# STOCK VALUATION OF CONSUMER NON-CYCLICAL COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE

**MINOR THESIS**

As one of the requirements for obtaining a degree

Bachelor of Accounting


By:

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**FACULTY OF ECONOMICS AND BUSINESS**
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## CURRICULUM VITAE

Hanny Angelina was born in Banjarmasin on October 24, 2002. The author is the only child of Mr. Hendarto and Mrs. Maria Susanti Toha. Began with her early education at Budi Bakti Kindergarten from 2006 until 2008. Then, she pursued primary education at SD Katolik 3 W.R. Soepratman Samarinda and graduated in 2014. Subsequently, she continued her studies at Kristen Sunodia School in Samarinda, from junior high school to senior high school. The author graduated from Junior High School in 2017 and graduated from Senior High School in 2020.

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# ABSTRAK

**Hanny Angelina. 2001036060. 2025.** *Penelitian ini bertujuan untuk menentukan kondisi harga saham emiten sektor* Consumer Non-Cyclical *pada tahun 2021-2023. Melalui teknik* purposive sampling *didapatkan sampel penelitian sebanyak 37 perusahaan. untuk menghitung nilai intrinsik digunakan model pendekatan* PBV (Price to Book Value)*,* PER (Price to Earnings Ratio)*, dan* DDM (Dividend Discount Model)*. Nilai intrinsik yang diperoleh kemudian dibandingkan dengan harga pasar saham guna menentukan kondisi harga saham tersebut apakah saham tersebut overvalued, undervalued, atau fairvalued. Selain itu, penelitian ini juga melakukan uji* RMSE (Root Mean Square Error) *untuk melihat model pendekatan mana yang paling akurat diantara tiga model pendekatan tersebut. Dari hasil uji RMSE didapatkan hasil model pendekatan DDM merupakan pendekatan yang paling akurat dibandingkan dengan PBV dan PER. Penelitian ini menggunakan metode kuantitatif dengan data sekunder yang diambil dari laporan keuangan tahunan yang dikeluarkan oleh perusahaan, dan seluruh data diolah dengan menggunakan Microsoft excel.*

**Keywords:** overvalued, undervalued, fairvalued, PBV, PER, DDM, intrinsic value, RMSE (Root Mean Square Error)

# ABSTRACT

**Hanny Angelina. 2001036060. 2025.** This study aims to determine the condition of stock prices of issuers in the Non-Cyclical Consumer sector from 2021 to 2023. Through purposive sampling technique, a research sample of 37 companies was obtained. To calculate intrinsic value, the PBV (Price to Book Value), PER (Price to Earnings Ratio), and DDM (Dividend Discount Model) approach models are used. The intrinsic value obtained is then compared with the stock market price to determine the condition of the stock price whether the stock is overvalued, undervalued, or fair valued. In addition, this study also conducted an RMSE (Root Mean Square Error) test to see which approach model is the most accurate among the three approach models. The smallest RMSE value indicates that the approach model is the most accurate. From the RMSE test results, it is found that the DDM approach model is the most accurate approach compared to PBV and PER. This is because the RMSE value of DDM is the lowest compared to the other two model approaches. This research uses quantitative methods with secondary data taken from the annual financial statements issued by the Company, and all data is processed using Microsoft Excel.



**Keywords:** overvalued, undervalued, fairvalued, PBV, PER, DDM, intrinsic value of shares, RMSE (Root Mean Square Error)

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The author is aware of the shortcomings in this Thesis, so the author openly accepts input, criticism, and suggestions to improve this Thesis.

Samarinda, September 26, 2025

Hanny Angelina

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# CHAPTER I

# INTRODUCTION

## 1.1 Background

The era of global digitalization is growing fast. Job fields and sources of income are increasingly diverse and can be obtained from various sources. One of the passive income sources, apart from the results of trading and service businesses, is investment in the capital market. Financial products issued by the capital market are investment instruments issued and traded through the capital market to raise funds from investors. The funds are used by the issuing party (company or government) to finance business activities, development, or other projects (Capital Markets, 2024). Financial products marketed in the capital market can be stocks, bonds, mutual funds, warrants, and right issue (Putri & Manisha, 2021). Stocks are one of the most attractive investment instruments due to their ability to generate income passively for their owners.

In sorting a stock, it requires investors' ability to make decisions whether to buy, sell, or hold the shares. Investors must analyze the company's condition in various ways. The analysis is conducted to enable investors to make informed assessments, draw conclusions, and take actions that inform their final decision, ultimately leading to maximum profits. The final result of valuation is a value that is always compared to the price that occurs in the market (Pengestika & Christianti, 2021).

Stock valuation is the process of calculating and determining the intrinsic value or fair price of a company's shares. A valuation model is a mechanism for

converting a series of economic variables or company variables that are forecasted (or observed) into an estimate of the stock price. These economic variables include company profit, dividends distributed, profit variability, and others. Stock valuation is essential for investors to understand because it enables them to sort, choose, and make informed decisions when buying shares or considering an investment in equities or other assets. (Husnan, 2019)

Intrinsic value is the actual value of the stock of the company. To determine the intrinsic value of stocks (commonly referred to as the fair price of shares), written financial data (generally from the past), such as audited annual financial statements, is needed to carry out data analysis. In this case, the data is public or has been widely published by a company that has been listed on the IDX (S. Seber & Hadilia, 2022).

There are two types of stock analysis techniques, technical analysis and fundamental analysis. In this study, fundamental analysis is used to obtain an estimate of the fair price of the shares. Fundamental analysis is an assessment of the fair price of shares using information from the company's internal information, contained in the company's individual financial statements (Pangestika & Christianti, 2021).

In the analysis of the intrinsic value of stocks, there are two types of methods, namely the absolute method and the relative method. The absolute method is a method of valuing shares based on the company's internal conditions (usually related to the assets the company owns). The relative method is a stock valuation method that compares one company with another company within the same industry

(also known as Peer Analysis) (Kurniawan, 2023). The calculation of stock valuation using this method is relatively more straightforward and faster than the absolute method (Damodaran, 2018).

This study uses both methods. In the absolute method, the approach model used is the Dividend Discount Model (DDM). According to Williams (1939) This approach model estimates the intrinsic value of a stock based on projected future dividends discounted to present value. In the relative method, there are two models of approach used, namely Price Earnings Ratio (PER) and Price to Book Value (PBV).

According to Kholifah (2020) PER is a ratio used to measure a company's effectiveness in utilizing its assets to generate profits. Meanwhile, PBV is a ratio that compares the market value of a stock with its book value (Hartono, 2017). This model of stock valuation approach was chosen because it is relatively easy and widely used by investors.

The stock valuation process aims to estimate the intrinsic value of a share. The intrinsic value of a stock reflects the actual value of a company based on its financial performance (Hartono, 2017). The intrinsic value is then compared to the market price of the stock to determine the condition of the identified stock, whether it is undervalued, overvalued, or at fair value. A stock market price that is lower than its intrinsic value indicates that the stock price is undervalued. If the stock market price is higher than its intrinsic value, then the stock is in a state of overvaluation. Meanwhile, if the market price of the stock is equal to the stock's intrinsic value, then the stock is at Fair Value (Husnan, 2019).

After obtaining intrinsic value through the three valuation models (PER, PBV, and DDM), the models were tested using the Root Mean Square Error (RMSE). RMSE is a statistical metric used to measure the degree of deviation between the intrinsic value of a stock predicted by the approach model and the actual market price (Alamu & Siam, 2024). This test aims to determine the most accurate model in estimating the intrinsic value of shares.

Observation of stock price movements from year to year can allow researchers to get an overview of stock market conditions as well as reflect the economic situation in the observation period. Changes in stock price conditions from time to time indirectly show the dynamics that occur in the stock market, which can be influenced by various factors, such as fluctuations in the dollar exchange rate, strengthening of the rupiah currency, increase in raw material prices, global geopolitical situation, pandemic, and other economic factors.

This research focuses on companies listed in the Consumer Non-Cyclical sector. The primary consumer goods sector is a sector that has experienced growth in line with the increase in population and income growth. In this case, along with the rise in people's income levels, the need for basic consumption will increase significantly (Khayati *et al.,* 2022). Companies in the Consumer Non-Cyclical sector are an industry characterized by a relatively high level of demand in the community, and they are generally resistant to economic crises.

Products and goods produced by companies in the Consumer Non-Cyclical sector are essential for daily life, providing the basic necessities that many people need for consumption. However, in reality, the growth of the industry Consumer

Non-Cyclical in Indonesia is experiencing challenges in maximizing company value. There are other factors beyond the company's management's control, such as import tariffs, BI interest rate products, and others, that can affect the value of the stock. Based on the above conditions of companies in the Consumer Non-Cyclical sector, it is required to implement a management strategy that ultimately increases the value of shares in the capital market. The sales and profits generated by the company are expected to enhance its value in the eyes of investors, thereby encouraging them to increase their investment in this sector (Khayati et al., 2022).

The title of this research is "Stock Valuation in Non-Cyclical Consumer Companies Listed on the Indonesia Stock Exchange", with a research period starting from 2021 until 2023.

## 1.2 Problem Formulation

From the above background, the following problem formulation can be compiled:

1. How much is the intrinsic value of shares of non-cyclical consumer sector companies based on the PBV, PER, and DDM approach models.
2. What is the condition of stock prices (undervalued, overvalued, fairvalued) based on the comparison of the intrinsic value of stocks and stock market prices in non-cyclical consumer sector companies.
3. How is the accuracy of the three models of the intrinsic value approach of stocks (PBV, PER, and DDM) using the Root Mean Square Error (RMSE) test.

## 1.3 Research Objectives

From the formulation of the problem above, it can be concluded that the objectives to be achieved from this research are as follows:

1. Determining the intrinsic value of shares of companies in the non-cyclical consumer sector based on the PBV, PER, and DDM approach models.
2. To determine the condition of stock prices (undervalued, overvalued, fairvalued) in non-cyclical consumer sector companies based on the comparison between intrinsic value and stock market price.
3. Determine the accuracy level of three stock intrinsic value approach models (PBV, PER, and DDM) by using the Root Mean Square Error (RMSE) test.

## 1.4 Research Benefits

This research is expected to bring benefits to readers, and companies related to the topic can utilize this research as a resource for their own evaluation. In addition, the following are the benefits that can be taken from this research, namely:

1. This research is expected to expand knowledge and insight related to stock valuation to be more distinct, both in theoretical explanation and the calculation process. This research is expected to play a complementary role, supplementing the results of existing research, and serve as a valuable reference for future researchers.
2. Helping prospective investors to make decisions in buying or holding their shares, as well as a reference for investors who want to try to apply these stock valuation methods.

# CHAPTER II

# LITERATURE REVIEW

## 2.1 Stock Analysis

Husnan (2019) explained that in valuation, there are two basic approaches used to analyze stocks. The two basic approaches are fundamental analysis and technical analysis.

1. Fundamental Analysis

   Fundamental analysis is an analytical technique used to calculate a stock's intrinsic value by examining the company's financial data, which reflects the company's financial condition. Fundamental analysis forecasts the future price of a stock by:

   1. Estimate the value of fundamental factors (sales, sales growth, costs, dividend policy, and so on) that are expected to affect the stock price in the future.
   2. Apply the relationship of these variables so that the stock price estimate is obtained.

   Fundamental analysis is often also referred to as fair share forecasting, which is often used for various securities analysis training. The most important step to take in this analysis is to identify the fundamental factors that affect the stock price. The factors analyzed are factors related to the company's condition, which include the organization, management conditions, the company's financial condition (the company's financial condition will be reflected in the company's performance), and so on.

2. Technical Analysis

The technical analysis approach can be done to individual stocks as well as to overall market conditions. This analysis aims to estimate the stock price (market condition) by observing changes in the stock price (market condition) in the past. Information on prices and trading volumes is the main tool for analysis. An increase or decrease in the stock price is usually related to a corresponding change in sales volume. Technical analysis uses charts or various technical indicators.

In contrast to fundamental analysis, technical analysis does not pay attention to the fundamental factors that affect stock prices. Market conditions (fundamental factors such as economic growth, corporate sales growth, interest and profit growth, government policies, and others) are not considered by technical analysis.

## 2.2 Stock Valuation Concept

The valuation model is a mechanism to change a series of economic variables or company variables that are forecasted (observed) into an estimate of the stock price. These economic variables include dividends distributed, profit variability, and others (Husnan, 2019). The principle of good investing is that investors do not pay more than their qualifying price to buy an asset (paying more than its intrinsic value). There must be value that matches the view of the viewing party, and any price is justifiable if other investors are willing to pay that price. The

price paid to own an asset must reflect the cash flow it is expected to generate (Damodaran, 2025).

A valuation model is a mechanism that converts a series of estimates (or observations) of a company's financial performance and economic variables into an estimate (prediction) of the market value of the company's stock. The input for a valuation model falls within the limits of economic variables, such as future earnings, dividends, income variability, and so on. Output in this case is the expected or expected market value Return, which is expected through planting shares, can also be from selling, buying, and holding shares (Elton *et al.,* 2014).

In the capital market, there are two categories of stock valuation methods there are, the relative method and the absolute method. Absolute valuation assesses the fair value of a stock using fundamental data, while relative valuation uses Price multiples as an analysis tool, where the market price is the main component in Price multiples (Christina, 2015). The approaches included in the absolute method are Dividend Discount Model (DDM), Discounted Cash Flow (DCF), and Free Cash Flow to Equity (FCFE). While the relative method consists of Price Earnings Ratio (PER), Price to Book Value (PBV), and Price to Sales (P/S) (Pangestika & Christianti, 2021).

The intrinsic value of a stock can be calculated using model approaches, such as Dividend Discount Model (DDM), Price Earnings Ratio (PER), and Price to Book Value (PBV). In determining the intrinsic value of a stock through the various approaches mentioned, this research focuses on assessing the condition of stocks.

According to Husnan (2019), the determination of the condition of a stock can be explained as follows:

1. Intrinsic value of shares < Market price of outstanding shares → Overvalued
2. Intrinsic value of shares > Market price of outstanding shares → Undervalued
3. Intrinsic value of shares = Market price of outstanding shares → Fair valued

## 2.3 Stock Value

The value of shares, also known as the price of shares, represents the worth of a stock, which is determined by a company's performance and the public's assessment of the company. Investors purchase these shares to show the identity of the investor (individual) or entity in the company, which is a reflection of the decision of funding, investment, and asset management (Hartono, 2017). Some explanations related to the value of stocks are as follows:

1. Intrinsic Value of Stocks

   Intrinsic value (or fundamental value/fair price) is the actual value of a stock traded on the stock exchange. Intrinsic value is commonly referred to as fundamental value. The intrinsic value of a stock refers to its actual value, determined by risk and return data.

2. Book Value of Shares

   Book value per share shows the net asset value per share, which is the value of equity divided by the number of shares (Malinda, 2019). Book value per share shows the net assets owned by shareholders for each share. Since net assets are equal to the total equity of shareholders, the book value per share is the total equity divided by the number of outstanding shares (Hartono, 2017).

3. Stock Market Value

Market value refers to the stock price that occurs in the stock market at a specific point in time, determined by market participants. This market value is determined by the supply and demand of the stock in question on the stock market (Hartono, 2017). Potential investors use the company's stock market price to assess whether the company's share price is cheap or expensive.

By comparing the market price and intrinsic value of a stock, it can be known whether the stock is undervalued, at fair value, or overvalued. A stock is said to be undervalued if the intrinsic value of the stock is higher than the market price; it is said to be at fair value if the intrinsic value of the stock is equal to the stock market price, and it is said to be overvalued if the intrinsic value of the stock is lower than the market price.

## 2.4 Stock Price Valuation Approach

The stock valuation approach model used for the intrinsic value assessment of stock prices consists of PER, PBV, and DDM.

### 2.4.1 Price to Book Value (PBV)

Price to Book Value (PBV) is a ratio that describes the state or condition of the performance of a company's stock market price to its book value (Fadjar *et al.,* 2021). The PBV formula is as follows:

$$\text{PBV} = \frac{\text{Price per Share}}{\text{Book Value per Share}}$$

PBV is the ratio of the market value of equity divided by the book value of equity. Book value, also commonly known as book value (BV). The book value per share represents the net assets owned by shareholders for every share they own. Since net assets are equal to the total equity of shareholders, the book value of shares is calculated by dividing the total equity by the number of outstanding shares.

$$\text{Book Value (BV)} = \frac{\text{Total equity}}{\text{number of shares outstanding}}$$

The PBV method emphasizes the book value and the price of its shares, as well as the accounting perspective, which aims to determine how much the market values the book value of a company. By looking at the level of the company's share price, if the company's analysis has negative earnings, the use of the PBV method can help mitigate the weaknesses that exist in other methods. Investors can use this method in conducting an analysis on large companies (Segoro & Sriludia, 2021). By Natalia (2019) The formula for finding the intrinsic value of shares through PBV is as follows:

Intrinsic value of shares = *Book Value per Share* (BVS) × PBV average ratio

### 2.4.2 **Price to Earnings Ratio (PER)**

The PER approach model (Price Earnings Ratio), also known as the earnings multiplier approach model, is a method for valuing a stock based on the profits generated by the company. PER shows the ratio of the stock price to the Earnings. This ratio shows how much investors value the price of a stock against its multiple of earnings (Damodaran, 2025). PER is used to see a company's ability to generate profits at current prices.

PER, according to Filbert & Prasetya (2017), is a measure of a stock's performance that is based on a comparison between its stock price and earnings per share (EPS). PER can be used to compare the cheapest and most expensive stock prices within a single industry. The company with the highest PER value is the company with the most expensive share price. Meanwhile, the company with the lowest PER value is typically the one with the cheapest share price. The thing that investors should avoid is a negative P/E ratio, because this means that the earnings per share (EPS) are negative. This situation reflects that the company's profits are in a loss-making condition.

$$PER = \frac{Market\ Price\ Per\ Share}{Earnings\ Per\ Share}$$

The PER formula above is based on Damodaran (2018) It can be further developed by deriving it using the constant growth DDM formula. By using the constant growth DDM model, $\mathbf{P0^* = \frac{D1}{k-g}}$. The PER formula can be derived by dividing the two sides of the equation by the Earnings value, so that the following is obtained:

$$\frac{\mathbf{P0}}{\boldsymbol{E0}} = \boldsymbol{PE} = \frac{\mathbf{Payout}\ \boldsymbol{ratio} \times (\mathbf{1} + \boldsymbol{g})}{\boldsymbol{k - g}}$$

From this formula, several factors are obtained that determine the amount of PER:

1. PER is negatively correlated with the desired rate of return (k).
2. PER is positively related to the dividend growth rate (g).

By Tandelilin (2017) The formula for finding intrinsic value through PER is as follows:

$$\text{Intrinsic Value} = \text{Estimated EPS} \times \text{PER}$$

### 2.4.3 Dividend Discount Model (DDM)

DDM, also known as the current value approach, can also be referred to as the profit capitalization method (or the capitalization of income method), because it involves capitalizing future values that will be discounted to their present values. The type of DDM used in this study is constant growth DDM. In the case of a constant growth dividend (with a growth of g), if the initial period dividend is $D_{0,}$ then the dividend of the first period is $D_0 (1+g)$ and $D_0 (1+g)^2$, and so on. The DDM method is considered more suitable for companies with consistent growth, at the maturity stage, and always distribute their dividends consistently (Hasanah & Rusliati, 2017). The formula for finding the intrinsic value of a stock using DDM (constant growth), according to Hartono (2017) It is as follows:

$$\mathbf{P0^*} = \frac{\mathbf{D1}}{\boldsymbol{k-g}}$$

## 2.5 Accuracy Test of the Stock Valuation Model with RMSE

When the output is in the form of numbers, the most common method used to characterize a model's ability to predict is to use the root mean square error (RMSE). This metric is a function of the residual model, which represents the difference between the observed value and the value predicted by the model. The mean square error (MSE) is calculated by taking the square root of the MSE, so that the unit is the same as the original data. The value is usually defined as how far the average residual value is from zero, or the average distance between the observed value and the model's prediction (Kuhn & Johnson, 2019).

RMSE is the subtraction between the value of the capital market or the stock market price and the actual value of an issuer or the intrinsic value. The smaller the

value produced by the RMSE, the more accurate the valuation approach model is in projecting the intrinsic value of a stock (Rosandy & Ain, 2023). If a stock valuation model has a low RMSE value or one that approaches zero, the model can be considered capable of analyzing stock prices accurately (Natalia et al., 2019).

The accuracy of the stock valuation model will be evaluated using the Root Mean Square Error (RMSE) test. RMSE is usually used to evaluate a model. In this study, the calculations were carried out to compare DDM, PER, and PBV stock valuation models to identify the most accurate model among them. The formula for performing the Root Mean Square Error (RMSE) test according to (Hasanah & Rusliati, 2017) It is as follows:

$$\text{RMSE} = \sqrt{\frac{\sum_{i=1}^{n}(Y_i - O_i)^2}{n}}$$

Where:

$Y_i$: Closing Price of the stock price

$O_i$: Intrinsic value of shares

$n$ : Amount of data

## 2.6 Previous Research

When valuing a stock, prospective investors need to be aware of the stock's book value, market value, and intrinsic value. The book value reflects the stock's worth based on the company's financial records, while the market value represents the price formed in the stock market. Meanwhile, the intrinsic value describes the stock's true worth. Understanding these three value concepts is essential, as it helps in identifying which stocks are experiencing growth and which are relatively undervalued. The previous research has crucial points for the author to discuss. The

material will serve as the foundation of this research, both for comparison and as a reference. Several previous studies on stock price valuation have conducted their research on different stock sectors as well as in other research periods. This research is also intended to update and build upon the findings of the previous study.

**Table 2.1 Previous Research**

| No. | Researchers and years | Valuation approach method | Research Results | Differences with ongoing research |
|---|---|---|---|---|
| 1. | Artika Ayu Aprilia, Siti Ragil Handayani, Raden Rustam Hidayat (2016) | PER | All mining sector stocks sampled in this study are undervalued, where the intrinsic value exceeds the market price. The right investment decision in this situation is to buy the shares. | Aprilia *et al*., (2016) Using the object of research: mining sector stocks listed on the IDX for the period 2012-2014.<br><br>Meanwhile, the research object chosen by the researcher in this journal is the non-cyclical consumer sector listed on the IDX for the 2021-2023 research period. The approach models used, other than PER, are PBV and DDM. |
| 2. | Nandaini Vita Maulida (2016) | Stock valuation is carried out using absolute methods, specifically the Dividend Discount Model (DDM), the Discounted Cash Flow (DCF), and the Free Cash Flow (FCF) model. | Based on the calculation results of the DDM, DCF, and FCF approach models, different fair price values were obtained. This is because each model uses different formulas and assumptions base. Among the three approach models, the fair price that is closest to the market price is Discounted Cash Flows (DCF). | Maulida (2016) Using absolute methods as its stock valuation approach (such as DDM, DCF, and so on). The object of research in this journal is companies that are members of the Jakarta Islamic Index (JII).<br><br>Meanwhile, the researcher in this journal uses a combination of relative and absolute methods, specifically DDM, PER, and PBV. Furthermore, this study employs a different research object, specifically non-cyclical consumer sector companies listed on the IDX over the 2021–2023 period. |

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**Table 2.1 Continuation**

| No. | Researchers and years | Valuation approach method | Research Results | Difference |
|---|---|---|---|---|
| 3. | Resti Siti Hasanah, Ellen Ruslianti (2017) | using the dividend discount model (DDM) stock valuation method for constant growth and price to book value (PBV) | The intrinsic value obtained from the DDM method is more accurate than the intrinsic value obtained from the PBV method, as shown by the results of the accuracy measurement with the root mean square (RMSE). | The research object used by the Hasanah & Rusliati (2017) Are companies that were listed in LQ45 from 2010 to 2014.<br><br>Meanwhile, this research has a different research object, namely, companies in the non-cyclical consumer sector, with a research period of 2021-2023. The model of approach used, other than DDM and PBV, is PER. |
| 4. | Vandara Vavras Setia (2017) | DDM growth is not constant | The results of this study show that all companies in 2015 are included in the overvalued category, including ADRO, AKRA, ASII, BBCA, BBNI, BBRI, BMRI, CPIN, GGRM, UNTR, and UNVR. Meanwhile, in 2013 and 2014, only one company was included in the undervalued category, namely ASII. | The object of the research is different; the research was conducted by the Faithful (2017) done on LQ-45 share group in 2013-2015<br><br>Meanwhile, in this study, the researcher has a research object in the non-cyclical consumer sector, with a research period of 2021-2023.<br><br>In addition to using the DDM (constant growth) approach model, the researcher also used the PER and PBV approach models, as well as an accuracy test of the intrinsic value stock valuation models. |

