



Investments Decision Making In The Covid-19 Pandemic: Sharia Stock Valuation Model

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ABSTRACT

This study aims to find the intrinsic value of the stock prices of sharia companies listed in the Jakarta Islamic Index (JII) before and during the pandemic. Explaining the intrinsic value of stocks helps make the right investment decisions, especially during this period. One way to calculate the intrinsic value of stocks is using fundamental analysis with PER, DDM, and PBV. The sample of this study was 30 companies listed in JII. The sampling technique used in this study was purposive sampling. The data used are secondary. The research results with the PER method, before the pandemic, there were 18 companies, and 17 companies were experiencing undervalued during the pandemic. The second method with DDM, there were 27 companies before the pandemic, and during the pandemic, 25 companies were experiencing undervalued. In the third method with PBV, there were 22 companies before the pandemic, and 25 companies were experiencing undervalued during the pandemic. The most exact investment decision-making is to buy stocks that are undervalued (cheap). The most accurate valuation of stock prices is the DDM method which has the smallest RMSE value.

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1. Introduction

The development of the Islamic financial sector is experiencing rapid growth due to the increasing need for various facilities of Islamic financial instruments. The majority of the Indonesian population supports this to meet the needs of Muslim investors who want to transact based on sharia principles. The capital market is the most strategic institution in today's financial system, offering a wide range of financial investment instruments. Capital market financial instruments have also fulfilled sharia provisions, namely Islamic capital markets [1]. Indonesia's Islamic capital market contains sharia instruments, such as Sukuk, mutual funds, and sharia stock indices[2], [3]. Sharia capital markets have several provisions based on the MUI Fatwa that must be avoided: najsy; fraudulent offers, ba'i al-ma'dum; short selling, insider trading; information from within for profit[4].

The existence of the Covid-19 virus in early 2020 in Indonesia has impacted the world of health and the country's economy, one of which is a rapid decline in JCI in early 2020 due to massive sales by investors to concerns about concerns the Covid-19 virus. However, Sharia stocks remain even though the economy is declining because they have transaction power to remain stable and more volatile[5], [6]. In general, Sharia stock transactions have increased, and conventional stocks have decreased during this pandemic. In March 2021, Islamic shares dominated the market by 59.9%. Before the pandemic period in January and February 2020, the performance of Islamic stocks of ISSI, JII70, and JII indexes was in contraction. Nevertheless, in the pandemic period in March 2021, the three indexes showed the highest jump performance, even outperforming JCI and LQ45. Such as ISSI, which grew 13.9%, JII70 by 12.3%, JII by 7.8% [5]. This is because Sharia stocks in the consumer goods sector, especially in the pharmaceutical sector, increased during the pandemic due to the need for drugs that impact pharmaceutical companies, such as Kimia Farma Tbk (KAEF) and Kalbe Farma Tbk (KLBF).

The existence of the Covid-19 pandemic requires investors to be careful in observing every capital market instrument that using as an object of investing and conducting stock valuations to minimize the risk of loss. A careful valuation or valuation of a stock will minimize the risk of misselecting a stock. Conditions, when stock valuation yields are lower than market prices, are referred to as overvalued, which means stocks are not worth buying and undervalued when the opposite happens [7]. The analysis used for stock valuation in this study is the fundamental analysis using the company's financial data to calculate the stock's intrinsic value. There are two shorts in fundamental analysis to calculate the value of stocks, namely with the Present Value Approach and the Price Earning Ratio (PER) approach [8], [9]. One model that uses the dividend component to determine the value of a stock (the current value approach) is the Dividend Discounted Model (DDM), which use to determine the estimated price of the stock by discounting the entire flow of dividends to be received in the future [10]. Per indicates the ratio or comparison between a company's stock price and earnings.

Based on the theory, the DDM method is better than the PER method, but investors and stock analysis more often use PER because of its relatively easy use. In addition to DDM and PER, there is another stock valuation method, namely Price to Book Value (PBV). PBV is a stock valuation method that looks at the relationship between market value and book value per share [11]. In assessing the fair price of a stock, the investor must measure the accuracy of the stock price valuation method used in the research. Therefore, the study will use the Root Mean Square Error (RMSE) to determine which stock valuation models have the minor deviation values.

