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Financial Distress and the Commitment to Promoting Innovation in State-Owned Enterprises: A Critical Perspective

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ABSTRACT

Financial distress in State-Owned Enterprises (SOEs) has been a problematic issue for a long time. By 2020, the total debt of SOEs in Indonesia reach 1.682 trillion Rupiahs, whereas 68% out of all SOEs that receive state capital injections are facing bankruptcy. However, a more critical perspective still needs to investigate how commitment to promoting innovation relates to financial distress in SOEs. The existing studies of financial distress in SOEs have mainly focused on analyzing technical and structural factors and the predictive models using company financial indicators. This study aims to analyze the financial distress and innovation in SOEs critically. This study uses official data of PT Krakatau Steel from 2015-2020 and employs the combined analysis method. Quantitative regression analysis analyzes the company's financial distress throughout the period. In contrast, qualitative content analysis analyzes the relevance of the company's innovation commitment in the same period. The study shows that apart from ineffective capital structure decisions, low commitment to innovation is an important factor influencing financial distress in SOEs. The prospect of restructuring as a short-term strategy is also discussed.

KEYWORDS:
Innovation; financial distress; State-Owned Enterprise

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INTRODUCTION

Financial distress is one of the urgent strategic issues in managing State-Owned Enterprises (SOEs), knowns as Badan Usaha Milik Negara (BUMN) in Indonesia. Financial distress, defined as a continuous decline in the company's financial performance within a certain period, carries the risk of forcing SOEs into bankruptcy. As many as 68% of SOEs that receive state capital injections are threatened with bankruptcy (Pratama, 2021), whereas until 2020, the total debt of SOEs reached 1.682 trillion Rupiahs (Ramalan, 2021b). As Indonesia's largest steel producer and state-owned enterprise, PT. Krakatau Steel (KRAS) is on the verge of facing bankruptcy (Mulyana, 2021). Where in the last seven years, the issuer coded KRAS as suffering consecutive losses, an accumulated debt reaching 31 trillion Rupiahs, stalled investment projects, massive employment termination, and the resignation of several independent commissioners at that time (Asmara, 2021; Hakim, 2021). Such condition forces the government to pay more attention to dealing with financial pressure or financial distress experienced by SOEs (Ramalan, 2021a). This particular attention is crucial as a continuous failure of financial management in SOEs, indicated by inefficiency and failure in achieving its objectives, indicates weak national governance and could lead to the risk of corruption (Baum Hackney, Medas, & Sy, 2019).

Not only in Indonesia but financial distress in SOEs has also always been a point of interest worldwide. Research regarding its development, policy, and influence has been growing worldwide, such as in China, South Africa, Brazil, and emerging European economies. For example, a study on Italian state firms from the late 1980s showed that state-owned enterprises respond to financial pressure by increasing productivity and reducing employment (Bertero & Rondi, 2000). Other means of dealing with financial distress in state-owned enterprises also include massive privatization (either partial or complete privatization) like what happened in 1990s European emerging markets (Bortolotti & Faccio, 2009; Cardinale & Belotti, 2022; Iwasaki, Kočenda, & Shida, 2021) and merger and acquisition (Del Bo, Ferraris, & Florio, 2017). In China, where SOEs are crucial, financial distress is related to managerial overconfidence and corporate social responsibility (CSR). In the presence of overconfident managers, SOEs are least likely to face financial distress (Emuron, Yixiang, Coffie, & Opoku-Mensah, 2021). Also, CSR positively impacts the firm's financial performance, making it less likely to face financial distress (Wu, Shao, Yang, Ding, & Zhang, 2020). In South Africa, SOEs that increase non-executive director (NED) compensation when the firm has a positive performance and penalize NED when facing financial distress have a better financial performance. Thus, a compensation policy for NEDs is important for preventing or dealing with financial distress in SOEs (Emuron & Yixiang, 2020). This explanation proves that financial distress in SOEs is a continuously growing study worldwide.

Studies related to financial distress in SOEs tend to be either descriptive or predictive rather than in a more critical perspective. Descriptive studies focus on identifying and assessing the occurrence of financial distress (Herlin, Effendi, & Ayu, 2021; Nakamura, 2021) and identifying technical or structural factors such as income management (Sayidah, Assagaf, & Faiz, 2020), investment, leverage, cash flow, and firm size (Gunawan, Assagaf, Sayidah, & Mulyaningtyas, 2019; Sayidah & Assagaf, 2020), audit committee characteristics (Putra & Serly, 2020), and government policies (Prasetyanto, Probohudono, Chayati, & Endiramurti, 2021). Meanwhile, predictive research focuses on the assessment of the

possibility of financial distress in SOEs using the Profitability Index (Marota, Alipudin, & Maiyarash, 2018; Rahmat, 2019), Financial Discriminant Models (Iqbal & Asyriana, 2020), Altman Z-Score Method (Resfitasari, Gumelar, Ulhaq, & Rusmayanti, 2021), as well as a combination of several models at once (Gunawan & Nurfithriyani, 2019). All these studies contribute to a better understanding of the known aspects of financial distress in SOEs, such as increasing productivity, company structuring, merger and acquisition, and so forth. However, studies on financial distress in SOEs that employ a critical perspective, particularly those that emphasize the urgency of innovation, still need exploration.

The critical perspective for financial distress and innovation in SOEs is important for several reasons. First, innovation is the key to firms' sustainability, including SOEs, in an increasingly competitive business ecosystem because innovation is among the strategic variables influencing a company's competitiveness (Madrid-Guijarro et al., 2011; Porter, 1979). Second, there is still a conceptual gap in discussing financial distress and innovation in SOEs. The existing studies are under the context of private firms in general, where different aspects are explored, such as the urgency of innovation in firms during hard times (Perel, 2005), the relationship between risk-taking and innovation in financially distressed firms (Sheth, Shepp, & Palmon, 2011), and the effects of R&D investment in the risk of bankruptcy (Agostino, Scalera, Succurro, & Trivieri, 2022).

