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Optimization of Stock Investments in Indonesia Stock Exchange: Comparing the Method of Dollar Cost Averaging (DCA) and Lump Sum (LS)

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Abstract

The aim of this research is to find out how to optimize stock investment using the dollar cost averaging method and the lump sum method and also to compare the performance between the dollar cost averaging method and the lump sum method based on return results. This research uses a descriptive method with a quantitative approach. This research uses 2 companies with the largest market cap listed on the Indonesian Stock Exchange for the 2021-2023 period. The results of this research found that the lump sum method return in 2022 on BBCA shares reached 22.85% and on BBRI shares 18.19% higher than the return on the dollar cost averaging method on BBCA shares which was only 13.70% and on shares BBRI is only 10.86%. The lump sum method return in 2022 is the highest return between 2021 and 2023. These results prove that the lump sum method is more optimal than the dollar cost averaging method.

Keywords: *Investment, Stock Optimization, Dollar Cost Averaging (DCA), Lump Sum (LS)*

Contribution/Originality: *This paper focuses on comparing the performance of the dollar cost averaging and lump sum methods based on return results and contributes to consideration for investors in determining the method to be used to invest in order to obtain greater returns.*

INTRODUCTION

Investment involves postponing current consumption to allocate resources to productive assets for future benefits or profits. It can be categorized into real investment (e.g., gold, land, buildings) and investment in financial assets (e.g., stocks, bonds, deposits). (Maharani & Farhan Saputra, 2021). While stocks have the advantage of significant capital growth potential and passive income through dividends, financial investments are also susceptible to market fluctuations that can lead to losses.

The Composite Stock Price Index is the main board index that reflects the stock index listed on the capital market (R & Lutfi, 2022). The Indonesia Stock Exchange provides various indices, including the infobank15 which measures the price performance of 15 banking stocks with good fundamentals and large trading liquidity (Anggraeni & Nirawati, 2022). Along with the diversity of investment instruments, it is important for investors to choose the right investment method to minimize the risk and optimizing potential profits in the capital market.

The movement of the infobank15 index from August 2016 to July 2021 is experiencing fluctuations with an overall upward trend, except in early 2020 when there was a significant decline due to the impact of COVID-19. The lowest point was recorded in November 2016 (559.73 points), meanwhile the highest was reached in February 2021 (1035.98 points). In the third quarter of 2021, the banking sector showed a positive outlook with an increase in net profit and lending, which is expected to be influenced by the government's success in handling the pandemic and stable monetary policy, including low interest rates (Anggraeni & Nirawati, 2022) (Figure 1.1).

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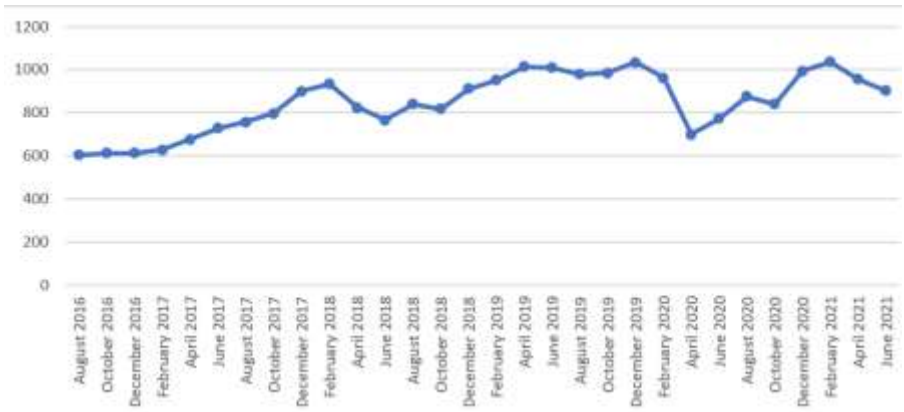

Figure 1.1. Infobank15 Index Period August 2016 - July 2021.

