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Evaluating Financial Health and Sustainability of Post-Merger Port Operations in Indonesia: Liquidity and Profitability Insights

Liwaul[1]*, Nasrullah Dali[2], Sahrun[1]

[1]Business Administration Study Program, Faculty of Political and Social Science, [2]Accounting Department, Faculty of Economics and Business, Halu Oleo University, Green Campus Bumi Tridharma, Anduonohu, Kambu Sub-district, Kendari City, Southeast Sulawesi 93232, Indonesia

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Abstract

This study aims to analyze the financial health of PT Pelabuhan Indonesia (PT Pelindo) after the merger with a liquidity and profitability assessment approach for the sake of the company's survival in global economic turmoil and increased digital services for consumers who use transportation services. The method used is secondary data in the form of audited financial statements (2021-2023). This research uses a descriptive quantitative approach by analyzing the company's liquidity, profitability, and efficiency. The analysis technique uses liquidity financial ratio analysis, including current, quick, and cash ratios. In contrast, profitability ratios include gross profit margin (GPM), net profit margin (NPM), return on assets (ROA), and return on equity (ROE) to describe the company's financial health condition. The results and discussion of the study indicate that the Indonesian port company (PT Pelindo), after the merger from 2021 to 2023 suggests that it needs to implement a liquidity strategy through financial restructuring with a focus on managing current assets and current liabilities, increasing cash efficiency, accelerating collections, and reviewing capital structure to ensure liquidity remains adequate and reduce liquidity risk, especially with the downward trend in cash ratio which can threaten the company's stability in the future. Improving the profitability of Indonesian port companies should focus on operational cost efficiency, including digitalization, process and preventive maintenance, and collaborating with strategic partners to increase revenue, diversify port services, and optimize asset usage to maintain long-term financial stability and minimize negative impacts and external fluctuations.

Keywords: *Digital innovation, diversification, financial restructuring, partner collaboration, revenue optimization.*

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*Liwaul
E-mail: liwaul@uho.ac.id

INTRODUCTION

A company's financial health is one of the critical elements in ensuring operational sustainability and long-term stability, especially in an industry fraught with economic and market challenges, such as the port sector. In this context, liquidity and profitability are often the two main indicators to measure a financial well-being of the business. The ability of a business to satisfy its immediate obligations is referred to as liquidity, often measured through current and quick ratios (Szálteleki et al., 2024). On the other hand, profitability reflects how efficiently a company generates profits from its operations. Both aspects are fundamental, especially for port companies that have high operating costs and depend on stable cash flow (Javed et al., 2024). As one of Indonesia's most significant port companies, the Indonesian Port Company faces major challenges in maintaining its liquidity and profitability. Large infrastructure projects not matched by a significant increase in revenue often leave the Company with limited liquidity. Port expansion projects in Eastern Indonesia that face capital constraints also put pressure on cash flow and create short-term financial risks for the Company. Financial restructuring measures and revenue innovation become crucial in this situation to ensure the Company remains competitive in an increasingly dynamic global market (Dainelli et al., 2024).

One of the main problems PT Pelindo faces is the high operational expenses that are not proportional to the revenue generated. This is mainly due to delays in planned infrastructure projects in Eastern Indonesia. These delays led to negative cash flows that increased the Company's liquidity risk. At the same time, the significant debt burden further weighs on the Company, making financial management more complicated and requiring immediate action to maintain both short-term and long-term financial health (Maside-Sanfiz et al., 2024a). Another problem is the lack of revenue diversification and innovation in port services. Most port companies rely on traditional revenue sources limited to loading and unloading activities and infrastructure leases. Meanwhile, the need for more modern digital and logistics services is increasing. The lack of technology integration and innovation in operational services has prevented PT Pelindo from maximizing its revenue potential, eventually affecting the business's financial stability and profitability in the face of the ever-changing global economic issues (Maani & Rajkumar A, 2024).

One solution widely raised in the literature is financial restructuring, which focuses on rearranging the capital structure and debt management. Financial restructuring allows companies to reduce debt burden through refinancing or rescheduling debt payments, thereby improving cash flow and reducing the risk of bankruptcy (Bon & Cheng, 2021). In addition, revenue diversification through digital service innovation is crucial to maintaining the company's revenue sustainability. Developing technology-based logistics services and digitizing port operations can contribute significantly to improving operational efficiency and long-term revenue (Gasco-Hernandez et al., 2022). The literature also points to the vital role of technology in port business restructuring. Previous research highlights that companies that successfully integrate technology into their operations tend to be better able to face global market challenges (Vrakas et al., 2021; Zhukevych et al., 2024). In addition, digital service innovations in the port sector, such as the development of cloud-based logistics information systems, can improve the company's competitiveness in the long term, especially in increasingly fierce industry competition (Maside-Sanfiz et al., 2024b).

This study hypothesizes that implementing financial restructuring by PT Pelindo after the merger, followed by digital service innovation, will significantly impact the company's financial health. The company's profitability and liquidity improvement will be reflected through more stable cash flows and the

company's ability to withstand global economic turmoil. The research question guiding this study is as follows:

RQ: To what extent can financial restructuring and digital service innovation enhance PT Pelindo's liquidity and profitability?

Specifically, how can these strategies help the company mitigate liquidity risk and improve revenue stability amid economic fluctuations and operational challenges in Indonesia's port sector?

The main objective of this study is to evaluate the extent to which financial restructuring and digital service innovation can improve the company's financial health, particularly in the context of economic fluctuations and operational challenges in the port sector. This research focuses on evaluating the financial health of PT Pelindo after the merger, with liquidity and profitability as the main indicators. The novelty of this research lies in combining the analysis of financial restructuring with digital service innovation in the port sector, which has not been widely discussed in previous literature. In addition, this study contributes to understanding how technology integration can improve the financial stability of port companies in developing countries. This research is expected to serve as a foundation for PT Pelindo's management strategic decision-making in maintaining operational stability and the company's long-term growth. The literature reviews of financial restructuring, liquidity, and profitability are explained below based on the research question and objectives.

Financial restructuring is a company's effort to improve capital structure, manage debt, and change financial strategy to improve financial performance stability (Rodriguez et al., 2024). Revenue optimization increases revenue through more efficient management, market development, and product diversification (Dainelli et al., 2024). Debt restructuring strategies through refinancing or debt rescheduling can reduce the burden of interest payments and improve the company's cash flow (Bon & Cheng, 2021). Companies that experienced liquidity difficulties managed to reduce the risk of bankruptcy after implementing well-planned debt restructuring strategies as a result of the impact of economic fluctuations (Listyaningsih et al., 2024). Improved operational efficiency and revenue optimization focusing on lean management and digitalization have improved profit margins (Naumov et al., 2024). Investment and technology can facilitate supply chain management, and production capacity can help companies maximize capacity and reduce variable costs to increase revenue (Wei et al., 2019). Diversified digital transformation in technology-based industries, significantly contributing to growing revenues by launching app-based services or entering the e-commerce market, which experienced a 15-20% increase in revenues within two years, overcoming large market fluctuations and providing revenue alternatives (Ramadan et al., 2024). The financial restructuring and revenue optimization of transport companies in developing countries in the past five years have been affected by the global economic crisis and technological development (Haris et al., 2024). Companies that can adapt through debt management, improved operational efficiency, diversification, and asset restructuring tend to have an excellent opportunity to survive and thrive in a dynamic business environment (Maani & Rajkumar A, 2024). Financial health is crucial in assessing the extent to which a company maintains stable financial performance in the face of future global economic challenges (Kebede et al., 2024). The company's financial health can be seen from several aspects, such as

company liquidity, leverage and capital structure, profitability, cash flow, and operational efficiency (Maside-Sanfiz et al., 2024b).

Company liquidity is the ability to meet short-term obligations with its current assets, such as cash, receivables, and inventory (Kebede et al., 2024). The liquidity ratio (current ratio and quick ratio) is one of the main indicators in measuring the company's health (Haris et al., 2024). Companies with good liquidity tend to be more able to survive in uncertain conditions because they can meet short-term obligations without selling fixed assets or seeking additional financing (Razermera et al., 2024). Capital structure is the proportion of a company's funding from debt compared to equity (Wanzala & Obokoh, 2024). A capital structure that is overly dependent on debt can significantly reduce the company's financial health when interest rates rise or earnings decline (Gharios et al., 2024). The debt-quick ratio is crucial in evaluating whether a company has a healthy debt burden (Rodriguez et al., 2024). The ratio helps ensure the company is not too vulnerable to bankruptcy due to excessive debt (Dainelli et al., 2024).