This study features a case study of KRAS for two reasons. Firstly, KRAS has experienced multiple years of chronic financial pressures that went quite badly. Secondly, it has become one of the government's targets of restructuring strategy to improve the financial situation of SOEs. Concerning the preceding, this study brought up three research questions to be addressed in this study, namely a) What was the level of financial distress of KRAS during the period of 2015-2020; b) What was the innovation undertaken by KRAS in addressing financial distress during that period; c) What are the possibilities for the restructuring of KRAS in dealing with financial distress considering its lack of attention in innovation. The answers to these three questions are expected to provide meaningful insight into strategic measures to handle financial distress in SOEs.

This study is based on the argument that companies that experience financial distress must implement innovation comprehensively. Mitigation strategies (such as restructuring policy) can produce the expected outcomes. Innovation works suitably for companies when there is clear and uncompromised commitment at all levels of the organization. Unfortunately, instead of carrying out innovation holistically, SOEs often use innovation as mere jargon manifests in peripheral innovation programs without making any significant changes to its products, business processes, or governance. It does not provide added value for the company. Under these circumstances, the restructuring policy adopted will only provide pseudo-financial health for the company. This implies that the company's financial health is artificial as it only shifts financial pressure from the short term to the long term without being supported by any significant improvement in conditions, as experienced by many companies that remain in financial distress for years after restructuring (Kaur & Srivastava, 2017).

Literature Review

Financial distress is a general term to describe a condition where a company experiences financial difficulties in meeting its obligations on an ongoing basis. In practice, various terms are used to describe the formal conditions and processes of companies experiencing distress and characterize the accom-

panying economic problems, including failure, insolvency, default, and bankruptcy. Although these terms are sometimes used interchangeably, each has its formal meaning and usage (Altman, Hotchkiss, & Wang, 2019). Financial distress has a systemic negative effect, for example, increasing costs (costs of lost investment potential, increased interest costs on debt) also decreasing productivity of managers and employees. The decrease happens due to more time wasted worrying about job security caused by the company's financial distress (Brigham & Daves, 2007). Therefore, financial distress generally leads to negotiations with the company's creditors to resolve this condition before reaching the final stage, the declaration of legal bankruptcy (Wruck, 1990).

Internal and external factors can influence financial distress. Internal factors include management inefficiency, debt and capital ratio imbalances, and fraud (Fadrul & Ridawati, 2020; Resfitasari et al., 2021). Other factors also contribute to financial distress, such as low operational performance, lack of technological innovation, and high unexpected costs (Altman et al., 2019). Internal factors that also greatly affect the occurrence of financial distress include the ineffectiveness of earnings or income management (Gunawan & Nurfithriyani, 2019; Sayidah et al., 2020), as well as investment, leverage, cash flow management, and company size (Putra & Serly, 2020; Sayidah & Assagaf, 2020). External factors that influence the occurrence and intensity of corporate financial distress include the financial crisis, deregulation of key industries, and the competitive effects of new industries (Altman et al., 2019), as well as government policies, bank health, market infrastructure (Shin, 2017) and interest rates (Amri & Aryani, 2021). Thus, financial distress analysis includes identifying the debt-to-equity ratio (D/E ratio), company value, and income capacity through sales growth.

In Indonesia, SOEs are business entities where the state owns the entire or most of the capital through direct participation from separated state assets (Indonesia, 2003). SOEs are established to contribute to the development of the national economy and state revenues, pursue profits, and provide public benefits in the form of high-quality and adequate goods and/or services for the people, being a pioneer in various activities. SOEs are also expected to manage businesses that have not been able to be implemented by private sectors and cooperatives as well as actively participate in providing guidance and assistance to entrepreneurs from economically vulnerable groups, cooperatives, also the community. The role of the economy in the country's development is reflected, for example, in infrastructure development in 2015-2019, where SOEs are expected to contribute IDR 1,066.2 trillion (22.2%) of the total required funds (Salim, 2017). SOEs are different from private companies in that they carry business economic responsibilities and a social mission in facing the challenges of globalization (Ansari, Sahrasad, & Iryadi, 2020).

As state property managed by the government, SOEs have at least three advantages over private companies (Lin, Lu, Zhang, & Zheng, 2020). First, government intervention enables functions in these capital-intensive industries to operate and drives the economy by providing construction infrastructure. Second, the government sees SOEs as one of the best solutions for maintaining social stability, which is necessary for the economy to function properly. For example, SOEs can be one of the instruments involved by the government in filling the industrial tree for competitive and prioritized products, especially during the pandemic (Salim et al., 2020). Third, the government uses SOEs to control key societal elements (Lin et al., 2020). Unfortunately, many studies show that SOEs often have lower performance and

profitability than private companies due to lower production efficiency (Rosyda & Raharja, 2020). Many influential factors include liquidity, capital structure, sales growth, and even independent commissioners, all of which significantly influence the profitability of SOEs (Adriaty, Purwanto, & Ermawati, 2019). One of the quickest ways to overcome this is through privatization, by selling some shares to the public. In many cases, the privatization of SOEs has proven to positively impact their financial performance (Fitriningrum, 2020; Rosyda & Raharja, 2020).

Innovation is the human way of responding to challenges and opportunities, generating new meanings, ways, and artifacts (Roberts et al., 2005). Innovation is also defined as applying a completely new product, process, marketing method, or organizational method, either completely new or significantly changed in business practices, workplace organization, or external relations (OECD & Eurostat, 2005). The goal of innovation is to achieve a new balance that considers financial performance and sustainable development responsibilities (Ezzi & Jarboui, 2016). Measurement of innovation can use various dimensions such as human resources, innovation efforts (training, research and development costs, costs of purchasing machinery and equipment, costs of implementing technological innovations), and relational capital (external research and development costs, costs of acquiring knowledge from external sources (Saliba de Oliveira et al., 2018). The outcome of innovation in a company is a competitive advantage that allows for a return in the form of sales and greater company growth (Bigliardi, 2013).

