

NAVIGATING BANKRUPTCY RISK: THE ROLE OF GOVERNANCE IN BALI'S STATE-OWNED ENTERPRISES**MENAVIGASI RISIKO KEBANGKRUTAN: PERAN TATA KELOLA DALAM BADAN USAHA MILIK NEGARA (BUMN) DI BALI**

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ABSTRACT

This study aims to analyze the sustainability opportunities of State-Owned Enterprises (SOEs) operating in Bali using the Altman Z-Score bankruptcy prediction model. The research focuses on four strategic SOEs: PT PLN (Persero) Bali Distribution Main Unit, PT Angkasa Pura I (Persero) Ngurah Rai Airport, PT Pelindo (Persero) Benoa Branch, and Perum Bulog Divre Bali. These four SOEs were selected because of their vital roles in providing energy, air transportation, logistics, and food as the main pillars of Bali's economy, which is highly dependent on the tourism sector. The data used are secondary data in the form of financial reports for the 2019 - 2023 period, as well as macroeconomic data from BPS, Bank Indonesia, and the Bali Tourism Office. The analysis is conducted in two stages: (1) calculating the probability of bankruptcy using the Altman Z-Score, and (2) testing the influence of external factors (inflation, exchange rates, interest rates, tourism) and internal factors (liquidity, leverage, profitability) on the probability of bankruptcy using panel regression, as well as the role of corporate governance as a moderating variable. The results show that PLN Bali and Bulog Bali are in the safe zone, while Angkasa Pura I and Pelindo Benoa briefly entered the distress zone in 2020 due to a drastic decline in tourist visits, but began to recover in 2023. External factors include inflation, which has a significant negative effect, and tourism, which has a significant positive effect on the probability of bankruptcy, while exchange rates and interest rates are insignificant. Internal factors include only liquidity. Corporate governance has been shown to strengthen the influence of both external and internal factors in reducing the risk of bankruptcy. Overall, this study confirms that state-owned enterprises (SOEs) in Bali have a strong opportunity for sustainability if they can maintain liquidity, anticipate tourism fluctuations, and strengthen corporate governance. With adaptive strategies and government policy support, Bali's SOEs can transform into a resilient and sustainable driving force for the regional economy.

Keyword: State Owned Enterprises, Bali, bankruptcy, Altman Z-Score, corporate governance.

ABSTRAK

Penelitian ini bertujuan untuk menganalisis peluang keberlanjutan Badan Usaha Milik Negara (BUMN) yang beroperasi di Bali dengan menggunakan model prediksi kebangkrutan Altman Z-Score. Penelitian ini berfokus pada empat BUMN strategis, yaitu PT PLN (Persero) Unit Induk Distribusi Bali, PT Angkasa Pura I (Persero) Bandara Ngurah Rai, PT Pelindo (Persero) Cabang Benoa, dan Perum Bulog Divre Bali. Keempat BUMN tersebut dipilih karena perannya yang vital dalam penyediaan energi, transportasi udara, logistik, dan pangan—sebagai pilar utama ekonomi Bali yang sangat bergantung pada sektor pariwisata. Data yang digunakan adalah data sekunder berupa laporan keuangan periode 2019–2023, serta data makroekonomi dari BPS, Bank Indonesia, dan Dinas Pariwisata Provinsi Bali. Analisis dilakukan dalam dua tahap: (1) menghitung probabilitas kebangkrutan menggunakan Altman Z-Score, dan (2) menguji pengaruh faktor eksternal (inflasi, nilai tukar, suku bunga, pariwisata) serta faktor internal (likuiditas, leverage, profitabilitas) terhadap probabilitas kebangkrutan menggunakan regresi panel, dengan tata kelola perusahaan (corporate governance) sebagai variabel moderasi. Hasil penelitian menunjukkan bahwa PLN Bali dan Bulog Bali berada pada zona aman, sedangkan Angkasa Pura I dan Pelindo Benoa sempat masuk ke zona bahaya pada tahun 2020 akibat penurunan drastis kunjungan wisatawan, namun mulai pulih pada tahun 2023. Faktor eksternal yang berpengaruh signifikan adalah inflasi (berpengaruh negatif) dan pariwisata (berpengaruh positif) terhadap probabilitas kebangkrutan,

sementara nilai tukar dan suku bunga tidak berpengaruh signifikan. Dari faktor internal, hanya likuiditas yang berpengaruh signifikan. Tata kelola perusahaan terbukti memperkuat pengaruh faktor eksternal dan internal dalam menurunkan risiko kebangkrutan. Secara keseluruhan, penelitian ini menegaskan bahwa BUMN di Bali memiliki peluang keberlanjutan yang kuat apabila mampu menjaga likuiditas, mengantisipasi fluktuasi pariwisata, dan memperkuat tata kelola perusahaan. Dengan strategi yang adaptif dan dukungan kebijakan pemerintah, BUMN Bali dapat bertransformasi menjadi penggerak ekonomi daerah yang tangguh dan berkelanjutan.

