THESIS

THE RATIO ANALYSIS OF FINANCIAL STATEMENTS OF TOLL ROAD BUSINESS ENTITIES BEFORE AND DURING COVID-19

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MAKASSAR
2023

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as one of the requirements for obtaining
a Bachelor of Economics degree

compiled and submitted by

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To

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FOREWORD

Bismillahir rahmanir rahim. All praise be to Allah SWT and greetings and blessings to the great Prophet Muhammad SAW, thanks to the grace, taufik, and guidance from Allah SWT, we as writers can complete the research for the thesis entitled “Toll Road Business Entity Financial Report Ratio Analysis Before and During COVID -19, Period 2019, 2020 and 2021” which is one of the requirements for completing the Bachelor study program at the Department of Accounting and Business, Hasanuddin University Makassar.

The researcher would like to thank all those who have helped and supported both directly and indirectly in completing our thesis. The researcher realizes that this thesis is far from perfect, but the researcher is trying his best to complete it. Allow researcher to express my deepest gratitude to:

1. Allah SWT, who has given opportunity, health and longevity and always protects us.
2. To my parents Ir. H. Wahyudi Mandala Putra, MT, and Hj. Elfiariani, and my sisters Putri Utami Wahyudi, ST, MT and dr.Dini Anggreini Sp. THT-KL, and my proud uncle, Prof. Dr. H. Muh. Asdar S.E, M.Si, CMW.,
3. To the two supervisor, Prof. Dr. Hj. Mediaty,S.E., M.Si., Ak., CA and Dr. H. Amiruddin, S.E., Ak., M.Si, CA., CPA
4. To the two examiners, Mrs. Dr. Darmawati, SE., M. Si., Ak., CA., AseanCPA and Ms. Hermita Arif, S.E., CIFP., M.Com
5. Dean of the Faculty of Economics and Business, Hasanuddin University, Prof. Dr. Abdul Rahman Kadir, M.Sc., CIPM, CWM, CRA., CRP and their staff, especially the representatives of the Deans I, II,

and III. As well as all lecturers who have devoted their knowledge while researchers studied at the Faculty of Economics and Business.

6. Head of the Accounting Department, Faculty of Economics and Business, Hasanuddin University, Dr. Syarifuddin Rasyid S.E., M.Sc.
7. All staff and employees of the Faculty of Economics and Business, Hasanuddin University.

Makassar, 26 January 2023

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ABSTRACT

The Ratio Analysis of Financial Statements of Toll Road Business Entities Before and During COVID-19

Analisis Rasio Laporan Keuangan Badan Usaha Jalan Tol Sebelum dan Selama COVID-19

Muhammad Dzakiy Fauzan Wahyudi
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This study aims to determine financial performance of Toll Road Business Entities (PT Jasa Marga Tbk, PT Citra Nusaphala Persada and PT Hutama Karya), in the period of 2019 (before Covid-19), 2020 and 2021 (Covid-19 period). The influence of Covid-19 on financial performance ratios are examined using profitability ratios (especially on net profit margin) and activity ratios (especially on fixed asset turnover and total asset turnover) during the Covid-19 period (in 2020) for the three toll road business entities. The financial performance of the three companies in 2020 has decreased significantly compared to the period before Covid-19 (in 2019). In 2021 (the Covid-19 period), financial performance has decreased but not as big as in 2020. This is due to the government's policy of relaxing the Community Activities Restrictions Enforcement (CARE). However, the decline in the ratio at PT Hutama Karya was lower than in 2019.

Keywords: Toll Road Business Entities, Covid-19, Ratio, PT Jasa Marga Tbk, PT Citra Nusaphala Persada, PT Hutama Karya

Penelitian ini bertujuan untuk mengetahui kinerja keuangan Badan Usaha Jalan Tol (PT Jasa Marga Tbk, PT Citra Nusaphala Persada dan PT Hutama Karya), pada periode 2019 (sebelum Covid-19), 2020 dan 2021 (periode Covid-19). Pengaruh Covid-19 terhadap rasio kinerja keuangan terdapat pada rasio profitabilitas (terutama pada net profit margin) dan rasio aktivitas (terutama pada perputaran aset tetap dan perputaran total aset) selama periode Covid-19 (tahun 2020) untuk ketiga badan usaha jalan tol tersebut. Kinerja keuangan ketiga perusahaan tersebut menurun signifikan pada tahun 2020 dibandingkan periode sebelum Covid-19 (tahun 2019). Pada tahun 2021 (masa Covid-19), kinerja keuangan mengalami penurunan namun tidak sebesar tahun 2020. Hal ini disebabkan kebijakan pemerintah yang melonggarkan Pemberlakuan Pembatasan Kegiatan Masyarakat (PPKM). Namun, di PT Hutama Karya penurunan rasio tersebut lebih rendah dibandingkan tahun 2019.