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**Table 2.1 Continuation**

| No. | Researchers and years | Valuation approach method | Research Results | Difference |
|---|---|---|---|---|
| 5. | Dr. Hartono (2018) | Relative valuation method with indicators such as Earnings Multiples (PER), Book Value Multiples (PBV), Revenue Multiples, and Cash Flow Multiples. | By using the relative valuation method, the results showed that PT. Waskita Beton Precast, Tbk is considered a more suitable investment option for investors. | Dr. Hartono (2018) Using the companies PT Waskita Beton Precast and PT. Wijaya Karya Beton as a case study of his research, with the cement sub-sector (companies that have a business in the concrete or precast sector).<br><br>Meanwhile, in this study, in addition to PBV and PER, the researcher also used constant growth DDM as a stock valuation tool. The research object is the non-cyclical consumer sector listed on the IDX, with a research period spanning from 2021 to 2023. |
| 6. | Dymas Adji Zaksana Budiono (2022) | Comparison between the two valuation methods, namely: relative valuation (PER, PBV, EV/ EBITDA) and discounted cash flow (DCF) | The results of this study show that both methods (relative valuation method and discounted cash flow) can be used, but discounted cash flow is more realistic based on a safer margin of safety in risk comparison, resulting in Conclusion: undervalued, so that the buy decision is very much recommended for the investors, and for the company, this can be a reference to improve the company's performance. | The difference lies in the research object and the stock valuation tool.<br><br>Budiono, D. A. Z and Yuana, P. (2022) Using research objects of healthcare sector companies listed on the Indonesia Stock Exchange for the period 2017 – 2021.<br><br>Meanwhile, the researcher, in this journal, uses the non-cyclical consumer sector listed on the IDX, with a research period of 2021-2023, as the object of his research.<br>In addition, the stock valuation approach method used by researchers other than PER and PBV is DDM. |

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**Table 2.1 Continuation**

| No. | Researchers and years | Valuation approach method | Research Results | Difference |
|---|---|---|---|---|
| 7. | Elin Nurlia, Heraeni Tanuadmodjo, Imas Purnamasari (2022) | Zero growth DDM, constant growth DDM, and PER | The determination of whether stocks are undervalued or overvalued using the PER approach yields results consistent with the DDM method. DVLA and SIDO stocks are identified as undervalued, leading to an investment decision to buy. In contrast, KBLF, MERK, and PEHA are identified as overvalued, prompting an investment decision to sell. | The research object used by Nurlia et al (2022) Is a pharmaceutical sub-industry stock listed on the IDX from 2015 to 2020<br><br>Meanwhile, in this study, the researcher has selected the consumer non-cyclical sector as the research object, with a 2021-2023 research period and PBV as the stock valuation approach. And there is a measurement of the accuracy of the stock valuation method. |
| 8. | Budi Dharma, Cici Winda Atila, Amanda Damayanti Nasution (2023) | PBV | Out of the nine sample companies, six were assessed as having overvalued stock prices, making selling the appropriate course of action. Meanwhile, three companies were found to be undervalued, indicating that their shares were relatively cheap. | Budi Dharma et al. (2022) Does not use DDM and PER as approaches to conduct stock valuations. And the object used is a pharmaceutical company listed on the Indonesian stock exchange.<br><br>Meanwhile, in this study, in addition to PBV, the researcher also used PER and DDM as stock valuation tools. Additionally, the research object is the non-cyclical consumer sector, with a research period spanning from 2021 to 2023. |

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**Table 2.1 Continuation**

| No. | Researchers and years | Valuation approach method | Research Results | Difference |
|---|---|---|---|---|
| 9. | Hadi Satria Ganefi, Agus Prasetyono, Mei Rani Amalia (2023) | Constant growth Dividend Discount Model (DDM), and Price Earnings Ratio (PER) | Of the 12 existing companies, it is known that 10 companies are overvalued and two companies are undervalued. In an overvalued condition, an investor can sell a stock, while in an undervalued condition, an investor can make a decision to buy a stock. | Ganefi et al., (2023) Using banking subsector companies listed on the Indonesian stock exchange in the 2021-2022 period as the object of its research.<br><br>Meanwhile, the researcher in this journal uses the Consumer Non-Cyclical sector listed on the IDX, with a research period of 2021-2023, as the object of his research. Also, the stock valuation approach method uses PBV, apart from PER and DDM. |
| 10. | Ega, Rusmawati, Aryanti, Husnaini, Rafiq Assaf (2023) | DDM constant growth | The average intrinsic value of shares exceeds the market value of shares in the company Meta Platforms, Inc., 2021, namely the average intrinsic value of shares worth 384.83, while the market price value is worth 329.22.<br>Based on the results of the comparison of intrinsic value and stock market value above, it is concluded that the company Meta Platforms, Inc. in 2021 is in an Undervalued situation, which means that the stock price is cheap, so prospective investors are advised to buy it.<br><br>Meanwhile, for people who already own their shares (investors), they should hold them in the hope of a high share price in the future. | The difference lies in the research object and the stock valuation tool.<br><br>The research object used by the Ega et al., (2023) The shares of the company Meta for the year 2021.<br><br>Meanwhile, the researcher in this journal uses the Consumer Non-Cyclical sector listed on the IDX, with a research period of 2021-2023, as the object of his research. And the stock valuation approach methods used other than DDM are PER and PBV. |

*Continued to the next page*

**Table 2.1 Continuation**

| No. | Researcher/ Title/ Source | Valuation approach method | Research Results | Difference |
|---|---|---|---|---|
| 11. | Novita Sari, Andy Lasmana, Mas Nur Mukmin (2024) | PER and PBV | Using the PBV approach from a total sample of 16 existing companies, six companies had undervalued stock prices in 2019, 7 undervalued companies in 2020, and 5 undervalued companies in 2021-2022, so the majority of companies tended to be overvalued. Meanwhile, based on the PER approach from a total sample of 16 companies, there are 11 companies whose stock prices are undervalued in 2019, 7 undervalued companies in 2020, 5 undervalued companies in 2021, and 8 undervalued companies in 2022.<br><br>In the comparison of fair share price valuations between the PBV and PER methods, there were nine companies experiencing the same conditions in 2019 and 2022, and there were eight companies experiencing the same conditions in 2020 and 2021. | The difference lies in the research object and the stock valuation tool.<br><br>Sari et al., (2024) has a research object of the company registered in the Jakarta Islamic Index (JII) for the 2019-2022 period.<br><br>Meanwhile, the researcher, in this journal, uses the non-cyclical consumer sector listed on the IDX, with a research period of 2021-2023, as the object of his research. As well as the stock valuation approach method used apart from PER and PBV, the researcher also uses DDM as a stock valuation tool. |

*Source: Processed Data, 2024*

## 2.7 Conceptual Framework

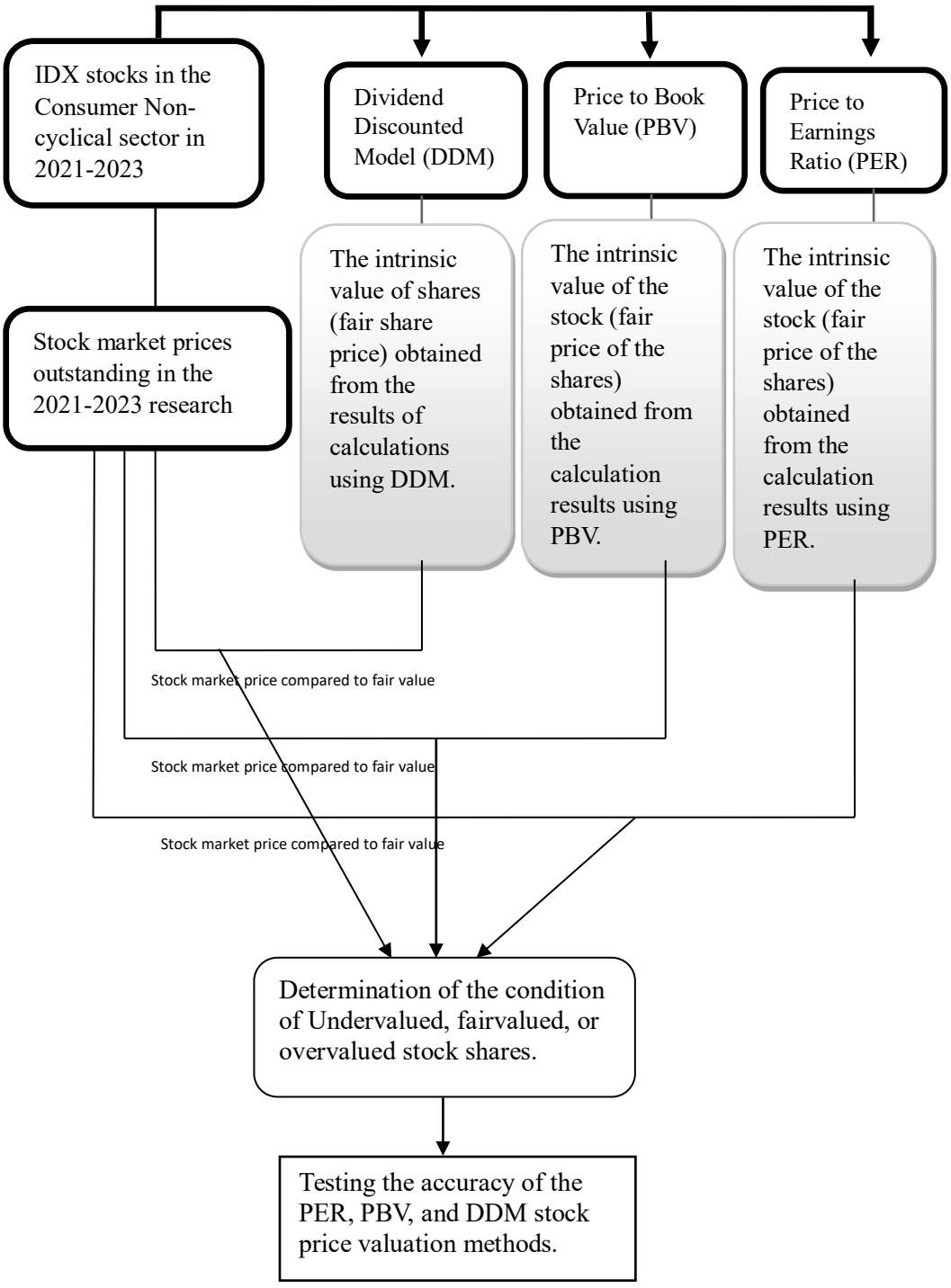


**Figure 2.1 Conceptual Framework**
Source: Data Processed, 2024

# CHAPTER III

# RESEARCH METHODS

## 3.1 Operational Definition

Operational definitions must be established to prevent errors in interpreting the relevant points in this study. The definitions are:

1. Stock Valuation

   Valuation is the process of determining the fair value of a share to find the actual value of the stock (the supposed value owned by a share/intrinsic value). Stock valuation aims to determine whether the stock price is fairvalued, undervalued, or overvalued. This can be done by comparing the intrinsic value of the stock with the market price (closing price). The closing price of the shares can be found on the company's annual financial statements. In this study, the model approach used to calculate the intrinsic value of stocks includes the PBV, PER, and DDM methods.

2. Intrinsic Value of Stocks

   The intrinsic value of a stock refers to the actual value of a share, also known as the fair price of a stock. The actual value of a stock is the price that a stock should have, outside of the price set by the company or the market price that is currently circulating on the stock exchange. This share price can be assessed based on the company's performance and financial statements, as issued by the company. These intrinsic values can be calculated using the PBV, PER, and DDM approach models.

3. PBV (Price to Book Value)

   PBV (Price to Book Value) is a ratio that describes the condition of the performance of the market price of a company's stock to its book value. Book Value per Share shows the net assets owned by shareholders for owning one share. To find the intrinsic value of a stock, it is necessary to have a BV value and the average ratio of the PBV industry. The value of an undervalued stock can be identified if the intrinsic value of the stock is higher than the market price of the stock. The value of an overvalued stock can be identified if the intrinsic value of the stock is lower than the market price of the stock. The value of a fairvalued stock can be identified if the intrinsic value of the stock is equal to the market price of the stock.

4. PER (Price to Earnings Ratio)

   PER (Price to Earnings Ratio) is a measure of stock performance that is based on the ratio between stock price and earnings per share (EPS). To find the intrinsic value of a stock using PER, the PER ratio is multiplied by the estimated EPS. Then the intrinsic value is compared to the market price. Undervalued stocks can be identified if the stock's intrinsic value is higher than its market price, while overvalued stocks can be identified if the stock's intrinsic value is lower than its market price, and fairvalued stocks can be identified if the stock's intrinsic value is equal to its market price.

5. DDM (Dividend Discount Model) Constant Growth

   The DDM approach model involves capitalizing future values that will be discounted to present values. In this model, the fair price of a stock is the present

value of its estimated dividend. DDM is based on the premise that the future cash flow that investors receive from stocks is in the form of cash dividends. The Dividend Discount Model approach assumes that the dividends to be paid grow constantly for an indefinite period of time. Undervalued stock can be identified if the intrinsic value of a stock is higher than its market price, overvalued stock can be identified if the intrinsic value of a stock is lower than its market price, and fairvalued stocks can be identified if the intrinsic value of a stock is equal to its market price.

### 3.2 Population and sample

The population in this study is Consumer Non-Cyclical sector companies listed on the Indonesia Stock Exchange (IDX) for the research years 2021 to 2023. Out of a total population of 129 companies, 37 companies are used as a sample. The sampling method in this study uses the purposive sampling method, with the criteria set as follows:

1. Companies that are not delisted in the Consumer Non-cyclical sector on the Indonesia Stock Exchange (IDX) during the research period.
2. Companies that have a positive EPS value.
3. The company that distributes its dividends regularly every year (during the research period).

Based on these criteria, the number of samples can be determined as follows:

**Table 3.1 Purposive Sampling**

| No. | Information | Sum |
|---|---|---|
| **1.** | Non-cyclical Consumer sector companies listed on the IDX during the 2021-2023 research period | 88 |
| **2.** | Non-cyclical Consumer sector companies delisted on the IDX during the 2021-2023 period | (2) |
| **3.** | Companies that do not have positive EPS | (24) |
| **4.** | Companies that do not distribute their dividends regularly every year (during the research period) | (25) |
| | **Number of companies** | **37** |
| | **37 Company X 3 Years** | **111** |

*Source: Processed Data, 2024*

## 3.3 Type and source of data.

This type of research is quantitative, with the data source used being secondary data. The secondary data used in this study comes from the Annual Financial Report of the relevant companies, which is used as a sample. The focus of this study are companies in the Consumer Non-Cyclical sector with a research period of 2021-2023 that has been listed and published on the Indonesia Stock Exchange (IDX). The annual financial statements of these companies can be accessed and obtained through the official website of the company concerned, the official website of the Indonesia Stock Exchange (idx.co.id), and (finance.yahoo.com).

## 3.4 Data Collection Methods

The data collection method used in this study is the documentation method. The documentation method is a data collection method that uses various kinds of documents or evidence of the past, including records, transcripts, newspapers, financial statements (Annual Financial Report), articles, and others. The

documentation method collects information by studying the data that has been documented.

### 3.5 Data analysis

The data analysis carried out in this study is as follows:

1. Calculate the intrinsic value of the stock first using the PBV, PER, and DDM stock valuation approach model. The calculation of each approach model is as follows:

   **a. Price to Book Value (PBV)**

   The formula for calculating intrinsic values using the PBV approach model is as follows:

   $$\text{Book Value per Share (BVS)} = \frac{\text{Total equity}}{\text{number of shares outstanding}}$$

   $$\text{PBV} = \frac{\text{P ( Price per Share)}}{\text{BVS ( Book Value per Share )}}$$

   Intrinsic value of shares = Book Value per Share (BVS) × PBV average ratio

   **b. Price Earnings Ratio (PER)**

   The formula for finding the intrinsic value of a stock using the PER approach model is as follows:

   Intrinsic value of shares = PER × E1

   $$\text{PER} = \frac{\mathbf{DPR \times (1+g)}}{\mathbf{k-g}}$$

   $$\text{E1} = \text{E0}\ (1+g)$$

   $$\text{E0} = \frac{\text{Net Income}}{\text{Total Number of Shares Outstanding}}$$

   $$g = \text{ROE} \times b$$

$$ROE = \frac{\text{Net Income}}{\text{Shareholder Equity}}$$

$$b = 1 - DPR$$

$$DPR = \frac{D0}{E0}$$

$$k = \frac{D1}{P} + g$$

Where:

PER : Price Earnings Ratio

D0 : Dividend Per Share (DPS) (Dividend per share)

E0 : Earnings Per Share (EPS) (Net income per share)

E1 : EPS Estimate

g : Dividend growth rate

k : The level of return that investors expect (the level of profit that the financier hints at)

P : Stock Market Closing Price

b : retention rate (the proportion of net profit that is not distributed as dividends, but is used to finance the company's investments)

DPR : Dividend Payout Ratio (a ratio that shows the net profit given to shareholders in the form of dividends)

ROE : Return On Equity (the company's ability to generate net profit after tax with its own capital)

**c. Dividend Discounted Model (DDM) Constant Growth**

The assumptions used in DDM constant growth are as follows:

1. Not all profits are divided (Some profits are shared, some profits are withheld). The number of retained profits is denoted by b, with a constant assumption (**b** equals the retention rate).
2. The level of profit produced, from the result of retained earnings and reinvested profits is also called Return on Equity (ROE) of **R**.
3. As a result of these assumptions, earnings per share (**E**) and dividends (**D**) increase by **bR** (**bR** is the notation of the increase), in other words "**g" (growth) = bR** or **(b x ROE).**

According to Husnan (2019) To calculate the intrinsic value with the DDM (constant growth) approach model, the formula is as follows:

$$\mathbf{P0^*} = \frac{\mathbf{D1}}{\mathbf{k-g}}$$

Dt = D0 (1+g)

g = ROE x b

b = 1- DPR

$$\text{DPR} = \frac{\mathbf{DPS}}{\mathbf{EPS}}$$

$$\text{DPS} = \frac{\textbf{Total dividends distributed}}{\textbf{Total shares outstanding}}$$

$$\text{k} = \frac{\text{D1}}{\text{P}} + \text{g}$$

Where:

P0 : Intrinsic value of stocks

D1 : Estimated Dividend

k : The level of return that investors expect (the level of profit that the financier hints at)

Dt : Estimated expected dividend year t

D0 : Dividends in the last year distributed

g : Dividend growth rate

p : Closing price stock

ROE : Return On Equity (the company's ability to generate net profit after tax with its own capital).

b : retention rate (The retention ratio measures the percentage of a company's profits that are reinvested into the company in a certain way, rather than being paid to investors in the form of dividends.

DPR : Dividend Payout Ratio (a ratio that shows the net profit given to shareholders in the form of dividends)

DPS : Dividend Per Share (Dividend per share)

EPS : Earnings Per Share (Net income per share)

2. Determine the condition of undervalued, overvalued, or fair value stock prices based on the PBV, PER, and DDM approach models. The analysis of stock price conditions is carried out by comparing the intrinsic value of the stock with the market price of the stock. The purpose of comparing the intrinsic value of a stock with its market price is to determine the condition of the stock price, whether it is undervalued, overvalued, or at fair value.
3. Measure the accuracy of PBV, PER, and DDM approach models using the Root Mean Square Error (RMSE) test. This test was conducted to determine which

stock valuation approach model is the most accurate among the three intrinsic value approach models: PER, PBV, and DDM.

RMSE is the difference between the value of the capital market or the stock market price and the actual value of an issuer or intrinsic value. The smaller the value produced by the RMSE, the more accurate the valuation approach model on the stock price when projecting the intrinsic value of a stock. If the stock price valuation model has a low or zero RMSE value, then the stock price valuation model can be called a model that can accurately analyze a stock. Formula for performing the test Root Mean Square Error (RMSE) according to (Hasanah & Rusliati, 2017) are as follows:

$$\text{RMSE} = \sqrt{\frac{\sum_{i=1}^{n}(Y_i - O_i)^2}{n}}$$

Where:

$Y_i$: Closing Price of the stock price

$O_i$: Intrinsic value of shares

n : Amount of data

# CHAPTER IV

# RESULTS AND DISCUSSION

## 4.1 Overview of Research Objects

The object of this research focuses on companies listed in the Consumer Non-Cyclical sector on the IDX from 2021 to 2023. The Consumer Non-Cyclical sector refers to a group of companies that produce essential goods required by consumers for their daily needs. The products produced include food, health products, hygiene products, medicines, and others. This study uses data obtained from the financial statements of each company which is the research sample, namely as many as 37 companies. This study aims to measure the intrinsic value of stocks in companies in the Consumer Non-Cyclical sector by using the PBV, PER, and DDM approach models. Then, determine the condition of the stock price (undervalued, overvalued, fair value), and conduct an accuracy test on the three approach models to determine the most accurate valuation model.

## 4.2 Results of Analysis and Discussion

This data analysis aims to assess stock prices by classifying stock price conditions. The condition of the stock price is determined by comparing the intrinsic value of the stock with the market price (closing price). Stock price conditions are classified into three categories: undervalued, overvalued, and fairvalued. The calculation of intrinsic values is carried out with three approach models, namely: PBV, PER, and DDM.

### 4.2.1 Intrinsic Value of Stocks

**4.2.1.1** Intrinsic value of stocks based on the Price to Book Value (PBV) approach model

The intrinsic value of shares can be calculated by multiplying the Book Value (BV) of each company by the average PBV of its industry. Based on the results of the calculation using the PBV approach model in Appendix 2, the average PBV for the industry in 2021 is 2.82. In 2022, the industry average PBV was 3.01. And in 2023, the average industrial PBV is 3.48.

**Table 4.1 Intrinsic Value of Stocks Based on the PBV Approach Model**

| Ticker Code | 2021 | | 2022 | | 2023 | |
|---|---|---|---|---|---|---|
| | BV | Intrinsic Value | BV | Intrinsic Value | BV | Intrinsic Value |
| AALI | 10.999,79 | Rp 31.019,42 | 11.556,79 | Rp 34.785,94 | 11.724,50 | Rp 40.763,50 |
| AMRT | 216,49 | Rp 610,51 | 276,24 | Rp 831,48 | 378,22 | Rp 1.314,97 |
| BISI | 909,35 | Rp 2.564,36 | 1.016,75 | Rp 3.060,42 | 1.148,90 | Rp 3.994,47 |
| BUDI | 308,45 | Rp 869,82 | 321,19 | Rp 966,78 | 353,71 | Rp 1.229,76 |
| CAMP | 173,80 | Rp 490,12 | 159,98 | Rp 481,53 | 161,88 | Rp 562,81 |
| CEKA | 2.331,71 | Rp 6.575,42 | 2.605,11 | Rp 7.841,39 | 2.760,14 | Rp 9.596,41 |
| CLEO | 83,46 | Rp 235,37 | 98,76 | Rp 297,28 | 126,22 | Rp 438,82 |
| CPIN | 1.533,72 | Rp 4.325,10 | 2.430,02 | Rp 7.314,37 | 1.648,30 | Rp 5.730,76 |
| DLTA | 1.261,68 | Rp 3.557,93 | 1.249,94 | Rp 3.762,32 | 1.167,06 | Rp 4.057,60 |
| DSNG | 662,79 | Rp 1.869,07 | 769,84 | Rp 2.317,21 | 838,64 | Rp 2.915,76 |
| EPMT | 2.527,81 | Rp 7.128,42 | 2.659,22 | Rp 8.004,24 | 2.694,28 | Rp 9.367,41 |
| GGRM | 30.813,70 | Rp 86.894,64 | 30.069,29 | Rp 90.508,57 | 31.632,05 | Rp 109.977,65 |
| GOOD | 82,14 | Rp 231,62 | 90,83 | Rp 273,40 | 105,95 | Rp 368,35 |
| HMSP | 250,96 | Rp 707,71 | 242,18 | Rp 728,97 | 256,79 | Rp 892,82 |
| ICBP | 4.692,53 | Rp 13.232,94 | 4.928,27 | Rp 14.834,09 | 5.325,37 | Rp 18.515,15 |
| INDF | 9.866,50 | Rp 27.823,54 | 10.662,70 | Rp 32.094,72 | 11.441,91 | Rp 39.781,01 |
| JPFA | 1.117,35 | Rp 3.150,93 | 1.164,43 | Rp 3.504,93 | 1.208,13 | Rp 4.200,40 |
| KMDS | 226,98 | Rp 640,09 | 231,34 | Rp 696,34 | 259,52 | Rp 902,28 |
| LSIP | 1.490,94 | Rp 4.204,46 | 1.602,80 | Rp 4.824,44 | 1.663,15 | Rp 5.782,40 |
| MIDI | 560,76 | Rp 1.581,35 | 689,27 | Rp 2.074,71 | 117,02 | Rp 406,84 |
| MLBI | 521,67 | Rp 1.471,11 | 509,39 | Rp 1.533,25 | 660,40 | Rp 2.296,05 |
| MYOR | 508,08 | Rp 1.432,79 | 574,04 | Rp 1.727,85 | 683,50 | Rp 2.376,37 |
| ROTI | 460,59 | Rp 1.298,86 | 433,39 | Rp 1.304,50 | 386,88 | Rp 1.345,10 |
| SDPC | 186,01 | Rp 524,55 | 203,23 | Rp 611,71 | 217,99 | Rp 757,89 |
| SIMP | 1.251,00 | Rp 3.527,83 | 1.338,32 | Rp 4.028,34 | 1.373,32 | Rp 4.774,75 |
| SKBM | 573,66 | Rp 1.617,71 | 620,75 | Rp 1.868,46 | 616,89 | Rp 2.144,78 |

*Linked to next page*

**Table 4.1 Continuation**

| Ticker Code | 2021 | | 2022 | | 2023 | |
|---|---|---|---|---|---|---|
| | BV | Intrinsic Value | BV | Intrinsic Value | BV | Intrinsic Value |
| SKLT | 784,43 | Rp 2.212,09 | 855,25 | Rp 2.574,29 | 118,27 | Rp 411,20 |
| SMAR | 5.019,80 | Rp 14.155,83 | 6.701,43 | Rp 20.171,30 | 6.640,17 | Rp 23.086,42 |
| SSMS | 641,21 | Rp 1.808,21 | 676,53 | Rp 2.036,36 | 208,92 | Rp 726,37 |
| TBLA | 1.215,32 | Rp 3.427,20 | 1.278,94 | Rp 3.849,62 | 1.361,39 | Rp 4.733,24 |
| TGKA | 1.916,83 | Rp 5.405,45 | 2.226,79 | Rp 6.702,63 | 2.395,61 | Rp 8.329,01 |
| ULTJ | 444,72 | Rp 1.254,12 | 503,97 | Rp 1.516,96 | 578,78 | Rp 2.012,30 |
| UNVR | 113,27 | Rp 319,42 | 104,78 | Rp 315,38 | 88,63 | Rp 308,15 |
| VICI | 111,83 | Rp 315,36 | 119,41 | Rp 359,43 | 136,96 | Rp 476,18 |
| WIIM | 627,84 | Rp 1.770,51 | 714,77 | Rp 2.151,46 | 879,73 | Rp 3.058,63 |
| PNGO | 812,92 | Rp 2.292,44 | 906,94 | Rp 2.729,90 | 1.019,96 | Rp 3.546,17 |
| UCID | 1.180,42 | Rp 3.328,79 | 1.242,31 | Rp 3.739,35 | 1.338,52 | Rp 4.653,73 |

*Source: Processed Data, 2025*

From the table above, it can be observed that in 2021 the intrinsic value of stocks ranged from Rp 231.62 to Rp 86,894.64. The company with the lowest intrinsic value was GOOD, while the company with the highest intrinsic value was GGRM. In 2022, the intrinsic value of stocks ranged from Rp 273.40 to Rp 90,508.57, with GOOD recording the lowest intrinsic value and GGRM the highest. In 2023, the intrinsic value of stocks ranged from Rp 308.15 to Rp 109,977.65, with TGKA having the lowest intrinsic value and GGRM the highest.

