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May intellectual capital and corporate governance reduce the probability of financial distress?

Pueden el capital intelectual y el gobierno corporativo reducir la probabilidad de dificultades financieras?

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Abstract

Intellectual capital is a resource that, if optimized, will prevent the company from financial distress. By strategically investing in both intellectual and physical capital, companies can enhance their financial performance through optimal resource utilization. Therefore, this study aimed to investigate the impact of intellectual capital, capital structure, and corporate governance on mitigating financial distress and financial ratios as an early warning system. The sample consisted of financial sector companies in Indonesia from 2012 to 2022, and a binary regression model was used to estimate potential predictor variables. It was found that IC by proxy, human resources, customer, and organizational capital tends to improve the company performance, mitigating financial distress. A capital structure featuring extended maturity and high debt costs elevates the risk of financial distress. It was also discovered that companies with good governance tend to reduce agency costs, preventing organizations from bankruptcy. Financial ratios can serve as early indicators of impending capital distress, potentially leading to bankruptcy.

JEL Code: G01, G34, O34
Keywords: intellectual capital; capital structure; GCG; financial distress

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Resumen

El capital intelectual es un recurso que, si se optimiza, evitará que la empresa sufra dificultades financieras. Al invertir estratégicamente en capital físico y intelectual, las empresas pueden mejorar su desempeño financiero mediante la utilización óptima de los recursos. Por lo tanto, este estudio tuvo como objetivo investigar el impacto del capital intelectual, la estructura de capital y el gobierno corporativo en la mitigación de las dificultades financieras y los ratios financieros como sistema de alerta temprana. La muestra estuvo compuesta por empresas del sector financiero en Indonesia de 2012 a 2022, y se utilizó un modelo de regresión binaria para estimar posibles variables predictivas. Se encontró que la CI por poder, recursos humanos, clientes y capital organizacional tiende a mejorar el desempeño de la empresa, mitigando las dificultades financieras. Una estructura de capital con vencimientos prolongados y altos costos de deuda eleva el riesgo de dificultades financieras. También se descubrió que las empresas con buen gobierno tienden a reducir los costos de agencia, evitando que las organizaciones quiebren. Los ratios financieros pueden servir como indicadores tempranos de una inminente crisis de capital, que podría conducir a la quiebra.

Código JEL: G01, G34, O34
Palabras clave: capital intelectual, estructura de capital; GCG; dificultades financieras

Introduction

The global crisis due to the Covid-19 pandemic has created financial uncertainty, increasing the risk of bankruptcy often encountered in complicated macroeconomic conditions such as seen in 1998, 2008, and 2020 to 2021 (Albulescu, 2021; Nurcahyono et al., 2021). The phenomenon of bankruptcy is one of the most iconic topics because it has attracted attention in financial studies, from Beaver (1966) and Altman (1968) to the present. This causes huge losses for stakeholders, specifically creditors, investors, and employees (B. Liu et al., 2021). Bankruptcy is not a condition that suddenly occurs in a company, but through a period of financial difficulties for quite a long time (Mselmi et al., 2019). Financial distress is experienced when a company cannot manage business operations, pay off its maturing debts, with a high risk of failure, end up being depressed, and eventually be delisted from the stock exchange. Therefore, serving as an early warning that is useful for stakeholders in predicting the company's future to avoid significant losses and manage risk (Lian, 2017). The success of detecting distress is a significant warning for investors and creditors.

Financial distress is a company condition that will lead to bankruptcy or is only temporary. The study conducted by Roth et al (2002) reported that companies experiencing tremendous pressure, might keep their high leverage structure the same through debt restructuring, which decreases business performance. According to Li et al (2021), companies can then improve their performance Huang & Yen (2019) because financial distress is a temporary phenomenon influenced by a specific event (Y. Li et al., 2020). Companies with solid fundamentals tend to survive all conditions, enabling quick recuperation

from the brink of collapse. Many companies worldwide carried out the succession of the global financial crisis by optimizing their intangible assets in the form of intellectual capital, which is a significant concern for averting bankruptcy risk.

Intellectual capital is strategically increases growth opportunities and creates corporate value (Sardo et al., 2018; Xu & Liu, 2020). Companies technically use IC to create innovations that enable companies to outperform competitors and improve financial performance (Fitzgerald & Kang, 2022). IC exponentially increasescorporate value by responding to customer needs exploring, and taking advantage of market opportunities (Ibrahim, 2019). As a unique and rare resource, IC is built from three components, namely human, structural, and relational capital Chou et al (Chou et al., 2010). Human value can increase a company's competitive advantage by exploiting its knowledge, skills, and experience (Habib et al., 2020). Structural capital aims to increase the efficient use of company resources to reduce costs, thereby creating high profits. Corporate value creation is assessed from a high level of profitability and leverage with a low percentage. Relational capital involves maintaining a good name and building relationships with the concept of mutual benefit (Dumitrescu et al., 2020). This necessitates a need to develop a bankruptcy risk study encompassing intellectual capital. In general, IC can avoid or accelerate the resolution of financial distress that companies encounter by improving corporate image, reducing transaction costs, and making it easier to obtain funds (A. H. Nguyen & Doan, 2020; Sugiyanto & Febrianti, 2021; Susanti et al., 2020).

Several studies have been conducted on financial distress using various predictors, such as good corporate governance (GCG) (Ayunitha et al., 2020; Nurcahyono et al., 2022). Ineffective implementation of GCG is often observed in companies at high risk of bankruptcy. Financial ratios are predictive tools for assessing whether companies are distressed or operating within safe zones (Ghazali et al., 2015; Liang et al., 2020a; B. Liu et al., 2021). The firm's value is a reflection of its business conditions. Companies that maintain a positive image tend to mitigate the risk of financial distress (Andreou et al., 2021; S. Li et al., 2021). Stock returns and volatility are parameters of the company's market performance, while high returns encourage more investments (Chen et al., 2018; Koh et al., 2015). Earning Quality refers to the ability of earnings to show the company performance is tenable for forecasting (Dumitrescu et al., 2020). Good environmental, social, and governance (ESG) performance is a positive signal for the company (Dumitrescu et al., 2020). At the same time, a capital structure dominated by debt is an early warning of financial distress (Munchen, 2022; Tinoco & Wilson, 2013).

The difference between this and the previous study is the focus on managing intangible assets in the form of intellectual capital, which is yet to be explored. Based on the study Ahmed et al (2019), IC can increase company value with competitive advantages and enable it to seize market opportunities. Therefore, IC optimization can prevent a company from the risk of financial distress, leading to

bankruptcy when prolonged. The focus of this study is IDX-listed financial companies. The study by Ninh et al (2018), it was reported that banking companies experienced an increase in non-performing financing caused by economic shocks during the pandemic, and resulting in companies failing to pay their debts. During the pandemic, companies in the financial sector were the most affected compared to other areas (Munchen, 2022). Study Dinh et al (2021) reported the lowest financial stock returns during the pandemic. This necessitates the investigation of financial companies, including the banking and non-banknotes sector.

