

Event Study: Itama Ranoraya Stock Valuation on Indonesia Stock Exchange during the COVID-19 Pandemic

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Abstract: This study aims to analyze investment decisions on one of the pharmaceutical company's shares, PT Itama Ranoraya Tbk, with the code IRRA on the Indonesia Stock Exchange in 2021. The research method used is the event study method (ESM). This research is expected to enrich scientific references for event studies on non-economic events and their impact on the capital market in Indonesia in general. The data used in this research is secondary data, especially from stock movement data and company financial statements. The share acquisition for valuation is only one share from various pharmaceutical industries, namely the IRRA coded stock. The valuation method used is Discounted Cash Flow - Free Cash Flow-to-Firm (DCF-FCFF) analysis. The recommendation is HOLD, with a target price of IDR 2,130 within the next year. The target price indicates a potential increase of 1.91% from the closing price of July 1, 2021.

Keywords: *COVID-19, Event Study, Stock Exchange, Stock Valuation*

Introduction

Coronavirus (COVID-19) has hit almost all elements of life. One of the sectors affected is finance, especially the capital market. In Indonesia, the coronavirus first appeared in March 2020. President Joko Widodo stated it on March 2, 2020, where two people who were positive for the coronavirus were Japanese citizens who came to Indonesia. This virus came from Wuhan, China, with an alarming level of spread and severity, so WHO assessed that COVID -19 could be categorized as a pandemic. Many people are experiencing financial problems due to COVID - 19. (Sakti, 2021)

With the COVID-19 pandemic as an extraordinary event affecting the stock market, various studies were conducted to see its impact.

The COVID-19 pandemic event is not an economic event (non-economic event). Research related to event studies for non-economic events and stock market reactions in Indonesia has been widely carried out, including political events that occurred, such as on July 27, 1996 (Suryawijaya & Setiawan, 1998), General Elections (Luhur, 2010), and Regional Head Elections (Suryawijaya & Setiawan, 1998). Wardhani, (2012), Presidential inauguration (Asshodiqi, 2016), changes in state administrators (Islami & Sarwoko, 2012), to natural events/phenomena such as floods (Yuwono, 2013), social, changes in fuel prices (Andarini & Rahardjo, 2016), terrorism (Utama & Hapsari, 2012), to the issuance of government regulations and policies (Nanda & Saryadi, 2017), and so on. (Trisnowati & Muditomo, 2021).

Saragih and Nurhaida's (2021) study confirm a negative impact of the COVID-19 pandemic on stock market performance. However, the CSA Research Institute wrote that the increasing demand for pharmaceutical products had given positive sentiment to pharmaceutical stocks. This phenomenon is reflected in the extraordinary increase in stock prices, such as in a study conducted by Welley & Franky (2020). They stated a significant rise in the stock price of pharmaceutical companies such as PT Indofarma (INAF) and PT Kimia Farma (KAEF). (Setiawan & Sumirat, 2021)

One of the many pharmaceutical companies examined in this research is PT ITAMA RANORAYA TBK (IRRA). One of the reasons IRRA is used as a reference is that during the COVID-19 pandemic, took stocks in the

pharmaceutical sector into account, and many were interested in buying them. However, the question is whether the pandemic makes people decide to buy pharmaceutical stocks, or just as trading or trading solely for the sake of profit amid the panic of the shareholders, without thinking about whether the Investment is worth it or not. For this reason, IRRA shares are taken as a reference in this study, especially IRRA shares that fluctuated during the COVID-19 pandemic. With the possibility of risk and return, it is necessary to conduct investment research analysis to determine the prospects of the shares to be purchased, whether the shares are classified as undervalued, fair value, or even overvalued. Thus, it can recommend investment decisions to buy, hold, or sell shares. The image below provides an overview of the movement of IRRA shares in 2021



Figure 1. IRRA Share Price Movement in 2021

From the explanation above, the objectives of this research are to: View the business profile of PT ITAMA RANORAYA TBK (IRRA); analyze IRRA stocks based on fundamental analysis; Analyzing the IRRA share price assessment, and Analyzing investment decisions on IRRA shares. This research is expected to enrich scientific references for event studies on non-economic events and their direct impact on the capital market in Indonesia in general and the impact of reactions on related

industrial sectors, such as pharmaceuticals. Through this research, it is hoped that investors can better recognize the behaviour of the Indonesian stock market so that they can make the best investment decisions in every event (economic and non-economic) that occurs (Trisnowati & Muditomo, 2021).

