# THE IMPACT OF PANDEMIC COVID-19 AND NATIONAL CAPITAL CITY (IKN) TOWARDS PRECAST CONCRETE COMPANY VALUATION AND FINANCIAL PERFORMANCE ANALYSIS (CASE STUDY: PT. WIJAYA KARYA BETON)

Muhammad Rifqi Ramadanto
Raden Aswin Rahadi
Wiwiek Mardawiyah Daryanto

## ABSTRACT

*Joko Widodo, the president of Indonesia has emphasized the construction and improvement of Indonesia's infrastructure ever since he is elected as president in 2014. The numerous infrastructure construction demand to support the development of Indonesia could potentially lead to high amount of demand in concrete structure. The current challenge of PT. WIKA Beton is to survive the covid pandemic era and recover their financial ability as strong as the pre pandemic era. However, ever since the pandemic hit Indonesia the company felt the effects negatively and lost a lot of revenue in a span of one year. In the recent year of 2020, the company's revenue dropped from Rp 7,08 trillion in 2019 to Rp. 4,8 trillion in 2020. The methodology used in this research is descriptive financial ratio analysis to define the firm's financial performance and discounted cash flow analysis as a valuation method to determine whether the company is overvalued or undervalued. The objective of this research is to give an assessment of the company valuation of PT. WIKA Beton in order to ease the unsure decision of potential investors. Based on the findings, the company is undervalued from both absolute and relative valuation, with an intrinsic value per share Rp. 288.55 and Rp. 237.83 from two possibilities and compare to the company current share price of Rp. 139 as per 29th May 2023. Given that the company is stated as undervalued based on this research, the company should improve their communication and marketing activities to raise investors awareness of the actual value of the company as indicated by the company's intrinsic value per share.*

*Keywords:* Financial Performance, Stock Valuation, Precast Concrete.

## INTRODUCTION

Construction is an important variable in order for a country to be able to grow rapidly. The reason behind the importance of such variable is to be able to support the grow of a country via infrastructure, public service structure, and even housing. The mentioned structures are an important aspect in a growing country such as Indonesia. In the world of civil engineering or even construction as a whole, there are two most common methods used regarding the construction using concrete, which are the conventional way to make the concrete structure at the project location or implement the use of precast concrete. Precast concrete has numerous benefits when used in a construction for example, fast and practical, unaffected by the elements, more precise, cheaper, higher quality, and more environment friendly (Woodson, 2009). But it also comes with its own drawbacks, the finished product's shape cannot be tampered, it comes with a high transport cost, and it requires heavy equipment to install.

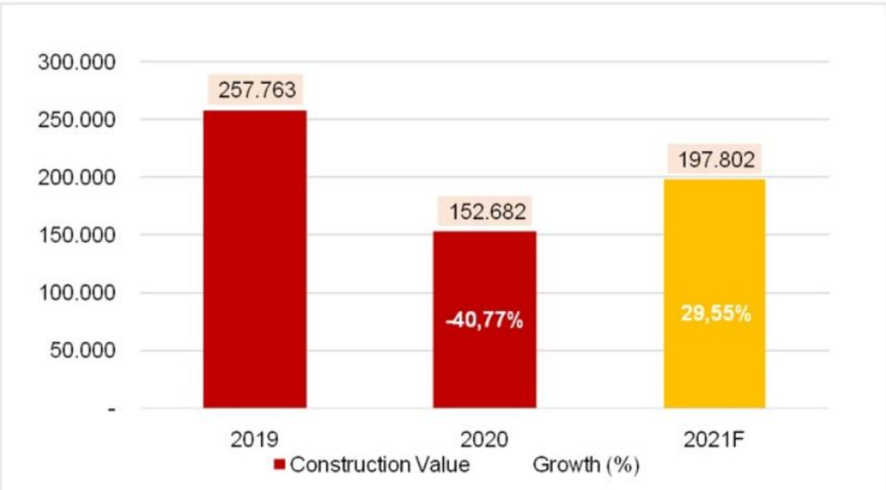



**Figure 1** National Construction Starts 2019 - 2021F (value in billion rupiah)
(Source: https://www.constructionplusasia.com)

Before the era of COVID-19, infrastructure construction and other civilian housing construction are steadily rising in hope to improve the life quality and the attempt at reaching Indonesia's Golden Age in 2045. For a few years, the amount of construction kept on increase each year, however the steep progress has put to sudden halt due to the arising of COVID-19. Ever since the pandemic started in 2020, a lot of construction have put to a halt which results in a massive decrease in cash flow, and decrease in property prices and even including a decrease in demand. In the year of 2022, the government of Indonesia decided to lift the government law of PPKM (Pemberlakuan Pembatasan Kegiatan Masyarakat) that prohibits people of Indonesia of recent activity and limit the amount of people allowed in one location at a time. This means that constructions in many sectors are able to start to run in full capacity.

The ability to continue construction activity in full capacity will help the construction of a big government construction project namely the IKN (Ibu Kota Negara). This big project has the purpose of moving the capital city of Indonesia from Jakarta, West Java to Nusantara, East Kalimantan in hope of finding the central position of Indonesia and spread the congested population in Jakarta or even perhaps the island of Java.