Thus far, the conceptual frameworks that explain the relationship between financial distress and innovation come from research in the context of private firms in general, not particularly in SOEs. The latest empirical research, for example, shows that firms' default probability is increasing in R&D investments and decreasing in innovation and productivity of research (Agostino et al., 2022). It also points out that firms carrying out R&D, adopting process innovation, and filing for patents show the lowest probability of default. However, whether the condition applies in the SOEs is still questioned. Furthermore, the existing studies' conclusion about the relationship between innovation and financial performance varies. Several studies prove that innovation significantly positively affects financial performance in general (Bigliardi, 2013; Ezzi & Jarboui, 2016; Muharam et al., 2020; Purwati, Budiyanto, & Suhermin, 2021). This also includes achieving a better post-crisis recovery (Bockova & Zizlavsky, 2016). Other studies, however, show that innovation does not necessarily improve financial performance given the fact of their nature which contains certain risks (Lemonakis, Garefalakis, Giannarakis, Tabouratzi, & Zopounidis, 2017; Memba & Job, 2013; Saliba de Oliveira et al., 2018).

RESEARCH METHOD

This study employs a combined method approach with data spanned over the last six years (2015-2020). The first research question is answered by a quantitative method that analyzes the company's financial performance data, including the components needed to calculate the debt-to-equity ratio (D/E ratio), company book value, and sales performance. The primary source used is the annual report from 2015-2020. Every single report was obtained from the official website of PT. KRAS in January 2022. The financial and sales data for 2016-2020 were taken from the 2020 report, whereas the 2015 financial and sales data were taken from the 2019 report because they were unavailable in the 2020 report.

Data analysis employs descriptive statistics on financial performance indicators, and linear regression analysis is employed to determine the effect of debt structure on firm value.

Qualitative document analysis methods answered the second and third research questions. Document analysis is very useful for understanding the overt and hidden values in policies and programs in organizations where policies are implemented (Leavy, 2014). The primary source used is the annual report document from 2015 to 2020 which is also obtained from the official website of PT. KRAS. Data is collected through reading and recording written data on the company's financial performance and company performance, in general, using keywords related to the subject of the study, including 'liability,' 'productivity,' 'production capacity,' and 'innovation.' The collected data were analyzed through the Miles and Huberman mode of analysis using a process of selection, reduction, classification, and interpretation to produce coherence with the conceptual framework of the study (Miles & Huberman, 1994). Figure 1 shows the conceptual framework of the study.

RESULT AND DISCUSSION

Significant Increase of Debt-to-Equity Ratio (D/E Ratio)

KRAS's financial distress is substantiated by the D/E ratio, which increased sharply in 2015-2020. Specifically, in the last three years (2018-2020), the D/E ratio has increased multiple times compared to 2015-2017, as shown in Table 1.

The average D/E ratio of manufacturing companies in Indonesia in 2015 was 1.1363 (Februansyah & Yanuarti, 2017) while in 2020 the value fell to 0.90050 (Chandra et al., 2020). Table 1 shows that in the last 5 years the D/E ratio of KRAS has been below the national average. Since 2017 the D/E ratio of KRAS has increased very significantly. The sharpest increase eventuated in 2018-2019.

Significant Decrease of Company Value

The following evidence of KRAS's financial distress is the company's value which has declined sharply in the last five years. The firm value is measured from book value by calculating the difference between the company's total assets and total liabilities. The significantly repetitive decline in the book value of KRAS is shown in Table 1.

KRAS's company value is decreasing occasionally. First, the value of assets remained relatively high, indicating no significant investment in technology. Second, the company's value in 2020 was 25% of its value in 2015. This declining value is not only caused by the increasing total liabilities from year to year but also because the total assets increase is overwhelmed by the significant increase in liabilities. Interestingly, the decline in the company's value coincided with the increase in the D/E ratio from year to year. The decline in firm value and the increase in

Figure 1. Research Conceptual Framework

Table 1. D/E Ratio and Book Value of KRAS 2015-2020

(thousands USD)

DESCRIPTION	2015	2016	2017	2018	2019	2020
Current Liabilities	1,465,327	1,224,501	1,503,312	1,783,672	2,494,040	827,496
Non-Current Liabilities	448,788	872,535	1,052,445	984,829	446,757	2,210,130
Total Liabilities	1,914,115	2,097,036	2,555,757	2,768,501	2,940,797	3,037,626
Increase from previous year		9.6%	21.9%	8.3%	6.2%	3.3%
Equity Attributable to:						
Owners of the Parent Entity	1,781,000	1,841,600	926,772	854,862	389,803	492,878
Non-Controlling Interests	7,029	(1,923)	(40,859)	(40,861)	(42,563)	(44,155)
Total Equity	1,788,029	1,839,677	885,913	814,001	347,240	448,723
Increase from previous year		2.9%	-51.8%	-8.1%	-57.3%	29.2%
D/E ratio	1.07	1.14	2.76	3.24	7.54	6.16
Current Assets	892,290	997,324	1,008,562	961,072	690,608	835,342
Non-Current Assets	2,809,854	2,939,389	2,433,108	2,621,430	2,597,429	2,651,007
Total Assets	3,702,144	3,936,713	3,441,670	3,582,502	3,288,037	3,486,349
Increase from previous year		6.3%	-12.6%	4.1%	-8.2%	6.0%
Book value	1,788,029	1,839,677	885,913	814,001	347,240	448,723

Source: PT. Krakatau Steel Annual Report of 2019 and 2020

the D/E ratio can be seen in Figure 2.

Sales Capacity Stagnancy

KRAS's financial distress is also evidenced by the undeveloped production and sales of all lines in 2015-2020, as shown in Appendix 1. During the last six years, sales only increased in 2018. Unfortunately, this increase could not be maintained, so sales fell again in the following two years. This stagnation in sales performance is visualized in Figure 2.

Unhealthy capital structure and debt

A poor capital structure is the cause of KRAS's financial distress. A poor capital structure is characterized by a very high D/E ratio value which affects the decline in the value of the company from period to period.