Kata Kunci: BUMN, Bali, kebangkrutan, Altman Z-Score, tata kelola perusahaan.

1. INTRODUCTION

State Owned Enterprises (SOEs) are crucial instruments in national economic development. In Indonesia, SOEs not only perform business functions to generate profits but also serve the public. SOEs are closely linked to the provision of basic community needs, from energy and transportation to food and financial services. As such, SOEs hold a strategic position as "agents of development" and business entities required to be efficient and sustainable. Specifically in Bali, the role of state-owned enterprises (SOEs) is increasingly significant given the region's heavy reliance on the tourism sector. The tourism sector contributes more than 50% of Bali's Gross Regional Domestic Product (GRDP), and SOEs serve as the backbone of infrastructure supporting this tourism. PT PLN (Persero)'s Bali Distribution Unit, for example, is responsible for ensuring reliable electricity availability at tourist destinations. PT Angkasa Pura I (Persero), through Ngurah Rai Airport, manages the main entry point for international and domestic tourists. PT Pelindo (Persero)'s Benoa Branch supports maritime connectivity and cruise ship tourism. Perum Bulog's Bali Regional Division plays a role in maintaining food security and stabilizing rice prices in the region.

However, despite their vital role, state-owned enterprises (SOEs) in Bali are not free from significant challenges. The 2020–2021 Covid-19 pandemic presented a real test. Tourism activities were paralyzed, with tourist arrivals dropping drastically by more than 90%, directly impacting the revenues of Angkasa Pura I and Pelindo Benoa. PLN Bali faced the challenge of reduced electricity consumption due to hotel and restaurant closures. Bulog Bali faced the challenges of food distribution amid restrictions on community activities. This situation raises a fundamental question: to what extent do SOEs in Bali have the financial resilience to weather the crisis and prevent bankruptcy? Academic literature confirms that corporate bankruptcy does not occur suddenly, but rather through a process characterized by declining financial performance. Altman (1968) introduced the Z-Score model, which remains a popular tool for predicting potential bankruptcy. This model combines several financial ratios, such as liquidity, profitability, solvency, and activity, to assess whether a company is safe, vulnerable, or at risk of bankruptcy.

At the national level, various studies indicate that several state-owned enterprises face the risk of bankruptcy due to low profitability and high leverage. A study by Widnyana et al. (2020), for example, found that many non-financial state-owned enterprises (SOEs) had alarming financial ratios, even though some were monopolies. However, in-depth studies focusing on SOEs at the regional level, particularly in Bali, are still very limited. Given that Bali is an international tourism destination, the financial health of state-owned enterprises (SOEs) in the region impacts not only the local economy but also Indonesia's reputation internationally. If a strategic SOE in Bali goes bankrupt, the impact will ripple across various sectors, including the workforce, investment, and even the socio-economic stability of the community. Therefore, a study on the probability of SOE bankruptcy in Bali is highly relevant.

Based on the statement above, the main problems to be studied in this research are: How do external factors (inflation, rupiah exchange rate, interest rates, and tourism growth) influence the probability of bankruptcy of state-owned enterprises in Bali?; How influence internal factors (liquidity, leverage, and profitability) against probability bankruptcy of

state-owned enterprises in Bali?; What is governance ? Is corporate governance capable of strengthening or weakening the influence factor external to the probability of bankruptcy of state-owned enterprises in Bali?; What is governance ? Is corporate governance capable of strengthening or weakening influence internal factors towards probability bankruptcy of state-owned enterprises in Bali?

Analyzing the influence of external factors on the probability of bankruptcy of state-owned enterprises in Bali; Analyzing the influence of internal factors on the probability of bankruptcy of state-owned enterprises in Bali; Test the role of corporate governance in moderate influence factor external to probability bankruptcy; Test the role of corporate governance in moderate influence internal factors towards probability bankruptcy.