The main objective of this study is to empirically find out that financial ratios, good corporate governance, and intellectual capital can reduce the risk of distress and bankruptcy. The second aim is to examine the factors that influencing the company's capital structure. This topic is relevant as Indonesia still grappling with the ongoing pandemic, necessitating empirical evidence on Covid-19's potential impact on financial distress. The study has two contributions, namely elaborating the literature on the role of intellectual capital in increasing competitiveness and corporate value. The second assesses the role of good corporate governance and capital structure as a determinant of the risk of financial distress. According to Kliestik et al (2020) bankruptcy risk occurs when a company is not serious about implementing GCG and has inadequate debt control.

Literature review

During the Covid-19 pandemic, many companies experienced distress, which was marked by failure to fulfil their financial obligations (Nurcahyono et al., 2021). Financial distress is an indicator that can be used to assess bankruptcy risk, characterized by poor monetary conditions and continuous decline in performance for three consecutive periods. According to Altman (1968), one of the criteria for bankruptcy of a company is financial distress. A study by Liu et al (2021) on the Shanghai Stock Exchange explains that companies with negative returns or net asset market values lower than the nominal value of their shares for two consecutive years are categorized as companies in the handling process. In this condition, the Shanghai Stock Exchange labels "ST" before the stock code, and when it continues in the third year, it is labelled "*ST", hence, all stakeholders should be prepared for the possibility of the company imminent delisting. Study Merton (1974), financial distress is a poor economic situation that causes companies to violate stakeholder contracts, potentially leading to bankruptcy.

It is also a negative signal for creditors and investors because the possibility of losing their assets is very high. This necessitates the relevance of the determinants and factors that can detect financial distress for the management and creditors to mitigate the effect adequately . Management of intangible assets in the form of intellectual capital is a solution for companies because they can improve financial

performance and company value (Sánchez et al., 2013). Good corporate governance is the primary indicator for assessing a company, while the adequate implementation of GCG will prevent the occurrence of prolonged financial distress (Ayunitha et al., 2020). In addition, the company capital structure is used to assess the leverage behaviour in facing monetary difficulties caused by high costs (Munchen, 2022). The distress can also be analyzed using various financial ratios available in the company. For example, (Albuquerque et al., 2019) use the ratio of earnings before tax (EBITDA) and interest payments to value companies. Companies with an EBITDA value lower than one are defined as experiencing financial distress. The study Thu et al (2018) found that the probability of default indicates that the company cannot pay its debts.

Intellectual capital

According to Sardo et al (2018), Intellectual Capital is an intangible asset that has a significant role in efforts to maintain financial stability. Companies that manage their intangible assets are better than those exploiting fixed investments. Since the economic crisis of 2000 and 2008, organizations have begun to focus on developing and optimizing intellectual capital (Nawaz & Ohlrogge, 2022). Companies that improve IC can strengthen internal success factors, contributing to aggregate innovation, performance, and competitiveness (Fitzgerald & Kang, 2022; Khalique et al., 2018). Study Xu & Liu (2020) stated that IC is a strategic resource and an opportunity for competitive advantage by meeting market needs and seizing opportunities, serving as a tool to maintain a competitive advantage (Aryani & Prabowo, 2011). The study by Dumay & Guthrie (2017) and Sugiyanto & Febrianti (2021) stated that corporate value that can be formed from IC is obtained from five perspectives, namely finance, performance, customer orientation, business processes, growth prospects, and focus on employees.

IC optimization is part of a shift in management strategy that exploits fixed and intangible assets. According to Meo et al (2017), it significantly contributes, to meeting needs, cost efficiency, and improving financial status. Study Boubaker et al (2020) defined IC as a scarce resource optimized to create a competitive advantage using human, structural, and relational perspectives. Human Capital refers to employees' knowledge, skills, and experience at work. Structural finance focuses on efficiency, specifically the use of resources and costs. Relational capital aims to develop relationships in markets and foster good stakeholder relationships. Finally, bankruptcy can be prevented by optimizing IC and managing resources for a competitive advantage.

H1: Optimal intellectual capital in reducing the risk of financial distress.

Capital structure

The capital structure shows the actual value of the company and the funding component obtained from equity and debt (Brigham & Houston, 2021). According to Riahi-Belkaoui (1999), capital structure indicates the balance between equity and nature with a combination of all debt, enabling companies to have high corporate value. Determining the optimal capital structure is an essential financial policy of management because it emphasizes a combination of debt and equity according to the nature of the industry. Selecting of a policy to improve the capital structure will impact the company financial balance. A capital structure dominated by debt has a higher risk of bankruptcy because it has the potential for non-performing financing to default (Cohen et al., 2014). This necessitates the need to determine the optimal capital structure. According to Ghazali et al (2015), in determining the capital structure, management must refer to the trade-off theory Miller (1977) and Modigliani & Miller (1963), pecking order law (Myers & Majluf, 1984).

The trade-off theory states that high debt tends to increase the risk of experiencing financial distress due to high interest payments. This can lead to financial distress costs, including bankruptcy and agency costs arising from losing of the company's credibility (Miller, 1977). Furthermore, high debt levels can also offer tax-saving advantages, per this theory. The pecking order theory expresses management with a low-risk preference, where the company will prioritize funding from internal sources; when insufficient, a debt policy is considered (Ermawati et al., 2023). According to Chou et al (2010), this theory cannot be applied to companies under pressure because they will use debt to maintain leverage balance. Distressed organizations report losses, will not gain tax advantages, and usually have high transaction costs (Ghasemzadeh et al., 2021).

H2: Capital structure has a negative effect on financial distress.

Good corporate governance

Corporate governance indicates success Khalid et al (2020), while the decline in performance, according to Rahma et al (2022), was due to the failure to implement GCG. The study Shira (2022) also found that weak GCG caused bankruptcy in several countries, having the role of maintaining the survival of a depressed organization (Nurcahyono et al., 2023). Its implementation, accompanied by proper regulation and supervision, can prevent the company from potential bankruptcy (Z. Li et al., 2021). The GCG mechanism built by this study embodies board structure, size, and gender diversity. Board structure and size are success factors for organizations to avoid financial distress. Companies with many independent boards can control management's opportunistic behaviour to avoid business failure. An independent board

plays a role in safeguarding the company and shareholder's interests, thereby reducing information asymmetry and agency costs (Chen et al., 2018). The large size of the board allows extensive oversight of the management performance. According to Andreou et al (2021), the control mechanism will be effective when the level of supervision is high, and there is an alignment of interests between the company and its stakeholders. Several studies Ali et al (2021) and Sun et al (2022) reported that gender diversity positively affects financial performance, thereby preventing companies from bankruptcy. Studies Ali et al (2021) and Teodósio et al (2022) stated that gender diversity can prevent bankruptcy and plays a role in balancing the behaviour of men and women, ensuring stable policies, specifically regarding strategic decisions in maintaining business sustainability.

H3a: The role of the audit committee is to reduce financial distress and agency costs.