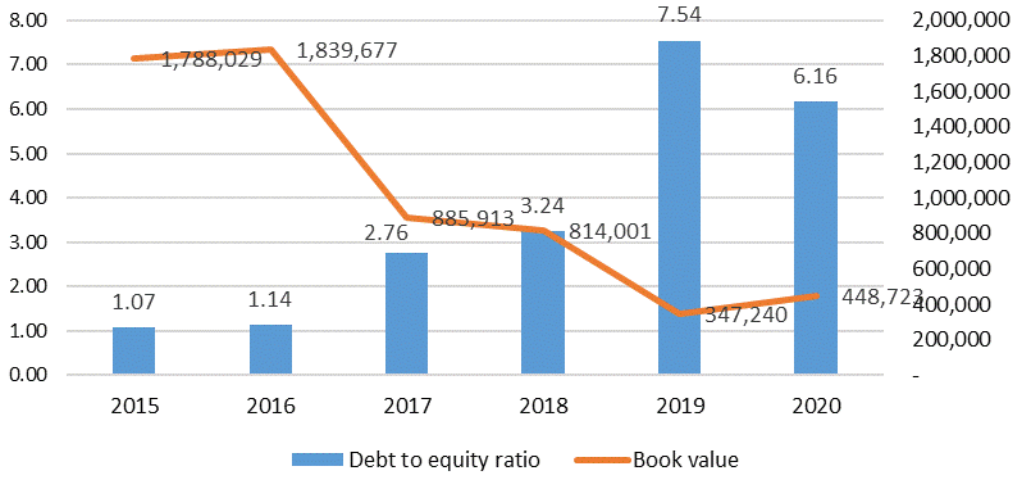

Figure 2. Book value and D/E ratio of KRAS 2015-2020

Analysis of the effect of the D/E ratio on firm value (book value/BV) shows that the D/E ratio has a significant effect on firm value, as shown in Table 2. This table displays the strong influence of the D/E ratio on BV with a correlation value (R) of 0.891 and a coefficient of determination (R2) of 72.7%. This effect is negative, which is indicated by the negative value of the X coefficient.

The capital structure uses various sources of capital to finance company operations, including long-term debt, short-term debt, equity, and income from sales (Suardi & Noor, 2015). The capital structure decision is a crucial element for the company, and many studies have proven that the capital structure, especially the D/E ratio, significantly impacts the company's profitability (Gill, Biger, & Mathur, 2011). Specific studies on manufacturing companies confirm that the higher the D/E ratio, the lower the profitability (Chandra, Wijaya, Angelia, & Hayati, 2020), and low profitability impacts the low firm value (Natsir & Yusbardini, 2017). Based on the analysis in Table 2, this study confirms that the higher the D/E ratio, the lower the firm value of KRAS. Interestingly, this study attests that the D/E ratio is the dominant factor in the overall decline in the value of the KRAS company, as indicated by the coefficient of determination of 72.7%. Thus, the decisions regarding the capital structure taken by the management of KRAS in the 2015-2020 period have become the dominant factor in the company's financial distress.

Inappropriate capital structure decisions impact the company, both internally and externally. Internally, increasing debt suggests increasing company costs. The referred costs consist of costs to pay interest on debt and other costs that accompany it. This automatically also means reduced net income and company profits. Externally, the increase in debt also gives advantages to competing companies. Companies that acquire assets using debt financing increase future profits for rival companies (Chevalier, 1995). Purchasing assets using debt shows the company's low financial capacity to finance its development. For a public company like KRAS, this is a declaration of financial weakness to the public, including to competing companies. For example, competing companies can use this situation to win the trust of quality suppliers, thereby lowering KRAS's credibil-

Table 2. Regression Analysis on D/E ratio to Book Value KRAS 2015-2020

Regression Statistics	
Multiple R	0.891812358
R Square	0.795329282
Adjusted R Square	0.72710571
Standard Error	308430.0899
Observations	5

ANOVA

	df	SS	MS	F	Significance F
Regression	1	1108985825775.67	1108985825775.67	11.6577	0.0420
Residual	3	285387361069.13	95129120356.38		
Total	4	1394373186844.80			

	Coefficients	Standard Error	t Stat	P-value
Intercept	1705586.3660	281660.9754	6.0555	0.0090
X	-201147.6501	58912.6700	-3.4143	0.0420

ity in the eyes of suppliers. Systemically, competition at this point increases costs in the following stages of the business process, ultimately making the value of the company's products less competitive.

Lack of innovation in an increasingly competitive business ecosystem

A significant factor that affects the financial distress of KRAS is a low level of innovation in facing competition nationally and globally. The demands for innovation are increasing due to intense competition driven by the development of new technologies (Salo, 2010), price wars (Pratiwi, 2013), and foreign tariff policies (Minardi, Taufik, & Ridha, 2019). Innovation can cover at least four aspects: product innovation, process innovation, marketing innovation, and organizational innovation (OECD & Eurostat, 2005). The search for the 2015-2020 annual report on the vision, strategy, and implementation of innovation also proves that innovation is still a formality jargon. The search shows there are no innovation programs in the product aspect. Innovation runs only in a very limited scope of processes and is not a priority program in the company. The investment program that has been going on in previous years, which is expected to provide added value for the company, has proven not to result in an increase in assets, production capacity, production volume, and sales volume in the following years. In addition, as shown in Appendix 1, the development of derivative business lines in the form of sales of real estate industry services, engineering and construction, port management, and other services did not contribute significantly because they only accounted for <20% of the company's total revenue. This fact proves the low level of innovation of KRAS in facing competition in its industrial sector.

The low level of innovation has a systemic negative impact on the company. First, the product needs to be developed accordingly. Having innovative new products can improve the company's image in the eyes of consumers and differentiate it from competing companies (Salo, 2010). With low product innovation, companies cannot compete in competing for the market for new needs that arise due to technological developments. On the other hand, more innovative domestic and foreign competitors can seize more of the industry's market opportunities—second, low innovation results in inefficient production costs. Low investment in technology development makes the company's production and operational processes rely on old technology. As a result, the operating and production processes cost many times, with lower product success in the market. Third, the lack of innovation results in slowing company performance. Product and process innovation, for example, has a positive and significant effect on company performance (Atalay, Anafarta, & Sarvan, 2013). With low product and process innovation, demand slows down, and operations and production also slow down. As a result, the company's overall performance slowed down, and the company's finances were under increasing pressure. This confirms previous studies on firms generally that default probability decreases when a firm invests in innovation and research productivity, adopts process innovation, and files for patents (Agostino et al., 2022).