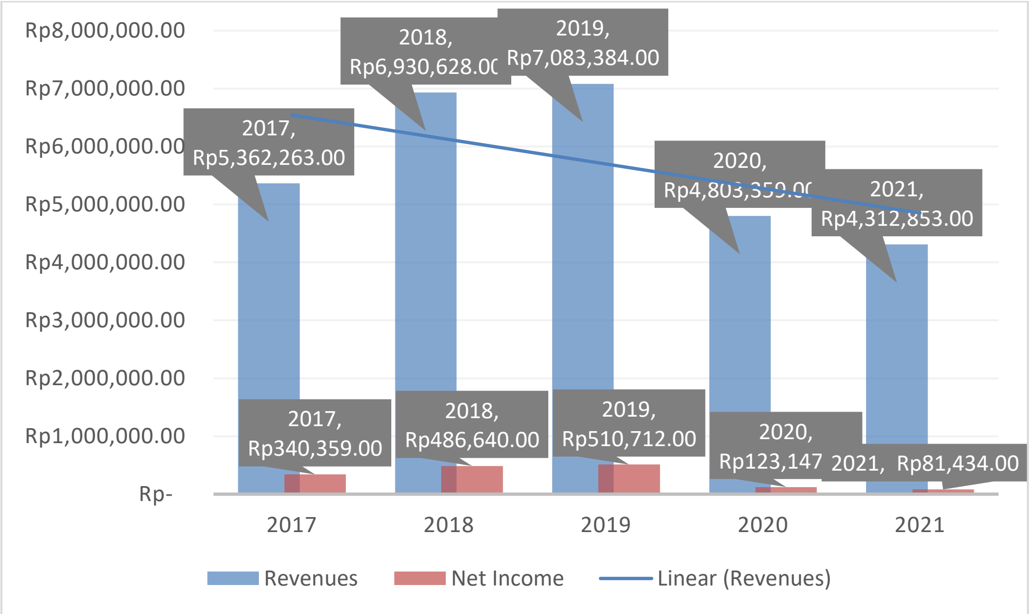



**Figure 2** Net Revenues and Net Income Attained by PT. Wika Beton

In its early life, PT. WIKA BETON has had a great growth every year. Throughout the year of 2017, PT. WIKA Beton have had a great increase in revenue. It is reported in 2017 the company managed to rake in a revenue of Rp. 5,3 Trillion rupiah and in 2018, the managed to attain Rp. 6,93 Trillion in revenue which is 30.7% increase compared the last year. The year 2019 is the peak year for PT. WIKA Beton in terms of revenue with RP. 7,08 Trillion. However ever since the pandemic hits Indonesia, PT. WIKA BETON had a massive decline in every single aspect, mainly performance and sales. In the recent year of 2020 and 2021, the company experienced a massive decrease with a revenue of Rp. 4,8 Trillion and Rp. 4.3 trillion respectively. See Figure 2. The decrease of revenues which could be said that it is the lowest ever WIKA Beton could attain, with it follows also a bigger decrease in profit attained as seen in Figure 3.

This decrease is seen as unattractive for a lot of investors. However, it may not be completely true, as per October 2022, the company has received a new contract from government with a total amount of Rp. 5,41 Trillion. Hopefully with this new contract received from the government the company could increase its performance in a lot of aspect with the result of increasing the value of the company. With hopefully an increase in revenue for the following years and years to come will entice more and more investors to invest in the company. Cost Of Goods Sold (COGS) of a company will directly affect the valuation of a company, and COGS is affected by the company's revenue.

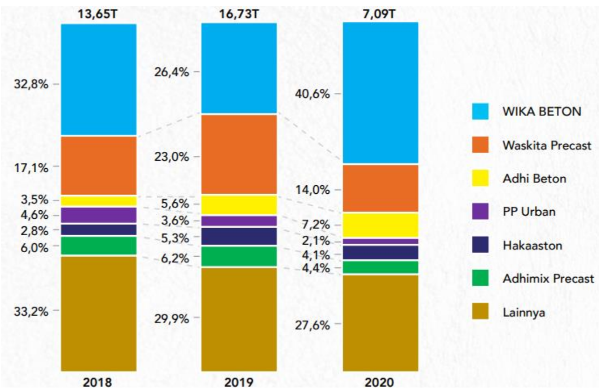



**Figure 3** Market Share of Precast Concrete Industry

Increase in contract received could also be perceived as the company's potential improvement in the future and perhaps better than ever. This research will also serve to decide whether the company will be able to grow above its peak in the coming years. The writer hypothesizes 2 possibilities, the first hypothesis is the amount of contract attained will only increase for some time in the future due to the large government project of IKN, the second hypothesis is where the company tanks the decline even further and may enter a time of crisis.

**BUSINESS ISSUE**

The company experience a decrease in 2020, which resulted in lower overall performance. This could be seen as unattractive by potential investors. However, since the decrease, the company manage to recover rather quickly and this causes the investors has doubts whether the company is prospering or not and whether they should invest on the company or not.

**RESEARCH QUESTIONS**

Below are the questions for this research:

1. How is the company performing before (<2020) and after the pandemic?
2. How is the performance of the company's stock value during the pandemic?

**RESEARCH OBJECTIVE**

The objective of this research is to give an assessment of the company valuation of PT. WIKA Beton in order to ease the unsure decision of potential investors. Moreover, this research has the purpose to do valuation for the financial performance of the company and study what factors that would affect the valuation of the company. The last one, is to give consideration for the company based on the valuation analysis.

**RESEARCH LIMITATION**

Below are the limitations for this research

1. The study focuses on construction industry, specifically the precast concrete industry;
2. The study conducted on PT. Wijaya Karya Beton Tbk using their annual report and financial report from 2017 – 2022;
3. The data used mostly consist of secondary data that is publicly available;
4. The assumption of forecasted revenue growth of the company boosted by IKN project is 15% at the beginning of forecasted year and 2% at the end of the forecasted year.

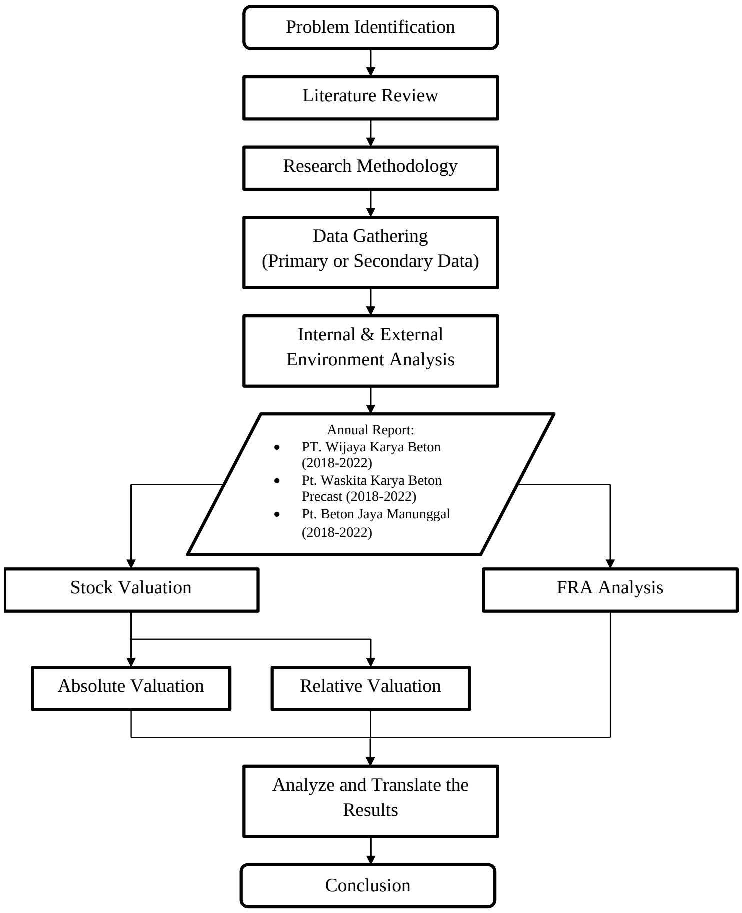



**Figure 4** Flowchart of Research

The data used in this research are mostly in the form of secondary data. The data are in the form of annual report and financial report of the company which is publicly available. The report used are from the year 2018 – 2022. The data is then separated into groups for ease of access during the process of analysis. The first analysis conducted is the Financial Ratio Analysis (FRA) to see the performance of the company based on its historical data. The data used for this analysis comes from purely the company's annual report and financial report. The FRA also include the relative valuation analysis (valuation ratio). The last analysis is the DCF analysis which uses numerous data with numerous sources with the final product of company valuation.