***Kata kunci**: Badan Usaha Jalan Tol, Covid-19, Rasio, PT Jasa Marga Tbk, PT Citra Nusaphala Persada, PT Hutama Karya*

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CHAPTER I

INTRODUCTION

1.1 Research Background

According to the Health Service (Dinkes, 2021), Covid-19 is a virus-borne sickness that causes respiratory issues. This disease made headlines when it first appeared in Wuhan, China, in 2019. Aside from China, the coronavirus expanded fast to a number of other nations, including Japan, Thailand, Japan, South Korea, and even the United States. Simple cold symptoms to serious respiratory conditions like pneumonia are all coronavirus symptoms. High fever and chills are common symptoms of corona, as are runny nose, dry cough, runny nose and sneezing, shortness of breath and sore throat. The respiratory collapse and mortality brought on by the corona virus can happen quickly. The 2019-nCoV virus infection symptoms may show up 2 to 14 days after exposure to the virus, according to the Centres for Disease Control and Prevention. According to Harahap, Anggraini, Ellys, and Effendy (2021), in order to break the chain of Covid-19 spread, some countries implemented a state implementation policy (lockdown), while others (like Indonesia) used a Large-Scale Social Restriction policy. As a result of this strategy, people's movement and mobility are severely restricted, resulting in psychological and economic shocks.

In 2020, the Indonesian government released Circular Letter No. 4 of 2020 about the criteria for limiting people's travel in the context of expediting the handling of the Covid-19, where this policy is known as Large-Scale Social Restrictions. Following these limits, there was a decrease in cases in various region across Indonesia. With the decrease in cases in 2022, the government relaxed the rules, with the Ministry of Home Affairs issuing an instruction from the Minister of Home Affairs regarding the implementation of restrictions on community activities at levels 3, 2, and 1 Corona Virus Disease 2019 in the Java and Bali regions, containing changes to the Restriction policy. Large-scale Social Welfare has evolved into the Enforcement of Community Activity Restrictions.

According to Hawari and Sudiarti (2022), the government's strategy of limiting community activities has an impact on a variety of areas, including economic, social, education, transportation, tourism, hospitality, and many others. The government's restrictions on community movement can be evident in a decline in communal activities outside the home, which is mirrored in reduced traffic flow on toll roads and highways. Before the Covid-19 outbreak and binding legislation relating to constraints on community mobility, the level of traffic on toll roads and motorways was always crowded. The toll road is one of the infrastructures developed by the government to improve traffic flow and speed up the transfer of commodities. Furthermore, toll highways are employed to connect manufacturing centres with worldwide markets. To facilitate economic activity, toll roads are an option for accelerating the flow of commodities in and out.

The sudden advent of the COVID-19 epidemic had an impact not just on health but also on the number of toll road users. The large-scale social restriction policy or the implementation of emergency community activity restrictions specifically for the islands of Bali and Java encourages people to stay at home and continue to practise physical distancing if they are forced to leave their homes due to important and urgent matters. When compared to before the emergence of this pandemic, this has a significant impact on the number of volume movements of cars that normally pass on the highway, particularly on toll roads, which are one of the keys traffics for the transportation of goods and services.

Roads are land infrastructure that is used for traffic of vehicle, people, and animal. Law No. 38 of 2004 relating to roads states that roads are classified into two groups, namely public roads and special roads. Roads designated for the community are generally public roads, while special roads are roads built by individuals, agencies, business entities, and others for their own interests.

Toll Road Business Entities (BUJT) are business entities that operate toll roads in Indonesia, with a total of 64 BUJTs and a handling length of 2545 Km, according to the Toll Road Concession Agreement (PPJT), between the government and investors (BPJT, 2022). According to BPJT (2020), the operation of the 59 km long Jagorawi toll road (including access roads) connecting Jakarta, Bogor, and Ciawi marked the beginning of Indonesia's toll road history. The government began constructing the toll road in 1975, using funds from the government budget as well as international loans given to PT Jasa Marga as equity participation. Furthermore, the government contracted PT Jasa Marga to build toll roads on land that was bought with public funds.