H3b: Bord size increases supervision, thereby reducing the potential for financial distress.

H3c: Gender diversity plays a role in balancing the behaviour of men and women to avoid financial distress.

H3d: Corporate governance influences the company capital structure policy.

Financial ratios

Financial ratios are used to detect the current condition of the company. Various ratios reported annually are the basis for investors and creditors in making investment decisions (Sukesti et al., 2021). Profitability ratios measure the company's achievements in the current year. Investors use return on assets to assess the company's effectiveness in using its assets. Organizations that can exploit their tangible and intangible assets will improve their financial performance (Citra et al., 2022; Ermawati et al., 2023). Return on equity shows the company's use of equity in generating profits. These financial ratios indicate the level of profitability obtained from the effective use of assets and equity in generating profits. Financial ratios are instruments used as an early warning system for management, investors and creditors to predict the company's condition in the future. They reflect the organisation's condition, providing confidence that the investment will provide a significant return (Mulyandani & Qintha, 2022). Management uses financial ratios as a basis for developing corporate strategy in order to improve performance (Munchen, 2022).

H4a: Financial ratios are an early warning for companies with potential financial distress.

H4b: The company's financial ratios affect the capital structure.

Study methods

Data

To empirically prove the hypothesis proposed, data were collected from financial sector companies listed on IDX from 2012 to 2022. This study focused on the financial sector (banks and non-banks) because of their high risk of bankruptcy compared to other industries. According to (Covid 19 research Center, 2020) during the Covid-19 pandemic, industries that were affected most include transportation, finance, and mining. The financial industry unique regarding characteristics, operations, and risks (Andreou et al., 2021; Pham Vo Ninh et al., 2018). This stimulated the interest in investigating the financial industry, with 880 samples, excluding 40 companies due to delisting during the observation period.

Variable measures

Measurement of company conditions (safe or distress zone) using the Z-score developed by Altman was measured by dummy one when the z-score was below 1.18 (distress zone) and 0 when the z-score was above 2.99 (safe zone) and $1.81 \leq Z \leq 2.99$) (grey zone) (Khalid et al., 2020). The Z-score model of the Altman model has better accuracy than others because it specifically formulates scores for the financial industry. While other measurements do not discuss industry specifics but use the same score level, this causes the Altman Z-score to be superior (Isayas, 2021). Intellectual capital is measured using a measurement model that precisely differentiates human, structural and relational capital—referring to the study (2020) using maturity and cost of debt to quantify capital structure. Good corporate governance selects board size, independent commissioners, audit committee, and gender diversity. This variable was selected because it represented corporate governance in a company. Financial ratios use profitability as measured by NPM and ROE. The control variables include company size, current ratio, and return on assets. Previous studies often use this variable in measuring financial performance and distress (Koh et al., 2015; Tsoulouhas, 2021). Table 1 presents operational definitions and variable measurements.

Table 1
Variable Measurement

Variable	Notation	Measures
Financial distress	FD	The dummy variable taking value 1 if the Z-score is below 1.81 (distress zone) and 0 if it is above 2.99 (safe zone).
Maturity	MAT	Ratio of long-term debt to total debt
Cost of debt	COST	ratio of financial expenses to total debt
Intellectual capital	IC	VAIC: the sum of human capital, structural capital and relational capital
Firm Size	FS	Ln Assets
Gender diversity	GD	Number of women directors as a percentage of total directors on the board
Independent commissioner	KI	Number of independent commissioners of total commissioner on the board
Audit Committees	KA	Number of audit committee of total commissioner on board
Board Size	BS	Number of commissioners and directors on board
Return on asset	ROA	EBIDA divided by total assets
Return on equity	ROE	EBITDA divided by total equity
Net profit margin	NPM	Net income devided by sales
Current ratio	CR	Current assets divided by current liabilities

In testing the hypothesis, a binary or logistic regression model was used because the dependent variable is dichotomous (binary) like other studies that have tested financial distress and bankruptcy risk (Bravo-Urquiza & Moreno-Ureba, 2021; Chen et al., 2018; Citterio & King, 2023; Miglani et al., 2015; Wu et al., 2022; Zhou et al., 2022). Compared to multiple linear regression, this method has advantages, which should meet the classical assumption requirements. This model does not require assumptions of normality and heteroscedasticity (Sekaran & Bougie, 2019). The binary regression model as a predictive tool is shown in the equation

$$FD_{i,t} = \alpha + \beta_1 MAT_{i,t} + \beta_2 COST_{i,t} + \beta_3 ICI_{i,t} + \beta_3 GD_{i,t} + \beta_4 KI_{i,t} + \beta_5 KA_{i,t} + \beta_6 BS_{i,t} + \beta_7 NPM_{i,t} + \beta_8 ROE_{i,t} + \varepsilon_i, \quad (1)$$

Variable definitions are explained in Table 1. We use control variables in the form of company size, current ratio and return on assets, the same as the study conducted by (Tsoulouhas, 2021). Equation (1) will empirically find evidence of whether intellectual capital and other variables can prevent companies from the risk of financial distress.

The second objective of this paper is to find empirical evidence on the determinants of optimal capital structure (measured by maturity and cost of debt) if a company has optimized its intangible assets in the form of intellectual capital. The testing model used is multiple linear regression. This measurement

is used because the capital structure uses a ratio scale, not a binary scale. The equation used is shown below:

$$MAT_{i,t} = \alpha + \beta_1 ICI_{i,t} + \beta_2 GD_{i,t} + \beta_3 KI_{i,t} + \beta_4 KA_{i,t} + \beta_5 BS_{i,t} + \beta_6 NPM_{i,t} + \varepsilon_{i,t} \quad (2)$$

$$COST_{i,t} = \alpha + y_1 MAT_{i,t} + \beta_1 ICI_{i,t} + \beta_2 GD_{i,t} + \beta_3 KI_{i,t} + \beta_4 KA_{i,t} + \beta_5 BS_{i,t} + \beta_6 NPM_{i,t} + \varepsilon_{i,t} \quad (3)$$

CS is a capital structure calculated with three stages. First, we find the maturity of each debt owned by the company, and second, we calculate the cost of the debt. Lastly, we regressed equation four with the regression results of equation two. In the second phase of our test, we controlled for the variable firm size, current ratio and return on assets and equity.

Result and discussion

Table 2 reported the Pearson correlation matrix used to identify a pairwise relationship between independent variables and multicollinearity problems. The correlation matrix showed that the correlation between variables did not exceed 0.9; hence, multicollinearity symptoms were not detected, and the data used was excellent and robust to test the hypothesis (Cooper et al., 2003). In addition, VIF is below 10, and tolerance is above 0.01, so multicollinearity does not occur (Hair, 2010). A robustness check was used to assess the ability of the independent variable to predict the dependent (Hair, 2010). This study follows the guidelines provided by Hair (2010), stated that the robustness check in logistic regression can be assessed from the Hosmer and Lemeshow test, Cox and Snell R^2, as well as Nagelkerke R^2 whose function is the same as R^2 in linear regression. The results showed a Hosmer and Lemeshow value of 0.313 (>0.05), indicating a fit model without difference between the data. Cox and Snell R^2 with Nagelkerke R^2 showed values of 0.702 and 0.690, meaning the predictive ability was around 70%.