Profitability measures how efficiently a company generates profits from its operations (Kweh et al., 2024). Net profit margin and return on assets (ROA) are metrics often used to assess a company's profitability (Wanzala & Obokoh, 2024). Stable levels of profitability tend to have better financial health (Moussa & Elmarzouky, 2024). Consistent profitability allows companies to be more flexible in the face of market and global economic challenges (Kebede et al., 2024). Strong operating Cash Flow is an essential indicator of financial health (Akbar et al., 2024). Companies with healthy cash flow tend to be better able to withstand economic conditions, and stable cash flow provides flexibility for companies to invest in growth and diversify (Joshi & Joshi, 2024). Free cash flow (FCF) is often used as a leading indicator because it reflects the funds available after the company covers operating expenses and capital investments (Metwally et al., 2024). Operational efficiency measures the extent to which a company can optimally use its assets and resources to generate revenue (Bai et al., 2022). Efficiency ratios such as asset turnover ratios are used to assess company performance (Meliá-Martí et al., 2024). Companies that can improve their operational efficiency tend to have stronger financial health (Moussa & Elmarzouky, 2024). High operational efficiency allows companies to maximize the use of assets and reduce cost wastage (Vrakas et al., 2021). Therefore, in measuring the health of the company's performance, liquidity, leverage, profitability, cash flow, and operational efficiency can be estimated as the main elements in evaluating the company's financial health. Companies that can balance all these factors will better survive in the long term and face the uncertainty of the global market and economy.

RESEARCH METHOD

Research Design

The design of this study aims to analyze the financial health of the Indonesian Port Company (PT Pelindo) after the merger year (2023-2021). This study uses secondary data from financial reports that public accountants have audited. Quantitative descriptive research on financial ratios is vital because it helps

understand the company's financial condition objectively, provides measurable data for performance analysis, and supports more informed business decision-making (Banks, 2024). This research is vital to provide a comprehensive picture of the company's stability, liquidity, profitability, and operational efficiency after the merger where PT Pelindo I to IV were merged into one entity, PT Pelindo.

Type of Research

This research is descriptive quantitative research because the data used are numbers, and the main focus of this research is to explain the financial condition of PT Pelindo based on financial ratios. Descriptive quantitative research has the advantage of providing a clear and systematic description of the characteristics of a particular population or phenomenon through numerical data collection, allowing data analysis objectively so that measurable conclusions can be drawn (Creswell & Creswell, 2017).

Table 1. Financial Ratios

Financial ratios	Abbreviation	Formula Description	Sources
Liquidity			
Current ratio	Cr	Current assets are divided into current liabilities	Farahvash, 2020
Quick ratio	Qr	Current assets minus inventory divided into current liabilities	
Cash Ratio	Csr	Cash equivalents are divided into current debt	
Profitability			
Gross Profit Margin	GPM	Gross profit divided by net sales multiplied by 100 %	Akkizidis & Stagars, 2015; Li & Li, 2021
Net Profit Margin	NPM	Net profit divided by net sales multiplied by 100 %	
Return on asset	ROA	Net profit divided by total assets multiplied by 100 %	
Return on equity	ROE	Net profit divided by total equity multiplied by 100 %	

Data collection techniques

The fund collection technique uses secondary data from three audited financial reports (2021-2023) that have been verified and trusted. The data collection process is carried out by downloading financial reports from the company's official website and converting them into a format that can be analyzed using statistical software and MS Excel to explore financial ratios and SPSS.v26 to analyze the average, minimum, maximum, and standard deviation values of each financial ratio indicator. Data was obtained from the company's annual financial statements published on the company's official website (https://www.pelindo.co.id/investor/laporan-keuangan). The virtue of research data sources with secondary data is that they provide historically accurate and generalizable information (Creswell & Creswell, 2017).

Data Analysis Techniques

The data was analyzed using financial ratios, namely liquidity ratios and profitability ratios. The liquidity ratio is measured using the current ratio, which includes a quick ratio, to measure the Company's ability to meet short-term obligations. The profitability ratio is used to see how well the Company generates profits by measuring ROA, ROE, and Gross Profit Margin). Table 1 shows the financial ratios used to analyze the post-merger performance of the Indonesian Port Company. Based on the financial ratios in Table 1, the data was analyzed using trend analysis and connecting the financial ratios with its balance sheet and income statement. The conclusion was derived using financial data and previous research reviews.

RESULTS AND DISCUSSION

Financial Performance

Measuring the financial health of the Indonesian Port Company (PT. Pelindo) after the merger by analyzing financial statements (2021-2023) aims to obtain information on how the level of liquidity and profitability to support the Company's survival on an ongoing basis. The results of the analysis trend of the income statement are presented in Table 2.

Table 2. Income Statement (in million IDR)

	2023	Trend (%)	2022	Trend (%)	2021
Operating income	31,018,217.70	7.65	29,700,694.14	3.07	28,814,806.34
Construction income	2,897,789.57	(9.32)	2,397,701.58	(24.97)	3,195,512.41
Operating expenses	(24,343,231.47)	7.99	(23,154,429.19)	2.72	(22,541,521.26)
Construction expenses	(2,897,789.57)	(9.32)	(2,397,701.58)	(24.97)	(3,195,512.41)
other business income	310,596.19	16.37	568,645.50	113.05	266,912.54
Operating Income	6,985,582.42	6.81	7,114,910.44	8.79	6,540,197.63
Finance income	627,295.43	53.83	380,490.27	(6.69)	407,775.88
Finance expenses	(2,860,119.85)	12.60	(2,571,042.97)	1.22	(2,540,082.87)
Share of profit of associates	370,377.56	45.18	302,615.69	18.62	255,107.59
Tax expense	(1,110,554.30)	(25.31)	(1,318,503.58)	(11.32)	(1,486,852.96)
Profit After Tax	4,012,581.26	26.33	3,908,469.86	23.06	3,176,145.28
Other comprehensive income	1,401,141.12	2,213.97	(1,711,656.11)	(2,926.78)	60,551.44
Profit For the Year	5,413,722.38	67.26	2,196,813.75	(32.13)	3,236,696.71
earnings per share	187.19	16.10	184.76	14.59	161.23
Net Income	5,413,909.57	67.26	2,196,998.51	(32.13)	3,236,857.94

Source: Secondary data analysis, 2024. https://www.pelindo.co.id/investor/laporan-keuangan

Table 2 shows the financial performance of the Indonesian Port Company (PT Pelindo) operating income has increased by 8.79% from the total operating income of IDR 6,540,197.63 in 2021, while in 2023 it has increased only 6.81%.

Table 3. Balance Sheet (In million IDR)

	2023	Trend (%)	2022	Trend (%)	2021
Assets					
Current Assets					
Cash and Cash Equivalents	12,481,274.25	(3.41)	13,597,640.82	5.23	12,922,388.59
Short-term Investments	3,769,584.38	(34.08)	3,943,052.00	(31.05)	5,718,525.97
Accounts Receivable	1,573,761.83	(43.73)	1,896,933.99	(32.17)	2,796,629.08
Prepaid Advances	208,543.81	(19.38)	225,480.26	(12.83)	258,677.72
Revenue still to be received	724,762.06	118.98	651,230.21	96.77	330,968.48
Inventory	270,428.29	24.24	276,990.51	27.25	217,674.56
Prepaid tax	1,190,287.68	10.16	972,176.64	(10.03)	1,080,535.30
Other Current Assets	100,458.67	82.01	56,662.96	2.66	55,194.66
Total Current Assets	20,319,100.97	(13.09)	21,620,167.39	(7.53)	23,380,594.37
Non-Current Assets					
Long-term Investments	4,708,437.32	25.50	4,118,791.19	9.79	3,751,638.88
Investment Property	1,380,726.35	58.08	1,233,319.43	41.20	873,433.98
Fixed assets	40,513,752.43	(12.50)	45,033,835.15	(2.74)	46,300,182.92
Operating partnership assets	358,909.83	(12.03)	379,887.73	(6.89)	408,013.15
Right of use asset	454,253.11	0.50	453,988.35	0.44	452,002.19
Deferred tax assets	844,098.61	43.73	632,879.44	7.77	587,268.84
Intangible assets	46,882,443.27	20.95	42,546,542.74	9.77	38,760,454.85
Estimated tax refund receivable	1,348,106.86	79.59	1,109,658.96	47.82	750,660.35
other non-current assets	1,531,236.93	58.71	1,221,507.54	26.60	964,824.98
Total Non-Current Assets	98,021,964.70	5.57	96,730,410.51	4.18	92,848,480.13
Total Assets	118,341,065.68	1.82	118,350,577.91	1.83	116,229,074.50
Liabilities & Equity					
Liabilities					
Short-term Liabilities	18,173,953.55	34.03	19,948,603.68	47.12	13,559,591.71
Long-term Liabilities	53,325,896.97	(12.03)	55,597,281.45	(8.28)	60,616,373.35
Total Liabilities	71,499,850.52	(3.61)	75,545,885.13	1.85	74,175,965.06
Equity					
Share Capital	40,575,584.00	378.76	40,575,584.00	378.76	8,475,067.00
Donated & Paid-up Capital	(32,492,851.28)	12,210	(32,492,851.28)	12,210	(263,957.86)
Profit	36,888,019.68	14.21	33,041,956.27	2.30	32,297,920.43
Prive	1,870,462.76	21.14	1,680,003.78	8.80	1,544,079.87
Total Equity	46,841,215.16	11.39	42,804,692.78	1.79	42,053,109.44
Total Equity & Liabilities	118,341,065.68	1.82	118,350,577.91	1.83	116,229,074.50