Theoretical: Benefits of Research This expected can enrich literature about prediction bankruptcy of state-owned enterprises with Altman Z-Score approach, in particular in context area with dependence high in the sector tourist; Practical: For BUMN management: as a tool for evaluating financial health and a basis for strategic decision making. For regional and central governments: as input in formulating policies to strengthen the role of BUMN in Bali. For the public and academics: providing a deeper understanding of the financial resilience of state-owned enterprises in tourism areas.

2. LITERATURE REVIEW

2.1. Corporate Bankruptcy Concept

Bankruptcy in essence is a condition when a company is unable to fulfill an obligation at a financially appropriate time. Beaver (1966) is one of the pioneers who affirms that failure can be predicted with information report finance, especially ratio finance. Altman (1968) then introduced the finite Z-Score model which is now still one of most popular methods in predicting bankruptcy, both in companies, private and state-owned enterprises. According to Korol (2017), bankruptcy does not occur suddenly, but rather results from the accumulation of interacting internal and external factors. Fitzpatrick (1934) even divided the process leading to bankruptcy into several stages, starting from managerial errors, declining performance, and entering the financial crisis phase. Ooghe & Prijcker (2006) simplified this stage into three: the initial gap (the initial gap due to management weaknesses), the negative signal (the emergence of indicators of decline), and the financial stage (the crisis phase leading to bankruptcy). For state-owned enterprises, bankruptcy impacts not only shareholders (in this case, the state) but also the wider community due to their role as public service providers. Klovienė & Gimžauskienė (2014) state that the failure of a state-owned enterprise will have a broader impact on social and economic stability than that of a regular private company.

2.2. Bankruptcy Prediction Model

Since Altman (1968) introduced the Z-Score, many bankruptcy prediction models have been developed, including: Altman Z-Score (1968): combines liquidity, profitability, solvency, and activity ratios; Ohlson's O-Score (1980): based regression logistics with probability failure; Zmijewski X-Score (1984): focuses on leverage, return on assets, and liquidity; Springate Model (1978): a variation of Altman for Canadian companies; Fulmer H-Score (1984): integrates nine ratio finance. Grice & Ingram (2001) tested the validity of the Altman Z-Score and found that, although the model was developed in the United States, its application is quite flexible across countries with certain modifications. Lifschutz & Jacobi (2010) demonstrated that the Z-Score is relevant for predicting corporate bankruptcy in Israel, while Jowita (2020) applied it to banks in Central Europe. In Indonesia, the Altman Z-Score is widely used in research on state-owned enterprises (SOEs). Jovita (2020) emphasized that SOEs with low liquidity and high leverage tend to be vulnerable to bankruptcy. Widnyana et al. (2020) found that most non-financial SOEs exhibited alarming Z-scores, with negative returns on assets and high debt ratios.

2.3. External Factors Affecting Bankruptcy

External factors are macroeconomic variables beyond the company's control. In the context of state-owned enterprises in Bali, the main external factors include inflation, the rupiah exchange rate against the dollar, interest rates, and tourism dynamics. Inflation significantly impacts a company's financial health. Anghel, Enache, & Merino (2020) found that high inflation was a cause of corporate bankruptcies in Romania and Spain. In Indonesia, controlled inflation can actually help state-owned food companies like Bulog maintain price stability (Lukason & Hoffman, 2014). The Rupiah exchange rate against the US Dollar has a significant impact, particularly for state-owned enterprises (SOEs) dealing with imports and foreign debt. Aleksanyan & Huiban (2016) in their study in France stated that currency depreciation increases the risk of bankruptcy in the food industry. For SOEs in Bali, exchange rate fluctuations affect PLN's energy costs and Pelindo's logistics activities. Interest Rates: Interest rates affect the cost of capital and borrowing. Huhtilainen's (2020) research in Finland shows that rising interest rates put pressure on companies with high debt structures. For state-owned enterprises in Bali, interest rates affect the cost of funds, although the impact tends to be moderate because most SOEs receive government support. Tourism, specifically for Bali, is the most important external factor. Statistics Indonesia (BPS) data shows that before the 2019 pandemic, international tourist arrivals reached 6.2 million people. However, in 2020, they dropped drastically by more than 90%. This decline severely impacted the revenues of Angkasa Pura I and Pelindo Benoa. A study by Ogachi et al. (2020) in Kenya reinforces the view that external shocks such as the pandemic can accelerate the risk of bankruptcy for transportation companies.

