

Investment Strategies in Covid-19 Pandemic: Comparative Analysis of Stock Investment Performance in the SETTHSI Index and the SET100 Index Utilizing Dollar Cost Averaging (DCA), Lump Sum (LS), and Value Averaging (VA) Strategies

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(Received: October 3, 2023; Revised: February 15, 2024; Accepted: March 6, 2024)

Abstract

This study aims to compare the effectiveness of three strategies—DCA, LS, and VA—with in the SETTHSI and SET100 indices for the period spanning 2020 to 2022. The evaluation will be conducted with a one-year investment horizon, utilizing both the Investment Rate of Return (IRR) and Sharpe ratio to assess returns, and standard deviation to gauge risk. The simulation approach involves evaluating portfolio performance, which includes stocks from both SETTHSI and SET100, using these three strategies over a 12-month time frame for three consecutive years. This results in a comprehensive analysis of 6 portfolios. The findings reveal that during 2020-2022, investing in SET100 stocks, which are characterized by their large size, outperformed SETTHSI, which focuses on sustainable stocks. Furthermore, the study demonstrates that utilizing the VA strategy proves to be the most effective approach for achieving an average return when investing in stocks from both the SETTHSI and SET100 indices. While LS investments may be perceived as carrying lower risk, particularly for short-term investments. Investors may want to consider choosing the VA strategy over LS and DCA as their short-term trading strategy and investing in large-cap stock, especially if they are inclined toward crisis investment.

Keyword: 1) Dollar Cost Averaging 2) Lump Sum 3) Value Average 4) SETTHSI 5) SET100

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Introduction

For those seeking to grow their wealth over the long term, investing in the stock market offers several compelling advantages. Here are a few reasons to consider stock market investment: Firstly, common stocks have historically delivered superior long-term returns compared to other asset classes such as bonds or cash. While stocks can exhibit short-term volatility, they typically appreciate in value and yield higher returns than other asset types over extended periods. Consequently, stock market investment provides the potential for greater returns. Secondly, individuals can diversify their portfolios and mitigate risk by investing in stocks. By spreading their investments across a variety of stocks from different sectors and industries, individuals can reduce their exposure to the risks associated with holding just one stock. This diversification strategy can also potentially enhance returns. Thirdly, when individuals invest in stocks, they are essentially acquiring ownership in a company. This ownership can foster a sense of pride and connection to corporate success, in addition to the potential for financial gains. Finally, some stocks offer dividends, which are a portion of a company's profits distributed to shareholders. Investing in dividend-paying stocks can allow investors to generate passive income from their investments. Overall, investing in the stock market can be a powerful strategy for long-term wealth accumulation and financial security.

It is crucial for investors to understand that investing in the stock market does entail risks, including the potential for financial losses.

Therefore, it is essential for an investor to carefully evaluate their financial objectives, desired returns, risk tolerance, and investment time horizon before venturing into stocks.

Sustainability investment, also known as socially responsible investment (SRI) or environmental, social, and governance (ESG) investment, is a growing trend in the investment world. In 2015, the Stock Exchange of Thailand introduced the Thailand Sustainability Investment (THSI) list, which comprises companies committed to sustainable business practices. THSI provides an alternative for investors who wish to adopt a responsible investment approach. As of 2022, Thailand boasts 169 companies dedicated to sustainability with a strong track record of ESG practices.

Investing in companies listed on the THSI index can offer investors exposure to businesses that prioritize sustainability and ESG practices. This approach can potentially lead to long-term financial gains while also contributing to positive social and environmental impacts. Nevertheless, it's vital for investors to assess their own portfolios and carefully deliberate on their investment objectives and risk tolerance before making any investment decisions.

In addition to considering THSI stocks, investing in the SET100 is also a sound choice for investors. The SET100 represents the top 100 companies listed on the Stock Exchange of Thailand, based on market capitalization. Investing in the SET100 provides investors with exposure to a diversified portfolio of companies spanning various sectors within the Thai economy. When examining the

price movements of the SETTHSI and SET100 indexes, both of which are attractive to investors focused on sustainable investments and companies with strong fundamentals, it's

apparent that both indexes followed a similar trajectory between 2020 and 2022, as depicted in Figure 1