Literature Review

In the social sciences, the study of events, better known as event studies, has been widely carried

out in contexts related to economics and finance. Event studies are often used to measure stock market efficiency in the semi-strong form. A market is called a semi-strong form of efficiency if no single investor obtains an abnormal rate of return through any publicly available information and is usually reviewed with an "event study." An event study in the stock market sector is conducted empirically to analyze the impact of an event on a country's capital market (Suganda, 2018). (Trisnowati & Muditomo, 2021)

In the capital market, the frequency of trading activity is one of the elements used as a study material to see the market reaction to incoming information on the stock market. An increase in the frequency of trading transactions caused by high demand and an increase in the volume of trading transactions will push stock prices up to increase returns. The large trading volume indicates that investors prefer the stock. Investors tend to be attracted to stores that provide high returns even though they are risky (Trisnowati & Muditomo, 2021). According to the theory of Kahneman & Tversky (1979), individuals make decisions based on perceived benefits rather than perceived losses. (Trisnowati & Muditomo, 2021).

Since COVID-19 Was a global pandemic, the stock market collapsed, and market volatility rose high globally, even in the United States market. The level of stock market volatility in mid-March 2020 has exceeded the highest volatility conditions that occurred in October 1987 and December 2008, which occurred in late 1929 and early 1931 (Baker, Bloom, Davis, Kost, Sammon, & Viratyosin, 2020). This COVID-19 pandemic can be classified as a "black swan" because it has adverse economic consequences. Black Swan is a random event with three characteristics: significant impact, incalculable probability, and surprising effect (Ali, 2020). (Trisnowati & Muditomo, 2021).

The COVID-19 pandemic has made investors panic, as seen from the decline in the JCI since March 5, 2020, giving rise to various policies as a reaction. For example, "The Financial Services Authority (OJK) responded by issuing a policy and allowing the implementation

of the buyback of shares issued by the issuer (buyback) without the need for approval from the General Meeting of Shareholders (GMS). The issued regulations are contained in OJK Regulation No. 3/SEOJK.04/2020 dated March 9, 2020, concerning Other Conditions as Market Conditions That Fluctuate Significantly in the Implementation of Shares Buyback Issued by Issuers or Public Companies" (Trisnowati & Muditomo, 2021).

Several studies have been conducted on the impact of COVID-19 on stock market returns, including the effects of the announcement of the COVID-19 event on the stock market (Bash, 2020; Huo & Qiu, 2020), the specific impact of the number of confirmed cases of COVID-19 on market returns. Stocks in several countries (Ruiz Estrada & Lee, 2020), the impact of the pandemic on the Chinese stock market, and in particular, the characteristics of various companies/sectors in the Chinese stock market (Xiong, Wu, Hou, & Zhang, 2020; He, Sun, Zhang, & Li, 2020). Previous studies found that the results of this study generally present the stock market reaction as indicated by the average change in abnormal returns, which decreased due to the announcement of the first COVID-19 on the stock market in several countries. (Trisnowati & Muditomo, 2021).

One of the previous studies conducted on stock valuation during a pandemic was undertaken by Setiawan & Sumirat (2021:127) with the title Stock Valuation of Indonesia Pharmaceutical Company with COVID-19 Vaccination Development Prospects Amidst Pandemic Situation (Case Study of PT. Kalbe Farma, Tbk, KLBF). They stated, "The COVID-19 Pandemic has erupted since the beginning of 2020, giving major impact on the overall condition of the country. However, it simultaneously stimulates the growth of the pharmaceutical market as it is expected to grow. This situation caused a reaction in the stock market, especially pharmaceutical companies, which experienced an increase. This study examines absolute valuation using the FCFF model and relative valuation using P/E and EV/EBITDA for KLBF. The valuation results show that the intrinsic value of the stock price

calculated from the FCFF model is Rp1,397. The relative valuation model shows Rp1,330 and Rp1,233 for EV/EBITDA and P/E ratios. So the stock price at that time was Rp 1,445, which was considered too high."

Investment

According to Tandelin (2010:3), "Investment is a commitment to several funds or other resources carried out at this time, to obtain several benefits in the future." According to Gitman and Joehnk (2005:3), "Investment is a means by which funds can be placed in the hope that it will generate positive income and maintain or increase its value. When trying to conclude the two definitions of Investment above, it can be supposed that Investment aims to make profits in the future."

Various investment instruments range from gold property, etc., but stocks are currently popular. Shares are "Securities which are instruments of proof of ownership or participation of individuals or institutions in a company. Meanwhile, according to general terms, shares are evidence of equity participation in a company's share ownership" (Raharjo, 2006:31). The public can buy more than 600 companies listed on the Indonesia Stock Exchange (IDX) whose shares are traded.