Prospects of restructuring in overcoming financial distress

Most firms are unprepared for hard times and typically respond to economic difficulties with draconian measures that promise short-term alleviation (Perel, 2005), such as budget cuts, layoffs, or restructuring. Debt restructuring, mainly, shows a positive prospect in overcoming financial distress because it reduces short-term financial pressure and can potentially increase firm value.

As shown in Table 2, in 2020, KRAS was restructured; therefore, the proportion of long-term debt is greater than short-term debt. This is in line with studies proving that restructuring can reduce financial dilemmas, reducing the debt burden of companies—which in turn increases the level and efficiency of investment, especially in government-owned companies (Jiang, Liu, & Yang, 2019). In addition, restructuring in many companies has also been shown to have positive impacts, such as increased profitability and financial stability of companies (Kwaning, Churchill, & Opoku, 2014), as well as increased economic sustainability of companies (Danovi, Magno, & Dossena, 2018).

However, further observations are still needed to ensure that the restructuring of KRAS has a positive long-term effect. First, data on improving financial performance still needs to be improved in 2020. Consequently, it cannot be concluded that the restructuring has been effective and that the company's finances are fully healthy. Other research proves that restructuring does not continually improve the company's condition even up to five years from the period of restructuring (Kaur & Srivastava, 2017). Second, after implementing good corporate governance, restructuring only improves the company's financial performance. Restructuring risks weakening organizational strength, for example, due to staff reductions, demands for cost efficiency, and reduced supply of creditors and incoming investment (Chung & Ratnovski, 2016). Company management needs to conduct comprehensive and ongoing studies related to external and internal factors to reduce uncontrollable factors that can lead to dysfunctional restructuring in the long term (Kaur & Srivastava, 2017) such as financial supervisors, government policies, bank health, market infrastructure, and dimensions of restructuring company (Shin, 2017).

CONCLUSION

Amid the scarcity of studies focusing on financial distress and innovation in SOEs, this study provides a starting point for further investigation. The lack of commitment and investment to promote innovation could be attributed significantly to state-owned enterprises facing financial distress. When SOEs do not adopt innovation in their process or product, the probability of default increases. This confirms existing studies that companies' default probability is increasing in R&D investments and decreasing in innovation and productivity of research. In addition, a short-term solution such as a restructuring strategy does not guarantee success in overcoming financial distress in the long term. Restructuring did help reduce pressure on costs and capital structure. However, the company's long-term sustainability is determined mainly by productivity and asset development, which depends on product innovation and company business processes. Thus, innovation in SOEs is a crucial factor in solving financial distress in the long term.

This study aims to contribute to the study of financial distress in SOEs in two ways. Firstly, this study offers a perspective of innovation in analyzing the underlying issue of SOEs' financial distress. Previous studies on the financial distress of SOEs have not included this perspective. In contrast, studies on financial distress and innovation are still limited in the context of private companies with different natures and characteristics from SOEs. Secondly, this study supports existing studies where restructuring does not automatically solve the problem of financial distress. A comprehensive and continuous commitment is needed for the company to implement product, business processes, and organizational innovations. Thereby restructuring can produce positive outcomes in the long run. However, further investigation with larger numbers of subjects and data

could extend this study for future conceptual development.

REFERENCES

Adriaty, S. T., Purwanto, B., & Ermawati, W. J. (2019). A determinant of state-owned enterprises' profitability with an independent board of commissioners as moderation variables. *Jurnal Keuangan dan Perbankan, 23*(1), 116–130. DOI: 10.26905/jkdp.v23i1.2519

Agostino, M., Scalera, D., Succurro, M., & Trivieri, F. (2022). Research, innovation, and bankruptcy: Evidence from European manufacturing firms. *Industrial and Corporate Change, 31*(1), 137–160. DOI: 10.1093/icc/dtab057

Altman, E. I., Hotchkiss, E., & Wang, W. (2019). *Corporate financial distress, restructuring, and bankruptcy*. In Corporate Financial Distress, Restructuring, and Bankruptcy (4th ed.). John Wiley & Sons, Inc. DOI: 10.1002/9781119541929

Amri, M. C., & Aryani, Y. A. (2021). Empirical evidence of financial distress in Indonesia. *Assets: Jurnal Akuntansi Dan Pendidikan, 10*(2), 165. DOI: 10.25273/jap.v10i2.8982

Ansari, T. S., Sahrasad, H., & Iryadi, I. (2020). Indonesian State-Owned Enterprises (BUMN or SOEs) and the urgency of implementation of the principle of 'Business Judgment Rule'. *JURNAL CITA HUKUM, 8*(1), 163–182.

Asmara, C. G. (2021, September 2021). Pernah merana bertahun-tahun, Jokowi: KRAS sudah sehat!. *CNBC Indonesia*. Retrieved from https://www.cnbcindonesia.com/market/20210921123148-17-277920/pernah-merana-bertahun-tahun-jokowi-kras-sudah-sehat

Atalay, M., Anafarta, N., & Sarvan, F. (2013). The relationship between innovation and firm performance: An empirical evidence from Turkish Automotive Supplier Industry. *Procedia - Social and Behavioral Sciences, 75*, 226–235. DOI: 10.1016/j.sbspro.2013.04.026

Baum, A., Hackney, C., Medas, P. A., & Sy, M. (2019). *Governance and State-Owned Enterprises: How costly is corruption?* In IMF Working Papers. DOI: 10.2139/ssrn.3523126

Bertero, E., & Rondi, L. (2000). Financial pressure and the behavior of public enterprises under soft and hard budget constraints: Evidence from Italian panel data. *Journal of Public Economics, 75*(1), 73–98. DOI: 10.1016/S0047-2727(99)00057-2

Bigliardi, B. (2013). The effect of innovation on financial performance: A research study involving SMEs. *Innovation: Management, Policy and Practice, 15*(2), 245–255. DOI: 10.5172/impp.2013.15.2.245

Bockova, N., & Zizlavsky, O. (2016). Innovation and financial performance of a company: A study from the Czech manufacturing industry. *Transformations in Business and Economics, 15*(3), 156–175.

