

A Study on the Probability of Sustainability of State-Owned Enterprises (A Review from the Perspective of the Bankruptcy Model)

I Wayan Widnyana^{1*}, Dominicus Djoko Budi Susilo¹, I Wayan Suarjana¹, Ni Putu Peri Antari¹, I Gusti Agung Putu Sintia Putri¹ and Nur Aima Shafie²

¹Faculty of Economics and Business, Universitas Mahasaraswati Denpasar, Indonesia.

²Accounting Research Institute, Universiti Teknologi MARA, Malaysia.

ABSTRACT

This study aimed to investigate how the external (such as growth, inflation, exchange rate) and internal factors influence the possibility of insolvency, in state owned enterprises (SOEs) and the moderating role of corporate governance. The study examined the SOEs in Indonesia, specifically analyzing financial data from the period between 2010 and 2019. The sample size consisted of an average of 112 companies. The analysis comprised of two phases; the first phase uses the Altman Z score model to evaluate the probability of bankruptcy followed by regression analysis in the second phase to identify the determinants of this probability. The findings indicated that certain external factors, such as inflation negatively influenced SOE profitability during bankruptcy while other factors such as leverage, and profitability were not significant. Corporate governance was found to heighten the impact of factors (growth, inflation, exchange rate) on profitability of bankruptcy. Nevertheless, it does not diminish the influence of interest rate fluctuations on bankruptcy profits. Furthermore, corporate governance was shown to heighten the impact of factors (such as liquidity, leverage, profitability) in reducing SOE profits during bankruptcy scenarios.

Keywords: State-owned enterprise, sustainability, corporate governance, bankruptcy

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* Corresponding author: I Wayan Widnyana; Faculty of Economics and Business, Universitas Mahasaraswati Denpasar, Indonesia; E-mail: wywid@unmas.ac.id

INTRODUCTION

State-owned enterprises (SOEs) are business entities in which the government holds a majority stake, playing an important role in various sectors such as healthcare, education, utilities, energy and infrastructure. These enterprises are prevalent in almost every country, although their functions and structures differ globally. In Indonesia, SOEs operates under government supervision, particularly through the Minister of State-Owned Enterprises, contributing greatly to the health of the country's economy and the well-being of the people. According to Regulation No. 19/2003, an enterprise qualifies as a government-owned entity if the government owns all or at least 50% of its shares. SOEs are established with the public interest in mind, which leads to their classification into two categories: joint stock companies (Perum), which operate on a non-profit basis focusing solely on public services, and limited liability companies (Persero), which aim to make a profit.

The performance shortfall of the state-owned enterprises (SOEs) in Indonesia between the period of 2010 and 2020 has attracted significant criticism and has become a prominent subject of public scrutiny. Notwithstanding their monopoly or oligopoly status in certain markets, these organizations frequently face censure due to their perceived inefficiency. The debate and scrutiny surrounding SOEs performance has become more intense in political discussions, especially during the presidential and vice-presidential elections in 2014 and 2019. Although the negative perceptions on SOEs had subsided after the 2014 and 2019 elections, the emergence of financial scandals involving prominent SOEs such as Garuda Indonesia, Asuransi Jiwasraya, and ASABRI, emphasized systemic issues and caused heightened public concern.

The downturn in performance of SOEs from 2010 to 2019 can be attributed to a deterioration in key financial metrics and a concerning rise in debt levels. During this period, there had been a steady decrease in important measures, with the average current ratio being close to 0.13 and the asset turnover ratio barely reaching 0.21. These figures suggested that there were significant inefficiencies in the company's operations. Of particular concern was the significant decline in return on equity, with the average rate dropping to -13.39 percent, the lowest ever recorded at -60.51 percent.

This indicated that only a few SOEs achieve positive performance results. On the other hand, the average debt ratio increased to 74.39%, with several SOEs having ratios surpassing 143%, and in extreme instances, reaching as high as 1,344.84%. Likewise, the Interest Coverage Ratio (ICR) among these SOEs frequently fell below the crucial barrier of 1.37, with the lowest number recorded at -183.91. The occurrence of severe financial disruption increases the concerns over the possibility of bankruptcy, which has been thoroughly documented in the literature as a consequence of inadequate corporate performance (Jinlan et al., 2014; Huhtilainen, 2020; Lukason & Hoffman, 2014; Laitinen & Suvas, 2016; Aleksanyan & Huiban, 2016; Jovita, 2020).