Descriptive statistics was used to determine the helpful distribution for justifying the results. The financial distress (FD) variable has an average value of 0.800, indicating that 80% of the companies were experiencing monetary difficulties. Based on these data, 20% of companies in the grey and safe zones were not excluded, because of the opportunities for these organizations to risk default. The average company experiences financial distress due to decreased revenue and market value during the Covid-19 pandemic. Debt control, as measured by Mat and Cost, has an average value of 2.720, and 0.119 is closer to the minimum, hence, the sample companies have a low debt ratio.

Good corporate governance is proxied by gender diversity, independent commissioners, audit committees, and board sizes. In general, companies did not yet have a balanced gender proportion, of which men dominated most of the board, and only 20% were women. Then, independent commissioners, audit committees, and board size have an average value of 1.126, 1.06 and 0.149, indicating that the company has yet to maximise corporate governance with this variable proxy. Financial ratios using return on assets and equity, net profit margin and current ratio have an average value with a low ratio because activity constraints influence it due to Covid-19. Intellectual capital has an average value of 0.119, indicating that the sample companies have yet to make maximum use of it in create a competitive advantage.

Table 2
Correlation Matrix and Descriptive Statistics

	FD	Mat	Cost	VAIC	Ln_Asset	GD	KI	KA	BS	ROA	ROE	NPM	CR
FD	1												
MAT	-0.003	1											
COST	-0.218	0.147	1										
IC	-0.101	0.041	0.084	1									
FS	-0.378	-0.077	0.18	0.058	1								
GD	-0.295	0.097	0.158	-0.033	0.119	1							
KI	0.393	-0.012	-0.067	-0.274	-0.258	-0.071	1						
KA	-0.405	-0.029	-0.016	-0.229	0.084	-0.162	0.032	1					
BS	-0.103	0.035	0.070	0.292	0.206	0.069	-0.184	-0.075	1				
ROA	-0.199	-0.164	-0.187	0.136	0.233	-0.023	-0.113	0.011	0.112	1			
ROE	0.079	0.241	0.366	-0.046	-0.125	0.006	0.048	-0.025	-0.056	-0.774	1		
NPM	0.040	-0.194	-0.132	-0.035	0.014	-0.093	0.050	0.041	-0.052	0.174	-0.330	1	
CR	-0.206	-0.002	-0.022	0.113	-0.216	-0.259	-0.152	0.269	0.174	-0.017	0.162	-0.080	1
Obs	880	880	880	880	880	880	880	880	880	880	880	880	880
Mean	0.800	2.720	0.119	3.554	18.666	0.536	2.954	3.540	0.443	1.337	3.576	2.734	1.818
SD	0.400	2.298	0.532	7.558	3.901	0.229	1.126	1.06	0.149	5.469	15.678	21.795	2.345
Min	0.000	-1.610	-0.65	0.400	9.200	0.120	2.000	1.000	0.300	-34.27	-94.01	-84.92	-0.880
Max	1.000	6.600	4.210	56.27	29.07	2.500	6.000	8.000	0.780	25.87	36.50	269.8	8.310
VIF	1.671	4.252	1.566	0.546	1.125	6.206	5.038	2.028	2.056	3.740	1.049	2.029	0.759
Tolerance	0.077	0.237	0.192	0.076	0.442	0.135	0.400	0.822	0.232	0.168	0.223	0.111	0.183
Hosmer &Lemeshow	0.313												
Cox & Snell R^2	0.702												
Nagelkerke R^2	0.690												

Table 3
Logistic regression analysis results

Variable	Expected sign	FD
Mat	H-	-0.428** (0.043)
Cost	+	-1.102* (0.008)
VAIC	-	-0.109* (0.001)
Asset	-	-0.012 (0.824)
GD	-	1.960*** (0.069)
KI	+	1.094 (0.299)
KA	-	-0.077** (0.049)
BS	-	-10.682*** (0.084)
ROA	-	-0.031** (0.048)
ROE	-	-0.049** (0.073)
NPM	+	0.029 (0.302)
CR	-	-0.518* (0.000)
LEV	+	0.377*** (0.067)

P-value: *<0,01%, **<0.05%, ***<0.1%

The logistic regression results in Table 3 show the analysis using the logistic regression model, indicating the influence of intellectual capital, monetary structure, good corporate governance, financial ratios, and control variables on the risk of distress.

Table 3 shows that bankruptcy risk can decrease significantly when the company effectively maximises intellectual capital. The capital structure assessed by maturity can prevent a company from financial distress, but it differs from the capital structure assessed by cost. Good corporate governance by using board size, audit committee, and gender diversity can prevent companies from the risk of financial distress. Profitability and leverage financial ratios can be an early warning system in detecting the distress risk.

The control variable firm size, was not able to be a predictor for financial distress, nor was the independent commissioner. Several studies have shown that an independent commissioner oversees business operations as a whole, indicating that the optimal use will prevent the risk of financial distress. However, more independent commissioners may need help coordinating when supervising and making

decisions to mitigate the risk of distress. Financial ratios in the form of current ratios and returns on assets can prevent distress, making them more liquid and highly profitability.

This study was consistent with several previous reports where financial distress will decrease in competitive advantage through intellectual capital (A. H. Nguyen & Doan, 2020). The intellectual effectiveness of capital can create innovation and increase the company's resilience from shocks (Dumay & Guthrie, 2017). The capital structure, dominated by debt, increases the risk of financial distress (Sardo et al., 2018). A capital structure with a high level of debt can cause default, potentially causing financial distress and the risk of business liquidation (Albuquerque et al., 2019). Good corporate governance with audit committees that can carry out their duties effectively and comprehensively will reduce the risk of financial distress (Dianova & Nahumury, 2019). These results were consistent with Sardo et al (2018), who found a negative relationship between the audit committee and financial distress. Similarly, the larger the board size, the easier it will be to realize corporate governance (Zhou et al., 2022).

The gender diversity of board members or company leadership can minimize the risk of financial distress. The study Pelaez-Verdet & Loscertales-Sanchez (2021) and Rahman & Ying (2020) reported that a more significant proportion of women as board members will reduce the risk of financial difficulties. Women tend to think carefully and have a lower risk preference than men (Sun et al., 2022). Table 4 shows the results of the empirical testing of equations (2) and (3). The panel data regression results showed the influence of intellectual capital, good corporate governance, financial ratios, and control variables on corporate debt policy using debt maturity (column 1) and debt costs (column 2).

Based on Table 4 in column 1 (MAT), the maturing debt policy is influenced positively by intellectual capital. Companies that can manage their intellectual capital well and efficiently will always consider the maturity of debt and its costs. The closer the maturity is, the smaller the company risk, compared to long-term debt, which should have a high risk of default. The financing component with high debt costs will encourage effective management to get a return that exceeds the mortgage cost. Companies with competitive advantages will always choose debt settlement and avoid significant risks due to mortgage financing (Crespí-Cladera et al., 2021). Gender diversity helped determine the capital structure and was significantly related to MAT and COST. Companies having a female composition as board members have lower MAT and COST.