After meeting their needs, investors who have excess funds will usually invest these funds in a certain period, hoping that they will get profits if they postpone consumption in the present. One of the things he does is buy shares, which are securities traded in the capital market. A person who buys shares will make it part of the company's owner. In the stock, there is a fair value of shares or the actual weight of the company, which is calculated from its fundamental data, for example, the value of income, assets, dividends, prospects, and management factors. It should reflect the fair value of these shares in the market price of the claims. Santono (2008:30) states, "Stock prices are formed through supply and demand for the capital market. The higher the stock market price, the higher the company's value. One of the objectives of financial management is to

maximize the company's value by maximizing the value of the stock market price."

Intrinsic Value (Fair Value of Shares)

According to Tambunan (2007:217), "Intrinsic value is the price that we can accept as the cost of ownership of shares after comparing the required rate of return with the speed of recovery that the stock can provide in the future (expected rate of return). The stock's intrinsic value is the current price of the cash flow obtained continuously from a company that is still operating or producing. The relationship between stock value and cash flow is a description of the ability of a company to obtain or generate income from business activity. The smoother the return on capital or cash inflows, the company has good business prospects going forward."

The fair value of the shares is as a fair amount paid. The price of a stake in the market is very volatile because there is demand and supply from stock players on the exchange. A point of agreement between the seller and the buyer that he thinks is appropriate for the shares traded, then a transaction occurs. Thus the share value is the right amount to be paid for the shares offered. Therefore, the stock value may be higher or lower than the stock price. So a stock player must be observant in analyzing stock movements.

Fair Price Valuation of Shares

"Stock valuation estimates the actual stock value calculated from its fundamental data" (Asnawi & Vijaya, 2006:101). In Tandelin's research (2010:102), it is stated that "Evaluation of stock prices aims to obtain information on the intrinsic value and then compare it with the current stock market price. The stock price assessment is carried out by considering the company's fundamental factors. We will know the fair price by evaluating stock prices, namely *undervalued* or *overvalued*. Stocks are *undervalued* if the stock price tends to be cheaper than its reasonable price, while *overvalued* indicates that the stock price is higher than its fair price. The stock price is acceptable if it equals its intrinsic value. By knowing the fair value of a stock, we can consider

whether a stock is worth buying or selling to provide the expected profit." (Kennedy, 2019)

Method of Valuation of Fair Price of Shares with Discounted Cash Flow

Discounted cash flow is cash flow that will receive in the future that can be assessed now with an overlooked factor. "Discounted Cash Flow (DCF) model is prepared for a certain period or period, used as a management tool to test performance expectations. The stability of the DCF model is used as a method for replicating the steps taken by investors in making decisions involving the sale, purchase, or tenure of a property or business. There are several methods of discounting that are often used, namely Free Cash Flow to Firm (FCFF) and Free Cash Flow to Equity (FCFE). In this study, the authors use the Discounted Cash Flow method FCFE approach, where this method is used to determine the intrinsic value of each stock ". (Damodaran, 2006)

Free Cash Flow to Equity (FCFE)

FCFE can be defined as net cash flow, which can be the basis for determining a company's intrinsic value. Damodaran (2006) says, "To estimate the cash of a company that can return to shareholders based on several stages, namely :

1. Every investment expenditure incurred must be reduced first by the company's net income to represent the cash outflow. Then depreciation is added again because these two things are not cash expenditures but non-cash cash.
2. Second, increasing working capital will reduce the company's cash flow, while reducing working capital will increase the cash flow available to shareholders. So that only non-cash working capital is considered.
3. The final stage of new and paid debt is in the company's cash flow. So that the payment of the principal debt represents the cash out while the issuance of new debt will represent the money coming in.

In each stage, cash flow impacts investment spending, working capital, and debt changes. It can define that the cash flow remaining from

these changes is Free Cash Flow to Equity (FCFE)."

Investment Decision

Mulyadi (2016:75) states that An investment decision is a decision to release funds now in the hope of generating a flow of funds released at the beginning of the Investment. An investment decision means to answer what line of business will be entered because many investment alternatives can be implemented so that the owner's wealth of the funds is expected to increase. The process of making decisions is continuous. That is, it continues until the best decision is reached. When making investment decisions, it is necessary to evaluate the media that you want to include in the Investment to know which investment media offers the highest return with a certain level of risk or, on the contrary, provides the expected return with low risk.

The price of a stock is to sell, buy and hold. When an investor knows the intrinsic value (NI) of stock and compares it to the stock market price, an investor can decide whether to buy, sell, or hold on to a stock. The guideline used in decision making is to use the intrinsic value of k (NI), which is as follows:

- If $NI >$ the current market price, the shares are considered *undervalued* because they are below their fair value, and a good decision is to buy the shares or hold them if the stakes are already owned.
- If $NI <$ the current market price, the stock is considered *overvalued* (expensive) because it is above its fair value, and a good decision is to sell.
- If $NI =$ the current market price, the stock is considered *fair* value (fair price) and is in balance. The investment decision taken is to maintain.