The stakeholders of SOEs are deeply concerned about the possibility of bankruptcy since it might result in several negative consequences such as heightened unemployment and economic instability. This emphasizes the hazard of financial mismanagement for companies that are owned by the state. Bankruptcy is not an abrupt occurrence, but rather the culmination of a protracted process impacted by the interplay of various circumstances. The decline can be ascribed to both external factors which are beyond control, such as shifts in economic conditions, inflation, currency volatility, and interest rates, as well as significant internal factors, notably in corporate governance. Given the alarming financial measures, such as a debt ratio of 1,344.84% and an ICR value of -183.91, mentioned earlier, the possibility of bankruptcy is becoming more likely. The complexity of the relationship between declining financial health and the eventual collapse of companies is emphasised in academic analysis (Korol, 2017; Kloviene & Gimžauskiene, 2014; Pratuckchai, 2012; Buehler et al., 2012). This highlights the critical need for immediate strategic intervention and reforms to prevent failure.

Based on the basis of the context presented by the previous discussion, the research questions can be briefly described as follows: (1) To what extent do external factors contribute to the possibility of firm bankruptcy? (2) To what extent do internal factors contribute to the likelihood of firm bankruptcy? (3) Does corporate governance moderate the influence of external factors on the probability of firm bankruptcy? (4) Does corporate governance moderate the influence of internal factors on the probability of firm bankruptcy? The aim of this study was to investigate: (1) The influence of external factors on the probability of firm bankruptcy; (2) The influence

of internal factors on the probability of firm bankruptcy; (3) The role of corporate governance in moderating the influence of external factors on the probability of firm bankruptcy; (4) The role of corporate governance in moderating the influence of internal factors on the probability of firm bankruptcy.

LITERATURE REVIEW

The Stakeholder Theory fundamentally argues for a business model where the interests and wellbeing of all stakeholders, not just shareholders, are a priority. Freeman's 1984 work is foundational in this regard, stressing that long-term success requires the balanced consideration of employees, customers, suppliers, and the community alongside those of shareholders. Applying this Theory to SOEs in the face of bankruptcy illuminates the critical role of corporate governance in managing the diverse expectations and needs of stakeholders. It posits that effective governance, informed by stakeholder interests, can mitigate negative impacts of financial distress, guiding SOEs towards strategies that enhance resilience and sustainability. Furthermore, integrating the Stakeholder Theory in bankruptcy analysis advocates for governance practices that are transparent, accountable, and inclusive, ensuring policies not only protect financial assets but also bolster employee welfare, supplier sustainability, and community well-being. This approach not only aids in navigating economic challenges but also in building a robust framework for financial health and organizational resilience, emphasizing the Theory's applicability and importance in contemporary business strategy and policy formulation for SOEs.

The phenomenon of bankruptcy represents a critical phase in a company's lifecycle, marked by the inability to fulfill financial obligations promptly. This condition is typically the result of extended periods of financial distress, where firms struggle to manage their operations and satisfy their financial commitments. Such periods demand immediate interventions like debt restructuring, corporate overhaul, and operational adjustments to prevent the dire consequences of bankruptcy (Korol, 2017). However, the absence of timely and effective measures often leads to an irreversible path towards financial collapse. The metaphor of the 'Boiled Frog,' introduced by Korol (2017), serves as a compelling illustration to differentiate among

various bankruptcy scenarios. This analogy, by highlighting firms that fail to recognize and adapt to gradual changes in their environment due to managerial complacency, offers a vivid depiction of one pathway to corporate demise. This metaphor not only aids in understanding the nuanced distinctions among bankruptcy types but also emphasizes the fatal outcome of neglecting environmental and strategic shifts.

Historically, the progression towards bankruptcy has been conceptualized through stages that encapsulate the descent into financial turmoil. Initially identified by Fitzpatrick (1934) and later refined by Oogher and Prijcker (2006), these stages outline a trajectory starting from managerial misjudgments, through escalating crises triggered by successive poor decisions, to the culmination in a financial debacle. This staged approach to understanding bankruptcy underlines its complex and multifaceted nature, not merely as a corporate failure but as a phenomenon with profound implications for the broader economy, including job losses and economic instability (Lifschutz & Jacobi, 2010). The advent and evolution of bankruptcy prediction models, such as Altman's Z-Score (1968), emphasized the scientific efforts to anticipate and mitigate financial distress. These models were built on the premise that pre-bankruptcy symptoms can be identified and measured, offering a window of opportunity for corrective action (Stankova & Hampel, 2018). Despite the diversity of these models, the consensus among scholars, as noted by Korol (2017), was that bankruptcy results from a confluence of factors rather than a singular cause, highlighting the complexity of predicting and preventing corporate collapse.

