



Department of Digital Business

Journal of Artificial Intelligence and Digital Business (RIGGS)

Homepage: <https://journal.ilmudata.co.id/index.php/RIGGS>

Vol. 4 No. 2 (2025) pp: 2758-2769

P-ISSN: 2963-9298, e-ISSN: 2963-914X

An Evaluation of Stock Fair Value Using Fundamental and Technical Analysis with DDM and PER Approaches

Mega Barokatul Fajri^{1*}, Elliv Hidayatul Lailiyah², Noer Rafikah Zulyanti³, Imran Syah⁴, Ellen D Oktanti⁵

^{1,2,3,4}Departemen Entrepreneur, Fakultas Ekonomi dan Bisnis, Universitas Muhammadiyah Lamongan

⁵Departemen Management, Fakultas Ekonomi dan Bisnis, Universitas Mulawarman

megabarokatul1@gmail.com

Abstrak

For an investor, it is very important to conduct a stock valuation before making a transaction because stock valuation is a form of rationalization for an investor in making investment decisions. The purpose of this study itself is to evaluate the intrinsic value of PT Indofood Sukses Makmur Tbk (INDF) shares using two approaches, namely fundamental analysis and technical analysis. In fundamental analysis, economic, industry, and company analyses are carried out. The fundamental analysis methods used are the dividend discount model (DDM) and price-earnings ratio (PER), while technical analysis is carried out using moving average indicators and the relative strength index. The results of this study indicate a relatively strong trend in the Indonesian economy and a fairly strong resilience in the face of trade wars. In terms of industry, INDF continues to experience growth both in terms of sales and in terms of net profit. And the results of calculations using the DDM and PER methods show that the INDF share price has an intrinsic value that is much higher than the value of shares in the market, so it can be concluded that INDF shares are classified as undervalued. And in terms of technical analysis, the intrinsic value of INDF shares is in the price range of IDR 6,500 to IDR 7,250. From this analysis, it indicates that the current stock value in the market is low and still has the potential to be purchased because of its higher intrinsic value.

Keywords: Intrinsic Value Of Shares; Fundamental Analysis; Technical Analysis; Economic Analysis; DDM; PER.

1. Research Background

Investment is one form of implementation of financial management and financial inclusion for the community. Where, through investment, indirectly the community, or in this case, the investors, can increase income passively outside of the income they get. In principle, investments can be made in various assets, including real assets and financial assets [1].

Stocks are one part of investment instruments that attract investors because they can provide significant profits. On the other hand, the existence of these benefits is inseparable from the existence of risk. Referring to the theory stated by Markowitz [2], it states that in the concept of investment, especially in stock investment, it will not be separated from the existence of a risk; if an investor wants a large profit, the investor must be willing to face a large risk on the investment. The benefits that investors can get from investing in stocks are in the form of capital gains and dividends. Capital gain is a form of profit obtained from the difference between the selling price and the purchase price of shares, while dividends are rights that investors can get from issuers. Basically, one of the aspects that can affect the size of profits in stock investment is the share price.

Stock price is the price or value of one share of a company that is traded in the capital market. The share price is also a reflection of the value or performance of a company. When a company has a good company value, it can indirectly affect the share price. The movement of the stock price itself is influenced by several factors, including internal factors such as trading volume, as well as external factors such as BI Rate, exchange rates, and inflation [3], [4]. Stock price movements tend to fluctuate with a level of volatility that is fast and difficult to predict; this depends on the demand and supply that occurs in the market. The more the level of market demand for a stock it will increase the price of the stock, and vice versa.

The movement and volatility that occur in the stock market make the price of a stock difficult to predict, so the size of the profits and risks that will be obtained are also difficult to predict. Basically, the price of a stock published on the stock exchange is not the real value or original value of a stock; therefore, it is important for an investor to analyze and assess whether the stock is classified as expensive (overvalued) or classified as cheap (undervalued) so that investors can make decisions in making investments [5].

Stock valuation, or what is often referred to as stock valuation, is one of the preventive steps that can be taken by an investor to minimize the risk in stock investment. Because in this stock valuation, investors can find out and determine the real value or fair value of the shares. On the other hand, stock valuation is also used by

investors to assess the performance of a company [4]. In valuing a stock, the thing that needs to be considered is how to estimate the fair value and the duration of time used to estimate the value [6].

In stock valuation, there are three types of value, including book value, market value, and intrinsic value of shares. Book value is a value that reflects the number of shares outstanding, where the value can be known by looking at the books of the issuers. Market value is a reflection of the value of shares in the market as seen from the share price in the market. While intrinsic value or fair value is the actual value of the stock [2]. To analyze stock valuation, the step that investors can take is to compare the amount of market value with the intrinsic value of a stock. If a stock is found to have a smaller market value than the intrinsic value, the price of the stock is classified as cheap or undervalued, and vice versa. When the market value of a stock is greater than its intrinsic value, the stock price is classified as expensive or overvalued. When the share price is undervalued, the step that can be taken by investors is to buy the shares, and when the share price is in an overvalued condition, investors can decide to sell the shares because at that time the shares are experiencing an increase in price.