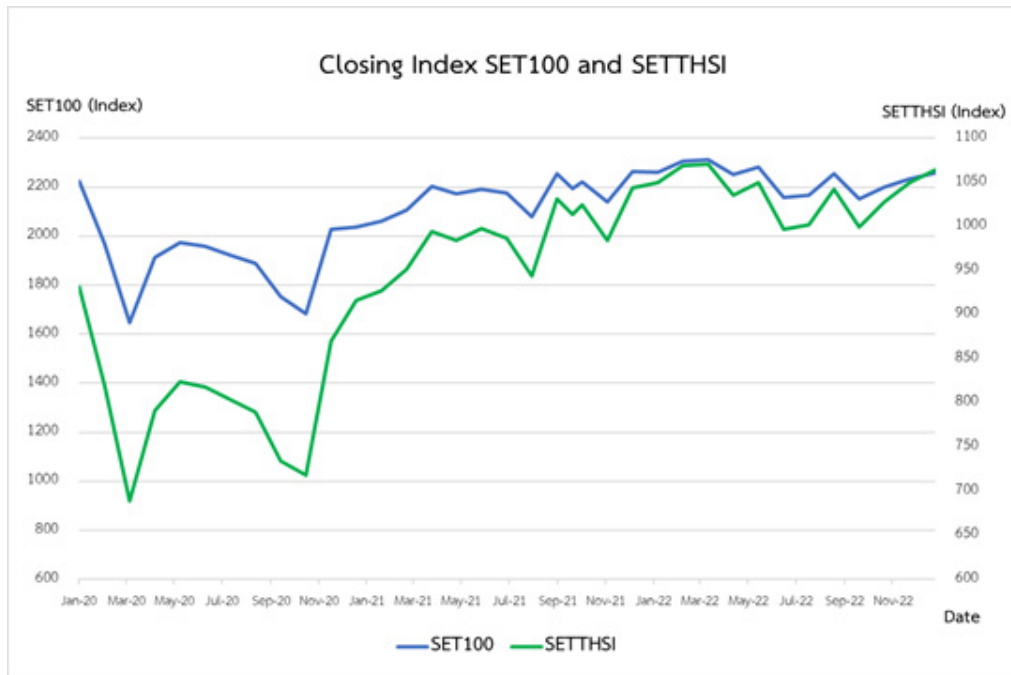


Figure 1 shows the price of SETTHSI and SET100 during 2020 and 2022

Common strategies for investing in common stocks are rooted in time-tested investment principles that have proven effective. These strategies offer investors a structured approach to analyze and make investment decisions based on well-defined criteria. Moreover, they assist investors in managing risk and optimizing returns. Examples of popular investment strategies encompass Dollar-Cost Averaging (DCA), Lump Sum (LS), and Value Averaging (VA).

DCA represents an investment strategy where an investor divides their total investment amount into smaller, regular contributions over time. With DCA, an investor purchases a fixed dollar amount of a specific investment at regular intervals, regardless of the investment's current price. In general, asset

or portfolio allocation and investment timing is an important problem, DCA is supported by researchers such as Trainor (2005, p. 320), Panyagometh and Zhu (2016, p. 75), Kirkby, Mitra and Nguye (2020, p. 1168) and Lu, Hoang and Wong (2021, p. 676). The returns produced by Dollar-Cost Averaging (DCA) exhibit a positive skewness and a flatter tail. DCA proves to be a superior trading strategy compared to Lump Sum (LS) investing, even in a market experiencing an upward trend. This is particularly evident when dealing with high-risk assets especially when investors prefer investing in a long term and high-risk investment (Lu, Hoang and Wong, 2021, p. 677).

LS, on the other hand, involves a single, substantial sum of money being invested all at once, as opposed to being spread out



in installments over time. In investment and financial planning, a lump sum typically denotes a significant amount of money invested in one go rather than incrementally over a period. Investing a lump sum can be advantageous in certain situations, such as when favorable market conditions prevail or when an investor has a long-term investment horizon. By investing the entire amount at once, an investor can potentially capitalize on the full market potential and earn a higher return compared to investing the same amount gradually. LS is one of the investment strategies which is also supported by previous research, such as Merlone and Pilotto (2014, p. 962), Panyagometh and Zhu, (2016, p. 76) and Eriksson and Fransson (2021, p. 36). The literature suggests either the superior performance of LS over DCA in uptrend markets or DCA outperforming LS when the underlying asset prices exhibit mean-reverting behavior or during downtrends in the markets.

