

## **EXPLORING THE IMPACTS OF TECHNOLOGICAL DISRUPTION ON FINANCIAL PERFORMANCE AND BUSINESS SUSTAINABILITY: A CASE STUDY OF PT JASA MARGA TOLLROAD OPERATOR (JMTO)**

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### **Abstract**

The rapid development of technology in recent years has disrupted economic and business activities in all sectors of the world, thus becoming a challenge and threat to companies in maintaining their business continuity and financial performance. Companies face the risk of financial distress if they cannot adapt quickly to changing conditions. This study aims to analyze the impact of technological disruption on corporate financial performance and business sustainability. A case study was conducted on the toll road operators in Indonesia, namely PT Jasamarga Tollroad Operator (JMTO), which is facing a disruptive situation due to changes in technology and toll transaction policies in Indonesia. This research uses a qualitative descriptive case study approach to analyze the company's business model and Strategy. It uses a quantitative method by calculating financial projections and measuring company performance using financial ratios. The results of the study show that the company's financial performance has decreased significantly and can potentially be exposed to financial distress if management does not have an effective adaptation strategy in dealing with technological disruptions. This contributes to providing an overview of the impact of technological disruption on the company's performance and business continuity, thus encouraging company management to develop an effective adaptation strategy plan in dealing with various changes.

**Keywords:** Technological Disruption, Toll Road Operators, Corporate Strategy, Financial Performance

### **Introduction**

The term "disruption" is the opposite of the concept of "sustainability" (Christensen, 1998). Disruption is a disturbance that causes a significant change that occurs in an industry

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or market, such as massive technological developments. Technology develops exponentially and often faster than people, organizations, or society can adapt (Downes & Mui, 1998). Technology has rapidly changed company strategy and business competition since the end of the 20th century and the following years (Bettis & Hitt, 1995). The internet is changing how people socialize, relate, and do business (Marcus, 2016). Based on the results of a survey conducted by PricewaterhouseCoopers (PwC) of 1,322 Chief Executive Officers (CEOs) in 77 countries, rapid technological developments in recent years have the potential to generate new markets and change all aspects of future economic and business activities (Setiaji, 2015). Technological disruption occurs when a new technology or innovative business model displaces established practices and disrupts existing industries. This phenomenon occurs in all sectors in the world, including in Indonesia.

The Indonesian toll road industry, there is a technological disruption when the government plans to implement a non-cash toll transaction system with the Multi-Lane Free Flow (MLFF) scheme based on Global Navigation Satellite System (GNSS) technology. This system will replace the previous toll payment technology using electronic money (e-Toll and e-Toll Pass). Minister of Public Works and Public Housing (PUPR) Basuki Hadimuljono, through Ministerial Letter Number PB.02.01-Mn/132 dated January 27, 2021, has determined Roatex Ltd., which was the initiator of the GNSS technology-based MLFF system as the winner of the tender and subsequently became the only toll road operator implementing the Toll Transaction System with the MLFF scheme in Indonesia. This policy will change the pattern of business competition in the toll road industry. Limited competition occurs in specific industries or geographic areas where market entry and exit decisions are controlled by regulations (Mahon & Murray, 1981). New regulations may limit the products and services offered by companies within the geographical scope of the market (Smith & Grimm, 1987). The magnitude of change brought about by deregulation was influenced by the restrictive regulations imposed on firms within the industry (Reger et al., 1992). Companies cannot take advantage of opportunities that arise to increase their competence due to restrictions on market entry (Reger et al., 1992). Thus, the Government's decision to implement the MLFF system poses a threat to toll road operator companies, which have so far carried out their business activities in the toll road transaction services field.

The company's adaptive response can be triggered by industry deregulation that changes the competitive landscape (Peteraf & Reed, 2007). Strategic adaptation and competency renewal are needed in dealing with environmental changes and business competition conditions triggered by the emergence of new technologies, increased customer expectations, offers from competitors, and the imposition of new regulations in the industry (Augier & Teece, 2009). Therefore, strategic management must be carried out by utilizing existing technology and facing continuous technological changes (Drejer, 2001). Companies must consistently build and develop capabilities to maintain a competitive advantage to grow in a changing environment (Verona & Ravasi, 2003).