According to Tandelilin, there are several approaches that can be taken in conducting valuation analysis, including using fundamental analysis and technical analysis approaches [2],[7],[4]. Fundamental analysis is an analysis that focuses on the company's performance as seen from the company's financial condition, such as the company's financial statements and ratios. This analysis is also divided into three forms of analysis in conducting this analysis, including economic analysis, industry analysis, and company analysis. Economic analysis is used to review global and domestic economic conditions; industry analysis is used to see the overall financial and operational performance of a company in a similar industry; and company analysis is used to see the company's performance internally.

The methods used in this study in using fundamental analysis are the Dividend Discount Model (DDM) method and the Price Earning Ratio (PER) method. The DDM method is a method using a present value approach, where the calculation model utilizes the amount of future dividend projections. Both when dividends experience constant growth and when dividends experience inconstant growth. The second method used in fundamental analysis is the PER method. PER is a market ratio used to determine the profit per share of the share price [8]. In other words, this method is a ratio or comparison between stock prices and company profits [2],[9]. Valuation measurement with this method focuses on the comparison of stock prices with net income per share of a company.

The second approach used in conducting stock valuation is to use technical analysis. This analysis is a step in determining stock prices by utilizing historical data on stock prices and trading volumes to identify patterns and trends in price movements that can signal decisions on stocks to sell or buy. This opinion is also reinforced by the opinion of experts who state that technical analysis is a technique for predicting the direction of stock price movements and other stock market indicators using historical data [2], [7]. The indicators used in this approach in this study are moving average and relative strength approaches. These two indicators basically have the same function, namely detecting the direction of stock price movements and providing signals to buy or sell the stock.

In this study, researchers want to observe the stock valuation from PT Indofood Sukses Makmur Tbk (INDF) for the 2019-2021 period using the previous five years of data, namely 2014-2018. This is done because this company is one of the companies engaged in the food and beverage sector and has stable financial performance with a significant level of volatility in stock prices and dividends and attracts many investors to invest. So it is important to do a comprehensive stock assessment.

The reason for the researchers in conducting this research is divided into three reasons, namely the reason from a practical point of view is that in Indonesia there are many investors, both individual and institutional investors, who are very interested in INDF shares because they are considered in terms of income to provide significant profits even though the company's profits sometimes fluctuate, but based on data observed by researchers in the year taken, the performance of PT Indofood Tbk is quite stable and consistent in making profits; The second reason in terms of stock valuation is that the combination of the two analyses, namely fundamental and technical analysis as a whole, can provide comprehensive information for investors in making decisions to buy or sell INDF stock, besides that the combination of these two approaches also provides a concise and detailed understanding compared to using only one approach. And the last reason is the difference in the results of the analysis, as each approach used also uses different methods or indicators. From the methods used in each approach, there are possible differences in results in evaluating INDF shares, and these results can be used as a reference for which methods are relevant and representative in knowing the intrinsic value of Indofood shares.

Based on the reasons for the research above, the following questions and objectives arise in this study, namely: (1) What are the results of the intrinsic valuation of PT Indofood Tbk shares using the DDM method? (2) What are the results of the intrinsic valuation of PT Indofood Tbk shares using the PER method? (3) What are the results of the intrinsic valuation of PT Indofood Tbk shares using technical analysis? And the objectives of this study are (1) Calculating the intrinsic value of PT Indofood Tbk shares using the DDM method; (2)

Calculating the intrinsic value of PT Indofood Tbk shares using the PER method; (3) Analyzing stock price movements as a form of testing the intrinsic value of PT Indofood Tbk shares using technical analysis.

The state of the art of this research is by referring to previous research that has been conducted by Hairul I. and Abdul M. (2022) [1], Yuliah et al. (2019) [4], Harmaen A. and Budi S. (2024) [10], and Revania et al. (2024) [11]. From some of the research results they conducted, it was found by researchers that many of the previous studies only used one approach in conducting stock valuations, either fundamental or technical analysis approaches. And there are some of the results of research that only use one method, both the DDM method and the PER method, in conducting fundamental analysis to determine the intrinsic value of stock prices. Whereas in this study, researchers want to know the intrinsic value of shares in PT Indofood Tbk (INDF) by combining 2 approaches, namely fundamental analysis with the DDM and PER methods and a technical analysis approach with the moving average and relative strength methods. In addition, in this study, researchers also want to compare the results of stock price valuation with technical and fundamental analysis of one object comprehensively. On the other hand, in this study, before conducting fundamental analysis with these two methods, researchers reviewed fundamental analysis in terms of the economy, industry, and company.

2. Research Methods

This research is a type of descriptive and comparative quantitative research. Quantitative research is a study used to understand a phenomenon or a problem based on empirical testing and is often used as a theory test that requires researchers not to influence the research too much to avoid bias [12]. The quantitative approach used in this study is to calculate and compare the intrinsic value of INDF shares by utilizing fundamental analysis (DDM and PER methods) and technical analysis as an analytical tool. Descriptive research referred to in this study is to provide details and a comprehensive description of each method used to determine the intrinsic value of shares. And the comparative research approach here is to compare the results of the intrinsic value of shares with the methods used in this study.

