537-550

TRENDS AND DETERMINANTS OF FINANCIAL DISTRESS: EVIDENCE FROM TWO-DECADE STUDIES

Nur Ellyanawati Esty Rahayu*, Hadri Kusuma, Zaenal Arifin
Universitas Islam Indonesia, Indonesia

Citation (APA 7th): Rahayu, N. E. E., Kusuma, H., & Arifin, Z. (2025). Trends and Determinants of Financial Distress: Evidence from Two-Decade Studies. *Jurnal Minds: Manajemen Ide Dan Inspirasi*, *12*(2), 537–550. https://doi.org/10.24252/minds.v12i2.56739

Submitted: 10 May 2025
Revised: 25 September 2025
Accepted: 25 September 2025
Published: 28 September 2025

ABSTRACT: This study maps trends and developments in financial distress research on publicly listed firms, highlighting themes, methods, and contexts to expose gaps for future work. Its contribution lies in offering a systematic, mixed-method review covering two decades of studies (2004–2024), which clarifies how the field has evolved and where it must advance. Articles were retrieved through Publish or Perish using the Scopus database, yielding insights into dominant themes of financial performance, corporate governance, and ownership structure. Current discourse gravitates around financial distress as a broad phenomenon, its occurrence in listed companies, and country-specific contexts. Looking forward, research opportunities cluster around financial distress prediction, turnaround strategies, and comparative country evidence. The findings equip scholars and practitioners with a structured view of existing knowledge while guiding targeted inquiry, ensuring future studies address pressing blind spots and enhance the practical utility of financial distress scholarship.

Keywords: Financial Distress; Determinants; Systematic Literature Review; Interpretation

*Corresponding Author: nur.ellyanawati@uii.ac.id
DOI: https://doi.org/10.24252/minds.v12i2.56739
ISSN-E: 2597-6990
ISSN-P: 2442-4951
http://journal.uin-alauddin.ac.id/index.php/minds
Publisher: Management Department, Universitas Islam Negeri Alauddin Makassar, Indonesia

INTRODUCTION

Financial distress is the state of a company being unable to meet its debt obligations (Beaver, 1966; Altman, 1968; Younas et al., 2021). In the literature, *financial distress* is a firm's inability to meet its debt obligations, which may lead to bankruptcy, liquidation, or other types of asset seizure and distribution (Farooq et al., 2023). Financial distress can give the impression that a company is in a dire condition if it is no longer able to generate sufficient revenue or profit to meet its financial obligations. Therefore, financial distress can be interpreted as an early symptom of bankruptcy of a company. Bankruptcy is the final stage of financial distress (Hussein & Idris, 2023).

Studying financial distress is not just about looking at current financial conditions, but it is necessary to consider future prospects and factors that can affect the company's financial soundness (Sumiyana et al., 2023). Based on previous research, the factors that influence the phenomenon of financial distress in several countries are due to internal company factors and external company factors. Internal factors include financial performance, corporate governance, and ownership structure. While external factors include government policy, Covid-19, and macroeconomic factors such as gross domestic product, inflation, interest rates, US dollar exchange rates, and markets. However, this systematic literature review will focus on three (3) major research theme trends from the articles obtained.

Research on financial distress is important because many companies in various countries in the world experience *it* every year. In developed countries such as the US and the UK, they prefer to declare bankruptcy to overcome the problem of financial distress. Even every year in the US, there are more than thirty thousand bankruptcy cases filed with the US bankruptcy court, while in the UK and Europe, thousands of cases are filed every year (Abdullah, 2020). However, financial distress in developing countries has special characteristics and challenges that are often different from the situation in developed countries (Fakhar et al., 2023). Compared to developed or industrialized countries, developing countries exhibit a lower level of economic, social, and human development (Mselmi et al., 2017).

The handling of financial distress problems in developing countries must use a different approach compared to developed countries, because there are differences in institutional, economic, and social conditions (Zhou et al., 2022). In developed countries, companies usually rely on formal mechanisms such as bankruptcy supported by a sound legal system and developed capital markets (Fakhar et al., 2023). However, in developing countries, these mechanisms are not yet effective due to weak management systems, limited access to funds, and high macroeconomic uncertainty (Sumiyana et al., 2023). Therefore, research on financial distress in developing countries must consider specific factors such as government intervention, exchange rate fluctuations, inflation, and different ownership structures (Habib et al., 2020). Thus, a theoretical framework can be developed that is more contextually appropriate, comprehensive, and adaptable to business conditions in developing countries.

Financial distress is considered the main cause of bankruptcy, making it a compelling subject for scholars and practitioners to study the factors contributing to financial distress in companies. Financial distress gets a lot of attention in the literature because it has impacts on business continuity, economic development, and can even threaten the value of the company to decline (Farooq et al., 2023). In addition, financial distress can affect many parties who might experience losses if business continuity is disrupted, such as investors, managers, employees, suppliers, banks, and people who use products and services from the company (Hussein & Idris, 2023). Financial distress in a company requires special and separate handling that is different from other companies, depending on the condition of the company itself by considering various causal factors and the company's business environment (Habib et al., 2020). This can accompany to take more proactive and effective steps in managing risk and maintaining financial stability (Younas et al., 2021).

THEORETICAL REVIEW

Across two decades, distress prediction has moved from classic ratio-based models toward hybrid and machine-learning frameworks—but legacy tools still anchor the field. Altman-type and regional variants remain strong signals, yet their accuracy drifts under shocks such as COVID-

19, prompting re-estimation and context-specific calibration (e.g., sector, crisis period) (Duricová et al., 2025; Dumitrescu et al., 2025). Recent work on listed firms shows ML models—ANNs, tree ensembles, RFECV—lift accuracy and surface new features (e.g., dividend growth, cash-to-current liabilities), while retaining interpretable financial ratios as core inputs (Lokanan & Ramzan, 2024). Governance augments these models: survival and panel studies report that board structures, independence, and state/institutional ownership add incremental predictive power beyond accounting and macro controls (Li et al., 2021). The message is simple: combine robust ratios with governance signals and re-fit models to regime shifts.

Ownership and governance mechanisms also shape distress incidence across country settings. New evidence from emerging markets links concentrated director and institutional holdings to lower distress probabilities, while highlighting heterogeneity by sector and legal environment (Alam et al., 2024). Turnaround studies extend the lens from prediction to recovery: capabilities matter—marketing capabilities help firm-specific distress turnarounds; industry shocks require different complements (Bhattacharya et al., 2024). These streams mark three open fronts: (i) integrated models that fuse text/ESG/governance with fundamentals, (ii) out-of-sample portability across markets and regimes, and (iii) mechanisms that translate ownership and board design into both early warning and post-distress performance.