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Suppose the company cannot adapt by changing its business strategy and fails to overcome the challenges of this disruption, it is likely that the company will not be able to survive due to financial distress. This can occur when the business's income is insufficient to cover the costs incurred by the company, the rate of return realized is much lower than the capital invested, or the average return on investment is continuously lower than the company's cost of capital (Altman et al., 2019). In addition, company failure can be caused by weak adaptability in aligning business strategies with changing industrial conditions (Helfat et al., 2009). An unsustainable business model is also one of the reasons why companies are easily disrupted by changing conditions, resulting in potential business failure (Altman et al., 2019). Therefore, it is necessary to comprehensively analyze the company's strategy and business model to assess its resilience to technological disruption. The company's business continuity can be analyzed based on its financial performance when experiencing a technological disruption.

To explore and understand the impact of technological disruption on financial performance and business continuity in the Indonesian toll road industry, this research attempts to examine the strategy and business model of the largest toll road operating company in Indonesia, namely PT Jasa Marga Tollroad Operator, as well as analyze and compare the performance of financial companies in normal situations with the projected performance of financial companies when there is a technological disruption, which is measured using financial ratios and z-score indicators. Evaluation of financial statements can be used to project company performance and anticipate situations that can potentially occur in the future (Brigham & Houston, 2006). Financial report analysis can be performed in several categories: short-term solvency or liquidity ratios, long-term solvency or financial leverage ratios, asset management or asset utilization ratios, and profitability ratios. Financial ratio analysis can be used to explain correlations or relationships that can be compared to understand the conditions and trends that occur in the company, as well as to analyze the factors that influence these ratios (Subramanyam & Wild, 2010).

### **Research Method**

This research was conducted by analyzing the corporate strategy and financial performance of PT Jasamarga Tollroad Operator (JMTO), which was facing a disruptive situation due to changes in technology and toll transaction policies in Indonesia. The case study approach method is a type of descriptive qualitative case study that reveals a more detailed and in-depth understanding of the description of an object that could be adopted in the broader environment (Susanto, 2020). Qualitative studies are well suited for investigating complex phenomena in natural and novel research settings (Yin, 2013). This research method was expected to capture these complex objects and understand them in depth, while researchers could capture the significance of the research (Raco, 2010). Qualitative case studies give researchers access to a deeper level of understanding of new or complex

phenomena in detail for exploratory purposes (Golicic et al., 2005). Qualitative investigations offer a better understanding of information (Tewksbury, 2009). Case studies aim to provide in-depth empirical evidence in the form of specific cases which were generally used to test a theory.

This research uses a qualitative approach in determining the subjects and research objects to be analyzed, but also uses a quantitative method by calculating financial projections and measuring company performance using financial ratios. The analysis of the company's business model and strategy is carried out utilizing information obtained from official reports as well as through direct interviews with management. Financial performance is analyzed for normal situations, compared to projected financial performance during disruptions. Scenario analysis and alternative strategies are carried out to maintain business continuity when facing disruption situations as measured by the company's financial performance. This research method is used to verify by conducting studies to establish facts and analyze the results systematically.

To measure the condition of a company, financial performance analysis can be done by reviewing the company's financial statements. One of the indicators in assessing financial performance is to analyze financial ratios and compare them for a certain period. In this study, financial performance analysis was carried out using financial report data obtained directly from research subjects in the form of official reports issued by the company. To capture a holistic perspective and increase the validity of the research, data and information were also obtained from semi-structured face-to-face interviews with the company's Directors and Management to explain the company's business processes and strategic business plans. This interview was also conducted to clarify the information and data used. The interview lasts 60 to 90 minutes. The interviewees were briefed on the topic and research objectives before the interview. An interview protocol is provided to explore the impact of technological disruption on the company's financial performance that can affect business continuity, including a series of open questions, including the opportunities and challenges faced by technological disruption.

Open-ended questions give the interviewee freedom to share their experiences and opinions to allow the interviewer to follow up on the topic in greater depth (Turner, 2010). Some questions are given more attention during a particular interview, depending on the position and role of the interviewee. Follow-up questions are asked to enable the interviewee to further describe the situation related to a particular activity or process. All information and findings obtained were triangulated from several data sources and clarified again through follow-up interviews to ensure accuracy.

## **Result and Discussion**

PT Jasamarga Tollroad Operator (JMTO) is one of the subsidiaries of PT Jasa Marga (Persero) Tbk, a toll road service provider. Jasa Marga owns 99.98% shares in PT JMTO. As

of December 2022, PT JMTO had operated 1,412.28 km of toll roads or 56% of the total 2,470.44 km of toll roads operating in Indonesia. This has made PT JMTO the market leader in toll road operations PT JMTO continues to strengthen its existence to increase the operation of toll road sections in both internal and external market share. PT JMTO's Business Lines include toll road operation services which include transaction services, traffic services, and maintenance services. In addition, PT JMTO also provides information technology services for toll road equipment and siinfokom equipment, and also toll payment system management services.

