DETERMINANT FACTORS OF FINANCIAL DISTRESS IN CONSTRUCTION COMPANIES: MODERATION BY COMPANY SIZE

Moh. Afrizal Miradji[1]✉, Irsyad Kamal[2], Dewi Sartika[3], Cuk Jaka Purwanggono[4], Iwan Setiawan[5]
[1]Universitas PGRI Adi Buana Surabaya, Jawa Timur, Indonesia
[2]Universitas Padjadjaran, Bandung, Indonesia
[3]Universitas Bina Darma, Palembang, Indonesia
[4]Universitas Wahid Hasyim, Semarang, Indonesia
[5]Universitas Islam Negeri Sunan Gunung Djati Bandung, Jawa Barat, Indonesia
✉afrizal@unipasby.ac.id

https://doi.org/10.46367/jas.v8i2.2074
Received: Aug 22, 2024 **Revised:** Nov 04, 2024 **Accepted:** Nov 14, 2024 **Published:** Dec 20, 2024

ABSTRACT

The purpose of this study is to investigate and evaluate the influence of intellectual capital (IC), debt-to-equity ratio (DER), and return on assets (ROA) on financial distress moderated by company size. This study uses a quantitative method with secondary data derived from financial reports obtained through the official website of the Indonesia Stock Exchange (IDX). Construction companies listed on the IDX 2017-2022 became the research population, and the sampling technique used purposive sampling to obtain 10 construction company sub-sector samples with 60 observation data. The data analysis technique uses panel data regression with the help of EViews 10 software. The results of this study indicate that intellectual capital, ROA, and company size have a positive effect, but DER has a negative effect on financial distress; company size is proven to be able to moderate the effect of intellectual capital and ROA on financial distress. Company size cannot moderate the effect between DER and financial distress. This research can complement existing theories and be a reference for future research on financial distress. This research can serve as a guide for companies that want to improve their performance and for investors who assess company performance to obtain investment certainty; in addition, the management of stock issuers can maintain good company performance to increase investor confidence sustainably.

Keywords: intellectual capital, DER, ROA, company size, financial distress.

INTRODUCTION

The global financial crisis has dramatically impacted numerous issues, including the high unemployment rate and elevated credit risk that has caused companies to go bankrupt, including the construction company (Ninh, Thanh, and Hong 2018). In recent years, the Indonesian government has focused on the infrastructure sector. Infrastructure development is one of the most crucial and essential components to quicken the process of national development (Tegor et al. 2024). Infrastructure is crucial as one of the main engines of economic expansion (Idawati and Wardhana 2021). The development of infrastructure, including building new airports, toll roads, high-speed trains, ports, and other facilities, is a major priority for President Joko Widodo during his administration, which runs from 2014 to 2021. The increase in the state budget for the infrastructure sector from 2016 to 2021 is additional proof of this (Kim 2023). Nevertheless, in 2020, the budget outcomes, which had an initial budget of 423.3 trillion, need to be

lowered to 281.1 trillion. This is due to a reallocation of funds to address the COVID-19 pandemic that struck Indonesia in 2020. In addition to reducing funding for areas of the economy, the pandemic impacts financial performance significantly in infrastructure companies. An additional indication is the rise in the infrastructure sector budget between 2016 and 2021 (Widodo and Yujana 2022).

The average business income from construction service company-managed projects started to rise in 2016, but the increase in income did not last long. In 2019, a decline began to occur, marked by decline in the average value of income earned (Montalbán-Domingo et al. 2022). When considering total liabilities, it is essential to remember that construction companies' average total liabilities tend to rise significantly along with income increases. This is contradictory with infrastructure development, which is very massive. However, the costs and effects on construction service companies are rising, posing a risk to their ability to continue operating both state-owned and privately owned (Dini, Siregar, and Santoso 2023). Theoretically, in order to prevent bankruptcy and provide the business with a more accurate understanding of its position, management must be able to recognize financial crises in time and conduct predictive analysis (Komala and Triyani 2020).

Several factors can lead to financial difficulties for businesses, including intellectual capital (IC). The financial statements do not acknowledge the intellectual capital, even though it is a precious asset that outside parties also require. Since it is challenging to measure intellectual capital, the company developed the VAIC (Value Added Intellectual Coefficient) method, intended to offer data regarding tangible and intangible assets value creation efficiency (Fashhan and Fitriana 2019). VAIC method is valuable for evaluating a company's intellectual capital performance. Improved performance within a company can be attributed to intellectual capital. The organization's intellectual capital management is improving; its performance will be evaluated favorably. Conversely, when it is not, company performance will be evaluated unfavorably, indicating that the performance of its current resources is declining. If intellectual capital performance can be maximized, then the company will have added value, which can provide its characteristics (Jati, Kholmi, and Jannah 2023). A study by Ozkan, Cakan, and Kayacan (2017); Pradana and Chalid (2023) discovered a substantial relationship between financial distress and intellectual capital. Meanwhile, a study by Shahwan and Habib (2020); Widhiastuti and Karimah (2024) shows that intellectual capital did not significantly affect financial distress.

Apart from intellectual capital, another factor that influences financial distress is debt to equity ratio (DER). This study used DER as a proxy for leverage. Compared to using its capital, the company used a significant amount of debt to finance its operations. DER represents the proportion of the total debt the company holds to its total equity or capital owned (Erayanti 2019). DER indicates the degree of company risk; the higher the DER, the larger the company's long-term liability composition, which raises the default risk. The amount of risk the company will bear of financial distress will vary depending on how much debt it has as a corporation (Santoso et al. 2023). Research conducted by (Mesak 2019; Ugur, Solomon, and Zeynalov 2022), shows that the debt-to-equity ratio affects financial distress significantly. Meanwhile, according to studies by Laksmiwati et

al. (2021); Mashudi et al. (2021), the debt-to-equity ratio did not affect financial distress.

Other factors can influence financial distress, namely return on asset (ROA). The ratio used to assess a company's potential for profit is called profitability. ROA gauges company management effectiveness (Silvia and Yulistina 2022). This ratio can be used to compare elements of the financial statements from one or more periods to observe changes in the company's development over time, both positive and negative. A high ROA is a positive sign, indicating operational efficiency and the potential ability to overcome debt burdens. The higher its ROA value and the less likely financial distress occurs, the better a company performs (Muliadi 2022). The findings of studies by Rachman (2022); Septyanto, Welandasari, and Sayidah (2022) prove that the relationship between financial distress and ROA is substantial. While, Handayani, Perwitasari, and Hermawan (2021); Sariroh (2021) in their research found that return on assets does not affect financial distress.

Company size is a moderating variable because it can support operational activities and assist in resource management. The company size significantly influences the capital structure. Small businesses select internal funding sources by ranking debt, retained and personal earnings, and new equity issuance. Study by Syuhada, Muda, and Rujiman (2020); Putra, Wahyuni, and Fitrijanti (2022), the size of a company significantly influences financial distress. In a study by Putri, Meiriasari, and Djuita (2021); Nafisah, Widjajanti, and Budiati (2023), the company's size does not significantly affect the financial distress. Several previous studies have examined the company size as a moderation variable towards intellectual capital in financial distress, as in the study Purwaningrat and Oktarini (2020); Viriany and Wirianata (2021). Several studies have also discussed the company size as a moderation variable toward debt to equity ratio in financial distress, such as studies Ariqoh and Yuniningsih (2022); Bimantio and Nur (2023); Sitompul and Syarif (2023). Several studies have examined company size as a moderation variable towards return on asset in financial distress, as in the study by Erdi et al. (2022); Erawati, Pratiwi, and Grediani (2024).