METHODOLOGY

This section discusses the nature of this review, its research methods, and the strategies used to answer the research questions. The nature of this research is theoretical and classified as a bibliographic study that analyzes existing publications on a particular subject, i.e., *financial distress* (Cresswell, 2018). This research mainly aims to find specific information about what is being studied for exploratory and descriptive purposes. The study followed a systematic, mixed-method review to pinpoint the financial distress research themes. In line with Rahmah et al., (2024), the Publish or Perish software, with specific criteria, was used to retrieve and filter 56 financial distress articles from 2004 to 2024 from the Scopus database. Then, an input-process-output framework was used to classify and discuss potential future research. This study uses the Input–Process–Output (IPO) framework because it is able to describe the research flow in a structured manner, starting from the initial data used (input), the selection and analysis processes carried out, to the final results in the form of research theme trends and possible future research directions (output). By applying IPO, this study can present a classification of literature that is easy to understand but still comprehensive, making it easier to draw conclusions and identify research gaps in financial distress studies. The IPO framework is considered more suitable than PRISMA, which is commonly used in the health sector to ensure transparency in reporting, and TCMM, which focuses on the relationship between theory, context, methods, and metrics.

This study incorporates quantitative analysis, i.e., a systematic review of using a database of 56 initial articles. While mostly using qualitative methods (see Table 1). The study consisted of four stages, as depicted in Figure 1: data search and retrieval, article selection, article digitization, and data processing and analysis (Indarti et al., 2020; Dash & Mishra, 2024). The process of digitizing articles is carried out to improve the reliability of research, as all parts of the article are stored in a structured digital format. Thus, the potential for manual errors can be minimized, the analysis process is more consistent, and verification and replication by other researchers is possible. Digitization also facilitates comparisons between articles based on the same category to reduce researcher subjectivity, increase transparency, and make it easier to track the data used.

Data Search and Retrieval

The first step involved searching and retrieving financial distress studies (Dash & Mishra, 2024). The researchers used Scopus and Publish or Perish software due to their accessibility and completeness. The researchers used a combination of non-case-sensitive keywords and title words. The keywords included "*developing countries*" and "*emerging markets*", while the title was "*financial distress*". We used, or,in various combinations, retrieved as many relevant financial distress articles as possible. The search combinations yielded 56 articles from journals, proceedings/conferences, symposia, books, working papers, theses, and citations.

Article Selection

The researchers used three search criteria: article universality, publication quality and relevance to ensure article quality and review validity (Yudhistira et al., 2024). Article universality was represented by the use of "language (English)" (Rahmah et al., 2024), while publication quality was represented by "index value (e.g., Scimagojr)", "has a good citation index", or "nonpredatory journal (beallslist.weebly.com)". With these criteria, 37 articles were selected for further analysis, consisting of 20 articles from Q1 journals (Scopus indexed), 9 articles from Q2 journals, 3 articles from Q3 journals, and 5 articles from Q4 journals (see Table 2). All articles were published between 2003 and 2023. The researchers further sorted the 20 most relevant key articles from the previous 37.

The digitization process required data entry and storage of 20 articles (Dash & Mishra, 2024), which included information from the abstract, keywords, research objectives, theory, methodology, and research setting (i.e., sector/industry and country of origin). Journal rank, publisher, and summary information were also stored. The data was stored in Excel and Access formats.

Data Processing and Analysis

In addition to descriptive and narrative analysis, the researchers also conducted interpretive content analysis to infer one theme for each article in four stages. First, the researchers identified specific themes for each paper according to its abstract, objectives, research questions, and findings. Second, the researchers further investigated identified themes, identifying possible patterns and developing appropriate clusters of discussion topics within the themes to represent the patterns. Third, the researchers assessed the articles to recognize the possibilities among the patterns and inferred further discussion topics within each theme. Thus, each theme in each paper was added to a group, and the group of discussion topics was used as a baseline for further interpretation. Fourth, based on the resulting baseline, the researchers conducted data analysis and interpretation using an input-process-output (IPO) framework. The researchers acknowledge that some subjectivity issues might occur due to our qualitative approach, although we took some precautionary measures. In particular, to ensure objectivity, we followed the described procedures and separated the analytical process into five tasks. Task 1 involved data collections and entry, while Task 2 encompassed tasks 2-5 (Iterations 1-4 in Figure 1, step 4). Task 3 verifies the results of the steps from Iterations 1 to 4. The back arrows in Figure 1 represent the feedback process, which involves flexibility, inductivity, and iteration from all knowledgeable research teams. Each researcher has the appropriate knowledge to perform the five given tasks.

Table 1. Research Methodology Based on Ranking 20 Journal Articles (Quartile)

No	Methodology	Q1	Q2	Q3	Q4	Total
1	Quantitative (Regression, MDA)	9	6	3	1	19
2	Qualitative (Case Study)	1	0	0	0	1
	Total	10	6	3	1	20

Source: Data Processed (2025)

Table 2. List of Journals based on Ranking of 20 Journal Articles (Quartile)

Quartile	Journal List	Total
Q1	Corporate Governance (Bingley), An International Journal of Cross-Cultural Management, Eurasian Business Review, Emerging Markets Review, Humanities and Social Sciences Communications, Emerging Markets Finance and Trade	6
Q2	Economic Systems, Review of Quantitative Finance and Accounting, Journal of Financial Services Research, Accounting Research Journal, Quarterly Review of Economics and Finance, Applied Economics Letters	6
Q3	Cogent Economics and Finance, Managerial Finance	2
Q4	Quality - Access to Success	1

Source: Data Processed (2025)