In order to participate in toll roads as toll road operators, the private sector signed a concession agreement with PT Jasa Marga in 1987. In Indonesia, 553 km of toll roads were built and operated as of 2007. Of the total length, PT Jasa Marga manages 418 km, and other private businesses are in charge of the remaining 135 km.

By launching a tender for 19 toll road segments totalling 762 kilometers between 1995 and 1997, attempts were made to hasten the construction of toll highways. This plan was, however, put on hold as a result of the financial crisis in July 1997, which compelled the government to postpone the toll road development program with the issuance of Presidential Decree No. 39/1997. Toll road building in Indonesia has stalled as a result of the delay. Between 1997 and 2001 just 13.30 km of toll roadways were built. The government released Presidential Decree No. 7/1998 in 1998 regarding public-private partnerships for the provision of infrastructure.

Following that, the government issued Presidential Decree No. 15/2002 on the continuing of infrastructure projects in 2002. The government also assesses and advances the concession of postponed toll road projects. From 2001 to 2004, 4 roads totalling 41.80 km in length were constructed.

The Roads Law No. 38 of 2004 mandated the creation of the Highway Regulatory Agency in 2004 as a replacement for the regulatory role formerly held by PT Jasa Marga. According to Law No. 15 Article 1 of 2005, toll roads are national routes that are public roadways that require users to pay a specified fee to use. The actualization of the toll road's implementation aims to accomplish justice by paying attention to balance in regional development and fair distribution of development and its outcomes. This can be done by creating a network of roads whose tolls come from users of the roads. Toll roads have an important part in the development of a region. Furthermore, toll roads are expressways and national highways that can help boost economic growth. According to BPJT (2020), toll road construction will have an impact on regional development and economic improvement, increasing accessibility and mobility of people and products, toll road users will gain from reduced time and operational costs relative to non-toll roads, and commercial organizations will profit from the predictability of toll rates.

According to Jasa Marga's 2020 annual report, PT Jasa Marga Tbk. is one of the toll road business entities. The government asserts that State Possessed Ventures are ensnared in toll road deals. Built up in 1978, this trade substance is the primary toll street administrator in Indonesia that has worked 34 toll roads with a length of 1,603 km of the 2,545 km of toll streets working in Indonesia, of which the toll roads are in the city and some are outside the city (BPJT, 2022). According to CMNP's official website, PT Citra Marga Nusaphala Persada Tbk. is a private consortium and several state-owned enterprises. Established on April 13, 1987 and currently operates 5 toll road sections with a total operating length of 71.50 km, where the handling sections are in urban areas, (BPJT, 2022). According to Hutama Karya's official website, PT Hutama Karya in 2015 through presidential decree number 117 of 2015 was given a mandate to develop 2,770 km of toll roads in Sumatra with priority on the first 8 sections and to date (2022), PT Hutama Karya has operated 9 sections with a length of a total of 574.07 km, and the majority of the handling sections are in areas outside the city, namely the Trans Sumatra toll road, (BPJT, 2022).

According to Kodrat Setiawan (2020), in 2020, there was a decline in traffic on toll roads ranging from 10% to 60%, depending on the segment. The Indonesian Toll Road Association likewise reported a 3 percent to 5 percent decline in the early weeks, with the decline increasing by 10 percent to 15 percent every day on weekends. According to Emir Yanwardhana (2021), by mid-2021, traffic on toll highways has begun to increase and is nearly back to pre-pandemic levels. The quantity of traffic on toll roads steadily climbed by 80% for all toll road enterprises in July and August.

In this regard, the author would like to analyse the ratio of BUJT financial statements before and during the COVID-19 period, namely the financial reports of the Toll Road Business Entity, namely PT Jasa Marga Tbk, is a BUMN that operates 34 toll roads with a length of 1261 KM (BPJT, 2022), PT Citra Marga Nusaphala Persada, a national private company that operates 5 toll roads with a length of 71.5 km (BPJT, 2022), and PT Hutama Karya, a BUMN that operates 9 toll roads with a length of 574.07 km (BPJT, 2022), in 2019, 2020 (covid-19 period) in which the government implements the Large-Scale Social Restrictions (PSBB) policy, and in 2021 (covid-19 period) the government implements the Enforcement of Community Activities Restrictions Enforcement (CARE) policy.