The object used in this research is PT Indofood Sukses Makmur Tbk, with INDF as the stock code. The observed period is stock valuation in 2019-2021, while the data used to conduct this analysis is from the 2014-2018 period. The data source in this study uses secondary data, where the data is obtained by documenting data from the financial statements of Indofood companies that have been published on the Indonesia Stock Exchange on the page www.idx.co.id.

The data analysis technique used in the research is divided into several steps, including the following:

- 1) Conduct descriptive analysis using part of the fundamental analysis, namely economic analysis, industry analysis, and company analysis;
- 2) Calculating the amount of intrinsic value with a fundamental analysis approach with the dividend discount model (DDM) method [2],[1];

- a. Calculating the growth rate on the expected dividend (g)

$$g = ROE \times (1 - \text{Payout Ratio})$$

- b. Calculating the expected dividend estimate in the future

$$D_t = D_0 \cdot (1+g)$$

- c. Determining the amount of return required (k) to calculate the value (k) using the CAPM approach, namely:

$$k = k_{RF} + \beta \cdot (k_M - k_{RF})$$

- d. Calculating intrinsic value with the assumption that DDM experiences constant growth

$$\hat{P}_0 = \frac{D_1}{k - g}$$

- e. Calculating intrinsic value with the assumption that DDM experiences inconstant growth

$$\hat{P}_0 = \sum_{t=1}^n \frac{D_0(1+g_1)^t}{(1+k)^t} + \frac{D_n(1+g_c)}{k-g_c} \cdot \frac{1}{(1+k)^n}$$

- 3) Calculating the amount of intrinsic value with a fundamental analysis approach with the price-earnings ratio (PER) method:

- a. Calculating the amount of earnings per share share

$$\text{Earning per Share (EPS)} = \frac{\text{Net Income}}{\text{Number of Shares Outstanding}}$$

- b. Calculating price-earnings ratio (PER)

$$\text{PER} = \frac{\text{Share Price}}{\text{EPS}}$$

- c. Calculating the Intrinsic Value of Shares [2].

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

- 4) Analyzing stock price movements using technical analysis

- a. Using the moving average indicator to see short-term and long-term stock price trends.
- b. Using relative strength indicators to see overbought or oversold conditions in stocks.

- 5) Comparing the intrinsic value of the stock with the stock market price with the following criteria [2], [7]:
 - a. When intrinsic value > market value, the stock is **undervalued**.
 - b. When the intrinsic value < market value, the stock is **overvalued**.
 - c. When intrinsic value = market value, the stock is **correctly valued**.
- 6) Decision making [2], [7].
 - a. When intrinsic value > market value, the stock is classified as **undervalued**, so it is **recommended to buy**.
 - b. When the intrinsic value < market value, the stock is classified as **overvalued**; it is **recommended to sell, or if you do not have a recommendation, it is better not to buy**.
 - c. When intrinsic value = market value, the stock is **correctly valued**, and it is **recommended to hold the investment in the stock**.

3. Research Results and Discussion

3.1 Economic Analysis Results

Economic analysis is part of fundamental analysis that focuses on analyzing stocks in the capital market through a top-down approach, where this analysis is closely related to various macroeconomic variables. In this study, the results of economic analysis observed by researchers are related to Indonesia's economic conditions in the research year. From the results, it can be seen that Indonesia's economic prospects in 2018 are classified as experiencing growth even though this year there has been a trade war between the United States and China [13], which has an impact on developing countries such as Indonesia. Besides that, after the Fed increased the benchmark interest rate three times, it can also make the Indonesian government have to maintain the Indonesian economy. One of the preventive measures taken by the Indonesian government was to increase the BI rate six times with a total increase of 175 basis points [14], [15].

In the same year, Indonesia's economic growth also increased; the main drivers of economic growth in this period were public consumption and the number of trade transactions that increased along with the momentum of Eid al-Fitr and the long school year holidays. This can be seen from the GDP figures obtained from the central statistics agency page in 2018, showing that the GDP figure in the second quarter experienced a growth of 2 percent compared to the previous quarter, from 5.06 to 5.27 [16]. However, the increase in the Indonesian economy does not necessarily increase the rate of investment in the community; in fact, this year the level of public investment has decreased. In terms of investment, both foreign investment and domestic investment in the first quarter of 2018 reached Rp185.3 trillion, while in the second quarter the investment level decreased to Rp176.3 trillion [17]. The high level of investment that occurred in 2018 in the first quarter could not affect the level of investment in stocks. This is because throughout this year the JCI value has weakened by 7.29 percent. The weakening of the JCI value this year was influenced by pressures from price declines experienced by issuers in each sector listed on the Indonesia Stock Exchange.

In 2019, the Ministry of Finance projected that the Indonesian economy would experience growth of 5.3 percent. This economic growth is supported in various ways, such as increasing the number of job vacancies so that the unemployment rate decreases to reach 4.8 to 5.2 percent. Another aspect is to reduce the poverty rate by 8.5 to 9.5 percent [18]. On the other hand, the government also projects a growth in state revenue of 15 percent. This is done to strengthen the fundamentals of the Indonesian economy.

