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The Influence of Corporate Governance Quality on Financial Distress Prediction Models

Mutiara Fatmarum Putri Satria[1]

[1] Universitas Muhammadiyah Surakarta, Surakarta, Indonesia

Abstract

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This study examines how corporate governance quality enhances the predictive power of financial distress models beyond traditional accounting and market based indicators. While ratio based and Altman type models remain widely used and effective as early warning tools, they tend to overlook institutional and governance related drivers of distress. Using a systematic literature review, this study synthesizes evidence from research that incorporates board structure, ownership configuration, and board diversity into financial distress prediction frameworks. The review shows that stronger governance, reflected in board independence, effective monitoring committees, and well-designed ownership structures, is generally associated with lower distress likelihood and better model classification accuracy. However, the effect of ownership concentration and gender diversity on distress risk is context dependent, varying across legal, cultural, and market environments. Overall, the findings indicate that corporate governance quality is a critical non-financial input for improving financial distress prediction, but it should be treated as a multidimensional construct rather than a single "good governance" proxy. The study highlights the need for integrated models that combine financial indicators with multiple governance mechanisms and calls for future research to test interaction effects and compare traditional, augmented, and advanced modelling approaches.

1. Introduction

Financial distress prediction has long been a central topic in corporate finance because early warning signals allow managers, creditors, and regulators to mitigate value destruction, job losses, and spillover risks to the broader financial system. Traditional bankruptcy prediction models such as those based on accounting and market ratios continue to dominate empirical practice and are widely applied in both developed and emerging markets (Bukhori et al., 2022). However, recent studies show that models relying solely on financial indicators may overlook institutional and governance-related drivers of distress, limiting their explanatory power in complex corporate environments (Ernawati et al., 2018).

In response, an expanding literature incorporates corporate governance mechanisms into financial distress prediction frameworks. Empirical evidence indicates that board size, board independence, and ownership structures shape firms' risk-taking, transparency, and access to external finance, thereby influencing the likelihood of financial distress (Natalia & Rudiawarni, 2022). Using a large international sample, Li et al. (2021) demonstrate that corporate governance measures such as board independence and ownership concentration significantly enhance the predictive accuracy of financial distress models beyond traditional financial ratios. Similarly, studies on board characteristics document that more independent and better-structured boards are associated with lower insolvency risk in non-financial firms (Maier & Yurtoglu, 2022).

The quality of corporate governance also influences distress risk through its interaction with capital structure decisions. For example, García and Herrero (2021) show that boards with higher female representation tend to choose more conservative leverage policies and face a lower probability of financial distress. At the same time, research combining financial ratios with good corporate governance indicators finds that governance variables materially improve the classification of firms into distressed and non-distressed categories (Ernawati et al., 2018; Fahlevi, 2018).

Despite these advances, there is still limited consensus on which governance dimensions most effectively enhance financial distress prediction models, and whether their incremental contribution varies across institutional contexts and economic cycles. This study seeks to address this gap by examining how different aspects of corporate governance quality such as board structure, ownership configuration, and board diversity can be systematically integrated into financial distress prediction frameworks and to what extent they improve model performance over and above conventional financial indicators.

2. Literature Review

Research on financial distress prediction initially focused on accounting and market-based indicators, particularly Altman type scoring models and financial ratio analysis. Recent empirical work confirms that these traditional models still provide useful early-warning signals, including in banking and Sharia compliant settings, but also highlights their limitations when non-financial drivers of distress are ignored (Pertiwi, 2018; Setiawan, 2021). Models that combine profitability, leverage, liquidity, and macroeconomic variables capture distress probability more accurately than specifications relying only on financial ratios, suggesting that a broader set of firm and environment specific factors needs to be considered.

Against this backdrop, a growing body of literature integrates corporate governance mechanisms into financial distress frameworks. Early evidence from Indonesian listed firms finds that good corporate governance proxied by board of directors, board of commissioners, audit committee and independent commissioners has a significant association with distress likelihood measured by Altman Z-scores (Irsyad, 2018; Zulfa, 2020). Handriani et al. (2021) provide further support using panel data on manufacturing companies and show that stronger governance structures reduce the probability of financial distress even after controlling for conventional financial indicators. Complementary evidence from the banking sector indicates that firm size can moderate the effect of corporate governance on distress, with larger institutions benefiting more from effective governance mechanisms (Gaos, 2021).