## LITERATURE REVIEW

### PRECAST CONCRETE INDUSTRY

Pandemic hits numerous of industry quite harshly. One of the most affected by the pandemic is the construction industry. Ever since the pandemic hits Indonesia, the construction industry experiences a massive decline in every single aspect including activity. The government announce a prohibition namely the PPKM (Pemberlakuan Pembatasan Kegiatan Masyarakat) that prohibit a large number of people to gather in one location. However, before the pandemic, the construction industry and precast concrete industry had a steady growth every year and kept on increasing in trend. In the last few years, the construction industry experiences an increase and decrease. In 2020, the industry experiences a decrease due to the pandemic of Covid-19 that resulted in lower amount of contract and also demands. This forces the companies in the industry to halt or even abandon their activities in 2020. However, in the recent year of 2022 the government has started their big construction project of IKN or National Capital City to move the Capital city of Indonesia from West Java to the island of Kalimantan. This project is assumed will boost the sales for the related companies in construction industry, one of which the concrete manufacture companies.

"*Salah satu kegiatan kritikal yang tetap berjalan selama Pemberlakuan Pembatasan Kegiatan Masyarakat (PPKM) adalah sektor konstruksi atau infrastuktur publik. Artinya, industri penunjangnya juga perlu dijaga aktivitas produksinya agar bisa memenuhi pasokan bahan bakunya*," – said Ministry of Industry Agus Gumiwang Kartasasmita in Vitual Urban Forum 2021, Tuesday (27/7).

In short, the ministry of industry of Indonesia saw that construction sector and infrastructure is a critical aspect, which in turn the industry that supports it needs to be improved and assured of their productions.

**FINANCIAL RATIO**

There are two types of financial measurement, which are market and accounting. The more famous method used for financial measurement is the accounting one, however there are several studies that uses both method (Daryanto & Nurfadilah, Financial Performance Analysis Before and After the Decline in Oil Productio: Case Study in Indonesian Oil and Gas Industry, 2018)
The financial ratio was a calculation that used variables commonly found on financial statements to assess and measure the performance of each department and managers of multi-level company, evaluating competitive of rivals, and for projecting the future through supplying historical financial information to get a potential investor (Ross, Westerfield, & Jordan, 2010).
The metrics used to determine the performance of a company is called ratio analysis. Ratio analysis is the quantitative analysis of information from the company's financial statements or share price (Bloomenthal, 2020). The said ratios are separated into several general types, there are:

1. Liquidity Ratio

Commonly consist of current ratio and acid-test ratio. This ratio shows how the company able to repay their short-term liabilities and cash flows.

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

$$\textbf{Quick Ratio (Acid-Test Ratio)} = \frac{\text{(Current Assets-inventories-prepaid expenses)}}{\text{Current Liabilities}}$$

2. Profitability Ratio

Commonly consist of profit margin ratio, Return on Assets (ROA), and Return on Equity (ROE) ratios. This ratio determines the company’s ability to generate profits from its operations.

$$\textbf{Net Profit Margin} = \frac{\text{Net Income}}{\text{Net Sales}}$$

$$\textbf{Gross Profit Margin Ratio} = \frac{\text{Gross Profit}}{\text{Net Sales}}$$

$$\textbf{Return on Assets (ROA)} = \frac{\text{Net Income}}{\text{Total Assets}}$$

$$\textbf{Return on Equity (ROE)} = \frac{\text{Net Income}}{\text{Total Equity}}$$

3. Efficiency Ratio

Commonly consists of asset turnover, inventory turnover, and capital turnover ratios. This ratio shows how the company uses their assets and also their liabilities to generate income.

$$\textbf{Asset Turnover Ratio} = \frac{\text{Net Sales}}{\text{Average Total Assets}}$$

$$\textbf{Inventory Turnover Ratio} = \frac{\text{Cost of Good Sold}}{\text{Average Value of Inventory}}$$

$$\textbf{Capital Turnover Ratio} = \frac{\text{Net Sales}}{\text{Net Working Capital}}$$

4. Solvency Ratio

Commonly consist of debt ratio and debt-to-equity ratio. Solvency ratio is used to determine how the company deals with long-term obligations.

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

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

5. Valuation Ratio

Commonly consist of Earning per Share (EPS), Price to Earnings ratios, book value per share ratio, and dividend yield ratio. This ratio shows the attractiveness the company for investments.

$$\textbf{Earning per Share} = \frac{\text{(Net Income - Preferred Dividends)}}{\text{End of period common shares outstanding}}$$

$$\textbf{Price to Earnings} = \frac{\text{Share Price}}{\text{Earnings per Share}}$$

**WEIGHTED AVERAGE COST OF CAPITAL (WACC)**

Weighted Average Cost of Capital (WACC) is a representation of a firm's average after-tax cost of capital from all sources and including preferred stock, bonds, common stock, and other form of debts. Instead of utilizing risk-neutral real-option valuation, real-option valuation can also be done using the weighted-average cost of capital (WACC) (Arnold & Crack, 2019)

$$\text{WACC} = (\text{Cost of Debt x Proportion of Debt}) + (\text{CoE x Proportion of Equity})$$

**COST OF DEBT & COST OF EQUITY**

$$\textbf{Cost of Debt} = (\text{Risk free} + \text{Country Def. Spread} + \text{Company Def. Spread}) * (1 - \text{Tax Rate})$$

$$\textbf{Cost of Equity} = \text{Rf} + \text{Beta Stock}\ (\text{Rm} - \text{Rf})$$

Whereas:

Rf = Risk free rate;

Rm – Rf = Equity risk premium;

**Table.1** Cost of Equity and Cost of Debt Components

| No. | Variable | Value | Source |
|---|---|---|---|
| 1 | Government Bond | 6.57% | https://www.phei.co.id |
| 2 | Country Default Spread | 2.33% | Damodaran |
| 3 | Company Default Spread | 2% | Damodaran |
| 4 | Equity Risk Premium | 9.23% | Damodaran |
| 5 | Beta Stock | 1.7 | Pefindo Beta Market |
| 6 | Risk Free Rate | 4.24% | Government Bond – Country default spread |

**DISCOUNTED CASH FLOW OR ABSOLUTE VALUATION**

The concept of time value of money states that money has intrinsic and extrinsic value. Intrinsic value of money is a value that comes moment after being spent to purchase a product. While extrinsic value of money is a value that is listed or printed using nominals (Prasetyo, 2011).