Source: Secondary data analysis, 2024. https://www.pelindo.co.id/investor/laporan-keuangan

Table 3 shows that the asset position of the Indonesian Port Company (PT Pelindo) in 2022 increased by 1.83% from 116,229,074.50 million. In 2023, it increased by 1.82%. Based on the financial performance

seen from the balance sheet and income statement, financial ratios presented to measure the financial health of the Indonesian Port Company (PT Pelindo) can be presented in Table 4. Table 4 shows the results of the analysis of liquidity and profitability levels.

Table 4. Financial Ratios

Ratio	Years			Mean	Min	Max	Std. Deviation
	2023	2022	2021				
Current ratio (Cr)	1.12	1.08	1.72	1.31	1.08	1.72	0.36
Quick ratio (Qr)	1.10	1.07	1.71	1.29	1.07	1.71	0.36
Cash ratio (Csr)	0.69	0.68	0.95	0.77	0.68	0.95	0.16
Gros profit margin (GPM)	0.23	0.24	0.23	0.23	0.23	0.24	0.01
Net profit margin (NPM)	0.13	0.13	0.11	0.12	0.11	0.13	0.01
Return on assets (ROA)	0.05	0.02	0.03	0.03	0.02	0.05	0.01
Return on equity (ROE)	0.12	0.05	0.08	0.08	0.05	0.12	0.03

Source: Secondary Data Analysis, 2024

Post-merger in 2022, PT Pelindo recorded a 1.83% increase in assets, reaching IDR 116,229.07 billion. This growth was influenced by operational efficiency and synergies from the merger process that drove the increase in asset value. However, in 2023, the asset increase slowed slightly to 1.82%, indicating fluctuations due to unstable global economic conditions, increased operational costs, and decreased demand in the logistics sector, which affected overall asset growth. Due to unstable global financial conditions and fluctuating asset growth in companies and industries (Spitsin et al., 2020). fluctuations in asset growth due to increased operating costs (Kweh et al., 2024). The fluctuation in the port company assets increases due to the declining demand in the logistics sector, which affects the overall asset growth (Bahadur Budhathoki et al., 2024). PT Pelindo's operating income after the merger showed relatively stable fluctuations from 2021 to 2023. In 2022, increased operating income of 8.79% was influenced by increased port activities and operational efficiency after company integration.

However, in 2023, the increase only reached 8.81%, indicating slower growth. Operating income could be due to global economic challenges, such as a decline in international trade volumes and the impact of increased operational costs that hinder a more significant increase in revenue. Global economic challenges caused Company operating income fluctuations (Bai et al., 2022; Yoga & Dinarjito, 2021). The decline in international trade volume affected the Company's and industry's operating revenues (Worku et al., 2024). Increased operating costs impact operating income fluctuations, hindering revenue growth.

The fluctuation in PT Pelindo's operating expenses post-merger is due to several factors. In 2022, the 48.88% increase reflected the integration costs and operational adjustments after the merger, including system harmonization and capacity enhancement. The efficacy of cost-saving measures, including resource optimization and operational process synergies following the consolidation phase, is demonstrated by the 52.42% decline in 2023. This decrease also signifies Pelindo's success in achieving post-merger cost stability, thereby increasing the Company's profitability. The Company's operational cost efficiency is influenced by operational process synergy and resource optimization (Worku et al., 2024). A decrease in operating costs signifies the Company's success in achieving cost stability (Shkodra et al., 2024). Decreased operating costs increase the Company's profitability (Dainelli et al., 2024). Post-merger, PT Pelindo's financial statements showed fluctuations in net profit due to changes in operating expenses. A significant

increase in integration-related operating expenses, such as restructuring and infrastructure investment, triggered a 32.13% drop in profit in 2022.

However, in 2023, net profit surged 67.26%, reflecting the operational efficiency gained after successful restructuring and increased port service capacity. More effective cost management and post-merger synergies supported this improved performance. The decrease in profit was due to an increase in operating costs due to restructuring and infrastructure investment (Wanzala & Obokoh, 2024). Net income fluctuations are caused by changes in operating expenses that reflect operational efficiency with restructuring and increased service capacity (da Silva Stefano et al., 2022). More effective cost management and post-merger synergies support improved company performance (Eldomiaty et al., 2024).

Liquidity Ratio in Measuring Financial Performance

Current Ratio

The current ratio value of the Indonesian port company (PT Pelindo) during the merger period from 2021 to 2023 obtained a minimum value of 1.08, which indicates that in the lowest period, the company was in a reasonably tight position in terms of liquidity. Although still above 1, the small spread indicates a potential liquidity risk in case of sudden cash flow pressures (Dunz et al., 2021). The minimum value for several years has only increased insignificantly, so the company needs to manage receivables and inventory to avoid liquidity problems (Eldomiaty et al., 2024; Yunita, 2021) The maximum current ratio value of 1.72 indicates that in the best period, the port company (PT Pelindo) has significant current assets compared to its current liabilities. A company at the maximum value of several years of financial performance means a safer position to meet short-term obligations and more flexibility in handling urgent expenses (Razermera et al., 2024; Vrakas et al., 2021).

The maximum value of the financial ratio of the maximum number of years can reflect an increase in cash and a decrease in current liabilities in a certain period. The standard deviation value of 0.36 reflects the variation or fluctuation in the current ratio value over the past three years. The financial ratios show fluctuations of less than 0.5, which indicates considerable variation in significant changes in the liquidity structure from year to year (Gharios et al., 2024). Cash flow fluctuations, changes in working capital management policies, or significant changes in current assets and liabilities cause current ratio fluctuations (Dunz et al., 2021; Putri & Naibaho, 2022). concluded that the overall current ratio value of PT Pelindo during the merger period from 2021 to 2023 is in a relatively stable liquid position, with slight fluctuations reflected in the standard deviation. PT Pelindo needs to maintain a balance between current assets and current liabilities to ensure adequate liquidity in the future.

The strategy that PT Pelindo must carry out is financial restructuring, focusing on optimizing the composition of current assets and liabilities to maintain liquidity stability. Strategies include improving cash management efficiency, accelerating receivables collection, postponing short-term obligations where possible, and reviewing the company's capital structure. These strategies can ensure adequate liquidity availability, such as renegotiating debt or increasing long-term borrowings to replace short-term liabilities that strain cash flow. Efficient cash management strategies and accelerated collection of receivables can support improving the capital structure (Metwally et al., 2024). The strategy of cash efficiency and

collection of receivables can ensure the sustainability of the Company's liquidity level (Wanzala & Obokoh, 2024).

Quick Ratio

The measurement of PT Pelindo's quick ratio aims to measure the company's ability to meet short-term obligations using current assets readily converted into cash without regard to inventory. The quick ratio illustrates how well the company can cover its short-term liabilities with liquid assets (Gómez-Puig et al., 2023; Rodriguez et al., 2024). The quick ratio of the Indonesian Port Company (PT Pelindo) based on Table 1 shows that in 2023, it slightly increased to 1.10 compared to 2022. Although it has increased, it is still lower than in 2021. Based on this value, the Indonesian Port Company (PT Pelindo) is still safe but less substantial than in 2021. In 2022, the quick ratio value decreased to 1.07, which indicates that the company's liquidity has decreased compared to 2021. This ratio shows that current assets can meet short-term liabilities only by a small margin. This decrease is due to reduced assets or an increase in short-term liabilities. In 2021, the highest quick ratio value of 1.71 indicates that the company has strong enough assets to cover short-term liabilities. The quick ratio value is considered very safe because the current assets that are quickly available are more than enough to pay off current liabilities. Therefore, the quick ratio value is included in the safe category in the Company, so the Company is considered liquid (Nguyen et al., 2024). One indicator that the Company is said to be liquid is if the quick ratio value is more than 1 (Szálteleki et al., 2024).