3.2 Industry Analysis Results

Industry analysis is an analysis that focuses on comparing company performance by comparing it with other companies in one industry. In this study, Indofood is one of the manufacturing companies engaged in food. This company, for the first time, conducted an IPO on July 14, 1994, and offered a share price for the first time at Rp6,200 per share, and the number of shares circulated at that time was 21,000,000 shares. At the end of 2017, on December 29, the number of shares outstanding was 12.85 billion shares at a price of Rp7,625, while on November 23, 2018, the number of shares outstanding was only 7.70 billion shares at a price of Rp6,250. The share price in 2018 was lower compared to the previous year [19][20][21]. Below we attach the results of the industry analysis, which can be seen from the PER value in one sector in the consumer sector.

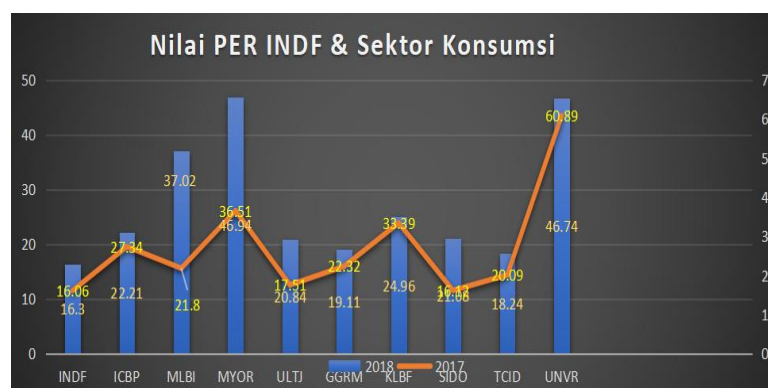


Chart 1. PER Value of Indofood Tbk & Consumer Sector
Source: Data Processed from The Indonesia Stock Exchange, 2018

Based on the chart above, the PER value of INDF is 14.25, while ICBP has a PER value of 22.21. These figures are low when compared to companies in the same consumption industry. The top position is Unilever (UNVR), followed by Mayora (MYOR) and Multi Bintang Indonesia (MLBI). Although the PER value of PT Indofood shows the lowest value of all competitors in one industry, INDF, through its subsidiary ICBP, is able to show that Indofood Corporation has a relatively high stock market value, third after Unilever and Gudang Garam, with a market capitalization figure owned by ICBP of Rp101,750 billion. INDF is a company that is able to show superior performance in the food and beverage industry sector. INDF is also able to show the highest level of profit and the highest level of sales compared to all public companies on the Indonesia Stock Exchange. In terms of sales, INDF is third only to ASII.

3.3 Company Analysis Results

Company analysis is part of a fundamental analysis that focuses on analyzing the company's performance internally using financial ratio analysis as an analytical tool. In this study, it can be seen that INDF's financial ratio performance from 2014 to 2018 in the third quarter continues to fluctuate. The ROE value from 2016 to 2018 continues to decline, which initially reached 11.99 percent in 2018 and 7.74. The same thing also happened to the company's ROA value from 2016 to 2018, which also showed a decrease in ROA value in 2017, reaching 5.85 percent, while in 2018 it was 3.91 percent. Here we attach the consolidated INDF financial ratio results from 2014-2018.

Table 1. INDF Consolidated Financial Ratios

Ratio	Dec-2014	Dec-2015	Dec-2016	Dec-2017	18-Sept	Average
ROE (%)	12,48%	8,60%	11,99%	11%	7,74%	10%
ROA (%)	5,99%	4,04%	6,41%	5,85%	3,91%	5%
GPM (%)	26,81%	26,94%	29,11%	28,31%	28,26%	28%
OPM (%)	11,34%	11,49%	12,41%	12,46%	12,40%	12%
NPM (%)	8,09%	5,79%	7,89%	7,33%	6,54%	7%
EPS (Rp)	442,5	338,02	472,02	474,75	428	431,058
IT	7,52	8,4	7,88	7,24	4,51	7,11
DSO	20,3	24,2	25,2	26,2	38,97	26,97
FAT	2,89	2,55	2,6	2,36	1,3	2,34
TAT	0,74	0,7	0,81	0,8	0,57	0,72
CR	180,74	170,53	150,81	150,27	113,1	153,09
QR	1,43	1,4	1,07	1,05	0,74	1,14
DER	1,08	1,13	0,87	0,88	0,97	1,0
DAR	0,52	0,53	0,47	0,47	0,49	0,5

Source: Data Processed from Consolidated Financial Statements, (2018)

From the table it can also be seen that the EPS value in 2018 in the third quarter experienced a downward trend, which reached Rp428, while in 2017 it was Rp474.75. Income-based profitability ratios, namely GPM, OPM, and NPM, show that (a) the GPM level in the last five years tends to

fluctuate; the highest GPM level occurred in 2016 at 29.11 percent. The high level of GPM of a company indicates that the company is able to increase efficiency in production by reducing the low cost of goods produced. In 2018 the GPM level decreased by 3 percent, with a figure of 28.26 percent when compared to 2016. (b) The OPM level in the last five years has continued to experience an upward trend; the highest figure occurred in 2017 at 12.46 percent. While in 2018 it reached 12.40 percent. The magnitude of this figure indicates that the company is able to manage expenses for operating costs relatively smaller than in previous years. (c) From the level of NPM value in 2018, it reached 6.54 percent; this figure is lower when compared to 2017, which reached 7.33 percent. The high NPM value of a company indicates that the company is able to generate a high enough net profit from each sale of products produced by the company.