Discounted Cash Flow is a method that emphasizes in the concept of Time Value of Money (TVM) in a lot a variable. This method is commonly used to give a prediction the value of a firm in the future for several periods. However, DCF analysis is categorized as a "decently realistic" method. This is due the type of data used in this analysis is from financial report which could be considered objectively (Prasetyo, 2011). Discounted cash flow analysis, where future cash flows are discounted at a discount rate to compensate for the uncertainty of those future cash flows (Daryanto & Mentari, 2018).

$$\textbf{DCF} = \left(\frac{\text{CF1}}{(1+r)^1}\right) + \left(\frac{\text{CF2}}{(1+r)^2}\right) + \ldots + \left(\frac{\text{CFn}}{(1+r)^n}\right) + \left(\frac{\text{TV}}{(1+r)^n}\right)$$

Whereas:
CF = Cash Flow
r = Rate of Discount
TV = Terminal Value of a company
n = Number of years in the projection period

## FREE CASH FLOW

Conceptually there are two types of free cash flow which are Free Cash Flow to Firm (FCFF) and Free Cash Flow to Equity. FCFF is used to identify the value of a firm (value to firm) and FCFE is used to identify the company's equity value (Prasetyo, 2011). Below is the formula to calculate the FCFF:

$$FCFF = net\ income + depriciation - Capita\ Expenditure - change\ in\ working\ capital$$

## RESULT AND DISCUSSION

## FINANCIAL RATIOS ANALYSIS (FRA)

Overall performance of the company from was promising at the span time of 2017 – 2019 (before Covid) and even has achieved the highest performance in 2019 ever since the company's IPO. However, the analysis shows that in 2020 – 2021 the company is having problem adjusting with the sudden condition of the pandemic that they experience massive losses in overall performance and even reach an all time low ever since their IPO. The latest financial report of 2022 shows that the company is recovering rather quickly with a 35% growth compared to last year.

1. Liquidity Performance

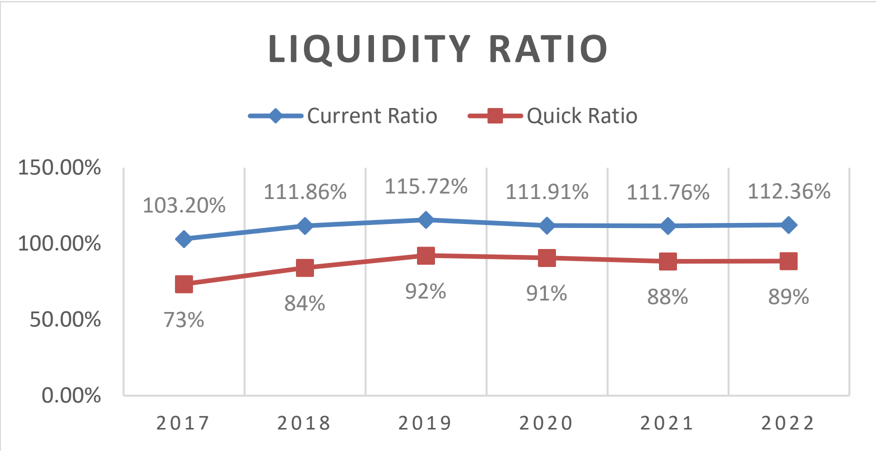



**Figure 5** Liquidity Ratio

Figure 5 shows the comparison between current ratio and quick ratio, both aspects reach its highest point at the year 2019 which was prior to the Covid outbreak in Indonesia. The highest number for current ratio is at 115.72% and quick ratio at 92%. However, based on the chart, the company's performance in liquidity is in a good shape without much changes.

2. Profitability Performance

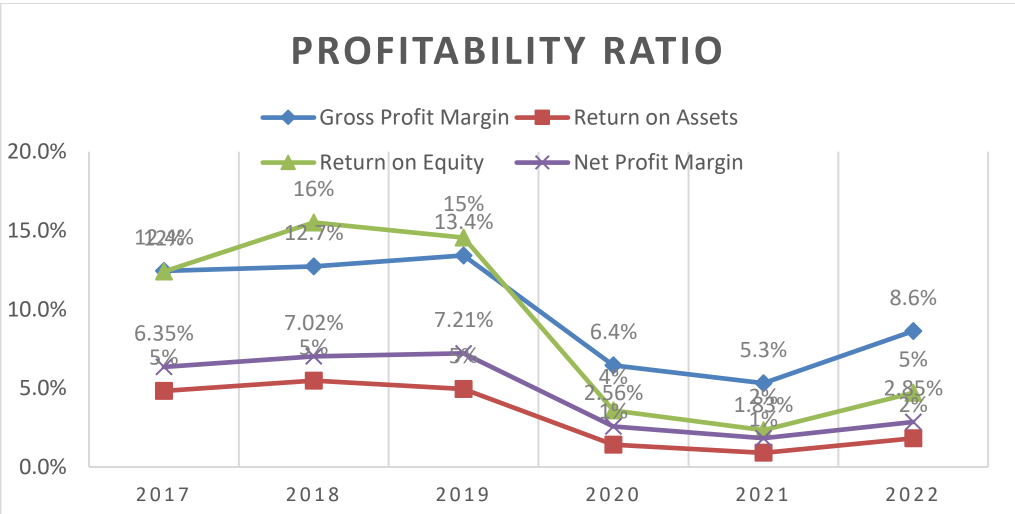



**Figure 6** Profitability Ratio

The highest point of Return on Equity (ROE) and Return on Assets (ROA) is achieved in 2018 with 16% and 5% respectively, while the highest gross profit margin is achieved in 2019 with 13.4%. Net profit margin reaches its highest point in 2019 with 7.21% and reach its lowest point in 2021 with 1.83%. After 2020, every single aspect of profitability ratio has experienced a significant reduction due to the impact of Covid-19 and is shown that the company is already recovering in 2022.

