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Analysis of the Effect of Operational Efficiency, Good Corporate Governance, and Inflation on Financial Distress (Case Study on ISSI 2019-2023)

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This study aims to analyze the influence of operational efficiency, good corporate governance (GCG), and inflation on financial distress in consumer cyclical sector companies listed on the Indonesian Sharia Stock Index (ISSI) from 2019 to 2023. Financial distress is measured using the modified Altman Z-Score model, while GCG variables are proxied by institutional ownership, managerial ownership, board of directors, board of commissioners, and audit committee. Operational efficiency is measured by Total Asset Turnover (TATO), and inflation is calculated based on data from the Central Statistics Agency. This research employs panel data with a multiple linear regression approach and purposive sampling to select 18 companies as samples. The results indicate that managerial ownership and operational efficiency have a significant positive effect on financial distress, while the board of directors has a significant negative effect. Meanwhile, institutional ownership, board of commissioners, audit committee, and inflation do not significantly influence financial distress. Control variables such as firm size and leverage also show significant effects.

Keywords: Financial Distress; GCG; Operational Efficiency; Inflation; Altman Z-Score

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INTRODUCTION

Globalization has brought significant changes to various aspects of life. Various aspects of human life, ranging from social, cultural, political, to economic aspects, have undergone rapid changes throughout the world, including in Indonesia. Rapid economic changes have resulted in increasingly competitive growth and competition among companies. The consumer cyclicals sector, which includes the automotive, retail, tourism, and luxury goods industries, is one of the sectors that is highly vulnerable to economic fluctuations. Demand in the consumer cyclicals sector tends to increase rapidly during times of economic expansion, but declines dramatically when there is an economic slowdown. This is because products and services in the consumer cyclicals sector are highly dependent on people's purchasing power.

At the end of 2019, the world faced a major challenge due to the COVID-19 pandemic, which had a significant impact on changes in consumer behavior and caused a global recession. Based on data from the Central Statistics Agency (BPS), the impact of the COVID-19 pandemic caused 82.45% of businesses to experience a decline in performance, while only 2.55% of businesses were able to operate normally (Alexandra et al., 2022). This condition is also reflected in the Indonesia Stock Exchange (IDX) through a special monitoring list, where out of 153 listed stocks, there are 42 issuers or around 27.5% from the consumer cyclicals sector (Syavira et al., 2024). This shows high financial vulnerability in the non-primary consumer sector compared to other more stable sectors.

This prolonged decline in performance has the potential to cause companies to become trapped in financial distress. Financial distress is a stage of serious financial crisis that is an early indicator before bankruptcy or liquidation occurs (Chandio & Anwar, 2022). Financial instability can affect all aspects of a company's life, not only causing losses for the company, but also impacting *stakeholders* and *shareholders* (Ninda Febriyanti & Khalifaturofi'ah, 2023).

Furthermore, the worst-case scenario when a company experiences *financial distress* is that the Indonesia Stock Exchange (IDX) may delist or remove the securities of a company experiencing financial problems as a sign of a financial crisis. To measure this level of risk, this study uses a modified version of the Altman Z-Score model, which is considered to be highly flexible and applicable to various types of companies, both in the manufacturing and non-manufacturing sectors. In addition, the model is considered suitable for economic conditions in developing countries such as Indonesia (Saha & Ahmed, 2024).

The risk of financial distress is influenced by internal factors such as management errors, capital imbalances, and financial statement fraud, as well as external factors such as macroeconomic conditions and natural disasters. One of the most important internal factors is operational efficiency, which is proxied using Total Asset Turnover (TATO). Companies that use their assets effectively have a lower risk of *financial distress* because they can generate greater sales than the assets they invest in (Syachputra & Kusumawati, 2024). In addition to efficiency, the implementation of Good Corporate Governance (GCG) also plays an important role in determining the level of operational and financial success. In other words, a company's failure to implement good *corporate governance* principles can cause it to experience financial difficulties (Ihvan et al., 2022). Based on CG Watch 2023 data taken from *the Asian Corporate Governance Association,* Indonesia's GCG ranking is still the lowest in the Asia Pacific region with a score of 35.7%. This is far behind other ASEAN countries such as Singapore (62.9%), Malaysia (61.5%), and Thailand (53.9%). This indicates that improvements to the internal governance systems of listed companies in Indonesia are still not optimal.