The company is able to manage inventory well by looking at the inventory turnover value of 8.4 times per year, while in 2018 inventory turnover only reached 4.51 times per year. Asset turnover owned by the company can be seen from the company's fixed assets (FAT) and total assets (TAT). The FAT value owned by the company is in the range of 2.3, and the TAT value is smaller than the FAT value, which is only in the range of 0.7. On the other hand, the level of the company's current ratio can also be seen from the current ratio (CR) and quick ratio (QR); the value of the two current ratios is relatively high. The CR value is in the range of 153.09, and the QR value is 1.14.

3.4 Fundamental Analysis Results with *Dividen Discount Model Method (DDM)*

The Dividend Discount Model (DDM) approach is carried out using three scenarios, namely pessimistic, moderate, and optimistic. And each scenario has an assumption if the dividend every year experiences growth. The calculation of growth (g) can be estimated using a sustainable growth rate. Meanwhile, the cost of capital (k) can be determined using the CAPM approach. The information about the known components is as follows:

- Beta = 1.11, beta value obtained by regressing the adjusted close of the stock price
- Market Risk Premium = 5%
- Rf = Risk-Free Rate = 7.98%, obtained from the yield of government securities for 10 years
- CAPM = 7.98% + (1.11 * 0.05) = 13.5%, Based on these results, the CAPM value is found to be 13.5%. This figure can later be used in calculating the cost of capital (k).

Each scenario uses a database with the same time vulnerability. The details are as follows:

- Dividend projection using average dividend growth from 2012 to 2017 = 10.63%
- t = the prediction year of the supernormal period is 5 years.
- TV = terminal value using constant growth = Gn (pessimistic) = 6%, Gn (moderate) = 7%, and Gn (optimistic) = 8%

1) Pessimistic Scenario Gn = 6%

Table 2. Interpretation of the Intrinsic Value of INDF Shares: Pessimistic Scenario, Gn 6%

T	Year	Dividend Projection	PVIF	ADG X PVIF
0	2017	237		
1	2018	262	0,881	231
2	2019	290	0.776	225,1
3	2020	321	0.683	219,3
4	2021	355	0.602	213,7
5	2021	393	0.530	208,3
	TV			5529,6
Intrinsic Values Interpretation				6.627

Source: Company Financial Statements (processed)

2) Moderate Scenario Gn = 7%

Table 3. Interpretation of the Intrinsic Value of INDF Shares: Moderate Scenarios, Gn 7%

T	Year	Dividend Projection	PVIF	ADG X PVIF
0	2017	237		
1	2018	262	0,881	231
2	2019	290	0.776	225,1
3	2020	321	0.683	219,3
4	2021	355	0.602	213,7

5	2021	393	0.530	208,3
	TV			6436,6
Intrinsic Values Interpretation				7.534

Source: Company Financial Statements (processed)

3) Optimistic Scenario $G_n = 8\%$

Tabel 4. Interpretation of the Intrinsic Value of INDF Shares: Optimistic Scenarios, $G_n 8\%$

T	TAHUN	Proyeksi Dividen	PVIF	ADG X PVIF
0	2017	237		
1	2018	262	0,881	231
2	2019	290	0.776	225,1
3	2020	321	0.683	219,3
4	2021	355	0.602	213,7
5	2021	393	0.530	208,3
	TV			7671,5
Intrinsic Values Interpretation				8.769

Source: Company Financial Statements (processed)

Based on the assumptions and data processing above, the interpretation of the value of INDF shares with the scenarios in tables 2, 3, and 4. Where scenario A is pessimistic, scenario B is moderate, and scenario C is optimistic. From the above calculations, it can be obtained that the estimated value of INDF shares is in the range of IDR 6.627 to IDR 8.769.

3.5 Fundamental Analysis Results with *Price Earning Ratio (PER) Method*

The approach with the price-earnings ratio (PER) method is part of a relative approach. From the results of the analysis with this approach, the PER value is dominated by Indofood's subsidiary, ICBP. Referring to graph 1 above, it is known that the PER value of INDF shares is 16.30, while the industry is 20.01. If calculated on average, the PER of the 10 consumption industries reaches 27.34 (average of the top 10). This figure is almost close to and exceeds the estimated PER value of ICBP, which reaches 22.21. However, when compared to the industry PER value, ICBP's PER value is much higher than the industry PER value. Table 5 below presents the estimated value of INDF shares for 2018, which is Rp6,976.40 with a price range of Rp8.564,28 to Rp11.701,52.