The quick ratio value from 2021 to 2023, with an average of 1.29, shows that overall, the Indonesian Port Company (PT Pelindo) can maintain liquid assets more remarkably than its short-term liabilities, although the fluctuations from year to year are significant. The minimum value of 1.07 occurred in 2022, the lowest point of liquidity of the Port of Indonesia (PT Pelindo) company in three years. The maximum value of 1.71 (year 2021) shows the best liquidity, which may reflect a more conservative asset management policy or fewer short-term liabilities. The standard deviation of 0.36 indicates a significant variability in the quick ratio from year to year. The Port of Indonesia (PT Pelindo) 's liquidity fluctuated considerably in the last three years after the company merged. Based on the quick ratio analysis, it can be concluded that the company's liquidity is still at a safe level, with a quick ratio above 1 each year. However, the decline from 2021 to 2022 indicates a challenge in maintaining quick and sufficient assets to anticipate the future. The quick ratio value is greater than the value of 1, and if there are fluctuations from several years not at a value less than the value of 1, then the Company is still at a safe level (Khatib et al., 2023).

An increase in 2023 to 1.10 signals improvement, but stability should still be a focus, given the relatively high standard deviation. Companies may want to focus more on managing their current assets and current liabilities to maintain consistent liquidity. PT Pelindo establishes better financial management strategies to reduce fluctuations and increase stability, such as lowering short-term liabilities or increasing the component of current assets that can be converted into cash. Maintaining and increasing the current asset component reduces short-term debt (Otrusinova & Kulleova, 2019; Valaskova et al., 2018). PT Pelindo's financial restructuring shows liquidity is still at a safe point with a quick ratio above one, although there is a decline between 2021 and 2022, which shows the challenge of maintaining assets. An increase in the quick ratio to 1.10 by 2023 indicates improvement, but stability should be noted due to the high standard deviation. To maintain consistent liquidity, companies must focus on managing their current assets and liabilities and implement strategies to reduce fluctuations, such as lowering short-term liabilities or increasing current assets that can be easily converted into cash. Maintain consistent liquidity by organizing

current assets and liabilities to reduce fluctuations by converting them into cash (Kalimashi et al., 2022; Nerantzidis et al., 2023).

Cash ratio

PT Pelindo's cash ratio experienced a significant decrease from 0.95 in 2021 to 0.68 in 2022 and slightly increased in 2023 to 0.68. The reduction from 2021 to 2022 of 0.27 indicates that the amount of cash or cash equivalents available to cover current liabilities has decreased quite drastically, which can be caused by increased cash expenditures or decreased cash receipts. The average cash ratio of 0.77 indicates that over the past three years, the Company has a ratio of 77% of its current liabilities. This value is quite good even though it is below 1, which indicates that the Company does not always have the cash to pay off all its short-term obligations immediately. The standard deviation of 0.16 indicates considerable variation in the cash ratio over the last three years. The drastic decline in 2022 to a minimum level of 0.68 and the slight increase in 2023 to a level of 0.69 indicate fluctuations that need to be considered by management in the face of global economic turmoil. Based on the results of the cash ratio analysis, it is concluded that the negative downward trend from 0.95 to 0.68 indicates a decrease in the Company's ability to meet current liabilities with available cash. A slight increase in 2023 is not significant enough to change the downward trend. If this trend continues, a potential liquidity risk must be addressed so the Company does not experience difficulties meeting current obligations. Therefore, management should evaluate strategies to improve liquidity, such as optimizing cash management, reducing unproductive expenses, or increasing cash inflows to restore the cash ratio to a safer figure, at least close to above the average value of 0.77 or ideally back to the 2021 value of 0.95.

The decline in cash ratio value from recent years requires management strategies to evaluate cash management by reducing unproductive expenses and increasing cash inflows and efficiency (Eldomiaty et al., 2024). Cash inefficiency results in increased cash expenditure, making it difficult to cope with current liabilities (Spitsin et al., 2020). The strategy that the management of PT Pelindo must carry out in conducting financial structuring because the cash ratio has decreased from 0.95 to 0.68, which indicates that the Company's ability to meet current obligations with cash is decreasing. Then, in 2023, it experienced a slight increase but did not change the downward trend, causing potential liquidity risks that must be addressed. The Company's strategy is that if there is a decrease in cash ratio, the Company needs to reduce short-term liabilities by negotiating debt rescheduling and extending maturity (Dainelli et al., 2024; Metwally et al., 2024). Debt rescheduling and maturity extension can reduce debt burden and stabilize cash flow (Dainelli et al., 2024; Metwally et al., 2024). PT Pelindo's management must evaluate strategies and restructure by optimizing cash management, reducing unproductive expenses and increasing cash inflows so that the cash ratio can again reach or exceed the average of 0.77 or, ideally, return to 0.95 as in 2021. Financial restructuring strategies must be carried out due to the declining cash ratio to ensure the Company can finance its operations.

Profitability

Gross Profit Margin (GPM)

Table 1 shows that the gross profit margin (GPM) of PT Pelabuhan Indonesia (PT Pelindo) after the merger from 2021 to 2023 shows that GPM has fluctuated in the last three years. In 2022, GPM peaked at 23.96%. However, it then dropped to 22.52% in 2023. The decrease in GPM from 2022 to 2023 indicates a reduction in efficiency in generating gross profit compared to revenue. The average GPM for the last three years of 23.06% shows the average performance of the Indonesian port company (PT Pelindo) in generating gross profit compared to revenue during that period. The decline occurred in 2023 when GPM was lower than the average. The maximum value of GPM occurred in 2022 (23.96%), while the lowest value occurred in 2023 (22.52%). GPM indicates that 2022 is the best year in gross margin efficiency. Gross profit margin efficiency shows how well a company manages production costs to generate profits, illustrating the ability to convert sales into profits by considering direct costs (Worku et al., 2024).

The higher the gross profit margin, the more efficient the Company is in maximizing profitability from operating income, indicating reasonable control over production costs and practical strategies (Kweh et al., 2024). In 2023, PT Pelindo experienced unfavorable conditions in maintaining this margin. The standard deviation of 0.78% shows how much the GPM varies or deviates from the average. This value is relatively small. It can be said that the GPM of the Indonesian Port Company (PT Pelindo) from 2021 to 2023 did not experience drastic changes and was quite stable, although there was a decrease in 2023. It can be concluded that the GPM of PT Pelabuhan Indonesia (PT Pelindo) shows stability with not too large fluctuations over three years. However, the decline from 23.96% in 2022 to 22.52% in 2023 requires more attention from company management.

The decrease in GPM was due to several factors, such as increased operating costs, decreased revenue due to weather constraints that slowed down the entry of vessels into the port or the global economy, and increased competition resulting in pressure on prices. To maintain or increase GPM, PT Pelindo needs to evaluate and streamline operational costs so as not to experience a further decline. One strategy to overcome these problems is to increase GPM. PT Pelindo can implement an operational cost-efficiency strategy by digitizing the ship's loading and unloading transaction and distribution and conducting preventive equipment maintenance. Implemented digitization of ship loading, unloading, and distribution processes to improve operational efficiency and reduce costs, thereby increasing Gross Profit Margin (GPM) (Škare & Soriano, 2021). Optimized equipment preventive maintenance to lower the frequency of operational disruptions, thereby contributing to cost efficiency and increased (GPM) (Chin et al., 2020; Soedarsono et al., 2023). Integrating cost efficiency through the digitization of equipment operation and maintenance enables companies to increase profitability by lowering costs and improving service performance (Shehadeh, 2024).

Another thing PT Pelindo needs to do is collaborate with strategic partners to increase revenue. Diversifying port services, such as adding logistics facilities or specialized terminals, can also increase revenue and reduce the negative impact of external fluctuations. Increase the company's operating income through cooperation with strategic partners (Pirttilä et al., 2020). Diversification of services, such as adding logistics facilities or specialized terminals, helps to supplement revenue and reduce the impact of external fluctuations (Vega-Gámez & Alonso-González, 2024). Strategic collaboration and diversification of port services, including logistics or specialized terminals, strengthen revenue, reduce dependence on external factors, and add value and competitiveness.