VA is an investment strategy centered around making regular contributions or investments in a stock or portfolio of stocks with the aim of reaching a predetermined target value over time. In value averaging, the investor sets a target value for their portfolio and makes consistent contributions to steadily approach that target. The value-averaging investment strategy is also a strategy for investing in mutual funds which were discovered by Edleson (1988, p. 12) and recommended by Marshall (2000, p. 88) indicates that VA demonstrated a higher Internal Rate of Return (IRR) compared to DCA or random investing. Throughout the entire period, VA consistently

outperformed. Supported by thousands of simulations, VA emerged as the winner. Theoretically, considering enhanced performance in volatile markets and over extended time periods, VA proves victorious. Historically, VA has been the prevailing choice. The evidence supporting VA's ability to deliver superior performance appears robust.

According to previous research studies regarding investment strategies, namely dollar cost averaging, lump sum, and value averaging, the findings were different. The DCA strategy is better applied by investors prefer investing in a long term and high-risk investment (Lu, Hoang and Wong, 2021, p. 677). However, in other studies, the LS strategy was chosen and is better applied compared to DCA and VA (Williams and Bacon, 1993, p. 66; Park and Lee, 2010, p. 88) and also supports VA as an investment alternative is better performance than DCA Panyagometh (2013, p. 26).

These three strategies have distinct advantages and disadvantages, providing investors with a structured framework to navigate the intricate world of stock investments. The choice of which strategy to employ should consider various factors, including the prevailing stock market conditions, especially during the COVID-19 pandemic period from 2020 to 2022. Therefore, the objective of this study is to compare the performance of investing in sustainable stocks from the SETTHSI index and large-cap stocks from the SET100 index using the DCA, LS, and VA strategies over a one-year investment horizon. This research aims to serve as a guide for selecting an investment strategy suitable for both sustainable stocks and large-

cap stocks. It will assess the performance of each strategy in terms of returns and risks under different market conditions. The findings apply to individual investors aiming to select an investment strategy that yields high returns under various market conditions, including the scope of the COVID-19 pandemic. Thus, the study is conducted with a one-year investment horizon, utilizing both the Investment Rate of Return (IRR) and Sharpe ratio to assess returns, and standard deviation to gauge risk.

Literature Review

Recent studies, such as the one conducted by Anantanasuwong and Chaivittangkun (2019, p. 100), which focused on the Dollar-Cost Averaging (DCA) strategy, have indeed highlighted less favorable outcomes. Their research, carried out on the Thailand stock exchange, revealed that the DCA strategy typically yields lower annual returns when compared to Lump-Sum (LS) investments and asset allocation strategies. Furthermore, they found that DCA resulted in a lower terminal wealth value during the 2008 financial crisis. These findings suggest that under certain market conditions, DCA may not perform as effectively as other investment strategies like LS and asset allocation.

In a study conducted by Panyagometh (2013, p. 22), the impacts of investment horizon and target terminal wealth on the performance of the DCA investment strategy were explored in comparison to the Value Averaging (VA) investment strategy. The findings indicate that as the investment horizon increases and/or the target terminal wealth is reduced, VA

tends to outperform the DCA strategy. In other words, VA may be a more effective strategy in these specific circumstances. This underscores the importance of considering various factors and customizing investment strategies to align with specific goals and timeframes.

Dollar - Cost Averaging (DCA)

Dollar-cost averaging (DCA) is an investment strategy wherein an investor divides their desired total investment amount into smaller, regular contributions over time. With DCA, an investor purchases a fixed dollar amount of a specific investment at regular intervals, regardless of the investment's current price. For instance, if an investor aims to invest \$10,000 in a particular stock, they might opt to invest \$1,000 each month over ten months, rather than investing the entire \$10,000 at once. This approach can help mitigate the impact of short-term price fluctuations, as the investor acquires shares at various price points over time.

DCA can prove beneficial for investors with a long-term market horizon who prefer not to attempt to time the market. However, it's crucial to recognize that DCA does not guarantee profits or shield against losses, and past performance is not necessarily indicative of future results. Furthermore, DCA aligns well with passive investment strategies, which involve diversifying a portfolio across various assets and holding them for the long term, rather than trying to time the market or select individual stocks. DCA serves as an effective means to implement a passive investment strategy, allowing investors to gradually construct a diversified portfolio over time with-



out the need to time market fluctuations. By consistently investing a fixed dollar amount at regular intervals, investors can capitalize on market ups and downs, purchasing more shares when prices are lower and fewer when prices are higher. Additionally, DCA helps temper the influence of emotions on investment decisions. It encourages investors to adhere to a disciplined investment plan, reducing the likelihood of impulsive decisions driven by short-term market fluctuations.