1.2 Research Question

The problem formulation of this study is:

1. How is the financial performance of the Toll Road Business Entities in the 2019, 2020 and 2021 periods?
2. What is the effect of COVID-19 on the financial health of Toll Road Business Entities in the 2019 period and during the covid-19 period in 2020 and 2021?

1.3 Research Objectives

The following are the aims of this research focusing on how the issue was described above:

1. Determine the financial performance of the Toll Road Business Entities in the period 2019, 2020, and 2021.
2. Determine the effect of COVID-19 on the financial health of Toll Road Business Entities in the 2019 period and during the COVID-19 period in 2020 and 2021.

1.4 Research Purpose

1. Researcher
   Through this research, researchers try to determine the impact of the COVID-19 pandemic and find out the performance of Toll Road Business Entities in the midst of a pandemic where economic conditions are not yet stable.
2. Investor
   The study's findings can help investors better understand the performance of their investments by assessing the company's financial stability and projecting potential future performance.
3. Creditors
   The findings of this study should provide creditors more details to consider when determining whether the corporation can pay off its loan.

1.5 Systematics of Writing

The writing systematics used in this paper are as follows:

Chapter I Introduction

The backdrop, problem formulation, research objectives, research purpose, and writing methodology are all covered in this chapter.

Chapter II Literature Review

The theoretical underpinnings and literature evaluation procedure for the theories connected to this research are described in this chapter.

Chapter III Research Method

The study subject, research design, different types and sources of research data, data collection strategies, and data analysis strategies are all covered in this section.

Chapter IV

This chapter consists of an overview of the research object, data analysis and interpretation of the results

Chapter V

This chapter consists of conclusions and suggestions of researcher

CHAPTER II

LITERATURE REVIEW

a. Financial statements

Financial statements give data about a company's activities and financial performance (Murphy, 2022). Government agencies, bookkeepers, and businesses often examine financial statements. For charge, finance, or contributing purposes, those provide precision. The adjust sheet, salary articulation, explanation of cash flow, and analysis of changes in value are all included in for-profit essential financial statements. In contrast, non-profit organisations use a similar but varied set of financial reports.

Financial data is to evaluate a firm's productivity by analysts and investors. They also use projections for the future trend of its company's stock. According to Novianti, Mediaty, and Usman (2021), financial reports that reflect good performance are a sign that the company is operating well. Investors will invest their capital if they judge that the company is able to provide added value to the invested capital which is greater than if they invest elsewhere. The financial statement is one of the most significant sources of trustworthy and fully transparent cash flows. Financial statements for the company are included. Investors, market analysts, and creditors all use financial reports to assess a company's prospects for growth. The three primary financial statements are the income statement, balance sheet, and cash flow statement.

1. Balance sheet

According to Murphy (Murphy: 2022), the balance sheet summarizes the assets, liabilities, and shareholder equity of the firm. The balance sheet information are as follows.

a. Assets

Liquid assets are those that can be found in asset accounts cash and cash equivalents, such as marketable securities and certificates of deposit. The money that customers owe a business for the goods and services they've purchased is known as accounts receivable. Stock refers to items that a firm possesses and plans to sell as part of its commercial operations. Finished products, semi-finished products, or raw materials that are still available but have not been processed might all fall under this category. Expenses that have been prepaid at maturity have been paid in advance. An organization's long-term profit assets include its property, plant, and equipment. This comprises buildings used to manufacture heavy machinery required to process raw materials. An investment is a speculative asset maintained for future growth. It is just retained for capital appreciation and is not used in operations. Even though they cannot be physically touched, goodwill, patents, trademarks, and other intangible assets give the company potential long-term and future financial advantages.

b. Liability

Trade payables are receivables that are due as a result of the usual operations of the firm. This comprises utility expenses, rent invoices, and raw material purchase responsibilities. Wages payable are payments made to employees for time performed. Notes payable are signed notes that serve as proof of a contractual debt arrangement, detailing the due date and sum. Dividends declared but not yet paid to shareholders are referred to as dividends payable. Long-term debt can refer to a number of obligations, such as fund settlement bonds, mortgages, or other loans with maturities of longer than one year. This debt's short-term element is classified as a current liability.

c. Equity

The total assets of the business less all liabilities equal the amount of equity held by shareholders. Shareholders' equity refers to the amount that would remain after all of the company's assets have been liquidated and all of its obligations have been paid. Additionally, retained earnings, which represent the fraction of net profit that is not paid out to shareholders dividends, are a part of shareholders' equity.