3. Efficiency Performance

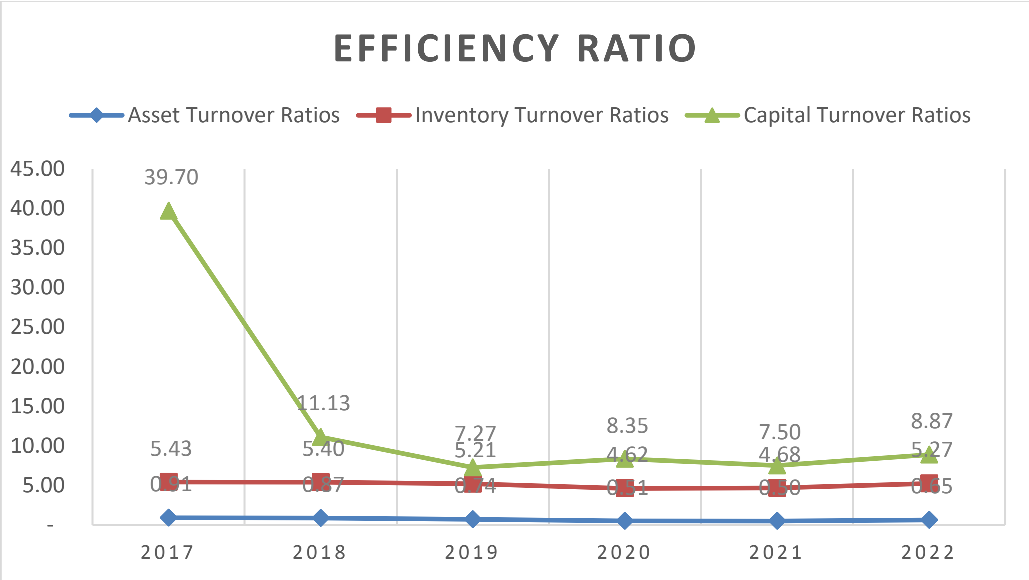



**Figure 7** Efficiency Ratio

From figure 7, asset turnover ratio's highest value is 39.7 and it was achieved in 2017 and been experienced a reduction ever since until the all-time low of 0.5 in 2021 which is during the pandemic. Inventory turnover's ratio highest value is 5.43 and it was also achieved in 2017 and reach its lowest point at 4.62 in 2020. Capital turnover ratio's highest point is 1.91 and was achieved in 2018 and its lowest is 1.11 in 2021. Other than the asset turnover ratio the company's efficiency (activity) performance is rather on the healthy side despite being in the middle of a pandemic.

4. Solvency Performance

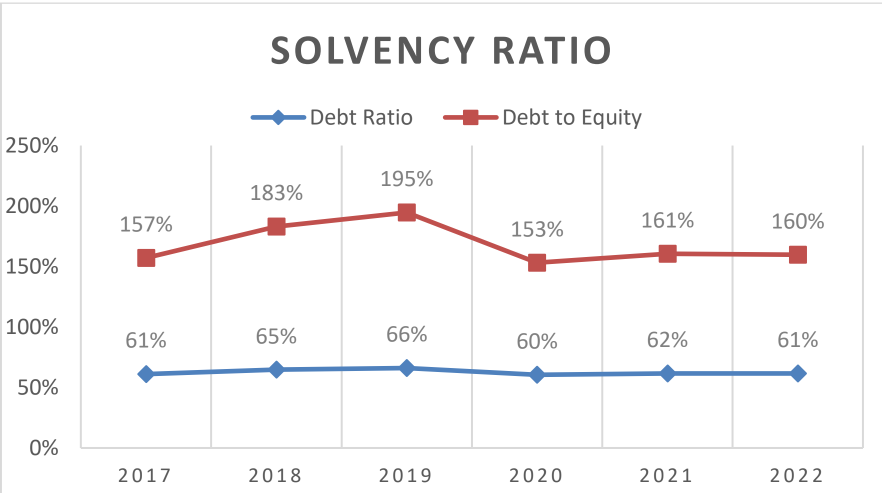
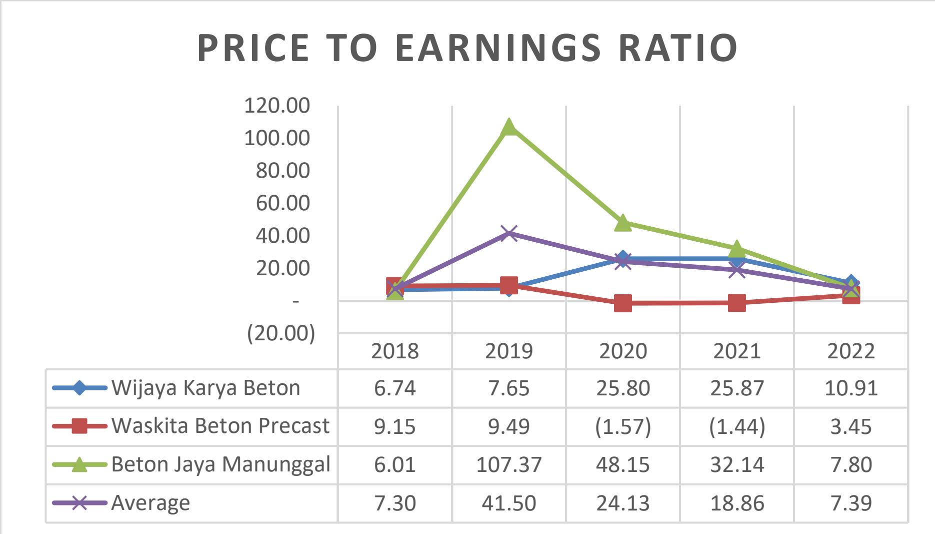



**Figure 8** Solvency Ratio

From the chart shown in figure 8, both the debt ratio and debt to equity ratio reach its highest value in 2019 at 195% and 66% respectively. The two ratios also reach its lowest in 2020, with 153% for debt ratio and 60% for debt to equity. During the six years, the more noticeable aspect is the debt-to-equity ratio where it experiences a rather big increase or decrease on the range of

12% - 42% notably in 2020 where the company has les debt compare to last year which was a result of paying their short-term debt before the pandemic hits.

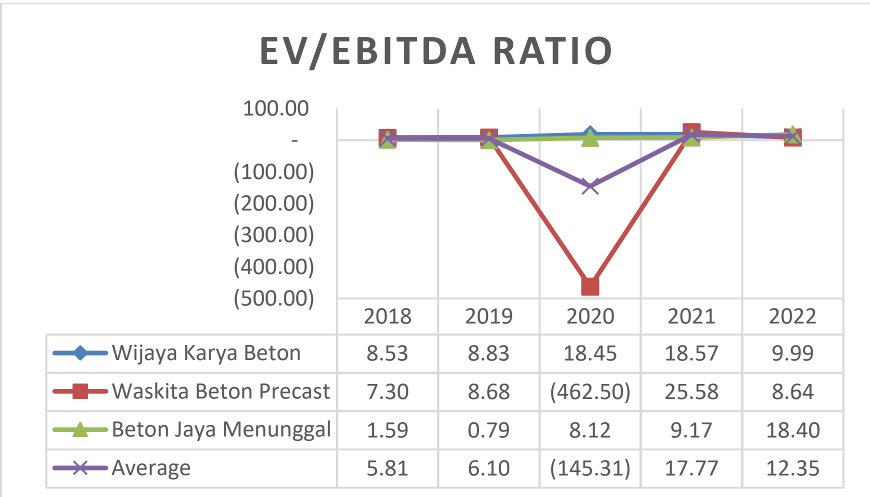
5. Relative Valuation (Valuation Ratio)




| | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|
| Wijaya Karya Beton | 6.74 | 7.65 | 25.80 | 25.87 | 10.91 |
| Waskita Beton Precast | 9.15 | 9.49 | (1.57) | (1.44) | 3.45 |
| Beton Jaya Manunggal | 6.01 | 107.37 | 48.15 | 32.14 | 7.80 |
| Average | 7.30 | 41.50 | 24.13 | 18.86 | 7.39 |