At the end of 2023, the Government of Indonesia is targeting the implementation of a modern toll road transaction system, with plans to implement a non-cash toll transaction system with contactless and non-stop technology with an application-based Multi-Lane Free Flow (MLFF) scheme that uses Global Navigation Satellite technology System (GNSS). Multi-Lane Free Flow (MLFF) allows online toll payments without stopping at the toll gate.

The GNSS-based MLFF policy implementation plan will undoubtedly have an impact on changing the business model in the toll road industry. The government has appointed Roatex Ltd. through PT Roatex Indonesia Toll System (RITS) as the only service provider that will become the operator of all toll roads in Indonesia when the GNSS-based MLFF scheme is implemented. As such, all toll road operators currently providing transaction services will lose their market, impacting the company's business and financial performance.

MLFF implementation can cause PTJMTO to lose revenue from transaction services, ETC services, and IT-based services that support toll transactions. With changes in toll transaction technology following the implementation of Multi-Lane Free Flow (MLFF) on all toll roads in Indonesia, the challenges faced by PT JMTO include:

1. **Business Operations.** Transaction services in the PT JMTO toll road operation business line are in danger of stopping and being replaced by the Implementing Business Entity (BUP) appointed by the Government, namely PT Roatex Indonesia Toll System (RITS)
2. **Financial Performance.** PT JMTO faces the potential risk of losing revenue from toll road transaction services and its supporting businesses so the business growth target cannot be achieved.
3. **Human Resources.** With the implementation of MLFF managed by BUP, PT JMTO's operational officers in transaction services, which are currently quite numerous, are at risk of losing their jobs.
4. **Impairment of Assets / Investment Value.** Supporting operational assets and investments that PT JMTO has issued in the field of transaction services cannot be used resulting in a decrease in the value of assets that must be imported (additional expenses).

#### **A. Analysis of Corporate Strategy and Business Model**

Operating toll roads is one of the core competencies within the Jasa Marga Group as a pioneer toll road company in Indonesia. Currently, this competency serves as the

value proposition of PT JMTO, a subsidiary of Jasa Marga, which is directed to develop and maximize the toll road operating system to capture both the internal captive market of the Jasa Marga Group and external market share. PT JMTO is expected to become a service provider in toll road operations, focusing on the principles of operational excellence by implementing a cost leadership strategy. The adoption of the Management Fee scheme as the business model allows PT JMTO to avoid substantial investments in asset acquisition. This approach helps in minimizing the initial cost burden for the company and supports the implementation of a cost leadership strategy.

PT JMTO continues to utilize a contract scheme with a management fee approach in its business operations rather than adopting operating leases. By adopting a business model based on performance-oriented management contracts and leveraging state-of-the-art technology, PT JMTO can achieve greater flexibility in resource optimization, delivering top-notch services at a comparatively lower cost. Under this business model, PT JMTO will generate operating revenues through toll road management contracts, with the profit margin being equivalent to the cumulative management fees earned from all the toll roads it serves. Moreover, PT JMTO stands to gain an additional profit margin if it successfully streamlines operating expenses.

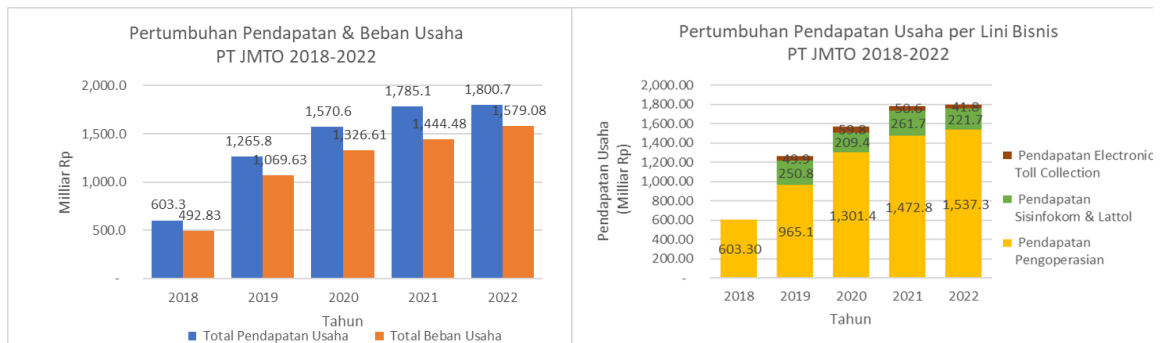
PT JMTO is urged to enhance its self-reliance by continuously enhancing its capabilities and technological proficiency to optimize its business operations. This decision is driven by the ongoing development of the toll road operating system, particularly due to the emergence of advanced technology, which introduces potential changes that may pose business risks. Hence, PT JMTO has initiated the integration of technology into its business strategy as a means to enhance the company's capabilities and gain a competitive edge within the industry. This aligns with the concept that highlights the importance of strategic adaptation and competency renewal in response to environmental changes and competitive conditions (Augier & Teece, 2009). Continuous capability development is crucial to maintaining a competitive advantage (Verona & Ravasi, 2003).