However, studies regarding the financial distress of construction companies, especially during the pandemic, are still minimally studied. The novelty of this research lies in studying the financial distress during economic contraction because, in pandemic conditions, the economic sector experiences contraction in general, but other sectors experience growth, such as the manufacturing sector. Construction companies were chosen as research samples because, during the COVID-19 pandemic, they played a significant role in the Indonesian economy. It has been demonstrated that there are still discrepancies in the outcomes of every variable based on multiple earlier investigations. This discrepancy might result from the varied samples used in previous studies. As a result, context-specific research is required to identify more precise empirical data. This study examines the consequences of intellectual capital, leverage (DER), and profitability (ROA) on financial distress moderated by company size in construction companies listed on the IDX for 2017-2022. This study helps investors learn about the company's financial health to consider when making investment decisions. Additionally, the analysis of bankruptcy theory helps

businesses be more prepared and identify possible financial issues sooner. A solution can be found right away in this manner.

LITERATURE REVIEW

Theory of Agency

Agency theory states that the best type of contract-to-control relationship is when a principal assigns tasks to an agent (Eisenhardt 1989). The principal party, the business owner, entrusts the agent party and the managers to carry out all business-related tasks, including making decisions. Natakusumawati and Faisal (2021) claim that an entity serves as a focal point in a complicated process that balances individual disapprovals within the framework of a contractual relationship. Furthermore, Kushermanto et al. (2023) stated that conflicts of interest between managers and business owners frequently arise, mainly when the manager is not the company owner. Based on agency theories, managers exhibit opportunistic, self-fulfilling, egoistic, and individualistic behaviors. Managers frequently sacrifice the business owners' interests to maximise their personal interests. This theory originated from the development of accounting research, which combines economic models with human behavior.

Financial Distress

A business that faces financial difficulties for multiple years is claimed to be experiencing financial hardship, which may result in bankruptcy. Financial distress is when a business finds it difficult or impossible to pay its creditors (Akbar and Lanjarsih 2024). Then Putri and Putri (2024) said that a company in financial distress is enduring unusual operational losses, like years-long losses, a decline in business performance, employee layoffs, and a failure to pay dividends. When a company has large, fixed costs or earnings highly susceptible to an economic downturn, there is a greater likelihood of financial distress. Due to this requirement, businesses will have to incur significant costs, which will compel management to lend money to third parties. Financial distress is the potential for a business to be unable to pay its bills on time. The decrease in the value of retained earnings, which are used to pay dividends because of the losses, will cause a capital shortage. If the situation continues, the corporation's total liabilities could surpass its total assets. As a result, a business experiences financial hardship, ultimately resulting in bankruptcy if it cannot overcome the circumstances above (Suharti et al. 2021).

Company Size

Size can quantify a company's dimension in several ways, such as total assets and stock market value. The classification of companies, whether large or small, is based on size (Sudaryo et al. 2021). Businesses with a high total asset value can be classified and are less likely to file for bankruptcy. Additionally, total net sales can be used to determine company size. That company size and stability correlate with its sales, reducing the likelihood of the business encountering financial difficulties. Bigger companies will have more access to this phenomenon in the competition between each company, while smaller companies will also have less access, depending on the circumstances. Each of

these businesses needs to be able to assess the state of the market in order to grow and make the most money possible (Nurdiansari 2023). The company size will benefit interested parties like creditors and investors, who will be willing to lend money and make investments to keep the business out of financial distress.

Intellectual Capital (IC)

In the modern business environment, particularly in knowledge-based economies, it is widely accepted that intellectual capital is a precious intangible resource. It is critical in fostering creativity, advancing innovation, creating value, and improving business performance. Intangible resources, such as intellectual property assets, can give a sustained competitive edge by protecting property rights legally. Resources can take the form of tangible or intangible assets. In order to improve corporate performance and establish favorable conditions for sustainable competitive advantage, intellectual capital is essential (Pratiwi, Nahdiah, and Sugiyanto 2023). Businesses can gain and maintain a competitive edge by possessing remarkable talent, aptitude, inventiveness, and human creativity. The value-added intellectual coefficient (VAIC) method is one way to determine the effectiveness of intellectual capital (Pradana and Chalid 2023). Human capital and structural capital are included in this model. Innovation capital is the primary modification made to the VAIC model.

Debt to Equity Ratio (DER)

The amount of debt used to finance a company asset is indicated by its leverage ratio. The statement suggests that the companies can meet all their immediate and long-term obligations. The debt-to-equity ratio (DER) is used in this study as a stand-in for the leverage ratio. DER is a ratio that shows the relationship between the number of loans creditors give and the capital the company owner provides (Suleman, Machmud, and Dungga 2023). The higher the DER value, the lower the share price, meaning the company has a relatively high debt burden compared to its equity, and this can affect investors' perception of risk, performance and company value so that share prices tend to fall. The DER comparison of own capital and long-term debt aims to determine how own capital is used more often. A high DER indicates that debt is used to finance most assets. This brings on financial distress because it puts more of a strain on the business to pay its debts and accrue interest. Businesses with higher DER do so because they finance all of their operations with a higher debt ratio than their own capital (Idawati and Wardhana 2021).

Return on Asset (ROA)

The difference between company expenses and revenue is used to calculate profitability. Construction companies must measure profitability because it is a crucial indicator of success and serves as a foundation for evaluating the health of the construction sector to remain competitive and viable as an organization (Mesrawati et al. 2022). By demonstrating how well company assets are used to cut costs, generate savings, and ensure the company has enough cash to operate, profitability can be used to quantify the degree of financial distress. Effective profitability generation will boost investor confidence in construction firms, which is expected to boost the economy (Rahma 2020). A comparison of

the rate of return with assets owned, or ROA, indicates how well a business manages its assets to turn a profit and demonstrates its superior performance when compared to sales, volume, total assets, and owner investments. ROA, which gauges how well businesses use their assets to generate profits, is why it is used as a financial performance indicator for the construction sector. This implies that as a company's profits increase, the likelihood of financial hardship declines (Muliadi 2022).

Hypothesis Development

Enhancing corporate performance and fostering favorable conditions for long-term competitive advantage depends heavily on intellectual capital. Businesses with outstanding talent, capabilities, innovation, and human creativity can attain and maintain a competitive edge. According to agency theory, the company's value can be strengthened by good management through the calibers of its human resources, enabling the most recent innovations to surface in the industrial sector. Intellectual capital can raise corporate governance's value, lowering the value of financial distress (Shahwan and Habib 2020). A company must consider its intellectual capital to improve financial performance, maintain its competitive advantage, and avoid bankruptcy or financial distress. Based on a study by Ozkan, Cakan, and Kayacan (2017); Pradana and Chalid (2023) discovered a substantial relationship between financial distress and intellectual capital. The hypothesis of this study is H1: Intellectual capital positively affects financial distress.

Agents have the authority to manage business entities and make decisions on behalf of investors, and the decision will never satisfy the principal or agents. The parties directly handling business operations activities should act on the owner's behalf. Businesses with greater debt levels will face financial difficulties sooner than those with lower debt levels. When a business does not make creditor payments, it becomes financially distressed (Osinubi 2020). The business cannot maintain its financial stability or effectively manage its funds. An increase in the total debt indicates a high probability of financial difficulties for the entity (Cole and Sokolyk 2018). Businesses may not always be categorized as being in financial distress, and businesses with lower DER values must always be categorized as not in financial distress. In a study by Mesak (2019); Ugur, Solomon, and Zeynalov (2022), Debt to equity ratio affects financial distress significantly. The hypothesis of this study is H2: Debt to equity ratio positively affects financial distress.

Agency theory states that management as an agent is pressured to maximize company profitability to meet shareholder expectations. Even though shareholders as principals want maximum profits, management as agents want maximum reserves from the company. In measuring profitability, return on assets describes the effectiveness of companies in managing assets sourced from personal capital and lenders. A high ROA indicates the business can use its assets to make money from investment and sales (Shahnia et al. 2020). Improved profitability and the most economical use of resources can result from more effective and efficient asset management for the company. Nonetheless, certain businesses may be able to turn a profit. However, they may need help managing how much money is left over to manage their operations and pay expenses, which

could lead to financial difficulties for the company. Year-over-year increases in net losses can be caused by rising expenses and falling revenues, putting the business in financial distress. The findings of studies by Rachman (2022); Septyanto, Welandasari, and Sayidah (2022) prove that the relationship between financial distress and return on assets is substantial. The following hypotheses are proposed H3: Return on assets positively affect financial distress.