Tabel 5. Stock Valuation Based on Comparator PER

Panel A: Year 2018

INDF & Benchmark	PER	Estimated EPS of INDF	Estimated Value INDF
Indofood Sukses Makmur	16.3	428	6.976,40
Indofood CBP Sukses Makmur	22.21	428	9.505,88
Industry	20,01	428	8.564,28
Average Top 10	27.14	428	11.615,92
Average	21,42	428	9.165,62

Source: Company Financial Statements (processed)

In panel table B, below shows the prediction of the estimated value of INDF shares in 2019. In 2019, the author estimates a growth in the EPS value of INDF shares by 10 percent, which, with the growth in EPS value, can affect the estimated value of INDF shares. This EPS growth rate is based on the issue of growth in the food industry, which, when there is an issue of growth in the food industry, has an impact on PT Indofood on the growth of product sales, which is quite large, where the amount of product sales can have an impact on the profit or income earned by the company. And when Indofood's profit increases, it can indirectly affect the increase in the EPS value of INDF shares.

Tabel 6. Stock Valuation Based on Comparator PER

Panel B: Year 2018

INDF & Benchmark	PER	Estimated EPS of INDF	Estimated Value INDF
------------------	-----	-----------------------	----------------------

DOI: <https://doi.org/10.31004/riggs.v4i2.930>

Lisensi: Creative Commons Attribution 4.0 International (CC BY 4.0)

Indofood Sukses Makmur	16,3	470,8	7.674,04
Indofood CBP Sukses Makmur	22,21	470,8	10.456,47
Industry	20,01	470,8	9.420,71
Average Top 10	27,14	470,8	12.777,51
Average	21,42	470,8	10.082,18

Source: Company Financial Statements (processed)

Based on the table above, panel B shows that the estimated price of INDF shares in 2019 is IDR 7,674.04, with a price range of IDR 9.420,71 to IDR 12.871,67.

3.6 Technical Analysis Results

Indofood Sukses Makmur (INDF) company at the close of trading on Friday closed with an increase at Rp7.075 based on the stochastic indicator, which is at the 40-50 level with an upward trend. INDF shares still have the potential to increase towards the nearest resistance of Rp7.125. The INDF stock movement range itself for the next few days is expected to move with a price range of Rp6.850 to Rp7.125. There are 3 points why Rp6.850 is the price support for the movement of Indofood shares, namely:

- Based on moving average with 1-year price movement
- The middle band support area from Bollinger Band and
- Support of the short-term uptrend

During this year, INDF shares tended to experience a downward trend in November with a low of Rp5.575 based on the Fibonacci retracement indicator. Despite experiencing a downward trend, INDF managed to rebound to break the 100% level with a high of Rp6.400. After the breakout, it can be seen that INDF shares are stuck at the 138.6% level in December with a current price of IDR 7.125. The ADX indicator, which is below the 50 level, precisely at the 34.56 level, indicates that INDF shares currently have no strong trend, either an upward trend or a downward trend, which indicates to buy and hold (trending). So that, based on the ADX indicator, INDF shares are currently more likely to be traded in the short term.

Accumulation of INDF shares is rational if the price is near the support area of Rp6.850, with a note that if a breakout occurs and the share price closes below the 200 Moving Average, then INDF shares have the potential to fall towards the price of Rp6.708 (lower band).

The movement of INDF's stock price and transactions over the past three months, as well as transactions in December with Bollinger Bands in Figure 2, shows that:

- The closing of INDF shares on Sept 28, 2018, at Rp5.900, and in the short term will move in the support range at Rp5.800 and resistance at Rp6,025.
- The closing of INDF shares on December 14, 2018, at Rp7.075, and in the short term will move in the range of support at Rp6.850 and resistance at Rp7.125.

Based on the Bollinger Bands indicator in Figure 2, it shows that INDF's share price for the last three months, which fell in September, is still in the Middle Band area, so it cannot be said to be relatively low or high. However, if the stock price closed in December, precisely on December 14, the Bollinger Area indicator shows that it is in the Upper Band area, which indicates that the INDF stock price at that time was relatively high and overbought. In addition, based on this indicator, it also shows that on December 14, 2018, it can be said that the market is in a crowded state; this is evidenced by high volatility and the distance between the bands being wide open.



Figure 1. Technical View



Figure 2. Bollinger Band 1 January - 14 December 2018

Meanwhile, technical trend measurement with the Average Directional Movement Index (ADX) and Aaron Indicator method is used to measure the trend of a stock. Figure 3 shows that the ADX indicator on INDF shares that occurred on December 14, 2018, was at the level of 34.54; this indicates that on that date there was a price trend that was strengthening. Meanwhile, if based on the Aaron indicator, it shows that on December 14, 2018, it shows the potential uptrend; this is evidenced by the red AroonUp indicator at level 95, and at the same time, the AroonDown indicator is between levels 0 and 30, precisely at level 14.



Figure 3. Average Directional Movement Index (ADX) and Aaron Indicator

An attempt to measure trading pressure on a stock is conducted properly by using the Accumulation/Distribution (A/D) and Chaikin Money Flow (CMF) indicators. Figure 4 below shows that on December 14, 2018, the A/D and CMF indicators showed an increase compared to the previous closing price. The increase in the A/D indicator shows that INDF shares are currently in the accumulation phase, meaning that many market participants are buying INDF shares. In accordance with economic law, prices will increase when the A/D indicator starts to move up and it looks like the distribution phase will end. With this increase, it can be recommended to buy INDF shares. This is also reinforced by the results of the CMF indicator, which show that the CMF line in Figure 16 has crossed above the zero line. If the CMF line crosses above the zero line, then this indicator provides a potential buy signal.