#### 4.2.1.2 Intrinsic value of stocks based on the Price Earnings Ratio (PER) approach model

In this study, the PER model is applied under the assumption that the company's dividends grow at a constant rate. This PER approach is a derivative of the constant growth DDM model, as explained in Damodaran's book. Based on the calculations using this PER approach, the intrinsic values obtained are as follows:

**Table 4.2 Intrinsic Value of Stocks Based on the PER Approach Model**

| Kode Emiten | 2021 | | | 2022 | | | 2023 | | |
|---|---|---|---|---|---|---|---|---|---|
| | PER (DPR*(1+g)) (K-G) (Damodaran) | estimated EPS (E1) | Intrinsic Value | PER (DPR*(1+g)) (K-G) (Damodaran) | estimated EPS (E1) | Intrinsic Value | PER (DPR*(1+g)) (K-G) (Damodaran) | estimated EPS (E1) | Intrinsic Value |
| AALI | 9,96 | 1099,37 | Rp 10.944,53 | 9,31 | 933,58 | Rp 8.691,37 | 12,97 | 555,73 | Rp 7.208,48 |
| AMRT | 30,45 | 55,32 | Rp 1.684,41 | 45,64 | 81,43 | Rp 3.716,43 | 41,35 | 94,82 | Rp 3.920,37 |
| BISI | 8,61 | 139,36 | Rp 1.199,25 | 10,14 | 192,61 | Rp 1.952,37 | 8,97 | 221,10 | Rp 1.984,33 |
| BUDI | 10,10 | 19,34 | Rp 195,35 | 11,87 | 20,53 | Rp 243,66 | 12,71 | 22,95 | Rp 291,61 |
| CAMP | 18,03 | 17,97 | Rp 324,06 | 13,52 | 18,75 | Rp 253,38 | 18,76 | 21,87 | Rp 410,24 |
| CEKA | 6,54 | 342,85 | Rp 2.241,40 | 5,89 | 409,59 | Rp 2.413,29 | 7,56 | 272,78 | Rp 2.062,37 |
| CLEO | 20,86 | 9,99 | Rp 208,36 | 40,06 | 18,48 | Rp 740,08 | 33,76 | 29,72 | Rp 1.003,19 |
| CPIN | 28,83 | 236,68 | Rp 6.824,53 | 32,48 | 184,22 | Rp 5.984,42 | 36,53 | 144,52 | Rp 5.278,76 |
| DLTA | 15,73 | 232,21 | Rp 3.651,68 | 13,17 | 285,24 | Rp 3.756,98 | 13,25 | 232,76 | Rp 3.084,68 |
| DSNG | 7,92 | 74,52 | Rp 590,08 | 5,91 | 127,74 | Rp 755,18 | 7,42 | 83,89 | Rp 622,22 |
| EPMT | 9,01 | 326,97 | Rp 2.946,33 | 31,93 | 47,36 | Rp 1.512,08 | 10,38 | 258,62 | Rp 2.685,12 |
| GGRM | 10,61 | 2942,59 | Rp 31.224,87 | 12,12 | 1406,32 | Rp 17.049,32 | 7,71 | 2904,09 | Rp 22.388,84 |
| GOOD | 50,35 | 12,90 | Rp 649,71 | 48,54 | 12,53 | Rp 608,08 | 29,85 | 17,28 | Rp 515,93 |
| HMSP | 15,07 | 58,11 | Rp 875,88 | 14,95 | 51,91 | Rp 776,30 | 13,54 | 74,15 | Rp 1.004,20 |
| ICBP | 17,27 | 596,14 | Rp 10.295,84 | 26,59 | 410,72 | Rp 10.922,23 | 19,31 | 655,02 | Rp 12.645,56 |
| INDF | 7,91 | 946,74 | Rp 7.490,00 | 9,85 | 767,79 | Rp 7.563,13 | 7,53 | 1004,77 | Rp 7.561,25 |
| JPFA | 11,13 | 195,83 | Rp 2.178,67 | 11,21 | 128,83 | Rp 1.444,03 | 15,12 | 82,03 | Rp 1.240,74 |
| KMDS | 6,33 | 91,05 | Rp 576,48 | 11,24 | 70,37 | Rp 791,00 | 7,34 | 70,91 | Rp 520,51 |
| LSIP | 9,00 | 159,66 | Rp 1.436,67 | 7,17 | 163,14 | Rp 1.169,22 | 8,23 | 115,96 | Rp 953,99 |
| MIDI | 28,59 | 117,95 | Rp 3.372,60 | 27,68 | 168,35 | Rp 4.660,23 | 28,37 | 18,46 | Rp 523,79 |
| MLBI | 17,16 | 219,68 | Rp 3.769,67 | 19,89 | 428,27 | Rp 8.517,88 | 18,82 | 621,73 | Rp 11.700,59 |
| MYOR | 38,57 | 53,11 | Rp 2.048,21 | 32,08 | 97,13 | Rp 3.116,12 | 20,20 | 165,93 | Rp 3.352,64 |
| ROTI | 29,33 | 45,85 | Rp 1.344,79 | 18,67 | 79,51 | Rp 1.484,32 | 17,81 | 52,90 | Rp 942,28 |
| SDPC | 18,79 | 7,79 | Rp 146,45 | 18,84 | 20,92 | Rp 394,14 | 6,75 | 28,83 | Rp 194,65 |
| SIMP | 7,59 | 68,14 | Rp 516,85 | 5,70 | 81,58 | Rp 464,75 | 8,07 | 49,42 | Rp 398,59 |
| SKBM | 21,63 | 17,59 | Rp 380,32 | 8,15 | 53,58 | Rp 436,83 | 356,76 | 0,84 | Rp 299,79 |
| SKLT | 22,42 | 139,98 | Rp 3.138,75 | 17,44 | 130,74 | Rp 2.280,55 | 4,10 | 82,07 | Rp 336,58 |
| SMAR | 5,00 | 1109,40 | Rp 5.542,08 | 3,20 | 2374,04 | Rp 7.607,51 | 12,41 | 317,59 | Rp 3.940,07 |
| SSMS | 7,29 | 191,26 | Rp 1.394,45 | 8,05 | 203,83 | Rp 1.641,29 | 17,47 | 48,35 | Rp 844,52 |
| TBLA | 5,82 | 166,01 | Rp 965,42 | 4,80 | 159,11 | Rp 764,16 | 7,03 | 111,21 | Rp 781,72 |
| TGKA | 14,51 | 568,55 | Rp 8.247,42 | 15,02 | 573,35 | Rp 8.611,83 | 13,70 | 526,67 | Rp 7.213,95 |
| ULTJ | 14,17 | 134,33 | Rp 1.903,52 | 18,79 | 107,81 | Rp 2.025,65 | 16,15 | 126,62 | Rp 2.045,04 |
| UNVR | 23,62 | 131,01 | Rp 3.093,94 | 29,53 | 124,89 | Rp 3.687,63 | 25,49 | 114,64 | Rp 2.922,22 |
| VICI | 22,61 | 30,67 | Rp 693,36 | 37,24 | 15,48 | Rp 576,60 | 27,58 | 30,02 | Rp 827,81 |
| WIIM | 5,60 | 92,67 | Rp 519,27 | 6,00 | 135,59 | Rp 813,33 | 8,83 | 283,11 | Rp 2.501,08 |
| PNGO | 7,58 | 280,86 | Rp 2.129,58 | 7,02 | 246,96 | Rp 1.732,52 | 6,36 | 272,66 | Rp 1.733,97 |
| UCID | 13,55 | 125,78 | Rp 1.704,80 | 15,02 | 79,23 | Rp 1.189,99 | 10,16 | 112,02 | Rp 1.138,23 |

*Source: Processed Data, 2025*

Based on Table 4.2 above, in 2021 the intrinsic value of shares ranged from IDR 146.45 to IDR 31,224.87. The company with the lowest intrinsic value was SDPC at IDR 146.45, while the company with the highest intrinsic value was GGRM at IDR 31,224.87. In 2022, the intrinsic value ranged from IDR 243.66 to IDR 17,049.32. Among the 37 companies, BUDI recorded the lowest intrinsic value at IDR 243.66, while GGRM had the highest at IDR 17,049.32. In 2023, the intrinsic value ranged from IDR 194.65 to IDR 22,388.84, with SDPC recording

the lowest intrinsic value at IDR 194.65 and GGRM recording the highest intrinsic value at IDR 22,388.84.

#### 4.2.1.3 The intrinsic value of the stock is based on the Dividend Discounted Model (DDM) approach model

Based on the results of the calculation using the constant growth DDM approach model, the intrinsic values are obtained as follows:

**Table 4.3 Intrinsic Value of Stocks Based on DDM's Approach Model**

| Ticker Code | 2021 | | | 2022 | | | 2023 | | |
|---|---|---|---|---|---|---|---|---|---|
| | D1 | k-g | Intrinsic Value (DDM Constant Growth) | D1 | k-g | Intrinsic Value (DDM Constant Growth) | D1 | k-g | Intrinsic Value (DDM Constant Growth) |
| AALI | 273,70 | 0,03 | Rp 10.196,72 | 462,067 | 0,06 | Rp 8.351,54 | 406,20 | 0,06 | Rp 7.116,15 |
| AMRT | 10,95 | 0,01 | Rp 1.430,58 | 22,24 | 0,01 | Rp 3.138,24 | 27,83 | 0,01 | Rp 3.389,20 |
| BISI | 41,72 | 0,04 | Rp 1.092,36 | 75,12 | 0,04 | Rp 1.767,42 | 75,73 | 0,04 | Rp 1.781,83 |
| BUDI | 6,27 | 0,03 | Rp 187,00 | 8,31 | 0,04 | Rp 234,67 | 14,34 | 0,05 | Rp 284,72 |
| CAMP | 7,40 | 0,02 | Rp 306,56 | 31,85 | 0,11 | Rp 278,45 | 20,20 | 0,05 | Rp 406,10 |
| CEKA | 109,19 | 0,05 | Rp 2.052,76 | 110,40 | 0,05 | Rp 2.185,93 | 105,73 | 0,05 | Rp 1.950,66 |
| CLEO | 28,49 | 0,09 | Rp 312,94 | 1,15 | 0,00 | Rp 640,89 | 1,95 | 0,00 | Rp 843,96 |
| CPIN | 119,95 | 0,02 | Rp 6.372,28 | 111,15 | 0,02 | Rp 5.814,81 | 102,49 | 0,02 | Rp 5.150,32 |
| DLTA | 247,03 | 0,07 | Rp 3.695,57 | 297,13 | 0,08 | Rp 3.793,31 | 303,81 | 0,09 | Rp 3.299,84 |
| DSNG | 13,40 | 0,02 | Rp 543,18 | 22,44 | 0,03 | Rp 673,13 | 31,76 | 0,05 | Rp 587,65 |
| EPMT | 208,92 | 0,07 | Rp 2.820,47 | 152,01 | 0,07 | Rp 2.039,17 | 208,73 | 0,08 | Rp 2.637,13 |
| GGRM | 2626,41 | 0,08 | Rp 30.910,85 | 2.189,78 | 0,13 | Rp 17.518,21 | 1.259,45 | 0,06 | Rp 21.331,97 |
| GOOD | 3,98 | 0,01 | Rp 584,04 | 6,39 | 0,01 | Rp 565,02 | 6,57 | 0,01 | Rp 471,01 |
| HMSP | 69,36 | 0,08 | Rp 919,36 | 60,85 | 0,08 | Rp 807,52 | 57,94 | 0,06 | Rp 948,03 |
| ICBP | 233,89 | 0,02 | Rp 9.464,34 | 224,70 | 0,02 | Rp 10.450,95 | 205,58 | 0,02 | Rp 11.564,03 |
| INDF | 302,52 | 0,04 | Rp 6.882,89 | 294,81 | 0,04 | Rp 7.131,76 | 278,26 | 0,04 | Rp 6.983,56 |
| JPFA | 44,75 | 0,02 | Rp 1.935,80 | 62,78 | 0,05 | Rp 1.367,49 | 50,81 | 0,04 | Rp 1.209,99 |
| KMDS | 15,85 | 0,03 | Rp 500,19 | 23,46 | 0,03 | Rp 674,41 | 39,89 | 0,08 | Rp 469,78 |
| LSIP | 22,01 | 0,02 | Rp 1.304,78 | 54,71 | 0,05 | Rp 1.089,39 | 54,85 | 0,06 | Rp 921,44 |
| MIDI | 25,76 | 0,01 | Rp 2.730,10 | 35,89 | 0,01 | Rp 3.720,33 | 3,96 | 0,01 | Rp 474,58 |
| MLBI | 330,22 | 0,06 | Rp 5.422,50 | 440,42 | 0,05 | Rp 8.731,27 | 436,20 | 0,05 | Rp 9.522,58 |
| MYOR | 52,10 | 0,03 | Rp 2.044,10 | 23,45 | 0,01 | Rp 2.791,11 | 40,61 | 0,01 | Rp 2.889,30 |
| ROTI | 47,79 | 0,04 | Rp 1.352,37 | 59,33 | 0,04 | Rp 1.399,75 | 88,91 | 0,09 | Rp 1.040,97 |
| SDPC | 0,52 | 0,00 | Rp 141,13 | 1,09 | 0,00 | Rp 361,74 | 2,22 | 0,01 | Rp 175,37 |
| SIMP | 3,13 | 0,01 | Rp 485,47 | 13,50 | 0,03 | Rp 438,64 | 15,14 | 0,04 | Rp 387,13 |
| SKBM | 1,23 | 0,00 | Rp 370,02 | 3,76 | 0,01 | Rp 406,35 | 9,74 | 0,03 | Rp 306,81 |
| SKLT | 15,37 | 0,01 | Rp 2.756,04 | 46,72 | 0,02 | Rp 2.108,81 | 2,65 | 0,01 | Rp 308,08 |
| SMAR | 388,97 | 0,08 | Rp 4.915,63 | 384,31 | 0,06 | Rp 6.136,54 | 367,22 | 0,09 | Rp 3.969,92 |
| SSMS | 36,65 | 0,03 | Rp 1.160,02 | 163,56 | 0,11 | Rp 1.553,28 | 67,10 | 0,07 | Rp 939,43 |
| TBLA | 27,21 | 0,03 | Rp 876,08 | 93,22 | 0,13 | Rp 728,76 | 20,98 | 0,03 | Rp 737,09 |
| TGKA | 390,76 | 0,05 | Rp 7.598,15 | 324,89 | 0,04 | Rp 7.819,46 | 375,44 | 0,06 | Rp 6.821,29 |
| ULTJ | 91,47 | 0,05 | Rp 1.728,73 | 24,99 | 0,01 | Rp 1.728,54 | 33,43 | 0,02 | Rp 1.808,88 |
| UNVR | 144,03 | 0,04 | Rp 3.565,96 | 135,52 | 0,03 | Rp 4.163,16 | 121,92 | 0,04 | Rp 3.211,77 |
| VICI | 9,86 | 0,02 | Rp 597,56 | 7,44 | 0,01 | Rp 542,28 | 10,16 | 0,01 | Rp 733,54 |
| WIIM | 22,58 | 0,05 | Rp 471,43 | 24,54 | 0,03 | Rp 715,82 | 85,39 | 0,04 | Rp 2.106,99 |
| PNGO | 119,37 | 0,07 | Rp 1.819,75 | 133,49 | 0,09 | Rp 1.557,41 | 144,68 | 0,09 | Rp 1.558,06 |
| UCID | 16,26 | 0,01 | Rp 1.572,25 | 23,83 | 0,02 | Rp 1.141,51 | 16,10 | 0,02 | Rp 1.066,88 |

*Source: Processed Data, 2025*

Based on Table 4.3, in 2021 the intrinsic value of stocks was within the range of IDR 141.13 to IDR 30,910.85. SDPC recorded the lowest intrinsic value at IDR 141.13, while GGRM recorded the highest at IDR 30,910.85. In 2022, the intrinsic value of stocks ranged from IDR 234.67 to IDR 17,518.21. In this period, BUDI had the lowest intrinsic value at IDR 234.67, whereas GGRM had the highest intrinsic value at IDR 17,518.21. In 2023, the intrinsic value of stocks ranged from IDR 175.37 to IDR 21,331.97, with SDPC having the lowest and GGRM the highest.

### 4.2.2 Identify Stock Price Conditions

After the intrinsic value of the stock is known, it can be determined whether the stock price is undervalued, overvalued, or fairvalued. By comparing the intrinsic value and market price of stocks, the conditions of stock prices are as follows:

1. Intrinsic value of < stock market price is → overvalued
2. Intrinsic value of > stock market price is → undervalued
3. Intrinsic value of shares = Fair valued stock market price → fairvalued

#### 4.2.2.1 Stocks Condition Identification Based on the PBV Approach Model

Based on the calculation of intrinsic stock values using the Price-to-Book Value (PBV) model, the intrinsic value of each stock is compared with its market price. This comparison enables investors to identify the condition of the stock price, whether it is undervalued, overvalued, or fairly valued.

**Table 4.4 Comparison of the Intrinsic Value of PBV with Market Value**

| Ticker Code | Stock Price Condition 2021 | | | Stock Price Condition 2022 | | | Stock Price Condition 2023 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Intrinsic Value (PBV) | PRICE (2021) | Description (under/over/fair) | Intrinsic Value (PBV) | PRICE (2022) | Description (under/over/fair) | Intrinsic Value (PBV) | PRICE (2023) | Description (under/over/fair) |
| AALI | Rp 31.019,42 | Rp 9.500 | undervalued | Rp 34.785,94 | Rp 8.025 | undervalued | Rp 40.763,50 | Rp 7.025 | undervalued |
| AMRT | Rp 610,51 | Rp 1.215 | Overvalued | Rp 831,48 | Rp 2.650 | Overvalued | Rp 1.314,97 | Rp 2.930 | Overvalued |
| BISI | Rp 2.564,36 | Rp 995 | undervalued | Rp 3.060,42 | Rp 1.600 | undervalued | Rp 3.994,47 | Rp 1.600 | undervalued |
| BUDI | Rp 869,82 | Rp 179 | undervalued | Rp 966,78 | Rp 226 | undervalued | Rp 1.229,76 | Rp 278 | undervalued |

*Linked to the next page*

**Table 4.4 Continuation**

| Ticker Code | Stock Price Condition 2021 | | | Stock Price Condition 2022 | | | Stock Price Condition 2023 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Intrinsic Value (PBV) | PRICE (2021) | Description (under/over/fair) | Intrinsic Value (PBV) | PRICE (2022) | Description (under/over/fair) | Intrinsic Value (PBV) | PRICE (2023) | Description (under/over/fair) |
| CAMP | Rp 490,12 | Rp 290 | undervalued | Rp 481,53 | Rp 306 | undervalued | Rp 562,81 | Rp 402 | undervalued |
| CEKA | Rp 6.575,42 | Rp 1.880 | undervalued | Rp 7.841,39 | Rp 1.980 | undervalued | Rp 9.596,41 | Rp 1.845 | undervalued |
| CLEO | Rp 235,37 | Rp 470 | Overvalued | Rp 297,28 | Rp 555 | Overvalued | Rp 438,82 | Rp 710 | Overvalued |
| CPIN | Rp 4.325,10 | Rp 5.950 | Overvalued | Rp 7.314,37 | Rp 5.650 | undervalued | Rp 5.730,76 | Rp 5.025 | undervalued |
| DLTA | Rp 3.557,93 | Rp 3.740 | Overvalued | Rp 3.762,32 | Rp 3.830 | Overvalued | Rp 4.057,60 | Rp 3.530 | undervalued |
| DSNG | Rp 1.869,07 | Rp 500 | undervalued | Rp 2.317,21 | Rp 600 | undervalued | Rp 2.915,76 | Rp 555 | undervalued |
| EPMT | Rp 7.128,42 | Rp 2.700 | undervalued | Rp 8.004,24 | Rp 2.750 | undervalued | Rp 9.367,41 | Rp 2.590 | undervalued |
| GGRM | Rp 86.894,64 | Rp 30.600 | undervalued | Rp 90.508,57 | Rp 18.000 | undervalued | Rp 109.977,65 | Rp 20.325 | undervalued |
| GOOD | Rp 231,62 | Rp 525 | Overvalued | Rp 273,40 | Rp 525 | Overvalued | Rp 368,35 | Rp 430 | Overvalued |
| HMSP | Rp 707,71 | Rp 965 | Overvalued | Rp 728,97 | Rp 840 | Overvalued | Rp 892,82 | Rp 895 | Overvalued |
| ICBP | Rp 13.232,94 | Rp 8.700 | undervalued | Rp 14.834,09 | Rp 10.000 | undervalued | Rp 18.515,15 | Rp 10.575 | undervalued |
| INDF | Rp 27.823,54 | Rp 6.325 | undervalued | Rp 32.094,72 | Rp 6.725 | undervalued | Rp 39.781,01 | Rp 6.450 | undervalued |
| JPFA | Rp 3.150,93 | Rp 1.720 | undervalued | Rp 3.504,93 | Rp 1.295 | undervalued | Rp 4.200,40 | Rp 1.180 | undervalued |
| KMDS | Rp 640,09 | Rp 434 | undervalued | Rp 696,34 | Rp 575 | undervalued | Rp 902,28 | Rp 424 | undervalued |
| LSIP | Rp 4.204,46 | Rp 1.185 | undervalued | Rp 4.824,44 | Rp 1.015 | undervalued | Rp 5.782,40 | Rp 890 | undervalued |
| MIDI | Rp 1.581,35 | Rp 2.210 | Overvalued | Rp 2.074,71 | Rp 2.970 | Overvalued | Rp 406,84 | Rp 430 | Overvalued |
| MLBI | Rp 1.471,11 | Rp 7.800 | Overvalued | Rp 1.533,25 | Rp 8.950 | Overvalued | Rp 2.296,05 | Rp 7.750 | Overvalued |
| MYOR | Rp 1.432,79 | Rp 2.040 | Overvalued | Rp 1.727,85 | Rp 2.500 | Overvalued | Rp 2.376,37 | Rp 2.490 | Overvalued |
| ROTI | Rp 1.298,86 | Rp 1.360 | Overvalued | Rp 1.304,50 | Rp 1.320 | Overvalued | Rp 1.345,10 | Rp 1.150 | undervalued |
| SDPC | Rp 524,55 | Rp 136 | undervalued | Rp 611,71 | Rp 332 | undervalued | Rp 757,89 | Rp 158 | undervalued |
| SIMP | Rp 3.527,83 | Rp 456 | undervalued | Rp 4.028,34 | Rp 414 | undervalued | Rp 4.774,75 | Rp 376 | undervalued |
| SKBM | Rp 1.617,71 | Rp 360 | undervalued | Rp 1.868,46 | Rp 378 | undervalued | Rp 2.144,78 | Rp 314 | undervalued |
| SKLT | Rp 2.212,09 | Rp 2.420 | Overvalued | Rp 2.574,29 | Rp 1.950 | undervalued | Rp 411,20 | Rp 282 | undervalued |
| SMAR | Rp 14.155,83 | Rp 4.360 | undervalued | Rp 20.171,30 | Rp 4.950 | undervalued | Rp 23.086,42 | Rp 4.000 | undervalued |
| SSMS | Rp 1.808,21 | Rp 965 | undervalued | Rp 2.036,36 | Rp 1.470 | undervalued | Rp 726,37 | Rp 1.045 | Overvalued |
| TBLA | Rp 3.427,20 | Rp 795 | undervalued | Rp 3.849,62 | Rp 695 | undervalued | Rp 4.733,24 | Rp 695 | undervalued |
| TGKA | Rp 5.405,45 | Rp 7.000 | Overvalued | Rp 6.702,63 | Rp 7.100 | Overvalued | Rp 8.329,01 | Rp 6.450 | undervalued |
| ULTJ | Rp 1.254,12 | Rp 1.570 | Overvalued | Rp 1.516,96 | Rp 1.475 | undervalued | Rp 2.012,30 | Rp 1.600 | undervalued |
| UNVR | Rp 319,42 | Rp 4.110 | Overvalued | Rp 315,38 | Rp 4.700 | Overvalued | Rp 308,15 | Rp 3.530 | Overvalued |
| VICI | Rp 315,36 | Rp 515 | Overvalued | Rp 359,43 | Rp 510 | Overvalued | Rp 476,18 | Rp 650 | Overvalued |
| WIIM | Rp 1.770,51 | Rp 428 | undervalued | Rp 2.151,46 | Rp 630 | undervalued | Rp 3.058,63 | Rp 1.775 | undervalued |
| PNGO | Rp 2.292,44 | Rp 1.555 | undervalued | Rp 2.729,90 | Rp 1.400 | undervalued | Rp 3.546,17 | Rp 1.400 | undervalued |
| UCID | Rp 3.328,79 | Rp 1.450 | undervalued | Rp 3.739,35 | Rp 1.095 | undervalued | Rp 4.653,73 | Rp 1.095 | undervalued |

*Source: Processed data, 2025*

Stock prices are categorized into three conditions, namely undervalued, overvalued, and fairvalued. In Table 4.4 for 2021, out of a total of 37 companies, 15 are in an overvalued condition (market price > intrinsic value), indicating that the stock prices are relatively expensive. Meanwhile, the other 22 companies are undervalued (market price < intrinsic value). In 2022, 12 companies are overvalued, and the remaining 25 companies are undervalued. Meanwhile, in 2023, 10 were overvalued, and the remaining 27 companies are undervalued.