Agency theory implies a contractual relationship between principals and agents to synchronize information and company conditions. In agency theory, company managers with significant assets tend to minimize expenditure on financial distress. Conversely, smaller businesses usually need more internal resources or funding, making it easier to fulfil their short-term obligations. The company is small but mature due to its numerous working partners, high confidence from banks, and recommendations from clients and other external parties. An organization's capacity to make money increases with company size, which can lessen financial distress by lowering its reliance on borrowing money to fund its operations. The study findings by Syuhada, Muda, and Rujiman (2020); Putra, Wahyuni, and Fitrijanti (2022), the size of a company significantly influences financial distress. The hypothesis of this study is H4: Company size positively affects financial distress.

Agency theory states that the large number of resources owned by the company maximizes agents' performance compensation by reducing the company's financial distress. According to agency theory, a company's resources will maximize the agent's performance, thereby reducing the company's financial difficulties. Larger companies can manage their resources more efficiently and make it easier to obtain funding (Massis et al. 2018). The likelihood of misclassifying financially distressed companies can be estimated with an intellectual capital indicator. Improving the evaluation of a business's financial health can aid in minimizing financial resource misallocation, which in turn can lessen the loss of economic value and employment. The financial resources can be allocated to companies that can effectively manage and invest in their intellectual capital. A study by Purwaningrat and Oktarini (2020); Viriany and Wirianata (2021) states that the company's size can moderate intellectual capital towards financial distress. The following hypotheses are H5: company size moderates the effect of intellectual capital on financial distress.

Agency theory states that leverage can be a responsible tool that lessens agency issues. The company's likelihood of going bankrupt is reduced when it optimizes external funds to maximize profits and minimize agency costs. Bigger businesses with a solid base are better equipped to handle outside obstacles like an unstable economy. The firm's size can support corporate debt financing (Cole and Sokolyk 2018). Large companies have more flexibility in raising money and easier access to the capital market. The smaller a company gets, the more likely it will experience financial difficulties. Smaller businesses have more room for expansion and frequently deal with principal-agent conflicts of interest. A study by Ariqoh and Yuniningsih (2022); Bimantio and Nur (2023) state that company size moderates debt to equity ratio towards financial distress. The hypothesis of this research is H6: Company size moderates the effect of DER on financial distress.

Managers will work efficiently to increase profit relative to the amount borrowed; agency theory demonstrates that higher profitability can lower agency costs. Improved profit margins and the most economical use of capital can result from more effective and efficient asset management for the business (Nariswari and Nugraha 2020). Although a company's size does not directly affect profitability or financial distress, it usually significantly influences factors like operational scope, financial market accessibility, and resource management effectiveness. The degree of profitability varies according to a company's size, but this has little bearing on the possibility of financial distress that any business may encounter. Financial distress has nothing to do with a company's size or profitability. A study by Erdi et al. (2022); Erawati, Pratiwi, and Grediani (2024) shows that the company's size moderates the relationship between ROA and financial distress. The hypothesis of this research is H7: company size moderates the effect of ROA on financial distress.

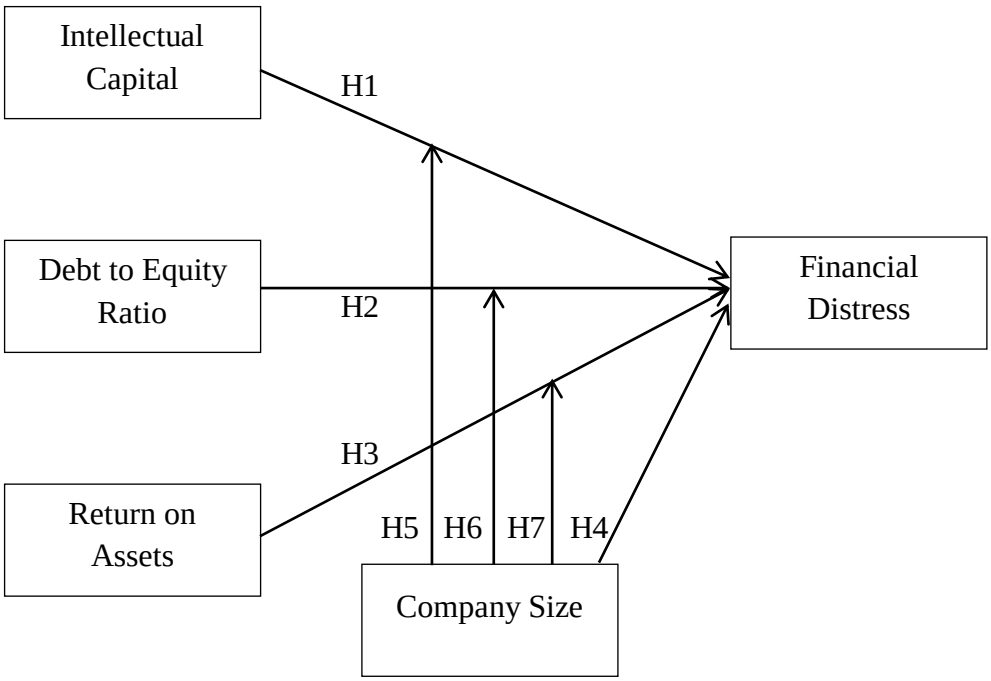

Figure 1 Research Model

METHOD

The quantitative method with panel data regression is the approach that the research used in this study. This research incorporates literature studies by referencing pertinent articles from journals and books as theoretical foundations. The data is produced in numerical form and generated from secondary data in financial reports obtained from the Indonesia Stock Exchange (IDX) on its official website. Data was collected by documenting and observing construction companies in Indonesia. Construction companies listed on the IDX comprise the study population for 2017-2022, totaling 17 companies, and the sample size is determined using a purposive sampling technique. Four of seventeen companies are state-owned enterprises, and the remaining thirteen are private. Four state-

owned companies routinely report financial statements from 2017-2022. Six of thirteen companies routinely report financial statements. Based on this, the sample selection results in 60 observation data from 10 construction company's subsectors, including property, real estate and building construction were obtained that met the criteria; these are ADHI, CSIS, ACST, IDPR, DGIK, NRCA, JKON, WIKA, WSKT and WEGE and which had consistent and complete financial records through the publication of the annual report. Random effect model (REM) with EViews 10 software as a data analysis technique in this study, which involves one dependent variable (financial distress), three independent variables (intellectual capital, debt to equity ratio, and return on assets) and one moderation variable (company size) as seen in Table 1. This research uses four stages of testing, which are as follows: (1) descriptive statistics test, (2) regression model selection, (3) classical assumption test, (4) hypothesis test and determination coefficient test.

Table 1 Operational Variables

Variables	Formula	Scale
Financial Distress	Z = 1.2X1 + 1.4X2 + 3.3X3 + 0.6X4 + 1.0X5 Cut-off Value: Z > 2.99 : Safe Zone 1.81 < Z < 2.99 : Grey Area Z > 1.81 = Distress Zone (Altman et al. 2017)	Ratio
Intellectual Capital	iB-VAIC^{TM} = iB-VACA + iB-VAHU + iB-STVA (Nadeem, Dumay, and Massaro 2019)	Ratio
Debt to Equity Ratio	$DER = \frac{\text{Total Liabilities}}{\text{Total Equity}}$ (Naibaho and Natasya 2023)	Ratio
Return on Assets	$ROA = \frac{\text{Earnings After Tax}}{\text{Total Assets}}$ (Sitompul and Syarif 2023)	Ratio
Company Size	SIZE = Ln (Total Assets) (Natalia and Rudiawarni 2022)	Ratio

RESULTS AND DISCUSSIONS

Descriptive Statistics

The descriptive analysis objective in this study was to give a summary of each variable research characteristics. Table 2 shows the minimum financial distress value of -3.862471, with a maximum value of 17.31796 and an average of 2.501214. The financial distress model classifies construction companies as having an average healthy value and being less prone to bankruptcy. The minimum value of intellectual capital is -5.288724, with a maximum value of 56.79384 and an average value of 6.400230. A higher intellectual capital value shows that the business can generate added value. The minimum value of the

debt-to-equity ratio is 0.192702, with a maximum value of 0.983688, and the average value is 0.590846, indicating low variation in the debt-to-total assets ratio. The minimum value of return on assets is 0.177519, with a maximum value of 1.508540 and an average value of 0.559340, indicating moderate variations in the company's efficiency in generating profits based on total assets owned. The minimum value of company size is 15.32110, with a maximum value of 21.78000 and an average value of 19.12844. This demonstrates that the business belongs to a large group based on total assets.