PT JMTO persistently pursues innovation and service development while leveraging toll road operation technology. These efforts are not limited to toll roads under the Jasa Marga Group but can also be implemented on toll roads owned by other BUJTs (Business Units of Toll Road Companies). The strategic focus of PT JMTO revolves around expanding its toll road operation services to encompass a wider operational area, alongside other complementary businesses. Furthermore, PT JMTO has commenced the development of additional ventures beyond the toll road operating ecosystem, as part of its diversification strategy, while concurrently optimizing its resources, competencies, and capabilities. As a result, PT JMTO is expected to continue expanding its market share and maintain its position as the leading player in the toll road operation industry.

## **B. Business Revenue Analysis**

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Examining the company's operating income over the past years enables us to gain insights into the origins, proportions, growth patterns, and influential factors impacting the company's financial performance. This analysis serves as a foundation for identifying strengths and weaknesses, as well as opportunities and threats that might influence future revenue growth. The graph below illustrates the growth of PT JMTO's operating income and expenses during the period from 2018 to 2022.



Over the course of five years, from 2018 to 2022, PT JMTO's operating income has demonstrated a relatively consistent growth, exhibiting a Compound Annual Growth Rate (CAGR) of 24%. Simultaneously, direct expenses related to PT JMTO's business activities have also exhibited a consistent upward trend, with a CAGR of 25%. The toll road operation business line, encompassing transaction services, traffic services, and maintenance services, has contributed the most to the company's total operating revenues. This business segment has also witnessed a continuous increase in revenue, with a CAGR of 21%, corresponding to the expanding number of toll road sections managed by PT JMTO each year.

Conversely, revenue from IT-based services (sisinfokom and lattol) experienced negative growth, with a CAGR of -3%, as did revenue from electronic toll collection services, with a CAGR of -4%. These findings indicate that only the toll road operation business line has exhibited positive advancements in both revenue value and growth over the past five years. Consequently, operating income stands as the primary income source for PT JMTO, significantly influencing its profitability performance.

Based on analysis of PT JMTO's financial performance over the past five years, specifically from 2018 to 2022, it can be concluded that the company has shown a satisfactory performance under normal conditions. To gain a deeper understanding, a more detailed examination was carried out to assess the performance of PT JMTO's operating revenues in 2022, aiming to analyze the sensitivity and contribution of each line of business or service to the company's financial performance. The proportion of PT JMTO's operating revenues in 2022, categorized by line of business or type of service, is as follows:



Total Revenue of PT JMTO: IDR 1.8 T

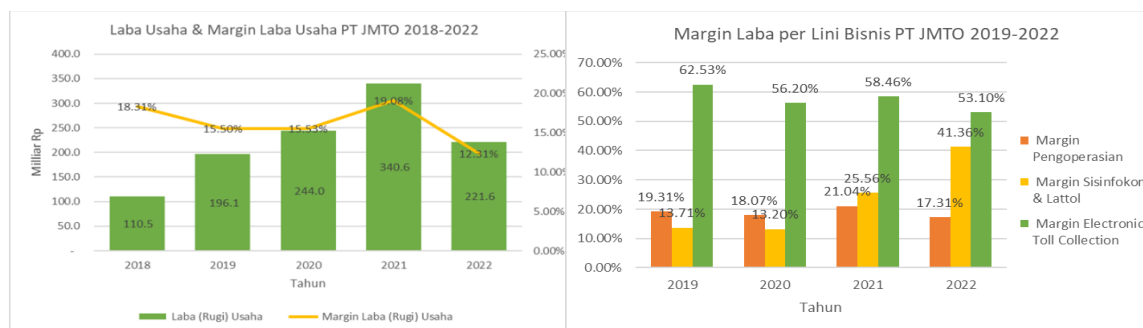
Total Revenue of PT JMTO related to the Transaction Service Business: IDR 1,064.17 billion

Total Revenue of PT JMTO related to the Traffic Service Business: IDR 736.53 billion

This indicates that toll road transaction services make a substantial contribution to PT JMTO's operating revenues, accounting for 59% of the company's total operating revenues, while the remaining 41% is attributed to toll road traffic services. This proportion remains relatively consistent year after year, as transaction services encompass a wider range of activities compared to traffic services.