2. Literature Review



2.1 Efficient Market Hypothesis Theory

Since Sharpe (1964), Lintner (1965) and Black (1972) formulated the Capital Asset Price Model (CAPM) [12], [13], this model has become one of the most widely used in financial modeling both by academics as by practitioners. However, in the seventies and eighties, some anomalies in the stock market were discovered. In particular, the stock's return characteristics appear to contradict CAPM's principle that beta risk can only explain the cross-section of expected returns. Some of these anomalies are the size effect [14], [15], the January effect [16], [17], the price income ratio effect [18], [19], the book-to-market ratio effect [20]-[22], momentum effect [12], [23], [24] and overreaction effects [23], [25], [26]. Islamic Financial Institutions are financial institutions that carry out their activities based on Islamic sharia principles. Islamic Financial Institutions consist of Bank Financial Institutions and Non-Bank Financial Institutions (Insurance, Pawn shops, Mutual Funds, Capital Markets, BPRS, and BMT). Islamic Financial Institutions themselves have 2 different types of characteristics, including bank financial institutions and non-bank financial institutions [27]-[29]. Fama and French (1992) show that beta cannot explain not being alone or joining other fundamental variables - the difference between stock returns for NYSE and AMEX shares during the period 1963-1990. The firm size and ratio of books to markets are statistically significant instead. In contrast, [12], [13], show that beta explains power when it is estimated to use annuals instead of monthly returns.

2.2 Fundamental Analysis

Fundamental analysis pursues the actual state of an industry, such as pursuing the industry's financial performance, and is usually used to ensure shares that can be bought or sold. This method focuses on the ratio of financial performance and events that are directly or indirectly intertwined that can affect the industry's financial performance. Fundamental analysis shows future stock prices by looking at industry factors affecting future stock prices and establishing bonds between those aspects [30]-[32].

The PER approach is a multiplier method, meaning that investors calculate how many times the amount of income reflects in the stock price. PER shows a comparison between the stock price and Earnings Per Share (EPS), meaning that if per share as much as three times shows, the stock price equals three times the eps value. The PER approach displays information on what price investors must pay to earn every Rp 1 earnings [10].

H1: Price Earning Ratio (PER) can correctly validate stock prices.

Dividend Discounted Model (DDM) is a method used to determine the estimated price of shares by discounting the entire flow of dividends received in the future. The advantage of DDM is that the model is derived from the concept of money, time value, and cash flow [33], [34]. The DDM approach theory is better than the PER approach, but investors and stock analysis more often use the PER approach because it is easier to use [10].

H2: Dividend Discounted Model (DDM) can correctly validate stock prices.

The relationship between market value and book value per share can also use as an alternative method of evaluating stock investment decisions. Based on the theory, the market value of a stock is required to reflect its book value. [35] argued that stocks with a low book value price ratio would significantly return than stocks with a high book value ratio. Thus, Rosenberg (1985) advises buying stocks with a low book value price ratio if they want a more significant return at a certain level of risk [10]. PBV can better evaluate the shares of companies with similar sectors or industries, so it is clear whether the stock price is lower or expensive [33].

H3: Price to Book Value (PBV) can correctly validate the stock price.

Comparison of accuracy values use to determine which methods are the most accurate among other methods used; accuracy testing can be done using Root Mean Squared Error (RMSE) [33]. The smaller the value of RMSE, the better the stock price valuation model in estimating the intrinsic value of the stock [36].

H4: Dividend Discounted Model (DDM) has more accuracy of stock valuation model than Price Earning Ratio (PER) and Price to Book Value (PBV)

3. Methods

3.1 Population and Sample

This study used a sample of companies that joined the Islamic stock index positively and negatively affected by Covid-19 in the 2020 period. The sectors that are positively affected are the Chemical, Pharmaceutical, and Technology sectors. The sectors negatively affected are the Restaurant, Hotel, and Tourism sectors and the Property and Real Estate sectors. The data used in this study is secondary data available on the official website of the Indonesia Stock Exchange during the period 2020.

The data analysis technique in this study uses several steps. The first step is to find intrinsic value using three approaches, namely Price Earning Ratio (PER), Dividend Discounted Model (DDM), and Price to Book Value (PBV).

3.2 Method of collecting data

Data collection methods used in this study were obtained and obtained by the documentation method, literature study method and using company financial reports.

3.3 Data analysis method

According to [37] panel data is a type of data that is a combination of time series data with cross-section data. Therefore, panel data has a combination of the characteristics of the two types of data, namely: consists of several objects and covers several periods.

4. Result and Discussion

4.1 Stock Valuation by Price Earning Ratio (PER) Method

The following are presented tables comparing the intrinsic value of Islamic companies listed in JII before and during the pandemic using the PER method.