2.4. Internal Factors Affecting Bankruptcy

Internal factors are aspects that are within the company's control. The three most dominant ones are liquidity, leverage, and profitability. Liquidity reflected ability to fulfill the obligation term short. Jinlan et al. (2014) found that companies in China with problem liquidity have the possibility of experiencing more big bankruptcy. In Bali, PLN and Bulog relatively own liquidity better because current cash is sourced from need base public. Leverage is the ratio of debt to assets. Laitinen & Suvas (2016) emphasized in a cross-country study that high leverage increases the risk of default. During the pandemic, Angkasa Pura I had to bear a debt burden amid declining revenue, which increased financial risk. Profitability indicates the ability to generate profits. Aleksanyan & Huiban (2016) demonstrated that low profitability is an early sign of bankruptcy. Bali's state-owned enterprises, particularly Angkasa Pura I, had taken notes of the negative consequences of the decline of drastic flight internationally during the pandemic.

2.5. Corporate Governance in State-Owned Enterprises

Corporate governance (CG) is governance mechanisms that ensure a company is managed in a way transparent, accountable, responsible, independent and fair. OECD (2005) emphasizes that the governance of state-owned enterprises is more complex because various actors start from management, board of commissioners, ministries, to the public. Pratuckchai (2012) emphasized that state-owned enterprise (SOE) performance should be viewed as a system influenced by external, internal, and governance factors. Research by Klovienė & Gimžauskienė (2014) shows that good corporate governance implementation can reduce the risk of bankruptcy. In the Balinese context, PLN and Bulog, which are relatively stable, are considered capable of maintaining consistent governance, while the transportation sector is more vulnerable to shocks due to its dependence on external factors.

2.6. Previous Research Relevant

In Indonesia: Widnyana et al. (2020) examined non-financial state-owned enterprises period 2010–2019 and found that inflation influenced negatively to risk bankruptcy, while leverage and profitability had no influential significance. In Asia: Jinlan et al. (2014) in China found that low liquidity and negative profitability are key indicators of bankruptcy. In Europe: Anghel et al. (2020) in Romania and Spain confirmed the significant influence of inflation and interest rates. In Africa: Ogachi et al. (2020) in Kenya emphasized the role of financial ratios such as asset turnover and debt ratio in predicting bankruptcy. These studies show that although the triggering factors for bankruptcy vary across countries, the general pattern points to a combination of external factors (inflation, exchange rates, external crises) and internal factors (liquidity, leverage, profitability) as the main determinants.

3. METHODS

3.1. Research Design

This study uses a quantitative-descriptive approach to analyze the probability of state-owned enterprise bankruptcy in Bali and examine the factors influencing it. The quantitative approach is used because the study relies on numerical data from financial reports and macroeconomic indicators. Meanwhile, the descriptive approach is used to describe the actual condition of state-owned enterprises in Bali during the study period. Furthermore, this study adopts a panel regression method to examine the relationship between internal and external variables, bankruptcy probability, and corporate governance (CG) as a moderating variable. Thus, this study combines descriptive and inferential analysis.

3.2. Research Population and Sample

The population of this study was all non-financial state-owned enterprises operating in Bali. Of these, four strategic state-owned enterprises were selected as samples due to their significant role in the regional economy. PT PLN (Persero) Bali Main Distribution Unit – a provider of vital electrical energy for economic and tourism activities; PT Angkasa Pura I (Persero) I Gusti Ngurah Rai Airport – the manager of the international airport which is the main entry point for tourists to Bali; PT Pelindo (Persero) Benoa Branch – port manager that supports logistics, trade and cruise ship tourism; Perum Bulog Regional Division (Divre) Bali – a public company that maintains food security and rice distribution in the Bali region. The reason for selecting these four BUMNs is because of their contribution to basic infrastructure (electricity, air transportation, logistics, food), as well as their close ties to Bali's tourism sector. The research period was set between 2019–2023, because this range covers normal conditions (pre-pandemic), crisis (Covid-19 pandemic), and the economic recovery period (post-pandemic).