Table 2 Descriptive Statistics

Variables	N	Minimum	Maximum	Mean	Std. Deviation
Financial Distress	60	-3.862471	17.31796	2.559720	2.501214
Intellectual Capital	60	-5.288724	56.79384	6.400230	10.15368
Debt to Equity Ratio	60	0.192702	0.983688	0.590846	0.168286
Return on Assets	60	0.177519	1.508540	0.559340	0.297019
Company Size	60	15.32110	21.78000	19.12844	1.381903

Source: secondary data (processed, 2024)

Regression Model Selection

Many model specification tests are performed to guarantee that the optimal model is employed in panel data analysis to approximate panel data regression. The best panel data model can be ascertained using one of two test models, namely the Chow and Hausman tests. The fixed and common effect models are compared using the Chow test to see which fits the data better. It is determined that the common effect model is valid if the probability cross-section value of the Chow test result is higher than 5% (0.05). The Chow test indicates that a probability value 0.0035 is less than 0.05. It can be inferred that the fixed effect model is chosen based on Table 3.

Table 3 The Chow-Test Results

Effects Test	Statistic	df	Prob.
Cross-Section F	2.493577	(15.72)	0.0035
Cross-Section Chi-Square	35.834017	15	0.0006

Source: secondary data (processed, 2024)

The Hausman test determines which fixed effect and random effect models perform better. If a probability value of 0.0113 is found in the results, more diminutive than 0.05, the fixed effect model can be chosen using the Hausman test basis. The fixed effect model is deemed acceptable when the random probability cross-section value in the result is less than 0.05. Table 4 shows the results of the Chow and Hausman tests mentioned earlier; the fixed effect model was the best in the model goodness test. As a result, the lag range multiplier test, which compares the random and common effect models, is not run.

Table 4 Hausman-Test Results

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f	Prob.
Cross-Section Random	19.966625	8	0.0113

Source: secondary data (processed, 2024)

Classical Assumption Test

The classical assumption test aims to ascertain whether the study data are normal and devoid of autocorrelation, heteroscedasticity, and multicollinearity signs. To find out if the data distribution is expected or not, one can perform a normality test. The data may be considered normal if Jarque-Bera's profitability value exceeds 0.05. The normality test results indicate a probability of 0.565225, higher than 0.05. According to the normality test results, the study data are presumed to be normally distributed.

The correlation between independent variables can be found using a multicollinearity test. If the data are not multicollinear, the VIF value < 10. Table 5 shows the multicollinearity test results, indicating a probability value of less than 10.00. The multicollinearity test indicates no multicollinearity symptoms.

Table 5 The Multicollinearity Test Results

Variables	Coefficient Variance	Uncentered VIF	Cantered VIF
C	1.066150	18.52035	NA
Intellectual Capital	0.007729	4.449451	1.074277
Debt to Equity Ratio	-0.540437	-0.635886	0.513842
Return on Assets	1.000000	3.144672	2.244568
Company Size	1.221485	2.114600	1.102881

Source: secondary data (processed, 2024)

Heteroscedasticity tests can be used to determine whether variables are unequal from residuals or observations to other observations in the regression model. If the profitability value exceeds 0.05, data show no signs of heteroscedasticity. Table 6 shows the heteroscedasticity test results, with a higher probability value than 0.05. This means that there are no symptoms of heteroscedasticity.

Table 6 The Heteroscedasticity Test Results

Variables	Coefficient	Std. Error	t-Statistic	Prob.
C	1.223273	11.94894	0.223047	0.8065
Intellectual Capital	-0.003355	0.038446	-1.009056	0.4179
Debt to Equity Ratio	-4.589110	2.539457	-1.955125	0.3862
Return on Assets	0.642993	1.062244	0.517008	0.5033
Company Size	0.133406	0.155829	0.752877	0.6330

Source: secondary data (processed, 2024)

Autocorrelation can be detected through the LM test and the Durbin-Watson test. The signifier does not form an autocorrelation when the Prob (F-statistic) > 0.05. When D-W is < (4-dU) and > (dU), it is claimed that autocorrelation is not found. The autocorrelation problem is passed according to the results of the Autocorrelation test in this research. Where DW = 2.203655, dL= 1.4797, dU = 1.6889, 4-dU = 2.3111, and 4-dL = 2.5203. It can be inferred from the table that dL < dU < DW < 4-dU < 4-dL, and Prob. 0.213352 higher than 0.05, it can be said that the autocorrelation is not formed.

Hypothesis Test

A partial understanding of the relationship between the exogenous variable (X) and the endogenous variable (Y) can be obtained from the T-test results. The impact of an exogenous variable on an endogenous variable is significant if the probability value is sig < 0.05. In contrast, exogenous variables have no effect on endogenous variables if the probability value is sig > 0.05.

Table 7 Hypothesis Test Results

Variables	Coefficient	Std. Error	t-Statistic	Prob.
Intellectual Capital (IC)	0.052446	0.026130	2.250507	0.0012
Debt to Equity Ratio (DER)	-0.027954	0.442590	-3.428216	0.0004
Return on Assets (ROA)	2.485235	1.322566	4.820437	0.0001
Company Size (CS)	1.148755	0.158140	3.482983	0.0011
IC*CS	0.162558	0.058225	2.409767	0.0019
DER*CS	-0.013253	0.631350	-3.968986	0.1070
ROA*CS	4.377052	0.698764	6.695084	0.0005
C	32.23192	7.448265	3.435085	0.0043
R-Squared	0.806699			
Adjusted R-Squared	0.789890			
F-Statistic	37.99259			
Prob. (F-Statistic)	0.000000			

Source: secondary data (processed, 2024)

A regression line equation based on Table 7 can be created, which is: FD = 32.23192 + 0.052446 IC - 0.027954 DER + 2.485235 ROA + 1.148755*CS* + 0.162558 IC*CS - 0.013253 DER*CS + 4.377052 ROA*CS. Table 7 shows the panel data test results, with a positive sign of 32.23192 for the constant α; it suggests a unidirectional influence between the endogenous and exogenous variables. This indicates that the financial distress is 32.23192 if the IC, DER, ROA, and company size are 0% or remain unchanged. The regression equation model leads to the state that there is a substantial positive and significant relationship between financial distress and intellectual capital, the finding of a positive coefficient value of 0.052446 and a probability value of 0.0012 < 0.05 (H1 accepted). The debt-to-equity ratio negatively and significantly influences financial distress, achieving a probability value of 0.0004 < 0.05 and a negative coefficient value of -0.027954 (H2 rejected). Return on assets positively and significantly influences financial distress, with a probability value of 0.0001 < 0.05 and a positive coefficient value of 2.485235 (H3 accepted). Company size positively and significantly influences financial distress, with a probability value of 0.0011 < 0.05 and a positive coefficient value of 1.148755 (H4 accepted).

Table 7 shows that IC*CS has a coefficient value of 0.162558 and a probability value of 0,0019 < 0,05, meaning the company size can strengthen the influences of intellectual capital on financial distress (H5 accepted). DER*CS has a coefficient value of -0.013253 and a probability value of 0,1070 > 0,05, meaning the company size cannot moderate the association between DER and financial distress (H6 rejected). ROA*CS has a coefficient value of 4.377052 and

a probability value of 0,0005 < 0,05, meaning the company size can strengthen the influences of ROA on financial distress (H7 accepted).