Note: Data from idx.co.id

The composite stock price index movement from August 2016 to July 2021 also fluctuates. From August 2016 to July 2021, the composite stock price index movement tends to be more stable although it also experienced an increase like the infobank15 index. The decline in the composite stock price index in early 2020 until April was not as deep as the decline in the infobank15 index. However, the lowest point of composite stock price index from August 2016 to July 2021 was in April 2020 at 4716.4 points and the highest point was in February 2018 at 6597.22 points (Figure 1.2).

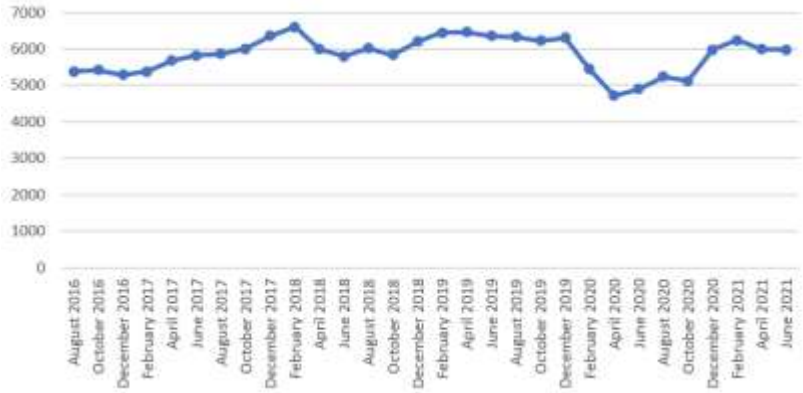

Figure 1.2. Stock Price Index Period August 2016 - July 2021.

Note: Data from idx.co.id.

Investors can choose between fundamental and technical approaches in stock analysis, with the fundamental approach covering the company's financial factors, while the technical approach uses price indicators. Dollar Cost Averaging strategy is an investment strategy which invests a fixed amount of money periodically with the same nominal (Lu *et al*., 2020). The Dollar Cost Averaging strategy offers benefits such as the ability for investors to invest in small amounts, fostering discipline. It alleviates concerns about market fluctuations and helps avoid emotional and irrational investment behavior during consistent market ups and downs with the same investment. (Patel & Shinde, 2020). A lump sum investment is an investment in a sizable amount in a mutual fund scheme, generally made for the long term to increase the chance of a higher return. According to Choudhari & Boargaon (2020) one of the advantages of implementing a lump sum strategy is that there is not too much investor involvement, only 1 investment, and waiting for results at a later date (Chodietty *et al*., 2022)

The research organization of this study is as follows: section two reviews literature on Dollar Cost Averaging (DCA), Lump Sum (LS) methods, and the framework; section three details research type, operational variables, stages, population, samples, and data collection; section four presents stock return calculations using Dollar Cost Averaging and Lump Sum methods, along with research results and discussions; Section five provides conclusions and suggestions based on the research findings.

LITERATURE REVIEW

Dollar Cost Averaging (DCA)

According to Shen (2022) Dollar Cost Averaging is an investment strategy that involves investing a fixed amount of money in the same investment instrument at regular intervals. This method buys more shares when prices are low and fewer when prices are high, reducing the average cost of investment. Dollar Cost Averaging involves investing small amounts of money at regular intervals, typically weekly or monthly, over a period of time. This strategy allows investors to start early with limited funds and is considered a protective measure against market uncertainties (Tan *et al.*, 2023). Anantanasuwong & Chaivisuttangkun (2019) also find that, Dollar Cost Averaging suggests spreading wealth by investing the same dollar amount consistently. This results in purchasing fewer shares when prices are high and more when prices are low, aiming to limit risk and lower the average cost over time.

Recent studies on Dollar Cost Averaging (DCA) indicate less favorable outcomes. Bisceglia & Zola (2018) found that DCA generally results in lower annual returns compared to Lump Sum (LS) across various global stock markets.