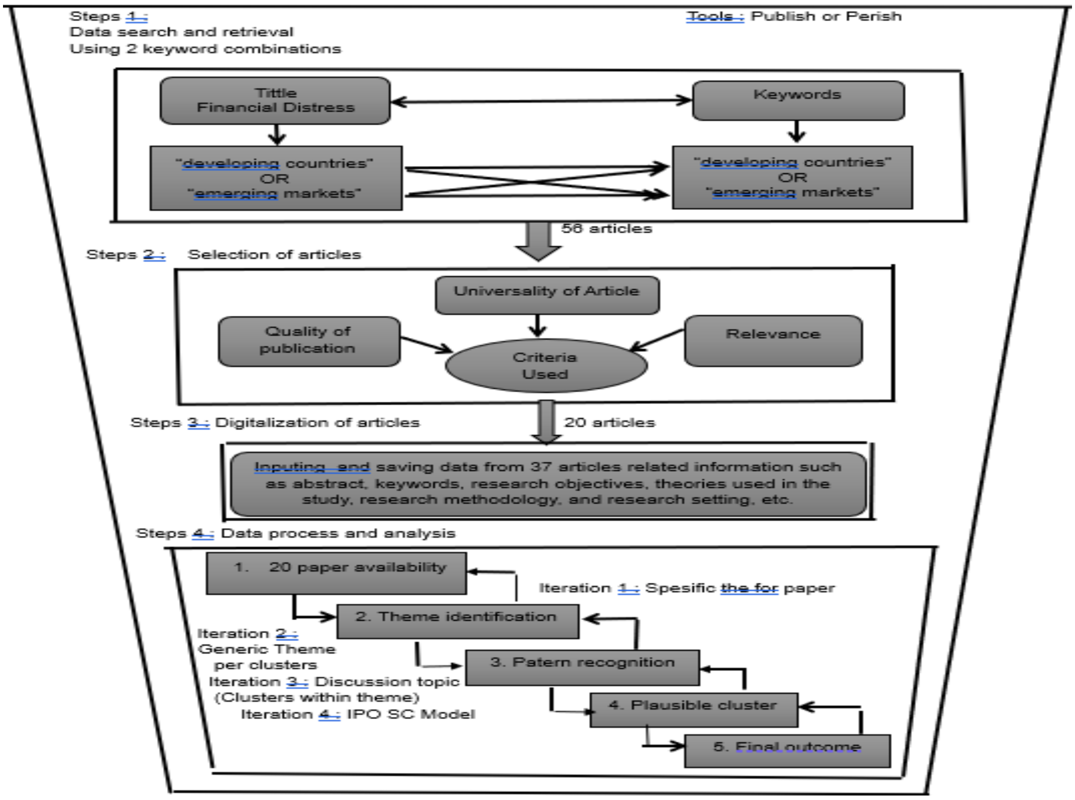

Figure 1. Research Process Articulation
Source: Data Processed (2025)

RESULTS AND DISCUSSION

Trends in Financial Distress Research Themes

Based on a more in-depth content analysis of the 20 main articles collected, the following research themes and detailed topics related to financial distress emerged:

1. Financial performance
2. Corporate governance
3. Ownership structure

The researchers have sorted the top three themes based on the most discussed themes and topics in the reference articles. The financial performance theme has 14 articles, the corporate governance theme has 5 articles, and the ownership structure theme has 4 articles (see Table 3).

The top research theme is about financial performance, with the number of articles that discuss as many as 15 articles. The financial performance theme includes 3 main topics, including accounting factors (Tsai, 2013; Sehgal, 2021; Hussein & Idris, 2023). Accounting factors (financial ratios) (Tsai, 2013; Ninh et al., 2018; Sehgal, 2021) include: profitability ratio and liquidity ratio (Uğurlu & Aksoy, 2006; Charalambakis & Garrett, 2016; Waqas & Md-Rus, 2018; ElBannan, 2021); leverage ratio (Uğurlu & Aksoy, 2006; Charalambakis & Garrett, 2016 ; Waqas & Md-Rus, 2018); cash flow ratio (Uğurlu & Aksoy, 2006; Charalambakis & Garrett, 2016; Waqas & Md-Rus, 2018; Ryu & Choi, 2023); excess returns, market capitalization, and return volatility (Charalambakis & Garrett, 2016); earnings management (Hussein & Idris, 2023); costs of addressing financial distress (Farooqs et al., 2023); EBITDA/total assets, proportion of trade credit in total claims ratio (Uğurlu & Aksoy, 2006); working capital management or working capital to total assets (WCTA) (Habib & Kayani, 2022); asset turnover, fixed assets to total assets, debt to equity ratio and firm size and firm life cycle (Uğurlu & Aksoy, 2006; ElBannan, 2021); growth opportunities, accrual-based earnings management (Uğurlu & Aksoy, 2006; Viana et al., 2022; Sumiyana et al., 2023); current assets turnover (CAT) and retained earnings to total assets (RETA) (Abdullah, 2020).

Table 3 Research Themes based on Content in the Article

No	Research Theme	Article	Total
1	Financial performance: Accounting factors: profitability ratios, liquidity ratios, leverage ratios, cash flow ratios, excess returns, market capitalization, volatility of returns, earnings management, costs of financial distress, EBITDA/total assets, proportion of trade credit in total claims ratio, working capital management or Working Capital to Total Assets (WCTA), asset turnover, fixed assets to total assets, debt to equity ratio and firm size, firm life cycle, growth opportunities, accrual-based earnings management, Current Assets Turnover (CAT), and Retained Earnings to Total Assets (RETA).	(Uğurlu & Aksoy, 2006; Tsai, 2013; Charalambakis & Garrett, 2016; Waqas & Md-Rus, 2018; Ninh et al., 2018; ElBannan, 2021; Sehgal, 2021; Viana et al., 2022; Habib & Kayani, 2022; Abdullah, 2020; Sumiyana et al., 2023; Hussein & Idris, 2023; Ryu & Choi, 2023)	14
2	Corporate governance: - Board of directors - Audit committee - Shareholder rights - Disclosure - Risk management.	(Muranda, 2006; Tsai, 2013; Shahwan, 2015; Younas et al., 2021; Sumiyana et al., 2023)	5
3	Ownership structure: - Ownership by insider ownership - Ownership by the board of directors - Ownership by Shareholders - Foreign ownership - Foreign institutional ownership	(Muranda, 2006; Udin et al., 2017; Younas et al., 2021; Ali et al., 2021)	4

Source: Data Processed (2025)

In the literature that is the reference for this systematic literature review, it is concluded that financial performance represented by financial ratios according to the results of the research can significantly affect the occurrence of financial distress. In 14 articles related to the theme of financial performance, the method used is quantitative, with the analytical tools used including Altman Z-Score, O-Score Model, and then regression, panel regression, dynamic logit model, Stata, or multivariate discriminant analysis. This study chose countries as samples, namely Vietnam, Pakistan, Turkey, India, UAE, Taiwan, Bahrain, Egypt, Jordan, Kuwait, Lebanon, Morocco, Oman, Qatar, Saudi Arabia, Tunisia, and Amman.

The second most discussed theme related to financial distress is corporate governance. This theme is found in 5 articles referenced in the systematic literature review. This study took a sample of countries, namely Egypt, Pakistan, Zimbabwe, Taiwan, and Amman. The topics in the corporate governance theme include board of directors, audit committee, shareholder rights, disclosure, and risk management. According to research (Shahwan, 2015) corporate governance turns out to have a negative effect on financial distress, but this research was only conducted in Egypt, the results of which are different from research in Pakistan (Younas et al., 2021) with a sample of 20 developing countries in the world that five important factors of corporate governance, namely, the board of directors, audit committee, shareholder rights, disclosure, and risk management, have a positive impact on the occurrence of corporate financial distress, as well as the results of research Muranda (2006) in Zimbabwe that corporate governance affects financial distress. Research from Tsai (2013) examining the role of corporate governance on the occurrence of financial distress shows that the results of corporate governance are relevant to the occurrence of financial distress. The last article also states that the CEO's decision, in the case of developing countries that are appropriate in the company's operations, can be used for reference so that financial distress does not occur (Sumiyana et al., 2023). In the literature, the reference systematic literature review with the method used is 1 qualitative article and 3 quantitative articles, concluding that corporate governance can significantly affect the occurrence of financial distress.