Bortolotti, B., & Faccio, M. (2009). Government control of privatized firms. *Review of Financial Studies, 22*(8), 2907–2939. DOI: 10.1093/rfs/hhn077

Brigham, E. F., & Daves, P. R. (2007). *Intermediate financial management 9th Edition*. DOI: 10.1016/0890-8389(89)90100-5

Cardinale, R., & Belotti, E. (2022). The rise of the shareholding state in Italy: A policy-oriented strategist or simply a shareholder? Evidence from the energy and banking sectors' privatizations. *Structural Change and Economic Dynamics, 62,* 52–60. DOI: 10.1016/j.strueco.2022.03.014

Chandra, A., Wijaya, F., Angelia, A., & Hayati, K. (2020). Pengaruh debt to equity ratio, total assets turnover, firm

size, dan current ratio terhadap return on assets. *Jurnal Akuntansi, Keuangan, Dan Manajemen (Jakman), 2*(1), 57–69.

Chevalier, J. A. (1995). Capital structure and product-market competition: Empirical evidence from the supermarket industry. *The American Economic Review, 85* (3), 415–435.

Chung, J., & Ratnovski, L. (2016). *Benefits and costs of corporate debt restructuring: An estimation for Korea*. In IMF Working Papers, 16(204). DOI: 10.5089/9781475545418.001

Danovi, A., Magno, F., & Dossena, G. (2018). Pursuing firm economic sustainability through debt restructuring agreements in Italy: An empirical analysis. *Sustainability (Switzerland), 10*(12). DOI: 10.3390/su10124830

Del Bo, C. D., Ferraris, M., & Florio, M. (2017). Governments in the market for corporate control: Evidence from M&A deals involving state-owned enterprises. *Journal of Comparative Economics, 45* (1), 89–109. DOI: 10.1016/j.jce.2016.11.006

Emuron, A. S. O., & Yixiang, T. (2020). Financial distress and non-executive director compensation: Evidence from State-owned enterprises in South Africa post King III. *African Development Review, 32*(2), 228–239. DOI: 10.1111/1467-8268.12430

Emuron, A. S. O., Yixiang, T., Coffie, C. P. K., & Opoku-Mensah, E. (2021). Overconfidence, Ownership Control, and Financial Distress in Different Types of State-Owned Enterprises: Evidence from China. *Management and Accounting Review, 20*(3). DOI: 10.24191/MAR.V20i03-04

Ezzi, F., & Jarboui, A. (2016). Does innovation strategy affect financial, social, and environmental performance? *Journal of Economics, Finance, and Administrative Science, 21*(40), 14–24. DOI: 10.1016/j.jefas.2016.03.001

Fadrul, F., & Ridawati, R. (2020). Analysis of method used to predict financial distress potential in pulp and paper companies of Indonesia. *International Journal of Economics Development Research (IJEDR), 1*(1), 57–69. DOI: 10.37385/ijedr.v1i1.29

Februansyah, R., & Yanuarti, I. (2017). Pengaruh financial leverage terhadap financial performance pada sektor industri manufaktur yang terdaftar di Bursa Efek Indonesia (BEI) Periode 2015. *Ultima Management Accounting, 9*(2), 33–48. DOI: 10.31937/manajemen.v9i2.719

Fitriningrum, A. (2020). The impacts of government and management conflicting objectives on the state-owned enterprises (SOEs) performances: The case of Indonesia publicly listed SOEs. *Journal of Applied Management, 18*(4), 632–644. DOI: 10.21776/ub.jam.2020.018.04.03

Gill, A., Biger, N., & Mathur, N. (2011). The effect of capital structure on profitability: Evidence from the United States. *International Journal of Management, 28*(4), 3–15.

Gunawan, A. W., Assagaf, A., Sayidah, N., & Mulyaningtyas, A. (2019). Financial distress di BUMN Indonesia dan faktor-faktor yang mempengaruhi investasi, leverage dan cash flow operation terhadap financial distress pada perusahaan BUMN. *EKUITAS: Jurnal Ekonomi Dan Keuangan, 3*(2), 226–243. DOI: 10.24034/j25485024.y2019.v3.i2.4135

Gunawan, B., & Nurfithriyani, D. (2019). Prediksi financial distress pada BUMN dalam rangka menilai kinerja perusahaan pemerintah. *Jurnal Aplikasi Akuntansi, 4*(1), 59–76. DOI: 10.29303/jaa.v4i1.73

Hakim, A. R. (2021, September 28). Blak-blakan Dirut Krakatau Steel soal proyek mangkrak hingga kasus korupsi. *Liputan6.com*. Retrieved from https://

www.liputan6.com/bisnis/read/4670329/blak-blakan-dirut-krakatau-steel-soal-proyek-mangkrak-hingga-kasus-korupsi

Herlin., Effendi, Y., & Ayu, E. T. (2021). Analisis financial distress bank umum milik negara (BUMN) pada masa pandemi covid 19. *Jurnal Bisnisman: Riset Bisnis Dan Manajemen, 3*(1), 19–29.