Lump Sum (LS)

The Lump-Sum strategy involves investing a substantial amount of money at the outset and holding it until the investor decides to withdraw or cash out (Chang *et al.*, 2023;Grudniewicz & Ślepaczuk, 2023). The Lump Sum method is convenient with minimal investor involvement, but it poses a higher entry barrier, necessitating the investor to accumulate the required investment amount (Ma *et al.*, 2022).

Lump Sum means investing the entire fund at the beginning of the period, outperforming Dollar Cost Averaging in an uptrend market. The advantage is that investors do not need to think about timing and allocation because the entire fund has been invested at the beginning. However, this method can be disadvantageous if bought during market peaks and can require deeper analysis to determine the right time to invest (Muhammad Elzafir Habsjah & Permana, 2023).

Framework

Comparison of Dollar Cost Averaging (DCA) and Lump Sum (LS) Methods

The Lump Sum method performs well in the long term, but is vulnerable to financial market volatility in the short term. It requires courage and determination to deal with market fluctuations and not be swayed by short-term panics. In contrast, the Dollar Cost Averaging method is more realistic, easy to adopt by novice investors, and suitable for short time horizons (Jam et al., 2011). The Dollar Cost Averaging can reduce potential losses during bearish markets, as the average price of the shares purchased tends to fall. When the market turns bullish again, investors can potentially gain more compared to the Lump Sum method. While no one can predict when the market will turn from bullish to bearish, the Dollar Cost Averaging helps reduce the risk of errors in timing stock purchases (Hartono, 2018).

RESEARCH DESIGN

Type of Research

This research adopts a descriptive method with a quantitative approach. The purpose of descriptive research with a quantitative approach is to explain a situation to be studied with the support of literature studies in order to further strengthen the analytical ability of researchers in drawing conclusions. This research falls into the non-contrived category, where research is conducted without the involvement of researchers in the natural activities of the research subjects. This research strategy is comparative, comparing returns between the dollar cost averaging and lump sum methods. The unit of analysis involves companies with the largest market cap on the Indonesia Stock Exchange in the 2021-2023 period, with data collection carried out in time series.

Variable Operationalization

The definition of variable dollar cost averaging is an investment strategy that invests a constant amount of money in the same investment vehicle at regular intervals (Shen, 2022) with the indicator (Total accumulated shares x year-end market closing price) - Total investment and ratio scale. While the definition of the lump sum variable according to OJK is depositing a large amount of funds at the beginning of the investment and letting the investment money move up and down following market developments, without making additional investments (top up) until the investor decides to cash it out with the indicator (Number of shares x year-end market closing price) - (Number of shares x market closing price of the first trading day) and a ratio scale.

Research Stages

This research followed a scientific approach with systematic stages. The initial stage involved identifying the problem area, where the researcher identified phenomena related to dollar cost averaging and lump sum. Next, the second stage involves formulating the problem by detailing the research objectives and questions. The third stage involved collecting data on the stock prices of companies with the largest market cap. The fourth stage involves analyzing the Dollar Cost Averaging and Lump Sum methods by purchasing stocks according to the chosen method. The fifth stage involves analyzing the performance comparison based on the returns of the two methods.

Population and Sample

The population in this study are companies with the largest market cap listed on the Indonesia Stock Exchange in 2021-2023. In this study, the sampling technique used purposive sampling with the consideration of involving companies that have the largest market cap listed on the Indonesia Stock Exchange in the 2021-2023 period, are consistently in the 50 companies with the largest market cap, and are included in the Infobank15 index.

Data Collection and Data Sources

This study uses secondary data derived from existing information, especially historical data on the stock prices of companies with the largest market cap listed on the Indonesia Stock Exchange (IDX) for the period 2021-2023. Data sources include research journals, articles, reference books, and data that can be accessed through the official website www.idx.co.id. Data collection techniques involve literature study to obtain the theoretical basis and documentation to research, review, and analyze historical stock price documents.