The third most discussed theme in financial distress is ownership structure. There are 4 articles that support the theme of this ownership structure. The topics of the ownership structure theme include: ownership by insiders, ownership by the board of directors, ownership by shareholders, and ownership by foreigners. Based on the information contained in the 4 articles, the sample countries used in the research are Pakistan, Zimbabwe, and China. The method used is quantitative, and one article that uses qualitative method. Based on research from Udin et al. (2017) in Pakistan in 2017, only insider ownership has a positive effect on financial distress, while the ownership structure of foreign share ownership, institutional ownership, and government share ownership has no impact on financial distress because of their role as passive shareholders. Different things resulted from research Younas et al. (2021) in Pakistan in 2021 that institutional ownership has a positive effect on the occurrence of financial distress. This is because the institutional role of the company is active. Further research in Zimbabwe in 2006 concluded that ownership by the board of directors, who are also major shareholders in the company, will only benefit the board of directors so that this can affect the occurrence of financial distress (Muranda, 2006). This is different from the results of research Ali et al. (2021) that share ownership by the board of directors impacts the occurrence of financial distress; therefore, the effort made is to invite the interest of foreign institutional investors and reduce the share ownership of the board of directors. The results that can be concluded are that the ownership structure affects the occurrence of financial distress.

The description above leads to the conclusion that financial performance, corporate governance, and ownership structure affect the occurrence of financial distress. The method used for measuring financial distress in this systematic literature review is to use financial ratios to measure or predict the possibility of financial distress with the Altman Z-Score bankruptcy prediction model, O-Score Model, and then perform regression, panel regression, dynamic logit model, Stata, or multivariate discriminant analysis.

Current Trends in Financial Distress Research

The density visualization map generated by VOSviewer illustrates the density of terms or research topics in the financial distress literature. Bright colors or denser areas indicate that the topic has been widely researched and is a trending topic, while darker areas indicate themes that are relatively rarely researched. Overlay visualization adds a time dimension, allowing it to show changes in research trends. Initially, research focused more on classical models, but recent studies have begun to consider emerging market issues, cross-country comparisons, and macroeconomic variables. On the other hand, network visualization shows the relationships between keywords in several groups, namely the crisis prediction group based on financial ratios, the methodology group (such as regression, logit, and discriminant analysis), and the cross-country contextual group. These three groups together show the structure and direction of research development in this field.

Based on the search using the VOSviewer application (Hai et al., 2025), the trend of financial distress studies is the big theme of financial distress, financial distress in publicly traded companies, and financial distress in a country (in this case, it can be in developed countries and in developing countries) (see Figure 2, Figure 3, and Figure 4). Financial distress based on the trend of the first study is done by using financial ratios to measure the financial soundness of the company or predict the possibility of financial distress with the Altman Z-Score bankruptcy model, O-Score Model, and then performing regression, panel regression, dynamic logit model, Stata, or multivariate discriminant analysis. This is reinforced by 19 out of 20 articles that are the main references regarding financial distress. Only 1 article, namely research (Muranda, 2006), in Zimbabwe uses qualitative methods, namely with case studies.

Then for the second trend of financial distress studies is financial distress in publicly traded companies. In the 20 sample articles that are the main reference for this systematic literature review, all of them use samples of companies that have gone public. This is done to make it easier for researchers to obtain data, namely through secondary data of publicly traded companies that have been published and can be obtained from the stock exchange of each country or through

Osiris software. Data in the form of financial reports can be obtained and accessed more easily than if the sample uses non-public companies.

The third trend of financial distress studies is financial distress conducted in a country (in this case, it can be a developed or developing country). Studies also compare developed countries with developing countries, such as the UK compared to India, and 11 MENA countries, includingthe United Arab Emirates, Bahrain, Egypt, Jordan, Kuwait, Lebanon, Morocco, Oman, Qatar, Saudi Arabia, and Tunisia. The countries sampled in this 20-article systematic literature review include the UK, Vietnam, Pakistan, Turkey, India, UAE, Taiwan, Bahrain, Egypt, Jordan, Kuwait, Lebanon, Morocco, Oman, Qatar, Saudi Arabia, Tunisia, Amman, Zimbabwe, and China.

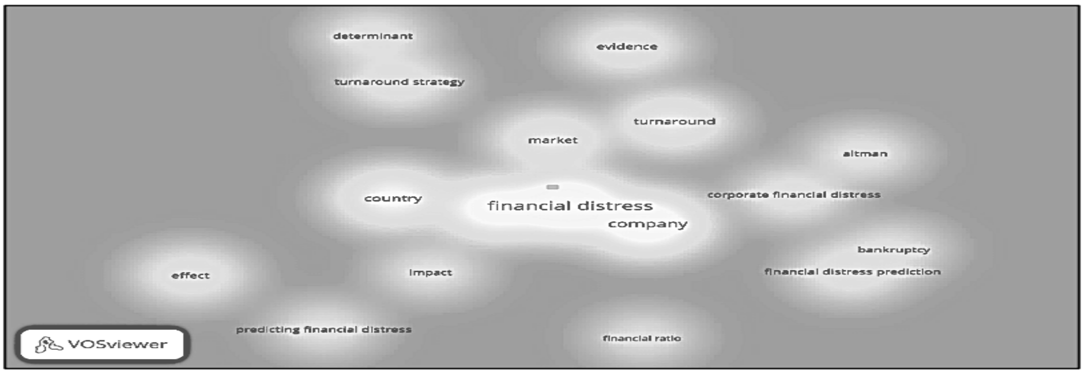

Figure 2. Density Visualization
Source: Data Processed (2025)