The reasons behind corporate bankruptcies are multifaceted, primarily stemming from both exogenous and endogenous factors. Externally, companies are subject to economic conditions beyond their control, such as fiscal policies, monetary policies, exchange rate fluctuations, and regulatory environments. These external factors play a significant role in determining a company's financial health, with empirical studies validating their impact on corporate bankruptcy. For instance, Angela et al. (2020) highlighted how macroeconomic elements like interest rates and inflation significantly contributed to corporate bankruptcies in Romania and Spain, a sentiment echoed in the findings from France (Aleksanyan & Huiban, 2016) and Switzerland (Buehler et al., 2012). These studies suggested a pervasive

influence of economic conditions across different geographical contexts on the financial stability of corporations, underlining the challenging nature of navigating these external pressures. Such research accentuates the necessity for companies to develop robust financial and operational strategies that can withstand the adverse effects of these external variables, despite their limited control over such conditions.

Second, there are internal factors, i.e. factors that come from within the company itself and should be within the company's control. Internal factors can be classified into three main groups: (a) Neoclassical group related to the problem of inappropriate and efficient asset allocation. (b) financial groups associated with inappropriate financing structures; (c) Management groups associated with poor governance. Various empirical studies have also shown that endogenous factors such as lack of liquidity, asset availability, leverage, and profitability can trigger corporate bankruptcies. Jinlan et al. (2014) found that Chinese companies that suffer from liquidity problems and declining profits are more likely to go bankrupt. On the other hand, Huhtilainen (2020) found that income decline and bankruptcy are triggers of bankruptcy in Finland. Daikatsu et al. (2020) also found that financial indicators such as asset turnover ratio, total assets, working capital ratio, inventory turnover ratio, and debt ratio influence corporate bankruptcies in Kenya. Jowita (2020) found much the same in Central and Eastern

In the context of state-owned enterprises, Pratuckchai (2012) suggested viewing the performance problem (bankruptcy) of state-owned enterprises as a systematic model determined by external and internal factors. Environmental changes such as political, economic, social, and technological changes can affect an organization's effectiveness. Therefore, the organization's policies must be adapted to the government's policies while adapting to the needs of society. Therefore, Kloviene and Gimžauskiene (2014) also emphasized that corporate performance cannot be explained only by the internal aspects of the company, but must also be integrated with good corporate governance. Corporate governance lacks clear and easily identifiable principles and involves a complex chain of actors (e.g., management, boards of directors, ownership departments, ministries, governments, etc.) (OECD, 2005).

Given this backdrop, the study posited the following hypotheses:

- H1: External factors (economic growth, inflation, exchange rates, interest rates) have a negative effect on the firm's bankruptcy probability.
- H2: Internal factors (liquidity level, debt ratio, profitability) have a negative effect on the firm's bankruptcy probability.
- H3: Corporate governance moderates the influence of external factors on the firm's bankruptcy probability
- H4: Corporate governance moderates the influence of internal factors on the firm's bankruptcy probability.

METHODOLOGY

The research sample comprised of all non-financial state-owned enterprises that existed during the observation period (2010-2019). The sample size changed from period to period due to the addition of new companies and attrition due to the sale or liquidation of multiple companies. The average sample size during the observation period was approximately 112 companies. The research data consisted of corporate financial data obtained from each company's securities reports and annual reports. Data on economic growth, inflation, exchange rates, and interest rates were obtained from the Central Bureau of Statistics and Bank Indonesia. The variables included in this study were: (1) Exogenous variables, i.e. internal factors of the company consisting of economic growth, inflation, exchange rates, and interest rates. Internal factors consisting of liquidity, leverage, and profitability. (2) the mediating variable, namely corporate governance; (3) the endogenous variable, i.e. the probability of firm bankruptcy using the Altman score model; Data analysis was performed in two steps. In the first stage, the probability of bankruptcy is analyzed using the Altman Z-score model. Systematically, the Z-score model used in this study was:

$$Z = 0,171 (\text{Working Capital})/(\text{Total Assets}) + 0,847 (\text{Retained Earnings})/(\text{Total Assets}) + 3,107 (\text{EBIT})/(\text{Total Assets}) + 0,420 (\text{Common Equity})/(\text{Total Debt}) + 0,998 (\text{Total Sales or Revenues})/(\text{Total Assets}) \quad (1)$$