Data Analysis Technique

This research involves simulating stock purchases using the monthly dollar cost averaging method and the lump sum method for comparison. It is assumed that shares can be purchased by the piece, although in the regular market, shares are purchased by the lot (per hundred shares). The calculation of stock returns is based only on capital gains and does not include dividends. The Dollar Cost Averaging (DCA) method is done by simulating a stock purchase of Rp1,000,000 every month for three years. The Dollar Cost Averaging (DCA) return calculation involves the accumulated number of shares purchased each month, with the purchase reference price on the first trading day of each month and the closing price on the first trading day of December. The

Lump Sum (LS) method involves simulating the purchase of shares once at the beginning of each year during the 2021-2023 period with a nominal value of IDR 12,000,000 per year. Performance comparison between the Dollar Cost Averaging (DCA) and the Lump Sum (LS) is done based on the return results every year during the study period.

RESULT AND ANALYSIS

Research Result

The fluctuating stock price index condition makes investors need to prepare the right investment strategy so it does not experience capital loss. One of the strategies needed is to determine the investment method to be used. This study aims to compare the performance of the dollar cost averaging method and the lump sum method. The comparison is based on the return results. The method whose return results are greater then that method is more optimal. The results of the calculation of stock returns for the two methods can be seen in the table below.

Return on Dollar Cost Averaging

From the results of the calculation of returns using the dollar cost averaging method in 2021, investment in BBCA shares obtained a return of Rp1,234,900 where investors earned a capital gain of 10.29% of the total funds invested. Meanwhile, investment in BBRI shares obtained a return of Rp52,230 where investors earned a capital gain of 0.44% of the total funds invested. Based on table 4.1, BBCA shares look superior compared to BBRI shares.

Table 4.1. Stock Return with Dollar Cost Averaging Method in 2021

Purchase Date	BBCA				BBRI			
	Stock Price	Investment Amount	Cumulative Shares	Loss/Profit Potential	Stock Price	Investment Amount	Cumulative Shares	Loss/Profit Potential
4-Jan-21	Rp6,835	Rp1,000,000	146	0	Rp4,205	Rp1,000,000	238	0
1-Feb-21	Rp6,820	Rp1,000,000	293	(Rp1,740)	Rp4,293	Rp1,000,000	471	Rp22,003
1-Mar-21	Rp7,045	Rp1,000,000	435	Rp64,575	Rp4,712	Rp1,000,000	683	Rp218,296
1-Apr-21	Rp6,225	Rp1,000,000	596	(Rp289,900)	Rp4,185	Rp1,000,000	922	(Rp141,430)
3-May-21	Rp6,390	Rp1,000,000	752	(Rp194,720)	Rp3,912	Rp1,000,000	1,178	(Rp391,664)
2-Jun-21	Rp6,465	Rp1,000,000	907	(Rp136,245)	Rp4,156	Rp1,000,000	1,419	(Rp102,636)
1-Jul-21	Rp6,025	Rp1,000,000	1,073	(Rp535,175)	Rp3,844	Rp1,000,000	1,679	(Rp545,924)
2-Aug-21	Rp5,960	Rp1,000,000	1,241	(Rp603,640)	Rp3,649	Rp1,000,000	1,953	(Rp873,503)
1-Sep-21	Rp6,565	Rp1,000,000	1,393	Rp145,045	Rp3,795	Rp1,000,000	2,217	(Rp586,485)
1-Oct-21	Rp6,760	Rp1,000,000	1,541	Rp417,160	Rp3,900	Rp1,000,000	2,473	(Rp355,300)
1-Nov-21	Rp7,400	Rp1,000,000	1,676	Rp1,402,400	Rp4,230	Rp1,000,000	2,709	Rp459,070
1-Dec-21	Rp7,300	Rp1,000,000	1,813	Rp1,234,900	Rp4,080	Rp1,000,000	2,954	Rp52,230

Note: Source of processed data (2023).