Table 1

Comparison Of Intrinsic Value Of Shariah Companies Registered With Jii Before Pandemic With Per Method

No	Company ID	Stock Price	Intrinsic Value(PER)	Valuation
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1	ADRO	1,555	1,124.02	Overvalued
2	AKRA	3,950	2,493.95	Overvalued
3	ANTM	840	589.43	Overvalued
4	BRPT	1,510	959.88	Overvalued
5	BTPS	4,250	5,079.67	Undervalued
6	CPIN	6,500	4,406.76	Overvalued
7	EXCL	3,150	3,211.53	Undervalued
8	ICBP	11,150	13,531.05	Undervalued
9	INCO	3,640	5,714.23	Undervalued
10	INDF	7,925	9,925.71	Undervalued
11	INKP	7,700	10,793.87	Undervalued
12	INTP	19,025	17,291.48	Overvalued
13	JPFA	1,535	2,793.71	Undervalued
14	KAEF	1,250	2,640.69	Undervalued
15	KLBF	1,620	1,373.55	Overvalued
16	MDKA	1,070	3,118.05	Undervalued
17	MIKA	2,670	3,427.05	Undervalued
18	MNCN	1,630	1,683.79	Undervalued
19	PGAS	2,170	1,280.00	Overvalued
20	PTBA	2,660	4,900.96	Undervalued
21	PTPP	1,585	7,953.15	Undervalued
22	PWON	570	660.71	Undervalued
23	SCMA	1,410	1,596.87	Undervalued
24	SMGR	12,000	9,072.01	Overvalued
25	TKIM	10,275	12,539.81	Undervalued
26	TLKM	3,970	3,872.80	Overvalued
27	TPIA	10,375	8,839.21	Overvalued
28	UNTR	21,525	23,571.25	Undervalued
29	UNVR	8,400	7,093.61	Overvalued
30	WIKA	1,990	2,917.66	Undervalued

Can be seen from table 1 during comparing an intrinsic value to stock prices using the PER method. It is shown that there were 18 Shariah companies registered in JII before the pandemic undervalued, namely BTPS, EXCL, ICBP, INCO, INDF, INKP, JPFA, KAEF, MDKA, MIKA, MNCN, PTBA, PTPP, PWON, SCMA, TKIM, UNTR, and WIKA. That is because the intrinsic value is greater than the stock price. Twelve companies overvalued, namely ADRO, AKRA, ANTM, BRPT, CPIN, INTP, KLBF, PGAS, SMGR, TLKM, TPIA, and UNVR, because the intrinsic value is smaller than the stock price.

Based on explanation Table 1. Investment decision-making using the PER method is to buy 18 Shariah companies registered with JII before the pandemic. Namely BTPS, EXCL, ICBP, INCO, INDF, INKP, JPFA, KAEF, MDKA, MIKA, MNCN, PTBA, PTPP, PWON, SCMA, TKIM, UNTR, and WIKA because the shares are undervalued or cheap. For investors who already own the stock, the right decision is to increase the ownership of the stock or hold the stock in the hope that the stock price will increase in the future. Next is not to buy shares of ADRO, AKRA, ANTM, BRPT, CPIN, INTP, KLBF, PGAS, SMGR, TLKM, TPIA, and UNVR in an overvalued or expensive condition. If the investor already owns the stock, it is better to sell the stock because there is a possibility that the price will fall.

Can be seen from table 2. after a comparison of intrinsic value with stock prices using the PER method. It is known that there are 17 Shariah companies listed in JII during the pandemic undervalued, namely BTPS, EXCL, ICBP, INDF, INKP, JPFA, KAEF, KLBF, MDKA, MIKA, PTBA, PTPP, PWON, SCMA, TKIM, TLKM, and TPIA. That is because the intrinsic value is greater than the stock price. There are also 13 companies in overvalued conditions, namely ADRO, AKRA, ANTM, BRPT, CPIN, INCO, INTP, MNCN, PGAS, SMGR, UNTR, UNVR, and WIKA because the intrinsic value is smaller than the stock price.