**Figure 9** Price to Earnings Ratio

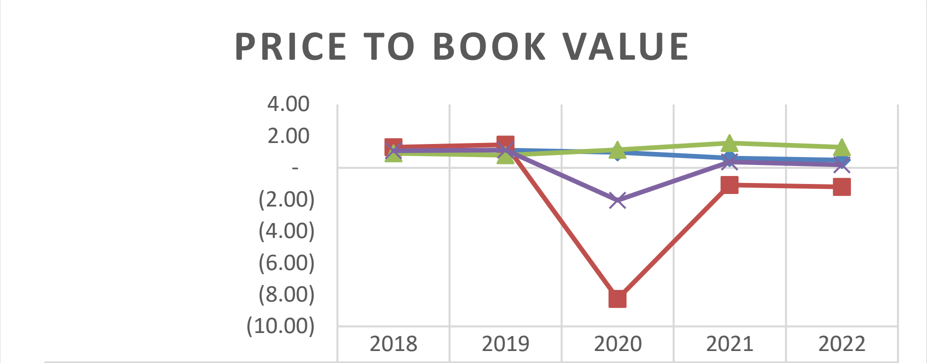
Based on chart shown in figure 9, the company of PT. Wijaya Karya Beton had a massive drop in earnings per share going from Rp. 58.79 down to Rp. 14.96 which was due to the pandemic season. The pandemic season caused a massive drop in revenue and which in turn causes a massive drop in net income for the company. The company's revenue tanks a large drop in revenue dropping from Rp. 7,08 trillion down to Rp. 4,8 trillion which is a decrease of 32.19%. The lower revenue affects heavily towards the company's net income dropping from Rp. 517 billion in 2019 to Rp. 120 billion in 2020. The trend seems to be the same for 2021 where the company experience a lower revenue by 10.21% with a recorded value of Rp. 4,31 trillion in revenue. This in turn, will lower the company's net income even lower with a recorded net income of Rp. 81 billion in 2021. Even though the activity of the company is rising, the company still unable to generate revenue as efficient as before the pandemic hits. In 2022 however, the company seems to be able to make a progress in recovering their usual activities and regain the efficiency of the company revenue generating process. In the year 2022, the company recorded a revenue amounting to Rp. 6,0 trillion which is a rather big increase compared to the year 2021 with Rp. 4,31 trillion. The increase in revenue affects positively in the company's net income in 2022 with a recorded amount of Rp. 171 billion and is a 89.6% increase compared to the net income in 2021. Based on the chart, the company seems to be above average compared to the two other competitors in the same industry. Based on this pretext, the company seems to be **relatively undervalued** since the company's P/E ratios is above the average line.




| | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|
| Wijaya Karya Beton | 8.53 | 8.83 | 18.45 | 18.57 | 9.99 |
| Waskita Beton Precast | 7.30 | 8.68 | (462.50) | 25.58 | 8.64 |
| Beton Jaya Menunggal | 1.59 | 0.79 | 8.12 | 9.17 | 18.40 |
| Average | 5.81 | 6.10 | (145.31) | 17.77 | 12.35 |

**Figure 10** EV/EBITDA Ratio

Based on figure 10, the company performance regarding EV/EBITDA in 2020 is rather quite high and sits above the average between the three companies and in 2021 the gap between the average and the company's ratios is getting closer yet the company still sits above the average. However, in 2022, the company's EV/EBITDA ratio is below the average. Which indicates that the company is **relatively undervalued** based on the year 2022.




| | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|
| Wijaya Karya Beton | 1.04 | 1.12 | 0.98 | 0.62 | 0.49 |
| Waskita Beton Precast | 1.30 | 1.46 | (8.26) | (1.08) | (1.19) |
| Beton Jaya Menunggal | 0.91 | 0.80 | 1.14 | 1.57 | 1.31 |
| Average | 1.09 | 1.13 | (2.05) | 0.37 | 0.20 |

**Figure 11** Price to Book Value Ratio

Based on figure 11, the company's price to book value doesn't fluctuate much. In 2020, the company has a price to book value ratio of 0.98 which is the year where the pandemic hits Indonesia. Even though the company's total equity in 2020 is lower compared to previous year of 2019, there could be seen an increase in the company's total equity in 2021 and 2022. From the relative comparison, the company seems to be **relatively undervalued** where the company's P/B ratio is above the average line. Based in accounting perspective, the company is also relatively undervalued due to the company's current year P/B ratio is below the value of 1.

## DISCOUNTED CASH FLOW ANALYSIS

Based on the data provided in table 1, the components of Cost of Equity (CoE) and Cost of Debt (CoE) has already been calculated and attained. The table 2 shows the calculation of after-tax cost of debt by adding risk-free rate, country default spread, and company default spread to get the cost of debt. However, to get the after-tax cost of debt, simply add the tax rate towards the calculation and multiply it with the cost of debt.

For this research the beta stock is attained from a database owned by PT. Pemeringkat Efek Indonesia (PEFINDO), which is an institution of debentures and bonds. The data available and attained from the database is dated 30$^{th}$ June 2022 in which the company's beta stock is 1.7 of raw beta. As for risk free rate is the same one used in determining the cost of debt, while equity risk premium could be seen in table 1. The calculation for cost of equity is [ Risk-Free rate + Beta Stock (Equity Risk Premium)] which is shown in table 3.

**Table 2** Cost of Debt Calculation

| Variables | Value |
|---|---|
| Risk-Free Rate | 4.24% |
| Country Def. Spread | 2.33% |
| Company Def. Spread | 2.00% |
| Marginal Tax Rate | 22% |
| CoD | 8.57% |
| **After Tax CoD** | **6.68%** |

***Table 3*** Cost of Equity Calculation

| Variables | Value |
|---|---|
| Risk-Free Rate | 4.24% |
| Beta Stock | 1.7 |
| Equity Risk Premium | 9.23% |
| **CoE** | **19.93%** |

**Table 4** Debt and Equity Proportion

| Account | Value |
|---|---|
| Debt 2022 | Rp 5,809,708.00 |
| Equity 2022 | Rp 3,637,820.00 |

| | |
|---|---|
| Debt Proportion | 61.5% |
| Equity Proportion | 38.5% |

After the CoE, CoD, and the respective proportion of debt and equity has been attained. Then the WACC can be calculated as such by using the aforementioned components.

**Table 5** WACC Calculation

| Variables | Value |
|---|---|
| After-Tax Cost of Debt | 6.68% |
| Cost of Equity | 19.93% |
| Debt Proportion | 61.5% |
| Equity Proportion | 38.5% |
| **Weighted Average Cost of Capital (WACC)** | **11.79%** |

The first component of DCF analysis has been determined with an WACC of 11.79%.