Return on Dollar Cost Averaging

From the results of the calculation of returns using the dollar cost averaging method in 2021, investment in BBCA shares obtained a return of Rp1,234,900 where investors earned a capital gain of 10.29% of the total funds invested. Meanwhile, investment in BBRI shares obtained a return of Rp52,230 where investors earned a capital gain of 0.44% of the total funds invested. Based on table 4.1, BBCA shares look superior compared to BBRI shares.

Table 4.2. Stock Return with Dollar Cost Averaging Method in 2022

Purchase Date	BBCA				BBRI			
	Stock Price	Investment Amount	Cumulative Shares	Loss/Profit Potential	Stock Price	Investment Amount	Cumulative Shares	Loss/Profit Potential
4-Jan-22	Rp7,325	Rp1,000,000	137	0	Rp4,180	Rp1,000,000	239	0
1-Feb-22	Rp7,800	Rp1,000,000	265	Rp67,000	Rp4,070	Rp1,000,000	485	(Rp26,050)
1-Mar-22	Rp8,050	Rp1,000,000	389	Rp131,450	Rp4,630	Rp1,000,000	701	Rp245,630
1-Apr-22	Rp7,925	Rp1,000,000	515	Rp81,375	Rp4,730	Rp1,000,000	912	Rp313,760
3-May-22	Rp7,600	Rp1,000,000	647	(Rp82,800)	Rp4,530	Rp1,000,000	1,133	Rp132,490
2-Jun-22	Rp7,575	Rp1,000,000	779	(Rp99,075)	Rp4,480	Rp1,000,000	1,356	Rp74,880

1-Jul-22	Rp7,250	Rp1,000,000	917	(Rp351,750)	Rp4,140	Rp1,000,000	1,598	(Rp384,280)
2-Aug-22	Rp7,500	Rp1,000,000	1,050	(Rp125,000)	Rp4,360	Rp1,000,000	1,827	(Rp34,280)
1-Sep-22	Rp8,150	Rp1,000,000	1,173	Rp559,950	Rp4,390	Rp1,000,000	2,055	Rp21,450
1-Oct-22	Rp8,500	Rp1,000,000	1,291	Rp973,500	Rp4,530	Rp1,000,000	2,276	Rp310,280
1-Nov-22	Rp8,800	Rp1,000,000	1,405	Rp1,364,000	Rp4,660	Rp1,000,000	2,491	Rp608,060
1-Dec-22	Rp9,000	Rp1,000,000	1,516	Rp1,644,000	Rp4,940	Rp1,000,000	2,693	Rp1,303,420

Note: Source of processed data (2023).

From the results of the return calculation using the dollar cost averaging method in 2022, investment in BBCA shares obtained a return of Rp1,644,000 where investors obtained a capital gain of 13.70% of the total funds invested, an increase of 3.41% from 2021. Meanwhile, investment in BBRI shares received a return of Rp1,303,420 where investors received a capital gain of 10.86% of the total funds invested, a significant increase of 10.42% from 2021. Based on table 4.2 BBCA shares still look superior compared to BBRI shares.

Table 4.3. Stock Return with Dollar Cost Averaging Method in 2023.