Methods

The research method used in this research is the event study method (ESM). This event study method looks at investors' reactions during the COVID-19 pandemic. The data used in this study

is secondary data, namely data that has been collected through primary sources and is available for use. The data types used include company annual reports, financial reports, public exposures, company updates, and press releases. This research follows a systematic approach starting with the research year 2021. The time of observation in this event study is forecasted for the next 1 (one) year from the closing price on July 1, 2021. The research design is carried out using several frameworks to assess stock valuations. IRRA and understand its competitive advantages. The systematic framework used in this research is: to describe business processes, types of industry, and internal conditions of the company; Analyze economic conditions related to the company's business challenges; Conduct financial analysis with applicable financial standards; Conduct a valuation with a clear justification for determining the valuation technique. Absolute valuation is performed using

the Discounted Cash Flow (DCF) model to assess its intrinsic value, enhanced with relative valuations that will form the basis of recommendations to buy, hold or sell.

Results

Business Description

Itama Ranoraya Tbk (IRRA) is a company engaged in the health sector with equipment and supplies sub-sector medical. The company was founded on November 30, 1989. Decided to have an IPO in 2019 with most shares controlled by PT Global Dinamika Kencana for 69.75 %, PT Neumedik Jaya for 5.25%, and PT Itama Ranoraya (Treasury Shares) for 6.25%, and the public as much as 18.75%. With the COVID-19 Pandemic, sales of drugs and medical devices will continue to increase.

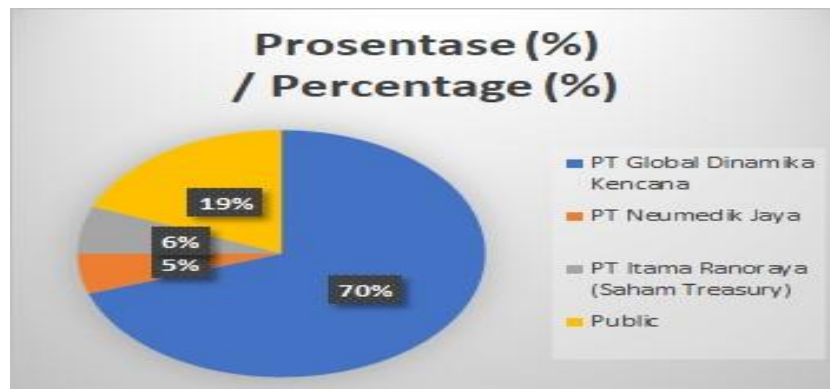


Figure 2. Shares of PT Itama Ranoraya Tbk

Business Model

IRRA has 3 (three) business segments: Non-Sterile Electromedical Medical Devices, Diagnostic In Vitro, and other products, with contributions of 26%, 72.9%, and 0.94%, respectively, to IRRA's 2020 revenue. It is predicted that the proportion of sales of the sterile non-electromedical medical device segment and the in vitro diagnostic product segment will continue to rise in line with the situation where the COVID-19 pandemic is still spreading. It will

still need this product during the pandemic. Revenue driver or the income comes from:

- The non-electromedical sterile medical equipment segment, namely the ADS (Auto Disable Syringe) syringe product; and
- In vitro diagnostic product segment, namely as a Swab Antigen Test product