The results of the determination coefficient test can determine the percentage of influence that the exogenous variable (X) has over the endogenous variable (Y) can be determined. The R^2 only has two possible values, namely 0 and 1. The low R^2 value suggests that the exogenous variables' capacity to explain the endogenous variable is constrained. However, almost all information about the endogenous variable can be obtained from the exogenous variable if the value is near 1.

Table 8 Determination Coefficient Test Results

	R-Square (R^2)	Adjusted R-Squared
Financial Distress (Y)	0.565446	0.527055
Company Size (M)	0.438840	0.409738

Source: secondary data (processed, 2024)

Table 8 shows the R-square findings indicate that the influence of intellectual capital, debt to equity ratio, return on asset, and company size on financial distress with a value of 0.565446 or 56,5% falls into the moderate category. While other variables not examined may have an impact on 43,5%. The company size has an R-squared value of 0.438840, indicating that 43,8% of the company size was impacted by intellectual capital, debt-to-equity ratio, and return on asset. While other variables not examined may have an impact on 56,2%.

The Effect of Intellectual Capital on Financial Distress

The result shows that intellectual capital positively affects financial distress in construction companies. Agency theory regards that the company value can strengthened by good management through the caliber of its human resources, enabling the most recent innovations to surface in the industrial sector. Intellectual capital can raise corporate governance's value, lowering the value of financial distress (Shahwan and Habib 2020). A company must consider its intellectual capital to improve financial performance, maintain its competitive advantage, and avoid bankruptcy or financial distress. The value of sound corporate governance can be strengthened by intellectual capital, which will positively impact the decreasing value of financial distress. To enhance the performance of the business, it is necessary to examine the effects of intellectual capital. One intangible asset that needs to be considered is the company's intellectual capital to enhance its competitive advantage, boost earnings and prevent bankruptcy or financial distress. These research findings are supported by a study by Ozkan, Cakan, and Kayacan (2017); Pradana and Chalid (2023) show that intellectual capital has significant effect on financial distress.

The Effect of Debt-to-Equity Ratio on Financial Distress

The result shows that debt to equity ratio negatively affects financial distress in construction companies. This is in line with agency theory, which states that a company's agency burden increases with its level of debt. If this is not followed by a solid ability to pay off debts, the company's financial health is also bad, which makes financial distress more likely. Businesses looking to take on

more debt must be ready to expand their assets (Cole and Sokolyk 2018). A company will face financial difficulties if it cannot produce additional assets to offset its substantial debts. An increase in the total debt indicates a high probability of financial difficulties for the entity. Bankruptcy could result from the company's failure to manage financial difficulties carefully and with the proper steps. The company's financial distress cannot be accurately predicted by looking at the size of the DER value. Companies with higher DER values are not always classified as being in financial distress, and companies with lower DER values are not always classified as not in financial distress. This study's findings are supported by research by Hidayati and Yuneline (2022); Hananiyah and Jaya (2023), the debt-to-equity ratio negatively affects financial distress.

The Effect of Return on Assets on Financial Distress

The result shows that return on assets positively affects financial distress in construction companies. Based on agency theory, management as an agent is pressured to maximize company profitability to meet shareholder expectations. Even though shareholders as principals want maximum profits, management as agents want maximum reserves from the company. Better profits and the most economical use of funds can result from more effective and efficient asset management for the business. Some businesses can turn a profit, but they cannot manage how much funds are left over to operate their business and pay their expenses, which puts them in a difficult financial position. A higher ROA does not mean the business is financially out of trouble (Dirman 2020). This is because the business can observe the revenue and the total amount spent. Year after year, a company may face financial distress due to declining revenues and rising costs, which can lead to a series of net losses. These findings are supported by a study from Rachman (2022); Septyanto, Welandasari, and Sayidah (2022), where return on assets significantly affect financial distress.

The Effect of Company Size on Financial Distress

The result shows that company size positively affects financial distress in construction companies. Agency theory implies a contractual relationship between principals and agents synchronizes information and company conditions. In agency theory, company managers with significant assets tend to minimize expenditure on financial distress. Smaller businesses usually need more internal resources or funding, making it easier to fulfil short-term obligations. Besides recommendations from clients and other external parties, a well-established business enjoys a high degree of trust from financial institutions despite its modest size and many working partners (Győri, Khan, and Szegedi 2021). The company in financial distress will not be impacted by any size increase or decrease. An organization's capacity to make money increases with company size, which can lessen financial distress by lowering its reliance on borrowing money to fund its operations. These research findings are supported by a study from Syuhada, Muda, and Rujiman (2020); Putra, Wahyuni, and Fitrijanti (2022), company size has a significant effect on financial distress.

The Effect of Intellectual Capital on Financial Distress Moderated by Company Size

The result shows that company size can strengthen intellectual capital's effect on construction companies' financial distress. Agency theory regards the large number of resources owned by the company to maximize agents' performance compensation by reducing company financial distress. According to agency theory, a company's resources will maximize the agent's performance, thereby reducing the company's financial difficulties. A larger company can aid in resource management and facilitate the acquisition of outside funding if deemed favorable by investors. Larger companies can manage their resources more efficiently and make it easier to obtain funding (Massis et al. 2018). This statement suggests that factors related to company size can enhance its intellectual capital and help it achieve the desired profit. The likelihood of misclassifying a financially distressed company can be estimated with an intellectual capital indicator. Improving the evaluation of a business's financial health can aid in minimizing financial resource misallocation, which in turn can lessen the loss of economic value and employment. The financial resources can be allocated to companies that can effectively manage and invest in their intellectual capital. This study's findings align with previous research conducted by Purwaningrat and Oktarini (2020); Viriany and Wirianata (2021) state that the company's size can moderate intellectual capital towards financial distress.

The Effect of Debt-to-Equity Ratio on Financial Distress Moderated by Company Size

The result shows that company size cannot moderate the association between debt-to-equity ratio and financial distress in construction companies. Agency theory regards leverage as a responsible tool that lessens agency issues. The company's likelihood of going bankrupt is reduced when it optimizes external funds to maximize profits and minimize agency costs. Stronger foundations and larger organizations are better equipped to handle outside obstacles like erratic economic conditions. The size of the company may be used to support corporate debt financing. Large companies can access the capital market more efficiently and choose how best to raise funds (Alfaro et al. 2019). The smaller the company, the greater the probability of encountering financial difficulties. Smaller businesses are more likely to experience principal-agent conflicts of interest and have greater room for expansion. Because of this, small businesses mainly depend on outside loans to fund their daily operations. The results of this investigation are consistent with those of earlier studies by Sunaryo (2021); Kusuma and Hersugondo (2023), which state that company size cannot moderate the debt-to-equity ratio towards financial distress.

The Effect of Return on Assets on Financial Distress Moderated by Company Size

The result shows that company size can strengthen the influences of return on assets on financial distress. Agency theory regards managers to work efficiently to increase profit relative to the amount borrowed so that higher profitability can lower agency costs. Improved profit margins and the most economical use of capital can result from more effective and efficient asset

management for the business (Nariswari and Nugraha 2020). Regarding operational scope, financial market accessibility, and resource management effectiveness, company size usually has a more significant influence than its profitability or effect on financial distress. Larger businesses typically enjoy more stable and favorable circumstances (Thukral 2021). This results from the company's business tendency, management of its assets to turn a profit, and demonstrating its superior performance compared to sales, volume, total assets, and owner investments. Investment expectations regarding the big businesses are high due to their size. As a result of these anticipations, the capital markets stock prices will rise due to increased demand for company shares. With these expectations, the company's share price will rise in the capital market due to increased demand. Consequently, businesses can reduce their risk of financial distress by using return on assets. This study's findings align with those of previous research conducted by Erdi et al. (2022); Erawati, Pratiwi, and Grediani (2024), the relationship between return on assets and financial distress is significantly moderated by the size of the company.