Purchase Date	BBCA				BBRI			
	Stock Price	Investment Amount	Cumulative Shares	Loss/Profit Potential	Stock Price	Investment Amount	Cumulative Shares	Loss/Profit Potential
4-Jan-23	Rp8,550	Rp1,000,000	117	0	Rp4,870	Rp1,000,000	205	0
1-Feb-23	Rp8,500	Rp1,000,000	235	(Rp2,500)	Rp4,680	Rp1,000,000	419	(Rp39,080)
1-Mar-23	Rp8,600	Rp1,000,000	351	Rp18,600	Rp4,720	Rp1,000,000	631	(Rp21,680)
1-Apr-23	Rp8,800	Rp1,000,000	465	Rp92,000	Rp4,800	Rp1,000,000	839	Rp27,200
3-May-23	Rp9,050	Rp1,000,000	575	Rp203,750	Rp5,150	Rp1,000,000	1,033	Rp319,950
2-Jun-23	Rp9,200	Rp1,000,000	684	Rp292,800	Rp5,425	Rp1,000,000	1,217	Rp602,225
1-Jul-23	Rp9,075	Rp1,000,000	794	Rp205,550	Rp5,475	Rp1,000,000	1,400	Rp665,000
2-Aug-23	Rp9,125	Rp1,000,000	904	Rp249,000	Rp5,700	Rp1,000,000	1,575	Rp977,500
1-Sep-23	Rp9,225	Rp1,000,000	1,012	Rp335,700	Rp5,575	Rp1,000,000	1,754	Rp778,550
1-Oct-23	Rp9,075	Rp1,000,000	1,122	Rp182,150	Rp5,250	Rp1,000,000	1,944	Rp206,000
1-Nov-23	Rp8,600	Rp1,000,000	1,238	(Rp353,200)	Rp4,830	Rp1,000,000	2,151	(Rp610,670)
1-Dec-23	Rp8,950	Rp1,000,000	1,350	Rp82,500	Rp5,350	Rp1,000,000	2,338	Rp508,300

Note: Source of processed data (2023).

From the results of the calculation of returns using the dollar cost averaging method in 2023, investment in BBCA shares obtained a return of Rp82,500 where investors obtained a capital gain of 0.69% of the total funds invested, a significant decrease of 13.01% from 2022. Meanwhile, investment in BBRI shares obtained a return of Rp508,300 where investors earned a capital gain of 4.24% of the total funds invested, a decrease of 6.62% from 2022. Based on table 4.3, BBRI shares look superior compared to BBCA shares.

Over the past three years the DCA method has been an effective investment method for BBCA and BBRI stocks. Despite experiencing market volatility, BBCA shares generated a return of 10.29% in 2021, while BBRI shares generated a return of 0.44%. The effectiveness of the method was further proven in 2022, BBCA stock returns increased by 3.41% to 13.70% and BBRI stock returns increased significantly by 10.42% to 10.86%. Although in 2023 the percentage of stock returns decreased, investors still gained capital gains and did not lose money. The DCA method is proven to produce stable profits in the face of market fluctuations. Through the application of DCA, investors can manage market risk effectively (Figure 4.1).

Figure 4.1. Graph of Stock Returns with the Dollar Cost Averaging Method for 2021-2023.

Note: Source of processed data (2023)

Return on Lump Sum

Table 4.4. Stock Return with Lump Sum Method in 2021

Stock Code	Investment Amount	Purchase Price on 4 January 2021	Total of Shares	Selling Price on 1 December 2021	Loss/Profit Potential
BBCA	Rp12,000,000	Rp6,835	1,756	Rp7,300	Rp818,800
BBRI	Rp12,000,000	Rp4,205	2,854	Rp4,080	(Rp355,680)

Note: Source of processed data (2023).

From the results of the return calculation using the lump sum method in 2021, investment in BBCA shares obtained a return of Rp818,800 where investors earned a capital gain of 6.74% of the total funds invested. Meanwhile, investment in BBRI shares obtained a return of (Rp355,680) where investors earned a capital loss of -2.96% of the total funds invested. Based on table 4.4 BBCA shares look superior compared to BBRI shares.

Table 4.5. Stock Return with Lump Sum Method in 2022.