Figure 4. Accumulation/Distribution (A/D) dan Chaikin Money Flow (CMF)

Furthermore, to measure overbought and oversold in a stock, you can use the CCI and Slow Stochastic indicators. Figure 17 below will show the movement of INDF shares using these indicators. When the CCI line is pointing up, it indicates that the market is bullish (prices are rising); besides that, the CCI line that is pointing up can also indicate overbought. Meanwhile, if the CCI line is pointing down, it indicates that the market is bearish (prices are falling), and it can also be said that there is overselling. Based on the results in Figure 17 below, it can be concluded that:

- INDF shares are still in the overbought area, meaning that the INDF share price tends to be corrected because the share price is too high, so there is a possibility that the share price will decline. If the share price continues to fall until it breaks the Rp6.850 level, it is expected to go to the price of Rp6.500.
- If it increases, it will try to break the resistance point above Rp7.125, and the next resistance point is Rp7.175.



Figure 5. CCI Indicator and Slow Stochastic



Figure 6. Resistance and Support Level

Figure 6 above shows the price movement of INDF for one year, which can be used to detect resistance levels and support levels. Based on these results, the resistance level points are in the range of Rp7,127 and Rp7,250. While the support level points are in the range of Rp6,500 and Rp5,870.

3.7 Buy or Sell Recommendation

Based on Figure 4, it presents the buying or selling power of INDF shares. The figure shows that if the closing share price is precisely on December 14, 2018, it shows that INDF shares are in the accumulation phase, in which phase many market participants or investors purchase INDF shares.

Looking in terms of a technical approach using the Average Directional Movement Index (ADX) method shows that the INDF share price is in a strengthening price trend with a resistance level in the range of Rp7.127 and Rp7.250 (closing date December 14, 2018). Until the closing of the 3rd week of December, INDF's share price continued to increase with a closing level of Rp7.500. As for the support level on INDF shares, the price range was Rp6.500 to Rp5.870. This technical approach is short-term; therefore, this approach must be compared using a fundamental approach. Based on the results of the analysis of the fundamental approach, it shows that the strength of the Indonesian economy is still able to survive in boosting domestic investment even though this year there is turmoil in the trade war between the United States and China, which has an impact on developing countries such as Indonesia. From the industrial aspect, it shows that INDF still has considerable market power compared to its competitors, especially in terms of sales.

The results of estimating the intrinsic value of shares with a relative comparison approach using the PER value show that the INDF share price is in the price range for 2016 of Rp6,976, with a price range

of Rp9,165 to Rp11,615. While the estimated price of INDF shares in 2019 is IDR 7,674, with a price range of IDR 9,420 to IDR 12,777. The estimated share value with the dividend discount model approach is Rp8,161, with a price range of Rp6,232 to Rp10,497. Table 16 shows the range of estimated stock values using both technical approaches and fundamental approaches. Based on the results of the above analysis, it shows that the recommendation to buy INDF shares is getting stronger.

Tabel 7. The Range of INDF Stock Value Interpretation

Analysis Approach	Lowest	Moderate	Highest	INDF Value
Technical Analysis	6.500	7.127	7.250	6.500 - 7.250
Fundamental Analysis				
a.Dividen Discount Model	6.627	7.534	8.769	6.627 - 8.769
b.Price Earning Ratio	6.976	8.564	11.615	6.976 - 11.615

4. Conclusions

The conclusions from the results of this research include four main reasons for the recommendation to buy PT Indofood Sukses Makmur Tbk (INDF) Tbk as follows: There is a relatively strong trend in Indonesia's economy and strong resilience in the presence of a trade war between the United States and China. This is evidenced by the growth of the GDP level in 2018, which is increasing, and the strengthening rupiah exchange rate, which became the strongest currency in Asia in 2018. Industry analysis shows that in 2018, INDF continued to grow both in terms of sales and net profit. This was supported by government pressure to increase growth in the food industry. This is what causes growth in the company Indofood Sukses Makmur, Tbk. In terms of fundamental analysis using the PER method and the dividend discount model, it shows that INDF's share price has an intrinsic value that is much higher than the value of shares in the market. By using the PER method, the intrinsic value obtained amounted to Rp6.976 to Rp11.615, and using the dividend discount model method, it was Rp6.627 to Rp7.534. From this number it can be interpreted that the intrinsic value of INDF shares is classified as undervalued or higher than the market so that INDF shares are recommended to buy. In terms of technical analysis, the intrinsic value of INDF shares is in the price range of Rp6,500 to Rp7,250. From this analysis, it indicates that if the current share value in the market is IDR 7,050, this number is relatively low and still has the potential to be purchased because of its higher intrinsic value.