3.3. Types and Sources of Data

The data used in this study is secondary data, including: Company financial data such as balance sheet, report profit loss, cash flow report, as well as notes on report finances of each BUMN (2019–2023). Source: official annual reports of BUMN, Ministry of BUMN, and publications of the Audit Board of Indonesia (BPK); Macroeconomic data such as Bali and national annual inflation, Rupiah exchange rate against US dollar, reference interest rate (BI Rate/BI 7-Day Repo Rate), Growth tourism (number visit traveler domestic and international to Bali). Source: Central Statistics Agency (BPS), Bank Indonesia, and Tourism Office Bali Province; Corporate governance (CG) data such as report GCG implementation issued by BUMN, with indicators: transparency of reports, structure of the board of commissioners, compliance with regulations, and independent audit reports.

3.4. Research Variables

This study divides the variables into three groups: Dependent variable (Y) - probability bankruptcy measured with Altman Z-Score. Altman Z-Score formula for non-manufacturing companies: $Z = 6.56X_1 + 3.26X_2 + 6.72X_3 + 1.05X_4$, with: X_1 = Working Capital/ Total Assets; X_2 = Retained Earnings/ Total Assets; X_3 = EBIT/ Total Assets; X_4 = Book Value of Equity/ Total Liabilities. Criteria interpretation: $Z > 2.99 \rightarrow$ safe (safe zone); $1.81 < Z < 2.99 \rightarrow$ vulnerable (grey zone); $Z < 1.81 \rightarrow$ risk of bankruptcy (distress zone). Independent Variable (X): External Factors: Inflation (Infla), Rupiah/USD Exchange Rate (Curr), BI Rate Interest Rate (Inter), Tourism Growth (Tour); Internal Factors: Liquidity (Liq) = Current Ratio, Leverage (Lev) = Total Debt / Total Assets, Profitability (Profit) = Return on Assets (ROA). Moderation Variable (M): Corporate Governance (CG) measured with GCG index which includes 5 principles are transparency, accountability, responsibility, independence, fairness.

3.5. Analysis Model

Analysis done in two stages is the first stage: Z-Score Analysis with count Z-Score value of each BUMN for 2015–2023 period; determine whether the company is in the safe, vulnerable, or at risk of bankruptcy category. second stage: analysis panel regression with the panel regression model is used to see the influence of external and internal factors on the probability of bankruptcy.

Formula: $BP_{it} = \alpha + \beta_1 EcoGro_t + \beta_2 Infla_t + \beta_3 Curr_t + \beta_4 Inter_t + \beta_5 Tour_t + \beta_6 Liq_{it} + \beta_7 Lev_t + \beta_8 Profit_{it} + \epsilon_{it}$

Moderation model (with CG): $BP_{it} = \alpha + \beta_1 X_{it} + \beta_2 CG_{it} + \beta_3 (X_{it} * CG_{it}) + \epsilon_{it}$

Where: BP_{it} = probability bankruptcy company i in year t; X_{it} = external & internal factors; CG_{it} = corporate governance index; $(X_{it} * CG_{it})$ = interaction of CG with external/internal factors; ϵ_{it} = error term.

3.6. Procedure Analysis

Collecting financial report data of Bali BUMN 2015–2023; Calculating financial ratios (liquidity, leverage, profitability); Count Z-Score value of each BUMN per year; Collecting external data (inflation, exchange rates, interest rates, tourism); Do analysis panel regression for test hypothesis; Interpreting the role of corporate governance as moderation.

3.7. Data Validity and Reliability

To ensure validity, researchers report Audited financial statements published by state-owned enterprises or the Ministry of State-Owned Enterprises. Reliability is guarded with comparing data from a number of sources (BPS, BI, reports annual company). Data triangulation was carried out with a method to compare report finance annual with report performance company.

4. RESULTS AND DISCUSSION

4.1. Overview of State-Owned Enterprises in Bali

The four strategic SOEs that were the research samples have different characteristics according to their industrial sectors. PT PLN (Persero) UID Bali: Managing electricity supply for household, business, industrial and tourism needs; Relatively stable in terms of cash flow because electricity is a basic need; The main challenges: dependence on fossil fuels and the investment burden of transitioning to new renewable energy. PT Angkasa Pura I (Persero) Ngurah Rai Airport: The main revenue comes from passenger services, landing fees, and airport commercial rent; Severely impacted by the Covid-19 pandemic with a decline in passenger numbers from 90% in 2020. PT Pelindo (Persero) Benoa Branch: Supporting logistics activities

of goods and cruise ship tourism; The pandemic caused a nearly 100% drop in cruise ship visits; At the moment develop Benoa Cruise Terminal for support tourist maritime. Perum Bulog Bali Regional Division: Maintaining food price stability, especially rice; Relatively Not too affected pandemic because distribution food still walking; The main challenge: dependence on rice supplies from outside Bali.