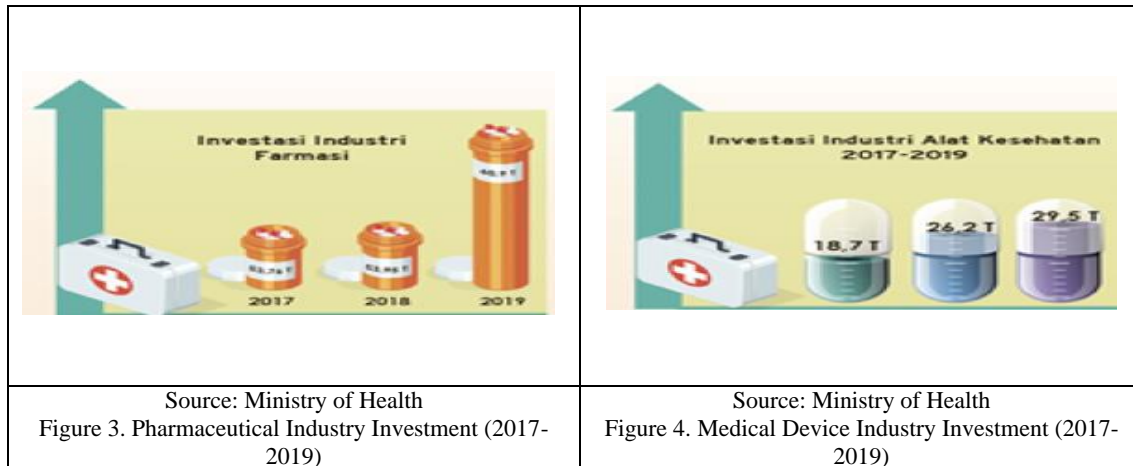
Management and Corporate Governance

Professional and experienced management leads IRRA in their field. Tjandra Yoga Aditama, as President Commissioner of PT Itama Ranoraya Tbk (IRRA), is the former Director of Infectious

Disease Control of WHO for the Southeast Asia region with an office in Delhi, India. They are very familiar with the situation. The President Director of PT Itama Ranoraya Tbk (IRRA) is led by Heru Firdausi Syarif, who is also experienced in his field.

Medical Device Industry

In 2018, the number of medical device industries had increased by 25.3 %, which is 27 industries. The national medical device market also grows 12% per year from 12 trillion to 18 trillion.



It is projected that this industry will still grow high as in previous years, 2021-2023, due to a significant increase in demand for medical devices, both for the general public and the more significant industry, due to awareness of the pandemic.

Government Support

The government realizes that the successful handling of the pandemic will be the key to

improving national economic growth. The government will increase the budget for the health sector in 2021 to Rp133.07 trillion. The funding for the health sector will, among other things, be used for the procurement and operation of the COVID-19 vaccine, facilities and infrastructure, and medical equipment. The government's awareness to improve national health will continue to be improved, which is included in the National Economic Recovery Program Policy (PEN).

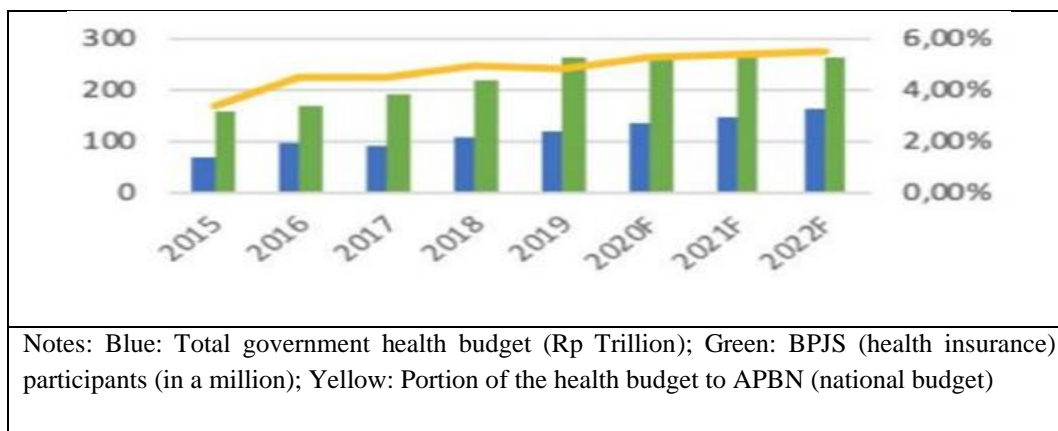


Figure 5. Development of the Government's Health Budget

Medical devices must be accompanied by technology and domestic production, where:

- Based on data from the Government Goods/Services Procurement Policy Institute (LKPP), until June 2021, domestic orders for medical devices only reached Rp. IDR 2.9

trillion. Meanwhile, the value of spending on imported medical devices is five times greater, Rp. 12.5 trillion *through e-catalogue*.

- The current government continues to echo the "Purchase of Domestic Products" in the "Proud National Movement Made in Indonesia."

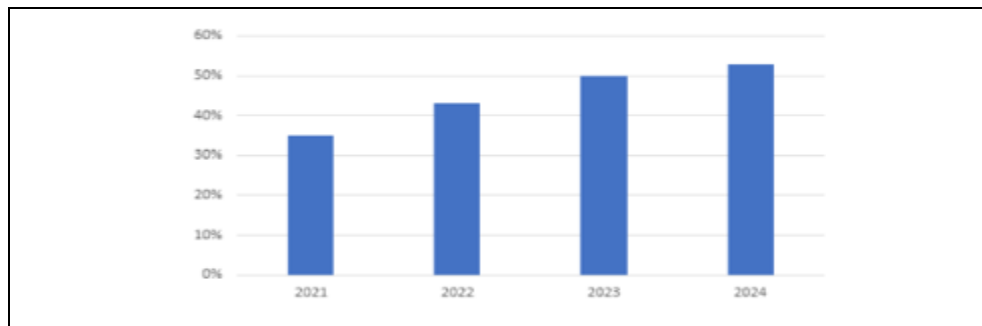


Figure 6. The target of Content Level Requirements for Domestic Industry (TKDN)