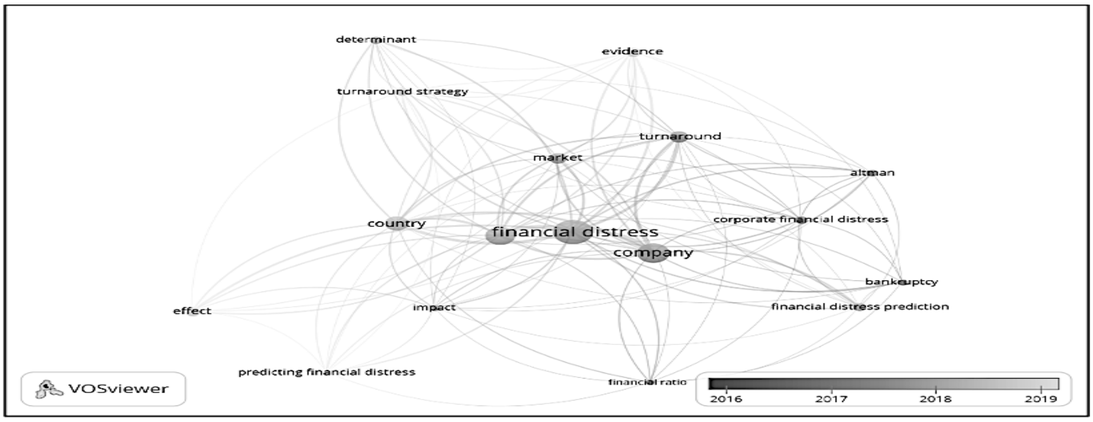

Figure 3. Overlay Visualization
Source: Data Processed (2025)

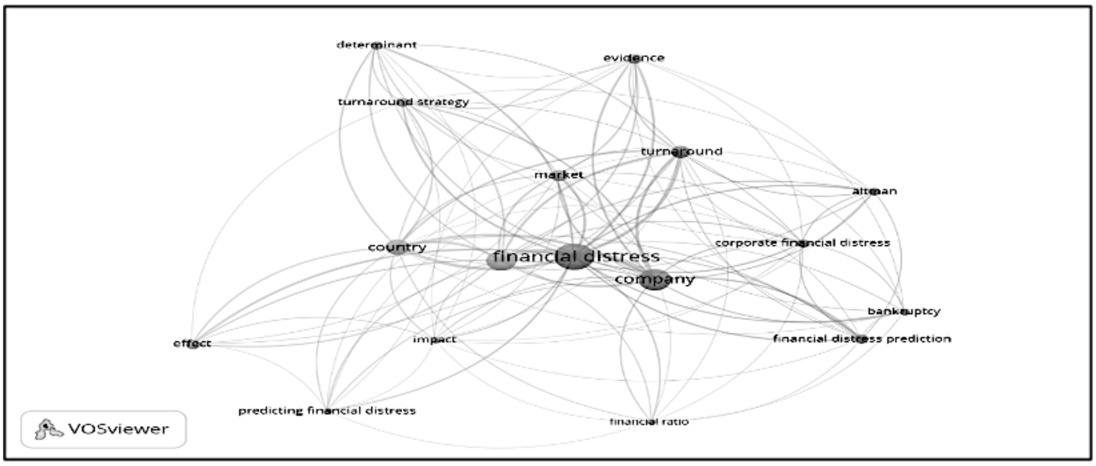

Figure 4. Network Visualization
Source: Data Processed (2025)

Future Trends in Financial Distress Research

According to the search using the VOSviewer application (Hai et al., 2025), the future trend of financial distress studies is the theme of financial distress prediction, financial distress turnaround strategy, and financial distress: evidence on a country or region of countries (see Figure 2, Figure 3, Figure 4, and Figure 5). To clarify the direction of future research, financial distress prediction models can be divided into two main approaches. The first approach is a model that uses traditional financial ratios such as Altman Z-Score, Springate, Ohlson O-Score, Zmijewski, Grover, Fulmer, and Beneish M-Score. These models generally use regression methods and combinations of simple financial ratios, making them easy to understand and apply, but less capable of capturing more complex patterns. The Springate model uses financial ratios, including liquidity ratios and profitability ratios, to predict financial distress (Fadrul & Ridawati, 2020). The Ohlson O-Score model uses accounting variables such as financial ratios, company size, and contemporaneous information such as stock price and trading volume to predict financial distress (Ohlson, 1980). The Grover's Score model was developed by considering financial ratios, operational variables, and stock market characteristics to identify companies at risk of financial distress. The Beneish M-Score model focuses on detecting possible financial statement manipulation or earnings management as early signs of financial distress.

The second approach is an artificial intelligence (AI) and machine learning-based model, such as decision trees, random forests, support vector machines, neural networks, gradient boosting, and hybrid models. These models are capable of processing large amounts of data, detecting non-linear patterns, and improving prediction accuracy, although they pose challenges in terms of interpreting the results. By grouping these models into these two categories, future research needs to focus on combining the strengths of traditional ratio models, which are easier to explain, with the advanced capabilities of artificial intelligence (AI) or machine learning (ML), in order to produce more comprehensive predictions that can be used in real-world applications.

Then the second theme for future trends in financial distress studies that can be carried out is the turnaround strategy policy carried out by companies when they know the condition of the company in financial distress. In the 20 main reference articles on financial distress, there is only 1 article that has provided a turnaround strategy when the company is experiencing financial distress, namely reducing the share ownership of the board of directors and offering it to foreign institutional investors (Ali et al., 2021). Turnaround strategy or company recovery can be done by identifying the strategy of companies that were originally declared in financial distress and then got up and could become a healthy company again, or identifying strategies carried out by companies that were originally declared in financial distress but management did not succeed in making recovery efforts so that the company could be declared bankrupt. The strategy of restructuring a company that is experiencing financial distress can be through aggressive and comprehensive steps: 1) Identification of the root of the problem 2) Cash and debt management 3) Cost cutting and efficiency 4) Renegotiation of contracts and agreements 5) Diversification or narrowing of focus 6) Operational recovery 7) Marketing and sales strategy development 8) Competent leaders 9) A long-term business plan 10) Professional consulting (Altman, 2000; Altman & Hotchkiss, 2011; Bouvatier et al., 2023). Each step should be taken with caution, and plans should be customized to the unique conditions of the company (Cao et al., 2024). Combining some of these strategies with open communication to all relevant parties can help companies recover from financial difficulties and avoid bankruptcy (Kalash, 2023). Companies can also restructure through mergers, acquisitions, or consolidation (Zhao et al., 2023; Sadaa et al., 2023; Aljughaiman et al., 2023). However, restructuring involves significant changes in a company's operational, financial, or organizational structure to address the issues at hand and create a stronger basis for future growth (Bouvatier et al., 2023). The main goal of restructuring is to transform the company into a more financially and operationally sustainable one, as well as to avoid bankruptcy (Darayseh & Alsharari, 2022; Bevilacqua et al., 2023). However, restructuring can be a complex process and requires in-depth analysis and careful planning (Boubaker et al., 2020; Ding et al., 2023). Consultation with professionals experienced in restructuring and change management is often very helpful in implementing these strategies successfully.