2. Income Statement

According to Murphy (Murphy: 2022), the income statement is for a specific time period, such as a full year for financial statements that are presented annually, and a quarter of a year for those that are presented quarterly. The income statement includes a breakdown of profits per net income, share, and revenues.

a. Income

Operating income is income obtained by the sale of a company's products or services. The production and sale of automobiles will generate operating income for automobile manufacturers. The company's core business activities generate operating income.

Non-operating income is income earned by non-core company activity. This income is unrelated to the primary purpose of the firm. Non-operating income includes things like interest received on bank deposits, income from strategic partnerships, rental income from property like collecting royalty payments, and income from showing adverts on corporate property.

Other revenue is acquired through other activities. Other revenue includes gets from the sale of long-term assets like automobiles, land, or subsidiaries.

b. Expenses

The main costs are incurred throughout the process of obtaining income from the business's main activities. General and administrative (SG&A), Cost of goods sold (COGS), selling, research and development, depreciation and amortization are examples of expenses (R&D).

Common expenses include employee salaries, sales commissions, and services like power and transportation. One illustration of a secondary activity expense is the interest on loans or other debts. Losses from asset disposal are also listed as an expense.

The income statement aims to disclose data regarding the financial performance and profitability of corporate operations. However, it can be quite useful in figuring out whether sales or revenues have grown over time. Investors can assess if the company's efforts to reduce sales costs will eventually lead to increased profits by looking at how well the management controls spending.

3. Cash Flow Statement

The cash flow statement assesses a company's ability to obtain enough cash to pay for operational costs, commitments, and fund investments (Murphy, 2022). This statement provides investors with information about a company's operations, sources of funding, and expenditures. It also illustrates the steadiness of the company's finances. In this statement, the balance sheet and the income statement are compared for each of the three main company operations. The cash flow statement is broken down into three parts that show the cash flows for all of the different things that a company uses its cash for. Those are:

a. Operating Activities

All sources and uses of cash resulting from a company's ongoing operations and the sale of its goods and services are referred to as operating activities in cash flow. Cash from operations cover any changes in cash receivables, inventories, depreciation, and accounts payable. Additional examples of these interactions are wages, interest payments, income tax payments, rent, and cash gains from the selling of goods or services.

b. Investment Activities

All cash earned by the company's long-term investments is employed in investing operations. This category comprises payments related to a merger or acquisition, loans made to suppliers or consumers, and acquisitions and sales of assets.

The purchases of permanent assets include machinery, real estate, and equipment. Equipment, assets, or investments are simply changing that correlate to cash from investments.

c. Funding Activities

Both money received from banks or investors and money paid to shareholders are included in the cash from financing activities. Examples of funding activities include issuing debt, issuing equity, buying back stock, making loans, paying dividends, and paying off debt.

b. Corona Virus (COVID–19)

Around the beginning of 2020 (Syauqi, 2020), a new coronavirus, known as SARS-CoV-2, shocked the world, causing a disease known as Coronavirus Disease (COVID-19). The virus's genesis is recognized to have occurred in Wuhan, China and that it was detected near the end of December 2019. Hundreds of nations have been verified to be infected with this virus up to this point. The World Health Organization (WHO) has classified COVID-19 as a pandemic, and the Indonesian government has said that there is a public health emergency that needs to be addressed, in accordance with Presidential Decree No. 11 of 2020 concerning the Determination of a Public Health Emergency of COVID-19.

The virus primarily transmits between people who are in close proximity to one another, as at conversational distances. The virus spreads in tiny fluid particles from the lips or nose of the infected person when they talk, sing, cough, or sneeze. If airborne infectious particles are inhaled within a short distance (this is usually referred to as short-range aerosol or short-range airborne transmission) or come into contact with the eyes, nose, or mouth of another person, they may get infected with the virus (droplet transmission) (WHO, 2021).

According to Prudential (2022), the coronavirus has had a significant influence on the Indonesian economy. Not only is output impeded, but investment is also hampered. Certain of the consequences of the COVID-19 virus include: some commodities becoming more expensive and difficult to obtain; Indonesian pilgrims cancelling their Hajj and Umrah travels; fewer international tourists visiting Indonesia; damage to Indonesia's economic order; and difficulties in importing goods.

c. Financial Ratio Analysis

According to Bloomenthal (2022), ratio analysis is a mathematical technique for analysing financial records like balance sheets and income statements to learn more about an operational effectiveness, company's liquidity, and profitability. Fundamental equity research is built on ratio analysis.