Net Margin (NPM)

The trend of PT Pelindo's Net Profit Margin (OPM) after the merger for three years, 2021, 2022, and 2023, as shown in Table 1, that the NPM experienced a significant increase from 2021 (11.02%) to 2022 (13.16%), this result indicates that there is an increase in efficiency in the company's operations. However, in 2023, there was a slight decrease from 13.16% to 12.94%. This relatively small decrease of only 0.22% means that PT Pelindo maintains its operational profitability despite a slight decrease from the previous year. Efficiency improvements in net profit margin reflect the Company's operational efficiency (Al-Mana et al., 2020). Profitability Stability NPM maintains operational profitability (Fawzi Shubita et al., 2024; Riza Salman et al., 2024). The average value of the last three years is 12.37%, indicating that PT Pelindo can maintain an operating profit margin above 11%. The standard deviation of 1.18% suggests that the variation in profit margin has not been too considerable over the past three years, which means that operational performance is stable, with not too large fluctuations each year. An increase from 2021 to 2022 indicates significant improvements in operational efficiency, cost reductions or revenue generation.

In 2023, the NPM value decreased; therefore, further attention must be paid to the Company's management to understand the causes of increased operating costs, decreased operating volumes, or external factors such as the global economy and operational digitization. The maximum value of 13.16% shows the highest achievement in the last three years, while the minimum value of 11.02% shows the initial achievement in 2021. The indication is that there has been a successful effort to improve operational efficiency from a low point. The decline in NPM requires management analysis related to increased operating costs, decreased volumes, and external impacts such as global economic conditions and operational digitization (Škare & Soriano, 2021). Achieving maximum NPM indicates an increase in operational efficiency from the minimum value, which reflects the success of efficiency improvement efforts made by company management (Krynke et al., 2022).

It is concluded that, overall, PT Pelindo has shown an increase in operational profitability from 2021 to 2022. However, there was a slight decrease in 2023. Given the low standard deviation (1.18%), this fluctuation is still within reasonable limits and does not show significant stability. In addition, PT Pelindo has a relatively good operating profit level when viewed from the average value of 12.37% but needs to maintain operational efficiency to avoid further decline in the coming years. PT Pelindo must increase operational profitability and include a revenue optimization strategy to maintain efficiency and prevent further decline. An automation improvement strategy focusing on improving service quality will support revenue growth and long-term profitability stability. Revenue optimization through efficiency and prevention of further decline will improve operational profitability (Bansal et al., 2018). Increased automation and service quality support revenue growth and long-term profitability stability (Dainelli et al., 2024).

Return on assets (ROA)

Table 1 shows the development of ROA in the financial statements of PT Pelindo in the last three years, namely in 2021, amounting to 2.78%. There was a decrease 2022 to 1.86%, the lowest value in the previous three years. However, in 2023, ROA again experienced a significant increase to 4.57%, and there was an increase in performance in terms of the efficiency of using company assets to generate profits. ROA

measures how efficiently a company uses its total assets to generate profits, comparing net income to total assets, showing the effectiveness of management in managing the Company's resources (Haris et al., 2024). ROA helps assess how well a company uses its assets to generate sales or net income (da Silva Stefano et al., 2022). The average ROA of PT Pelindo for three years is 3.07%, while the minimum value is 1.86% (year 2022) and the maximum value is 4.57% (year 2023). The average value of 3.07% indicates a moderate rate of return on assets, but the minimum and maximum values are quite different, indicating significant fluctuations in financial performance. The standard deviation of 1.38% shows high variation in ROA performance over the three years. ROA suggests that there is considerable fluctuation from 2021 to 2023. This high standard deviation is caused by several factors, such as significant company profits and operational efficiency changes, and external factors, such as global economic conditions, that affect asset returns.

Comparative analysis of several years shows that 2022 experienced a significant decline from 2.78% to 1.86% due to a decrease in operational efficiency or an increase in assets not offset by profit growth. Increasing ROA can be done through internal improvements in asset management efficiency, as well as increasing operating income and reducing costs efficiently will stabilize ROA. Increasing ROA can be done through internal improvements in asset management efficiency (Maside-Sanfiz et al., 2024), as well as increasing operating income and reducing costs efficiently, which will stabilize ROA (Riza Salman et al., 2024). PT Pelindo's condition reflects the company's internal success in improving operational performance through asset management optimization and cost efficiency, thereby increasing profitability.

These conditions reflect external or internal challenges such as increased costs and asset management issues. The increase in ROA in 2023 to 4.57% indicates that PT Pelindo has improved its efficiency in using its assets to generate profits. This is due to increased operating income and a more efficient reduction in operating costs compared to the previous year. During the merger, PT Pelindo's financial performance in generating profit from assets fluctuated with a moderate average and a significant increase in 2023. The increase in 2023 shows that PT Pelindo can adapt and improve its efficiency. However, it should be noted that the high variability reflected by the standard deviation of 1.38% indicates instability in the ability to generate profits. Therefore, to improve long-term stability and efficiency, the company can focus on strategies that maintain high efficiency, control operational costs, and maximize asset usage. Adapting and improving a company's operational efficiency can enhance the performance of its assets and increase profits (Anton, 2021). Instability and efficiency strategies require cost control and asset optimization strategies for long-term stability (Barro et al., 2022; Faturachman, 2023). In principle, to improve long-term stability and efficiency, PT Pelindo can implement a strategy for optimizing asset management and cost control, focusing on operational digitalization and strategic collaboration. This step can maximize revenue through increased cargo volume, service diversification, and logistics efficiency, thus creating profitability stability amid high variability.

Return on equity (ROE)

PT Pelindo's ROE for three years from 2021 to 2023, as shown in Table 1, shows a significant upward trend where, in 2021, ROE amounted to 7.70%, followed by a decrease in 2022 to 5.13%. ROE is a measure of the profit generated by the Company from each unit of shareholders' equity (Dunz et al., 2021). ROE illustrates how effectively a company uses shareholders' equity to generate profits in business operations (Spitsin et al., 2020). ROE indicates that PT Pelindo's financial performance experienced a significant

recovery and increase in 2023 after experiencing a decline in the previous year. However, in 2023, ROE jumped sharply to 11.56%. Shows that PT Pelindo's financial performance experienced a significant recovery and improvement in 2023 after experiencing a decline in the previous year. The average value of ROE over the last three-year period of 8.12% provides an overview of profitability. 2023 ROE exceeded the average by a considerable margin (11.56% vs 8.12%), which means much better performance than the historical average. 2022 ROE was below average (5.13%), which means weaker performance than the three-year average. The minimum value of ROE is 5.13% (year 2022), and the maximum value is 11.56% (year 2023). The maximum value of 11.56% indicates an increase in the efficiency of equity utilization in 2023 compared to its worst performance in 2022. The standard deviation level of 3.23% means that the variability of ROE over three years indicates significant changes in profitability. The fluctuations reflected in the standard deviation suggest that factors affect PT Pelindo's performance, both internal, such as operational efficiency, and external, such as economic and market conditions that affect the port industry.

ROE standard deviation of 1% to 3% reflects fluctuations in profitability, influenced by internal (operational efficiency) and external (economic conditions) factors (Spitsin et al., 2020). The implication of the increase in ROE in 2023 (11.56%) from 2022 (5.15%) indicates an increase in the Company's ability to generate profit on its equity. Factors that support the increase in ROE include improved operational efficiency, growth in operating income, and more efficient cost management. The decrease from 2022 to 2021 is due to the impact of the COVID-19 pandemic or global economic conditions that affect trade and sea transportation activities. Improved ROE of global companies in 2023 indicates operational efficiency, revenue growth, and better cost management (Rocha & Camargos, 2023).

The decline in ROE in 2022 was influenced by the COVID-19 pandemic and global economic conditions that impacted trade and sea transportation (Rocha & Camargos, 2023). PT Pelindo's overall performance showed significant recovery and improvement in 2023, with ROE more than doubling from 2022, meaning there was a successful effort to restore the Company's profitability. Although there is considerable fluctuation with a standard deviation of 3.23%, the 2023 results show a positive direction in using equity to achieve higher profits. PT Pelindo should monitor the factors contributing to these fluctuations to maintain profitability stability and increase ROE sustainably. High profitability stability can increase Return on Equity (ROE) by ensuring consistent revenue and optimal cost efficiency (Peñarreta Quezada et al., 2024). PT Pelindo's performance, which shows a significant recovery with an increase in ROE, needs to be supported by a strategy to reduce the cost of profitability fluctuations. Appropriate measures include optimizing asset utilization, improving operational efficiency, and diversifying port services to increase revenue. In addition, focus on risk mitigation and service quality improvement to help maintain sustainable profitability growth and financial stability.