Table 4
The relationship between good corporate governance and financial ratios on corporate capital structure decisions

Variable	Expected sign	Mat	Expected sign	Cost
Mat			-	-0.008 (0.036)**
Cost	-	-0.228*** (0.061)		
VAIC	+	0.046** (0.088)	+	0.005*** (0.097)
Asset	+	0.088*** (0.072)	+	-0.028** (0.002)
GD	-	0.022** (0.015)	-	-0.213** (0.028)
KI	-	-0.196 (0.058)***	-	-0.076*** (0.067)
KA	-	0.484** (0.048)	-	0.021** (0.057)
BS	-	0.012*** (0.068)	-	0.765 (0.065)***
ROA	-	-4.606*** (0.065)	-	-0.007** (0.021)
ROE	-	0.036** (0.019)	-	-0.004*** (0.075)
NPM	-	-0.02* (0.000)	+	0.002*** (0.092)
CR	+	0.015** (0.021)	-	0.222* (0.003)

P-value: *<0,01%, **<0.05%, ***<0.1%

These results were in line with the study conducted by García & Herrero (2021) reported that women have a higher scepticism, with clear supervision, reduce agency costs, and avoid significant risks due to strategic policies taken by companies. The audit committee and independent commissioners have significant influence over MAT and COST. The audit committee that oversees debt policy will encourage companies to select a capital structure with a low maturity level and cost of debt. However, in contrast to the Independent commissioners, through empirical results, the board of commissioners preferred high levels of MAT and COST. This was because many companies have proposed mortgage relaxation after the pandemic and significantly increased the amount of debt. The financial ratios variables ROA, ROE, NPM, and CR were the basis for determining a company's debt policy. Companies with high profitability selected a conservative debt policy and used their capital as shares for their business operations.

Discussion

Intellectual capital

Intellectual capital is all knowledge embedded in organizations used to create competitive advantage (Susanti et al., 2020). IC, consisting of three components, can empirically improve the company's innovation performance, thereby minimizing the risk of bankruptcy. The results showed that intellectual capital reduced the risk of financial distress by increasing the company performance (Abdullah & Sofian, 2012; Kalkan et al., 2014). IC was also one of the essential components in a company that increased the credibility and legibility of financial statements. Measurement of intellectual capital can encourage the achievement of company goals both on an intra and extra-organizational scale. Optimization of intellectual capital reflects the efficiency of resource allocation, minimizes organizational costs and provides actual information used to predict future growth and the company blueprint. Financial distress has a significant economic impact on employees, creditors, and investors (Susanti et al., 2020).

These results correlated with the study conducted by Sardo et al (2018), which reported that intellectual capital could reduce the risk of financial distress. IC encouraged companies to improve their financial performance by creating innovation and competitive advantage (H. T. Nguyen et al., 2022). Other studies also showed that intellectual capital increases a company competitive advantage (Ashraf, 2021; Ermawati et al., 2023; Fizabaniyah et al., 2023). High-performance companies can create good finances (non-distress) and reduce the cost of capital. Intellectual capital indicates competent, independent, and capable managers, which is human capital and increases company profits.

Capital structure

Based on these results, capital structure, as measured by maturity and debt cost, negatively affects financial distress. Therefore, the longer the debt repayment term the higher the cost, with a high risk of bankruptcy. Companies with high debt ratios have a high risk of bankruptcy when they cannot properly to manage the cost of debt (Deliana et al., 2022; Hartanto et al., 2023). A high debt ratio indicates that the company has an enormous mortgage burden, reducing the ability to finance operations. Besides that, when the company has a high leverage value but uses the debt for its operational activities, such as paying for expenses, buying assets, and remitting past dues, it can avoid financial distress. Companies with high debt impact the risk of more significant loss opportunities because the obligation to pay interest will reduce the net profit (Lian, 2017).

Good corporate governance

Based on empirical results, good corporate governance played a significant role in financial distress. Companies that can streamline the role of GCG tend to reduce the risk of financial distress and minimize agency conflict (Muzdalifah, 2021; Prihanto, 2020). GCG's role was to increase management's transparency and accountability through oversight of all company operations to avoid adverse selection and moral hazard, and to detect fraud early. Therefore, it can prevent the company from financial distress or even bankruptcy. The empirical results were proven by Table 3, which stated that gender diversity, independent commissioners, audit committees, and board size have a negative effect on the risk of financial distress. Gender diversity and its impact on companies are still debated among academics and practitioners. However, regulations in Indonesia seem to agree with the gender theory and diversity among the board members. The presence of women on the board can enhance managerial oversight, thereby reducing agency conflicts (Fizabaniyah et al., 2023; García & Herrero, 2021). The heterogeneity of board members can encourage effective oversight and reduce information asymmetry (Gong et al., 2022). Likewise, the company debt policy is heavily influenced by information asymmetry (Okafor et al., 2021; Tinoco & Wilson, 2013). Women have better risk preferences than men, specifically in avoiding significant risks (Habib et al., 2020). The diversity of boards encouraged using short-term debt and low capital costs (Z. Li et al., 2021; Lian, 2017; Roth et al., 2002). Independent commissioners, audit committees, and board size were components of GCG widely used to determine how effective companies carry out the level of supervision.

Financial ratios

Financial ratios were one of the instruments management used in making strategic decisions. The financial ratios supported the previous hypothesis, which can predict current and future economic and business activities (Fizabaniyah et al., 2023; Z. Li et al., 2021). Ratio analysis obtained from various financial information in the annual report enabled users to detect financial distress. The purpose of ratio analysis was to obtain financial ratios, providing information about future events, and for distress models or bankruptcy prediction (Dinh et al., 2021; Liang et al., 2020b; Pham Vo Ninh et al., 2018; Zhou et al., 2022). Financial ratios can also assess the capital structure management selects in the business activities.

Conclusion

This study extends previous research by examining the role of intellectual capital on financial distress risk and company capital structure decisions. We conducted a bankruptcy risk analysis through financial distress signals in financial sector companies in recent years. Companies that optimally utilize intellectual property in their business activities will continue to produce innovations that will improve financial performance, reducing the risk of financial distress. Companies also need to be aware of the risk of default through maturity and cost of debt; if not managed properly, it will burden the company, reducing its profit level. Furthermore, the company will avoid bankruptcy risk if it has a good growth trend which is reflected in the value of the company. This can be achieved with good corporate governance. Finally, financial ratios can be an early warning system that stakeholders can use to be aware of the various risks the company will face.