By comparing past and present financial statements, investors and analysts can utilize ratio analysis to evaluate a company's financial health. Comparative data can be employed to forecast potential future performance and demonstrate how a company has fared through time. This data could be equipped to assess how a company's financial health stacks up against the industry standard and against other businesses in the same sector. Since all the information needed to calculate a ratio is present in the company's financial records, ratio analysis is easy for investors to employ.

Ratios are points of comparison for corporations evaluating stocks in an industry. Ratio is also beneficial for comparing contemporary firms to historical figures. In most circumstances, understanding the factors that affect the ratio is essential because management may change its strategy to improve the ratio of its stock and business. Ratios are typically used in combination with other ratios rather than alone. Having a thorough comprehension of the ratio provides a full view of the organization from a different perspective and aids in the detection of any red flags.

Based on the data set, the many methods of financial ratio analysis accessible can be broadly classified:

2.3.1 Liquidity Ratios

According to Adam Hayes (Hayes, 2022), the liquidity ratio is a crucial financial metric used to evaluate a debtor's ability to pay off present debt obligations without raising additional funds. The operating cash flow ratio, quick ratio, and current ratio are all computed using the liquidity ratio. It is the ability to quickly and easily transform resources into money. When contrasted, this liquidity ratios are most useful.

For internal analysis of liquidity ratios, for instance, multiple accounting periods presented under the same accounting system are needed. By contrasting past periods with current activities, analysts can monitor changes inside the company. A higher liquidity ratio, in general, indicates an organization's improved liquidity and better debt coverage.

Additionally, external analysis involves contrasting the liquidity ratios of various businesses or an entire sector. This data can be used to evaluate a company's strategic position in relation to its rivals when defining benchmark goals. Analyzing liquidity ratios in the context of the overall industry may not be as helpful. This is so because different businesses need different financing models. When comparing businesses of varying sizes in various regions, it is less helpful.

The following categories apply to liquidity ratios:

a. Current Ratio

A The current ratio, according to Adam Hayes (Hayes, 2022), assesses a company's capacity to pay off its current obligations (payable in one year) with its entire current assets, which include cash, receivables, and inventory. The greater the ratio, the more liquid the firm is. The formula is as follows:

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

b. Quick Ratio

The quick ratio measures a company's capacity to pay its short-term debts using its most liquid assets (Hayes, 2022). As a result, inventories are excluded from current assets. The equation reads as follows:

$$\text{Quick Ratio} = \frac{\text{Current Assets - Inventory - Prepaid Expenses}}{\text{Current Liabilities}}$$

The fast ratio is more cautious than the current ratio (Seth, 2022). Other current assets and inventory are not included since they are typically more difficult to convert into cash. Only resources that can be immediately transformed into cash are examined using the fast ratio. The current ratio, on the other hand, considers inventory and asset prepaid costs. Most businesses need time to sell their inventory, yet a few exceptions can shift their inventory rapidly enough to consider it a quick asset. Prepaid expenses, while assets, cannot be utilised to satisfy current liabilities, hence they are excluded from the quick ratio.

c. Cash Ratio

A measure of a company's liquidity is the cash ratio (Kenton, 2022). It establishes how much of a corporation's overall cash and cash equivalents are retained in current liabilities. This metric assesses a firm's ability to pay off quick loan using cash or another asset that functions similarly to cash, like marketable securities. When choosing how much money to lend the company, creditors can utilize this information to their advantage. The equation reads as follows:

$$\text{Cash ratio} = \frac{\text{Cash and Cash Equivalents}}{\text{Current Liabilities}}$$

The cash ratio is a popular metric for assessing a company's liquidity. This indicator demonstrates the company's ability to pay off all obligations that are still due without having to sell or liquidate further assets.

A figure that is greater or lower than one is used to represent the cash ratio. If the response is 1, the company's existing liabilities and available cash and cash equivalents to pay off the debt are exactly equal.

2.3.2 Solvency Ratios

According to Adam Hayes (Hayes, 2022), potential business lenders primarily utilize the solvency ratio to determine a firm's capacity to repay its long-term loan obligations. By determining whether a company's cash flows are adequate to meet its long-term obligations, the solvency ratio assesses its financial stability. An unfavourable ratio can suggest that the corporation is likely to default on its debt obligations.

This ratio evaluates the ability of all liabilities, not just short-term debt, to generate cash flow. By evaluating the company's ability to pay off long-term debt and the interest on that debt, the solvency ratio assesses the company's long-term health.