Board structure has become a central focus in this literature. Ud-Din et al. (2020) examine non financial firms in an emerging Asian market and find that board size, independence and CEO duality are systematically related to the likelihood of financial distress, implying that boards with stronger monitoring capabilities are better able to prevent severe financial difficulties. In a similar vein, Williansyah and Meiliana (2022) document that a composite corporate governance index capturing ownership structure and director characteristics has significant explanatory power for distress risk, reinforcing the view that nuanced board attributes not just their existence matter for prediction.

Ownership structure is another key governance dimension linked to distress prediction models. Studies on Indonesian manufacturing and other sectors show that managerial, institutional and foreign ownership can either mitigate or exacerbate the probability of financial distress, depending on whether these owners act as effective monitors or entrench insiders (Santoso, 2022; Widhiadnyana, 2020). Evidence from listed firms suggests that concentrated ownership may reduce agency problems and improve financial stability in some contexts, but can also increase risk taking when controlling shareholders pursue private benefits at the expense of creditors and minority investors (Handriani et al., 2021; Williansyah & Meiliana, 2022).

More recent contributions emphasize board diversity, especially gender diversity, as a qualitative attribute of governance that may influence distress outcomes. The presence of female directors in Indonesian firms does not uniformly reduce distress probability, partly because women often remain a small minority on boards, which limits their influence on strategic and financing decisions. Complementary studies in emerging markets show that higher female representation is generally associated with more conservative risk-taking and improved monitoring, which can reduce the likelihood of extreme financial problems (Mohsni et al., 2021; Arvanitis, 2022). These results are consistent with international evidence that gender diverse boards tend to exhibit lower financial risk and more prudent leverage policies, suggesting that board diversity may be an important non-financial input in distress prediction models.

Overall, the literature indicates that incorporating corporate governance quality capturing board structure, ownership configuration and board diversity can enhance the explanatory and predictive power of financial distress models beyond traditional ratio based approaches. However, findings across countries and sectors are not fully consistent, and the relative importance of specific governance attributes remains contested. This motivates further research that systematically integrates multiple governance dimensions with financial indicators to evaluate their incremental contribution to financial distress prediction across different institutional environments.

3. Methods

This study employs a systematic literature review (SLR) to synthesize existing evidence on the relationship between corporate governance quality and financial distress prediction models. The review follows a structured multi stage protocol comprising planning, searching, screening, coding, and synthesis. First, key concepts and research questions are defined around three core constructs: financial distress prediction, corporate governance quality, and board and ownership related characteristics. Second, a comprehensive search strategy is implemented across major academic databases such as Scopus, Web of Science, and Google Scholar, using combinations of keywords related to financial distress, bankruptcy prediction models, corporate governance, board structure, ownership structure, and board diversity connected with Boolean operators. Third, duplicates are removed and the remaining records are screened based on titles and abstracts using predefined inclusion and exclusion criteria focused on relevance to corporate finance, the examination of financial distress or bankruptcy prediction, and the incorporation of corporate governance variables in the empirical model. Full texts that meet these criteria are then retrieved and examined in detail.

For each study, information is systematically extracted on context, industry, data sources, sample characteristics, measures of financial distress and corporate governance, research design, estimation techniques, and key results. A coding scheme is applied consistently to reduce subjectivity and ensure comparability across studies. Finally, the evidence is synthesized through narrative and comparative analysis by grouping studies according to the types of governance mechanisms (board structure, ownership configuration, board diversity) and modelling approaches (traditional ratio based models, augmented models, and advanced statistical or machine-learning techniques), enabling the identification of convergent findings, conflicting results, and gaps that inform future research on integrating governance quality into financial distress prediction frameworks.

4. Results and Discussion

The systematic review shows a clear evolution in financial distress prediction research from purely accounting and market based models toward frameworks that incorporate corporate governance quality. Studies that rely mainly on financial ratios and Altman type models confirm that traditional indicators still provide useful early warning signals for both conventional and Sharia compliant institutions (Pertiwi, 2018; Setiawan, 2021; Bukhori et al., 2022). However, evidence that these models tend to overlook institutional and governance related drivers of distress supports the argument that their explanatory power is limited in more complex corporate environments (Ernawati et al., 2018). In line with this, research that augments financial indicators with governance variables consistently finds that combined models offer superior classification performance between distressed and non-distressed firms (Fahlevi, 2018). This pattern reinforces the view that financial distress is not only a function of firms' quantitative performance, but also of how they are monitored and controlled.