Based on the search using the VOSviewer application, the third future trend of financial distress studies is financial distress: evidence on a country or region. In this case, financial distress that can still be researched is financial distress in a particular country or region, such as ASEAN, where no research has been found. Research on corporate financial distress using case studies in a country or region such as ASEAN has several advantages that can provide deeper research because it is more focused and can use a better approach, for example in terms of the economic context and legal regulations in a country, the variability of industry sectors in a country, macroeconomic factors of a country, the relationship between companies, financial institutions and the government in financial restructuring efforts, the availability of data for research, namely case study research in a country may have easier access to relevant data, such as company financial reports, economic data, and industry sector information (Li et al., 2023; Primawan, 2023; Hussein & Idris, 2023). This may support a more in-depth analysis and may influence the company's reaction to financial distress. Therefore, for the depth of financial distress research, research can be conducted using evidence from a country or region such as ASEAN.

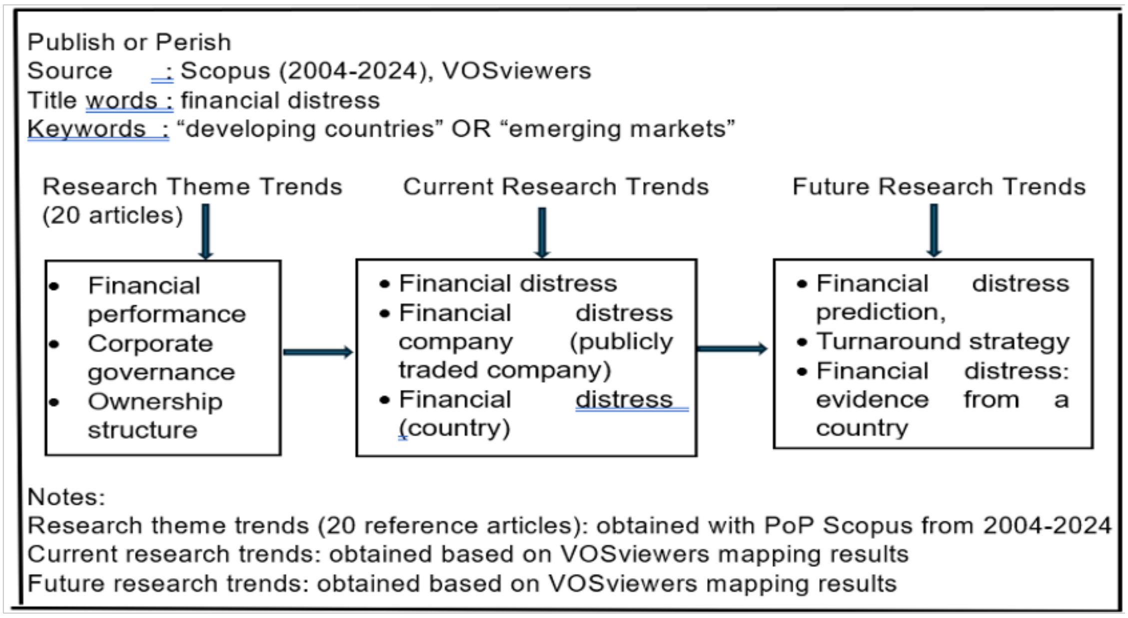

Figure 5. Research Theme Trends (20 articles), Current Research, and Future Trends
Source: Data Processed (2025)

CONCLUSIONS AND FURTHER STUDY

Research on corporate financial distress in developing countries is crucial because it is considered the main cause of bankruptcy. This is what draws scholars and professionals to examine the factors that contribute to financial distress in companies and their recovery strategies. The purpose of this study is to explain the factors that influence financial distress in companies in developing countries based on a systematic literature review and find out the methods of measuring the financial distress of companies. The sample in this literature review is research in developing countries and in companies that have gone public, with secondary data from the stock exchange of each developing country, using quantitative methods (19 articles) and qualitative methods (1 article). This systematic literature review consists of four stages: 1) searching and retrieving data from Scopus and Publish or Perish software; 2) selecting articles with the criteria "English, quartile Q1 to Q4, relevant articles"; 3) digitizing articles; and 4) data processing and analysis. The 56 articles were filtered down to 20 articles.

Trends in financial distress research themes based on a more in-depth content analysis of the 20 primary reference articles collected, the following research themes and detailed topics related to financial distress emerged: 1) Financial performance (14 articles), 2) Corporate governance (5 articles), 3) Ownership structure (4 articles). These major themes appear in the current trend of financial distress research. Based on the description above, it can be concluded that financial performance, corporate governance, and ownership structure affect the occurrence of financial distress. Then the method used for measuring financial distress in this systematic literature review is to use financial ratios to measure or predict the possibility of financial distress with the Altman Z-Score bankruptcy prediction model, the O-Score Model, and then perform regression, panel regression, dynamic logit model, Stata, or multivariate discriminant analysis.

The current trend of financial distress research based on the search using the VOSviewer application, the trend of financial distress studies are 1) The big theme of financial distress, financial distress based on the first study trend is done by using financial ratios to measure or predict the possibility of financial distress only with the Altman Z-Score bankruptcy prediction model and then perform regression, panel regression, dynamic logit model, Stata, or multivariate discriminant analysis; 2) Financial distress in publicly traded companies, in the 20 sample articles that are the main reference for this systematic literature review, all of them use samples of companies that have gone public. This is done to make it easier for researchers to obtain data, namely through secondary data of publicly traded companies that have been published and can be obtained from the stock exchange of each country; and 3) Financial distress in a country (in this case, it can be in developed countries and in developing countries).

Future financial distress research trends, according to the search using the VOSviewer application, reveal the following: 1) Financial prediction, turnaround strategy financial distress, and financial distress: evidence on a country. There are alternative models for bankruptcy prediction that can be used besides the Altman Z-Score, namely the Springate model, the Ohlson O-Score model, the Grover's Score model, the Beneish M-Score model, the Zmijewski model, the Fulmer model, logistic regression analysis, multivariate analysis, machine learning, and time series analysis; 2) A turnaround strategy can be done by identifying the company's efforts in rejuvenating the company; 3) Financial distress: evidence on a country. Research using case studies on a country offers several advantages that can provide specific and deeper research since it focuses on a country.

The results of this study have important implications for various parties involved. For policymakers, findings regarding internal factors such as financial performance, corporate governance, and ownership structure, as well as external factors such as macroeconomic conditions and regulations, indicate that rules are needed to encourage transparency in financial reporting, good governance systems, and tools to mitigate risks from macroeconomic conditions. For investors, understanding indicators that point to a company's risk of bankruptcy can help them make more informed investment decisions, including identifying companies with higher risk early on in order to avoid losses. Meanwhile, for corporate boards and management, this study emphasizes the importance of continuously monitoring financial ratios, strengthening governance, and implementing flexible improvement strategies so that companies can survive financial pressures and avoid bankruptcy. Thus, the results of this study are not only useful for the academic world, but also provide a basis for formulating better policies, investment decisions, and corporate management.