Stock Code	Investment Amount	Purchase Price on 4 January 2022	Total of Shares	Selling Price on 1 December 2022	Loss/Profit Potential
BBCA	Rp12,000,000	Rp7,325	1,638	Rp9,000	Rp2,742,000
BBRI	Rp12,000,000	Rp4,180	2,871	Rp4,940	Rp2,182,740

Note: Source of processed data (2023)

From the results of the return calculation using the lump sum method in 2022, investment in BBCA shares obtained a return of Rp2,742,000 where investors obtained a capital gain of 22.85% of the total funds invested, a significant increase of 16.11% from 2021. Meanwhile, investment in BBRI shares obtained a return of Rp2,182,740 where investors earned a capital gain of 18.19% of the total funds invested, a significant increase of 21.15% from 2021. Based on table 4.5 BBCA shares still look superior compared to BBRI shares.

Table 4.6. Stock Return with Lump Sum Method in 2023

Stock Code	Investment Amount	Purchase Price on 4 January 2023	Total of Shares	Selling Price on 1 December 2023	Loss/Profit Potential
BBCA	Rp12,000,000	Rp8,550	1,404	Rp8,950	Rp565,800
BBRI	Rp12,000,000	Rp4,870	2,464	Rp5,350	Rp1,182,400

Note: Source of processed data (2023).

From the results of the return calculation using the lump sum method in 2023, investment in BBCA shares obtained a return of Rp565,800 where investors obtained a capital gain of 4.72% of the total funds invested, a

significant decrease of 18.13% from 2022. Meanwhile, investment in BBRI shares obtained a return of Rp1,182,400 where investors earned a capital gain of 9.85% of the total funds invested, a decrease of 8.34% from 2022. Based on table 4.6 BBRI shares look superior compared to BBCA shares.

Over the past three years the Lump Sum method has been a successful investment method for BBCA and BBRI stocks. In 2021, BBRI shares experienced a negative return of -2.96%. However, BBCA stock earned a return of 6.74% using the Lump Sum method. In the following year, the Lump Sum method produced an impressive return. BBCA stock achieved a return of 22.85% and BBRI stock achieved a return of 18.19%. The high return shows the effectiveness of the right asset allocation. Meanwhile, in 2023, the return of the two stocks decreased. BBCA stock return became 4.72% while BBRI stock return became 9.85%. This illustrates that in some situations such as bullish market conditions, the Lump Sum method can provide profitable and efficient results in maximizing potential profits in the stock market (Figure 4.2).

Figure 4.2. Graph of Stock Returns with the Lump Sum Method for 2021-2023

Note: Source of processed data (2023)

In this study, a simulation of stock purchases using the Dollar Cost Averaging method and the Lump Sum method has been carried out for the years 2021-2023. Based on Figure 4.3, in 2021 the Dollar Cost Averaging method looks superior to the Lump Sum method. In that year, even the use of the Lump Sum method caused a capital loss on BBRI shares, which amounted to -2.96%. However, in 2022 and 2023 the Lump Sum method produces a greater return than the Dollar Cost Averaging method. Especially in 2022, investment in BBCA and BBRI stocks using the Lump Sum method produces the highest return among other years. Based on the results of the performance comparison of the two methods, the Lump Sum method is more optimal than the Dollar Cost Averaging method because it produces a greater return than the Dollar Cost Averaging method even though the Dollar Cost Averaging method tends to be stable in producing capital gains and minimizing the risk of loss (Figure 4.3).