The next component of DCF analysis is the cashflow. In this research the cashflow used is the cashflow for the future or 5 years ahead. Free Cash Flow to Firm analysis started with finding and analyze the data required for the analysis such as percentage ratio of EBIT, Capex (Investment Cash Flow), Depreciation of fixed assets compared to revenue.

**Table 6** Percentage Based on Revenue

| | 2018 | %Revenue | 2019 | %Revenue |
|---|---|---|---|---|
| Operating Revenue | Rp 6,930,628.00 | | Rp 7,083,384.00 | |
| Profit Before Tax | Rp 619,254.00 | 8.9% | Rp 626,271.00 | 8.8% |
| Capital Expenditures | Rp 439,848.00 | 6.3% | Rp 370,107.00 | 5.2% |
| Depreciation | Rp 223,903.00 | 3.2% | Rp 240,360.00 | 3.4% |
| Working Capital | Rp 622,628.00 | 9% | Rp 973,858.00 | 14% |

**Table 7** Percentage Based on Revenue (Cont'd)

| | 2020 | %Revenue | 2021 | %Revenue | 2022 | %Revenue |
|---|---|---|---|---|---|---|
| Operating Revenue | Rp 4,803,359.00 | | Rp 4,458,987.00 | | Rp 6,003,788.00 | |
| Profit Before Tax | Rp 130,506.00 | 2.7% | Rp 81,347.00 | 1.8% | Rp 249,508.00 | 4.2% |
| Capital Expenditures | Rp 281,518.00 | 5.9% | Rp 183,935.00 | 4.1% | Rp 145,874.00 | 2.4% |
| Depreciation | Rp 198,611.00 | 4.1% | Rp 202,331.00 | 4.5% | Rp 205,490.00 | 3.4% |
| Working Capital | Rp 575,500.00 | 12% | Rp 594,399.00 | 13% | Rp 676,658.00 | 11% |

Based on historical financial data of PT. Wijaya Karya Beton from 2018 to 2022 shown in table 6 and 7, the company experience lower percentage rate compared to revenue in 2020 – 2022 compared to 2017 – 2019. From the percentage data from the last 5 year, the writer can calculate the average percentage from the period. The average of these percentages could be used as an assumption on how the cashflow in the next five years will be. Below is the table that shows the average of the component.

**Table 8** Average Percentage

| Accounts | Average Percentage from last 5 years |
|---|---|
| Operating Revenue | - |
| Profit Before Tax | 5.29% |
| Capital Expenditures | 4.80% |
| Depreciation | 3.74% |
| Working Capital | 11.86% |

The next step would be determining the forecasted revenue of 5 years ahead for the components could compare it to and attain a value for the forecasted cashflow. Based on the research problem or limitation, the IKN project is assumes to be able to boost the revenue of the company in 2023 by 15% and at the end of the forecasted year in the year of 2027 by 2%. The forecasted YoY at the beginning year and at the ending year has been determined. However, the remaining 3 years of 2024-2026 is yet to be determined. The revenue growth in that years are calculated by using annual decrease based in the total decrease from 15% to 2%. To calculate the annual decrease, the total decrease is required from the value of 15 to 2.

**Total Decrease** = (2%/15%) – 1

= -86.7%

From the total decrease, to make it annual simply use the formula of:

**Annual decrease** = $(1+\text{Total Decrease})^{\frac{1}{\text{remaining period}}} - 1$

$= (1+(-86.7\%))^{\frac{1}{4}} - 1$

= -39.6%

After the annual decrease has been determined, the next year of the forecasted revenue growth could be calculated. The formula used to calculate the next year revenue growth is [previous revenue growth * (1+ annual decrease)].

**Table 9** Revenue Forecast

| PERIOD | YEAR | Revenues | %Revenue |
|---|---|---|---|
| 0 | 2017 | Rp 5,362,263.00 | |
| 1 | 2018 | Rp 6,930,628.00 | 29% |
| 2 | 2019 | Rp 7,083,384.00 | 2% |
| 3 | 2020 | Rp 4,803,359.00 | -32% |
| 4 | 2021 | Rp 4,458,987.00 | -7% |
| 5 | 2022 | Rp 6,003,788.00 | 35% |
| 6 | 2023 | Rp 6,904,356.20 | 15.0% |
| 7 | 2024 | Rp 7,530,175.76 | 9.1% |
| 8 | 2025 | Rp 7,942,620.47 | 5.5% |
| 9 | 2026 | Rp 8,205,501.43 | 3.3% |
| 10 | 2027 | Rp 8,369,611.45 | 2.0% |

After the forecasted revenue is determined. The next step would be to determine the company's future cashflows by multiplying the average FCFF components shown in table 8 with each respected year's revenue for the forecasted period shown in table 9. Below is the framework for the calculation for an easier understanding of the calculation:

**Table 10** FCFF Calculation of Forecasted Years

| IN MILLION RUPIAH | PERIOD | | | | |
|---|---|---|---|---|---|
| | 2023 | 2024 | 2025 | 2026 | 2027 |
| | | | | | |
| Real / Forecasted Revenue | Rp 6,904,356.20 | Rp 7,530,175.76 | Rp 7,942,620.47 | Rp 8,205,501.43 | Rp 8,369,611.45 |
| EBIT Margin (%Revenue) | 5.3% | 5.3% | 5.3% | 5.3% | 5.3% |
| EBIT | Rp 365,566.31 | Rp 398,701.71 | Rp 420,539.50 | Rp 434,458.31 | Rp 443,147.47 |
| Tax Rate [b] | 22% | 22% | 22% | 22% | 22% |
| **EBIT (1-tax rate)** | **Rp 285,141.72** | **Rp 310,987.33** | **Rp 328,020.81** | **Rp 338,877.48** | **Rp 345,655.03** |
| | | | | | |
| Depreciation Margin (%Revenue) | 3.7% | 3.7% | 3.7% | 3.7% | 3.7% |
| **Depreciation** | **Rp 258,485.73** | **Rp 281,915.21** | **Rp 297,356.34** | **Rp 307,198.09** | **Rp 313,342.06** |
| | | | | | |
| CAPEX Margin (%Revenue) | 4.8% | 4.8% | 4.8% | 4.8% | 4.8% |
| **Capital Expenditure** | **Rp 331,230.09** | **Rp 361,253.21** | **Rp 381,039.86** | **Rp 393,651.33** | **Rp 401,524.36** |
| **Changes in Working Capital** | **Rp 142,395.81** | **Rp 74,240.07** | **Rp 48,927.72** | **Rp 31,185.19** | **Rp 19,468.14** |
| | | | | | |
| **FCFF** | Rp 70,001.55 | Rp 157,409.26 | Rp 195,409.57 | Rp 221,239.05 | Rp 238,004.59 |