In the second stage of the analysis, we used a regression model to examine the factors that determined the probability of bankruptcy. Determining the probability of bankruptcy can be broadly divided into two groups. namely, (1) external factors such as economic growth, inflation, exchange rates, and interest rates; (2) internal factors represented by levels of liquidity, leverage, and profitability; Systematically, the developed panel regression model looked like this:

$$Z_{it} = \alpha_{it} + \beta_1[\text{Eco_Gro}]_{it} + \beta_2[\text{Infla}]_{it} + \beta_3[\text{Curr}]_{it} + \beta_4[\text{Inter}]_{it} + \beta_5[\text{Liq}]_{it} + \beta_6[\text{Lev}]_{it} + \beta_7[\text{Profit}]_{it} + \varepsilon_{it} \tag{2}$$

$$Z_{it} = \alpha_{it} + \beta_1[\text{Eco_Gro}]_{it} + \beta_2[\text{Infla}]_{it} + \beta_3[\text{Curr}]_{it} + \beta_4[\text{Inter}]_{it} + \beta_5[\text{Liq}]_{it} + \beta_6[\text{Lev}]_{it} + \beta_7[\text{Profit}]_{it} + \beta_8[\text{CG}]_{it} + \beta_9[\text{Eco_Gro}]_{it}[*\text{CG}]_{it} + \beta_{10}[\text{Infla}]_{it}[*\text{CG}]_{it} + \beta_{11}[\text{Curr}]_{it}[*\text{CG}]_{it} + \beta_{12}[\text{Inter}]_{it}[*\text{CG}]_{it} + \beta_{13}[\text{Liq}]_{it}[*\text{CG}]_{it} + \beta_{14}[\text{Lev}]_{it}[*\text{CG}]_{it} + \beta_{15}[\text{Profit}]_{it}[*\text{CG}]_{it} + \varepsilon_{it} \tag{3}$$

where: Z_{it} was the probability of bankruptcy of the company i in t ; α_{it} is the equation constant for the company i in t ; $[\text{Eco_Gro}]_{it}$ was the country's economic growth i in t , which in this case is only Indonesia's economic growth; $[\text{Infla}]_{it}$ was the country's inflation rate i in t , which in this case was only the Indonesian (national) inflation rate; $[\text{Curr}]_{it}$ was the change in the country's exchange rate i in t , which in this case was only represented by the rupiah exchange rate against the United States dollar; $[\text{Inter}]_{it}$ was the state interest rate i in t , which was represented by the Bank Indonesia reference rate (BI Rate); $[\text{Liq}]_{it}$ was the company's liquidity level i in t , as measured by the ratio of working capital to total assets; $[\text{Lev}]_{it}$ was the company's debt ratio i in t , as measured by the ratio of total debt to total assets; $[\text{Profit}]_{it}$ was the company's profitability ratio i in t , as measured by return on assets; $[\text{CG}]_{it}$ was corporate governance i in t ; $[\text{Eco_Gro}]_{it}[*\text{CG}]_{it}$ was the interaction of economic growth and corporate governance i in t ; $[\text{Infla}]_{it}[*\text{CG}]_{it}$ was the interaction of inflation and corporate governance i in t ; $[\text{Curr}]_{it}[*\text{CG}]_{it}$ was the interaction of exchange rates and corporate governance i in t ; $[\text{Inter}]_{it}[*\text{CG}]_{it}$ was the interaction of interest rates and corporate governance i in t ; $[\text{Liq}]_{it}[*\text{CG}]_{it}$ was the interaction of liquidity and corporate governance i in t ; $[\text{Lev}]_{it}[*\text{CG}]_{it}$

was the interaction of leverage and corporate governance i in t ; $[\text{Profit}]_{it}$ $[\text{*CG}]_{it}$ was the interaction of profitability and corporate governance i in t ; $\beta_{1,2,3,4,5,6,7,8}$ was the coefficient of each variable in each equation and period; and ε_{it} was the residual error rate for each equation and period.

RESULTS AND DISCUSSION

Results

Data analysis showed that the average Z-score of Indonesian state-owned enterprises during the COVID-19 pandemic was 6.18. This is specifically shown in Table 1.