References

- [1] I. Hairul and A. Moin, "Valuasi Saham dengan Dividend Discount Model (DDM) dan Price Earning Ratio (PER) untuk Pengambilan Keputusan Investasi (Studi Kasus pada Perusahaan Sub Sektor Makanan & Minuman, Perkebunan, dan Pertambangan Batu Bara)," *Sel. Manaj. J. Mhs. Bisnis Manaj.*, vol. 01, no. 06, pp. 123–134, 2022, [Online]. Available: <https://journal.uui.ac.id/selma/index>.
- [2] E. Tandililin, *Pasar Modal Manajemen Portofolio & Investas*, Kedua. Yogyakarta: Kanisius, 2017.
- [3] M. B. Fajri, W. Wihandaru, and A. L. Hakim, "Analysis The Effect of Trading Volume Activity and External Factors to Composite Stock Price Index," *Manag. Econ. J.*, vol. 4, no. 3, pp. 201–214, 2020, doi: 10.18860/mec-j.v4i3.10205.
- [4] Y. Yuliah, L. Triana, and I. S. Lesmana, "ANALISIS NILAI SAHAM DENGAN DIVIDEND DISCOUNT MODEL (DDM) (Studi kasus Perusahaan Tekstil Dan Garmen Yang Terdaftar Di Bursa Efek Indonesia Tahun 2018)," *J. Manaj. STIE Muhammadiyah Palopo*, vol. 5, no. 2, pp. 9–13, 2019, doi: 10.35906/jm001.v5i2.360.
- [5] P. Sukma, F. Ukhriyawati, Catur Fatchu, Elliv, Hidayatul, lailiyah, Mega, Barokatul, Nurchayati, S. Rahmiyanti, and Abdurrohman, *Manajemen Keuangan*.
- [6] R. S. Hasanah and E. Rusliati, "Harga Saham Dengan Metode Dividend," *J. Ris. Bisnis dan Manaj.*, vol. 10, no. 2, pp. 1–10, 2017.
- [7] M. Hanafi, *Manajemen Keuangan*, Kedua. Yogyakarta: Yogyakarta: BPFE, 2016.
- [8] B. Fajri, Mega, Barokatul., Jennifer, F, *Modul Analisis Laporan Keuangan*. Lamongan, 2022.
- [9] E. P. Husnan, Suad., "Dasar-Dasar Manajemen Keuangan," Edisi Ketu., Yogyakarta: UPP STIM YKPN, 2015.
- [10] S. Harmaen, A., Budi, "Stock valuation using the dividend discount model to determine the intrinsic value of the lq45 index," vol. 7, 2024.
- [11] N. Revania Rohman, M. T. Emiliana Natalia, R. Putri Dewitasari, and E. Almuntaha, "Analisis Penilaian Saham PT Industri Jamu dan Farmasi SIDO Muncul Tbk dalam Pengambilan Keputusan Investasi," vol. ISSN, no. November, pp. 2541–528, 2024.
- [12] S. Cooper, Donald R., Pamela S, *Business Research Methods*. New York: McGraw-Hill, 2017.
- [13] Finance.Detik, "Dampak Perang Dagang Amerika Serikat VS China," 2019. <https://finance.detik.com/berita-ekonomi-bisnis/d-4073010/dampak-perang-dagang-as-china-ke-ri-dan>

- cara-antisipasinya (accessed Jan. 21, 2020).
- [14] Databoks, “BI Menaikkan Suku Bunga Acuan,” 2018. <https://databoks.katadata.co.id/datapublish/2018/11/16/jaga-rupiah-bi-kembali-naikkan-suku-bunga-acuan-25-bps> (accessed Jan. 20, 2020).
- [15] Bank Indonesia, “Keadaan Ekonomi Global dan Domestik,” 2018. https://www.bi.go.id/id/ruang-media/siaran-pers/Pages/SP_160214.aspx (accessed Jan. 21, 2019).
- [16] Badan Pusat Statistik, “Pertumbuhan Ekonomi Indonesia Triwulan II,” 2018. .
- [17] Badan Koordinasi Penanaman Modal, “Pertumbuhan Investasi Di Indonesia Tahun 2018,” 2018. .
- [18] Kementerian Keuangan, “Pertumbuhan Perekonomian Indonesia,” 2018. http://www.fiskal.kemenkeu.go.id/publikasi/tekf/2018/tekf3/tekf_edisi3_2018a.pdf (accessed Dec. 20, 2018).
- [19] Bursa Efek Indonesia, “Ringkasan Performa Perusahaan Tercatat,” 2018. [Online]. Available: <https://www.idx.co.id/data-pasar/laporan-statistik/ringkasan-performa-perusahaan-tercatat/>.
- [20] Bursa Efek Indonesia, “Annual report perusahaan manufaktur periode 2013-2017,” 2019. [Online]. Available: www.idx.co.id.
- [21] Bursa Efek Indonesia, “Laporan Keuangan Tahunan,” 2019. https://www.idx.co.id/Portals/0/StaticData/ListedCompanies/Corporate_Actions/New_Info_JSX/Jenis_Informasi/01_Laporan_Keuangan/04_Annual_Report//2019/INDF/INDF_Annual_Report_2019.pdf (accessed Jun. 15, 2022).