CONCLUSIONS

The study findings, which are based on data analysis and discussion, show that intellectual capital, debt-to-equity ratio, return on assets, and company size positively influence financial distress in construction companies. Company size is proven to moderate the effect of intellectual capital and return on assets on financial distress. In contrast, company size cannot moderate the relationship between debt-to-equity ratio and financial distress in construction companies. This study helps construction companies create efficient debt-to-equity ratios to increase performance and financial performance.

The theoretical implication of this finding explains that the state of financial distress can be considered when investors interested in funding construction and building subsector businesses make investment decisions. For investors to make more informed investment decisions, it is also essential to consider the company's fundamental performance, such as profitability and leverage ratios, to gauge its financial health.

This study has several limitations, one of which is that it only looks at the Indonesian construction industry. Therefore, further research is advised to increase the range of industries included in the research sample. Additional investigation is advised to examine additional elements influencing the businesses' ability to anticipate financial distress. Further data on the company's success in landing new contracts can indicate its performance and help forecast future earnings. Management implications for construction firms may help them take corrective action before they face financial difficulties or even bankruptcy. As a result, by offering details on the financial standing of businesses in the safe, grey, or distressed zone, this research helps construction companies. Furthermore, the government should be considered when determining the financial policies the construction company's subsectors should follow.

REFERENCES

Akbar, Taufiq, and Laela Lanjarsih. 2024. "Financial Distress: Identifying Influencing Factors and Moderating Dynamics in Manufacturing Companies." *Journal of Economics, Finance and Management Studies* 7 (1): 793–800. https://doi.org/10.47191/jefms/v7-i1-79.

Alfaro, Laura, Gonzalo Asis, Anusha Chari, and Ugo Panizza. 2019. "Corporate Debt, Firm Size and Financial Fragility in Emerging Markets." *Journal of International Economics* 118 (May): 1–19. https://doi.org/10.1016/j.jinteco.2019.01.002.

Altman, Edward I, Małgorzata Iwanicz-Drozdowska, Erkki K Laitinen, and Arto Suvas. 2017. "Financial Distress Prediction in an International Context: A Review and Empirical Analysis of Altman's Z- Score Model." *Journal of International Financial Management & Accounting* 28 (2): 131–71. https://doi.org/10.1111/jifm.12053.

Ariqoh, Zivana Aprilia, and Yuniningsih Yuniningsih. 2022. "Altman Z-Score Method Application to Predict Financial Distress on Property and Real Estate Sector Listed in Indonesia Stock Exchange." *Journal of Economics, Finance And Management Studies* 5 (11): 3138–45. https://doi.org/10.47191/jefms/v5-i11-02.

Bimantio, Mahesha Aginio, and Dhani Ichsanuddin Nur. 2023. "Financial Distress with Firm Size as a Moderating Variable in the Construction Sub Sector on the Indonesian Stock Exchange." *Journal of Economics, Finance And Management Studies* 6 (11): 5689–96. https://doi.org/10.47191/jefms/v6-i11-49.

Cole, Rebel A., and Tatyana Sokolyk. 2018. "Debt Financing, Survival, and Growth of Start-up Firms." *Journal of Corporate Finance* 50 (June): 609–25. https://doi.org/10.1016/j.jcorpfin.2017.10.013.

Dini, Aini Nurachman, Hermanto Siregar, and Moch Hadi Santoso. 2023. "Financial Distress and Its Effect on Stock Return of Construction and Building Companies Before and During Pandemic Covid-19." *Jurnal Ilmiah Edunomika* 7 (1): 1–12. https://www.jurnal.stie-aas.ac.id/index.php/jie/article/view/8241.

Dirman, Angela. 2020. "Financial Distress: The Impacts of Profitability, Liquidity, Leverage, Firm Size, and Free Cash Flow." *International Journal of Business, Economics and Law* 22 (1): 17–25. https://www.ijbel.com/wp-content/uploads/2020/08/IJBEL22_205.pdf.

Eisenhardt, Kathleen M. 1989. "Agency Theory: An Assessment and Review." *The Academy of Management Review* 14 (1): 57–74. https://doi.org/10.2307/258191.

Erawati, Teguh, Cindy Pratiwi, and Evi Grediani. 2024. "The Effect of Financial Distress and Capital Structure Moderated by Company Size." *JASa (Jurnal Akuntansi, Audit Dan Sistem Informasi Akuntansi)* 8 (2): 345–59. https://doi.org/10.36555/jasa.v8i2.2497.

Erayanti, Rina. 2019. "Pengaruh Likuiditas, Profitabilitas Dan Leverage Terhadap Prediksi Financial Distress." *Jurnal Riset Akuntansi & Perpajakan (JRAP)* 6 (01): 38–50. https://doi.org/10.35838/jrap.v6i01.393.

Erdi, Tio Waskito, W. Agustin, S. A. G. Pradana, and Theresia Theresia. 2022.

"CAMEL Ratio as an Indicator of Financial Distress Altman Z-Score Model with Company Size as a Moderating Variable." *Journal of Applied Sciences in Accounting, Finance, and Tax* 5 (2): 95–104. https://doi.org/10.31940/jasafint.v5i2.95-104.

Fashhan, Muhammad Rasil, and Vita Elisa Fitriana. 2019. "The Influence of Corporate Governance and Intellectual Capital towards Financial Distress (Empirical Study of Manufacturing Company in IDX for the Period of 2014-2016)." *JAAF (Journal of Applied Accounting and Finance)* 2 (2): 163. https://doi.org/10.33021/jaaf.v2i2.553.

Győri, Zsuzsanna, Yahya Khan, and Krisztina Szegedi. 2021. "Business Model and Principles of a Values-Based Bank—Case Study of MagNet Hungarian Community Bank." *Sustainability* 13 (16): 9239. https://doi.org/10.3390/su13169239.

Hananiyah, Wardah Mujadidah, and Tiara Juliana Jaya. 2023. "The Effect of Financial Ratio on Financial Distress in Indonesia Sharia Commercial Banks." *I-Finance: A Research Journal on Islamic Finance* 9 (2): 148–67. https://doi.org/10.19109/ifinance.v9i2.19180.

Handayani, Sri, Erni Pratiwi Perwitasari, and M Arif Hermawan. 2021. "The Effect of Financial Ratio to Financial Distress Mediated by Profitability Ratio in PT Angkasa Pura II (Persero)." *JEJAK* 14 (2): 398–414. https://doi.org/10.15294/jejak.v14i2.32023.

Hidayati, Dewi Fortuna, and Mirza Hedismarlina Yuneline. 2022. "Pengaruh Current Ratio Dan Debt to Equity Ratio Terhadap Financial Distress Pada Perusahaan Jasa Subsektor Perdagangan Eceran Yang Terdaftar Di Bursa Efek Indonesia (BEI) Periode 2015-2020." *Banking and Management Review* 11 (1): 1498–1511. https://doi.org/10.52250/bmr.v11i1.509.

Idawati, Wiwi, and Aditya Kusuma Wardhana. 2021. "Analysis of Financial Distress with Profitability as Moderation Variable." *Jurnal Akuntansi* 25 (2): 222. https://doi.org/10.24912/ja.v25i2.807.

Jati, Ahmad Waluya, Masiyah Kholmi, and Wardatul Jannah. 2023. "The Role of Intellectual Capital in the Relationship between Good Corporate Governance, Financial Performance and Financial Distress." *Riset Akuntansi Dan Keuangan Indonesia* 8 (2): 122–31. https://doi.org/10.23917/reaksi.v8i2.2364.

Kim, Kyunghoon. 2023. "Analysing Indonesia's Infrastructure Deficits from a Developmentalist Perspective." *Competition & Change* 27 (1): 115–42. https://doi.org/10.1177/10245294211043355.