Law of The Republic of Indonesia Number 19 of 2003 concerning State-owned Enterprises (Undang-Undang Republik Indonesia Nomor 19 Tahun 2003 tentang Badan Usaha Milik Negara). Retrieved from https://peraturan.bpk.go.id/Home/Download/32159/UU%20Nomor%2019%20Tahun%202003.pdf

Iqbal, A., & Asyriana, S. (2020). Deteksi kesehatan keuangan Badan Usaha Milik Negara (BUMN) menggunakan financial discriminant models. *Jurnal ASET (Akuntansi Riset), 12*(2), 289–300. DOI: 10.17509/jaset.v12i2.28072

Iwasaki, I., Kočenda, E., & Shida, Y. (2021). Distressed acquisitions: Evidence from European emerging markets. *Journal of Comparative Economics, 49*(4), 962–990. DOI: 10.1016/j.jce.2021.04.008

Jiang, J., Liu, B., & Yang, J. (2019). The impact of debt restructuring on firm investment: Evidence from China. *Economic Modelling, 81*(May), 325–337. DOI: 10.1016/j.econmod.2019.05.019

Kaur, D., & Srivastava, S. (2017). Corporate debt restructuring and firm performance: A Study of Indian Firms. *Serbian Journal of Management, 12*(2), 271–281. DOI: 10.5937/sjm12-11916

Kwaning, C. O., Churchill, R. Q., & Opoku, A. K. (2014). The impact of organizational restructuring on the financial performance of public banks: A post restructuring assessment of Agricultural Development Bank, Ghana. *Research Journal of Finance and Accounting, 5*(16), 106–113.

Leavy, P. (Ed.). (2014). *The Oxford Handbook of Qualitative Research*. Oxford University Press.

Lemonakis, C., Garefalakis, A., Giannarakis, G., Tabouratzi, E., & Zopounidis, Co. (2017). The Greek debt crisis: In quest of growth in times of austerity. In C. Floros & I. Chatziantoniou (Eds.), *The Greek Debt Crisis: In Quest of Growth in Times of Austerity* (Issue November, pp. 1–313). Springer Nature. DOI: 10.1007/978-3-319-59102-5

Lin, K. J., Lu, X., Zhang, J., & Zheng, Y. (2020). State-owned enterprises in China: A review of 40 years of research and practice. *China Journal of Accounting Research, 13*(1), 31–55. DOI: 10.1016/j.cjar.2019.12.001

Madrid-Guijarro, A., García-Pérez-de-Lema, D., & van Auken, H. (2011). An analysis of non-financial factors associated with financial distress. *Entrepreneurship and Regional Development, 23*(3–4), 159–186. DOI: 10.1080/08985620903233911

Marota, R., Alipudin, A., & Maiyarash, A. (2018). Pengaruh debt to assets ratio (DAR), current ratio (CR) dan corporate governance dalam memprediksi financial distress pada perusahaan BUMN sektor non keuangan yang terdaftar di bursa efek Indonesia. *JIAFE (Jurnal Ilmiah Akuntansi Fakultas Ekonomi), 4*(2), 249–266. DOI: 10.34204/jiafe.v4i2.1202

Memba, F., & Job, A. N. (2013). Causes of financial distress: A survey of firms funded by industrial and commercial development corporations in Kenya. *Interdisciplinary Journal of Contemporary Research in Business, 4*, 1171–1185.

Miles, M. B., & Huberman, A. M. (1994). *An Expanded sourcebook: Qualitative data analysis (2nd Edition)*. SAGE.

Minardi, A., Taufik, & Ridha, N. (2019). Impact of trump tariffs policies on the export of Indonesian steel to the United States. *International Journal of Innovation, Creativity, and Change, 10*(7), 1–16.

Muharam, H., Andria, F., & Tosida, E. T. (2020). Effect of process innovation and market innovation on financial performance with moderating role of disruptive technology. *Systematic Reviews in Pharmacy*, *11*(1), 223–232. DOI: 10.5530/srp.2020.1.29

Mulyana, R. N. (2021). Banyak BUMN tersandung masalah keuangan, begini catatan ekonom Indef. *Nasional.kontan.co.id*. Retrieved from https://nasional.kontan.co.id/news/banyak-bumn-tersandung-masalah-keuangan-begini-catatan-ekonom-indef

Nakamura, T. M. (2021). Analisis financial distress saat krisis keuangan global: Studi empiris pada BUMN non-keuangan. *Media Akuntansi Dan Perpajakan Indonesia, 2*(2), 107–124. DOI: 10.37715/mapi.v2i2.1722

Natsir, K., & Yusbardini, Y. (2017). The effect of asset structure and firm size on firm value with capital structure as intervening variable. *Advances in Economics, Business and Management Research, 06*(04), 218–224. DOI: 10.4172/2167-0234.1000298

OECD., & Eurostat. (2005). *Oslo manual-third edition: Guidelines for collecting and interpreting innovation data, 3rd Edition*. OECD Publishing. DOI: 10.4337/9781786438935.00024

Perel, M. (2005). You can innovate in hard times. *Research Technology Management, 48*(4), 14–23. DOI: 10.1080/08956308.2005.11657320

Porter, M. E. (1979). How competitive forces shape industry. *Harvard Business Review,* 79, 1–10.

Prasetyanto, D., Probohudono, A. N., Chayati, N., & Endiramurti, S. R. (2021). Analysis of financial distress in Indonesia State-Owned Enterprise. *International Journal of Economics, Business and Accounting Research (IJEBAR), 5* (3), 1238–1246.

Pratama, W. P. (2021, Desember 16). 68 persen BUMN penerima suntikan negara terancam bangkrut. PMN belum optimal? *Ekonomi*. Retrieved from https://ekonomi.bisnis.com/read/20211216/9/1478305/68-persen-bumn-penerima-suntikan-negara-terancam-bangkrut-pmn-belum-optimal

Pratiwi, L. (2013). Imposition of Antidumping Duty (BAMD) Towards China's Cold Rolled Coil/Sheet (CRC/S) Products. *Indonesia Law Review, 3*(2), 151. DOI: 10.15742/ilrev.v3n2.34

Purwati, A. A., Budiyanto, & Suhermin. (2021). Social capital, entrepreneurial leadership, and SMEs performance: The mediating effect of innovation capability. *Jurnal Pendidikan Bisnis Dan Manajemen, 7*(3), 170–181.

Putra, R. D., & Serly, V. (2020). Pengaruh karakteristik komite audit dan ukuran perusahaan terhadap financial distress. *Jurnal Eksplorasi Akuntansi, 2*(3), 3160–3178.