References

Abdullah, D. F., & Sofian, S. (2012). The Relationship between Intellectual Capital and Corporate Performance. Procedia - Social and Behavioral Sciences, 40(6), 537–541. https://doi.org/10.1016/j.sbspro.2012.03.227

Ahmed, A., Khurshid, M. K., Zulfiqar, M., & Yousaf, M. U. (2019). Impact of intellectual capital on firm's value: The moderating role of managerial ownership. SMART Journal of Business Management Studies, 15(2), 28. https://doi.org/10.5958/2321-2012.2019.00012.5

Albulescu, C. T. (2021). COVID-19 and the United States financial markets' volatility. Finance Research Letters, 38(March 2020), 101699. https://doi.org/10.1016/j.frl.2020.101699

Albuquerque, F., Rodrigues, N., Texeira-Quirós, J., & Do Rosário Fernandes Justino, M. (2019). The conservatism as a cultural value that underlies the financial reporting: Empirical evidence from listed companies in European regulated markets. Contaduria y Administracion, 64(2), 1–21. https://doi.org/10.22201/fca.24488410e.2018.1673

Ali, B., Ghaleb, A., Qaderi, S. A., Almashaqbeh, A., & Qasem, A. (2021). Cogent Business & Management Corporate social responsibility , board gender diversity and real earnings management : The case of Jordan Corporate social responsibility , board gender diversity and real earnings management : The case of Jordan. Cogent Business & Management, 8(1). https://doi.org/10.1080/23311975.2021.1883222

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

Andreou, C. K., Andreou, P. C., & Lambertides, N. (2021). Financial distress risk and stock price crashes.

Journal of Corporate Finance, 67(September 2019), 101870. https://doi.org/10.1016/j.jcorpfin.2020.101870

Aryani, Y. A., & Prabowo, A. (2011). The Effects of Corporate Governace on The Intelectual Capital Disclosure : An Empirical Study from Banking Sector in Indonesia. World Review of Business Research, I(36), 66–83.

Ashraf, B. N. (2021). Stock markets' reaction to Covid-19: Moderating role of national culture. Finance Research Letters, 41(November), 101857. https://doi.org/10.1016/j.frl.2020.101857

Ayunitha, A., Sulastri, H. W., Fauzi, M. I., Prabowo, M. A. S., & Nugraha, N. M. (2020). Does the Good Corporate Governance Approach Affect Agency Cost? Solid State Technology, 63(4), 3760–3770. www.solidstatetechnology.us

Beaver, W. H. (1966). Financial ratios as predictors of failure. Journal of Accounting Research, 71–111.

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

Bravo-Urquiza, F., & Moreno-Ureba, E. (2021). Does compliance with corporate governance codes help to mitigate financial distress? Research in International Business and Finance, 55(October 2020), 101344. https://doi.org/10.1016/j.ribaf.2020.101344

Brigham, E. F., & Houston, J. F. (2021). Fundamentals of financial management: Concise. Cengage Learning.

Chen, J., De Cesari, A., Hill, P., & Ozkan, N. (2018). Initial compensation contracts for new executives and financial distress risk: An empirical investigation of UK firms. Journal of Corporate Finance, 48, 292–313. https://doi.org/10.1016/j.jcorpfin.2017.11.002

Chou, H. I., Li, H., & Yin, X. (2010). The effects of financial distress and capital structure on the work effort of outside directors. Journal of Empirical Finance, 17(3), 300–312. https://doi.org/10.1016/j.jempfin.2009.12.005

Citra, A., Syaipudin, U., & Dharma, F. (2022). Fraud Detection of Financial Statements through the Fraud Hexagon Approach in Indonesian SOEs. Asian Journal of Economics, Business and Accounting, 22(22), 45–58. https://doi.org/10.9734/AJEBA/2022/v22i2230709

Citterio, A., & King, T. (2023). The role of Environmental, Social, and Governance (ESG) in predicting bank financial distress. Finance Research Letters, 51(July 2022), 103411. https://doi.org/10.1016/j.frl.2022.103411

Cohen, S., Naoum, V. C., & Vlismas, O. (2014). Intellectual capital, strategy and financial crisis from a SMEs perspective. Journal of Intellectual Capital, 15(2), 294–315. https://doi.org/10.1108/JIC-11-2013-0110

Cooper, D. R., Schindler, P. S., Cooper, D. R., & Schindler, P. S. (2003). Business research methods.

Crespí-Cladera, R., Martín-Oliver, A., & Pascual-Fuster, B. (2021). Financial distress in the hospitality industry during the Covid-19 disaster. Tourism Management, 85(February). https://doi.org/10.1016/j.tourman.2021.104301

Deliana, D., Rahman, A., Monica, L., & Susanti, A. (2022). The Effect Of Financial Distress And Audit Delay On Auditor Switching On Banking Companies Listed On The Indonesia Stock Exchange. Kajian Akuntansi, 23(1), 26–42. https://doi.org/10.29313/ka.v23i1.9318

Dianova, A., & Nahumury, J. (2019). Investigating the Effect of Liquidity, Leverage, Sales Growth and Good Corporate Governance on Financial Distress. Journal of Accounting and Strategic Finance, 2(2), 143–156. https://doi.org/10.33005/jasf.v2i2.49

Dinh, D. V., Powell, R. J., & Vo, D. H. (2021). Forecasting corporate financial distress in the Southeast Asian countries: A market-based approach. Journal of Asian Economics, 74, 101293. https://doi.org/10.1016/j.asieco.2021.101293

Dumay, J., & Guthrie, J. (2017). Involuntary disclosure of intellectual capital: is it relevant? Journal of Intellectual Capital, 18(1), 29–44. https://doi.org/10.1108/JIC-10-2016-0102

Dumitrescu, A., El Hefnawy, M., & Zakriya, M. (2020). Golden geese or black sheep: Are stakeholders the saviors or saboteurs of financial distress? Finance Research Letters, 37(November 2019), 101371. https://doi.org/10.1016/j.frl.2019.101371

Ermawati, D., Nurcahyono, N., Sari, D. N., & Fakhruddin, I. (2023). The Dynamic Impact of Intellectual Capital on Firm Value : Evidence from Indonesia. International Conference on Business, Accounting, Banking, and Economics, 1, 246–262. https://doi.org/10.2991/978-94-6463-154-8

Fitzgerald, R., & Kang, J. W. (2022). Transforming Korean business? Foreign acquisition, governance and management after the 1997 Asian crisis. Asia Pacific Business Review, 28(1), 111–129. https://doi.org/10.1080/13602381.2021.1972612

Fizabaniyah, R., Nurcahyono, N., Argojuwono, A. D. A., & Hernawati, R. I. (2023). Financial Ratio , Board Diversity and Financial Distress : Evidence from Indonesia. International Conference on Business, Accounting, Banking, and Economics, 1, 307–320. https://doi.org/10.2991/978-94-6463-154-8

García, C. J., & Herrero, B. (2021). Female directors, capital structure, and financial distress. Journal of Business Research, 136(November 2020), 592–601. https://doi.org/10.1016/j.jbusres.2021.07.061

Ghasemzadeh, M., Heydari, M., & Mansourfar, G. (2021). Earning Volatility, Capital Structure Decisions and Financial Distress by SEM. Emerging Markets Finance and Trade, 57(9), 2632–2650. https://doi.org/10.1080/1540496X.2019.1663729

Ghazali, A. W., Shafie, N. A., & Sanusi, Z. M. (2015). Earnings Management: An Analysis of Opportunistic Behaviour, Monitoring Mechanism and Financial Distress. Procedia Economics and Finance, 28(April), 190–201. https://doi.org/10.1016/s2212-5671(15)01100-4

Gong, X., Lin, A., & Chen, X. (2022). CEO–CFO gender congruence and stock price crash risk in energy companies. Economic Analysis and Policy, 75, 591–609. https://doi.org/10.1016/j.eap.2022.06.010

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, 1023–1075.