### 4.2.2.1 Stock Price Conditions Based on the PER Approach Model

The results of the calculation of the intrinsic value of stocks using the PER approach model (Price Earnings Ratio) are compared with the market value, so that

shareholders and potential investors can find out whether the stock price is undervalued, expensive (overvalued), or at a fair price (fairvalued).

**Table 4.5 Comparison of the Intrinsic Value of PER with the Market Value**

| Ticker Code | Stock Price Condition 2021 | | | Stock Price Condition 2022 | | | Stock Price Condition 2023 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Intrinsic Value (PER) | PRICE (2021) | Description (under/over/fair) | Intrinsic Value (PER) | PRICE (2022) | Description (under/over/fair) | Intrinsic Value (PER) | PRICE (2023) | Description (under/over/fair) |
| AALI | Rp 10.944,53 | Rp 9.500 | undervalued | Rp 8.691,37 | Rp 8.025 | undervalued | Rp 7.208,48 | Rp 7.025 | undervalued |
| AMRT | Rp 1.684,41 | Rp 1.215 | undervalued | Rp 3.716,43 | Rp 2.650 | undervalued | Rp 3.920,37 | Rp 2.930 | undervalued |
| BISI | Rp 1.199,25 | Rp 995 | undervalued | Rp 1.952,37 | Rp 1.600 | undervalued | Rp 1.984,33 | Rp 1.600 | undervalued |
| BUDI | Rp 195,35 | Rp 179 | undervalued | Rp 243,66 | Rp 226 | undervalued | Rp 291,61 | Rp 278 | undervalued |
| CAMP | Rp 324,06 | Rp 290 | undervalued | Rp 253,38 | Rp 306 | Overvalued | Rp 410,24 | Rp 402 | undervalued |
| CEKA | Rp 2.241,40 | Rp 1.880 | undervalued | Rp 2.413,29 | Rp 1.980 | undervalued | Rp 2.062,37 | Rp 1.845 | undervalued |
| CLEO | Rp 208,36 | Rp 470 | Overvalued | Rp 740,08 | Rp 555 | undervalued | Rp 1.003,19 | Rp 710 | undervalued |
| CPIN | Rp 6.824,53 | Rp 5.950 | undervalued | Rp 5.984,42 | Rp 5.650 | undervalued | Rp 5.278,76 | Rp 5.025 | undervalued |
| DLTA | Rp 3.651,68 | Rp 3.740 | Overvalued | Rp 3.756,98 | Rp 3.830 | Overvalued | Rp 3.084,68 | Rp 3.530 | Overvalued |
| DSNG | Rp 590,08 | Rp 500 | undervalued | Rp 755,18 | Rp 600 | undervalued | Rp 622,22 | Rp 555 | undervalued |
| EPMT | Rp 2.946,33 | Rp 2.700 | undervalued | Rp 1.512,08 | Rp 2.750 | Overvalued | Rp 2.685,12 | Rp 2.590 | undervalued |
| GGRM | Rp 31.224,87 | Rp30.600 | undervalued | Rp 17.049,32 | Rp 18.000 | Overvalued | Rp 22.388,84 | Rp 20.325 | undervalued |
| GOOD | Rp 649,71 | Rp 525 | undervalued | Rp 608,08 | Rp 525 | undervalued | Rp 515,93 | Rp 430 | undervalued |
| HMSP | Rp 875,88 | Rp 965 | Overvalued | Rp 776,30 | Rp 840 | Overvalued | Rp 1.004,20 | Rp 895 | undervalued |
| ICBP | Rp 10.295,84 | Rp 8.700 | undervalued | Rp 10.922,23 | Rp 10.000 | undervalued | Rp 12.645,56 | Rp 10.575 | undervalued |
| INDF | Rp 7.490,00 | Rp 6.325 | undervalued | Rp 7.563,13 | Rp 6.725 | undervalued | Rp 7.561,25 | Rp 6.450 | undervalued |
| JPFA | Rp 2.178,67 | Rp 1.720 | undervalued | Rp 1.444,03 | Rp 1.295 | undervalued | Rp 1.240,74 | Rp 1.180 | undervalued |
| KMDS | Rp 576,48 | Rp 434 | undervalued | Rp 791,00 | Rp 575 | undervalued | Rp 520,51 | Rp 424 | undervalued |
| LSIP | Rp 1.436,67 | Rp 1.185 | undervalued | Rp 1.169,22 | Rp 1.015 | undervalued | Rp 953,99 | Rp 890 | undervalued |
| MIDI | Rp 3.372,60 | Rp 2.210 | undervalued | Rp 4.660,23 | Rp 2.970 | undervalued | Rp 523,79 | Rp 430 | undervalued |
| MLBI | Rp 3.769,67 | Rp 7.800 | Overvalued | Rp 8.517,88 | Rp 8.950 | Overvalued | Rp 11.700,59 | Rp 7.750 | undervalued |
| MYOR | Rp 2.048,21 | Rp 2.040 | undervalued | Rp 3.116,12 | Rp 2.500 | undervalued | Rp 3.352,64 | Rp 2.490 | undervalued |
| ROTI | Rp 1.344,79 | Rp 1.360 | Overvalued | Rp 1.484,32 | Rp 1.320 | undervalued | Rp 942,28 | Rp 1.150 | Overvalued |
| SDPC | Rp 146,45 | Rp 136 | undervalued | Rp 394,14 | Rp 332 | undervalued | Rp 194,65 | Rp 158 | undervalued |
| SIMP | Rp 516,85 | Rp 456 | undervalued | Rp 464,75 | Rp 414 | undervalued | Rp 398,59 | Rp 376 | undervalued |
| SKBM | Rp 380,32 | Rp 360 | undervalued | Rp 436,83 | Rp 378 | undervalued | Rp 299,79 | Rp 314 | Overvalued |
| SKLT | Rp 3.138,75 | Rp 2.420 | undervalued | Rp 2.280,55 | Rp 1.950 | undervalued | Rp 336,58 | Rp 282 | undervalued |
| SMAR | Rp 5.542,08 | Rp 4.360 | undervalued | Rp 7.607,51 | Rp 4.950 | undervalued | Rp 3.940,07 | Rp 4.000 | Overvalued |
| SSMS | Rp 1.394,45 | Rp 965 | undervalued | Rp 1.641,29 | Rp 1.470 | undervalued | Rp 844,52 | Rp 1.045 | Overvalued |
| TBLA | Rp 965,42 | Rp 795 | undervalued | Rp 764,16 | Rp 695 | undervalued | Rp 781,72 | Rp 695 | undervalued |
| TGKA | Rp 8.247,42 | Rp 7.000 | undervalued | Rp 8.611,83 | Rp 7.100 | undervalued | Rp 7.213,95 | Rp 6.450 | undervalued |
| ULTJ | Rp 1.903,52 | Rp 1.570 | undervalued | Rp 2.025,65 | Rp 1.475 | undervalued | Rp 2.045,04 | Rp 1.600 | undervalued |
| UNVR | Rp 3.093,94 | Rp 4.110 | Overvalued | Rp 3.687,63 | Rp 4.700 | Overvalued | Rp 2.922,22 | Rp 3.530 | Overvalued |
| VICI | Rp 693,36 | Rp 515 | undervalued | Rp 576,60 | Rp 510 | undervalued | Rp 827,81 | Rp 650 | undervalued |
| WIIM | Rp 519,27 | Rp 428 | undervalued | Rp 813,33 | Rp 630 | undervalued | Rp 2.501,08 | Rp 1.775 | undervalued |
| PNGO | Rp 2.129,58 | Rp 1.555 | undervalued | Rp 1.732,52 | Rp 1.400 | undervalued | Rp 1.733,97 | Rp 1.400 | undervalued |
| UCID | Rp 1.704,80 | Rp 1.450 | undervalued | Rp 1.189,99 | Rp 1.095 | undervalued | Rp 1.138,23 | Rp 1.000 | undervalued |

*Source: Processed data, 2025*

Stock prices are categorized into three conditions, namely undervalued, overvalued, and fairly valued. Based on Table 4.5, several stocks are observed to be in undervalued and overvalued conditions. In the research year 2021, out of a total sample of 37 companies, 6 were in an overvalued condition, indicating that their stock prices were expensive (market price > intrinsic value). The remaining 31

companies were undervalued, suggesting that their stock prices were relatively cheap (market price < intrinsic value). In 2022, out of the same 37 companies, 7 were overvalued, while 30 were undervalued. In 2023, 6 companies were overvalued, whereas the remaining 31 were undervalued.

#### 4.2.2.2 Stock Price Conditions Based on the DDM Approach Model

Through the results of calculating the intrinsic value of shares of companies in the Consumer Non-cyclical sector using the DDM constant growth approach model, the intrinsic value of shares is compared to their market value so that shareholders and potential investors can find out the condition of stock prices, whether undervalued, overvalued, or fairvalued.

**Table 4.6 Comparison of the Intrinsic Value of DDM with the Market Value**

| Ticker Code | Stock Price Condition 2021 | | | Stock Price Condition 2022 | | | Stock Price Condition 2023 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Intrinsic Value DDM | PRICE (2021) | Description (under/over/fair) | Intrinsic Value DDM | PRICE (2022) | Description (under/over/fair) | Intrinsic Value DDM | PRICE (2023) | Description (under/over/fair) |
| AALI | Rp10.196,72 | Rp 9.500 | undervalued | Rp 8.351,54 | Rp 8.025 | undervalued | Rp 7.116,15 | Rp 7.025 | undervalued |
| AMRT | Rp 1.430,58 | Rp 1.215 | undervalued | Rp 3.138,24 | Rp 2.650 | undervalued | Rp 3.389,20 | Rp 2.930 | undervalued |
| BISI | Rp 1.092,36 | Rp 995 | undervalued | Rp 1.767,42 | Rp 1.600 | undervalued | Rp 1.781,83 | Rp 1.600 | undervalued |
| BUDI | Rp 187,00 | Rp 179 | undervalued | Rp 234,67 | Rp 226 | undervalued | Rp 284,72 | Rp 278 | undervalued |
| CAMP | Rp 306,56 | Rp 290 | undervalued | Rp 278,45 | Rp 306 | Overvalued | Rp 406,10 | Rp 402 | undervalued |
| CEKA | Rp 2.052,76 | Rp 1.880 | undervalued | Rp 2.185,93 | Rp 1.980 | undervalued | Rp 1.950,66 | Rp 1.845 | undervalued |
| CLEO | Rp 312,94 | Rp 470 | Overvalued | Rp 640,89 | Rp 555 | undervalued | Rp 843,96 | Rp 710 | undervalued |
| CPIN | Rp 6.372,28 | Rp 5.950 | undervalued | Rp 5.814,81 | Rp 5.650 | undervalued | Rp 5.150,32 | Rp 5.025 | undervalued |
| DLTA | Rp 3.695,57 | Rp 3.740 | Overvalued | Rp 3.793,31 | Rp 3.830 | Overvalued | Rp 3.299,84 | Rp 3.530 | Overvalued |
| DSNG | Rp 543,18 | Rp 500 | undervalued | Rp 673,13 | Rp 600 | undervalued | Rp 587,65 | Rp 555 | undervalued |
| EPMT | Rp 2.820,47 | Rp 2.700 | undervalued | Rp 2.039,17 | Rp 2.750 | Overvalued | Rp 2.637,13 | Rp 2.590 | undervalued |
| GGRM | Rp30.910,85 | Rp 30.600 | undervalued | Rp17.518,21 | Rp 18.000 | Overvalued | Rp21.331,97 | Rp 20.325 | undervalued |
| GOOD | Rp 584,04 | Rp 525 | undervalued | Rp 565,02 | Rp 525 | undervalued | Rp 471,01 | Rp 430 | undervalued |
| HMSP | Rp 919,36 | Rp 965 | Overvalued | Rp 807,52 | Rp 840 | Overvalued | Rp 948,03 | Rp 895 | undervalued |
| ICBP | Rp 9.464,34 | Rp 8.700 | undervalued | Rp10.450,95 | Rp 10.000 | undervalued | Rp11.564,03 | Rp 10.575 | undervalued |
| INDF | Rp 6.882,89 | Rp 6.325 | undervalued | Rp 7.131,76 | Rp 6.725 | undervalued | Rp 6.983,56 | Rp 6.450 | undervalued |
| JPFA | Rp 1.935,80 | Rp 1.720 | undervalued | Rp 1.367,49 | Rp 1.295 | undervalued | Rp 1.209,99 | Rp 1.180 | undervalued |
| KMDS | Rp 500,19 | Rp 434 | undervalued | Rp 674,41 | Rp 575 | undervalued | Rp 469,78 | Rp 424 | undervalued |
| LSIP | Rp 1.304,78 | Rp 1.185 | undervalued | Rp 1.089,39 | Rp 1.015 | undervalued | Rp 921,44 | Rp 890 | undervalued |
| MIDI | Rp 2.730,10 | Rp 2.210 | undervalued | Rp 3.720,33 | Rp 2.970 | undervalued | Rp 474,58 | Rp 430 | undervalued |
| MLBI | Rp 5.422,50 | Rp 7.800 | Overvalued | Rp 8.731,27 | Rp 8.950 | Overvalued | Rp 9.522,58 | Rp 7.750 | undervalued |
| MYOR | Rp 2.044,10 | Rp 2.040 | undervalued | Rp 2.791,11 | Rp 2.500 | undervalued | Rp 2.889,30 | Rp 2.490 | undervalued |
| ROTI | Rp 1.352,37 | Rp 1.360 | Overvalued | Rp 1.399,75 | Rp 1.320 | undervalued | Rp 1.040,97 | Rp 1.150 | Overvalued |
| SDPC | Rp 141,13 | Rp 136 | undervalued | Rp 361,74 | Rp 332 | undervalued | Rp 175,37 | Rp 158 | undervalued |
| SIMP | Rp 485,47 | Rp 456 | undervalued | Rp 438,64 | Rp 414 | undervalued | Rp 387,13 | Rp 376 | undervalued |
| SKBM | Rp 370,02 | Rp 360 | undervalued | Rp 406,35 | Rp 378 | undervalued | Rp 306,81 | Rp 314 | Overvalued |

*Linked to the next page*

**Table 4.6 Continuation**

| Ticker Code | Stock Price Condition 2021 | | | Stock Price Condition 2022 | | | Stock Price Condition 2023 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Intrinsic Value DDM | PRICE (2021) | Description (under/over/fair) | Intrinsic Value DDM | PRICE (2022) | Description (under/over/fair) | Intrinsic Value DDM | PRICE (2023) | Description (under/over/fair) |
| SKLT | Rp 2.756,04 | Rp 2.420 | undervalued | Rp 2.108,81 | Rp 1.950 | undervalued | Rp 308,08 | Rp 282 | undervalued |
| SMAR | Rp 4.915,63 | Rp 4.360 | undervalued | Rp 6.136,54 | Rp 4.950 | undervalued | Rp 3.969,92 | Rp 4.000 | Overvalued |
| SSMS | Rp 1.160,02 | Rp 965 | undervalued | Rp 1.553,28 | Rp 1.470 | undervalued | Rp 939,43 | Rp 1.045 | Overvalued |
| TBLA | Rp 876,08 | Rp 795 | undervalued | Rp 728,76 | Rp 695 | undervalued | Rp 737,09 | Rp 695 | undervalued |
| TGKA | Rp 7.598,15 | Rp 7.000 | undervalued | Rp 7.819,46 | Rp 7.100 | undervalued | Rp 6.821,29 | Rp 6.450 | undervalued |
| ULTJ | Rp 1.728,73 | Rp 1.570 | undervalued | Rp 1.728,54 | Rp 1.475 | undervalued | Rp 1.808,88 | Rp 1.600 | undervalued |
| UNVR | Rp 3.565,96 | Rp 4.110 | Overvalued | Rp 4.163,16 | Rp 4.700 | Overvalued | Rp 3.211,77 | Rp 3.530 | Overvalued |
| VICI | Rp 597,56 | Rp 515 | undervalued | Rp 542,28 | Rp 510 | undervalued | Rp 733,54 | Rp 650 | undervalued |
| WIIM | Rp 471,43 | Rp 428 | undervalued | Rp 715,82 | Rp 630 | undervalued | Rp 2.106,99 | Rp 1.775 | undervalued |
| PNGO | Rp 1.819,75 | Rp 1.555 | undervalued | Rp 1.557,41 | Rp 1.400 | undervalued | Rp 1.558,06 | Rp 1.400 | undervalued |
| UCID | Rp 1.572,25 | Rp 1.450 | undervalued | Rp 1.141,51 | Rp 1.095 | undervalued | Rp 1.066,88 | Rp 1.000 | undervalued |

*Source: Processed data, 2025*

There are three conditions of stock prices, namely: undervalued, overvalued, and fair value. Based on Table 4.6, in 2021, there were 31 undervalued companies. The condition of the undervalued stock price indicates that the stock price is cheap (the market price < the intrinsic value of the stock). And there are six companies that are overvalued. Overvalued conditions indicate that the stock price is expensive (the market price > the intrinsic value of the stock). In 2022, out of 37 existing companies, seven are in an overvalued condition, while 30 others are undervalued. In 2023, there are six companies that are undervalued, while 31 other companies are in overvalued conditions.

When a stock is undervalued, it signals investors to buy. If investors already own the stock, they may increase their holdings by purchasing additional shares, or hold the shares until the price reaches the desired level of profit. Conversely, an overvalued condition indicates an appropriate time to sell. Meanwhile, when a stock is fairly valued, investors typically choose to hold and wait, or anticipate potential price movements either upward or downward.

Based on the researcher's observations of the condition of shares in the Consumer Non-Cyclical sector during the 2021-2023 research period, the stock

price condition may be influenced by external factors. According to Nurhaliza (2021), the Consumer Non-Cyclical sector stock index declined by 11.29% year-to-date (YTD) in 2021. The downward trend in stock performance is due to the declining purchasing power of the public due to the pandemic, the PPKM (Enforcement of Community Activity Restrictions) policy that limits mobility, and the company's profit margin which has decreased due to the increase in raw material costs (costs and revenues are not comparable). Falling profit margins can affect downward stock price movements. At the same time, 2021 is the year of post-COVID-19 economic recovery.

In 2022, quoted from (NISP, 2022), the Consumer Non-Cyclical sector experienced a year-to-date (YTD) increase of 12.17%. However, during the same period, Indonesia faced an inflation rate of 5.51%, which reduced people's purchasing power and made it difficult for companies to immediately pass on rising production costs to the selling price, as this could potentially lower demand. Consequently, profit margins of companies in the sector declined. Thus, even though the stock index of the Consumer Non-Cyclical sector increased, inflation triggered price fluctuations, causing the stock price to rise and fall throughout the year.

Furthermore, in 2023, the Consumer Non-Cyclical sector strengthened by 3.61%. Overall, the Consumer Non-Cyclical sector is one of the sectors that recorded the best performance throughout 2023 (Ariesta, 2023). At the same time, in 2023, Indonesia's inflation rate was controlled at 2.61%, lower than the previous year (Purwowidhu, 2024). Suppose it is concluded that the value of the stock price

has decreased due to the shrinking of the company's profit margin caused by previous years such as inflation, the shrinking rupiah exchange rate (which has resulted in the company's foreign debt increasing due to the weakening value of the rupiah currency), the Russia-Ukraine war which has caused the inhibition of wheat exports, an increase in the company's cost burden, and others. But in 2023, as investor sentiment improves (the emergence of positive sentiment due to controlled inflation), the price of raw materials becomes more stable, and so on, so the stock price shows a positive movement.

### 4.2.3 Root Mean Square Error (RMSE) Test

The Root Mean Square Error (RMSE) test is performed to see which approach model is most accurate in calculating the intrinsic value of stocks from one of the approach models.

**Table 4.7 Value *Root Mean Square Error* (RMSE) on sample companies**

| Approach model | Root Mean Square Error (RMSE) | | |
|---|---|---|---|
| | 2021 | 2022 | 2023 |
| PBV | 10.848,38 | 18.438,46 | 3.065,32 |
| PER | 913,33 | 746,20 | 895,79 |
| DDM | 493,72 | 354,05 | 415,85 |

*Source: Researcher's processed data (2025)*

The Price to Book Value (PBV) approach model shows a higher level of deviation compared to the Dividend Discount Model (DDM) and the Price Earnings Ratio (PER) approach models. This happens because PBV does not take cash flow into account in its calculations, so the results are often far different from the market price or closing price of the stock. In contrast, DDM takes into account the cash flow that

investors receive in the form of dividends, so the results tend to be closer to market value.

Among the three valuation model approaches, the Dividend Discount Model (DDM) demonstrates the highest level of accuracy in estimating stock values, which suggests that it is more reliable than the Price to Book Value (PBV) and Price Earnings Ratio (PER) models. This conclusion is supported by the fact that the RMSE value of DDM is the smallest among the three, and a lower Root Mean Square Error (RMSE) generally indicates a higher level of accuracy in estimating a stock's intrinsic value. These findings are consistent with the results of the previous studies, such as those conducted by Rosandy et al. (2023). There are several reasons why the condition of the stock price may fall into the categories of Overvalue, Undervalue, and Fair value. Such price changes are generally influenced by both external factors and internal factors. External factors are influenced by global economic conditions such as monetary crises, global interest rates, inflation, geopolitical tensions, wars, and others. In addition to external factors, internal factors can also affect stock prices, such as financial performance, financial ratios, profit performance, and supply and demand factors that affect the volatility of stock price movements.

# CHAPTER V

# CONCLUSION

## 5.1 Conclusion

From the results of this study, stock price conditions were obtained based on the PBV, PER, and DDM approach models. Based on the three approach models, the following results were obtained:

1. Stock values fluctuate from year to year, and the range of intrinsic value for each period, based on the respective valuation models, is presented as follows:
   a. Based on the PBV approach, the intrinsic value of shares in 2021 ranged from IDR 231.62 to IDR 86,894.64. In 2022, the intrinsic value of the shares ranged between IDR 273.40 and IDR 90,508.57, while in 2023, it ranged from IDR 308.15 to IDR 109,977.65.
   b. Based on the PER approach, the intrinsic value of shares in 2021 was IDR 146.45–31,225.87. In 2022, the intrinsic value is in the price range of IDR 243.66–17,049.32, whereas in 2023, the intrinsic value has a price range of IDR 194.65–22,388.84.
   c. Based on the DDM approach, the intrinsic value of shares in 2021 was in the range of IDR 141.13–30,911.85. In 2022, the intrinsic value of shares ranged from IDR 234.67 to IDR 17,518.21, while in 2023, it ranged from IDR 175.37 to IDR 21,331.97.
2. Based on the three model approaches, the following results were obtained:
   a. Based on the PBV model approach, these results were obtained:

In 2021, out of a total of 37 companies, there are two companies that are overvalued and 35 other companies that are undervalued. In 2022, 12 are overvalued, and 25 other issuers are undervalued. And in 2023, out of a total of 37 companies, 10 of them are overvalued, and the remaining 27 companies are undervalued.

b. In the calculation results using the PER approach model, the following findings were obtained: in 2021, out of a total of 37 companies that were analyzed, 6 of them were found to be overvalued, while the remaining 31 issuers were undervalued. In 2022, out of 37 companies, seven are overvalued and 30 are undervalued. And in 2023, there are six overvalued issuers and 31 undervalued issuers.

c. Based on the results of the calculation of the constant growth DDM approach model, the following results were obtained: in 2021 there were a total of 31 undervalued companies and six overvalued companies, in 2022 there were 30 companies that experienced undervalued conditions and seven companies that were overvalued, and in 2023 there were six companies that experienced undervalued conditions and 31 companies are in overvalued condition.

3. To assess the accuracy of the stock valuation approach model, the smaller the RMSE value, the more accurate the approach model used for stock price valuation when estimating the intrinsic value of stocks. From the results of the RMSE calculation, it is evident that the most accurate approach model for calculating the intrinsic value of shares is the DDM approach model, as the RMSE DDM value has the smallest value compared to the RMSE PBV and PER.

## 5.2 Suggestion

Based on the results and conclusions of this study, the researcher provides several suggestions in the hope that this research may provide valuable insights for the relevant parties and serve as a reference for further research.