Nonetheless, it is essential to recognize that DCA does not guarantee success, and investors should carefully assess their investment objectives, risk tolerance, and other relevant factors before adopting this strategy. Additionally, investors should be mindful of any transaction fees or associated costs tied to their investments, as these expenses can erode returns over time.

Lump Sum (LS)

"Lump Sum" refers to a substantial amount of money that is invested or disbursed in a single payment, as opposed to being distributed over time. This stands in contrast to dollar-cost averaging (DCA), where an investor allocates a fixed sum of money at regular intervals over a specified period. Investing a lump sum (LS) can be a suitable strategy in certain scenarios. For instance, if an investor comes into a substantial windfall, such as an inheritance or a bonus, they may opt to invest the entire amount at once rather than spreading it out over time. This approach can be advantageous if the investor perceives the market as undervalued or possesses a high-risk tolerance.

However, LS investing can also be risky, especially in volatile market conditions. If the

market experiences a sudden decline shortly after the lump sum is invested, the investor could incur significant losses. To mitigate this risk, diversification and a long-term investment horizon are recommended.

Ultimately, the decision to employ a lump sum or dollar-cost averaging approach hinges on the individual investor's objectives, risk tolerance, and market outlook. It's crucial for investors to carefully evaluate their options and consider seeking professional advice if they are uncertain about which approach suits them best.

Value Average (VA)

Value averaging (VA) is an investment strategy that entails investing a fixed amount of money at regular intervals with the aim of reaching a predetermined portfolio value over time. The concept behind value averaging is to purchase more shares when prices are low and fewer shares when prices are high, all in pursuit of attaining a pre-established investment objective.

In contrast to dollar-cost averaging, which involves investing a fixed amount of money at regular intervals, value averaging adjusts the investment amount based on the variance between the actual portfolio value and the target value. For instance, if the actual portfolio value falls below the target value, the investor would allocate more funds to bring the portfolio closer to the intended target. Conversely, if the actual portfolio value exceeds the target value, the investor would invest less money to prevent overinvesting.

VA can prove to be an effective strategy for investors with specific investment goals and a long-term investment horizon. However,

it demands more active management than dollar-cost averaging and can be relatively complex to implement.

It is important for investors to thoroughly assess their objectives, risk tolerance, and investment horizon before settling on an investment strategy. Additionally, seeking professional advice from a financial advisor can be beneficial in determining the most suitable investment strategy tailored to individual circumstances.

For previous studies comparing the three strategies including Dollar - Cost Averaging (DCA) Lump Sum (LS) and Value Average (VA). Zein and Darma (2023, p. 1137) study DCA, LS and VA in top 5 mutual fund in year 2022. The simulation results on equity funds indicated that LS investment method outperforms DCA and VA, particularly over 6 years, according to Lu, Hoang and Wong (2021, pp. 688-689). Previous research found that DCA outperforms LS in almost every situation in the less uptrend markets, but DCA still performs better than LS in the uptrend markets, especially when the market is more volatile and the investment horizon is long (Lu, Hoang and Wong, 2021, pp. 688-689). Consistent with Merlone and Pilotto (2014, p. 972) study, the Dollar-Cost Averaging (DCA) strategy appeared to yield a higher value.

Prospect theory

Prospect theory serves as an alternative to expected utility theory and aims to elucidate decision-making processes when outcomes are uncertain. Expected utility theory relies on three fundamental principles: the total utility of a decision is equivalent to the sum of the expected utilities of all possible outcomes; a decision is deemed acceptable if

it enhances the existing asset portfolio's value; and investors typically exhibit risk aversion (Markowitz, 1952, p. 77).

Conventional finance investors tend to adhere to expected utility theory. In contrast, the decisions made by "behavioral investors" align more closely with prospect theory. Investors following prospect theory assess their choices by considering potential gains and losses relative to reference points, while standard investors evaluate their choices in terms of net cash flows (total wealth). Furthermore, whereas standard investors consistently display risk aversion, prospect theory investors exhibit an S-shaped value function concerning gains and losses. This function showcases concavity (risk aversion) in the domain of gains and convexity (risk-seeking behavior) in the domain of losses.