From an external perspective, inflation is a macroeconomic factor that directly affects people's purchasing power and companies' production costs. The inflation rate in Indonesia for the 2019-2023 period shows sharp fluctuations. Based on the TPIP (Central Inflation Control Team) inflation analysis report for December 2020, accessed through the official website of Bank Indonesia, it is known that the inflation rate in 2020, when the Covid-19 outbreak began to hit Indonesia, reached its lowest level in the last 7 years. In 2019, inflation stood at 2.72%, then fell sharply to 1.68% in 2020 due to the pandemic. Inflation began to rise again in 2021 to 1.87% and peaked in 2022 at 5.51% due to global energy and food price increases, before finally declining again to 2.61% in 2023. High inflation has the potential to reduce companies' profit margins due to inflated operating costs, which ultimately increases the risk of financial instability.

This study identifies a theoretical gap by integrating internal and external factors simultaneously. The research focuses on issuers that are listed on the Indonesian Sharia Stock Index (ISSI), which has sharia standards. To strengthen the accuracy of the estimates, this study includes control variables such as company size, company age, and *leverage*. Overall, this study aims

to examine how operational efficiency, GCG, and inflation affect financial distress in the consumer cyclicals sector in the ISSI during the 2019-2023 period, in order to provide strategic recommendations for companies, investors, and policymakers.

LITERATURE REVIEW

The theoretical basis of this study is built using Agency Theory and Signaling Theory to explain the dynamics of internal and external corporate relationships. Agency theory defines the cooperative relationship between shareholders as principals and management as agents, which often triggers conflicts due to information asymmetry and differences in interests. These conflicts can take the form of moral hazard (agent non-compliance with contracts) or adverse selection (information concealment by agents before contracts are made) (Jensen & Meckling, 1976). Meanwhile, signaling theory emphasizes the importance of conveying information through financial reports as a management strategy to provide investors and creditors with an overview of the company's prospects (Brigham & Houston, 2006). In this context, healthy financial conditions are a positive signal that attracts the market, while signs of financial difficulties send a negative signal that can reduce the value of the company.

The main focus of this study is the phenomenon of financial distress, which is a stage of crisis or decline in financial condition prior to bankruptcy, characterized by a company's inability to meet its obligations to creditors (Brealey et al., 2004). To predict this risk, the modified Altman Z-Score model is used, which is considered the most flexible and relevant for various entities in developing countries such as Indonesia (Saha & Ahmed, 2024). There are two factors that cause *financial distress*, namely external factors and internal factors.

Internal factors can be influenced by a company's operational efficiency in managing resources optimally to produce maximum output. Efficient companies are able to reduce costs and increase productivity, which directly strengthens their financial structure. In addition to efficiency, the Good Corporate Governance (GCG) mechanism is a crucial oversight instrument for minimizing financial risk through various structures. Institutional and managerial ownership plays a role in aligning interests and improving control functions over management (Tubagus & Khuzaini, 2020). The existence of a board of directors, board of commissioners, and audit committee also serves to ensure quality strategic decision-making and financial reporting transparency to prevent harmful opportunistic behavior (Kalbuana et al., 2022).

On the other hand, external factors such as inflation are also considered because continuous price increases can inflate operational costs and reduce people's purchasing power. If not managed properly, inflation can put pressure on profits and increase the risk of financial distress, either through demand pull inflation or cost push inflation (Chen & Semmler, 2024). To maintain consistency in the analysis, this study also includes control variables in the form of company size, which reflects capital stability; leverage, which indicates the level of dependence on debt and company age, which illustrates the maturity of the management system.