Table 1: Descriptive Statistics

Z score	6.18
External Factors	
Eco_Gro (%)	-4.31
Infla (%)	1.83
Curr (%)	-1.32
Inter (%)	3.26
Internal Factors	
Liq	1.66
Lev (%)	0.78
Profit (%)	4.93

As shown in Table 1, the average Eco_Gro (economic growth) decreased by 4.31%. The inflation rate (inflation) tended to be suppressed, with an average of 1.83%. The average currency (rupiah to US dollar exchange rate) depreciated by 1.32%. The average inter rate (interest rate) was 3.26 times. Due to external factors, the average Liq (liquidity) was 1.66, Lev (leverage) was 0.78%, and Profit (profitability) was 4.93%.

Table 2: Regression Analysis

	Model 1		Model 2	
	Coef.	t-statistic	Coef.	t-statistic
External Factors				
Eco_Gro	-0.029	0.429		
Infla	-0.486	2.157**		
Curr	-0.014	0.371		
Inter	0.011	0.324		
Internal Factors				
Liq	-0.865	2.365**		
Lev	-0.124	1.287		
Profit	-0.051	0.932		
External Factors with CG as Moderator				
Eco_Gro * CG			-0.453	3.881**
Infla * CG			-0.617	4.732**
Curr * CG			-0.281	2.193**
Inter * CG			0.226	0.510
Internal Factors with CG as Moderator				
Liq * CG			-0.276	2.160**
Lev * CG			-0.285	2.218**
Profit * CG			-0.342	2.973**
R2	0.892		0.836	
Adjust R Square	0.814		0.782	
F-stat	2.729**		2.645**	

Note: **Sig 0.05, *Sig 0.01.

DISCUSSIONS

The Influence of External Factors on the Firm’s Bankruptcy Probability

In examining the impact of economic growth (Eco_Gro) on the profitability of state-owned enterprises (SOEs) at the time of bankruptcy, the regression analysis yielded a coefficient of -0.029 for profitability level, with a t-statistic of 0.429. This indicated that economic growth did not significantly influence the profitability of SOEs during bankruptcy. On the other hand, the analysis of the inflation rate’s effect on the profitability of bankruptcy revealed a regression coefficient of -0.486 and a t-statistic of 2.157. This demonstrated that inflation negatively and significantly impacted the profitability level of SOEs during bankruptcy, suggesting that higher inflation rates were associated with lower profitability levels in the event of bankruptcy.

Regarding the exchange rate (Curr) of the Rupiah against the US dollar in the context of bankruptcy profitability, the regression coefficient was found to be -0.014, with a t-statistic of 0.371. This outcome suggested that the Rupiah's exchange rate against the US dollar did not significantly impact the profitability of SOEs at the time of bankruptcy. For interest rates (Inter) and their influence on bankruptcy profitability, the regression analysis showed a coefficient of 0.011 and a t-statistic of 0.324, indicating that interest rates did not significantly affect SOEs' profitability during bankruptcy.

Among the four examined external factors (economic growth, inflation rate, exchange rate, and interest rate), only inflation exhibited a negative and significant effect on the profitability of SOEs at the time of bankruptcy. This finding supported the hypothesis that an increase in the inflation rate detrimentally affects SOEs' profitability in bankruptcy scenarios. Conversely, a decrease in inflation could potentially enhance the profitability of SOEs during bankruptcy. This aligns with the research conclusions of Jinlan et al. (2014), Huhtilainen (2020), and Anghel et al. (2020), which also identified inflation as a significant factor influencing corporate bankruptcy. The other three external factors—economic growth, exchange rates, and interest rates—did not show a significant impact on the profitability levels of SOEs in bankruptcy situations, suggesting that fluctuations in these variables did not alter the profitability outcomes of SOEs following bankruptcy.

The Influence of Internal Factors on the Firm's Bankruptcy Probability

The analysis concerning the impact of liquidity (Liq) on the profitability of state-owned enterprises (SOEs) during bankruptcy revealed a regression coefficient of -0.865 with a t-statistic of 2.365. This indicated a negative and significant relationship between liquidity and profitability at the time of bankruptcy, suggesting that higher liquidity levels were associated with lower profitability in bankruptcy scenarios. In the case of leverage (Lev) and its influence on bankruptcy profitability, the regression coefficient was -0.124, accompanied by a t-statistic of 1.287. This result implied that leverage did not significantly impact the profitability of SOEs during bankruptcy, indicating that the debt level of SOEs does not directly correlate with their profitability in such situations.