CONCLUSION

Financial restructuring, revenue enhancement, and digital service innovation at Pelabuhan Indonesia companies should focus on liquidity strategies by conducting financial restructuring that optimizes the composition of current assets and current liabilities to maintain cash flow stability. It can be achieved by

improving cash management efficiency, accelerating debt collection, postponing short-term obligations where possible, and reviewing the capital structure, such as renegotiating debt or increasing long-term loans to maintain adequate liquidity stability. A strategy is vital to overcome the decline in cash ratio, which can potentially increase liquidity risk and maintain the quick ratio above the ideal value. In terms of profitability, the strategies to be carried out related to revenue-enhancing innovations and digital services are operational efficiency strategies and revenue enhancement through digitalization, strategic collaboration, and diversification of port services, optimal cost control automation efforts, including the development of logistics facilities and special terminals, which aim to maximize revenue and create long-term profitability stability, with a focus on risk mitigation and service quality improvement to strengthen sustainable profitability growth and financial stability.

The limitations of this study include several aspects. First, the data used is limited to a specific period (2021-2023), which may not fully reflect long-term trends in PT Pelindo's financial condition. Second, this study only focuses on liquidity ratios and does not consider external factors, such as macroeconomic conditions, that may affect the Company's liquidity. Third, the analysis only uses historical data and does not consider the impact of restructuring strategies that may be implemented in the future. Finally, this study does not include comparisons with similar companies in the industry, which could provide a more comprehensive perspective on PT Pelindo's liquidity and profitability position.

To enhance the study, future research could expand the timeframe to capture long-term trends, incorporate macroeconomic factors affecting PT Pelindo's liquidity and profitability, and consider potential future impacts of restructuring strategies. Additionally, benchmarking against industry peers would offer valuable insights, enabling a more comprehensive analysis of Pelindo's financial health and positioning it within the broader port and logistics sector. Therefore, this research contributes to the literature by developing an insight into the liquidity and profitability of a post-merger company. Academics are expected to develop theoretical models to analyze the role of technological innovation in improving operational efficiency and port competitiveness in the context of developing countries.

For practical contributions, Indonesian port company management can first strengthen stakeholder collaboration, optimize technology to improve operational efficiency, and implement international global competitiveness and safety standards. Second, PT Pelindo can strengthen its financial stability by optimizing cash flow management, improving debt collection, and adopting digital service innovations. This approach enhances operational efficiency, mitigates liquidity risk, and increases long-term profitability through strategic collaboration, service diversification, and cost control automation.

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Author's Contribution

Liwaul: Responsible for research design, data collection, and data analysis. Also played a role in writing the first draft of the manuscript. and involved in the final editing of the manuscript and correspondence with the publisher.

Nasullah Dali: Involved in the formulation of the research methodology, critical revision of the intellectual content, and supervision of the entire research process.

Sahrun: Contributed to the analysis of data and interpretation of results and assisted in the formulation of research conclusions.

Authors' Information

Liwaul

Email	:	liwaul@uho.ac.id
Occupation	:	Senior Business Administration Study Program Lecturer, Universitas Halu Oleo.
Experiences	:	20 years as a lecturer and always active in research and teaching in Business Finance and Operations Management. He has published several reputable articles, Sinta 3 and 4, and 1 internationally reputable journal indexed by Scopus, Scopus Q2.
Research interest	:	Business Finance, Digital Economy, Public Economy.
Qualification	:	Doctorate in management science from Universitas Halu Oleo.
Other information	:	Active in various international seminars as a keynote speaker and committee member.

Nasrullah Dali

Email	:	nasrullahdali.feb.uho@gmail.com
Occupation	:	Senior Lecturer in the Department of Economics, Universitas Halu Oleo.
Experiences	:	He has been a lecturer for more than 30 years and is always active in research and teaching in Accounting and Financial Management. He has published several articles of national and international repute journals.
Research interest	:	Managerial Economics, Financial Management.
Qualification	:	Doctorate in economics from Universitas Brawijaya.
Other information	:	Active in various international seminars as a keynote speaker and committee member.

Sahrun

Email	:	s4hrunman3@gmail.com
Occupation	:	Senior Business Administration Study Program Lecturer, Universitas Halu Oleo.
Experiences	:	He has been a lecturer for more than 30 years and is always active in research and teaching in Business Startup and Business Finance. He has published several articles of national repute journals.
Research interest	:	Managerial Accounting, Financial Management, HRM
Qualification	:	Doctorate in economics from Universitas Brawijaya.
Other information	:	Active in various international seminars as a keynote speaker and committee member.

Conflicts of Interest

The authors declare that there are no conflicts of interest regarding the publication of this article. The research has been conducted independently, without any involvement from financial or non-financial entities that could inappropriately influence the study's outcomes or interpretations. The authors have also disclosed all potential affiliations, financial support, and other personal connections that may represent a competing interest.

REFERENCES

Adinegara, G., & Sukamulya, S. (2021). The Effect of Good Corporate Governance on the Market Value of Financial Sector Companies in Indonesia. *Jurnal Akuntansi dan Keuangan, 23*(2), 83–94. https://doi.org/10.9744/jak.23.2.83-94

Akbar, T., Ridarmelli, Wijayanti, I., Pramesworo, S., & Esti Riwayati, H. (2024). Examining the bonus mechanisms' role in real earnings management dynamics in an Indonesian manufacturing company. *Investment Management and Financial Innovations, 21*(1), 431–443. https://doi.org/10.21511/imfi.21(1).2024.33

Akkizidis, I., & Stagars, M. (2015). *Marketplace lending, Financial Analysis, and the Future of credit: Integration, Profitability, and risk management*. John Wiley & Sons.

Al-Mana, A. A., Nawaz, W., Kamal, A., & Koç, M. (2020). Financial and operational efficiencies of national and international oil companies: An empirical investigation. *Resources Policy, 68*(May 2019), 1–15. https://doi.org/10.1016/j.resourpol.2020.101701

Anton, S. G. (2021). The impact of temperature increase on firm profitability. Empirical evidence from the European energy and gas sectors. *Applied Energy, 295*(11), 1–10. https://doi.org/10.1016/j.apenergy.2021.117051

Badea, D. O., Trifu, A., & Darabont, D. C. (2024). A comparative study on the effectiveness of pollutants control measures adopted in the steel industry to reduce workplace and environmental exposure: a case study. *Scientific Reports, 14*(1), 1–11. https://doi.org/10.1038/s41598-024-60817-w

Bahadur Budhathoki, P., Bhattarai, G., & Kumar Dahal, A. (2024). The impact of liquidity on common stocks returns: Empirical insights from commercial banks in Nepal. *Banks and Bank Systems, 19*(1), 148–156. https://doi.org/10.21511/bbs.19(1).2024.13

Bai, X., Cheng, L., & Iris, Ç. (2022). Data-driven financial and operational risk management: Empirical evidence from the global tramp shipping industry. *Transportation Research Part E: Logistics and Transportation Review, 158*(December 2021), 1–17. https://doi.org/10.1016/j.tre.2022.102617

Banks, C. (2024). An-Najah University Journal for Research - B (Humanities). An-Najah University *Journal for Research - B (Humanities), 38*(2), 1827–1866. https://doi.org/10.35552/0247.v38.i2

Bansal, R., Singh, A., Kumar, S., & Gupta, R. (2018). Evaluating factors of profitability for Indian banking sector: a panel regression. *Asian Journal of Accounting Research, 3*(2), 236–254. https://doi.org/10.1108/AJAR-08-2018-0026

Barro, D., Consigli, G., & Varun, V. (2022). A stochastic programming model for dynamic portfolio management with financial derivatives. *Journal of Banking and Finance, 140*, 1–21. https://doi.org/10.1016/j.jbankfin.2022.106445

Bayaraa, B. (2017). Financial performance determinants of organizations: The case of Mongolian companies. *Journal of Competitiveness, 9*(3), 22–33. https://doi.org/10.7441/joc.2017.03.02

Bon, G., & Cheng, G. (2021). Understanding China's role in recent debt relief operations: A case study analysis. *International Economics, 166*(February), 23–41. https://doi.org/10.1016/j.inteco.2021.02.004

Cahyono, S., Fernando, H. A., & Primasatya, R. D. (2023). The Nexus between Corporate Financial Ratio and Price Earnings Performance: Evidence from President Election Period in Indonesia. *Jurnal Akuntansi Dan Keuangan, 25*(2), 101–116. https://doi.org/10.9744/jak.25.2.101-116

Chin, H. H., Varbanov, P. S., Klemeš, J. J., Benjamin, M. F. D., & Tan, R. R. (2020). Asset maintenance optimisation approaches in the chemical and process industries – A review. *Chemical Engineering Research and Design, 164*, 162–194. https://doi.org/10.1016/j.cherd.2020.09.034

Chiu, Y. S. P., Lo, Y. L., Pai, F. Y., Chiu, V., & Chiu, S. W. (2024). Optimization of a hybrid multi-item fabricating-shipping integrated system considering scrap, adjustable rate, and postponement. *International Journal of Industrial Engineering Computations, 15*(1), 89–104. https://doi.org/10.5267/j.ijiec.2023.11.002

Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approach*. Sage publications.