The Risk-Return Tradeoff

The risk-return tradeoff principle is a fundamental concept in finance and investing, stating that higher potential returns generally come with higher risk. One fundamental assumption for the positive risk-return tradeoff is that investors are risk-averse, and thus investors demand compensation for bearing risk (Wang, Yan and Yu, 2012). However, prospect theory, which accurately captures individuals' risk attitudes in an experimental situation, proposes that when confronted with prior loss compared to a reference point, individuals tend to be risk-seeking rather than risk-averse.

The risk-return tradeoff is absolutely central to portfolio investment, from asset allocation to individual stock selection. The core principle is constructing a portfolio that optimizes the expected return for your desired risk level. Diversification plays a crucial role



here, as it helps spread risk across different assets and reduce overall volatility.

Thailand Sustainability Investment (THSI)

In contemporary times, long-term investment strategies have shifted their focus towards sustainable companies, with a particular emphasis on evaluating financial statement performance and considering environmental, social, and governance (ESG) factors.

The Stock Exchange of Thailand (SET) has taken notable steps in this direction. Since 2015, SET has maintained a Thailand Sustainability Investment (THSI) list, which serves as an alternative investment avenue for those interested in high-performing ESG stocks. This initiative not only supports sustainable Thai companies but also underscores SET's definition of sustainable companies, which are characterized by their commitment to risk management, supply chain management, innovation, and responsibility in environmental, social, and governance aspects.

Consequently, SET has introduced the SETTHSI index, designed to reflect the stock prices of these sustainable companies that meet the market capitalization and liquidity criteria. (The Stock Exchange of Thailand, 2023b)

SET100

SET100 is an index of the Stock Exchange of Thailand (SET) that comprises the top 100 companies listed on the exchange, selected based on their market capitalization. This index is comprehensive, encompassing a diverse array of industries, including financials, energy, telecommunications, and consumer goods, among others. (The Stock Exchange of Thailand, 2023a)

The SET100 index serves as a benchmark for investors seeking to monitor the overall performance of the Thai stock market. To maintain its relevance and accuracy, the index undergoes a biannual review, conducted in June and December. This review process ensures that the index remains representative of the market's dynamics and facilitates the addition or removal of companies as necessary.

Methodology

To facilitate this study, three investment strategies (DCA, LS, and VA) are employed to analyze investments in the SETTHSI and SET100. It is assumed that the investor has already selected the asset for investment, and the investment horizon spans one year, commencing at time zero ($T=0$).

In the Dollar-Cost Averaging (DCA) strategy, a fixed sum is invested at regular intervals. At T_0 , the investor allocates one-twelfth of their initial capital to common stock, investing 10,000 baht each month, with an annual target of 120,000 baht.

Under the Lump Sum (LS) strategy, the investor invests the entire predetermined amount in the asset and calculates the mean return after one year. For instance, the investor initiates an annual investment of 120,000 baht.

In the Value Averaging (VA) investment strategy, the objective is to incrementally increase the investment's value by a predefined amount at regular intervals. This study assumes the investor reviews their investment plan on a monthly basis. If the individual intends to invest 120,000 baht by year-end, they augment the investment's value by 10,000 baht every month. In case the investment yields a profit

in month T1, the contribution in month T2 is adjusted downward by the amount gained in month T1. For example, if an investor deposits 10,000 baht and earns a 10% return in the first month, increasing the investment's value to 11,000 baht, they would need to contribute only 9,000 baht in month T2 to maintain a total invested amount of 20,000 baht by month T2.

This study adopts a 36-month investment time horizon, spanning from January 1, 2020, to December 31, 2022, and considers price variability during this period. To establish the database for assessing the portfolio performance of each strategy (DCA, LS, and VA), common stocks listed in both SETTHSI and SET100 are included. The THSI list, consisting of high-performance ESG stocks, is utilized by investors as an alternative investment avenue, focusing on organizations that prioritize risk management, supply chain management, innovation, and environmental, social, and governance responsibilities.

In addition to evaluating the performance of common stocks in SET100, which represents the top 100 companies listed on the Stock Exchange of Thailand based on market capitalization, it's important to note that the list of common stocks in SETTHSI and SET100 undergoes regular adjustments every six months. Consequently, the creation of the investment portfolio is limited to securities available during the three-year study period.

Between January 2020 and January 2022, a selection of 51 sustainable securities and 76 large capitalization companies from SET100 was made. For the large-cap portfolios, duplicate stocks shared with SETTHSI were removed, retaining only large-cap stocks that did

not consider sustainability factors. This process yielded a total of 37 stocks from SET100. Ultimately, two index portfolios will be examined: one comprising sustainable stocks from SETTHSI (consisting of 51 securities) and another comprising large-cap securities from SET100 (consisting of 37 securities). In this research, we collected the price of stock from the SET database.