1. For prospective investors and investors, it is hoped that they do not rely only on one valuation method in valuing a stock. The combination of PBV, PER, and DDM can provide a more comprehensive picture of the company's fundamental condition and investment viability.
2. For issuers registered in the Consumer Non-Cyclical sector, it is hoped that the company will remain consistent in distributing its dividends and remain transparent to make it easier for investors to analyze and make investment decisions.
3. Because this study has limitations in the time period, number of issuers, and approach model used, researchers are further advised to use longer data and expand the scope of the sector to obtain more representative and generalizable results. In addition, researchers can then try different approach models besides PBV, PER, and DDM to see the differences that exist with the previous approach models that have been discussed in this study.

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# APPENDICES

**Appendix 1 the Company's Issuer Code**

| No. | Ticker Code | Company |
|---|---|---|
| 1. | ALII | Astra Agro Lestari Tbk. |
| 2. | AMRT | Source: Alfaria Trijaya Tbk. |
| 3. | BISI | BISI International Tbk. |
| 4. | BUDI | Budi Starch & Sweetener Tbk. |
| 5. | CAMP | Campina Ice Cream Industry Tbk. |
| 6. | CEKA | Wilmar Cahaya Indonesia Tbk. |
| 7. | CLEO | Sariguna Primatirta Tbk. |
| 8. | CPIN | Charoen Pokphand Indonesia Tbk |
| 9. | DLTA | Delta Djakarta Tbk. |
| 10. | DSNG | Dharma Satya Nusantara Tbk. |
| 11. | EPMT | Enseval Putera Megatrading Tbk. |
| 12. | GGRM | Gudang Garam Tbk. |
| 13. | GOOD | Garudafood Putra Putri Jaya Tbk. |
| 14. | HMSP | H.M. Sampoerna Tbk. |
| 15. | ICBP | Indofood CBP Sukses Makmur Tbk. |
| 16. | INDF | Indofood Sukses Makmur Tbk. |
| 17. | JPFA | Japfa Comfeed Indonesia Tbk. |
| 18. | KMDS | Kurniamitra Duta Sentosa Tbk. |
| 19. | LSIP | PP London Sumatra Indonesia Tbk. |
| 20. | MIDI | Midi Utama Indonesia Tbk. |
| 21. | MLBI | Multi Bintang Indonesia Tbk. |
| 22. | MYOR | Mayor Indah Tbk. |
| 23. | ROTI | Nippon Indosari Corpindo Tbk. |
| 24. | SDPC | Millennium Pharmacon International Tbk. |
| 25. | SIMP | Salim Ivomas Pratama Tbk. |
| 26. | SKBM | Sekar Bumi Tbk. |
| 27. | SKLT | Sekar Laut Tbk. |
| 28. | SMAR | Smart Tbk. |
| 29. | SSMS | Sawit Sumbermas Sarana Tbk. |
| 30. | TBLA | Tunas Baru Lampung Tbk. |
| 31. | TGKA | Tigaraksa Satria Tbk. |
| 32. | ULTJ | Ultrajaya Milk Industry & Trading Company Tbk. |
| 33. | UNVR | Unilever Indonesia Tbk. |
| 34. | VICI | Victoria Care Indonesia Tbk. |
| 35. | WIIM | Wismilak Inti Makmur Tbk. |
| 36. | PNGO | Pinago Utama Tbk. |
| 37. | UCID | Uni-Charm Indonesia Tbk. |

**Appendix 2 Calculation of Intrinsic Value Using PBV for 2021-2023**

| Kode Emiten | 2021 | | | | | |
|---|---|---|---|---|---|---|
| | EQUITY (1) | SHARES OUTSTANDING (2) | PRICE (2021) (3) | BV (1):(2) (4) | PBV (3):(4) (5) | Intrinsic Value (4) x (PBV industry average) |
| AALI | 21.171.173.000.000 | 1.924.688.333 | Rp 9.500 | 10.999,79 | 0,86 | Rp 31.019,42 |
| AMRT | 8.989.798.000.000 | 41.524.501.700 | Rp 1.215 | 216,49 | 5,61 | Rp 610,51 |
| BISI | 2.728.045.000.000 | 3.000.000.000 | Rp 995 | 909,35 | 1,09 | Rp 2.564,36 |
| BUDI | 1.387.697.000.000 | 4.498.997.362 | Rp 179 | 308,45 | 0,58 | Rp 869,82 |
| CAMP | 1.022.814.971.131 | 5.885.000.000 | Rp 290 | 173,80 | 1,67 | Rp 490,12 |
| CEKA | 1.387.366.962.835 | 595.000.000 | Rp 1.880 | 2.331,71 | 0,81 | Rp 6.575,42 |
| CLEO | 1.001.579.893.307 | 12.000.000.000 | Rp 470 | 83,46 | 5,63 | Rp 235,37 |
| CPIN | 25.149.999.000.000 | 16.398.000.000 | Rp 5.950 | 1.533,72 | 3,88 | Rp 4.325,10 |
| DLTA | 1.010.174.017.000 | 800.659.050 | Rp 3.740 | 1.261,68 | 2,96 | Rp 3.557,93 |
| DSNG | 7.025.463.000.000 | 10.599.842.400 | Rp 500 | 662,79 | 0,75 | Rp 1.869,07 |
| EPMT | 6.846.921.143.922 | 2.708.640.000 | Rp 2.700 | 2.527,81 | 1,07 | Rp 7.128,42 |
| GGRM | 59.288.274.000.000 | 1.924.088.000 | Rp 30.600 | 30.813,70 | 0,99 | Rp 86.894,64 |
| GOOD | 3.030.658.030.412 | 36.897.901.455 | Rp 525 | 82,14 | 6,39 | Rp 231,62 |
| HMSP | 29.191.406.000.000 | 116.318.076.900 | Rp 965 | 250,96 | 3,85 | Rp 707,71 |
| ICBP | 54.723.863.000.000 | 11.661.908.000 | Rp 8.700 | 4.692,53 | 1,85 | Rp 13.232,94 |
| INDF | 86.632.111.000.000 | 8.780.426.500 | Rp 6.325 | 9.866,50 | 0,64 | Rp 27.823,54 |
| JPFA | 13.102.710.000.000 | 11.726.575.201 | Rp 1.720 | 1.117,35 | 1,54 | Rp 3.150,93 |
| KMDS | 181.585.343.241 | 800.000.000 | Rp 434 | 226,98 | 1,91 | Rp 640,09 |
| LSIP | 10.172.506.000.000 | 6.822.863.965 | Rp 1.185 | 1.490,94 | 0,79 | Rp 4.204,46 |
| MIDI | 1.616.317.000.000 | 2.882.353.000 | Rp 2.210 | 560,76 | 3,94 | Rp 1.581,35 |
| MLBI | 1.099.157.000.000 | 2.107.000.000 | Rp 7.800 | 521,67 | 14,95 | Rp 1.471,11 |
| MYOR | 11.360.031.396.135 | 22.358.699.725 | Rp 2.040 | 508,08 | 4,02 | Rp 1.432,79 |
| ROTI | 2.849.419.530.726 | 6.186.488.888 | Rp 1.360 | 460,59 | 2,95 | Rp 1.298,86 |
| SDPC | 236.979.349.790 | 1.274.000.000 | Rp 136 | 186,01 | 0,73 | Rp 524,55 |
| SIMP | 19.786.236.000.000 | 15.816.310.000 | Rp 456 | 1.251,00 | 0,36 | Rp 3.527,83 |
| SKBM | 992.485.493.010 | 1.730.103.217 | Rp 360 | 573,66 | 0,63 | Rp 1.617,71 |
| SKLT | 541.837.229.228 | 690.740.500 | Rp 2.420 | 784,43 | 3,09 | Rp 2.212,09 |
| SMAR | 14.417.829.000.000 | 2.872.193.366 | Rp 4.360 | 5.019,80 | 0,87 | Rp 14.155,83 |
| SSMS | 6.107.507.765.000 | 9.525.000.000 | Rp 965 | 641,21 | 1,50 | Rp 1.808,21 |
| TBLA | 6.492.354.000.000 | 5.342.098.939 | Rp 795 | 1.215,32 | 0,65 | Rp 3.427,20 |
| TGKA | 1.760.590.755.177 | 918.492.750 | Rp 7.000 | 1.916,83 | 3,65 | Rp 5.405,45 |
| ULTJ | 5.138.126.000.000 | 11.553.528.000 | Rp 1.570 | 444,72 | 3,53 | Rp 1.254,12 |
| UNVR | 4.321.269.000.000 | 38.150.000.000 | Rp 4.110 | 113,27 | 36,28 | Rp 319,42 |
| VICI | 750.156.832.464 | 6.708.000.000 | Rp 515 | 111,83 | 4,61 | Rp 315,36 |
| WIIM | 1.318.385.158.595 | 2.099.873.760 | Rp 428 | 627,84 | 0,68 | Rp 1.770,51 |
| PNGO | 635.095.987.703 | 781.250.000 | Rp 1.555 | 812,92 | 1,91 | Rp 2.292,44 |
| UCID | 4.906.505.000.000 | 4.156.572.300 | Rp 1.450 | 1.180,42 | 1,23 | Rp 3.328,79 |
| ADES | 969.817.000.000 | 589.896.800 | Rp 3.290 | 1.644,05 | 2,00 | Rp 4.636,21 |
| AISA | 818.890.000.000 | 9.311.800.000 | Rp 192 | 87,94 | 2,18 | Rp 247,99 |
| ALTO | 363.835.661.084 | 2.191.870.558 | Rp 280 | 165,99 | 1,69 | Rp 468,10 |
| ANJT | 6.182.419.025.285 | 3.354.175.000 | Rp 990 | 1.843,20 | 0,54 | Rp 5.197,83 |
| BTEK | 1.561.589.927.097 | 46.277.496.376 | Rp 50 | 33,74 | 1,48 | Rp 95,16 |
| BWPT | 2.057.824.000.000 | 31.525.291.000 | Rp 74 | 65,28 | 1,13 | Rp 184,08 |
| CPRO | 2.861.207.000.000 | 59.572.382.787 | Rp 95 | 48,03 | 1,98 | Rp 135,44 |
| DSFI | 211.406.626.312 | 1.857.135.500 | Rp 95 | 113,83 | 0,83 | Rp 321,01 |
| FISH | 2.187.129.332.641 | 480.000.000 | Rp 7.650 | 4.556,52 | 1,68 | Rp 12.849,38 |
| GZCO | 1.075.688.000.000 | 6.000.000.000 | Rp 69 | 179,28 | 0,38 | Rp 505,57 |
| HERO | 873.820.000.000 | 4.183.634.000 | Rp 1.840 | 208,87 | 8,81 | Rp 589,00 |

| Kode Emiten | 2021 | | | | | |
|---|---|---|---|---|---|---|
| | EQUITY (1) | SHARES OUTSTANDING (2) | PRICE (2021) (3) | BV (1):(2) (4) | PBV (3):(4) (5) | Intrinsic Value (4) x (PBV industry average) |
| JAWA | 223.405.125.774 | 3.774.685.500 | Rp 270 | 59,19 | 4,56 | Rp 166,90 |
| LAPD | -248.637.117.645 | 3.966.350.139 | Rp 50 | -62,69 | -0,80 | -Rp 176,78 |
| MAGP | 86.603.609.242 | 9.000.000.004 | Rp 50 | 9,62 | 5,20 | Rp 27,14 |
| MAIN | 2.048.040.000.000 | 2.238.750.000 | Rp 670 | 914,81 | 0,73 | Rp 2.579,78 |
| MBTO | 444.330.311.609 | 1.070.000.000 | Rp 146 | 415,26 | 0,35 | Rp 1.171,04 |
| MLPL | 4.528.441.000.000 | 14.639.632.470 | Rp 370 | 309,33 | 1,20 | Rp 872,30 |
| MPPA | 584.405.000.000 | 8.477.734.948 | Rp 434 | 68,93 | 6,30 | Rp 194,39 |
| MRAT | 343.195.928.497 | 428.000.000 | Rp 276 | 801,86 | 0,34 | Rp 2.261,24 |
| PSDN | 55.731.632.633 | 1.440.000.000 | Rp 153 | 38,70 | 3,95 | Rp 109,14 |
| RANC | 507.064.006.771 | 1.564.487.500 | Rp 1.800 | 324,11 | 5,55 | Rp 913,99 |
| SGRO | 4.596.699.000.000 | 1.890.000.000 | Rp 1.995 | 2.432,12 | 0,82 | Rp 6.858,57 |
| SIPD | 913.516.000.000 | 1.339.102.579 | Rp 2.000 | 682,19 | 2,93 | Rp 1.923,76 |
| STTP | 3.300.848.622.529 | 1.310.000.000 | Rp 7.550 | 2.519,73 | 3,00 | Rp 7.105,64 |
| TCID | 1.819.515.798.642 | 201.066.667 | Rp 5.350 | 9.049,32 | 0,59 | Rp 25.519,07 |
| UNSP | -6.892.884.000.000 | 2.500.162.344 | Rp 109 | -2.756,97 | -0,04 | -Rp 7.774,67 |
| WAPO | 75.063.781.594 | 1.240.923.111 | Rp 185 | 60,49 | 3,06 | Rp 170,58 |
| WICO | 93.580.634.534 | 1.268.950.977 | Rp 414 | 73,75 | 5,61 | Rp 207,96 |
| DAYA | 71.943.712.000 | 2.420.547.025 | Rp 304 | 29,72 | 10,23 | Rp 83,82 |
| DPUM | 620.454.942.168 | 4.175.000.000 | Rp 50 | 148,61 | 0,34 | Rp 419,09 |
| KINO | 2.688.443.262.783 | 1.428.571.500 | Rp 2.030 | 1.881,91 | 1,08 | Rp 5.306,99 |
| HOKI | 674.176.387.075 | 9.677.752.680 | Rp 181 | 69,66 | 2,60 | Rp 196,45 |
| PCAR | 65.022.002.999 | 1.166.666.700 | Rp 282 | 55,73 | 5,06 | Rp 157,17 |
| MGRO | 709.800.280.420 | 3.554.445.700 | Rp 850 | 199,69 | 4,26 | Rp 563,14 |
| ANDI | 249.265.757.028 | 9.350.000.000 | Rp 50 | 26,66 | 1,88 | Rp 75,18 |
| FOOD | 43.740.688.728 | 650.000.000 | Rp 133 | 67,29 | 1,98 | Rp 189,77 |
| BEEF | -174.360.232.700 | 1.884.312.595 | Rp 76 | -92,53 | -0,82 | -Rp 260,94 |
| COCO | 218.832.136.935 | 889.863.981 | Rp 288 | 245,92 | 1,17 | Rp 693,48 |
| ITIC | 324.679.509.187 | 940.720.000 | Rp 274 | 345,14 | 0,79 | Rp 973,29 |
| KEJU | 585.825.528.987 | 1.500.000.000 | Rp 1.185 | 390,55 | 3,03 | Rp 1.101,35 |
| PSGO | 1.424.812.031.387 | 18.850.000.000 | Rp 216 | 75,59 | 2,86 | Rp 213,15 |
| AGAR | 108.540.393.159 | 1.000.000.000 | Rp 368 | 108,54 | 3,39 | Rp 306,08 |
| CSRA | 781.292.859.465 | 2.050.000.000 | Rp 500 | 381,12 | 1,31 | Rp 1.074,75 |
| DMND | 5.019.381.000.000 | 9.468.359.000 | Rp 875 | 530,12 | 1,65 | Rp 1.494,94 |
| IKAN | 70.724.745.093 | 833.333.000 | Rp 95 | 84,87 | 1,12 | Rp 239,33 |
| PGUN | 1.541.454.252.144 | 4.998.360.000 | Rp 388 | 308,39 | 1,26 | Rp 869,67 |
| ENZO | 157.772.237.363 | 2.162.545.165 | Rp 50 | 72,96 | 0,69 | Rp 205,74 |
| PMMP | 667.975.650.276 | 2.353.000.000 | Rp 484 | 283,88 | 1,70 | Rp 800,55 |
| | | **PBV average ratio industry** | **2,82** | | | |

| Kode Emiten | 2022 | | | | | |
|---|---|---|---|---|---|---|
| | EQUITY (1) | SHARES OUTSTANDING (2) | PRICE (2022) (3) | BV (1):(2) (4) | PBV (3):(4) (5) | Intrinsic Value (4) x (PBV industry average) |
| AALI | 22.243.221.000.000 | 1.924.688.333 | Rp 8.025 | 11.556,79 | 0,69 | Rp 34.785,94 |
| AMRT | 11.470.692.000.000 | 41.524.501.700 | Rp 2.650 | 276,24 | 9,59 | Rp 831,48 |
| BISI | 3.050.250.000.000 | 3.000.000.000 | Rp 1.600 | 1.016,75 | 1,57 | Rp 3.060,42 |
| BUDI | 1.445.037.000.000 | 4.498.997.362 | Rp 226 | 321,19 | 0,70 | Rp 966,78 |
| CAMP | 941.454.031.015 | 5.885.000.000 | Rp 306 | 159,98 | 1,91 | Rp 481,53 |
| CEKA | 1.550.042.869.748 | 595.000.000 | Rp 1.980 | 2.605,11 | 0,76 | Rp 7.841,39 |
| CLEO | 1.185.150.863.287 | 12.000.000.000 | Rp 555 | 98,76 | 5,62 | Rp 297,28 |
| CPIN | 39.847.545.000.000 | 16.398.000.000 | Rp 5.650 | 2.430,02 | 2,33 | Rp 7.314,37 |
| DLTA | 1.000.775.865.000 | 800.659.050 | Rp 3.830 | 1.249,94 | 3,06 | Rp 3.762,32 |
| DSNG | 8.160.140.000.000 | 10.599.842.400 | Rp 600 | 769,84 | 0,78 | Rp 2.317,21 |
| EPMT | 7.202.862.872.000 | 2.708.640.000 | Rp 2.750 | 2.659,22 | 1,03 | Rp 8.004,24 |
| GGRM | 57.855.966.000.000 | 1.924.088.000 | Rp 18.000 | 30.069,29 | 0,60 | Rp 90.508,57 |
| GOOD | 3.351.444.502.184 | 36.897.901.455 | Rp 525 | 90,83 | 5,78 | Rp 273,40 |
| HMSP | 28.170.168.000.000 | 116.318.076.900 | Rp 840 | 242,18 | 3,47 | Rp 728,97 |
| ICBP | 57.473.007.000.000 | 11.661.908.000 | Rp 10.000 | 4.928,27 | 2,03 | Rp 14.834,09 |
| INDF | 93.623.038.000.000 | 8.780.426.500 | Rp 6.725 | 10.662,70 | 0,63 | Rp 32.094,72 |
| JPFA | 13.654.777.000.000 | 11.726.575.201 | Rp 1.295 | 1.164,43 | 1,11 | Rp 3.504,93 |
| KMDS | 185.074.524.724 | 800.000.000 | Rp 575 | 231,34 | 2,49 | Rp 696,34 |
| LSIP | 10.935.707.000.000 | 6.822.863.965 | Rp 1.015 | 1.602,80 | 0,63 | Rp 4.824,44 |
| MIDI | 1.986.727.000.000 | 2.882.353.000 | Rp 2.970 | 689,27 | 4,31 | Rp 2.074,71 |
| MLBI | 1.073.275.000.000 | 2.107.000.000 | Rp 8.950 | 509,39 | 17,57 | Rp 1.533,25 |
| MYOR | 12.834.694.090.515 | 22.358.699.725 | Rp 2.500 | 574,04 | 4,36 | Rp 1.727,85 |
| ROTI | 2.681.158.538.764 | 6.186.488.888 | Rp 1.320 | 433,39 | 3,05 | Rp 1.304,50 |
| SDPC | 258.910.138.345 | 1.274.000.000 | Rp 332 | 203,23 | 1,63 | Rp 611,71 |
| SIMP | 21.167.282.000.000 | 15.816.310.000 | Rp 414 | 1.338,32 | 0,31 | Rp 4.028,34 |
| SKBM | 1.073.965.710.489 | 1.730.103.217 | Rp 378 | 620,75 | 0,61 | Rp 1.868,46 |
| SKLT | 590.753.527.421 | 690.740.500 | Rp 1.950 | 855,25 | 2,28 | Rp 2.574,29 |
| SMAR | 19.247.803.000.000 | 2.872.193.366 | Rp 4.950 | 6.701,43 | 0,74 | Rp 20.171,30 |
| SSMS | 6.443.968.832.000 | 9.525.000.000 | Rp 1.470 | 676,53 | 2,17 | Rp 2.036,36 |
| TBLA | 6.832.234.000.000 | 5.342.098.939 | Rp 695 | 1.278,94 | 0,54 | Rp 3.849,62 |
| TGKA | 2.045.289.129.558 | 918.492.750 | Rp 7.100 | 2.226,79 | 3,19 | Rp 6.702,63 |
| ULTJ | 5.822.679.000.000 | 11.553.528.000 | Rp 1.475 | 503,97 | 2,93 | Rp 1.516,96 |
| UNVR | 3.997.256.000.000 | 38.150.000.000 | Rp 4.700 | 104,78 | 44,86 | Rp 315,38 |
| VICI | 801.013.449.120 | 6.708.000.000 | Rp 510 | 119,41 | 4,27 | Rp 359,43 |
| WIIM | 1.500.927.506.265 | 2.099.873.760 | Rp 630 | 714,77 | 0,88 | Rp 2.151,46 |
| PNGO | 708.549.398.656 | 781.250.000 | Rp 1.400 | 906,94 | 1,54 | Rp 2.729,90 |
| UCID | 5.163.753.000.000 | 4.156.572.300 | Rp 1.095 | 1.242,31 | 0,88 | Rp 3.739,35 |
| ADES | 1.334.836.000.000 | 589.896.800 | Rp 7.175 | 2.262,83 | 3,17 | Rp 6.811,12 |
| AISA | 777.861.000.000 | 9.311.800.000 | Rp 143 | 83,53 | 1,71 | Rp 251,44 |
| ALTO | 348.916.160.333 | 2.191.870.558 | Rp 50 | 159,19 | 0,31 | Rp 479,15 |
| ANJT | 6.671.693.129.890 | 3.354.175.000 | Rp 665 | 1.989,07 | 0,33 | Rp 5.987,10 |
| BTEK | 1.202.912.285.419 | 46.277.496.376 | Rp 50 | 25,99 | 1,92 | Rp 78,24 |
| BWPT | 2.049.643.000.000 | 31.525.291.000 | Rp 65 | 65,02 | 1,00 | Rp 195,70 |
| CPRO | 3.181.832.000.000 | 59.572.382.787 | Rp 53 | 53,41 | 0,99 | Rp 160,77 |
| DSFI | 236.283.606.703 | 1.857.135.500 | Rp 91 | 127,23 | 0,72 | Rp 382,96 |
| FISH | 2.633.273.991.485 | 480.000.000 | Rp 6.750 | 5.485,99 | 1,23 | Rp 16.512,82 |
| GZCO | 1.152.542.000.000 | 6.000.000.000 | Rp 81 | 192,09 | 0,42 | Rp 578,19 |
| HERO | 938.138.000.000 | 4.183.634.000 | Rp 1.500 | 224,24 | 6,69 | Rp 674,96 |