Rahmat, D. (2019). Profitability index dalam financial distress. *Integra, 9*(2), 98–113.

Ramalan, S. (2021a, September 21). Jokowi minta Erick Thohir benahi masalah keuangan BUMN. *Okezone.com*. Retrieved from https://economy.okezone.com/read/2021/09/21/320/2474544/jokowi-minta-erick-thohir-benahi-masalah-keuangan-bumn

Ramalan, S. (2021b, Januari 28). Wow! Utang BUMN hingga 2020 Capai Rp1.682 Triliun. *Sindonews.com*. Retrieved from https://ekbis.sindonews.com/read/317458/34/wow-utang-bumn-hingga-2020-capai-rp1682-triliun-1611849667

Resfitasari, E., Gumelar, T. M., Ulhaq, A., & Rusmayanti, N. (2021). Analisis prediksi financial distress dengan metode Altman Z-Score pada PT Waskita Karya Tbk. *Jurnal Aktiva: Riset Akuntansi Dan Keuangan*, *3*(2), 37–46.

Roberts, D., Baker, S., & Walker, D. (2005). Can we learn together? Co-creating with consumers. *International Journal of Market Research, 47*(4), 407–427. DOI: 10.1177/147078530504700401

Rosyda, S. S., & Raharja, S. J. (2020). Privatization in State-Owned Enterprises: A systematic literature review. *Jurnal Manajemen Pelayanan Publik, 3*(2), 107. DOI: 10.24198/jmpp.v3i2.25317

Saliba de Oliveira, J. A., Cruz Basso, L. F., Kimura, H., & Sobreiro, V. A. (2018). Innovation and financial performance of companies doing business in Brazil. *International Journal of Innovation Studies, 2*(4), 153–164. DOI: 10.1016/j.ijis.2019.03.001

Salim, Z. (Ed.). (2017). Pembiayaan pembangunan dan beban hutang. Retrieved from https://habibiecenter.or.id/img/publication/3b3339ed9e29b868fc7a7c5d4af71fee.pdf

Salim, Z., Firdausy, C. M., Hidayat, A. S., Febiyansyah, P. T., Cahyono, B. D., Sabilla, K., & Nugraheni, R. D. (2020). *Policy Paper kebijakan perdagangan dan investasi global dalam masa new normal COVID-19: Bagaimana Indonesia mengambil momentum?* Retrieved from https://ekonomi.lipi.go.id/public/images/publikasi/1620007482_Draft_Policy_Paper_8_(1).pdf

Salo, J. T. (2010). Innovation in the metal manufacturing industry: Facilitating innovation with electronic business applications. *International Journal of Electronic Business Management, 8*(2), 130–138.

Sayidah, N., & Assagaf, A. (2020). Assessing variables affecting the financial distress of state-owned enterprises in Indonesia (empirical study in non-financial sector). *Business: Theory and Practice, 21*(2), 545–554.

Sayidah, N., Assagaf, A., & Faiz, Z. (2020). Does earning management affect financial distress? Evidence from state-owned enterprises in Indonesia. *Cogent Business and Management, 7*(1). DOI: 10.1080/23311975.2020.1832826

Sheth, A., Shepp, L., & Palmon, O. (2011). Risk-taking, financial distress, and innovation. *The World Congress on Engineering 2011* (pp. 412–417). London: Newswood Ltd. DOI: 10.2139/ssrn.1752372

Shin, J. (2017). Corporate restructuring and its macro effects. *IMF Working Papers, 17*(17), 26. DOI: 10.5089/9781475572438.001

Suardi, I., & Noor, K. D. (2015). The Impact of capital structure on the financial performance of the listed agriculture companies in Indonesia. *Global Journal of Business Social Sciences Review, 3*(1), 9–17. DOI: 10.35609/gjbssr.2015.3.1(2)

Wruck, K. H. (1990). Financial distress, reorganization, and organizational efficiency. *Journal of Financial Economics, 27*(2), 419–444. DOI: 10.1016/0304-405X(90)90063-6

Wu, L., Shao, Z., Yang, C., Ding, T., & Zhang, W. (2020). The impact of CSR and financial distress on financial performance—evidence from Chinese listed companies of the manufacturing industry. *Sustainability, 12*(17), 6799. DOI: 10.3390/su12176799

APPENDIX

Appendix 1. Sales Performance KRAS 2015-2020 *(thousands USD)*

DESCRIPTION	2015	2016	2017	2018	2019	2020
Steel Domestic Sales						
Hot Rolled Coil	434,983	492,145	584,802	774,594	632,142	540,991
Cold Rolled Coil	316,732	309,971	380,917	391,265	241,224	240,290
Wire Rod	61,546	49,370	31,622	56,666	7,408	1,039
Reinforcing Steel Bars	110,764	96,249	64,495	73,742	54,186	25,018
Steel Section	35,966	34,548	29,859	36,295	14,926	22,964
Steel Pipe	43,083	52,553	70,137	85,216	66,327	54,547
Others	36,396	28,962	55,686	65,196	30,031	195,877
Subtotal	1,039,469	1,063,800	1,217,518	1,482,973	1,046,243	1,080,725
Steel Export Sales						
Hot Rolled Coil	13,664	47,079	16,500	39,872	132,255	63,423
Cold Rolled Coil	-	-	-	405	-	-
Others	-	-	-	598	-	-
Subtotal	13,664	47,079	16,500	40,875	132,255	63,423
Total Steel Sales	1,053,133	1,110,879	1,234,018	1,523,848	1,178,498	1,144,148
Sales of Service						
Industrial Estate & Hotels	22,947	31,622	28,551	28,927	36,541	23,175
Engineering & Construction	112,799	52,659	31,971	29,941	31,676	29,517
Port Services Provider	57,224	62,657	64,844	66,774	76,100	77,823
Other Services	75,720	86,899	89,636	92,357	97,685	78,994
Total Sales of Service	268,690	233,836	215,002	217,999	242,002	209,509
Total Sales	1,321,823	1,344,715	1,449,020	1,741,847	1,420,500	1,353,657