Hypothesis

Operational efficiency through Total Asset Turnover (TATO) reflects the optimization of assets in generating revenue. Based on signaling theory, high TATO provides a positive signal of effective resource management, which contributes to an increase in the Altman Z-Score and reduces the risk of financial distress. These findings are in line with research conducted by Laksmiwati et al. (2021), Nofita & Darmansyah (2024), Mahardika & Mulyawan (2023), Saputri & Sari (2020). Therefore, the hypothesis is formulated as follows:

H1: Operational efficiency has a significant positive effect on financial distress.

Institutional ownership functions as an intensive monitoring mechanism to reduce agency conflicts and lower agency costs. Effective monitoring increases the Z-Score value, thereby reducing the likelihood of financial distress. This is in line with research conducted by I. Nilasari (2021), Telaumbanua & Budiantara (2020), Li et al. (2021). Therefore, the hypothesis is formulated as follows:

H2 : Institutional ownership has a significant positive effect on financial distress.

Share ownership by managers serves to align the interests of managers with those of company owners. Large ownership encourages decision-making that improves performance and Z-Score value, thereby minimizing the risk of financial distress. This is supported by research by Mujiyati et al. (2021), Shan et al. (2024), Wilevy dan Kurniasih (2021), which states that managerial ownership has a significant positive effect on

the financial health of a company. Therefore, the hypothesis is formulated as follows:

H3: Managerial ownership has a significant positive effect on financial distress.

A large board of directors allows for higher quality strategic decision-making through broad consideration. Based on agency theory, this creates financial stability that minimizes the risk of financial distress. This statement is in line with the results of studies conducted by Siahaan et al. (2021), D. W. Pratiwi & Venusita (2020), Ihvan et al. (2022). Therefore, the hypothesis is formulated as follows:

H4: The board of directors has a significant positive effect on financial distress.

The board of commissioners functions to supervise the decisions of the board of directors to mitigate agency problems and ensure optimal decision making. Strong supervision empirically increases the Z-Score value and reduces the potential for financial distress. This is in line with research conducted by Soesetio (2023), Mahardini & Framita (2022), dan Priyanto & Setiawan (2023). Therefore, the hypothesis is formulated as follows:

H5 : The board of commissioners has a significant positive effect on financial distress.

An effective audit committee ensures the accuracy of financial reports and reduces information asymmetry. An adequate number of members allows for an exchange of opinions in handling crises, thereby increasing the Z-Score and keeping the company away from the risk of bankruptcy. This is in line with research conducted by Orbaningsih et al.(2022), Sewpersadh(2022) , and Nurhayati(2021). Therefore, the hypothesis is formulated as follows:

H6: Audit committees have a significant positive effect on financial distress.

Inflation reflects a continuous increase in prices that can reduce purchasing power and increase operational costs. Based on *signaling theory*, high inflation is a negative signal because it disrupts cash flow and lowers the Z-Score value. These findings are reinforced by the research of Taufik & Sugianto (2021), Chandio & Anwar (2022) and Ceylan (2021), which shows that inflation has a significant negative relationship with *financial distress* in terms of *Z-Score* value. Therefore, the hypothesis is formulated as follows:

H7 : Inflation has a significant negative effect on financial distress.

Based on the development of the hypothesis described above and previous research, a conceptual framework of the study can be illustrated as follows:

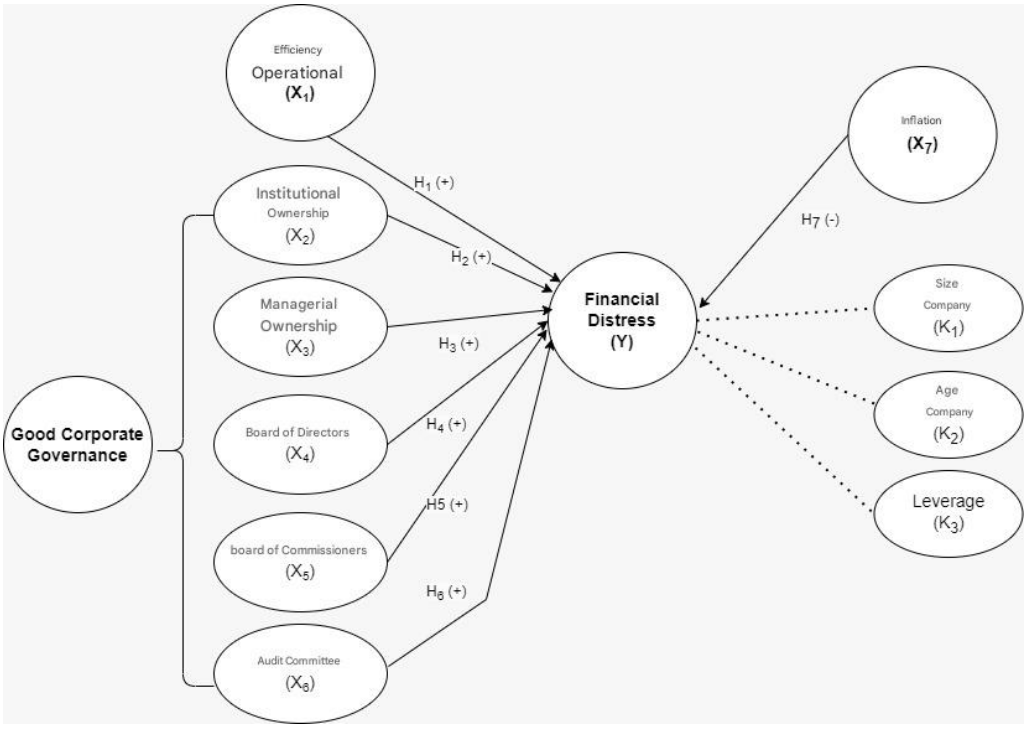

Figure 1. Model Framework

METHOD

This study uses a quantitative approach with secondary data obtained from the annual financial reports of consumer cyclicals companies listed on the Indonesian Sharia Stock Index (ISSI) and inflation data from the Central Statistics Agency (BPS) for the period 2019–2023. The research population includes all consumer cyclicals companies in the ISSI, with sampling techniques using purposive sampling based on specific criteria, resulting in 18 companies with a total of 90 observations. Financial distress was measured using a modified Altman Z-Score model, while the independent variables included operational efficiency (TATO), Good Corporate Governance mechanisms (institutional ownership, managerial ownership, board of directors, board of commissioners, and audit committee), and inflation. This study also used control variables in the form of company size, leverage, and company age.

Data analysis was performed using panel data regression with the help of EViews 12 software. The selection of the best model was done through the Chow Test, Hausman Test, and Lagrange Multiplier Test to determine the most appropriate approach between the Common Effect Model, Fixed Effect Model, and Random Effect Model. Before testing the hypothesis, the data was tested through classical assumption tests, including normality and multicollinearity tests, to ensure the feasibility of the regression model. Hypothesis testing was conducted using the t-test to see the partial effect of the independent variables and the F-test to test the simultaneous effect, as well as the coefficient of determination to assess the model's ability to explain the variation in financial distress.

RESULTS AND DISCUSSION

Model Selection Test

Table 1. Model Selection

Chow Test	Prob > 0,05 = CEM *Prob < 0,05 = FEM*
Hausman Test	*Prob > 0,05 = REM* Prob < 0,05 = FEM
LM Test	Prob > 0,05 = CEM *Prob < 0,05 = REM*

Based on the *Chow* test results, a probability value of 0.000 (< 0.05) was obtained, indicating that *the Fixed Effect Model* (FEM) is more appropriate than *the Common Effect Model* (CEM). Furthermore, the Hausman test results show a probability value of 0.541 > 0.05, indicating that the Random Effect Model (REM) is more appropriate than the Fixed Effect Model. In addition, the Lagrange Multiplier (LM) test also shows a probability value < 0.05, which indicates that the Random Effect Model is more appropriate than the Common Effect Model. Thus, based on the results of the Chow test, Hausman test, and LM test, it can be concluded that the Random Effect Model (REM) is the best model in this study.