For this research, there are to possible terminal value at the end of the year due to the difference in assumption of terminal value growth rate (long-term growth rate). One is under the assumption that the company long-term growth rate is equals to the current Indonesia's GDP as per April 2023 with 4.3% and the second one is under the calculation by Damodaran by multiplying the company's Return on Capital (ROC) with the value of 0.025 with its Retention Rate with the value of 90.3%. Therefore, the terminal value growth rate is 90.3% x 0.0251, which is 2.3%.

$$\text{Terminal Value (4.3\%)} = \frac{\text{Rp. } 238{,}004.59\ (1+4.3\%)}{(11.79\% - 4.3\%)}$$

$$= \text{Rp. } 3{,}330{,}699{,}92$$

$$\text{Terminal Value (2.3\%)} = \frac{\text{Rp. } 238{,}004.59\ (1+2.3\%)}{(11.79\% - 2.3\%)}$$

$$= \text{Rp. } 2{,}559{,}165.11$$

**Table 11** DCF Analysis Possibility 1

| | 2023 | 2024 | 2025 | 2026 | 2027 | Terminal Value 4.3% |
|---|---|---|---|---|---|---|
| FCFF | Rp 70,001.55 | Rp 157,409.26 | Rp 195,409.57 | Rp 221,239.05 | Rp 238,004.59 | Rp 3,330,699.92 |
| (1+WACC)^n | 1.117851955 | 1.249592993 | 1.396859971 | 1.561482649 | 1.745506432 | 1.745506432 |
| | | | | | | |
| Present Value | Rp 62,621.49 | Rp 125,968.42 | Rp 139,892.02 | Rp 141,685.25 | Rp 136,352.74 | Rp 1,908,156.77 |
| **DCF** | **Rp 2,514,676.70** | | | | | |
| Shares Outstanding | 8715 | | | | | |
| | Rp 288.55 | | | | | |

**Table 12** DCF Analysis Possibility 2

| | 2023 | 2024 | 2025 | 2026 | 2027 | Terminal Value 2.3% |
|---|---|---|---|---|---|---|
| FCFF | Rp 70,001.55 | Rp 157,409.26 | Rp 195,409.57 | Rp 221,239.05 | Rp 238,004.59 | Rp 2,559,165.11 |
| (1+WACC)^n | 1.117851955 | 1.249592993 | 1.396859971 | 1.561482649 | 1.745506432 | 1.745506432 |
| | | | | | | |
| Present Value | Rp 62,621.49 | Rp 125,968.42 | Rp 139,892.02 | Rp 141,685.25 | Rp 136,352.74 | Rp 1,466,144.76 |
| **DCF** | **Rp 2,072,664.68** | | | | | |
| Shares Outstanding | 8715 | | | | | |
| | Rp 237.83 | | | | | |

Based on table 11 and table 12, the company's intrinsic value per share for the GDP growth terminal value and the retention rate ROC method are Rp. 288.55 and Rp. 237.83 respectively. Both intrinsic value per share is of higher value compared to the 2022 share price of Rp. 204 and the current year 2023 as per 29th May with the share price of Rp. 139. Conclusion, based on DCF analysis the company is currently **undervalued.**

## CONCLUSION

Based on the financial ratio analysis, the company' seems to be doing fine and is currently recovering to its pre-pandemic situation. For Liquidity Ratio doesn't seems to have changed drastically. However, there is significant change in the company's current assets and current liabilities. For Profitability Ratio, the company experience a big decrease in 2020, which due to the pandemic and resulting in a significant decrease in overall activities for the company including productivity. Despite the decline in activity, the company manage to stay afloat and manage to avoid experiencing a massive loss. For Efficiency Ratio, the company doesn't seem to have experience a significant change other than the capital turnover ratio in 2017. Which means the company's efficiency in managing their inventories and assets does not change even during the pandemic. For the Solvency Ratio, the company experience a small turbulence in 2020 due to a decrease in total debt. Overall, the company's performance manages to stay afloat even during the crisis of pandemic. Additionally, the company also manage to not experience a loss during that time of crisis showing that they have a capable management to conduct rational choices even with enormous amount of pressure.

The price-to-earnings ratio (P/E), price-to-book value (P/B), and enterprise value-to-EBITDA (EV/EBITDA) ratios of the company all show that it is undervalued based on the data used in the research. This metrics of calculation indicates that the company's market price of the company's stock is relatively low compared to the other competitors. This under valuation may present as an opportunity for potential investors that trust the company's growth, prospects, and performance to improve in the future. However, it is important to conduct further research before deciding to invest.

Based on the DCF analysis, the company is deemed as undervalued since the forecasted cash flows has resulted in a positive manner. The company's intrinsic value per share for the GDP growth terminal value and the retention rate ROC method terminal value are Rp. 288.55 and Rp. 237.83 respectively. Both intrinsic value per share is of higher value compared to the 2022 share price of Rp. 204 and the current year 2023 as per 29th May with the share price of Rp. 139. This indicates that the company is undervalued. However, it is also important to understand that the DCF analysis is filled with assumptions and numerous approaches. Therefore, further research is required before deciding to invest in the company

## RECOMMENDATION

### RECOMMENDATION FOR INVESTORS

The price of the stock may be on the cheap side and possibly provide an investment opportunity given that the company's valuation from both relative valuation and absolute valuation resulted in undervalue. This means that the company's intrinsic value per share is higher than its current price. However, investors must conduct further research other than the data provided such as macroeconomics, market trends, level of competition, etc. and conduct risk evaluation with its potential rewards before considering to invest in the company. However, based on the analysis alone, investing in the company is recommended.

### RECOMMENDATION FOR THE COMPANY

Given that the company is stated as undervalued based on this research, the company should improve their communication and marketing activities to raise investors awareness of the actual value of the company as indicated by the company's intrinsic value per share. Engaging prospective investors and showcasing the business development, financial performance, and show the company's competitive advantage may initiate an interest for investors and perhaps even raise the company's stock valuation.

### RECOMMENDATION FOR FUTURE RESEARCH

In order to have a more comprehensive result, future research should include the dynamics of cashflow within the company and perhaps create a more detailed financial ratio analysis where every single aspect of the financial ratio is included. Including the company's customer base, competitive advantages, and differentiation strategies with how their team or management conduct their activities could also help create a more comprehensive result.
It also helps if future research could provide a more detailed explanation regarding the macroeconomics that affects the company performance. Create an analysis about the risk and potential challenges that the company may face.

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Muhammad Rifqi Ramadanto
*School of Business and Management Institut Teknologi Bandung, Jakarta, Indonesia*
*Email: muhammad_ramadanto@sbm-itb.ac.id*

Raden Aswin Rahadi
*School of Business and Management Institut Teknologi Bandung, Jakarta, Indonesia*
*Email: aswin.rahadi@sbm-itb.ac.id*

Wiwiek Mardawiyah Daryanto
*IPMI International Business School, Jakarta, Indonesia*
*Email: wiwiek.daryanto@ipmi.ac.id*