Across the reviewed studies, board structure emerges as one of the most robust governance determinants of distress risk. Evidence from Indonesian listed companies indicates that good corporate governance practices proxied by the board of directors, board of commissioners, audit committee, and independent commissioners are significantly associated with lower distress likelihood as measured by Altman Z-scores (Irsyad, 2018; Zulfa, 2020). This is consistent with broader findings that board size and independence shape firms' risk taking and transparency, thereby affecting their vulnerability to financial difficulties (Natalia & Rudiawarni, 2022). Using panel data on manufacturing firms, stronger governance structures are shown to reduce distress probability even after controlling for conventional financial indicators (Handriani et al., 2021), while evidence from the banking sector suggests that firm size can strengthen the beneficial impact of effective governance mechanisms (Gaos, 2021). Results from an emerging Asian market further show that board size, independence, and CEO duality are systematically related to the likelihood of financial distress, implying that boards with greater monitoring capacity are better positioned to prevent severe financial problems (Ud-Din et al., 2020). The use of composite governance indices that capture ownership and director characteristics also demonstrates significant explanatory power for distress risk, highlighting that nuanced board attributes, not merely their existence, matter for prediction accuracy (Maier & Yurtoglu, 2022; Williansyah & Meiliana, 2022).

The review also finds that ownership structure is a key governance dimension in distress prediction models, but its effects are context dependent. Empirical studies on Indonesian manufacturing and other sectors indicate that managerial, institutional, and foreign ownership can either mitigate or worsen the probability of financial distress, depending on whether these owners function as effective monitors or instead entrench insiders (Widhiadnyana, 2020; Santoso, 2022). Evidence from listed firms suggests that concentrated ownership may help reduce agency problems and improve financial stability when controlling shareholders align their interests with those of other stakeholders, yet in other cases it may encourage greater risk taking if controlling owners pursue private benefits (Handriani et al., 2021; Williansyah & Meiliana, 2022). These mixed findings underline the need for distress prediction models to treat ownership configuration as a nuanced construct rather than a uniformly stabilizing or destabilizing factor.

Board diversity, particularly gender diversity, appears as a more recent but increasingly important qualitative attribute of governance linked to distress risk. Findings from Indonesian samples suggest that the presence of female directors does not automatically reduce distress probability, partly because women often remain a small minority on boards, limiting their influence on strategic and financing decisions. Nonetheless, complementary studies in emerging markets show that higher female representation is generally associated with more conservative risk taking and stronger monitoring, which can lower the likelihood of extreme financial problems (Mohsni et al., 2021; Arvanitis, 2022). International evidence that gender diverse boards tend to exhibit lower financial risk and more prudent leverage choices resonates with research showing that boards with higher female representation adopt more conservative capital structure policies and face a reduced probability of financial distress (García & Herrero, 2021). Taken together, these results indicate that board diversity is a promising non-financial input for distress models, but its predictive contribution likely depends on the critical mass and actual influence of diverse directors.

Overall, the SLR reveals converging evidence that incorporating corporate governance quality through variables capturing board structure, ownership configuration, and board diversity enhances the explanatory and predictive power of financial distress models beyond traditional ratio-based approaches (Li et al., 2021; Natalia & Rudiawarni, 2022; Maier & Yurtoglu, 2022). At the same time, the findings are not fully consistent across sectors and institutional contexts, especially with respect to ownership concentration and gender diversity. This suggests that the influence of governance quality on distress risk is shaped by broader legal, cultural, and market environments. Consequently, future models should explicitly test interaction effects between governance mechanisms and firm- or country-level characteristics, and compare the performance of traditional, augmented, and advanced modelling techniques. Such an approach would clarify which governance dimensions provide the greatest incremental improvement in distress prediction and under what conditions they are most effective.

5. Conclusion

The systematic review concludes that financial distress prediction is substantially improved when corporate governance quality is incorporated alongside traditional financial indicators. While ratio based and Altman type models remain useful as early warning tools, they systematically under represent institutional and governance related drivers of distress. The evidence shows that board structure, ownership configuration, and board diversity are consistently linked to firms' risk taking behaviour, transparency, capital structure choices, and ultimately their likelihood of experiencing financial distress. In particular, strong boards with effective monitoring roles, appropriate independence, and well designed committees tend to reduce distress risk, while certain ownership patterns and more gender diverse boards contribute to more prudent leverage and risk management, although their effects are context dependent.