Da Silva Stefano, G., Antunes, T. dos S., Lacerda, D. P., Wolf Motta Morandi, M. I., & Piran, F. S. (2022). The impacts of inventory in transfer pricing and net income: Differences between traditional accounting and throughput accounting. *British Accounting Review, 54*(2), 1–19. https://doi.org/10.1016/j.bar.2021.101001

Dainelli, F., Bet, G., & Fabrizi, E. (2024). The financial health of a company and the risk of its default: Back to the future. *International Review of Financial Analysis, 95*(PB), 1–19. https://doi.org/10.1016/j.irfa.2024.103449

Deng, M., & Zhang, A. (2020). Effect of Transaction Rules on Enterprise Transaction Costs Based on Williamson Transaction Cost Theory in Nanhai, *China. Sustainability, 12(*3), 1129. https://doi.org/10.3390/su12031129

Dunz, N., Naqvi, A., & Monasterolo, I. (2021). Climate sentiments, transition risk, and financial stability in a stock-flow consistent model. *Journal of Financial Stability, 54*, 1–37. https://doi.org/10.1016/j.jfs.2021.100872

Eldomiaty, T., Azzam, I., Afifi, K. T. H., & Rashwan, M. H. (2024). An Alignment of Financial Signaling and Stock Return Synchronicity. *Journal of Risk and Financial Management, 17*(4), 1–12. https://doi.org/10.3390/jrfm17040162

Farahvash, P. (2020). *Asset-liability and liquidity management*. John Wiley & Sons.

Fawzi Shubita, M., Habis Alrawashedh, N., Marouf Alsawalhah, J., & Tawfiq Shaikh Saleh, E. (2024). Moderating effect of bank performance on bank value: Evidence from Jordan. *Banks and Bank Systems, 19*(3), 91–101. https://doi.org/10.21511/bbs.19(3).2024.09

Gasco-Hernandez, M., Nasi, G., Cucciniello, M., & Hiedemann, A. M. (2022). The role of organizational capacity to foster digital transformation in local governments: The case of three European smart cities. *Urban Governance, 2*(2), 236–246. https://doi.org/10.1016/j.ugj.2022.09.005

Gharios, R., Awad, A. B., Abu Khalaf, B., & Seissian, L. A. (2024). The Impact of Board Gender Diversity on European Firms' Performance: The Moderating Role of Liquidity. *Journal of Risk and Financial Management, 17*(8), 1–20. https://doi.org/10.3390/jrfm17080359

Gómez-Puig, M., Pieterse-Bloem, M., & Sosvilla-Rivero, S. (2023). Dynamic connectedness between credit and liquidity risks in euro area sovereign debt markets. *Journal of Multinational Financial Management, 68*(November 2022), 100800. https://doi.org/10.1016/j.mulfin.2023.100800

Haris, M., Yao, H. X., & Fatima, H. (2024). The impact of liquidity risk and credit risk on bank profitability during COVID-19. *PLoS ONE, 19*(9), 1–24. https://doi.org/10.1371/journal.pone.0308356

Hidayat, T., Masyita, D., Nidar, S. R., Febrian, E., & Ahmad, F. (2021). The effect of COVID-19 on credit and capital risk of state-owned bank in Indonesia: A system dynamics model. *WSEAS Transactions on Business and Economics, 18*, 1121–1136. https://doi.org/10.37394/23207.2021.18.106

Joshi, B., & Joshi, H. (2024). Financial determinants of environmental, social and governance performance: Empirical evidence from India. *Investment Management and Financial Innovations, 21*(1), 13–24. https://doi.org/10.21511/imfi.21(1).2024.02

Kalimashi, A., Ahmeti, S., & Aliu, M. (2022). The Relationship between Liquidity Risk Management and Commercial Bank Performance: Evidence from the Western Balkans. *International Journal of Applied Economics, Finance and Accounting, 14*(2), 129–136. https://doi.org/10.33094/ijaefa.v14i2.689

Kebede, T. N., Tesfaye, G. D., & Erana, O. T. (2024). Determinants of financial distress: evidence from insurance companies in Ethiopia. *Journal of Innovation and Entrepreneurship, 13*(1), 2–23. https://doi.org/10.1186/s13731-024-00369-5

Khatib, A. Y. AL, Malahim, S. S., Khanji, I. M., & Jaradat, A. A. (2023). Examining the causal factors of banking achievements for Islamic banks in Jordanian Islamic banks: An analytical study. *International Journal of Applied Economics, Finance and Accounting, 16*(2), 264–273. https://doi.org/10.33094/ijaefa.v16i2.979

Krynke, M., Ivanova, T. N., & Revenko, N. F. (2022). Factors, Increasing the Efficiency of Work of Maintenance, Repair and Operation Units of Industrial Enterprises. *Management Systems in Production Engineering, 30*(1), 91–97. https://doi.org/10.2478/mspe-2022-0012

Kweh, Q. L., Lu, W. M., Tone, K., & Liu, H. M. (2024). Evaluating the resource management and profitability efficiencies of US commercial banks from a dynamic network perspective. *Financial Innovation, 10*(1), 1–20. https://doi.org/10.1186/s40854-023-00531-0

Lermen, F. H., Campos, R. V. de M., Coelho, T. M., Matias, G. de S., & Echeveste, M. E. S. (2020). A proposal for restructuring the layout of continuous freezing tunnels of fresh sausages. *Gestão & Produção, 27*(1), 1–21. https://doi.org/10.1590/0104-530x2969-20

Li, S., & Li, S. (2021). Financial Regulation and Bank Performance. Springer.

Listyaningsih, E., Mukminin, A., Marzulina, L., Harto, K., Rachmad, M., & Muazza, M. (2024). Islamic Stocks and Russia – Ukraine War: Evidence from the Jakarta Islamic Index. *Qubahan Academic Journal, 4*(2), 1–13. https://doi.org/10.48161/qaj.v4n2a185

Maani, J., & Rajkumar A, D. (2024). Investigation of the Pre-Post-Merger Effects on the Financial Performance of Select Banks in India. *International Research Journal of Multidisciplinary Scope, 05*(03), 197–214. https://doi.org/10.47857/irjms.2024.v05i03.01034

Mandagie, W. C., Susanto, K. P., Endri, E., & Wiwaha, A. (2024). Corporate governance, financial performance and sustainability disclosure: Evidence from Indonesian energy companies. *Uncertain Supply Chain Management, 12*(3), 1791–1800. https://doi.org/10.5267/j.uscm.2024.3.003

Maside-Sanfiz, J. M., López-Penabad, M.-C., Iglesias-Casal, A., & Torrelles Manent, J. (2024). Determinants of the profitability of Sheltered Workshops: efficiency and effects of the COVID-19 crisis. *Humanities and Social Sciences Communications, 11*(1), 1–15. https://doi.org/10.1057/s41599-024-03435-1

Meliá-Martí, E., Mozas-Moral, A., Bernal-Jurado, E., & Fernández-Uclés, D. (2024). Global efficiency and profitability: Cooperatives as social innovation agents vs. Joint stock companies in the agri-food sector. *Journal of Innovation & Knowledge, 9*(3), 1–11. https://doi.org/10.1016/j.jik.2024.100537

Metwally, A. B. M., Elsharkawy, A. A. M., & Salem, M. I. (2024). The impact of corporate social responsibility on operating cash flow opacity: the moderating role of tax avoidance. *Cogent Business and Management, 11*(1), 1–21. https://doi.org/10.1080/23311975.2024.2390692

Moussa, A. S., & Elmarzouky, M. (2024). Beyond Compliance: How ESG Reporting Influences the Cost of Capital in UK Firms. *Journal of Risk and Financial Management, 17*(8), 1–20. https://doi.org/10.3390/jrfm17080326