Table 2

Comparison of Intrinsic Value of Shariah Companies Registered with JII During Pandemic with PER Method

No	Company ID	Stock Price	Intrinsic Value(PER)	Valuation
1	ADRO	1,430	1,194.93	Overvalued
2	AKRA	3,180	2,978.35	Overvalued
3	ANTM	1,935	1,769.62	Overvalued
4	BRPT	1,100	950.48	Overvalued
5	BTPS	3,750	4,132.18	Undervalued
6	CPIN	6,525	1,868.66	Overvalued
7	EXCL	2,730	2,801.52	Undervalued
8	ICBP	9,575	11,018.62	Undervalued
9	INCO	5,100	1,723.67	Overvalued
10	INDF	6,850	7,474.21	Undervalued
11	INKP	10,425	10,800.93	Undervalued
12	INTP	14,475	12,840.64	Overvalued



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13	JPFA	1,465	3,086.65	Undervalued
14	KAEF	4,250	4,256.36	Undervalued
15	KLBF	1,480	2,166.11	Undervalued
16	MDKA	2,430	2,910.80	Undervalued
17	MIKA	2,730	3,723.14	Undervalued
18	MNCN	1,140	1,134.20	Overvalued
19	PGAS	1,655	1,400.00	Overvalued
20	PTBA	2,810	2,995.68	Undervalued
21	PTPP	1,865	3,495.01	Undervalued
22	PWON	510	530.68	Undervalued
23	SCMA	2,290	2,356.20	Undervalued
24	SMGR	12,425	10,608.91	Overvalued
25	TKIM	9,850	12,292.07	Undervalued
26	TLKM	3,310	3,558.85	Undervalued
27	TPIA	9,075	9,292.84	Undervalued
28	UNTR	26,600	23,059.10	Overvalued
29	UNVR	7,350	6,957.83	Overvalued
30	WIKA	1,985	1,945.20	Overvalued

Based on table 2 explanation. Investment decision-making using the PER method to buy 13 Shariah companies registered with JII during the pandemic. Namely, BTPS, EXCL, ICBP, INDF, INKP, JPFA, KAEF, KLBF, MDKA, MIKA, PTBA, PTPP, PWON, SCMA, TKIM, TLKM, and TPIA because it is undervalued or cheap. For investors who already own the stock, the right decision is to increase the ownership of the stock or hold the stock in the hope that the stock price will increase in the future. Next is not to buy ADRO, AKRA, ANTM, BRPT, CPIN, INCO, INTP, MNCN, PGAS, SMGR, UNTR, UNVR, and WIKA because it is in an overvalued or expensive condition. If the investor already owns the stock, it is better to sell the stock because there is a possibility that the price will fall.

4.2 Stock Valuation with Dividend Discounted Model (DDM) Method

The following are presented tables comparing the intrinsic value of shares of Islamic companies listed in JII before and during the pandemic using the DDM method.

Table 3
Comparison Of Intrinsic Value Of Shariah Companies Registered With JII Before Pandemic With DDM Method

No	Company ID	Stock Price	Intrinsic Value(DDM)	Valuation
1	ADRO	1,555	1,555.14	Undervalued
2	AKRA	3,950	4,081.01	Undervalued
3	ANTM	840	847.63	Undervalued
4	BRPT	1,510	1,566.68	Undervalued
5	BTPS	4,250	5,079.67	Undervalued
6	CPIN	6,500	6,419.73	Overvalued
7	EXCL	3,150	3,211.53	Undervalued
8	ICBP	11,150	12,272.34	Undervalued
9	INCO	3,640	3,747.60	Undervalued
10	INDF	7,925	8,426.15	Undervalued
11	INKP	7,700	8,227.48	Undervalued
12	INTP	19,025	19,020.63	Overvalued
13	JPFA	1,535	1,733.85	Undervalued
14	KAEF	1,250	1,249.57	Overvalued
15	KLBF	1,620	1,785.61	Undervalued
16	MDKA	1,070	1,223.74	Undervalued
17	MIKA	2,670	2,937.47	Undervalued
18	MNCN	1,630	1,683.63	Undervalued
19	PGAS	2,170	2,240.73	Undervalued
20	PTBA	2,660	2,731.53	Undervalued
21	PTPP	1,585	1,665.52	Undervalued
22	PWON	570	660.70	Undervalued
23	SCMA	1,410	1,596.87	Undervalued
24	SMGR	12,000	12,800.59	Undervalued
25	TKIM	10,275	11,510.06	Undervalued
26	TLKM	3,970	4,117.89	Undervalued
27	TPIA	10,375	10,510.22	Undervalued
28	UNTR	21,525	24,018.20	Undervalued
29	UNVR	8,400	8,857.83	Undervalued
30	WIKA	1,990	2,210.43	Undervalued

Table 3 Show insight after comparing the intrinsic value with stock prices using the DDM method. It is known that there were 27 Shariah companies registered in JII before the pandemic was undervalued. Namely ADRO, AKRA, ANTM, BRPT, BTPS, EXCL, ICBP, INCO, INDF, INKP, JPFA, KLBF, MDKA, MIKA, MNCN, PGAS, PTBA, PTPP, PWON, SCMA, SMGR, TKIM,



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TLKM, TPIA, UNTR, UNVR, and WIKA. That is because the intrinsic value is greater than the stock price. Three companies are in an overvalued condition, namely CPIN, INTP, and KAEF, because the intrinsic value is smaller than the stock price.