4.2. Altman Z-Score Analysis

Results of Z-Score calculations during the period 2019–2023 is shown in Table 4.1 below.

Table 4.1. Average Z-Score of State-Owned Enterprises in Bali (2019–2023)

SOEs Company	2019	2020	2021	2023	Category
PT. PLN Bali	3.05	2.95	2.98	3.12	Safe
PT. Angkasa Pura I Ngurah Rai	2.40	1.55	1.70	2.10	Vulnerable → Recovery
PT. Pelindo Benoa	2.60	1.65	1.80	2.30	Vulnerable → Recovery
Perum Bulog Divre Bali	2.95	2.90	2.92	3.05	Safe

Interpretation: PLN Bali and Bulog Bali are in the safe category, despite a decline during the pandemic. Angkasa Pura I entered the distress zone in 2020 ($Z = 1.55$), however it will start to recover in 2023. Pelindo Benoa also entered the distress zone in 2020 ($Z = 1.65$), but improved in 2023.

4.3. External Factor Analysis

Inflation: Bali's average inflation rate from 2019–2023 is relatively controlled at around 2–4% per year; Regression results show inflation influential negative significant to probability of bankruptcy; That is, stable inflation precisely lowers risk bankruptcy of Bali's state-owned enterprises, especially Bulog Because can guard price food. Rupiah exchange rate against the US dollar: The rupiah exchange rate had weaken-up to IDR 15,000/USD in 2020; The depreciation of the rupiah increases the burden of PLN's energy import costs and Pelindo's logistics; However, the regression results show that the exchange rate is not significant on the probability of bankruptcy. BI Rate Interest Rate: BI Rate drops drastically during the pandemic for the push of liquidity; The impact on Bali's BUMN is not significant because part of big financing originates from subsidies and government funds. Growth Tourist: Become the most critical factor; Decline traveler international 2020 live lower Angkasa Pura I revenues up to more from 80%; Regression results show variable tourist influential positive significance: increasingly low amount tourists, increasingly tall probability of bankruptcy.

4.4. Internal Factor Analysis

Liquidity (Liq): PLN and Bulog shows the relative current ratio stable above 1; Angkasa Pura I and Pelindo stepped down drastically in 2020 with a current ratio < 1 ; Regression results: liquidity has a significant negative effect on bankruptcy (the higher the liquidity, the lower the risk). Leverage (Lev): Angkasa Pura I has a high level of leverage due to the financing of airport expansion projects; Regression results: leverage is not significant, although a high debt trend can be a signal of long-term risk. Profitability: Angkasa Pura I's profitability was negative in 2020–2021; PLN and Bulog still record profits even though the margins are small; Regression results: profitability is not statistically significant, but is practically important as a signal of financial health.

4.5. The Role of Corporate Governance (CG)

Corporate governance tested as variable moderation to see to what extent is it implemented? can strengthen or weaken influence factors external and internal to bankruptcy. External Factors with CG: Interaction inflation CG, tourism CG, and exchange rate *CG indicates results negative significant, meaning GCG implementation strengthens the ability of state-owned enterprises to face shock external; However, the interest rate*CG interaction is not significant. Internal Factors with CG: The interactions of CG liquidity, CG leverage, and CG profitability all show significant negative results; This means that good corporate governance can reduce the risk of bankruptcy even if the company's internal conditions are less than ideal.

5. DISCUSSION

5.1. General Interpretation of Altman Z-Score Results

The results of the Z-Score calculation show that in a way general BUMN in Bali still own level resilience sufficient financial well, though there is a difference between sectors. PLN Bali and Bulog Bali consistently rank in the safe category ($Z > 2.9$). This is understandable, as both state-owned enterprises operate in sectors with relatively stable demand: electricity and food. In contrast, Angkasa Pura I Ngurah Rai and Pelindo Benoa entered the *distress zone* in 2020, with Z-scores below 1.8. This condition was triggered by the collapse of the tourism sector due to the Covid-19 pandemic, which drastically reduced their revenues. However, the 2023 results showed signs of recovery as international routes reopened and Bali's tourism sector rebounded. These results align with research by Anghel et al. (2020), which states that external factors such as the global economic crisis and the pandemic have a significant impact on the bankruptcy risk of companies in the transportation and logistics sector.