The solvency ratio differs between industries. As a result, rather than being assessed separately, the solvency ratio of the business should be contrasted with that of its rivals in the same sector.

The following are the several forms of solvency ratios:

a. Total Debt to Total Assets Ratio

The debt-to-assets ratio, according to Adam Hayes (Hayes, 2022), contrasts the overall debt of an organization with its total assets. The firm's leverage is assessed by this ratio. It is the practice of borrowing money to increase profits. This ratio also shows the percentage of debt used to fund the corporate resources. the business's capacity to pay off debts with available resources. A higher ratio, particularly one exceeding 1.0, shows that the business is heavily reliant on debt and would struggle to meet its obligations. The formula is as follows:

$$\text{Debt to Assets Ratio} = \frac{\text{Total Debt}}{\text{Total Assets}}$$

b. Debt to Equity Ratio

The debt-to-equity (D/E) ratio is derived by dividing the total liabilities of the corporation by the stockholders' equity. The organization's financial leverage is measured using this equity (Fernando, 2022). A crucial metric in corporate finance is the D/E ratio. It is a gauge of how much debt, as opposed to cash on hand, a company uses to fund its operations.

According to Adam Hayes (Hayes, 2022), the debt-to-equity ratio demonstrates how the organisation is funded with debt. More debt the corporation has, the higher the ratio, which suggests the corporation may be unable to pay its bills. This ratio looks at how much of the company's debt would be covered by equity in the case of a liquidation. The equation reads as follows:

$$\text{Debt to Equity Ratio} = \frac{\text{Total Debt}}{\text{Total Equity}}$$

2.3.3 Profitability Ratios

According to Adam Hayes (Hayes, 2022), profitability ratios are financial indicators utilized to analyse data at a specific point in time to determine revenue generation capability of a corporation through time in relation to revenues, operating costs, balance sheet assets, or shareholder equity.

For the majority of the profitability ratios, a higher value in comparison to competitors or a ratio that is unchanged from the prior period suggests that the business is doing well. When compared to comparable businesses, the company's past, or the industry average ratio, profitability ratios are at their most advantageous. Gross profit margin as one of the margin ratios or profitability that is most frequently employed. Gross profit, often known as the cost of goods sold, is the sum of sales and manufacturing costs.

The types of profitability ratios are:

a. Profit Margin

Profit margin is one of the profitability ratios that are frequently used to gauge how much money a company or line of business makes, according to Troy Segal (Segal, 2021). It displays the proportion of sales that result in profit. The percentage statistic shows the amount of profit generated by the business for each dollar of sales. If an organization claims a 35% profit margin for the previous quarter, that means it earned 350 rupiahs for every 1,000 rupiahs in sales.

Profit margins can be divided into several categories. In common parlance, it usually refers to net profit margin, which is another name for the company's net profit after all expenses are deducted.

The types of profit margins are:

- Gross Profit Margin

  The analysts use gross profit margin (Bloomenthal, 2021). A metric is used to assess the financial health of a company that quantifies the amount of money left over from product sales after deducting cost of goods sold (COGS). The equation reads as follows:

$$\text{Gross Profit Margin} = \frac{\text{Gross Profit}}{\text{Net sales (or Revenue)}}$$

$$= \frac{\text{Net Sales (or Revenue)} - \text{COGS}}{\text{Net Sales (or Revenue)}}$$

- Operating Profit Margin

  According to Hayes (2022) operating profit margin is the amount of profit a business makes on each dollar of sales after variable production expenses like salaries and raw materials are subtracted, but before interest and taxes are subtracted. A greater ratio typically denotes an organization that is efficient in its operations and adept at converting sales into profits. The equation reads as follows:

$$\text{Operating Margin} = \frac{\text{Operating Earnings}}{\text{Revenue}}$$

- Net Profit Margin

According to Segal (2021), net profit margin is computed by dividing net income by net sales or by the actual revenue for a time period. When calculating profit margins, the phrases net income and net profit are used interchangeably. The words revenue and sales are also interchangeable. In order to determine net profit, the total revenue earned must be subtracted from all associated costs. The following is the formula for net profit margin:

$$\text{Net Profit Margin} = \frac{\text{Net Profits (or Income)}}{\text{Revenue}}$$

b. Return on Assets (ROA)

Financial measurements that demonstrate how successful a business is in relation to its total assets are referred to as "return on assets" (ROA) (Hargrave, 2022). ROA can be used by management, analysts, and investors to determine how efficiently a business uses its assets to generate profits.