Hair, J. F. (2010). Multivariate data analysis : a global perspective (Pearson Education (ed.)).

Hartanto, M. C., Prajanto, A., & Nurcahyono, N. (2023). Determinants of going-concern audit opinions : Empirical evidence from listed mining firms in Indonesia. Maksimum: Media Akuntansi Universitas Muhammadiyah Semarang, 13(1), 17–27. https://doi.org/10.26714/mki.13.1.2023.17-27

Huang, Y.-P., & Yen, M.-F. (2019). A new perspective of performance comparison among machine learning algorithms for financial distress prediction. Applied Soft Computing, 83, 105663.

Ibrahim, R. (2019). Corporate governance effect on financial distress: evidence from In-donesian public listed companies. Journal of Economics, Business & Accountancy Ventura, 21(3), 415. https://doi.org/10.14414/jebav.v21i3.1626

Isayas, Y. N. (2021). Financial distress and its determinants: Evidence from insurance companies in Ethiopia. Cogent Business and Management, 8(1). https://doi.org/10.1080/23311975.2021.1951110

Covid 19 research Center, (2020). https://coronavirus.jhu.edu/map.html

Kalkan, A., Bozkurt, Ö. Ç., & Arman, M. (2014). The Impacts of Intellectual Capital, Innovation and Organizational Strategy on Firm Performance. Procedia - Social and Behavioral Sciences, 150, 700–707. https://doi.org/10.1016/j.sbspro.2014.09.025

Khalid, M., Abbas, Q., Malik, F., & Ali, S. (2020). Impact of audit committee attributes on financial distress: Evidence from Pakistan. International Journal of Financial Engineering, 07(01), 2050005. https://doi.org/10.1142/s242478632050005x

Khalique, M., Bontis, N., Bin Shaari, J. A. N., Yaacob, M. R., & Ngah, R. (2018). Intellectual capital and organisational performance in Malaysian knowledge-intensive SMEs. International Journal of Learning and Intellectual Capital, 15(1), 20–36. https://doi.org/10.1504/IJLIC.2018.088345

Kliestik, T., Valaskova, K., Lazaroiu, G., Kovacova, M., & Vrbka, J. (2020). Remaining financially healthy and competitive: The role of financial predictors. Journal of Competitiveness, 12(1),

74–92. https://doi.org/10.7441/joc.2020.01.05

Koh, S. K., Durand, R. B., Dai, L., & Chang, M. (2015). Financial distress: Lifecycle and corporate restructuring. Journal of Corporate Finance, 33, 19–33. https://doi.org/10.1016/j.jcorpfin.2015.04.004

Li, S., Shi, W., Wang, J., & Zhou, H. (2021). A Deep Learning-Based Approach to Constructing a Domain Sentiment Lexicon: a Case Study in Financial Distress Prediction. Information Processing and Management, 58(5), 102673. https://doi.org/10.1016/j.ipm.2021.102673

Li, Y., Li, X., Xiang, E., & Geri Djajadikerta, H. (2020). Financial distress, internal control, and earnings management: Evidence from China. Journal of Contemporary Accounting and Economics, 16(3), 100210. https://doi.org/10.1016/j.jcae.2020.100210

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

Lian, Y. (2017). Financial distress and customer-supplier relationships. Journal of Corporate Finance, 43, 397–406. https://doi.org/10.1016/j.jcorpfin.2017.02.006

Liang, D., Tsai, C.-F., Lu, H.-Y. R., & Chang, L.-S. (2020a). Combining corporate governance indicators with stacking ensembles for financial distress prediction. Journal of Business Research, 120, 137–146.

Liang, D., Tsai, C. F., Lu, H. Y. (Richard), & Chang, L. S. (2020b). Combining corporate governance indicators with stacking ensembles for financial distress prediction. Journal of Business Research, 120(August), 137–146. https://doi.org/10.1016/j.jbusres.2020.07.052

Liu, B., Ju, T., Bai, M., & Yu, C. F. (Jeffrey). (2021). Imitative innovation and financial distress risk: The moderating role of executive foreign experience. International Review of Economics and Finance, 71(September 2020), 526–548. https://doi.org/10.1016/j.iref.2020.09.021

Liu, Z., Huynh, T. L. D., & Dai, P. F. (2021). The impact of COVID-19 on the stock market crash risk in China. Research in International Business and Finance, 57(March), 101419. https://doi.org/10.1016/j.ribaf.2021.101419

Mangena, M., Priego, A. M., & Manzaneque, M. (2020). Bank power, block ownership, boards and financial distress likelihood: An investigation of Spanish listed firms. Journal of Corporate Finance, 64(April), 101636. https://doi.org/10.1016/j.jcorpfin.2020.101636

Meo, F. Di, Manuel, J., Lara, G., & Surroca, J. A. (2017). Managerial entrenchment and earnings management. Journal of Accounting and Public Policy, 36(5), 399–414. https://doi.org/10.1016/j.jaccpubpol.2017.07.003

Merton, R. C. (1974). On the pricing of corporate debt: The risk structure of interest rates. The Journal of

Finance, 29(2), 449–470.

Miglani, S., Ahmed, K., & Henry, D. (2015). Voluntary corporate governance structure and financial distress: Evidence from Australia. Journal of Contemporary Accounting and Economics, 11(1), 18–30. https://doi.org/10.1016/j.jcae.2014.12.005

Miller, E. M. (1977). Risk, uncertainty, and divergence of opinion. The Journal of Finance, 32(4), 1151–1168.

Modigliani, F., & Miller, M. H. (1963). Corporate income taxes and the cost of capital: a correction. The American Economic Review, 433–443.

Mselmi, N., Hamza, T., Lahiani, A., & Shahbaz, M. (2019). Pricing corporate financial distress: Empirical evidence from the French stock market. Journal of International Money and Finance, 96, 13–27. https://doi.org/10.1016/j.jimonfin.2019.04.008

Mulyandani, V. C., & Qintha, Y. (2022). The Effect of Profitability, Solvency and Company Size On Audit Delay. COMSERVA Indonesian Jurnal of Community Services and Development, 1(12), 1199–1204. https://doi.org/10.36418/comserva.v1i12.194

Munchen, D. da R. (2022). The effect of financial distress on capital structure: The case of Brazilian banks. Quarterly Review of Economics and Finance, 86, 296–304. https://doi.org/10.1016/j.qref.2022.07.010

Muzdalifah, M. (2021). Pengaruh Good Corporate Governance Terhadap Fraud Pada Perusahaan Perbankan. Amnesty: Jurnal Riset Perpajakan, 3(1), 56–64. https://doi.org/10.26618/jrp.v3i1.3406

Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. Journal of Financial Economics, 13(2), 187–221.