Komala, Felicia, and Yustina Triyani. 2020. "Analisis Rasio Keuangan Terhadap Financial Distress Dengan Struktur Kepemilikan Sebagai Variabel Moderasi." *Jurnal Akuntansi* 8 (2): 176–205. https://doi.org/10.46806/ja.v8i2.619.

Kushermanto, Andi, Inayah Risqi Alisa, Akhmad Samsul Ulum, and . Zulaikha. 2023. "COVID-19 Spread and Financial Distress: Does Managerial Ability Matter?" *Jurnal Dinamika Akuntansi Dan Bisnis* 10 (2): 249–64. https://doi.org/10.24815/jdab.v10i2.28905.

Kusuma, Malinda Amelia, and Hersugondo Hersugondo. 2023. "Peran Financial Distress Risk Dan Firm Size Sebagai Variabel Moderasi Pada Pengaruh Financial Leverage Terhadap Financial Performance." *JAP: Jurnal*

Akuntansi Dan Pajak 24 (1): 1–10. https://jurnal.stie-aas.ac.id/index.php/jap/article/view/8517.

Laksmiwati, Mia, Agoestina Mappadang, Amir Indrabudiman, and Vindari Gita Riza. 2021. "Determination of Financial Performance on Prediction Financial Distress." *Asian Journal of Economics, Business and Accounting* 21 (22): 46–57. https://doi.org/10.9734/ajeba/2021/v21i2230523.

Mashudi, Mashudi, Risdiana Himmati, Id Fitria Rahayu Ardillah, and Citra Sarasmitha. 2021. "Financial Distress Prediction in Infrastructure, Utilities, and Transportation Sector Companies 2015-2020." *Jurnal Keuangan Dan Perbankan* 25 (3): 656–70. https://doi.org/10.26905/jkdp.v25i3.5858.

Massis, Alfredo De, David Audretsch, Lorraine Uhlaner, and Nadine Kammerlander. 2018. "Innovation with Limited Resources: Management Lessons from the <scp>G</Scp> Erman <scp>M</Scp> Ittelstand." *Journal of Product Innovation Management* 35 (1): 125–46. https://doi.org/10.1111/jpim.12373.

Mesak, Dance. 2019. "Financial Ratio Analysis in Predicting Financial Conditions Distress in Indonesia Stock Exchange." *Russian Journal of Agricultural and Socio-Economic Sciences* 86 (2): 155–65. https://doi.org/10.18551/rjoas.2019-02.18.

Mesrawati, Mesrawati, Selly Selly, Stefanie Sherlytan, Meliana Natalia Sinaga, and Rosella Apryani Saragih. 2022. "The Effect of DAR, CR, ROA and Corporate Governance Mechanism on Financial Distress in BUMN Companies Go Public on Bei Year 2016-2020." *Journal Research of Social, Science, Economics, and Management* 1 (7): 954–68. https://doi.org/10.36418/jrssem.v1i7.117.

Montalbán-Domingo, Laura, Tatiana García-Segura, Amalia Sanz-Benlloch, Eugenio Pellicer, Cristina Torres-Machi, and Keith Molenaar. 2022. "Assessing Social Performance of Construction Companies in Public-Works Procurement: Data Envelopment Analysis Based on the Benefit of the Doubt Approach." *Environmental Impact Assessment Review* 96 (September): 106844. https://doi.org/10.1016/j.eiar.2022.106844.

Muliadi, Selamat. 2022. "Pengaruh Rasio Keuangan Terhadap Kinerja Bank Umum Syariah (BUS) Periode 2019-2021." *Global Financial Accounting Journal* 6 (2): 199. https://doi.org/10.37253/gfa.v6i2.6812.

Nadeem, Muhammad, John C. Dumay, and Maurizio Massaro. 2019. "If You Can Measure It, You Can Manage It: A Case of Intellectual Capital." *Australian Accounting Review* 29 (2): 395–407. https://doi.org/10.1111/auar.12227.

Nafisah, Durrotun, Kesi Widjajanti, and Yuli Budiati. 2023. "Pengaruh Profitabilitas, Ukuran Perusahaan Terhadap Financial Distress Dengan Nilai Perusahaan Sebagai Variabel Intervening." *Jurnal Riset Ekonomi Dan Bisnis* 16 (1): 95–109. https://doi.org/10.26623/jreb.v16i1.6773.

Naibaho, Eduard Ary Binsar, and Adeline Natasya. 2023. "Ratio Analysis to Financial Distress with Profitability as a Moderation Variable." *Jurnal Reviu Akuntansi Dan Keuangan* 13 (2): 412–40. https://doi.org/10.22219/jrak.v13i2.24506.

Nariswari, Talitha Nathaniela, and Nugi Mohammad Nugraha. 2020. "Profit

Growth : Impact of Net Profit Margin, Gross Profit Margin and Total Assests Turnover." *International Journal of Finance & Banking Studies (2147-4486)* 9 (4): 87–96. https://doi.org/10.20525/ijfbs.v9i4.937.

Natakusumawati, Tarisa, and Faisal Faisal. 2021. "Analysis of the Relationship Between Cost Stickiness and Financial Reporting Quality in the Indonesian Stock Exchange." *Diponegoro Journal of Accounting* 10 (1): 1–9. https://ejournal3.undip.ac.id/index.php/accounting/article/view/30240.

Natalia, Ivena, and Felizia Arni Rudiawarni. 2022. "The Effect of Board Size, Institutional Ownership and Insolvency Risk on Financial Distress Before and During Covid-19." *Jurnal Dinamika Akuntansi* 14 (2): 110–25. https://doi.org/10.15294/jda.v14i2.35466.

Ninh, Binh Pham Vo, Trung Do Thanh, and Duc Vo Hong. 2018. "Financial Distress and Bankruptcy Prediction: An Appropriate Model for Listed Firms in Vietnam." *Economic Systems* 42 (4): 616–24. https://doi.org/10.1016/j.ecosys.2018.05.002.

Nurdiansari, Ranti. 2023. "The Effect of Profitability, Leverage and Company Size on Financial Distress with Institutional Ownership as a Moderating Variable in Restaurant, Hotel and Tourism Sector Companies Listed on the Indonesia Stock Exchange for the 2016-2020 Period." *West Science Accounting and Finance* 1 (1): 1–14. https://wsj.westscience-press.com/index.php/wsaf/article/view/2.

Osinubi, Igbekele Sunday. 2020. "Effects of Financial Distress and Financing Constraints on Trade Credit Provisions." *Asian Review of Accounting* 28 (4): 545–66. https://doi.org/10.1108/ARA-04-2020-0058.

Ozkan, Nasif, Sinan Cakan, and Murad Kayacan. 2017. "Intellectual Capital and Financial Performance: A Study of the Turkish Banking Sector." *Borsa Istanbul Review* 17 (3): 190–98. https://doi.org/10.1016/j.bir.2016.03.001.

Pradana, Radifan Wisnu, and Dony Abdul Chalid. 2023. "Intellectual Capital and Firm's Financial Distress Risk: Evidence from Developed and Developing Countries." *Jurnal Manajemen Teori Dan Terapan | Journal of Theory and Applied Management* 16 (2): 309–20. https://doi.org/10.20473/jmtt.v16i2.45672.

Pratiwi, Melinda, Aniswati Nahdiah, and Sugiyanto Sugiyanto. 2023. "Analysis of Financial Distress, Profitability, Liquidity, Leverage on Share Prices of Manufacturing Companies Listed on the IDX." In *HUMANIS (Humanities, Management and Science Proceedings)*, 4:156–63. https://openjournal.unpam.ac.id/index.php/SNH/article/view/35621.

Purwaningrat, Putu Atim, and Luh Nik Oktarini. 2020. "Efektifkah Firm Size Memoderasi Hubungan Antara Intellectual Capital Dengan Kinerja Keuangan Perusahaan." *Juima: Jurnal Ilmu Manajemen* 10 (1): 11–21. https://e-journal.unmas.ac.id/index.php/juima/article/view/1067.