### C. Profitability Analysis

The company's level of profitability is determined not only by the performance of its operating revenues but also by the magnitude of costs incurred. Conducting a cost analysis helps identify and assess costs that have an impact on the company's profitability, including operational costs, labor costs, overhead costs, and other expenses associated with its business activities. These factors can influence the company's operating profit performance. Financial ratio analysis offers a means to examine the company's profitability performance through calculations such as gross profit margin, net profit margin, Return on Assets (RoA), and Return on Equity (RoE). The graph below illustrates PT JMTO's operating profit and operating profit margin for the period from 2018 to 2022.

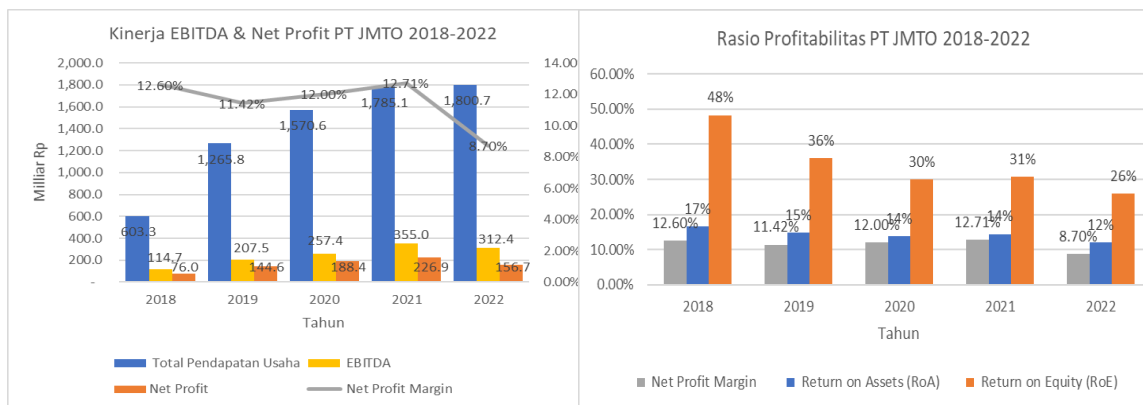




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The consistent growth in business revenues has contributed to an annual increase in PT JMTO's net profit. PT JMTO's Operating Profit/EBIT has displayed positive growth until 2021 but is projected to decline in 2022. This decline can be attributed to the lower growth rate of operating income in 2022 compared to the increase in operating expenses. The operating profit margin has fluctuated from year to year, and in 2022, it is expected to decrease significantly compared to 2021, despite PT JMTO's overall business growth. The fluctuations in operating profit margins are influenced by the performance and profit margins of each business line within PT JMTO.

While operating services generate the highest contribution to PT JMTO's operating revenues, the largest profit margin is derived from Electronic Toll Collection (ETC) services, ranging from approximately 53% to 63%, although this margin shows a downward trend over the years. The profit margin from operating services remains relatively stable, ranging from 17% to 22%, while the profit margin from sysinfokom services and toll road equipment (lattol) continues to grow. The overall profitability performance of PT JMTO is undoubtedly influenced by both revenue amounts and profit margins across each business line. Despite operating services consistently making the most substantial contribution to revenue, their profit margin is the lowest compared to other services, particularly in 2021 and 2022.



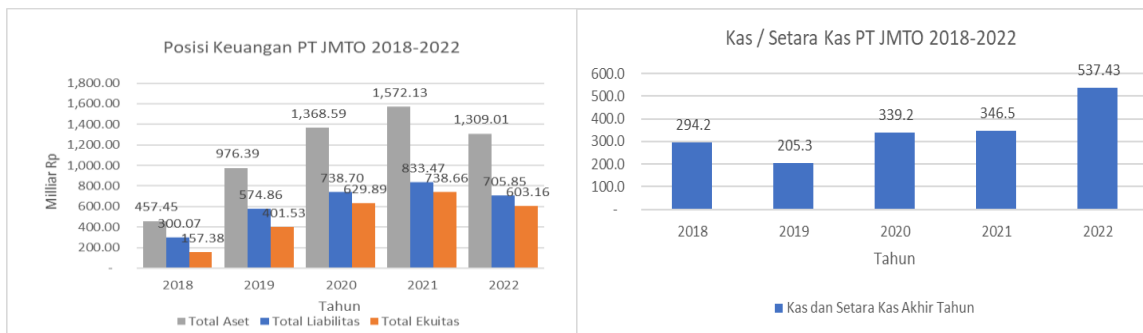
PT JMTO witnessed positive growth in both EBITDA and Net Profit from 2018 to 2021, but experienced a decline in 2022. This decline can be attributed to the lower growth rate of the company's operating income compared to the overall increase in operating expenses. In 2022, there will be an increase in both direct and indirect expenses, which is primarily due to adjustments in employee salaries and the addition of personnel for new business development, as well as higher depreciation expenses.