FUNDING STATEMENT

This work was not supported by any funding agency.

CONFLICTS OF INTERESTS

The authors declare that there is no conflict of interest in the publication of this article. This includes all financial interests, personal relationships, or affiliations with parties that could affect the publication of this article.

AUTHOR CONTRIBUTIONS

The first author was responsible for designing the research, collecting the articles, and analyzing the content of the articles. The first author was also involved in writing the initial draft of the article and revisions based on feedback from co-authors. The second author contributed to the development of the research methodology and provided critical feedback throughout the writing process of this article. The second author was also responsible for ensuring that all ethical aspects of the research were followed and contributed to the discussion section of the article. The third author was involved in field data collection methods. The third author also assisted in the compilation of relevant literature and made significant contributions to the writing and editing of the final article.

REFERENCES

Abdullah, A. M. (2020). Identifying the determinants of financial distress for public listed companies in Malaysia. *Jurnal Pengurusan*, 59, 11–24. https://doi.org/10.17576/pengurusan-2020-59-03

Alam, S., et al. (2024). Predicting financial distress through ownership pattern: Dynamics of financial resilience of Bangladesh. *Future Business Journal*. https://doi.org/10.1186/s43093-024-00379-5

Ali, S., ur Rehman, R., Yuan, W., Ahmad, M. I., & Ali, R. (2021). Does foreign institutional ownership mediate the nexus between board diversity and the risk of financial distress? A case of an emerging economy of China. *Eurasian Business Review*, 12(3), 553–581. https://doi.org/10.1007/s40821-021-00191-z

Aljughaiman, A. A., Nguyen, T. H., Trinh, V. Q., & Du, A. (2023). The COVID-19 outbreak, corporate financial distress and earnings management. *International Review of Financial Analysis*, 88, 102675. https://doi.org/10.1016/j.irfa.2023.102675

Altman, E. I. (1968). Financial ratios, discriminant analysis and the prediction of corporate bankruptcy. *The Journal of Finance*, 23(4), 589–609.

Altman, E. I. (2000). Predicting financial distress of companies: Revisiting the Z-score and ZETA models. *Journal of Banking & Finance*.

Altman, E. I., & Hotchkiss, E. (2011). *Corporate financial distress and bankruptcy: Predict and avoid bankruptcy, analyze and invest in distressed debt* (3rd ed.). https://doi.org/10.1002/9781118267806

Beaver, W. H. (1966). Financial ratios as predictors of failure. *Journal of Accounting Research*, 4, 71–111. http://www.jstor.org/stable/2490171

Bevilacqua, M., Tunaru, R., & Vioto, D. (2023). Options-based systemic risk, financial distress, and macroeconomic downturns. *Journal of Financial Markets*, 65, 100834. https://doi.org/10.1016/j.finmar.2023.100834

Boubaker, S., Cellier, A., Manita, R., & Saeed, A. (2020). Does corporate social responsibility reduce financial distress risk? *Economic Modelling*, 91, 835–851. https://doi.org/10.1016/j.econmod.2020.05.012

Bouvatier, V., Lepetit, L., Rehault, P. N., & Strobel, F. (2023). Time-varying Z-score measures for bank insolvency risk: Best practice. *Journal of Empirical Finance*, 73, 170–179. https://doi.org/10.1016/j.jempfin.2023.06.002

Cao, J., Dong, D., & Yue, S. (2024). Institutional investors' site visits and firms' financial distress. *Research in International Business and Finance*, 67, 102150. https://doi.org/10.1016/j.ribaf.2023.102150

Charalambakis, E. C., & Garrett, I. (2016). On the prediction of financial distress in developed and emerging markets: Does the choice of accounting and market information matter? A comparison of UK and Indian firms. *Review of Quantitative Finance and Accounting*, 47(1), 1–28. https://doi.org/10.1007/s11156-014-0492-y

Creswell, J. W. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). SAGE.

Darayseh, M., & Alsharari, N. M. (2022). Determinants of merger and acquisition in the banking sector: An empirical study. *Meditari Accountancy Research*. https://doi.org/10.1108/MEDAR-09-2021-1449

Dash, P., & Mishra, S. K. (2024). Investment intentions and financial decisions of women investors: A bibliometric analysis for future research. *Global Business and Finance Review*, 29(6), 114–128. https://doi.org/10.17549/gbfr.2024.29.6.114

Ding, S., Cui, T., Graham, A., Zoynul, M., & Lucey, B. (2023). The role of feature importance in predicting corporate financial distress in pre- and post-COVID periods: Evidence from China. *International Review of Financial Analysis*, 90, 102851. https://doi.org/10.1016/j.irfa.2023.102851