| Kode Emiten | 2022 | | | | | |
|---|---|---|---|---|---|---|
| | EQUITY (1) | SHARES OUTSTANDING (2) | PRICE (2022) (3) | BV (1):(2) (4) | PBV (3):(4) (5) | Intrinsic Value (4) x (PBV industry average) |
| JAWA | 118.404.868.769 | 3.774.685.500 | Rp 105 | 31,37 | 3,35 | Rp 94,42 |
| LAPD | -15.425.411.963 | 3.966.350.139 | Rp 50 | - 3,89 | -12,86 | -Rp 11,71 |
| MAIN | 2.075.138.470.000 | 2.238.750.000 | Rp 490 | 926,92 | 0,53 | Rp 2.790,02 |
| MBTO | 404.797.197.979 | 1.070.000.000 | Rp 127 | 378,32 | 0,34 | Rp 1.138,73 |
| MLPL | 4.486.685.000.000 | 15.682.323.987 | Rp 112 | 286,10 | 0,39 | Rp 861,16 |
| MPPA | 166.017.000.000 | 8.477.734.948 | Rp 128 | 19,58 | 6,54 | Rp 58,94 |
| MRAT | 411.385.562.228 | 428.000.000 | Rp 765 | 961,18 | 0,80 | Rp 2.893,16 |
| PSDN | 39.120.716.694 | 1.440.000.000 | Rp 83 | 27,17 | 3,06 | Rp 81,77 |
| RANC | 426.237.663.973 | 1.564.487.500 | Rp 815 | 272,45 | 2,99 | Rp 820,06 |
| SGRO | 5.230.111.000.000 | 1.818.622.000 | Rp 2.100 | 2.875,86 | 0,73 | Rp 8.656,35 |
| SIPD | 702.317.000.000 | 1.339.102.579 | Rp 1.425 | 524,47 | 2,72 | Rp 1.578,65 |
| STTP | 3.928.398.773.915 | 1.310.000.000 | Rp 7.650 | 2.998,78 | 2,55 | Rp 9.026,32 |
| TCID | 1.854.787.914.762 | 201.066.667 | Rp 6.300 | 9.224,74 | 0,68 | Rp 27.766,47 |
| UNSP | -5.956.620.000.000 | 2.500.162.344 | Rp 128 | - 2.382,49 | -0,05 | -Rp 7.171,30 |
| WAPO | 71.015.677.839 | 1.240.923.111 | Rp 250 | 57,23 | 4,37 | Rp 172,26 |
| WICO | 17.076.944.353 | 1.391.304.367 | Rp 394 | 12,27 | 32,10 | Rp 36,94 |
| DAYA | 34.038.783.000 | 2.420.547.025 | Rp 212 | 14,06 | 15,08 | Rp 42,33 |
| DPUM | 576.241.661.680 | 4.175.000.000 | Rp 50 | 138,02 | 0,36 | Rp 415,45 |
| KINO | 1.533.820.300.426 | 1.428.571.500 | Rp 1.535 | 1.073,67 | 1,43 | Rp 3.231,76 |
| HOKI | 668.859.547.083 | 9.677.752.680 | Rp 103 | 69,11 | 1,49 | Rp 208,03 |
| PCAR | 61.178.353.928 | 1.166.666.700 | Rp 87 | 52,44 | 1,66 | Rp 157,84 |
| MGRO | 645.372.796.017 | 3.554.445.700 | Rp 845 | 181,57 | 4,65 | Rp 546,52 |
| ANDI | 238.693.908.651 | 9.350.000.000 | Rp 50 | 25,53 | 1,96 | Rp 76,84 |
| FOOD | 41.655.447.592 | 650.000.000 | Rp 111 | 64,09 | 1,73 | Rp 192,90 |
| BEEF | -266.288.337.366 | 1.884.312.595 | Rp 66 | - 141,32 | -0,47 | -Rp 425,37 |
| COCO | 204.293.087.838 | 889.863.981 | Rp 268 | 229,58 | 1,17 | Rp 691,03 |
| ITIC | 364.321.203.318 | 940.720.000 | Rp 262 | 387,28 | 0,68 | Rp 1.165,71 |
| KEJU | 703.505.819.337 | 1.500.000.000 | Rp 1.430 | 469,00 | 3,05 | Rp 1.411,70 |
| PSGO | 1.686.092.119.450 | 18.850.000.000 | Rp 146 | 89,45 | 1,63 | Rp 269,24 |
| AGAR | 106.800.156.233 | 1.000.000.000 | Rp 278 | 106,80 | 2,60 | Rp 321,47 |
| CSRA | 963.111.881.039 | 2.050.000.000 | Rp 570 | 469,81 | 1,21 | Rp 1.414,13 |
| DMND | 5.411.262.000.000 | 9.468.359.000 | Rp 815 | 571,51 | 1,43 | Rp 1.720,25 |
| IKAN | 72.756.417.261 | 833.333.000 | Rp 59 | 87,31 | 0,68 | Rp 262,80 |
| PGUN | 1.429.166.103.716 | 5.737.848.882 | Rp 805 | 249,08 | 3,23 | Rp 749,72 |
| ENZO | 160.506.528.052 | 2.162.546.669 | Rp 66 | 74,22 | 0,89 | Rp 223,41 |
| PMMP | 1.278.653.749.020 | 2.353.000.000 | Rp 410 | 543,41 | 0,75 | Rp 1.635,68 |
| | | | PBV average ratio industry (2022) | 3,01 | | |

| Kode Emiten | 2023 | | | | | |
|---|---|---|---|---|---|---|
| | EQUITY (1) | SHARES OUTSTANDING (2) | PRICE (2023) (3) | BV (1):(2) (4) | PBV (3):(4) (5) | Intrinsic Value (4) x (PBV industry average) |
| AALI | 22.566.006.000.000 | 1.924.688.333 | Rp 7.025 | 11.724,50 | 0,60 | Rp 40.763,50 |
| AMRT | 15.705.200.000.000 | 41.524.501.700 | Rp 2.930 | 378,22 | 7,75 | Rp 1.314,97 |
| BISI | 3.446.696.000.000 | 3.000.000.000 | Rp 1.600 | 1.148,90 | 1,39 | Rp 3.994,47 |
| BUDI | 1.591.327.000.000 | 4.498.997.362 | Rp 278 | 353,71 | 0,79 | Rp 1.229,76 |
| CAMP | 952.639.271.054 | 5.885.000.000 | Rp 402 | 161,88 | 2,48 | Rp 562,81 |
| CEKA | 1.642.285.662.293 | 595.000.000 | Rp 1.845 | 2.760,14 | 0,67 | Rp 9.596,41 |
| CLEO | 1.514.585.030.778 | 12.000.000.000 | Rp 710 | 126,22 | 5,63 | Rp 438,82 |
| CPIN | 27.028.758.000.000 | 16.398.000.000 | Rp 5.025 | 1.648,30 | 3,05 | Rp 5.730,76 |
| DLTA | 934.414.260.000 | 800.659.050 | Rp 3.530 | 1.167,06 | 3,02 | Rp 4.057,60 |
| DSNG | 8.889.428.000.000 | 10.599.842.400 | Rp 555 | 838,64 | 0,66 | Rp 2.915,76 |
| EPMT | 7.297.830.360.245 | 2.708.640.000 | Rp 2.590 | 2.694,28 | 0,96 | Rp 9.367,41 |
| GGRM | 60.862.843.000.000 | 1.924.088.000 | Rp 20.325 | 31.632,05 | 0,64 | Rp 109.977,65 |
| GOOD | 3.909.211.386.219 | 36.897.901.455 | Rp 430 | 105,95 | 4,06 | Rp 368,35 |
| HMSP | 29.869.853.000.000 | 116.318.076.900 | Rp 895 | 256,79 | 3,49 | Rp 892,82 |
| ICBP | 62.104.033.000.000 | 11.661.908.000 | Rp 10.575 | 5.325,37 | 1,99 | Rp 18.515,15 |
| INDF | 100.464.891.000.000 | 8.780.426.500 | Rp 6.450 | 11.441,91 | 0,56 | Rp 39.781,01 |
| JPFA | 14.167.212.000.000 | 11.726.575.201 | Rp 1.180 | 1.208,13 | 0,98 | Rp 4.200,40 |
| KMDS | 207.612.551.051 | 800.000.000 | Rp 424 | 259,52 | 1,63 | Rp 902,28 |
| LSIP | 11.347.441.000.000 | 6.822.863.965 | Rp 890 | 1.663,15 | 0,54 | Rp 5.782,40 |
| MIDI | 3.912.434.000.000 | 33.435.294.800 | Rp 430 | 117,02 | 3,67 | Rp 406,84 |
| MLBI | 1.391.455.000.000 | 2.107.000.000 | Rp 7.750 | 660,40 | 11,74 | Rp 2.296,05 |
| MYOR | 15.282.089.186.736 | 22.358.699.725 | Rp 2.490 | 683,50 | 3,64 | Rp 2.376,37 |
| ROTI | 2.393.431.575.281 | 6.186.488.888 | Rp 1.150 | 386,88 | 2,97 | Rp 1.345,10 |
| SDPC | 277.713.387.566 | 1.274.000.000 | Rp 158 | 217,99 | 0,72 | Rp 757,89 |
| SIMP | 21.720.925.000.000 | 15.816.310.000 | Rp 376 | 1.373,32 | 0,27 | Rp 4.774,75 |
| SKBM | 1.067.279.217.885 | 1.730.103.217 | Rp 314 | 616,89 | 0,51 | Rp 2.144,78 |
| SKLT | 816.943.780.892 | 6.907.405.000 | Rp 282 | 118,27 | 2,38 | Rp 411,20 |
| SMAR | 19.071.863.000.000 | 2.872.193.366 | Rp 4.000 | 6.640,17 | 0,60 | Rp 23.086,42 |
| SSMS | 1.989.962.060.000 | 9.525.000.000 | Rp 1.045 | 208,92 | 5,00 | Rp 726,37 |
| TBLA | 8.202.858.000.000 | 6.025.373.372 | Rp 695 | 1.361,39 | 0,51 | Rp 4.733,24 |
| TGKA | 2.200.352.000.000 | 918.492.750 | Rp 6.450 | 2.395,61 | 2,69 | Rp 8.329,01 |
| ULTJ | 6.686.968.000.000 | 11.553.528.000 | Rp 1.600 | 578,78 | 2,76 | Rp 2.012,30 |
| UNVR | 3.381.238.000.000 | 38.150.000.000 | Rp 3.530 | 88,63 | 39,83 | Rp 308,15 |
| VICI | 918.737.261.352 | 6.708.000.000 | Rp 650 | 136,96 | 4,75 | Rp 476,18 |
| WIIM | 1.847.322.308.256 | 2.099.873.760 | Rp 1.775 | 879,73 | 2,02 | Rp 3.058,63 |
| PNGO | 796.841.740.042 | 781.250.000 | Rp 1.400 | 1.019,96 | 1,37 | Rp 3.546,17 |
| UCID | 5.563.650.000.000 | 4.156.572.300 | Rp 1.000 | 1.338,52 | 0,75 | Rp 4.653,73 |
| ADES | 1.729.808.000.000 | 589.896.800 | Rp 9.675 | 2.932,39 | 3,30 | Rp 10.204,72 |
| AISA | 968.198.000.000 | 9.311.800.000 | Rp 144 | 103,98 | 1,38 | Rp 361,83 |
| ALTO | 323.765.890.496 | 2.191.870.558 | Rp 50 | 147,71 | 0,34 | Rp 514,04 |
| ANJT | 6.556.820.729.128 | 3.354.175.000 | Rp 745 | 1.954,82 | 0,38 | Rp 6.802,79 |
| BTEK | 1.106.844.618.075 | 46.277.496.376 | Rp 50 | 23,92 | 2,09 | Rp 83,23 |
| BWPT | 2.191.550.000.000 | 31.525.291.000 | Rp 54 | 69,52 | 0,78 | Rp 241,92 |
| CPRO | 3.419.703.000.000 | 59.572.382.787 | Rp 51 | 57,40 | 0,89 | Rp 199,77 |
| DSFI | 250.501.129.131 | 1.857.135.500 | Rp 68 | 134,89 | 0,50 | Rp 469,40 |
| FISH | 2.754.289.758.344 | 480.000.000 | Rp 5.525 | 5.738,10 | 0,96 | Rp 19.968,60 |
| GZCO | 1.168.272.000.000 | 6.000.000.000 | Rp 120 | 194,71 | 0,62 | Rp 677,60 |
| HERO | 1.420.122.000.000 | 4.183.634.000 | Rp 885 | 339,45 | 2,61 | Rp 1.181,28 |

| Kode Emiten | 2023 | | | | | |
|---|---|---|---|---|---|---|
| | EQUITY (1) | SHARES OUTSTANDING (2) | PRICE (2023) (3) | BV (1):(2) (4) | PBV (3):(4) (5) | Intrinsic Value (4) x (PBV industry average) |
| JAWA | 981.581.839.113 | 16.232.951.842 | Rp 180 | 60,47 | 2,98 | Rp 210,43 |
| LAPD | 43.671.948.594 | 3.966.350.139 | Rp 6 | 11,01 | 0,54 | Rp 38,32 |
| MAIN | 2.140.281.849.000 | 2.238.750.000 | Rp 515 | 956,02 | 0,54 | Rp 3.326,94 |
| MBTO | 369.146.072.052 | 1.070.000.000 | Rp 100 | 345,00 | 0,29 | Rp 1.200,59 |
| MLPL | 4.699.051.000.000 | 15.682.323.987 | Rp 73 | 299,64 | 0,24 | Rp 1.042,75 |
| MPPA | 259.155.000.000 | 12.966.640.084 | Rp 65 | 19,99 | 3,25 | Rp 69,55 |
| MRAT | 401.891.124.930 | 428.000.000 | Rp 370 | 939,00 | 0,39 | Rp 3.267,71 |
| PSDN | 66.082.211.930 | 1.440.000.000 | Rp 90 | 45,89 | 1,96 | Rp 159,70 |
| RANC | 299.190.875.000 | 1.564.487.500 | Rp 670 | 191,24 | 3,50 | Rp 665,51 |
| SGRO | 5.512.407.000.000 | 1.818.622.000 | Rp 2.010 | 3.031,09 | 0,66 | Rp 10.548,19 |
| SIPD | 1.193.049.000.000 | 1.839.102.056 | Rp 1.350 | 648,71 | 2,08 | Rp 2.257,52 |
| STTP | 4.847.511.375.575 | 1.310.000.000 | Rp 9.375 | 3.700,39 | 2,53 | Rp 12.877,36 |
| TCID | 1.885.787.335.302 | 402.133.334 | Rp 2.730 | 4.689,46 | 0,58 | Rp 16.319,31 |
| UNSP | -5.932.870.000.000 | 2.500.162.344 | Rp 113 | - 2.372,99 | -0,05 | -Rp 8.258,02 |
| WAPO | 71.252.011.564 | 1.240.923.111 | Rp 91 | 57,42 | 1,58 | Rp 199,82 |
| WICO | 5.701.584.118 | 2.393.710.348 | Rp 121 | 2,38 | 50,80 | Rp 8,29 |
| DAYA | 17.608.015.000 | 2.420.547.025 | Rp 288 | 7,27 | 39,59 | Rp 25,31 |
| DPUM | 430.504.496.106 | 4.175.000.000 | Rp 37 | 103,11 | 0,36 | Rp 358,84 |
| KINO | 1.618.730.458.142 | 1.428.571.500 | Rp 1.265 | 1.133,11 | 1,12 | Rp 3.943,23 |
| HOKI | 661.573.606.369 | 9.677.752.680 | Rp 173 | 68,36 | 2,53 | Rp 237,89 |
| PCAR | 66.832.180.628 | 1.166.666.700 | Rp 50 | 57,28 | 0,87 | Rp 199,35 |
| MGRO | 521.064.635.086 | 3.554.445.700 | Rp 705 | 146,60 | 4,81 | Rp 510,15 |
| ANDI | 182.739.343.465 | 9.350.000.000 | Rp 50 | 19,54 | 2,56 | Rp 68,01 |
| FOOD | 21.426.725.878 | 650.000.000 | Rp 103 | 32,96 | 3,12 | Rp 114,72 |
| BEEF | 140.538.682.970 | 7.031.371.419 | Rp 248 | 19,99 | 12,41 | Rp 69,56 |
| COCO | 150.603.066.920 | 889.863.981 | Rp 175 | 169,24 | 1,03 | Rp 588,96 |
| ITIC | 397.931.210.948 | 940.720.000 | Rp 300 | 423,01 | 0,71 | Rp 1.472,06 |
| KEJU | 670.772.958.412 | 1.500.000.000 | Rp 1.155 | 447,18 | 2,58 | Rp 1.556,19 |
| PSGO | 2.237.120.695.275 | 18.850.000.000 | Rp 133 | 118,68 | 1,12 | Rp 413,01 |
| AGAR | 106.965.772.756 | 1.000.000.000 | Rp 106 | 106,97 | 0,99 | Rp 372,24 |
| CSRA | 1.115.171.555.082 | 2.050.000.000 | Rp 472 | 543,99 | 0,87 | Rp 1.893,07 |
| DMND | 5.831.732.000.000 | 9.468.359.000 | Rp 815 | 615,92 | 1,32 | Rp 2.143,39 |
| IKAN | 73.686.172.369 | 833.333.000 | Rp 50 | 88,42 | 0,57 | Rp 307,71 |
| PGUN | 1.626.074.845.771 | 5.737.848.882 | Rp 416 | 283,39 | 1,47 | Rp 986,21 |
| ENZO | 155.873.787.142 | 2.162.547.122 | Rp 50 | 72,08 | 0,69 | Rp 250,83 |
| PMMP | 1.253.711.287.280 | 2.353.000.000 | Rp 262 | 532,81 | 0,49 | Rp 1.854,19 |
| | | | PBV average ratio industry (2023) | 3,48 | | |

## Appendix 3 Intrinsic Value of Stocks Based on the PER Approach Model

| Ticker Code | 2021 | | | | | | | | 2022 | | | | | | | | 2023 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | DPR | (1+g) | K | Dividend Growth (g) | EPS | estimated EPS | PER (DPR*(1+g)) (K-G) (Damodaran) | Intrinsic Value | DPR | (1+g) | K | Dividend Growth (g) | EPS | estimated EPS | PER (DPR*(1+g)) (K-G) (Damodaran) | Intrinsic Value | DPR | (1+g) | K | Dividend Growth (g) | EPS | estimated EPS | PER (DPR*(1+g)) (K-G) (Damodaran) | Intrinsic Value |
| AALI | 0,25 | 1,07 | 0,10 | 0,07 | 1024,25 | 1099,37 | 9,96 | Rp 10.945 | 0,49 | 1,04 | 0,10 | 0,04 | 897,08 | 1099,37 | 9,31 | Rp 8.691 | 0,73 | 1,01 | 0,07 | 0,01 | 548,61 | 555,73 | 12,97 | Rp 7.208 |
| AMRT | 0,20 | 1,18 | 0,19 | 0,18 | 46,98 | 55,32 | 30,45 | Rp 1.684 | 0,27 | 1,18 | 0,19 | 0,18 | 68,76 | 55,32 | 45,64 | Rp 3.716 | 0,29 | 1,16 | 0,16 | 0,16 | 81,97 | 94,82 | 41,35 | Rp 3.920 |
| BISI | 0,30 | 1,10 | 0,14 | 0,10 | 126,94 | 139,36 | 8,61 | Rp 1.199 | 0,39 | 1,10 | 0,15 | 0,10 | 174,36 | 139,36 | 10,14 | Rp 1.952 | 0,34 | 1,11 | 0,16 | 0,11 | 198,54 | 221,10 | 8,97 | Rp 1.984 |
| BUDI | 0,32 | 1,04 | 0,08 | 0,04 | 18,51 | 19,34 | 10,10 | Rp 195 | 0,40 | 1,04 | 0,07 | 0,04 | 19,77 | 19,34 | 11,87 | Rp 244 | 0,62 | 1,02 | 0,07 | 0,02 | 22,41 | 22,95 | 12,71 | Rp 292 |
| CAMP | 0,41 | 1,06 | 0,08 | 0,06 | 17 | 17,97 | 18,03 | Rp 324 | 1,70 | 0,91 | 0,02 | -0,09 | 20,60 | 17,97 | 13,52 | Rp 253 | 0,92 | 1,01 | 0,06 | 0,01 | 21,65 | 21,87 | 18,76 | Rp 410 |
| CEKA | 0,32 | 1,09 | 0,15 | 0,09 | 314 | 342,85 | 6,54 | Rp 2.241 | 0,27 | 1,10 | 0,15 | 0,10 | 371,00 | 342,85 | 5,89 | Rp 2.413 | 0,39 | 1,06 | 0,11 | 0,06 | 258 | 272,78 | 7,56 | Rp 2.062 |
| CLEO | 2,85 | 0,67 | -0,24 | -0,33 | 15 | 9,99 | 20,86 | Rp 208 | 0,06 | 1,15 | 0,16 | 0,15 | 16,00 | 9,99 | 40,06 | Rp 740 | 0,07 | 1,19 | 0,19 | 0,19 | 25 | 29,72 | 33,76 | Rp 1.003 |
| CPIN | 0,51 | 1,07 | 0,09 | 0,07 | 221 | 236,68 | 28,83 | Rp 6.825 | 0,60 | 1,03 | 0,05 | 0,03 | 179,00 | 236,68 | 32,48 | Rp 5.984 | 0,71 | 1,02 | 0,04 | 0,02 | 141 | 144,52 | 36,53 | Rp 5.279 |
| DLTA | 1,06 | 0,99 | 0,05 | -0,01 | 235 | 232,21 | 15,73 | Rp 3.652 | 1,04 | 0,99 | 0,07 | -0,01 | 288,00 | 232,21 | 13,17 | Rp 3.757 | 1,31 | 0,93 | 0,03 | -0,07 | 249 | 232,76 | 13,25 | Rp 3.085 |
| DSNG | 0,18 | 1,09 | 0,11 | 0,09 | 68,6 | 74,52 | 7,92 | Rp 590 | 0,18 | 1,12 | 0,16 | 0,12 | 113,86 | 74,52 | 5,91 | Rp 755 | 0,38 | 1,06 | 0,11 | 0,06 | 79,23 | 83,89 | 7,42 | Rp 622 |
| EPMT | 0,64 | 1,04 | 0,12 | 0,04 | 313 | 326,97 | 9,01 | Rp 2.946 | 3,21 | 0,74 | -0,18 | -0,26 | 63,87 | 326,97 | 31,93 | Rp 1.512 | 0,81 | 1,02 | 0,10 | 0,02 | 254 | 258,62 | 10,38 | Rp 2.685 |
| GGRM | 0,89 | 1,01 | 0,10 | 0,01 | 2913 | 2942,59 | 10,61 | Rp 31.225 | 1,56 | 0,97 | 0,10 | -0,03 | 1445,00 | 2942,59 | 12,12 | Rp 17.049 | 0,43 | 1,05 | 0,11 | 0,05 | 2767 | 2904,09 | 7,71 | Rp 22.389 |
| GOOD | 0,31 | 1,11 | 0,12 | 0,11 | 11,60 | 12,90 | 50,35 | Rp 650 | 0,51 | 1,08 | 0,09 | 0,08 | 11,64 | 12,90 | 48,54 | Rp 608 | 0,38 | 1,10 | 0,11 | 0,10 | 15,78 | 17,28 | 29,85 | Rp 516 |
| HMSP | 1,19 | 0,95 | 0,03 | -0,05 | 61 | 58,11 | 15,07 | Rp 876 | 1,17 | 0,96 | 0,04 | -0,04 | 54,00 | 58,11 | 14,95 | Rp 776 | 0,78 | 1,06 | 0,12 | 0,06 | 70 | 74,15 | 13,54 | Rp 1.004 |
| ICBP | 0,39 | 1,09 | 0,11 | 0,09 | 548 | 596,14 | 17,27 | Rp 10.296 | 0,55 | 1,05 | 0,07 | 0,05 | 393,00 | 596,14 | 26,59 | Rp 10.922 | 0,31 | 1,09 | 0,11 | 0,09 | 599 | 655,02 | 19,31 | Rp 12.646 |
| INDF | 0,32 | 1,09 | 0,13 | 0,09 | 870 | 946,74 | 7,91 | Rp 7.490 | 0,38 | 1,06 | 0,10 | 0,06 | 724,00 | 946,74 | 9,85 | Rp 7.563 | 0,28 | 1,08 | 0,12 | 0,08 | 928 | 1004,77 | 7,53 | Rp 7.561 |
| JPFA | 0,23 | 1,13 | 0,15 | 0,13 | 174 | 195,83 | 11,13 | Rp 2.179 | 0,49 | 1,06 | 0,10 | 0,06 | 122,00 | 195,83 | 11,21 | Rp 1.444 | 0,62 | 1,03 | 0,07 | 0,03 | 80 | 82,03 | 15,12 | Rp 1.241 |
| KMDS | 0,17 | 1,15 | 0,18 | 0,15 | 79 | 91,05 | 6,33 | Rp 576 | 0,33 | 1,17 | 0,21 | 0,17 | 60,00 | 91,05 | 11,24 | Rp 791 | 0,56 | 1,11 | 0,19 | 0,11 | 64 | 70,91 | 7,34 | Rp 521 |
| LSIP | 0,14 | 1,10 | 0,12 | 0,10 | 145 | 159,66 | 9,00 | Rp 1.437 | 0,34 | 1,07 | 0,12 | 0,07 | 152,00 | 159,66 | 7,17 | Rp 1.169 | 0,47 | 1,04 | 0,09 | 0,04 | 112 | 115,96 | 8,23 | Rp 954 |
| MIDI | 0,22 | 1,24 | 0,24 | 0,24 | 95,48 | 117,95 | 28,59 | Rp 3.373 | 0,21 | 1,25 | 0,26 | 0,25 | 134,40 | 117,95 | 27,68 | Rp 4.660 | 0,21 | 1,10 | 0,11 | 0,10 | 16,73 | 18,46 | 28,37 | Rp 524 |
| MLBI | 1,50 | 0,70 | -0,24 | -0,30 | 316 | 219,68 | 17,16 | Rp 3.770 | 1,03 | 0,98 | 0,03 | -0,02 | 439,00 | 219,68 | 19,89 | Rp 8.518 | 0,70 | 1,23 | 0,27 | 0,23 | 506 | 621,73 | 18,82 | Rp 11.701 |
| MYOR | 0,98 | 1,00 | 0,03 | 0,00 | 53 | 53,11 | 38,57 | Rp 2.048 | 0,24 | 1,12 | 0,12 | 0,12 | 87,00 | 53,11 | 32,08 | Rp 3.116 | 0,24 | 1,16 | 0,17 | 0,16 | 143 | 165,93 | 20,20 | Rp 3.353 |
| ROTI | 1,04 | 0,99 | 0,03 | -0,01 | 46,11 | 45,85 | 29,33 | Rp 1.345 | 0,75 | 1,06 | 0,10 | 0,06 | 74,98 | 45,85 | 18,67 | Rp 1.484 | 1,68 | 0,91 | -0,01 | -0,09 | 58,44 | 52,90 | 17,81 | Rp 942 |
| SDPC | 0,07 | 1,04 | 0,04 | 0,04 | 7,51 | 7,79 | 18,79 | Rp 146 | 0,05 | 1,09 | 0,09 | 0,09 | 19,20 | 7,79 | 18,84 | Rp 394 | 0,08 | 1,11 | 0,12 | 0,11 | 25,97 | 28,83 | 6,75 | Rp 195 |
| SIMP | 0,05 | 1,06 | 0,07 | 0,06 | 64 | 68,14 | 7,59 | Rp 517 | 0,17 | 1,06 | 0,09 | 0,06 | 77,00 | 68,14 | 5,70 | Rp 465 | 0,31 | 1,03 | 0,07 | 0,03 | 48 | 49,42 | 8,07 | Rp 399 |
| SKBM | 0,07 | 1,03 | 0,03 | 0,03 | 17,11 | 17,59 | 21,63 | Rp 380 | 0,07 | 1,08 | 0,08 | 0,08 | 49,84 | 17,59 | 8,15 | Rp 437 | 11,59 | 0,98 | 0,01 | -0,02 | 0,86 | 0,84 | 356,76 | Rp 300 |
| SKLT | 0,11 | 1,14 | 0,14 | 0,14 | 122,91 | 139,98 | 22,42 | Rp 3.139 | 0,36 | 1,08 | 0,10 | 0,08 | 120,89 | 139,98 | 17,44 | Rp 2.281 | 0,03 | 1,09 | 0,10 | 0,09 | 75,12 | 82,07 | 4,10 | Rp 337 |
| SMAR | 0,35 | 1,13 | 0,21 | 0,13 | 984 | 1109,40 | 5,00 | Rp 5.542 | 0,16 | 1,24 | 0,30 | 0,24 | 1915,00 | 1109,40 | 3,20 | Rp 7.608 | 1,16 | 0,99 | 0,08 | -0,01 | 320 | 317,59 | 12,41 | Rp 3.940 |
| SSMS | 0,19 | 1,20 | 0,23 | 0,20 | 159,11 | 191,26 | 7,29 | Rp 1.394 | 0,80 | 1,06 | 0,16 | 0,06 | 192,90 | 191,26 | 8,05 | Rp 1.641 | 1,39 | 0,90 | -0,03 | -0,10 | 53,78 | 48,35 | 17,47 | Rp 845 |
| TBLA | 0,16 | 1,10 | 0,13 | 0,10 | 150,65 | 166,01 | 5,82 | Rp 965 | 0,59 | 1,05 | 0,18 | 0,05 | 151,74 | 166,01 | 4,80 | Rp 764 | 0,19 | 1,06 | 0,09 | 0,06 | 104,86 | 111,21 | 7,03 | Rp 782 |
| TGKA | 0,69 | 1,09 | 0,14 | 0,09 | 523,79 | 568,55 | 14,51 | Rp 8.247 | 0,57 | 1,10 | 0,14 | 0,10 | 520,60 | 568,55 | 15,02 | Rp 8.612 | 0,71 | 1,06 | 0,11 | 0,06 | 498 | 526,67 | 13,70 | Rp 7.214 |
| ULTJ | 0,68 | 1,10 | 0,15 | 0,10 | 122 | 134,33 | 14,17 | Rp 1.904 | 0,23 | 1,17 | 0,19 | 0,17 | 92,00 | 134,33 | 18,79 | Rp 2.026 | 0,26 | 1,13 | 0,15 | 0,13 | 112 | 126,62 | 16,15 | Rp 2.045 |
| UNVR | 1,10 | 0,87 | -0,09 | -0,13 | 151 | 131,01 | 23,62 | Rp 3.094 | 1,09 | 0,89 | -0,08 | -0,11 | 141,00 | 131,01 | 29,53 | Rp 3.688 | 1,06 | 0,91 | -0,05 | -0,09 | 126 | 114,64 | 25,49 | Rp 2.922 |
| VICI | 0,32 | 1,16 | 0,18 | 0,16 | 26,43 | 30,67 | 22,61 | Rp 693 | 0,48 | 1,06 | 0,08 | 0,06 | 14,56 | 30,67 | 37,24 | Rp 577 | 0,34 | 1,13 | 0,14 | 0,13 | 26,60 | 30,02 | 27,58 | Rp 828 |
| WIIM | 0,24 | 1,10 | 0,15 | 0,10 | 84,13 | 92,67 | 5,60 | Rp 519 | 0,18 | 1,14 | 0,17 | 0,14 | 119,33 | 92,67 | 6,00 | Rp 813 | 0,30 | 1,19 | 0,23 | 0,19 | 238,50 | 283,11 | 8,83 | Rp 2.501 |
| PNGO | 0,43 | 1,17 | 0,24 | 0,17 | 240 | 280,86 | 7,58 | Rp 2.130 | 0,54 | 1,11 | 0,20 | 0,11 | 222,00 | 280,86 | 7,02 | Rp 1.733 | 0,53 | 1,11 | 0,21 | 0,11 | 245 | 272,66 | 6,36 | Rp 1.734 |
| UCID | 0,13 | 1,08 | 0,09 | 0,08 | 116 | 125,78 | 13,55 | Rp 1.705 | 0,30 | 1,04 | 0,06 | 0,04 | 76,00 | 125,78 | 15,02 | Rp 1.190 | 0,14 | 1,07 | 0,08 | 0,07 | 105 | 112,02 | 10,16 | Rp 1.138 |