Regarding the effect of profitability itself on bankruptcy profitability, the regression coefficient stood at -0.051, with a t-statistic of 0.932. This outcome suggested that pre-bankruptcy profitability levels did not significantly influence the profitability of SOEs during bankruptcy. Of the three internal factors examined (liquidity, leverage, profitability), only liquidity supported the proposed hypothesis, affirming a significant and negative impact on SOEs' bankruptcy profitability. This finding implied that an increase in liquidity was associated with a decrease in profitability for SOEs facing bankruptcy, while a decrease in liquidity could potentially enhance profitability in these circumstances. These results are in line with the research findings of Jinlan et al. (2014), Laitinen & Suvas (2016), Aleksanyan & Huiban (2016), and Jowita (2020), which highlighted that liquidity challenges are a precursor to bankruptcy among firms.

The study concluded that the other two internal factors, leverage and profitability, did not validate the proposed hypotheses. In other words, variations in the levels of debt and profitability prior to bankruptcy did not significantly influence the profitability levels of SOEs during bankruptcy. This suggested that changes in debt and profitability metrics of SOEs did not directly affect their bankruptcy profitability outcomes.

The Role of Corporate Governance in Moderating the Effect of External Factors on the Firm's Bankruptcy Probability

The regression analysis incorporating corporate governance as a moderating variable revealed that economic growth (Eco_Gro) had a regression coefficient of -0.453 with a t-statistic of 3.881 when assessing its impact on the bankruptcy profitability of state-owned enterprises (SOEs). This outcome suggested that corporate governance intensified the negative relationship between economic growth and the profitability of SOEs during bankruptcy, indicating that as economic growth increased, the profitability of SOEs in bankruptcy decreased more sharply when corporate governance was considered. Similarly, the inflation rate (Infla) exhibited a regression coefficient of -0.617 and a t-statistic of 4.732 in the context of bankruptcy profitability, with corporate governance acting as a moderating variable. This result implied that corporate governance enhanced the negative effect of inflation on SOEs' bankruptcy profitability, signifying that rising inflation led to a more pronounced decrease in profitability during bankruptcy when factoring in corporate governance.

The analysis also showed that the exchange rate (Curr) of the rupiah against the US dollar had a regression coefficient of -0.281 with a t-statistic of 2.193, again with corporate governance as a moderating variable. This indicated that corporate governance amplified the negative impact of exchange rate appreciation on the profitability of SOEs in bankruptcy situations, suggesting that an increase in the rupiah's value against the US dollar results in a greater decrease in profitability during bankruptcy when corporate governance is accounted for. However, for interest rates (Inter), the regression coefficient was 0.226 with a t-statistic of 0.510 when examining its effect on bankruptcy profitability with corporate governance as the moderating variable. This finding suggested that corporate governance did not significantly modify the impact of interest rate fluctuations on the bankruptcy profitability of SOEs, indicating that changes in interest rates did not have a marked impact on profitability during bankruptcy, regardless of corporate governance practices.

Initially, among the external factors evaluated without the moderating effect of corporate governance, only inflation was found to significantly influence the bankruptcy profitability of SOEs according to the proposed hypothesis. However, when considering corporate governance as a moderating variable, it became evident that economic growth, inflation, and exchange rate appreciation negatively affected the profitability of SOEs during bankruptcy. This highlighted the role of corporate governance in exacerbating the effects of these external factors on reducing profitability in bankruptcy scenarios. Conversely, corporate governance did not significantly alter the influence of interest rate changes on the bankruptcy profitability of SOEs, highlighting a nuanced interaction between external factors and corporate governance in shaping SOEs' financial outcomes during bankruptcy.

The Role of Corporate Governance in Moderating the Effect of Internal Factors on the Firm's Bankruptcy Probability

The analysis incorporating corporate governance as a moderating variable showed that liquidity (Liq) had a significant impact on the bankruptcy profitability of state-owned enterprises (SOEs), with a regression coefficient of -0.276 and a t-statistic of 2.160. This result suggested that corporate governance strengthened the negative effect of higher liquidity

levels on SOEs' profitability during bankruptcy, indicating that as liquidity increased, the profitability of SOEs decreased more significantly when corporate governance was considered.