Financial Analysis

IRRA's financial performance can be said to be relatively good, but this still comes from current

sales of the COVID -19 pandemic, as shown in the figure and table below:

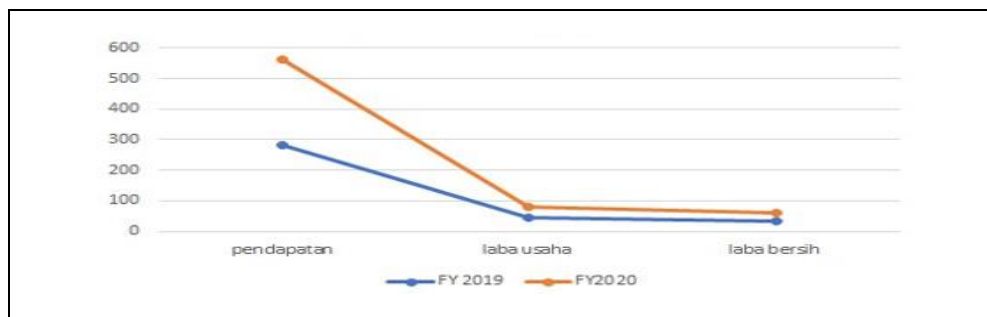


Figure 7. Comparison of IRRA Financial Performance in 2019 and 2020 (Revenue-Operating Profit-Net Profit)

Table 1. IRRA's Financial Performance

Rasio	2018	2019	2020	2021F
GPM	21,09 %	21,15 %	21,35 %	21,35 %
NPM	12,14 %	11,78 %	10,73 %	10,73 %
ROA	31,67 %	13,54 %	14,46 %	14,46 %
ROE	48,40 %	14,11 %	24,97 %	24,97 %

Notes: GPM=Gross Profit Margin, NPM=Net Profit Margin, ROA=Return on Asset, ROE=Return on Equity

Asset growth from IRRA increased 64% during 2021, as shown in Figure 8 below. Due to the IRRA acquisition of PT Oneject Indonesia, a manufacturer of ADS syringes that have received recognition from the World Health Organization (WHO). In addition, a positive catalyst for optimism in the future is that IRRA will also produce more diverse medical devices, such as blood bags, and include the localization of the *Panbio antigen swab test*, which is currently still under development. After this pandemic ends, of

course, people will not stop taking care and become more aware of their health.

During this Pandemic, IRRA posted a *return* of 103%. *Diagnostic In Vitro* was recorded as the product that gave the most considerable contribution to total revenue, which reached 72.9%, a significant increase due to the high demand for antigen swab test kits which in 2020 sold 2.4 million *pieces*.

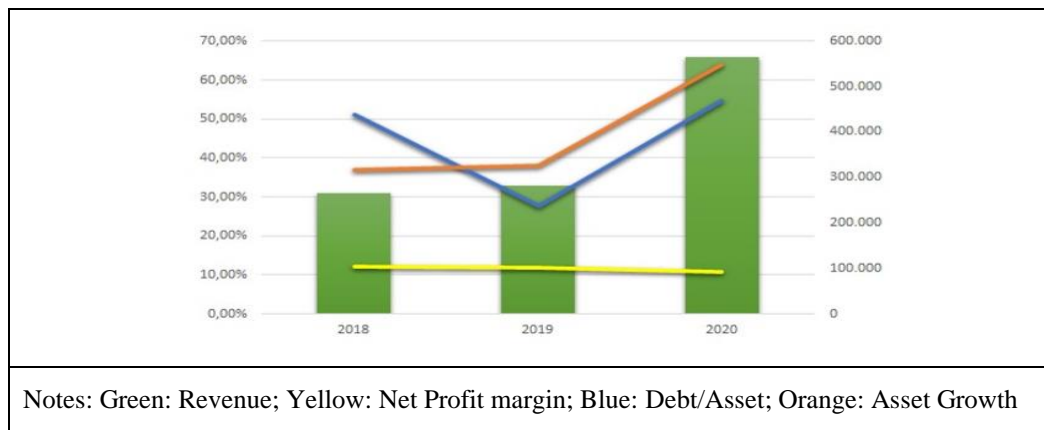


Figure 8. Financial Performance of IRRA

However, there are risks faced by the company regarding this business expansion, namely:

- The increase in 2020 debt is relatively high at 54.72%, even though income was already very high that year.
- An expensive investment because you want to be a manufacturer of medical devices that need
 - Investment for equipment that will be sufficient
 - High bad debts, third parties have receivables that account for more than half of the company's *return* in 2020

It should also pay the debt ratio of the IRRA more attention to (see Figure 8 below) because it can cause problems in the future.