Net Profit Margin of PT JMTO remained relatively stable between 11% and 13% from 2018 to 2021, but is expected to witness a significant decline in 2022 due to the increase in operating expenses. Consequently, this will impact the company's operating

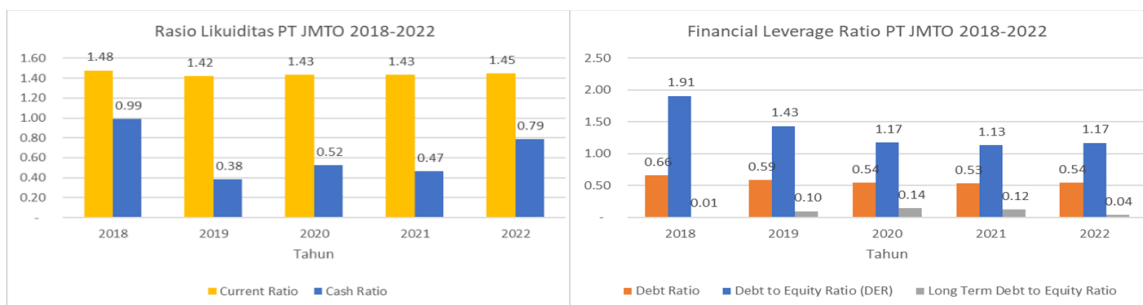
profit performance for the year. Although the company continues to experience positive growth in terms of operating income, it has not been able to offset the impact of less efficient cost management, thus affecting profitability. Return on Assets (RoA) has been decreasing annually as the company's net profit growth has been lower than the growth of its assets, particularly in 2022. Similarly, the Return on Equity (RoE) has also witnessed a decline over the years, as the increase in the company's equity value has outpaced the growth of its operating profit.

**D. Solvency Analysis**

The state of the company's balance sheet serves as the foundation for conducting both liquidity analysis, which evaluates the company's capacity to fulfill short-term obligations, and solvency analysis, which assesses the company's ability to meet long-term obligations.



PT JMTO maintains a relatively consistent position of cash and cash equivalents over the years. In 2022, there was a substantial rise in cash and cash equivalents compared to previous years, primarily driven by an increase in cash flows from operating activities and an expansion of PT JMTO's market share. The growth in cash and cash equivalents is accompanied by an overall increase in the company's assets. Over the past 5 years, the company has experienced significant asset growth, aligning with the expansion of equity and liabilities. The annual growth in net profit has also contributed to the rise in equity through retained earnings. As the company develops, its capital structure expands, including an increase in liabilities.

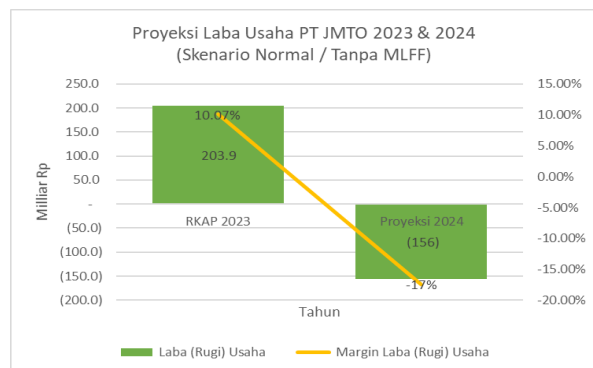
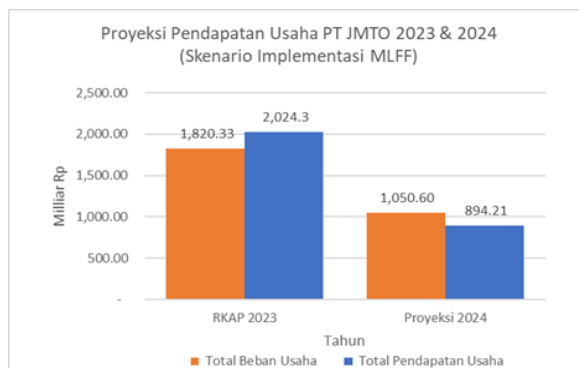