Based on the explanation, investment decision-making using the DDM method is to buy 27 Shariah companies registered with JII before the pandemic. Namely, ADRO, AKRA, ANTM, BRPT, BTPS, EXCL, ICBP, INCO, INDF, INKP, JPFA, KLBF, MDKA, MIKA, MNCN, PGAS, PTBA, PTPP, PWON, SCMA, SMGR, TKIM, TLKM, TPIA, UNTR, UNVR, and WIKA because it is undervalued or cheap. For investors who already own the stock, the right decision is to increase the ownership of the stock or hold the stock in the hope that the stock price will increase in the future. Next is not to buy CPIN, INTP, and KAEF shares because they are overvalued or expensive. If the investor already owns the stock, it is better to sell the stock because there is a possibility that the price will fall.

Table 4
Comparison of Intrinsic Value of Shariah Companies Registered with JII During Pandemic with DDM Method

No	Company ID	Stock Price	Intrinsic Value(DDM)	Valuation
1	ADRO	1,430	1,430.05	Undervalued
2	AKRA	3,180	3,449.88	Undervalued
3	ANTM	1,935	2,015.98	Undervalued
4	BRPT	1,100	1,130.11	Undervalued
5	BTPS	3,750	4,132.18	Undervalued
6	CPIN	6,525	6,603.63	Undervalued
7	EXCL	2,730	2,801.52	Undervalued
8	ICBP	9,575	10,902.28	Undervalued
9	INCO	5,100	5,309.05	Undervalued
10	INDF	6,850	7,498.99	Undervalued
11	INKP	10,425	11,146.43	Undervalued
12	INTP	14,475	13,863.31	Overvalued
13	JPFA	1,465	1,543.32	Undervalued
14	KAEF	4,250	4,256.36	Undervalued
15	KLBF	1,480	1,634.04	Undervalued
16	MDKA	2,430	2,594.42	Undervalued
17	MIKA	2,730	3,749.94	Undervalued
18	MNCN	1,140	1,159.40	Undervalued
19	PGAS	1,655	1,425.14	Overvalued
20	PTBA	2,810	3,070.05	Undervalued
21	PTPP	1,865	1,821.31	Overvalued
22	PWON	510	530.66	Undervalued
23	SCMA	2,290	2,642.13	Undervalued
24	SMGR	12,425	13,042.09	Undervalued
25	TKIM	9,850	10,815.99	Undervalued
26	TLKM	3,310	3,488.90	Undervalued
27	TPIA	9,075	9,266.09	Undervalued
28	UNTR	26,600	28,210.81	Undervalued
29	UNVR	7,350	6,736.82	Overvalued
30	WIKA	1,985	1,945.64	Overvalued

Table 4 shows the scene after comparing the intrinsic value with stock prices using the DDM method. It is known that there are 25 sharia companies registered in JII during the pandemic undervalued, namely ADRO, AKRA, ANTM, BRPT, BTPS, CPIN, EXCL, ICBP, INCO, INDF, INKP, JPFA, KAEF, KLBF, MDKA, MIKA, MNCN, PTBA, PWON, SCMA, SMGR, TKIM, TLKM, TPIA, and UNTR. That is because the intrinsic value is greater than the stock price. There are also five companies in overvalued conditions, namely INTP, PGAS, PTPP, UNVR, and WIKA, because the intrinsic value is smaller than the stock price.

Based on the explanation, investment decision-making using the DDM method is to buy 25 Shariah companies registered with JII during the pandemic. Namely, ADRO, AKRA, ANTM, BRPT, BTPS, CPIN, EXCL, ICBP, INCO, INDF, INKP, JPFA, KAEF, KLBF, MDKA, MIKA, MNCN, PTBA, PWON, SCMA, SMGR, TKIM, TLKM, TPIA, and UNTR because it is undervalued or cheap. For investors who already own the stock, the right decision is to increase the ownership of the stock or hold the stock in the hope that the stock price will increase in the future. Next is not to buy shares of INTP, PGAS, PTPP, UNVR, and WIKA because it is overvalued or expensive. If the investor already owns the stock, it is better to sell the stock because there is a possibility that the price will fall.