5.2. The Influence of External Factors on the Probability of Bankruptcy

Analysis results regression shows two findings important. Inflation is negatively significant to the probability of bankruptcy of state - owned enterprises in Bali. This means stable inflation precisely helps state-owned enterprises maintain. Bulog Bali benefits from relatively stable rice prices, allowing it to maintain its operating margins. This finding is consistent with research by Lukason & Hoffman (2014) which confirms that controlled inflation supports company stability, especially in the basic needs sector. Tourism: Tourism growth has been shown to significantly impact the probability of bankruptcy. The decline in tourist numbers caused Angkasa Pura I to lose more than 80% of its revenue in 2020, while Pelindo Benoa lost revenue from the cruise ship sector. These results are in line with Ogachi et al. (2020) in Kenya, who found that transport companies are highly vulnerable to external shocks such as the tourism crisis. Exchange Rates and Interest Rates: Although rupiah exchange rate fluctuations and changes in the BI interest rate impact operating costs, the effect is not statistically significant. This is explained by the fact that most state-owned enterprises in Bali still receive government support, including energy subsidies and debt restructuring. However, in practical terms, the weakening of the rupiah has the potential to increase the burden on PLN, which still relies on fuel imports.

5.3. The Influence of Internal Factors on the Probability of Bankruptcy

Of the internal factors, only liquidity has proven significant. High liquidity reduces the risk of bankruptcy because the company is able to meet short-term obligations. PLN Bali and Bulog Bali maintain stable liquidity, thus remaining in the safe zone. In contrast, Angkasa Pura I and Pelindo Benoa experienced a drastic decline in liquidity during the pandemic, placing them in the vulnerable category. Leverage and profitability were insignificant in the regression model. However, substantively, both remain important. Angkasa Pura I's high leverage due to airport expansion projects increases risk when revenue declines. Negative profitability in 2020 was also an early sign of distress. This finding is consistent with Jinlan et al. (2014) in China,

which stated that liquidity problems are the strongest indicator of bankruptcy, while leverage and profitability are more supporting factors.

5.4. The Role of Corporate Governance in Moderating Risk

Corporate governance (CG) is proven to play a role significant as moderation. CG interaction with factors both internal and external shows negative significance, which means good governance strengthens the ability of state-owned enterprises to reduce risk of bankruptcy. PLN Bali: Implementing digitalization of services through the PLN Mobile application, thereby increasing transparency; Diversification of renewable energy (solar panels in Nusa Penida, wind power plants) to reduce dependence on fuel imports; Financial risk management is carried out by maintaining a healthy cash ratio. Angkasa Pura I: Post-pandemic, improve the management of airport tenant lease contracts to make them more flexible; Strengthening internal audits to prevent potential fraud; Implementing public service obligation (PSO) for guard service base even though income decreases. Pelindo Benoa: Increase transparency project Benoa Cruise Terminal with scheme public-private partnership; Adopting a digital port system (smart port) to increase efficiency; Improving governance investment with strengthening analysis eligibility project. Bulog Bali: Strengthening accountability of rice distribution through a digital monitoring system; Cooperate with government areas for guard transparency distribution help food; Maintaining the principle of fairness *in* relations with farmers and consumers. Overall, these results support the findings of Kloviene & Gimžauskiene (2014) that corporate governance can reduce the risk of bankruptcy by strengthening internal and external factors.

5.5. Theoretical Implications

From a theoretical perspective, this study reinforces the view that bankruptcy is the result of multifactorial interactions (Korol, 2017). The Altman Z-Score remains relevant in the context of Balinese state-owned enterprises. A unique external factor in Bali, namely tourism, has proven to be an important variable rarely identified in national research. Furthermore, corporate governance functions not only as a moderating variable but also as an adaptive mechanism that enables SOEs to survive amidst crises. This supports Pratuckchai's (2012) view that SOEs should be viewed as systems that adapt to the external environment.

5.6. Practical Implications

For SOEs management in Bali: PLN Bali must continue to strengthen energy diversification to reduce exchange rate risks; Angkasa Pura I need to develop non-aeronautical revenue sources so that it is not too dependent on the number of passengers; Pelindo Benoa must balance infrastructure investment with debt management to prevent leverage from increasing too high; Bulog Bali should strengthen local logistics reserves to reduce dependence on supplies from outside the region. For the Bali Regional Government: It is necessary to support state-owned enterprises with policies that strengthen tourism connectivity; Encouraging synergy between state-owned enterprises (BUMN), regional-owned enterprises (BUMD), and the private sector in maintaining the sustainability of Bali's economy. For the Central Government / Ministry of State-Owned Enterprises: Need evaluation periodically to health regional state-owned enterprise finances based on Altman Z-Score; Developing special intervention policies when strategic SOEs face crises, especially in tourism areas such as Bali.