F Test

The following is *the Eviews output* of the F-test results with *financial distress* as the dependent variable using a probability value (*F-statistic*) < 0.05:

Table 2. F-test results

R-squared	0,675001
Adjusted R-Squared	0,633862
S.E. of regression	0,064510
F-statistic	16,40777
Prob(F-statistic)	0,000000

Based on the statistical test results, the regression model in this study has a Prob(F-statistic) value of 0.000000. Because this probability value is much smaller than the significance level set at 0.05 (5%), it can

be concluded that simultaneously, all independent variables consisting of operational efficiency, institutional ownership, managerial ownership, board of directors, board of commissioners, audit committee, and inflation, as well as control variables, have a significant effect on financial distress in consumer cyclicals companies. These results indicate that the model used is appropriate and capable of comprehensively explaining the phenomenon of financial distress through a combination of internal company factors and macroeconomic conditions.

t-Test

The following is *the Eviews output* of the t-test results with *financial distress* as the dependent variable using a probability value (*t-statistic*) < 0.10:

Table 3. T-test results

Variable	Coefficient	Std.Error	t-Statistic	Prob.
C	-0,894362	0,776762	-1,151397	0,2530
TATO	0,156275	0,040806	3,829707	0,0003
KI	-0,009591	0,127691	-0,075113	0,9403
KM	0,026605	0,014983	1,775618	0,0796
DD	-0,214239	0,097652	-2,193895	0,0312
DK	-0,095297	0,109241	-0,872358	0,3857
KA	0,284554	0,236266	1,204377	0,2320
Inflation	-0,000390	0,040127	-0,009793	0,9923
Company Size	0,053720	0,028106	1,911366	0,0548
Leverage	-1,021917	0,087288	-11,70738	0,0000
Age	-0,210700	0,194993	-1,080551	0,2832

Based on the t-test results at a significance level of 10%, Total Asset Turnover (TATO) has a significant effect on financial distress with a probability value of 0.000<0.10, so the hypothesis is accepted, while institutional ownership has no significant effect with a probability value of 0.412>0.10, so the hypothesis is rejected. Managerial ownership has a significant effect with a probability value of 0.073<0.10, so the hypothesis is accepted. The board of directors shows a significant effect on financial distress with a probability value of 0.021<0.10, but the direction of the effect is negative, so the hypothesis is rejected because it does not match the direction of the proposed hypothesis.

Furthermore, the board of commissioners and the audit committee do not have a significant effect with probability values of 0.318>0.10 and 0.256>0.10, respectively, so the hypothesis is rejected. Inflation also does not have a significant effect with a probability value of 0.447>0.10. In the control variables, company size has a significant effect with a probability value of 0.054<0.10, and leverage has a significant effect with a probability value of 0.000<0.10, so both hypotheses are accepted, while company age does not have a significant effect with a probability value of 0.283>0.10, so the hypothesis is rejected.

Discussion

Based on the results of the tests conducted, it is known that Total Asset Turnover (TATO) has a significant effect on financial distress. This is because the higher the asset turnover rate, the more efficient the company is in utilizing assets to generate sales, so that the company's ability to meet its financial obligations becomes better and the risk of financial distress can be reduced. In the context of signaling theory, efficiency sends a positive signal to investors that management is capable of running operations optimally, reflecting good financial prospects in the future (Nur Aini Sugiana & Wastam Wahyu Hidayat, 2023). This is in line with research conducted by Daenggrasi et al (2023), Imhanzenobe (2020), and Ceylan (2021) which states that asset efficiency reflects the operational health of a company.

Institutional ownership does not have a significant effect on financial distress. This indicates that institutional share ownership is not necessarily followed by effective supervision of management. Institutional investors tend to be passive and more oriented towards investment returns than direct involvement in managerial decision-making (Shan et al., 2024). In addition, institutional ownership in Indonesia tends to

be centralized, resulting in weak oversight of management. Institutional ownership is also considered to not perform oversight as a shareholder (Fiscienthar, 2021).