Putra, Kiki Satria Hutama, Ersa Tri Wahyuni, and Tettet Fitrijanti. 2022. "Financial Distress, Size, Age, and Corporate Social Responsibility Disclosure: Empirical Study From Indonesia Before and During the COVID-19 Pandemic." *Jurnal Dinamika Akuntansi Dan Bisnis* 9 (1): 73–88. https://doi.org/10.24815/jdab.v9i1.24590.

Putri, Andini Utari, Vhika Meiriasari, and Puspa Djuita. 2021. "Analisis Pengaruh

Sumber Daya Manusia Terhadap Kualitas Laporan Keuangan Pada Kantor Kelurahan Sukajaya Kota Palembang." *Jurnal Ilmiah Ekonomi Global Masa Kini* 12 (2): 156–61. https://doi.org/10.36982/jiegmk.v12i2.1331.

Putri, Trisandi Eka, and Syifa Ariella Putri. 2024. "Determinant of Financial Distress in Construction Sub-Sector Companies in Indonesia and Malaysia." In *InCAF: Preceeding of International Conference on Accounting and Finance*, 2:319–34. Department of Accounting, Faculty of Business and Economics, Universitas Islam Indonesia Yogyakarta. https://journal.uii.ac.id/inCAF/article/view/32632.

Rachman, Rathria Arrina. 2022. "The Determinants of Financial Distress in Emerging Country: Empirical Evidence from Indonesia." *Jurnal Keuangan Dan Perbankan* 26 (4): 735–47. https://doi.org/10.26905/jkdp.v26i4.7891.

Rahma, Ayumi. 2020. "Analisis Pengaruh Profitabilitas, Leverage Dan Likuiditas Terhadap Financial Distress." *JABI (Jurnal Akuntansi Berkelanjutan Indonesia)* 3 (3): 253–66. https://openjournal.unpam.ac.id/index.php/JABI/article/view/6730.

Santoso, Budi, Sulastri Sulastri, Muizzudin Muizzudin, and Marlina Widiyanti. 2023. "The Effect of Financial Distress, Capital Structure and Firm Size on Firm Value in the Banking Sector in Southeast Asia." *Jurnal Ekonomi* 12 (4): 906–18. https://www.ejournal.seaninstitute.or.id/index.php/Ekonomi/article/view/3033.

Sariroh, Hasivatus. 2021. "Pengaruh Likuiditas, Leverage, Profitabilitas, Dan Ukuran Perusahaan Terhadap Financial Distress Di Sektor Trade, Service, and Invesment." *Jurnal Ilmu Manajemen* 9 (3): 1227–40. https://doi.org/10.26740/jim.v9n3.p1227-1240.

Septyanto, Dihin, Nadia Figrita Welandasari, and Nur Sayidah. 2022. "An Empirical Test of The Financial Ratio Effect on Financial Distress in Indonesia (Study in Garment and Textile Industry)." *Journal of Economics and Business* 5 (2): 222–30. https://doi.org/10.31014/aior.1992.05.02.428.

Shahnia, Citra, Endah Dewi Purnamasari, Luqman Hakim, and Endri Endri. 2020. "Determinant of Profitability: Evidence from Trading, Service and Investment Companies in Indonesia." *Accounting* 6 (5): 787–94. https://doi.org/10.5267/j.ac.2020.6.004.

Shahwan, Tamer Mohamed, and Ahmed Mohamed Habib. 2020. "Does the Efficiency of Corporate Governance and Intellectual Capital Affect a Firm's Financial Distress? Evidence from Egypt." *Journal of Intellectual Capital* 21 (3): 403–30. https://doi.org/10.1108/JIC-06-2019-0143.

Silvia, Dewi, and Yulistina Yulistina. 2022. "Pengaruh Current Ratio, Return On Asset, Debt To Asset Terhadap Financial Distress Selama Masa Pandemi." *Global Financial Accounting Journal* 6 (1): 89. https://doi.org/10.37253/gfa.v6i1.6528.

Sitompul, Yuliani Kalsum, and Andam Dewi Syarif. 2023. "Analysis of Financial Distress in Construction Companies with the Altman Method." *Journal of Economics, Finance And Management Studies* 6 (6): 2817–23. https://doi.org/10.47191/jefms/v6-i6-47.

Sudaryo, Yoyo, Nunung Ayu Sofiati, Ita Kumaratih, Nandan Limakrisna, Mohd

Hassan Che Haat, Zikri Muhammad, Astrin Kusumawardani, and Jumadil Saputra. 2021. "Factors That Affect Financial Distress in Indonesia." *International Journal of Research -GRANTHAALAYAH* 9 (9): 306–15. https://doi.org/10.29121/granthaalayah.v9.i9.2021.4269.

Suharti, Suharti, Yunita Purnamasari, Ardhyayuda Patria Mahari, Menik Puji Astutik, and Suci Pawiati. 2021. "The Effect of Financial Ratio in Financial Distress with Firm Size as Moderated Variables (Empirical Study of Manufacturing Sector Companies Listed on The Indonesia Stock Exchange for The 2014-2018 Period)." *IPTEK Journal of Proceedings Series* 1 (1): 349. https://doi.org/10.12962/j23546026.y2020i1.11358.

Suleman, Indriani, Rizan Machmud, and Meriyana Fransisca Dungga. 2023. "Analisis Faktor-Faktor Yang Mempengaruhi Pertumbuhan Laba Pada Perusahaan Sub Sektor Makanan Dan Minuman Yang Terdaftar Di Bursa Efek Indonesia Tahun 2015-2019." *Jurnal Ilmiah Manajemen Dan Bisnis* 5 (3): 963–74. https://ejurnal.ung.ac.id/index.php/JIMB/article/view/17972.

Sunaryo, Deni. 2021. "Identification of Financial Distress With Company Size As A Moderating Variables in Southeast Asia Property and Real Estate Industry." *International Journal of Science, Technology & Management* 2 (1): 349–63. https://doi.org/10.46729/ijstm.v2i1.115.

Syuhada, Putri, Iskandar Muda, and Rujiman Rujiman. 2020. "Pengaruh Kinerja Keuangan Dan Ukuran Perusahaan Terhadap Financial Distress Pada Perusahaan Property Dan Real Estate Di Bursa Efek Indonesia." *Jurnal Riset Akuntansi Dan Keuangan* 8 (2): 319–36. https://ejournal.upi.edu/index.php/jrak/article/view/22684.

Tegor, Tegor, Said Nuwrun Thasimmim, Nisha Desfi Arianti, Eka Lenggang Dianasari, Mey Krisselni Sitompul, and Fauzan Haqiqi. 2024. "Economic Development of Indonesia Outermost Regions: Overcoming Challenges and Creating Opportunities." *Jurnal Cafetaria* 5 (1): 73–77.

Thukral, Esha. 2021. "COVID-19: Small and Medium Enterprises Challenges and Responses with Creativity, Innovation, and Entrepreneurship." *Strategic Change* 30 (2): 153–58. https://doi.org/10.1002/jsc.2399.

Ugur, Mehmet, Edna Solomon, and Ayaz Zeynalov. 2022. "Leverage, Competition and Financial Distress Hazard: Implications for Capital Structure in the Presence of Agency Costs." *Economic Modelling* 108 (March): 105740. https://doi.org/10.1016/j.econmod.2021.105740.

Viriany, Viriany, and Henny Wirianata. 2021. "Pengaruh Intellectual Capital Dan Leverage Terhadap Financial Performance Dengan Moderasi Firm Size." *Jurnal Ekonomi* 26 (3): 379. https://doi.org/10.24912/je.v26i3.797.

Widhiastuti, Ratieh, and Aulia Istna Karimah. 2024. "The Role of Intellectual Capital in Moderating the Effect of Operating Cash Ratio and Leverage on Financial Distress." *Journal of Applied Accounting and Taxation* 9 (2): 134–44. https://jurnal.polibatam.ac.id/index.php/JAAT/article/view/8199.

Widodo, Boediarso Teguh, and Lalu Hendry Yujana. 2022. "Introduction of National Strategic Projects."