Duricová, L., Kovalová, E., Gazdíková, J., & Hamranová, M. (2025). Refining the best-performing V4 financial distress prediction models: Coefficient re-estimation for crisis periods. *Applied Sciences*, 15(6), 2956. https://doi.org/10.3390/app15062956
Dumitrescu, D., et al. (2025). Signaling financial distress through Z-scores and corporate governance compliance interplay: A random forest approach. *Electronics*, 14(11), 2151. https://doi.org/10.3390/electronics14112151
ElBannan, M. A. (2021). On the prediction of financial distress in emerging markets: What matters more? Empirical evidence from Arab Spring countries. *Emerging Markets Review*, 47, 100806. https://doi.org/10.1016/j.ememar.2021.100806
Fadrul, F., & Ridawati, R. (2020). Analysis of method used to predict financial distress potential in pulp and paper companies of Indonesia. *International Journal of Economics Development Research*, 1(1), 57–69. https://doi.org/10.37385/ijedr.v1i1.29
Fakhar, S., Mohd Khan, F., Tabash, M. I., Ahmad, G., Akhter, J., & Al-Absy, M. S. M. (2023). Financial distress in the banking industry: A bibliometric synthesis and exploration. *Cogent Economics & Finance*, 11(2), 2253076. https://doi.org/10.1080/23322039.2023.2253076
Farooq, M., Hunjra, A. I., Ullah, S., & Al-Faryan, M. A. S. (2023). The determinants of financial distress cost: A case of emerging market. *Cogent Economics & Finance*, 11(1), 2186038. https://doi.org/10.1080/23322039.2023.2186038
Habib, A., Costa, M. D., Huang, H. J., Bhuiyan, M. B. U., & Sun, L. (2020). Determinants and consequences of financial distress: Review of the empirical literature. *Accounting & Finance*, 60(S1), 1023–1075. https://doi.org/10.1111/acfi.12400
Habib, A. M., & Kayani, U. N. (2022). Does the efficiency of working capital management affect a firm's financial distress? Evidence from UAE. *Corporate Governance*, 22(7), 1567–1586. https://doi.org/10.1108/CG-12-2021-0440
Hai, P. H., Toan, T. C., & Khoa, B. T. (2025). Science mapping of the development and trends in green finance: A bibliometric analysis. *Global Business and Finance Review*, 30(2), 57–71. https://doi.org/10.17549/gbfr.2025.30.2.57
Hussein, R., & Idris, M. (2023). Detecting financial distress of companies listed on Amman Stock Exchange using the models of Altman and Jones. *Quality – Access to Success*, 24(194), 196–201. https://doi.org/10.47750/QAS/24.194.23
Indarti, N., Lukito-Budi, A. S., & Islam, A. M. (2020). A systematic review of halal supply chain research: To where shall we go? *Journal of Islamic Marketing*, 12(9), 1930–1949. https://doi.org/10.1108/JIMA-05-2020-0161
Kalash, I. (2023). The financial leverage–financial performance relationship in the emerging market of Turkey: The role of financial distress risk and currency crisis. *EuroMed Journal of Business*, 18(1), 1–20. https://doi.org/10.1108/EMJB-04-2021-0056
Li, L., Chen, H., & Xiang, J. (2023). Oil price uncertainty, financial distress and real economic activities: Evidence from China. *Pacific-Basin Finance Journal*, 81, 102103. https://doi.org/10.1016/j.pacfin.2023.102103
Li, Z., Crook, J., Andreeva, G., & Tang, Y. (2021). Predicting the risk of financial distress using corporate governance measures. *Pacific-Basin Finance Journal*, 68, 101334. https://doi.org/10.1016/j.pacfin.2020.101334
Lokanan, M. E., & Ramzan, S. (2024). Predicting financial distress in TSX-listed firms using machine learning algorithms. *Frontiers in Artificial Intelligence*, 7, 1466321. https://doi.org/10.3389/frai.2024.1466321
Mselmi, N., Lahiani, A., & Hamza, T. (2017). Financial distress prediction: The case of French small and medium-sized firms. *International Review of Financial Analysis*, 50, 67–80. https://doi.org/10.1016/j.irfa.2017.02.004
Muranda, Z. (2006). Financial distress and corporate governance in Zimbabwean banks. *Corporate Governance*, 6(5), 643–654. https://doi.org/10.1108/14720700610706126
Ninh, B. P. V., Do Thanh, T., & Vo Hong, D. (2018). Financial distress and bankruptcy prediction: An appropriate model for listed firms in Vietnam. *Economic Systems*, 42(4), 616–624. https://doi.org/10.1016/j.ecosys.2018.05.002
Ohlson, J. A. (1980). Financial ratios and the probabilistic prediction of bankruptcy. *Journal of Accounting Research*, 18(1), 109–131. https://doi.org/10.2307/2490395

Primawan, A. (2023). Systematic literature review: Determinants of corporate financial distress prediction. *Jurnal Akuntansi*, 13(2), 120–130. https://doi.org/10.33369/jakuntansi.13.2.120-130

Rahmah, A. S., Pratama, N. R., Kuswadi, S. A., & Ichsan, M. (2024). The effectiveness of implementing agile project management: A systematic literature review. *Global Business and Finance Review*, 29(6), 170–186. https://doi.org/10.17549/gbfr.2024.29.6.170

Ryu, H., & Choi, H. (2023). Financial distress and value of cash holdings: Evidence from the Korean stock market. *Applied Economics Letters*, 30(13), 1833–1837. https://doi.org/10.1080/13504851.2022.2083550

Sadaa, A. M., Ganesan, Y., Yet, C. E., Alkhazaleh, Q., Alnoor, A., & Aldegis, A. M. (2023). Corporate governance as antecedents and financial distress as a consequence of credit risk: Evidence from Iraqi banks. *Journal of Open Innovation: Technology, Market, and Complexity*, 9(2), 100051. https://doi.org/10.1016/j.joitmc.2023.100051

Sehgal, S. (2021). On the determinants and prediction of corporate financial distress in India. *Managerial Finance*, 47(??), 1–73.

Shahwan, T. M. (2015). The effects of corporate governance on financial performance and financial distress: Evidence from Egypt. *Corporate Governance*, 15(5), 641–662. https://doi.org/10.1108/CG-11-2014-0140

Sumiyana, S., Na'im, A., Kurniawan, F., & Nugroho, A. H. L. (2023). Earnings management and financial distress or soundness determining CEOs' future over- and under-investment decisions. *Humanities and Social Sciences Communications*, 10, 516. https://doi.org/10.1057/s41599-023-01638-6

Tsai, B. H. (2013). An early warning system of financial distress using multinomial logit models and a bootstrapping approach. *Emerging Markets Finance and Trade*, 49(Suppl. 2), 43–69. https://doi.org/10.2753/REE1540-496X4902S203

Udin, S., Khan, M. A., & Javid, A. Y. (2017). The effects of ownership structure on likelihood of financial distress: An empirical evidence. *Corporate Governance*, 17(4), 589–612. https://doi.org/10.1108/CG-03-2016-0067

Uğurlu, M., & Aksoy, H. (2006). Prediction of corporate financial distress in an emerging market: The case of Turkey. *Cross Cultural Management: An International Journal*, 13(4), 277–295. https://doi.org/10.1108/13527600610713396

Viana, D. B. C., Lourenço, I., & Black, E. L. (2022). Financial distress, earnings management and Big 4 auditors in emerging markets. *Accounting Research Journal*, 35(5), 660–675. https://doi.org/10.1108/ARJ-06-2021-0165

Waqas, H., & Md-Rus, R. (2018). Predicting financial distress: Applicability of O-score and logit model for Pakistani firms. *Business and Economic Horizons*, 14(2), 389–401. https://doi.org/10.15208/beh.2018.28

Younas, N., Uddin, S., Awan, T., & Khan, M. Y. (2021). Corporate governance and financial distress: Asian emerging market perspective. *Corporate Governance*, 21(4), 702–715. https://doi.org/10.1108/CG-04-2020-0119

Yudhistira, P. G. A., Riana, I. G., Supartha, I. W. G., & Wibawa, I. M. A. (2024). Knock! Knock! How does knowledge management maintain organizational performance? A systematic literature review. *Global Business and Finance Review*, 29(6), 129–142. https://doi.org/10.17549/gbfr.2024.29.6.129

Zhao, Q., Xu, W., & Ji, Y. (2023). Predicting financial distress of Chinese listed companies using machine learning: To what extent does textual disclosure matter? *International Review of Financial Analysis*, 89, 102770. https://doi.org/10.1016/j.irfa.2023.102770

Zhou, F., Fu, L., Li, Z., & Xu, J. (2022). The recurrence of financial distress: A survival analysis. *International Journal of Forecasting*, 38(3), 1100–1115. https://doi.org/10.1016/j.ijforecast.2021.12.005