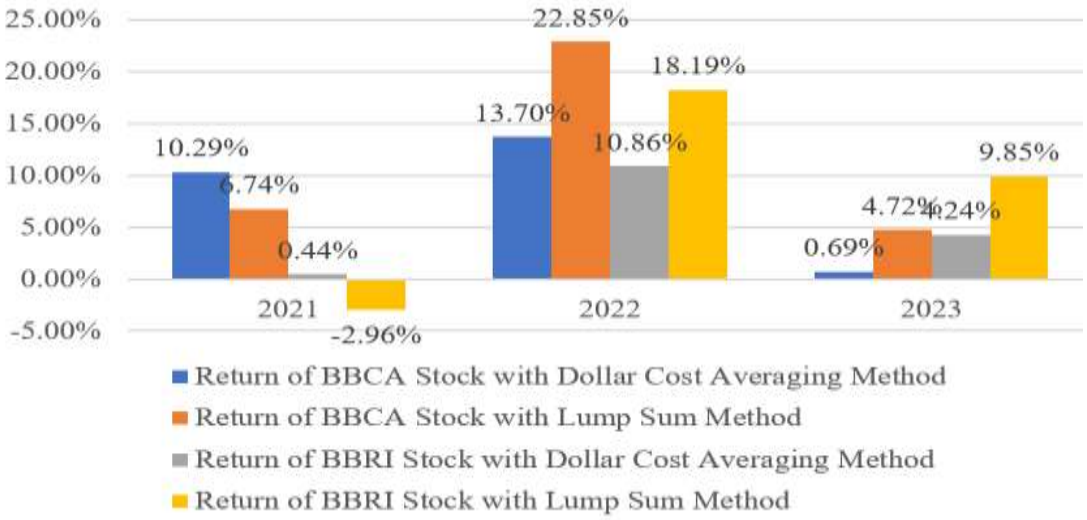

Figure 4.3. Comparison of Stock Return with Dollar Cost Averaging Method and Lump Sum Method for 2021-2023

Note: Source of processed data (2023).

Analysis of Research Results

Based on the results of the research that has been done, stock investment optimization using the Dollar Cost Averaging method can be done by making regular investments within a certain period of time, in the study conducted at the beginning of each month on the first trading day of each month with a nominal value of Rp1,000,000 per month, and with the same nominal value every month. Meanwhile, if using the Lump Sum method, it is done by investing a number of funds owned at the same time at the beginning, in the research conducted on the first trading day at the beginning of the year with a nominal value of Rp12,000,000.

After calculating the return in each method, a performance comparison is made based on the return generated by the two investment methods. This study found that the return generated by the lump sum method in 2022 of 22.85% on BBCA shares was greater than the dollar cost averaging method which only amounted to 13.70%. While the return generated by the lump sum method on BBRI shares is 18.19% which is also greater than the return generated by the dollar cost averaging method of 10.86%. In 2022, the return generated by the lump sum method is the highest return among the other two years. These results show that the lump sum method is more optimal than the dollar cost averaging method. The results of this study are in line with research conducted by Muhammad Elzafir Habsjah & Permana (2023) and Bisceglia & Zola (2018).

In the results of comparing the returns of the dollar cost averaging method and the lump sum method, in 2021 the use of the lump sum method experienced a loss of -2.96% on BBRI shares while the use of the dollar cost averaging method did not experience any capital loss for three consecutive years. The findings in this study are in line with research conducted by Tan *et al.* (2023) and Anantanasuwong & Chaivisuttangkun (2019) that the use of the dollar cost averaging method can reduce the risk of loss due to errors in determining the timing of stock purchases. From these results it can be concluded that the dollar cost averaging method is more suitable for novice investors and can attract investment interest.

CONCLUSIONS AND RECOMMENDATIONS

This research focuses on the optimization of stock investment using Dollar Cost Averaging (DCA) and Lump Sum (LS) methods for three years in two companies. Dollar Cost Averaging (DCA) proved to be effective, providing stable returns for BBCA and BBRI stocks, despite market fluctuations. Meanwhile, Lump Sum (LS) is also effective, especially in 2022 with the highest return among the three years, demonstrating the ability of this method to maximize potential profits. The performance comparison shows that in 2022, Lump Sum (LS) outperforms Dollar Cost Averaging (DCA) with higher returns for both stocks. In conclusion, Lump Sum (LS)

is more optimal than Dollar Cost Averaging (DCA). The theoretical aspect of this research can be used as a reference for the development of science, especially in simulating the application of the lump sum method in a more fluctuating crypto market. Practically, it is recommended for investors to use the lump sum method in bullish market conditions, especially by investing in Bank Central Asia Tbk to maximize investment returns.

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