Naumov, I. V., Bychkova, A. A., Nikulina, N. L., & Sedelnikov, V. M. (2024). Assessment of the Prospects for Bankruptcy of Industrial Sectors of the Sverdlovsk Region. *Finance: Theory and Practice, 28*(4), 181–192. https://doi.org/10.26794/2587-5671-2024-28-4-181-192

Nerantzidis, M., Koutoupis, A., Tzeremes, P., Drogalas, G., & Mitskinis, D. (2023). The Effects of Covid-19 on Firms' Liquidity: Evidence from the Athens Stock Exchange. *Journal of Business Economics and Management, 24*(1), 155–176. https://doi.org/10.3846/jbem.2023.18637

Nguyen, K. Q. T., Nga Phan, T. H., & Hang, N. M. (2024). The effect of liquidity on firm's performance: Case of Vietnam. *Journal of Eastern European and Central Asian Research (JEECAR), 11*(1), 176–187. https://doi.org/10.15549/jeecar.v11i1.1344

Otrusinova, M., & Kulleova, A. (2019). Liquidity Values in Municipal Accounting in the Czech Republic. *Journal of Competitiveness, 11*(1), 84–98. https://doi.org/10.7441/joc.2019.01.06

Peñarreta Quezada, M. A., Armas, R., Álvarez-García, J., & Teijeiro, M. (2024). Capital intelectual y desempeño financiero de los bancos privados en Ecuador. *Contaduría y Administración, 70*(2), 105–130. https://doi.org/10.22201/fca.24488410e.2025.5456

Pirttilä, M., Virolainen, V. M., Lind, L., & Kärri, T. (2020). Working capital management in the Russian automotive industry supply chain. *International Journal of Production Economics, 221*(August), 1–8. https://doi.org/10.1016/j.ijpe.2019.08.009

Ramadan, A., Maali, B., Morshed, A., Baker, A. A. R., Dahbour, S., & Ahmad, A. B. (2024). Optimizing working capital management strategies for enhanced profitability in the UK furniture industry: Evidence and implications. Journal of Infrastructure, *Policy and Development, 8*(9), 1–12. https://doi.org/10.24294/jipd.v8i9.6302

Ramadhan, P., Rani, P., & Wahyuni, E. S. (2023). Disclosure of Carbon Emissions, COVID-19, Green Innovations, Financial Performance, and Firm Value. *Jurnal Akuntansi dan Keuangan, 25*(1), 1–16. https://doi.org/10.9744/jak.25.1.1-16

Razermera, T., Brijlal, P., & Jwara, N. (2024). The Impact of Risk Management on Banks' Profitability: A South African Perspective. *International Journal of Economics and Financial Issues, 14*(4), 56–65. https://doi.org/10.32479/IJEFI.16195

Rifai, A., Irawan, T., & Indrawan, D. (2024). The Effect of Government Policy on Infrastructure Priorities on the Profitability of Construction Companies in Indonesia 2011-2019. *Journal of Indonesian Economy and Business, 39*(3), 308–327. https://doi.org/10.22146/jieb.v39i3.4369

Riza Salman, K., Sutisna, E., Siti Nor Khasanah, J., & Z.D. Siahay, A. (2024). The effect of the COVID-19 pandemic on profitability performance and Maqashid sharia performance in Islamic commercial banks in the ASEAN region. *Banks and Bank Systems, 19*(3), 80–90. https://doi.org/10.21511/bbs.19(3).2024.08

Rocha, C. A. C., & Camargos, M. A. de. (2023). Financing Decisions and Abnormal Returns: An Analysis of Brazilian Companies. *Brazilian Business Review, 21*(3), 1–18. https://doi.org/10.15728/bbr.2022.1271.en

Rodriguez, V. H. P., Aguilar, H. E. V., Delgado, F. M. C., Cruz, L. D. C. S. S., Benavides, A. M. V., Salazar, C. A. H., Reategui, J. A., Escobar, B. R. P., & Suyón, A. A. (2024). Challenges in the Relationship between Liquidity and Profitability: Perspectives from a Literature Review. *Revista de Gestão Social e Ambiental, 18*(1), 1–17. https://doi.org/10.24857/rgsa.v18n1-084

Shehadeh, H. K. (2024). Evaluating the Impact of Transitioning Maintenance Strategy from Reactive to Proactive in Power Generation Companies: An Empirical Analysis. *WSEAS Transactions on Business And Economics, 21*, 820–838. https://doi.org/10.37394/23207.2024.21.69

Shkodra, J., Anastasioub, D., & Kallandranisc, C. (2024). the Impact of Non-Performing Loans on Commercial Bank Profitability: Evidence from the Western Balkans. *Financial and Credit Activity: Problems of Theory and Practice, 3*(56), 49–58. https://doi.org/10.55643/FCAPTP.3.56.2024.4355

Škare, M., & Soriano, D. R. (2021). A dynamic panel study on digitalization and firm's agility: What drives agility in advanced economies 2009–2018. *Technological Forecasting and Social Change, 163*(xxxx), 1–13. https://doi.org/10.1016/j.techfore.2020.120418

Soedarsono, J. W., Wijaya, A., Aditiyawarman, T., SetiawanKaban, A. P., Riastuti, R., Ramdhani, R. T., & Ayende. (2023). Development of Risk-based Inspection of 28-Years-Old Subsea Sales Gas Pipelines to Support the Energy Demand. *Eastern-European Journal of Enterprise Technologies, 2*(3–122), 17–27. https://doi.org/10.15587/1729-4061.2023.277256

Soesanto, S., & Wijaya, H. (2022). The Effect of Readability of Annual Reports and Value Relevance of Financial Information on Agency Costs with Analyst Coverage as Moderating Variable. *Jurnal Akuntansi dan Keuangan, 24*(1), 46–56. https://doi.org/10.9744/jak.24.1.46-56

Spitsin, V., Ryzhkova, M., Vukovic, D., & Anokhin, S. (2020). Companies' profitability under economic instability: evidence from the manufacturing industry in Russia. *Journal of Economic Structures, 9*(1), 1–20. https://doi.org/10.1186/s40008-020-0184-9

Sun, H., Yang, M., & Wang, H. (2022). Resilience-based approach to maintenance asset and operational cost planning. *Process Safety and Environmental Protection, 162*, 987–997. https://doi.org/10.1016/j.psep.2022.05.002

Szálteleki, P., Bánhegyi, G., & Bacsi, Z. (2024). The Impacts of CAP Subsidies on the Financial Risk and Resilience of Hungarian Farms, 2014–2021. *Risks, 12*(2), 2014–2021. https://doi.org/10.3390/risks12020030

Valaskova, K., Kliestik, T., & Kovacova, M. (2018). Management of financial risks in Slovak enterprises using regression analysis. *Oeconomia Copernicana, 9*(1), 105–121. https://doi.org/10.24136/oc.2018.006

Vega-Gámez, F., & Alonso-González, P. J. (2024). How likely is it to beat the target at different investment horizons: an approach using compositional data in strategic portfolios. *Financial Innovation, 10*(1), 1–17. https://doi.org/10.1186/s40854-023-00601-3

Vrakas, G., Chan, C., & Thai, V. V. (2021). The effects of evolving port technology and process optimisation on operational performance: The case study of an Australian container terminal operator. *Asian Journal of Shipping and Logistics, 37*(4), 281–290. https://doi.org/10.1016/j.ajsl.2020.04.001

Wanzala, R. W., & Obokoh, L. (2024). The Effects of Working Capital Management on the Financial Performance of Commercial and Service Firms Listed on the Nairobi Securities Exchange in Kenya. *Risks, 12*(8), 2–11. https://doi.org/10.3390/risks12080119

Wei, Q., Li, S., Gou, X., & Huo, B. (2019). Joint optimal decision of the shared distribution system through revenue-sharing and cooperative investment contracts. *Industrial Management & Data Systems, 119*(3), 578–612. https://doi.org/10.1108/IMDS-07-2018-0285

Wirama, D. G., Krisnadewi, K. A., Artini, L. G. S., & Ardiana, P. A. (2024). Dividend policy and residual dividend theory: evidence from Indonesia. *Asian Journal of Accounting Research, 9*(3), 201–216. https://doi.org/10.1108/AJAR-10-2023-0347

Worku, A. T., Bayleyegne, Y. W., & Tafere, Z. B. (2024). Determinants of profitability of insurance companies in Ethiopia: evidence from insurance companies from 2011 to 2020 years. *Journal of Innovation and Entrepreneurship, 13*(1), 1–19. https://doi.org/10.1186/s13731-023-00357-1