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The current ratio of PT JMTO has remained relatively stable around 1.4-1.5 over the past 5 years. A value of 1 is considered a critical point, indicating that current assets are equal to current liabilities. A ratio above 1 signifies that the company has more than enough current assets to meet its short-term obligations. The cash ratio has exhibited volatility during the 2018-2022 period, reflecting changes in the value of cash and cash equivalents as well as the increase in short-term liabilities. Generally, a ratio above 0.5 or 50% is considered favorable as it indicates that at least half of the current liabilities can be covered by available cash and cash equivalents.

Regarding long-term solvency and financial leverage ratios, PT JMTO has maintained a relatively stable solvency performance. The debt ratio and debt to equity ratio (DER) decreased annually from 2018 to 2021 but experienced a slight increase in 2022. Additionally, the long-term debt to equity ratio for PT JMTO is relatively low. This suggests that the company relies more on its own capital than on debt, indicating a healthier capital structure with reduced financial risks. Overall, PT JMTO demonstrates a prudent level of financial solvency, safeguarding against potential risks. This is further supported by the company's strong cash flow from operating activities and a business model that minimizes the need for significant external funding. Consequently, the company possesses a sound ability to fulfill its debts and obligations.

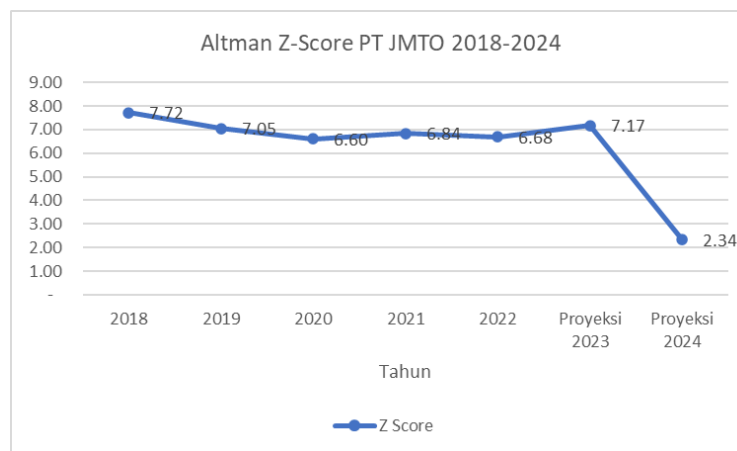
## E. Financial Performance Projection (MLFF Scenario)



Based on the GNSS-based MLFF implementation plan, which will be implemented no later than December 2023, in 2024, PT JMTO will experience a significant decrease in operating revenues from all services related to toll transactions. Potential Loss of Revenue from the Toll Transaction Service Business reaches more than IDR 1 trillion per year or 59% of PT JMTO's total business revenue per year \*(calculation based on realized revenue in 2022). Operating expenses related to the Toll Transaction Service Business also experienced a significant decrease. The decline in operating revenues is projected to be greater than the decrease in operating expenses, resulting in a

significant drop in PT JMTO's performance to record a loss, with a margin difference projected to reach -17% in 2024.

Using the formula for companies in developing countries (emerging market scores), the Z-Score for assessing the performance of PT JMTO can be calculated as shown by the following tables and graphs:



Z SCORE CALCULATION	2018	2019	2020	2021	2022	RKAP 2023	Proyeksi 2024
Share Price x Number of Outstanding Shares	75.00	250.00	250.00	250.00	250.00	250.00	250.00
Working Capital	142.36	224.96	281.24	322.11	306.23	438.36	109.59
X1 = Working Capital / Total Assets	0.31	0.23	0.21	0.20	0.23	0.39	0.06
X2 = Retained Earning / Total Assets	0.17	0.15	0.14	0.14	0.12	0.14	0.00
X3 = EBIT / Total Assets	0.24	0.20	0.18	0.22	0.17	0.02	(0.23)
X4 = Market Cap / Total Liabilities	0.25	0.43	0.34	0.30	0.35	0.74	0.25
Z Score	7.72	7.05	6.60	6.84	6.68	7.17	2.34

Based on the Z-Score calculations for each of these years, PT JMTO has shown a consistently strong performance until 2023 (before the MLFF technology disruption), with a Z-Score value exceeding 2.6. This indicates that PT JMTO has a low potential for financial distress and is considered financially stable. However, after the implementation of the MLFF, there was a significant decline in performance due to a decrease in revenue from transaction services. As a result, the projected Z-Score value for 2024 (post MLFF implementation) decreased to 2.34, placing PT JMTO in a gray area with an increased risk of bankruptcy or financial distress.