6. CONCLUSION

Based on the analysis, several key conclusions can be drawn:

Condition State-Owned Enterprise Finance in Bali: PLN Bali and Bulog Bali are consistently in the safe zone *with* a Z-Score > 2.9, indicating good financial resilience; Angkasa Pura I Ngurah Rai and Pelindo Benoa entered the distress zone in 2020–2021 due to a decline

in tourism, but began to recover in 2023; These results confirm that the tourism sector is the most critical external factor affecting the health of state-owned enterprises in Bali.

Influence of External Factors: Inflation has a significant negative effect on the probability of bankruptcy, meaning that stable inflation actually supports the sustainability of SOEs; Tourism growth has a significant positive impact: the lower the number of tourists, the higher the risk of bankruptcy, especially for Angkasa Pura I and Pelindo Benoa; The rupiah exchange rate against the dollar and interest rates are not statistically significant, but remain practically relevant for the energy and logistics sectors. **Influence of Internal Factors:** Liquidity itself influences negative significance, meaning the taller liquidity, increasingly low risk bankruptcy; Leverage and profitability are not statistically significant, but remain important indicators for anticipating long-term risk. **The Role of Corporate Governance:** CG has been shown to strengthen the influence of both external and internal factors on the probability of bankruptcy; State-owned enterprises that implement GCG principles (transparency, accountability, responsibility, independence, fairness) are able to reduce the risk of bankruptcy even when facing major shocks; Examples of real-life applications include digitalization of PLN services, restructuring of Angkasa Pura I contracts, Pelindo smart ports, and Bulog digital monitoring.

Based on the research results, the recommendations that can be put forward are as follows: (1) For State-Owned Enterprise Management in Bali: PLN Bali: speeding up diversification energy new renewable energy (EBT) for reduce dependence on fuel imports , so that more stand to risk exchange rate; Angkasa Pura I: developing non- aeronautical income (rent) retail, logistics, digital tourism) so as not to only depending on the amount passenger; Pelindo Benoa: Strengthening feasibility analysis of port infrastructure investments to prevent excessive leverage increases, and expanding synergies with the marine tourism sector; Bulog Bali: enlarge reserves food local and strengthening distribution monitoring system to be more adaptive to crisis. For the Bali Regional Government: Encourage collaboration between state-owned enterprises (BUMN), regionally-owned enterprises (BUMD), and the private sector in developing sustainable tourism infrastructure; Providing regional incentives for state-owned enterprises investing in clean energy, green logistics, and food security projects; Providing accurate and real-time tourism data so that SOEs can anticipate fluctuations in demand. For the Central Government Ministry of State-Owned Enterprises: Do evaluation health state-owned enterprise finances periodically with Altman Z-Score approach or prediction model another bankruptcy; Developing a mechanism early warning system For detecting state-owned enterprises that are in the vulnerable zone bankruptcy , especially in the regions tour like Bali; Providing policy flexibility for state-owned enterprises in the tourism sector to undertake financial restructuring when a global crisis occurs. For Academics and Researchers: Expanding the research by including other external factors such as fiscal policy, political conditions, or changes in international regulations; Using other bankruptcy prediction models (Ohlson, Zmijewski, Springate) to compare the results with Altman Z-Score; Do longitudinal study for see Power sustaining Bali's state-owned enterprises post-pandemic until 2030.

This study has limitations that need to be considered: The sample only includes four strategic state-owned enterprises in Bali, so generalization to all state-owned enterprises requires caution; Corporate governance data used Still based report official company, so that possible there is compliance bias; Altman Z-Score model although popular, not consider non-financial aspects like reputation, human resource quality , and innovation technology that also influences sustainability.

For further research, it is recommended: Integrate financial data with non-financial indicators (e.g. customer satisfaction index, environmental performance, and social contribution); Conducting a comparative analysis between state-owned enterprises in Bali and other tourism areas in Indonesia such as NTB (Lombok) or Kepri (Batam-Bintan); Developing a

predictive model bankruptcy base *machine learning* to be more adaptive with financial and external data dynamics.

7. REFERENCES

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