Nawaz, T., & Ohlrogge, O. (2022). Clarifying the impact of corporate governance and intellectual capital on financial performance: A longitudinal study of Deutsche Bank (1957–2019). International Journal of Finance and Economics, August 2020, 1–16. https://doi.org/10.1002/ijfe.2620

Nguyen, A. H., & Doan, D. T. (2020). The impact of intellectual capital on firm value: Empirical evidence from Vietnam. International Journal of Financial Research, 11(4), 74–85. https://doi.org/10.5430/ijfr.v11n4p74

Nguyen, H. T., Alphonse, P., & Nguyen, H. M. (2022). Financial distress and the accrual anomaly. Journal of Contemporary Accounting and Economics, 18(3), 100319. https://doi.org/10.1016/j.jcae.2022.100319

Nurcahyono, N., Hanum, A. N., & Sinarasri, A. (2023). Does Board Diversity and Financial Ratio Predict the Risk of Financial Distress ?? International Conference on Business, Accounting, Banking, and Economics, April 2020, 337–348. https://doi.org/10.2991/978-94-6463-154-8

Nurcahyono, N., Hanum, A. N., & Sukesti, F. (2021). COVID 19 Outbreak and Stock Market Return: Evidence from Indonesia. Jurnal Dinamika Akuntansi Dan Bisnis, 8(1), 47–58. https://doi.org/10.24815/jdab.v8i1.18934

Nurcahyono, N., Sukesti, F., & Haerudin, H. (2022). The Effect of Good Corporate Governance Mechanisms, Financial Ratio, and Financial Distress: A Study on Financial Companies. ICBAE. https://doi.org/10.4108/eai.10-8-2022.2320848

Okafor, A., Adeleye, B. N., & Adusei, M. (2021). Corporate social responsibility and financial performance: Evidence from US tech firms. Journal of Cleaner Production, 292, 126078.

Pelaez-Verdet, A., & Loscertales-Sanchez, P. (2021). Key ratios for long-term prediction of hotel financial distress and corporate default: Survival analysis for an economic stagnation. Sustainability (Switzerland), 13(3), 1–17. https://doi.org/10.3390/su13031473

Pham Vo Ninh, B., 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

Prihanto, H. (2020). Earnings Management : Empirical Evidence on Determinants in Indonesia. European Journal of Business and Management, July. https://doi.org/10.7176/ejbm/12-3-04

Rahma, A. M., Nurcahyono, N., & Sinarasri, A. (2022). Moderating Effects of Institutional Ownership on the Relation Between Capital Structure. International Conference on Business, Accounting, Banking, and Economics, 1, 293–306. https://doi.org/10.2991/978-94-6463-154-8

Rahman, M. J., & Yixuan Ying. (2020). Accountancy Business and the Public Interest 2020. Accountancy Business and the Public Interest, Liu 2013, 280–296.

Riahi-Belkaoui, A. (1999). Value added reporting and research: state of the art.

Roth, R., Evans, R., Lang, A., & Kahl, G. (2002). Fundamental measure theory for hard-sphere mixtures revisited: the White Bear version. Journal of Physics: Condensed Matter, 14(46), 12063.

Sánchez, C. P., Monelos, P. de L., & López, M. R. (2013). A parsimonious model to forecast financial distress, based on audit evidence. Contaduría y Administración, 58(4), 151–173. https://doi.org/10.1016/s0186-1042(13)71237-3

Sardo, F., Serrasqueiro, Z., & Alves, H. (2018). On the relationship between intellectual capital and financial performance: A panel data analysis on SME hotels. International Journal of Hospitality Management, 75(January), 67–74. https://doi.org/10.1016/j.ijhm.2018.03.001

Sekaran, U., & Bougie, R. (2019). Research methods for business: A skill building approach. john wiley & sons.

Shira, R. K. (2022). Corporate governance , competition and earnings management : evidence from Asian emerging economies. Journal of Financial Reporting and Accounting, 20(1), 1–17.

https://doi.org/10.1108/JFRA-07-2022-0270

Sugiyanto, S., & Febrianti, F. D. (2021). The effect of green intellectual capital, conservatism, earning management, to future stock return and its implications on stock return. The Indonesian Accounting Review, 11(1), 93. https://doi.org/10.14414/tiar.v11i1.2286

Sukesti, F., Ghozali, I., Fuad, F., Almasyhari, A. K., & Nurcahyono, N. (2021). Factors Affecting the Stock Price: The Role of Firm Performance. Journal of Asian Finance, Economics and Business, 8(2), 165–173. https://doi.org/10.13106/jafeb.2021.vol8.no2.0165

Sun, Y., Xu, C., Li, H., & Cao, Y. (2022). What drives the innovation in corporate social responsibility (CSR) disclosures? An integrated reporting perspective from China. Journal of Innovation and Knowledge, 7(4), 100267. https://doi.org/10.1016/j.jik.2022.100267

Susanti, N., Widajatun, V. W., Sumantri, M. B. A., & Nugraha, N. M. (2020). Implications of Intellectual Capital Financial Performance and Corporate Values (Studies on Goods and Consumption Sector 2013-2017 period). International Journal of Psychosocial Rehabilitation, 24(07), 6588–6599.

Teodósio, J., Vieira, E., & Madaleno, M. (2022). Gender Diversity and Financial Risk: A Bibliometric Analysis. In Handbook of Research on New Challenges and Global Outlooks in Financial Risk Management (pp. 38–63). IGI Global.

Thu, P. A., Khanh, T. H. T., Ha, N. T. T., & Khuong, N. V. (2018). Perceived audit quality, earnings management and cost of debt capital: Evidence from the energy listed firms on Vietnam's stock market. International Journal of Energy Economics and Policy, 8(6), 120–127. https://doi.org/10.32479/ijeep.6992

Tinoco, M. H., & Wilson, N. (2013). Financial distress and bankruptcy prediction among listed companies using accounting, market and macroeconomic variables. International Review of Financial Analysis, 30, 394–419. https://doi.org/10.1016/j.irfa.2013.02.013

Tsoulouhas, T. (2021). Why do countries in financial distress strategically delay seeking help? Journal of Government and Economics, 2(June), 100006. https://doi.org/10.1016/j.jge.2021.100006

Wu, D., Ma, X., & Olson, D. L. (2022). Financial distress prediction using integrated Z-score and multilayer perceptron neural networks. Decision Support Systems, 159(November 2021), 113814. https://doi.org/10.1016/j.dss.2022.113814

Xu, J., & Liu, F. (2020). The impact of intellectual capital on firm performance: A modified and extended vaic model. Journal of Competitiveness, 12(1), 161–176. https://doi.org/10.7441/joc.2020.01.10

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