At the same time, the findings across sectors, countries, and governance dimensions are not entirely uniform, especially regarding ownership concentration and gender diversity, which can either mitigate or amplify distress risk depending on the broader legal, cultural, and market environment. These mixed results suggest that corporate governance should be modelled as a nuanced, multifaceted construct rather than a single "good governance" proxy. Consequently, future research is encouraged to develop and test integrated financial distress prediction frameworks that explicitly incorporate multiple governance mechanisms, examine interaction effects with firm and country level characteristics, and compare traditional ratio based models with augmented and advanced approaches such as machine learning. Such efforts can help identify which governance attributes yield the greatest incremental predictive power and provide more targeted guidance for regulators, investors, and corporate decision makers seeking to strengthen early warning systems for financial distress.

References

Arvanitis, S. E., Varouchas, E. G., & Agiomirgianakis, G. M. (2022). Does board gender diversity really improve firm performance? Evidence from Greek listed firms. *Journal of Risk and Financial Management, 15*(7), 306.

Bukhori, I., Kusumawati, R., & Meilani, M. (2022). Prediction of financial distress in manufacturing companies: Evidence from Indonesia. *Journal of Accounting and Investment, 23*(3), 588–605.

Eka, H. (2021). Corporate governance on financial distress: Evidence from Indonesia. *Management Science Letters.* Retrieved February 9, 2023 from https://www.growingscience.com/msl/Vol11/msl_2021_20.pdf

Ernawati, E., Handojo, S. E., & Murhadi, W. R. (2018, March). Financial performance, corporate governance, and financial distress. In *15th International Symposium on Management (INSYMA 2018)* (pp. 35–39). Atlantis Press.

Fahlevi, E. D., & Mukhibad, H. (2018). Use of financial ratios and good corporate governance to predict financial distress. *Jurnal Reviu Akuntansi dan Keuangan, 8*(2), 147–158.

Gaos, R. R., & Mudjiyanti, R. (2021). Pengaruh corporate governance dan firm size terhadap financial distress (studi pada perusahaan perbankan yang terdaftar di Bursa Efek Indonesia periode 2017–2019). *Kompartemen: Jurnal Ilmiah Akuntansi,* 13–24.

García, C. J., & Herrero, B. (2021). Female directors, capital structure, and financial distress. *Journal of Business Research, 136,* 592–601.

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.

Maier, F., & Yurtoglu, B. B. (2022). Board characteristics and the insolvency risk of non-financial firms. *Journal of Risk and Financial Management, 15*(7), 303.

Mohsni, S., Otchere, I., & Shahriar, S. (2021). Board gender diversity, firm performance and risk-taking in developing countries: The moderating effect of culture. *Journal of International Financial Markets, Institutions and Money, 73,* 101360.

Munawar, I., Firli, A., & Iradianty, A. (2018). Pengaruh good corporate governance terhadap financial distress (studi pada perusahaan subsektor tekstil & garmen di Bursa Efek Indonesia periode tahun 2012–2016). *eProceedings of Management, 5*(2). Retrieved February 9, 2023 from https://share.google/jsSi9vCvYsshMbqmm

Natalia, I., & Rudiawarni, F. A. (2022). The effect of board size, institutional ownership and insolvency risk on financial distress before and during Covid-19. *Jurnal Dinamika Akuntansi, 14*(2), 13–29.

Santoso, L., & Nugrahanti, Y. W. (2022). The effect of ownership structure on financial distress: Evidence in Indonesian manufacturing companies. *JRAK, 14*(1), 55–64.

Setiawan, F. (2021). Financial distress analysis using Altman Z-score model in sharia banking in Indonesia. *Iqtishoduna: Jurnal Ekonomi Islam, 10*(2). Retrieved February 9, 2023 from https://www.researchgate.net/publication/355066436_Financial_Distress_Analysis_Using_Altman_Z-Score_Model_In_Sharia_Banking_In_Indonesia

Ud-din, S., Khan, M. Y., Javeed, A., & Pham, H. (2020). Board structure and likelihood of financial distress: An emerging Asian market perspective. *The Journal of Asian Finance, Economics and Business, 7*(11), 241–250.

Williansyah, F., & Meiliana, M. (2022). Kesulitan keuangan: Efek struktur kepemilikan, karakteristik dewan direksi, dan indeks tata kelola perusahaan. *Global Financial Accounting Journal, 6*(2), 288–305.