Metrics are typically stated as a percentage of a corporation's net income and average assets. While a lower ROA suggests potential for improvement, a greater ROA implies the organization is more effective and successful at managing its financial sheet to make profits. The following is how ROA is determined:

$$\text{Return on Assets} = \frac{\text{Net Income}}{\text{Total Assets}}$$

c. Return on Equity (ROE)

Return on equity is a measure of financial performance. It is calculated by dividing net income by shareholder equity (Fernando, 2022). Since shareholder equity is equal to the company's assets less its debt, ROE is a return on net assets.

ROE is used as a gauge of a business' profitability and effectiveness in turning a profit. The management of the company is more effective at obtaining growth and revenue from equity financing the higher the ROE. The following is how ROE is determined:

$$\text{Return on Equity} = \frac{\text{Net Income}}{\text{Average Shareholders' Equity}}$$

2.3.4 Activity Ratios

Will Kenton (Kenton, 2020) defines activity ratios as a type of financial indicator that shows how well a company uses assets on its balance sheet to generate revenue and cash. This ratio, also known as the efficiency ratio, is useful in assisting analysts in figuring out how a company manages inventory, which is essential to efficient operations and overall financial health. Some of the activity ratios used include the following:

a. Receivables Turnover

Account receivable turnover, according to the CFI Team (CFI, 2022), gauges how effectively a company can manage its credit sales and turn receivables into cash. A high accounts receivable turnover demonstrates the company's ability to quickly convert its receivables into cash, whereas a low accounts receivable turnover indicates the company's inability to do so as quickly as it should. The equation reads as follows:

$$\text{Receivables Turnover} = \frac{\text{Revenue}}{\text{Average Accounts Receivable}}$$

b. Inventory Turnover

According to the CFI Team (CFI, 2022), inventory turnover assesses how efficiently a firm can manage its inventory. A low inventory turnover ratio indicates that inventory is moving too slowly and sapping capital. Companies with high inventory turnover percentages, on the other hand, may shift inventory fast. However, excessive inventory turnover might result in shortages and missed revenues. The formula is as follows:

$$\text{Inventory Turnover} = \frac{\text{Cost of Revenue}}{\text{Average Inventory}}$$

c. Fixed Asset Turnover

According to the CFI team (CFI, 2022), fixed asset turnover can assess how efficiently a company utilises its fixed assets. If the ratio is high, the company might need to raise its capital expenditures (capex). A low ratio could indicate that too much money is being put into fixed assets. The rotation formula is as follows:

$$\text{Fixed Asset Turnover} = \frac{\text{Revenue}}{\text{Average Fixed Assets}}$$

d. Total Assets Turnover

Total assets, both operating and non-operating, are all assets shown on a company's balance sheet, according to the CFI Team (CFI, 2022). Total asset turnover measures how effectively a company uses all of its assets. A high ratio may indicate that the company has little assets initially or that its overall assets are used very well. A low ratio suggests that assets are tying up too much capital and that assets are not being used properly to generate income. The formula is as follows:

$$\text{Total Assets Turnover} = \frac{\text{Revenue}}{\text{Average Total Assets}}$$

CHAPTER III

RESEARCH METHOD

3.1 Research Object

The object of this research 3 toll road management and operator companies in Indonesia, namely PT Jasa Marga Tbk. This company is compared to 2 similar toll road operators; PT Citra Marga Nusaphala Persada Tbk. and PT Hutama Karya (Persero). The method used is the ratio analysis method as the basis for assessing financial performance using the company's financial statements for the period 2019 (before the covid-19), 2020, and 2021 (during the covid-19 period).

3.2 Types of Research

The quantitative descriptive approach is utilized to conduct this type of research, and the secondary data used was taken from the company's financial records for the years 2019 (which reflected circumstances prior to COVID-19), 2020, and 2021 (reflecting conditions during the covid-19). In this study, researchers did not use theory because there was no theory in analysing financial statements.

3.3 Types and Sources of Research Data

3.3.1 Types of Research Data

In this research, the sort of data is secondary data, or information that the company in question has processed and published as an annual report. The research period spans three years, from 2019 to 2021.

3.3.2 Sources of Research Data

Secondary data from the company's annual report was gathered for this study via the IDX website, https://idx.co.id/.

Particularly, the PT Hutama Karya (Persero) financial statements, secondary information in the form of papers gathered from the company's annual report on the official Hutama Karya website, https://www.hutamakarya.com/.