For leverage (Lev), the regression coefficient on bankruptcy profitability, with corporate governance acting as the moderating variable, was -0.285, and the t-statistic is 2.218. This finding indicated that corporate governance enhanced the negative influence of increased leverage on the profitability of SOEs in bankruptcy situations, suggesting that higher debt levels lead to a more pronounced decline in profitability when corporate governance practices were accounted for.

Regarding profitability, with corporate governance as the moderating variable, the regression coefficient for bankruptcy profitability was -0.342, with a t-statistic of 2.973. This indicated that corporate governance amplified the negative effect of higher profitability levels on the bankruptcy profitability of SOEs, meaning that improvements in profitability could paradoxically lead to greater declines in profitability during bankruptcy when influenced by corporate governance. Initially, when evaluating internal factors without considering the moderating effect of corporate governance, only liquidity was found to significantly impact the profitability of SOEs during bankruptcy according to the proposed hypothesis. However, with corporate governance introduced as a moderating variable, it was evident that all internal factors—liquidity, leverage, and profitability—negatively affected SOEs' profitability during bankruptcy. This highlighted the role of corporate governance in exacerbating the negative impacts of increased liquidity, debt, and profitability on the profitability of SOEs in the context of bankruptcy, highlighting the significant influence of corporate governance practices on internal factors and their effects on SOEs' financial outcomes during bankruptcy.

CONCLUSION

The comprehensive analysis of the factors affecting the profitability of SOEs during bankruptcy revealed nuanced insights into the dynamics between external and internal variables and their interplay with corporate governance. Among external factors, inflation stood out for its negative

and significant impact on SOEs' bankruptcy profitability. An uptick in inflation correlated with a marked decrease in profitability for SOEs facing bankruptcy, underscoring the sensitivity of these enterprises to macroeconomic volatilities. In contrast, a dip in inflation could bolster profitability during such challenging times. This finding highlighted the critical role of inflation in shaping the financial outcomes of SOEs during periods of distress.

Conversely, other examined external factors, including economic growth, exchange rates, and interest rates, appeared to have a negligible impact on the profitability of SOEs in the context of bankruptcy. This suggested that variations in these economic indicators did not significantly alter the profitability trajectory of SOEs undergoing bankruptcy, indicating a degree of resilience or decoupling of SOEs' financial performance from these broader economic fluctuations during bankruptcy proceedings.

Internal factors, particularly liquidity, were identified as having a profound negative impact on bankruptcy profitability. Elevated liquidity levels were inversely associated with the profitability of SOEs during bankruptcy, indicating that excess liquidity might not translate into favorable financial outcomes in such scenarios. Conversely, reduced liquidity could enhance the profitability of SOEs in distress, suggesting that managing liquidity levels could be crucial for SOEs navigating bankruptcy. However, leverage (debt) and profitability prior to bankruptcy did not demonstrate a significant influence on the profitability levels during bankruptcy. This indicated that the initial states of debt and profitability of SOEs did not directly dictate their financial performance in bankruptcy, pointing towards other factors or mechanisms at play that determined bankruptcy profitability outcomes.

Corporate governance emerged as a pivotal factor, accentuating the impacts of both internal and external factors on SOEs' bankruptcy profitability. In the realm of external factors, corporate governance exacerbated the adverse effects of economic fluctuations—specifically inflation, economic growth, and exchange rates—on the profitability of SOEs during bankruptcy. This suggested that effective corporate governance mechanisms could potentially moderate or amplify the influence of external economic conditions on SOEs' financial vulnerability in bankruptcy

situations. On the internal front, corporate governance significantly magnified the effects of liquidity, leverage, and profitability on SOEs' bankruptcy profitability. This underlines the role of corporate governance in either mitigating or intensifying the financial challenges faced by SOEs during bankruptcy, based on the strategic decisions and policies enacted in response to internal financial conditions.

Interestingly, corporate governance did not markedly alter the impact of interest rate changes on bankruptcy profitability, indicating a specific boundary to its moderating capacity. This nuanced interaction highlighted the complexity of the role of corporate governance in navigating the financial intricacies of bankruptcy among state-owned entities. In sum, this expanded analysis delineated the intricate web of factors influencing the profitability of SOEs in bankruptcy, highlighting the pivotal role of inflation among external factors, the critical impact of liquidity among internal factors, and the overarching influence of corporate governance in shaping these relationships. It emphasizes the importance of strategic financial and governance practices in steering SOEs through the treacherous waters of bankruptcy towards more favorable financial outcomes.

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