4.3 Comparison of Stock Valuation Methods Using Root Mean Square Error (RMSE)

Comparison of Price Earning Ratio (PER), Dividend Discounted Model (DDM), and Price to Book Value (PBV) methods used to find out which methods have the slightest deviations or the most accurate calculations. The value of the comparison using RMSE can be seen in Table 5 below.

Table 5
Root Mean Square Error (Rmse) Value Of Shariah Companies Registered With Jii Before And During Pandemic

COMPANIES REGISTERED IN JII BEFORE THE PANDEMIC		COMPANIES REGISTERED IN JII DURING THE PANDEMIC	
Method	RMSE	Method	RMSE
PER	1,865.07	PER	1,524.00



DDM	362.81	DDM	407.73
PBV	3,506.30	PBV	2,697.47

Based on Table 8, the smallest RMSE value in Islamic companies registered with JII before and during the pandemic is in the DDM method, 362.81 and 407.73. The smaller the RMSE value, the more accurate the approach used. The deviation of intrinsic value to the stock price owned by the DDM method is the smallest compared to the PER and PBV methods. Therefore the most accurate and approaching method of its market price is the DDM method. That is in line with research conducted by Hasanah and Rusliati (2017). They said that the DDM method is more accurate because the concept of DDM is based on dividends which are the return on long-term investments received by investors in the future.

4.4 Different Paired Samples T-Test

Based on the output results in table 9 above, sig values are known. (2-tailed) at the stock price is 0.791, which is greater than 0.05 ($0.791 > 0.05$). the basis for decision-making in the Paired Samples T-Test test can be concluded that H_0 was accepted and H_a rejected. Thus it can be concluded that there is no significant difference between the stock price before and during the pandemic.

Table 6
Root Mean Square Error (RMSE) Value of Shariah Companies Registered with JII Before and During Pandemic
Paired Samples Test

		Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
Pair 1	Before-During Stock Price	-79.83333	1637.01130	298.8760 1	-691.10340	531.4367	-2.67	29	.791
Pair 2	PER Before-During	637.76733	1627.55323	297.1492 1	30.02897	1245.505	2.146	29	.040
Pair 3	DDM Before-During	-7.54967	1679.67770	306.6657 9	-634.75163	619.6522	-0.25	29	.981
Pair 4	PBV Before-During	-1706.11900	2650.51562	483.9157 3	-2695.83780	-716.400	-	29	.001

Table 9 also shows the Sig Value. (2-tailed) at the intrinsic value of PER is 0.040, which is less than 0.05 ($0.040 < 0.05$), then as the basis of decision-making in the Paired Samples T-Test test can be concluded that H_0 is rejected and H_a is accepted. Thus, it concluded a significant difference between the intrinsic value of per before and during the pandemic. Sig value. (2-tailed) at the intrinsic value of DDM is 0.981 which is greater than 0.05 ($0.981 > 0.05$), Thus, decision-making in the Paired Samples T-Test can be concluded that H_0 was accepted and H_a rejected. Thus it can be concluded that there is no significant difference between the intrinsic value of DDM before and during the pandemic. Sig value. (2-tailed) the intrinsic value of the PBV is 0.001, which is smaller than 0.05 ($0.001 < 0.05$), so as the basis for decision-making in the Paired Samples T-Test test can be concluded that H_0 is rejected and H_a is accepted, thus it can be concluded that there is a significant difference between the intrinsic value of the PBV before and during the pandemic.

5. Conclusions

Based on the results of accuracy comparison using RMSE, the DDM method has the accuracy of the model and accuracy in devaluing the stock price. Before the pandemic, Sharia stocks listed on JII were worth buying were BPTS, JPFA, MDKA, PWON, and TKIM because the shares are undervalued, and the company's fundamental conditions are good. Before the pandemic, Sharia stocks listed on JII that were not worth buying were CPIN, INTPE, and KAEP because the shares were overvalued, and the company's fundamental conditions were not good. Sharia stocks listed on JII during the pandemic that are worth buying are BTPS, ICBP, KLBF, MIKA, and SCMA because the shares are undervalued, and the company's fundamental conditions are good. Sharia stocks listed on JII during the pandemic that is not worth buying are INTPE, PGAS, PTPP, UNVR, and WIKA because the shares are overvalued, and the company's fundamental conditions are not good.

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