By the results of one-to-one interviews conducted for 90 minutes with the management of PT JMTO, including the President Director, Director of IT, Director of Finance and Risk Management, and Director of Human Capital, all agreed that PT JMTO would experience a significant decrease in operating income if the government's plan for the implementation of MLFF by service provider PT RITS to be carried out at the end of 2023. The company has the potential to experience financial distress if no alternative

efforts and strategies are made. The potential loss of revenue from toll road transactions is the main thing that drives PT JMTO Management to plan to develop new businesses, both in the MLFF ecosystem and non-toll road businesses.

This analysis of financial performance highlights the importance of addressing the challenges posed by the implementation of Multi Lane Free Flow (MLFF) technology, based on GNSS, on all toll roads in Indonesia. PT JMTO's management must view this change as a significant challenge that needs to be mitigated, as it can have a notable impact on business lines associated with toll transaction services, leading to a negative effect on the company's performance. The literature has consistently emphasized that technology and digitalization are the primary drivers of disruption (Drejer, 2017).

This phenomenon aligns with previous research that indicates how massive technological advancements can result in disruptions that bring about significant changes in an industry or market (Downes & Mui, 1998; Christensen, 1998; Setiaji, 2015). The adoption of MLFF, as a technological breakthrough, has the potential to render company-specific competencies less relevant or even obsolete, as evidenced by a study conducted by Kim and Prescott (2005).

## **Conclusions**

The modernization of toll road transaction technology, mandated by the government, has disrupted the business processes of toll road operators that primarily focus on transaction services. This has had a significant impact on the company's financial performance, as more than 50% of operating revenues are derived from transaction services. This situation reveals the company's heavy reliance on toll road transaction services, making it vulnerable to financial pressure when disruptions occur in this particular business line, resulting in a substantial loss of operating income. Toll road operators with less diversified or homogeneous business lines in the toll road operation service sector are highly susceptible to disruptions. This increases the risk of declining financial performance, particularly if the company fails to adapt swiftly and lacks alternative strategies to sustain positive performance.

PT JMTO, the largest toll road operator in Indonesia, is projected to experience a decrease in operating revenues amounting to IDR 1 trillion, equivalent to 59% of the company's total operating revenues in 2022, if the toll transaction system adopts the MLFF scheme based on GNSS technology on all Indonesian toll roads by December 2023. This will adversely impact the company's profitability, with a projected net loss of IDR 156 billion and a loss margin of -17% in 2024. This situation arises because the reduction in operating income surpasses the decrease in operating expenses, particularly non-cash expenses, resulting in a negative bottom line. The significant decline in company profitability also disrupts the company's cash flow, thereby affecting its liquidity performance. This, in turn, affects the company's financial position in terms of assets and equity. If efforts to improve

liquidity conditions are not implemented, the company has the potential to face financial distress, which could endanger its continuity.

With the company's strategy and business model aimed at optimizing the value chain in the toll road operation business, coupled with parental support in terms of capital and market control, the company's reliance on debt funding is relatively minimal. The management of the company's solvency performance is also commendable. However, adjustments to the funding strategy are necessary to address the disrupted liquidity performance resulting from the decline in company performance following the implementation of GNSS technology-based MLFF. The Z-Score indicator reveals a significant decline in company performance following the adoption of GNSS technology-based MLFF, especially in terms of EBIT, working capital, total assets, and retained earnings. Consequently, the company's Z-Score dropped to 2.34, placing it in a gray area with an increased risk of financial distress. This substantiates how technological disruptions can exert financial pressures on the company's sustainability.

To uphold positive performance and ensure business continuity, the company's directors and management must prepare adaptation scenarios and alternative strategies to address technological disruptions in the toll transaction system in Indonesia. The Board of Directors and company management have formulated short and long-term strategies to sustain performance and drive company growth through four scenarios: enhancing operational efficiency, strengthening core competencies and expanding within the toll road ecosystem, capitalizing on collaboration opportunities and strategic alliances with the GNSS technology-based MLFF Implementing Business Entity (BUP), namely PT RITS, and exploring new business prospects in non-toll road environments to diversify the company's portfolio.

The Board of Directors and company management firmly believe that the implementation of these alternative scenarios and strategies will maintain profitability and liquidity performance, enhance competitiveness, and foster long-term business growth for the company.

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