## Appendix 4 Calculation of Intrinsic Value Using DDM for 2021-2023

| Ticker Code | 2021 | | | | | | | 2022 | | | | | | | 2023 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | PRICE (2021) | K | Dividend Growth (g) | D0 | (1+g) | D1 | Intrinsic Value (DDM Constant Growth) | PRICE (2022) | K | Dividend Growth (g) | D0 | (1+g) | D1 | Intrinsic Value (DDM Constant Growth) | PRICE (2023) | K | Dividend Growth (g) | D0 | 1+g | D1 | Intrinsic Value (DDM Constant Growth) |
| AALI | Rp 9.500 | 0,10 | 0,07 | 255,00 | 1,07 | 273,70 | Rp 10.196,72 | Rp 8.025 | 0,10 | 0,04 | 444,00 | 1,04 | 462,07 | Rp 8.351,54 | Rp 7.025 | 0,07 | 0,01 | 401,00 | 1,01 | 406,20 | Rp 7.116 |
| AMRT | Rp 1.215 | 0,19 | 0,18 | 9,30 | 1,18 | 10,95 | Rp 1.430,58 | Rp 2.650 | 0,19 | 0,18 | 18,78 | 1,18 | 22,24 | Rp 3.138,24 | Rp 2.930 | 0,16 | 0,16 | 24,06 | 1,16 | 27,83 | Rp 3.389 |
| BISI | Rp 995 | 0,14 | 0,10 | 38,00 | 1,10 | 41,72 | Rp 1.092,36 | Rp 1.600 | 0,15 | 0,10 | 68,00 | 1,10 | 75,12 | Rp 1.767,42 | Rp 1.600 | 0,16 | 0,11 | 68,00 | 1,11 | 75,73 | Rp 1.782 |
| BUDI | Rp 179 | 0,08 | 0,04 | 6,00 | 1,04 | 6,27 | Rp 187,00 | Rp 226 | 0,07 | 0,04 | 8,00 | 1,04 | 8,31 | Rp 234,67 | Rp 278 | 0,07 | 0,02 | 14,00 | 1,02 | 14,34 | Rp 285 |
| CAMP | Rp 290 | 0,08 | 0,06 | 7,00 | 1,06 | 7,40 | Rp 306,56 | Rp 306 | 0,02 | -0,09 | 35,00 | 0,91 | 31,85 | Rp 278,45 | Rp 402 | 0,06 | 0,01 | 20,00 | 1,01 | 20,20 | Rp 406 |
| CEKA | Rp 1.880 | 0,15 | 0,09 | 100,00 | 1,09 | 109,19 | Rp 2.052,76 | Rp 1.980 | 0,15 | 0,10 | 100,00 | 1,10 | 110,40 | Rp 2.185,93 | Rp 1.845 | 0,11 | 0,06 | 100,00 | 1,06 | 105,73 | Rp 1.951 |
| CLEO | Rp 470 | -0,24 | -0,33 | 42,78 | 0,67 | 28,49 | Rp 312,94 | Rp 555 | 0,16 | 0,15 | 1,00 | 1,15 | 1,15 | Rp 640,89 | Rp 710 | 0,19 | 0,19 | 1,64 | 1,19 | 1,95 | Rp 844 |
| CPIN | Rp 5.950 | 0,09 | 0,07 | 112,00 | 1,07 | 119,95 | Rp 6.372,28 | Rp 5.650 | 0,05 | 0,03 | 108,00 | 1,03 | 111,15 | Rp 5.814,81 | Rp 5.025 | 0,04 | 0,02 | 100,00 | 1,02 | 102,49 | Rp 5.150 |
| DLTA | Rp 3.740 | 0,05 | -0,01 | 250,00 | 0,99 | 247,03 | Rp 3.695,57 | Rp 3.830 | 0,07 | -0,01 | 300,00 | 0,99 | 297,13 | Rp 3.793,31 | Rp 3.530 | 0,03 | -0,07 | 325,00 | 0,93 | 303,81 | Rp 3.300 |
| DSNG | Rp 500 | 0,11 | 0,09 | 12,33 | 1,09 | 13,40 | Rp 543,18 | Rp 600 | 0,16 | 0,12 | 20,00 | 1,12 | 22,44 | Rp 673,13 | Rp 555 | 0,11 | 0,06 | 30,00 | 1,06 | 31,76 | Rp 588 |
| EPMT | Rp 2.700 | 0,12 | 0,04 | 200,00 | 1,04 | 208,92 | Rp 2.820,47 | Rp 2.750 | -0,18 | -0,26 | 205,00 | 0,74 | 152,01 | Rp 2.039,17 | Rp 2.590 | 0,10 | 0,02 | 205,00 | 1,02 | 208,73 | Rp 2.637 |
| GGRM | Rp 30.600 | 0,10 | 0,01 | 2600,00 | 1,01 | 2626,41 | Rp 30.910,85 | Rp 18.000 | 0,10 | -0,03 | 2.250,00 | 0,97 | 2.189,78 | Rp 17.518,21 | Rp 20.325 | 0,11 | 0,05 | 1.200,00 | 1,05 | 1.259,45 | Rp 21.332 |
| GOOD | Rp 525 | 0,12 | 0,11 | 3,58 | 1,11 | 3,98 | Rp 584,04 | Rp 525 | 0,09 | 0,08 | 5,94 | 1,08 | 6,39 | Rp 565,02 | Rp 430 | 0,11 | 0,10 | 6,00 | 1,10 | 6,57 | Rp 471 |
| HMSP | Rp 965 | 0,03 | -0,05 | 72,80 | 0,95 | 69,36 | Rp 919,36 | Rp 840 | 0,04 | -0,04 | 63,30 | 0,96 | 60,85 | Rp 807,52 | Rp 895 | 0,12 | 0,06 | 54,70 | 1,06 | 57,94 | Rp 948 |
| ICBP | Rp 8.700 | 0,11 | 0,09 | 215,00 | 1,09 | 233,89 | Rp 9.464,34 | Rp 10.000 | 0,07 | 0,05 | 215,00 | 1,05 | 224,70 | Rp 10.450,95 | Rp 10.575 | 0,11 | 0,09 | 188,00 | 1,09 | 205,58 | Rp 11.564 |
| INDF | Rp 6.325 | 0,13 | 0,09 | 278,00 | 1,09 | 302,52 | Rp 6.882,89 | Rp 6.725 | 0,10 | 0,06 | 278,00 | 1,06 | 294,81 | Rp 7.131,76 | Rp 6.450 | 0,12 | 0,08 | 257,00 | 1,08 | 278,26 | Rp 6.984 |
| JPFA | Rp 1.720 | 0,15 | 0,13 | 39,77 | 1,13 | 44,75 | Rp 1.935,80 | Rp 1.295 | 0,10 | 0,06 | 59,46 | 1,06 | 62,78 | Rp 1.367,49 | Rp 1.180 | 0,07 | 0,03 | 49,55 | 1,03 | 50,81 | Rp 1.210 |
| KMDS | Rp 434 | 0,18 | 0,15 | 13,75 | 1,15 | 15,85 | Rp 500,19 | Rp 575 | 0,21 | 0,17 | 20,00 | 1,17 | 23,46 | Rp 674,41 | Rp 424 | 0,19 | 0,11 | 36,00 | 1,11 | 39,89 | Rp 470 |
| LSIP | Rp 1.185 | 0,12 | 0,10 | 19,99 | 1,10 | 22,01 | Rp 1.304,78 | Rp 1.015 | 0,12 | 0,07 | 50,98 | 1,07 | 54,71 | Rp 1.089,39 | Rp 890 | 0,09 | 0,04 | 52,98 | 1,04 | 54,85 | Rp 921 |
| MIDI | Rp 2.210 | 0,24 | 0,24 | 20,85 | 1,24 | 25,76 | Rp 2.730,10 | Rp 2.970 | 0,26 | 0,25 | 28,65 | 1,25 | 35,89 | Rp 3.720,33 | Rp 430 | 0,11 | 0,10 | 3,59 | 1,10 | 3,96 | Rp 475 |
| MLBI | Rp 7.800 | -0,24 | -0,30 | 475,00 | 0,70 | 330,22 | Rp 5.422,50 | Rp 8.950 | 0,03 | -0,02 | 451,45 | 0,98 | 440,42 | Rp 8.731,27 | Rp 7.750 | 0,27 | 0,23 | 355,00 | 1,23 | 436,20 | Rp 9.523 |
| MYOR | Rp 2.040 | 0,03 | 0,00 | 52,00 | 1,00 | 52,10 | Rp 2.044,10 | Rp 2.500 | 0,12 | 0,12 | 21,00 | 1,12 | 23,45 | Rp 2.791,11 | Rp 2.490 | 0,17 | 0,16 | 35,00 | 1,16 | 40,61 | Rp 2.889 |
| ROTI | Rp 1.360 | 0,03 | -0,01 | 48,05 | 0,99 | 47,79 | Rp 1.352,37 | Rp 1.320 | 0,10 | 0,06 | 55,95 | 1,06 | 59,33 | Rp 1.399,75 | Rp 1.150 | -0,01 | -0,09 | 98,23 | 0,91 | 88,91 | Rp 1.041 |
| SDPC | Rp 136 | 0,04 | 0,04 | 0,50 | 1,04 | 0,52 | Rp 141,13 | Rp 332 | 0,09 | 0,09 | 1,00 | 1,09 | 1,09 | Rp 361,74 | Rp 158 | 0,12 | 0,11 | 2,00 | 1,11 | 2,22 | Rp 175 |
| SIMP | Rp 456 | 0,07 | 0,06 | 2,94 | 1,06 | 3,13 | Rp 485,47 | Rp 414 | 0,09 | 0,06 | 12,74 | 1,06 | 13,50 | Rp 438,64 | Rp 376 | 0,07 | 0,03 | 14,70 | 1,03 | 15,14 | Rp 387 |
| SKBM | Rp 360 | 0,03 | 0,03 | 1,20 | 1,03 | 1,23 | Rp 370,02 | Rp 378 | 0,08 | 0,08 | 3,50 | 1,08 | 3,76 | Rp 406,35 | Rp 314 | 0,01 | -0,02 | 9,97 | 0,98 | 9,74 | Rp 307 |
| SKLT | Rp 2.420 | 0,14 | 0,14 | 13,50 | 1,14 | 15,37 | Rp 2.756,04 | Rp 1.950 | 0,10 | 0,08 | 43,20 | 1,08 | 46,72 | Rp 2.108,81 | Rp 282 | 0,10 | 0,09 | 2,43 | 1,09 | 2,65 | Rp 308 |
| SMAR | Rp 4.360 | 0,21 | 0,13 | 345,00 | 1,13 | 388,97 | Rp 4.915,63 | Rp 4.950 | 0,30 | 0,24 | 310,00 | 1,24 | 384,31 | Rp 6.136,54 | Rp 4.000 | 0,08 | -0,01 | 370,00 | 0,99 | 367,22 | Rp 3.970 |
| SSMS | Rp 965 | 0,23 | 0,20 | 30,49 | 1,20 | 36,65 | Rp 1.160,02 | Rp 1.470 | 0,16 | 0,06 | 154,79 | 1,06 | 163,56 | Rp 1.553,28 | Rp 1.045 | -0,03 | -0,10 | 74,64 | 0,90 | 67,10 | Rp 939 |
| TBLA | Rp 795 | 0,13 | 0,10 | 24,69 | 1,10 | 27,21 | Rp 876,08 | Rp 695 | 0,18 | 0,05 | 88,90 | 1,05 | 93,22 | Rp 728,76 | Rp 695 | 0,09 | 0,06 | 19,78 | 1,06 | 20,98 | Rp 737 |
| TGKA | Rp 7.000 | 0,14 | 0,09 | 360,00 | 1,09 | 390,76 | Rp 7.598,15 | Rp 7.100 | 0,14 | 0,10 | 295,00 | 1,10 | 324,89 | Rp 7.819,46 | Rp 6.450 | 0,11 | 0,06 | 355,00 | 1,06 | 375,44 | Rp 6.821 |
| ULTJ | Rp 1.570 | 0,15 | 0,10 | 83,07 | 1,10 | 91,47 | Rp 1.728,73 | Rp 1.475 | 0,19 | 0,17 | 21,33 | 1,17 | 24,99 | Rp 1.728,54 | Rp 1.600 | 0,15 | 0,13 | 29,57 | 1,13 | 33,43 | Rp 1.809 |
| UNVR | Rp 4.110 | -0,09 | -0,13 | 166,00 | 0,87 | 144,03 | Rp 3.565,96 | Rp 4.700 | -0,08 | -0,11 | 153,00 | 0,89 | 135,52 | Rp 4.163,16 | Rp 3.530 | -0,05 | -0,09 | 134,00 | 0,91 | 121,92 | Rp 3.212 |
| VICI | Rp 515 | 0,18 | 0,16 | 8,50 | 1,16 | 9,86 | Rp 597,56 | Rp 510 | 0,08 | 0,06 | 7,00 | 1,06 | 7,44 | Rp 542,28 | Rp 650 | 0,14 | 0,13 | 9,00 | 1,13 | 10,16 | Rp 734 |
| WIIM | Rp 428 | 0,15 | 0,10 | 20,50 | 1,10 | 22,58 | Rp 471,43 | Rp 630 | 0,17 | 0,14 | 21,60 | 1,14 | 24,54 | Rp 715,82 | Rp 1.775 | 0,23 | 0,19 | 71,93 | 1,19 | 85,39 | Rp 2.107 |
| PNGO | Rp 1.555 | 0,24 | 0,17 | 102,00 | 1,17 | 119,37 | Rp 1.819,75 | Rp 1.400 | 0,20 | 0,11 | 120,00 | 1,11 | 133,49 | Rp 1.557,41 | Rp 1.400 | 0,21 | 0,11 | 130,00 | 1,11 | 144,68 | Rp 1.558 |
| UCID | Rp 1.450 | 0,09 | 0,08 | 15,00 | 1,08 | 16,26 | Rp 1.572,25 | Rp 1.095 | 0,06 | 0,04 | 22,86 | 1,04 | 23,83 | Rp 1.141,51 | Rp 1.095 | 0,08 | 0,07 | 15,09 | 1,07 | 16,10 | Rp 1.067 |

## Appendix 5 RMSE Calculation in 2021

| RMSE Data for Each Valuation Approach Model (PBV, PER, DDM) in 2021 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ticker Code | RMSE PBV 2021 | | | | RMSE PER 2021 | | | | RMSE DDM 2021 | | | |
| | Intrinsic Value (PBV) | PRICE (2021) | (Yi−Oi) | (Yi−Oi)² | Intrinsic Value (PER) | PRICE (2021) | (Yi−Oi) | (Yi−Oi)² | Intrinsic Value (DDM) | PRICE (2021) | (Yi−Oi) | (Yi−Oi)² |
| AALI | Rp 31.019,42 | Rp 9.500 | -21.519,42 | 463.085.260,25 | Rp 10.945 | Rp 9.500 | -1.444,53 | 2.086.672,60 | Rp 10.196,72 | Rp 9.500 | -696,72 | 485.415,68 |
| AMRT | Rp 610,51 | Rp 1.215 | 604,49 | 365.405,05 | Rp 1.684 | Rp 1.215 | -469,41 | 220.342,03 | Rp 1.430,58 | Rp 1.215 | -215,58 | 46.473,86 |
| BISI | Rp 2.564,36 | Rp 995 | -1.569,36 | 2.462.898,03 | Rp 1.199 | Rp 995 | -204,25 | 41.717,78 | Rp 1.092,36 | Rp 995 | -97,36 | 9.479,21 |
| BUDI | Rp 869,82 | Rp 179 | -690,82 | 477.228,48 | Rp 195 | Rp 179 | -16,35 | 267,31 | Rp 187,00 | Rp 179 | -8,00 | 63,94 |
| CAMP | Rp 490,12 | Rp 290 | -200,12 | 40.046,79 | Rp 324 | Rp 290 | -34,06 | 1.160,18 | Rp 306,56 | Rp 290 | -16,56 | 274,17 |
| CEKA | Rp 6.575,42 | Rp 1.880 | -4.695,42 | 22.046.967,95 | Rp 2.241 | Rp 1.880 | -361,40 | 130.609,62 | Rp 2.052,76 | Rp 1.880 | -172,76 | 29.846,65 |
| CLEO | Rp 235,37 | Rp 470 | 234,63 | 55.050,64 | Rp 208 | Rp 470 | 261,64 | 68.455,32 | Rp 312,94 | Rp 470 | 157,06 | 24.668,89 |
| CPIN | Rp 4.325,10 | Rp 5.950 | 1.624,90 | 2.640.298,55 | Rp 6.825 | Rp 5.950 | -874,53 | 764.811,46 | Rp 6.372,28 | Rp 5.950 | -422,28 | 178.322,44 |
| DLTA | Rp 3.557,93 | Rp 3.740 | 182,07 | 33.148,63 | Rp 3.652 | Rp 3.740 | 88,32 | 7.801,30 | Rp 3.695,57 | Rp 3.740 | 44,43 | 1.973,70 |
| DSNG | Rp 1.869,07 | Rp 500 | -1.369,07 | 1.874.341,87 | Rp 590 | Rp 500 | -90,08 | 8.114,72 | Rp 543,18 | Rp 500 | -43,18 | 1.864,22 |
| EPMT | Rp 7.128,42 | Rp 2.700 | -4.428,42 | 19.610.884,33 | Rp 2.946 | Rp 2.700 | -246,33 | 60.676,23 | Rp 2.820,47 | Rp 2.700 | -120,47 | 14.514,20 |
| GGRM | Rp 86.894,64 | Rp 30.600 | -56.294,64 | 3.169.086.410,32 | Rp 31.225 | Rp 30.600 | -624,87 | 390.457,97 | Rp 30.910,85 | Rp 30.600 | -310,85 | 96.630,37 |
| GOOD | Rp 231,62 | Rp 525 | 293,38 | 86.069,22 | Rp 650 | Rp 525 | -124,71 | 15.552,70 | Rp 584,04 | Rp 525 | -59,04 | 3.485,24 |
| HMSP | Rp 707,71 | Rp 965 | 257,29 | 66.196,82 | Rp 876 | Rp 965 | 89,12 | 7.942,65 | Rp 919,36 | Rp 965 | 45,64 | 2.083,01 |
| ICBP | Rp 13.232,94 | Rp 8.700 | -4.532,94 | 20.547.517,69 | Rp 10.296 | Rp 8.700 | -1.595,84 | 2.546.711,11 | Rp 9.464,34 | Rp 8.700 | -764,34 | 584.223,08 |
| INDF | Rp 27.823,54 | Rp 6.325 | -21.498,54 | 462.187.247,01 | Rp 7.490 | Rp 6.325 | -1.165,00 | 1.357.219,65 | Rp 6.882,89 | Rp 6.325 | -557,89 | 311.246,18 |
| JPFA | Rp 3.150,93 | Rp 1.720 | -1.430,93 | 2.047.566,67 | Rp 2.179 | Rp 1.720 | -458,67 | 210.377,40 | Rp 1.935,80 | Rp 1.720 | -215,80 | 46.568,45 |
| KMDS | Rp 640,09 | Rp 434 | -206,09 | 42.472,40 | Rp 576 | Rp 434 | -142,48 | 20.299,71 | Rp 500,19 | Rp 434 | -66,19 | 4.381,25 |
| LSIP | Rp 4.204,46 | Rp 1.185 | -3.019,46 | 9.117.146,03 | Rp 1.437 | Rp 1.185 | -251,67 | 63.339,89 | Rp 1.304,78 | Rp 1.185 | -119,78 | 14.347,99 |
| MIDI | Rp 1.581,35 | Rp 2.210 | 628,65 | 395.198,63 | Rp 3.373 | Rp 2.210 | -1.162,60 | 1.351.634,89 | Rp 2.730,10 | Rp 2.210 | -520,10 | 270.503,31 |
| MLBI | Rp 1.471,11 | Rp 7.800 | 6.328,89 | 40.054.884,86 | Rp 3.770 | Rp 7.800 | 4.030,33 | 16.243.525,62 | Rp 5.422,50 | Rp 7.800 | 2.377,50 | 5.652.526,89 |
| MYOR | Rp 1.432,79 | Rp 2.040 | 607,21 | 368.705,77 | Rp 2.048 | Rp 2.040 | -8,21 | 67,49 | Rp 2.044,10 | Rp 2.040 | -4,10 | 16,84 |
| ROTI | Rp 1.298,86 | Rp 1.360 | 61,14 | 3.738,49 | Rp 1.345 | Rp 1.360 | 15,21 | 231,44 | Rp 1.352,37 | Rp 1.360 | 7,63 | 58,19 |
| SDPC | Rp 524,55 | Rp 136 | -388,55 | 150.974,19 | Rp 146 | Rp 136 | -10,45 | 109,15 | Rp 141,13 | Rp 136 | -5,13 | 26,29 |
| SIMP | Rp 3.527,83 | Rp 456 | -3.071,83 | 9.436.113,37 | Rp 517 | Rp 456 | -60,85 | 3.702,58 | Rp 485,47 | Rp 456 | -29,47 | 868,60 |
| SKBM | Rp 1.617,71 | Rp 360 | -1.257,71 | 1.581.839,99 | Rp 380 | Rp 360 | -20,32 | 412,85 | Rp 370,02 | Rp 360 | -10,02 | 100,40 |
| SKLT | Rp 2.212,09 | Rp 2.420 | 207,91 | 43.226,07 | Rp 3.139 | Rp 2.420 | -718,75 | 516.606,30 | Rp 2.756,04 | Rp 2.420 | -336,04 | 112.926,11 |
| SMAR | Rp 14.155,83 | Rp 4.360 | -9.795,83 | 95.958.263,31 | Rp 5.542 | Rp 4.360 | -1.182,08 | 1.397.311,22 | Rp 4.915,63 | Rp 4.360 | -555,63 | 308.730,01 |
| SSMS | Rp 1.808,21 | Rp 965 | -843,21 | 710.998,08 | Rp 1.394 | Rp 965 | -429,45 | 184.423,51 | Rp 1.160,02 | Rp 965 | -195,02 | 38.031,72 |
| TBLA | Rp 3.427,20 | Rp 795 | -2.632,20 | 6.928.473,68 | Rp 965 | Rp 795 | -170,42 | 29.043,00 | Rp 876,08 | Rp 795 | -81,08 | 6.573,30 |
| TGKA | Rp 5.405,45 | Rp 7.000 | 1.594,55 | 2.542.592,15 | Rp 8.247 | Rp 7.000 | -1.247,42 | 1.556.063,45 | Rp 7.598,15 | Rp 7.000 | -598,15 | 357.789,38 |
| ULTJ | Rp 1.254,12 | Rp 1.570 | 315,88 | 99.779,91 | Rp 1.904 | Rp 1.570 | -333,52 | 111.234,45 | Rp 1.728,73 | Rp 1.570 | -158,73 | 25.196,71 |
| UNVR | Rp 319,42 | Rp 4.110 | 3.790,58 | 14.368.475,76 | Rp 3.094 | Rp 4.110 | 1.016,06 | 1.032.375,10 | Rp 3.565,96 | Rp 4.110 | 544,04 | 295.975,19 |
| VICI | Rp 315,36 | Rp 515 | 199,64 | 39.855,69 | Rp 693 | Rp 515 | -178,36 | 31.813,47 | Rp 597,56 | Rp 515 | -82,56 | 6.816,73 |
| WIIM | Rp 1.770,51 | Rp 428 | -1.342,51 | 1.802.331,38 | Rp 519 | Rp 428 | -91,27 | 8.329,41 | Rp 471,43 | Rp 428 | -43,43 | 1.886,11 |
| PNGO | Rp 2.292,44 | Rp 1.555 | -737,44 | 543.821,41 | Rp 2.130 | Rp 1.555 | -574,58 | 330.147,14 | Rp 1.819,75 | Rp 1.555 | -264,75 | 70.094,53 |
| UCID | Rp 3.328,79 | Rp 1.450 | -1.878,79 | 3.529.840,83 | Rp 1.705 | Rp 1.450 | -254,80 | 64.925,47 | Rp 1.572,25 | Rp 1.450 | -122,25 | 14.944,82 |
| | | | **∑** | **4.354.431.270,32** | | | **∑** | **30.864.486,17** | | | **∑** | **9.018.927,65** |
| | | | **n** | **37** | | | **n** | **37** | | | **n** | **37** |
| | | | **∑(Yi−Oi)² / n** | **117.687.331,63** | | | **∑(Yi−Oi)² / n** | **834175,302** | | | **∑(Yi−Oi)² / n** | **243754,8013** |
| | | | **RMSE (PBV) (Rounded Number)** | **10.848** | | | **RMSE (PER) (Rounded Number)** | **913,33** | | | **RMSE (DDM) (Rounded Number)** | **493,72** |
| | | | **RMSE (PBV)** | **10.848,38** | | | **RMSE (PER)** | **913,331978** | | | **RMSE (DDM)** | **493,7153039** |