Managerial ownership has a significant effect on financial distress. This is because the involvement of management as shareholders encourages the alignment of interests between managers and company owners. This condition makes management more cautious in making financial decisions, thereby reducing the potential for financial difficulties. When management holds a portion of the company's ownership, this will ensure regular monitoring and supervision of company policies to improve performance, reduce agency problems, and work for the benefit of the organization (Puspasari et al., 2023). This is supported by research conducted by Sarker & Hossain (2023), Mujiyati et al.(2021), Alam et al.(2024), which shows the role of managerial ownership in reducing agency conflicts.

The board of directors has a significant but negative effect on financial distress, so the hypothesis is rejected. This indicates that a larger board of directors can actually reduce the effectiveness of coordination and decision-making, which in turn has the potential to increase the risk of financial distress. Although the board of directors plays a strategic role in managing company assets, if this function is not performed optimally, the company still faces the potential for financial distress. This risk arises due to the board's inability to maintain a balance between its control function over management and the effectiveness of coordination in running the company's operations (Alexandra et al., 2022). This is in line with the research by Jodjana & Nathaniel (2021), Siahaan et al.(2021), Younas et al.(2021), which highlights the issue of effectiveness in large boards.

The board of commissioners does not have a significant effect on financial distress because its supervisory function is not yet optimal and tends to be formalistic (Agustina & Anwar, 2021). The existence of the board of commissioners has not been fully able to influence the company's strategic policies related to the prevention of financial difficulties (Orbaningsih et al., 2022). The board of commissioners does not have the authority to be directly involved in the company's operational decision-making. Thus, responsibility for operational decisions remains with the board of directors.

The audit committee also has no significant effect on financial distress, indicating that the existence of the audit committee has not been fully effective in improving the quality of the company's internal supervision and control (Balagobei & Keerthana, 2022; Khalid et al., 2020). The audit committee can only conduct high-level evaluations without being directly involved in operational matters (Sadaa et al., 2023).

Meanwhile, inflation does not have a significant effect on financial distress because inflation conditions during the research period were relatively stable, so they did not put significant pressure on the company's financial performance. According to research conducted by Adiputra & Ruslim (2023), Zedde et al. (2022), when the inflation rate is less than 10% per year, companies are still able to anticipate and manage their finances well.

As a control variable, company size has a significant effect on financial distress because larger companies generally have better resources, access to funding, and operational flexibility to deal with financial pressures (Hassan, 2022). Leverage has a significant effect on financial distress because high debt usage increases interest expenses and payment obligations, thereby increasing the risk of companies experiencing financial difficulties if not balanced with good performance (Al Naim et al., 2025; Khalid et al., 2020).

CONCLUSION

This study aims to analyze the effect of operational efficiency, Good Corporate Governance (GCG), and inflation on financial distress in consumer cyclicals companies listed on the ISSI for the period 2019–2023. The results show that operational efficiency and managerial ownership have a significant positive effect, while the board of directors has a significant negative effect on financial distress. Meanwhile, institutional ownership, the board of commissioners, the audit committee, and inflation have no significant effect, with company size and leverage as control variables that also influence financial distress.

This study reinforces agency theory and signaling theory by showing that operational efficiency and certain Good Corporate Governance mechanisms play an important role in influencing financial distress. These findings confirm that internal company factors are more dominant than external factors such as inflation in explaining the risk of financial distress in sharia-based consumer cyclicals companies.

Practically, the results of this study can be used as a reference for company management to improve asset management efficiency and strengthen the role of the board of directors and managerial ownership in order to reduce the risk of financial distress. For investors, this study can be used as a consideration in assessing the financial health of sharia companies, while

for regulators, it is expected to serve as a basis for encouraging the implementation of more effective corporate governance, particularly in the consumer cyclicals sector.

This study has several limitations, including the limited observation period, which only covers 2019–2023, and the limited sample size of consumer cyclicals companies listed on the ISSI, so the results cannot be generalized to all industrial sectors. In addition, this study only uses the Altman Z-Score model and certain variables in measuring financial distress. Therefore, further research is recommended to expand the period and object of study, use other financial distress prediction models, and add other internal and external variables in order to obtain more comprehensive and accurate results.

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