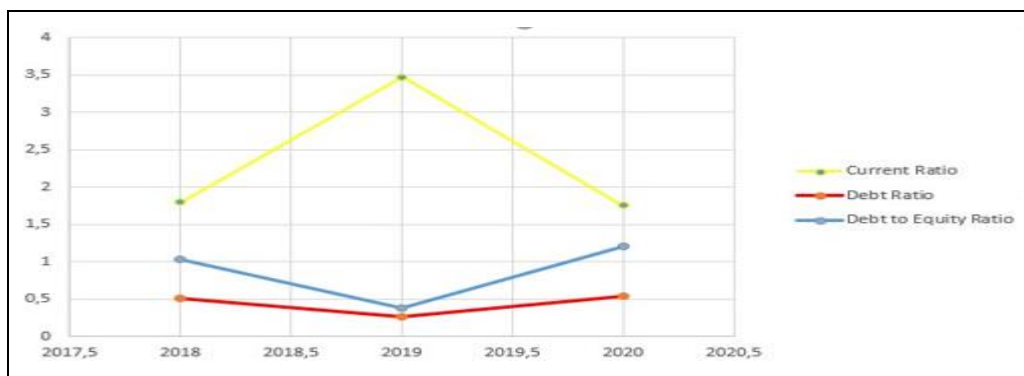


Figure 9. Debt Indicators from IRR

Challenges faced by PT Itama Ranoraya Tbk (IRRA) in the future:

- Increase in total short-term liabilities by Rp202,118,067,513, to Rp.291.335.459.649,-. The increase was mainly due to the increase in third-party trade receivables by Rp. 163,093,624,890,- to Rp.213.857.923.132,-.
- The increase in the Company's tax payable to Rp8,507,764,925,- compared to the tax payable in 2019 of Rp2,295,689,605,-, as well as an advance for sales of r Rp9,515,888,800,-.

Valuation

Referring to Damodaran (2006), there are several approaches to *relative valuation*, *contingent claim valuation*, and *discounted cash flow valuation* to determine the value of a company's stock. There is a *dividend discount model* (DDM) in the discounted cash flow valuation, suitable for use. Because dividends (yield) are determined from the amount of profit generated in 1 (one) current year, it can be seen whether one year is good or not. No. In calculating the intrinsic value in the DDM method, it is necessary to use 2 (two) approaches, namely the financial statement approach and the fundamental report approach.

The following table uses the valuation table with the *Cash Flow-Free Cash Flow-to-Firm* (DCF-FCFF) valuation method.

Table 2. IRRA. Share Valuation Calculation

WACC	4,22%		Base	2021F	Terminal Value
Equity FV	Rp3.406.319.411rb	FCFF	Rp103.209.943rb	Rp141.005.425rb	Rp7.848.708.939rb
Debt FV	Rp4.117.680.589rb	Growth		36,62%	2,45%
ΣMarket Share	Rp7.524.000.000rb	Discount Rate		4,22%	4,22%
Outstanding share	3.600.000.000	FCFF PV		Rp135.301.002rb	Rp7.531.186.740rb
Tax Rate	22%	Total Est. FCFF			Rp7.666.487.742rb
Cost of Equity (r_e)	5,54%				
Risk Free Rate (r_f)	3,50%	Total Est. FCFF			Rp 7.666.487.742.000
Industry Derived β	13,54%	Outstanding Share			Rp 3.600.000.000
Market Return (R_m)	18,58%	Price per share			Rp 2.130
Cost of Debt (r_d)	4,00%	Price as of July 1, 2021			Rp 2.090
		"UNDERVALUED"			

According to standard CFA measurements, a market value of 15% below intrinsic value will result in a "buy" recommendation. A market value between 15% below and 15% above intrinsic value will result in a "hold" recommendation. A market value above 15% of value intrinsically will provide a "sell" recommendation. The calculation results show that IRRA shares are still *undervalued with an upside/ down* potential of 1.91% (from the closing price of July 1, 2021). So, the recommendation is "hold."

Investment Risk

Risks faced by investors when choosing IRRA
(see also Figure 9):

1. Bad debts (K1) Of the total assets of Rp511,239,884,710, which consists of Rp233,037,390,711 cash and cash equivalents, there are funds of Rp277,837,601,453, - in the form of third party trade receivables, which are more than 55% of assets are receivables.