## Appendix 6 RMSE Calculation in 2022

| RMSE Data for Each Valuation Approach Model (PBV, PER, DDM) in 2022 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ticker Code | RMSE PBV 2022 | | | | RMSE PER 2022 | | | | RMSE DDM 2022 | | | |
| | Intrinsic Value (PBV) | PRICE (2022) | (Yi−Oi) | (Yi−Oi)² | Intrinsic Value (PER) | PRICE (2022) | (Yi−Oi) | (Yi−Oi)² | Intrinsic Value (DDM) | PRICE (2022) | (Yi−Oi) | (Yi−Oi)² |
| AALI | Rp 34.785,94 | Rp 8.025 | -35.988,95 | 1.295.204.302,14 | Rp 8.691 | Rp 8.025 | -666,37 | 444.054,66 | 8.351,54 | Rp 8.025 | -326,54 | 106.630,64 |
| AMRT | Rp 831,48 | Rp 2.650 | 1.597,95 | 2.553.429,80 | Rp 3.716 | Rp 2.650 | -1.066,43 | 1.137.280,21 | 3.138,24 | Rp 2.650 | -488,24 | 238.378,02 |
| BISI | Rp 3.060,42 | Rp 1.600 | -2.272,28 | 5.163.275,87 | Rp 1.952 | Rp 1.600 | -352,37 | 124.163,22 | 1.767,42 | Rp 1.600 | -167,42 | 28.030,91 |
| BUDI | Rp 966,78 | Rp 226 | -997,25 | 994.513,50 | Rp 244 | Rp 226 | -17,66 | 311,98 | 234,67 | Rp 226 | -8,67 | 75,09 |
| CAMP | Rp 481,53 | Rp 306 | -303,26 | 91.969,21 | Rp 253 | Rp 306 | 52,62 | 2.768,87 | 278,45 | Rp 306 | 27,55 | 759,02 |
| CEKA | Rp 7.841,39 | Rp 1.980 | -7.941,56 | 63.068.314,76 | Rp 2.413 | Rp 1.980 | -433,29 | 187.737,34 | 2.185,93 | Rp 1.980 | -205,93 | 42.408,83 |
| CLEO | Rp 297,28 | Rp 555 | 178,86 | 31.992,16 | Rp 740 | Rp 555 | -185,08 | 34.253,50 | 640,89 | Rp 555 | -85,89 | 7.377,46 |
| CPIN | Rp 7.314,37 | Rp 5.650 | -3.604,73 | 12.994.076,39 | Rp 5.984 | Rp 5.650 | -334,42 | 111.836,09 | 5.814,81 | Rp 5.650 | -164,81 | 27.160,98 |
| DLTA | Rp 3.762,32 | Rp 3.830 | -930,39 | 865.619,93 | Rp 3.757 | Rp 3.830 | 73,02 | 5.332,07 | 3.793,31 | Rp 3.830 | 36,69 | 1.345,88 |
| DSNG | Rp 2.317,21 | Rp 600 | -2.331,91 | 5.437.823,75 | Rp 755 | Rp 600 | -155,18 | 24.081,81 | 673,13 | Rp 600 | -73,13 | 5.348,64 |
| EPMT | Rp 8.004,24 | Rp 2.750 | -7.377,61 | 54.429.109,59 | Rp 1.512 | Rp 2.750 | 1.237,92 | 1.532.456,96 | 2.039,17 | Rp 2.750 | 710,83 | 505.281,57 |
| GGRM | Rp 90.508,57 | Rp 18.000 | -96.518,66 | 9.315.852.392,90 | Rp 17.049 | Rp 18.000 | 950,68 | 903.797,03 | 17.518,21 | Rp 18.000 | 481,79 | 232.120,64 |
| GOOD | Rp 273,40 | Rp 525 | 179,07 | 32.067,44 | Rp 608 | Rp 525 | -83,08 | 6.902,44 | 565,02 | Rp 525 | -40,02 | 1.601,24 |
| HMSP | Rp 728,97 | Rp 840 | -82,35 | 6.781,36 | Rp 776 | Rp 840 | 63,70 | 4.057,06 | 807,52 | Rp 840 | 32,48 | 1.054,65 |
| ICBP | Rp 14.834,09 | Rp 10.000 | -8.769,27 | 76.900.081,05 | Rp 10.922 | Rp 10.000 | -922,23 | 850.509,53 | 10.450,95 | Rp 10.000 | -450,95 | 203.353,81 |
| INDF | Rp 32.094,72 | Rp 6.725 | -33.883,80 | 1.148.111.991,51 | Rp 7.563 | Rp 6.725 | -838,13 | 702.464,66 | 7.131,76 | Rp 6.725 | -406,76 | 165.457,10 |
| JPFA | Rp 3.504,93 | Rp 1.295 | -3.139,72 | 9.857.858,80 | Rp 1.444 | Rp 1.295 | -149,03 | 22.211,01 | 1.367,49 | Rp 1.295 | -72,49 | 5.254,51 |
| KMDS | Rp 696,34 | Rp 575 | -306,07 | 93.677,97 | Rp 791 | Rp 575 | -216,00 | 46.654,46 | 674,41 | Rp 575 | -99,41 | 9.881,48 |
| LSIP | Rp 4.824,44 | Rp 1.015 | -5.089,26 | 25.900.593,45 | Rp 1.169 | Rp 1.015 | -154,22 | 23.784,27 | 1.089,39 | Rp 1.015 | -74,39 | 5.533,14 |
| MIDI | Rp 2.074,71 | Rp 2.970 | 344,91 | 118.963,40 | Rp 4.660 | Rp 2.970 | -1.690,23 | 2.856.869,30 | 3.720,33 | Rp 2.970 | -750,33 | 562.999,27 |
| MLBI | Rp 1.533,25 | Rp 8.950 | 7.010,01 | 49.140.237,76 | Rp 8.518 | Rp 8.950 | 432,12 | 186.725,95 | 8.731,27 | Rp 8.950 | 218,73 | 47.843,61 |
| MYOR | Rp 1.727,85 | Rp 2.500 | 313,79 | 98.463,68 | Rp 3.116 | Rp 2.500 | -616,12 | 379.606,01 | 2.791,11 | Rp 2.500 | -291,11 | 84.746,01 |
| ROTI | Rp 1.304,50 | Rp 1.320 | -330,56 | 109.269,90 | Rp 1.484 | Rp 1.320 | -164,32 | 27.002,49 | 1.399,75 | Rp 1.320 | -79,75 | 6.360,52 |
| SDPC | Rp 611,71 | Rp 332 | -441,99 | 195.350,96 | Rp 394 | Rp 332 | -62,14 | 3.860,89 | 361,74 | Rp 332 | -29,74 | 884,25 |
| SIMP | Rp 4.028,34 | Rp 414 | -4.682,98 | 21.930.307,19 | Rp 465 | Rp 414 | -50,75 | 2.575,21 | 438,64 | Rp 414 | -24,64 | 607,13 |
| SKBM | Rp 1.868,46 | Rp 378 | -1.986,13 | 3.944.714,54 | Rp 437 | Rp 378 | -58,83 | 3.460,90 | 406,35 | Rp 378 | -28,35 | 803,81 |
| SKLT | Rp 2.574,29 | Rp 1.950 | -1.307,20 | 1.708.772,41 | Rp 2.281 | Rp 1.950 | -330,55 | 109.262,74 | 2.108,81 | Rp 1.950 | -158,81 | 25.219,95 |
| SMAR | Rp 20.171,30 | Rp 4.950 | -20.572,34 | 423.221.300,91 | Rp 7.608 | Rp 4.950 | -2.657,51 | 7.062.367,50 | 6.136,54 | Rp 4.950 | -1.186,54 | 1.407.888,55 |
| SSMS | Rp 2.036,36 | Rp 1.470 | -1.106,57 | 1.224.491,30 | Rp 1.641 | Rp 1.470 | -171,29 | 29.338,61 | 1.553,28 | Rp 1.470 | -83,28 | 6.936,12 |
| TBLA | Rp 3.849,62 | Rp 695 | -4.175,84 | 17.437.639,12 | Rp 764 | Rp 695 | -69,16 | 4.783,68 | 728,76 | Rp 695 | -33,76 | 1.139,88 |
| TGKA | Rp 6.702,63 | Rp 7.100 | -1.380,71 | 1.906.350,26 | Rp 8.612 | Rp 7.100 | -1.511,83 | 2.285.632,49 | 7.819,46 | Rp 7.100 | -719,46 | 517.626,76 |
| ULTJ | Rp 1.516,96 | Rp 1.475 | -444,38 | 197.474,82 | Rp 2.026 | Rp 1.475 | -550,65 | 303.216,14 | 1.728,54 | Rp 1.475 | -253,54 | 64.280,21 |
| UNVR | Rp 315,38 | Rp 4.700 | 4.300,96 | 18.498.224,98 | Rp 3.688 | Rp 4.700 | 1.012,37 | 1.024.891,40 | 4.163,16 | Rp 4.700 | 536,84 | 288.201,88 |
| VICI | Rp 359,43 | Rp 510 | 55,22 | 3.049,43 | Rp 577 | Rp 510 | -66,60 | 4.435,57 | 542,28 | Rp 510 | -32,28 | 1.041,91 |
| WIIM | Rp 2.151,46 | Rp 630 | -2.092,20 | 4.377.289,11 | Rp 813 | Rp 630 | -183,33 | 33.608,78 | 715,82 | Rp 630 | -85,82 | 7.364,80 |
| PNGO | Rp 2.729,90 | Rp 1.400 | -2.054,09 | 4.219.269,60 | Rp 1.733 | Rp 1.400 | -332,52 | 110.568,97 | 1.557,41 | Rp 1.400 | -157,41 | 24.778,00 |
| UCID | Rp 3.739,35 | Rp 1.095 | -3.636,33 | 13.222.890,60 | Rp 1.190 | Rp 1.095 | -94,99 | 9.022,33 | 1.141,51 | Rp 1.095 | -46,51 | 2.162,75 |
| | | | ∑ | 12.579.143.931,54 | | | ∑ | 20.601.886,14 | | | ∑ | Rp 4.637.939,01 |
| | | | n | 37 | | | n | 37 | | | n | 37 |
| | | | ∑(Yi−Oi)² / n | 339.976.863,01 | | | ∑(Yi−Oi)² / n | 556807,7336 | | | ∑(Yi−Oi)² / n | Rp 125.349,70 |
| | | | RMSE (PBV) (Rounded Number) | 18.438 | | | RMSE (PER) (Rounded Number) | 746,20 | | | RMSE (DDM) (Rounded Number) | 354,05 |
| | | | RMSE (PBV) | 18.438,46 | | | RMSE (PER) | 746,1955063 | | | RMSE (DDM) | 354,0475997 |

## Appendix 7 RMSE Calculation in 2023

| RMSE Data for Each Valuation Approach Model (PBV, PER, DDM) IN 2023 | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ticker Code | RMSE PBV 2023 | | | | RMSE PER 2023 | | | | RMSE DDM 2023 | | | |
| | Intrinsic Value (PBV) | PRICE (2023) | (Yi−Oi) | (Yi−Oi)² | Intrinsic Value (PER) | PRICE (2023) | (Yi−Oi) | (Yi−Oi)² | Intrinsic Value (DDM) | PRICE (2023) | (Yi−Oi) | (Yi−Oi)² |
| AALI | Rp 40.763,50 | Rp 7.025 | -33.738,50 | 1.138.286.121,32 | Rp 7.208 | Rp 7.025 | -183,48 | 33.663,60 | Rp 7.116 | Rp 7.025 | -Rp 91,15 | Rp 8.307,76 |
| AMRT | Rp 1.314,97 | Rp 2.930 | 1.615,03 | 2.608.318,61 | Rp 3.920 | Rp 2.930 | -990,37 | 980.837,74 | Rp 3.389 | Rp 2.930 | -Rp 459,20 | Rp 210.866,65 |
| BISI | Rp 3.994,47 | Rp 1.600 | -2.394,47 | 5.733.473,40 | Rp 1.984 | Rp 1.600 | -384,33 | 147.707,55 | Rp 1.782 | Rp 1.600 | -Rp 181,83 | Rp 33.062,73 |
| BUDI | Rp 1.229,76 | Rp 278 | -951,76 | 905.849,63 | Rp 292 | Rp 278 | -13,61 | 185,17 | Rp 285 | Rp 278 | -Rp 6,72 | Rp 45,19 |
| CAMP | Rp 562,81 | Rp 402 | -160,81 | 25.858,75 | Rp 410 | Rp 402 | -8,24 | 67,86 | Rp 406 | Rp 402 | -Rp 4,10 | Rp 16,79 |
| CEKA | Rp 9.596,41 | Rp 1.845 | -7.751,41 | 60.084.384,47 | Rp 2.062 | Rp 1.845 | -217,37 | 47.248,87 | Rp 1.951 | Rp 1.845 | -Rp 105,66 | Rp 11.163,74 |
| CLEO | Rp 438,82 | Rp 710 | 271,18 | 73.536,87 | Rp 1.003 | Rp 710 | -293,19 | 85.958,93 | Rp 844 | Rp 710 | -Rp 133,96 | Rp 17.944,44 |
| CPIN | Rp 5.730,76 | Rp 5.025 | -705,76 | 498.099,53 | Rp 5.279 | Rp 5.025 | -253,76 | 64.392,15 | Rp 5.150 | Rp 5.025 | -Rp 125,32 | Rp 15.703,96 |
| DLTA | Rp 4.057,60 | Rp 3.530 | -527,60 | 278.359,28 | Rp 3.085 | Rp 3.530 | 445,32 | 198.309,19 | Rp 3.300 | Rp 3.530 | Rp 230,16 | Rp 52.975,08 |
| DSNG | Rp 2.915,76 | Rp 555 | -2.360,76 | 5.573.180,61 | Rp 622 | Rp 555 | -67,22 | 4.518,97 | Rp 588 | Rp 555 | -Rp 32,65 | Rp 1.066,10 |
| EPMT | Rp 9.367,41 | Rp 2.590 | -6.777,41 | 45.933.311,52 | Rp 2.685 | Rp 2.590 | -95,12 | 9.047,18 | Rp 2.637 | Rp 2.590 | -Rp 47,13 | Rp 2.221,19 |
| GGRM | Rp 109.977,65 | Rp 20.325 | -89.652,65 | 8.037.598.006,40 | Rp 22.389 | Rp 20.325 | -2.063,84 | 4.259.423,27 | Rp 21.332 | Rp 20.325 | -Rp 1.006,97 | Rp 1.013.996,53 |
| GOOD | Rp 368,35 | Rp 430 | 61,65 | 3.800,31 | Rp 516 | Rp 430 | -85,93 | 7.383,13 | Rp 471 | Rp 430 | -Rp 41,01 | Rp 1.681,59 |
| HMSP | Rp 892,82 | Rp 895 | 2,18 | 4,76 | Rp 1.004 | Rp 895 | -109,20 | 11.923,72 | Rp 948 | Rp 895 | -Rp 53,03 | Rp 2.811,87 |
| ICBP | Rp 18.515,15 | Rp 10.575 | -7.940,15 | 63.046.047,91 | Rp 12.646 | Rp 10.575 | -2.070,56 | 4.287.202,56 | Rp 11.564 | Rp 10.575 | -Rp 989,03 | Rp 978.177,42 |
| INDF | Rp 39.781,01 | Rp 6.450 | -33.331,01 | 1.110.956.469,09 | Rp 7.561 | Rp 6.450 | -1.111,25 | 1.234.879,74 | Rp 6.984 | Rp 6.450 | -Rp 533,56 | Rp 284.683,33 |
| JPFA | Rp 4.200,40 | Rp 1.180 | -3.020,40 | 9.122.798,00 | Rp 1.241 | Rp 1.180 | -60,74 | 3.689,91 | Rp 1.210 | Rp 1.180 | -Rp 29,99 | Rp 899,47 |
| KMDS | Rp 902,28 | Rp 424 | -478,28 | 228.750,62 | Rp 521 | Rp 424 | -96,51 | 9.313,84 | Rp 470 | Rp 424 | -Rp 45,78 | Rp 2.096,03 |
| LSIP | Rp 5.782,40 | Rp 890 | -4.892,40 | 23.935.607,63 | Rp 954 | Rp 890 | -63,99 | 4.094,94 | Rp 921 | Rp 890 | -Rp 31,44 | Rp 988,51 |
| MIDI | Rp 406,84 | Rp 430 | 23,16 | 536,59 | Rp 524 | Rp 430 | -93,79 | 8.796,02 | Rp 475 | Rp 430 | -Rp 44,58 | Rp 1.987,59 |
| MLBI | Rp 2.296,05 | Rp 7.750 | 5.453,95 | 29.745.545,92 | Rp 11.701 | Rp 7.750 | -3.950,59 | 15.607.160,98 | Rp 9.523 | Rp 7.750 | -Rp 1.772,58 | Rp 3.142.047,73 |
| MYOR | Rp 2.376,37 | Rp 2.490 | 113,63 | 12.912,69 | Rp 3.353 | Rp 2.490 | -862,64 | 744.144,13 | Rp 2.889 | Rp 2.490 | -Rp 399,30 | Rp 159.442,40 |
| ROTI | Rp 1.345,10 | Rp 1.150 | -195,10 | 38.063,22 | Rp 942 | Rp 1.150 | 207,72 | 43.148,20 | Rp 1.041 | Rp 1.150 | Rp 109,03 | Rp 11.887,35 |
| SDPC | Rp 757,89 | Rp 158 | -599,89 | 359.864,56 | Rp 195 | Rp 158 | -36,65 | 1.343,44 | Rp 175 | Rp 158 | -Rp 17,37 | Rp 301,77 |
| SIMP | Rp 4.774,75 | Rp 376 | -4.398,75 | 19.348.967,64 | Rp 399 | Rp 376 | -22,59 | 510,23 | Rp 387 | Rp 376 | -Rp 11,13 | Rp 123,86 |
| SKBM | Rp 2.144,78 | Rp 314 | -1.830,78 | 3.351.763,13 | Rp 300 | Rp 314 | 14,21 | 201,90 | Rp 307 | Rp 314 | Rp 7,19 | Rp 51,65 |
| SKLT | Rp 411,20 | Rp 282 | -129,20 | 16.692,95 | Rp 337 | Rp 282 | -54,58 | 2.978,96 | Rp 308 | Rp 282 | -Rp 26,08 | Rp 680,36 |
| SMAR | Rp 23.086,42 | Rp 4.000 | -19.086,42 | 364.291.409,17 | Rp 3.940 | Rp 4.000 | 59,93 | 3.591,87 | Rp 3.970 | Rp 4.000 | Rp 30,08 | Rp 904,76 |
| SSMS | Rp 726,37 | Rp 1.045 | 318,63 | 101.526,09 | Rp 845 | Rp 1.045 | 200,48 | 40.193,25 | Rp 939 | Rp 1.045 | Rp 105,57 | Rp 11.145,92 |
| TBLA | Rp 4.733,24 | Rp 695 | -4.038,24 | 16.307.368,47 | Rp 782 | Rp 695 | -86,72 | 7.520,23 | Rp 737 | Rp 695 | -Rp 42,09 | Rp 1.771,18 |
| TGKA | Rp 8.329,01 | Rp 6.450 | -1.879,01 | 3.530.691,95 | Rp 7.214 | Rp 6.450 | -763,95 | 583.615,51 | Rp 6.821 | Rp 6.450 | -Rp 371,29 | Rp 137.854,25 |
| ULTJ | Rp 2.012,30 | Rp 1.600 | -412,30 | 169.987,61 | Rp 2.045 | Rp 1.600 | -445,04 | 198.059,60 | Rp 1.809 | Rp 1.600 | -Rp 208,88 | Rp 43.632,63 |
| UNVR | Rp 308,15 | Rp 3.530 | 3.221,85 | 10.380.334,95 | Rp 2.922 | Rp 3.530 | 607,78 | 369.392,00 | Rp 3.212 | Rp 3.530 | Rp 318,23 | Rp 101.272,00 |
| VICI | Rp 476,18 | Rp 650 | 173,82 | 30.211,77 | Rp 828 | Rp 650 | -177,81 | 31.616,92 | Rp 734 | Rp 650 | -Rp 83,54 | Rp 6.978,54 |
| WIIM | Rp 3.058,63 | Rp 1.775 | -1.283,63 | 1.647.700,25 | Rp 2.501 | Rp 1.775 | -726,08 | 527.191,57 | Rp 2.107 | Rp 1.775 | -Rp 331,99 | Rp 110.218,84 |
| PNGO | Rp 3.546,17 | Rp 1.400 | -2.146,17 | 4.606.032,79 | Rp 1.734 | Rp 1.400 | -333,97 | 111.536,33 | Rp 1.558 | Rp 1.400 | -Rp 158,06 | Rp 24.983,76 |
| UCID | Rp 4.653,73 | Rp 1.095 | -3.558,73 | 12.664.591,15 | Rp 1.138 | Rp 1.000 | -138,23 | 19.106,15 | Rp 1.067 | Rp 1.000 | -Rp 66,88 | Rp 4.472,44 |
| | | | ∑ | 10.971.496.179,60 | | | ∑ | 29.689.955,62 | | | ∑ | Rp 6.398.465,41 |
| | | | n | 37 | | | n | 37 | | | n | 37 |
| | | | ∑(Yi−Oi)² / n | 296.526.923,77 | | | ∑(Yi−Oi)² / n | 802.431,23 | | | ∑(Yi−Oi)² / n | Rp 172.931,50 |
| | | | RMSE (PBV) (Rounded Number) | 17.220 | | | RMSE (PER) (Rounded Number) | 895,79 | | | RMSE (DDM) (Rounded Number) | 415,85 |
| | | | RMSE (PBV) | 17.219,96 | | | RMSE (PER) | 895,7852605 | | | RMSE (DDM) | 415,8503307 |