2. Solvency risk (K2) The ratio of the company's total liabilities to equity as of December 31, 2020, and December 31, 2019, was 120.88% and 38.38%, respectively. Meanwhile, the ratio of total liabilities compared to total assets as of December 31, 2020, and December 31, 2019, was 54.73% and 27.73%, respectively.
3. Liquidity risk (K3) The Company has an excellent level of liquidity. The current asset position in 2020 experienced a surge to Rp511,239,884,710, an increase compared to 2019, which was Rp309,969,923,749.-.
4. Competition Risk (P2) In the Pharmaceutical sector, IRRA is not a market leader, so it is still vulnerable to competition from all market leaders.
5. The government mandate (B2) the government through the policy of the National Economic Recovery (PEN) program in 2020 has allocated a budget of Rp. 695.2 trillion for various sectors, and the health sector absorbs a budget allocation of Rp. 63.51 trillion, which has been used for handling Covid-19. The government is aware of the success of running the pandemic.

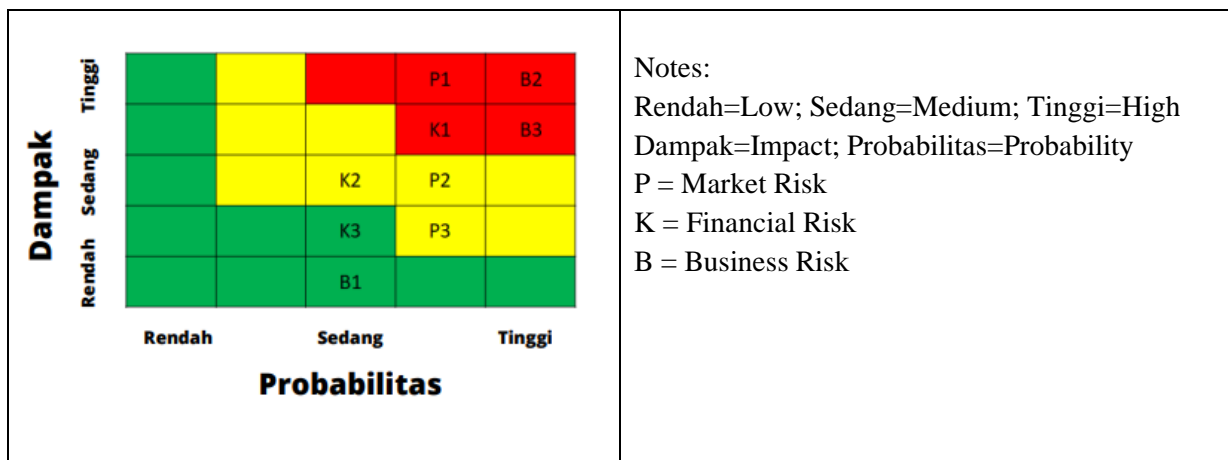


Figure 10. The Risks Faced by Investors in Choosing IRRA Shares

Conclusion

The COVID-19 pandemic brings excellent opportunities that are seen as prospects for pharmaceutical companies because they are in the pandemic time that requires a variety of massive medical devices. Investors certainly have high expectations and a good perception of the company, driven by the pharmaceutical company's track record of financial performance and good corporate reputation.

The method used for valuation is the *Discounted Cash Flow - Free Cash Flow-to-Firm* (DCF-FCFF) analysis. The recommendations are "hold" for stock PT Itama Ranoraya Tbk (IRRA) with a *target price* of IDR 2,130 within the next year. There is a potential increase of 1.91% from the closing price of July 1, 2021.

Things to consider when making a decision are:

- The ongoing COVID-19 pandemic supports the increase in stock prices, so when this does not happen again, IRRA's share price will have the potential to fall, but it is projected that this will occur after one year.
- Of the total assets owned by IRRA, 55% of the assets are receivables from third parties prone to uncollectable.
- Competition risk, where IRRA tries to widen its business into manufacturing prone to large additional liabilities. Meanwhile, the number of short-term liabilities has increased by Rp202,118,067,513,- to Rp291,335,459,649,- in 2020. The increase was mainly due to the increase in trade receivables from third parties by Rp163,093,624,890- to Rp.213.857.923.13.

In addition, the development of the medical device industry has increased by 25.3% since 2018. The national medical device market has also grown by 12%. This industry is projected to continue to grow, in line with the awareness of people's health due to the COVID-19 pandemic.

The limitation of this research is that only one stock is taken for valuation from various pharmaceutical industries, namely the stock-coded IRRA. The analysis is carried out by looking at descriptive data from the movement of IRRA shares in 2021 and the company's financial statements. For this reason, in further research, an *event study* is carried out using inference statistics by testing lots of data with various stocks (not just one stock) in the entire pandemic period.

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