The simulation approach entails evaluating the portfolio performance in stocks from SETTHSI and SET100 using the three strategies (DCA, LS, and VA) over a 12-month time horizon for a period of 3 years. This allows an assessment of returns during months of the COVID-19 pandemic, resulting in a comprehensive study encompassing a total of 6 portfolios.

This analysis assesses the investment returns of three techniques through the use of the Internal Rate of Return (IRR) for each cash flow. The investment outcomes over time are employed to compute the mean IRR, the standard deviation of IRR, and the Sharpe ratio for each of the three strategies.

To calculate the cash flow pattern for each strategy, it is essential to have data on the invested amount and the market price of the investment for each period. With this information in hand, the IRR can be determined, as both the amount and timing of each periodic investment, as well as the final market value, are known. However, it's worth noting that this analysis does not take into account transaction costs, taxes, inflation, or excess returns.

The portfolio's risk is measured in terms of standard deviation, expressed as a percentage. The calculation of risk is as follows:



$$\sigma_p = \sqrt{\frac{\sum (r_p - \bar{r}_p)^2}{n-1}}$$

Where σ_p is the standard deviation (S.D.) of portfolio, n is number of observation in each period, r_p is the return of portfolio and $\bar{r}_p$ is the average return of portfolio

The Sharpe ratio is a crucial metric in finance for gauging the risk-adjusted performance of an investment. It essentially reveals how much extra return an investment delivers relative to the amount of risk it incurs. It is a meaningful measure of portfolio performance when the risk can be adequately measured by the standard deviation. (Zakamouline and Koekebakker, 2009, p. 1242) The Sharpe ratio can assist investors in determining if the prospective return on an investment is justified by the level of risk involved. Investors can compare Sharpe ratios across different assets or strategies to determine which ones provide the best risk-adjusted returns.

The risk-free rate is applied when calculating the shape ratio following the equation.

$$\text{Shape ratio} = \frac{r_p - r_{RF}}{\sigma_p}$$

where r_p is the return of portfolio, r_{RF} is the risk-free rate and σ_p is the S.D. of portfolio.

The considered risk-free rate of return on Thai Government Treasury Bills 12-Month is 1.77%. (Thai BMA, 2023)

Results

The sample comprises 6 portfolios spanning from 2020 to 2022, and Table 1 presents the results for the entire sample. In 2020, as this study encompasses, the year began with the index at 1514.14, which subsequently

decreased, resulting in an end-of-year index of 1449.35 (with highs at 1514.14, lows at 1125.86, and an average of 1324.41).

For SETTHSI, the Value Averaging (VA) strategy exhibited the highest outperformance in terms of mean IRRs (1.45%), median (1.24%), and Shape ratio (-0.22), while the Lump Sum (LS) strategy recorded the lowest standard deviation (S.D.) (1.79%). In the case of SET100, VA again demonstrated the highest outperformance in mean IRRs (2.01%), median (2.22%), and Shape ratio (0.01), while LS had the lowest S.D. (2.17%). When comparing the performance between SETTHSI and SET100 for DCA, LS, and VA, it's noteworthy that VA in SET100 yielded the highest outperformance in mean and median IRRs and Shape ratio, whereas LS in SETTHIS recorded the lowest S.D.

The average market return for SETTHSI was 0.57% from 2020 to 2022. During the same period, the Sharpe ratio for SETTHSI was -0.27. In comparison, the average market return for SET100 was 0.23%, with a Sharpe ratio of -0.33.

To sum it up, these results suggest that, on average, the VA strategy appears to be the most favorable investment strategy for both SETTHSI and SET100, delivering the highest outperformance in mean and median IRRs and Shape ratio. Conversely, LS exhibits the lowest S.D., indicating that it outperforms in terms of risk. Additionally, the performance of SET100 seems to indicate better average returns, while SETTHSI indicates lower risk. In the 2020-2022 period, both SETTHSI and SET100 experienced the VA strategy producing the best average return and Shape ratio, while the LS strategy resulted in the lowest S.D.

Table 1 Comparison of annualized return, S.D. and Sharpe ratio among DCA, LS and VA strategies, from 2020 to 2022

		SETTHSI	SET100
DCA	Mean	0.91%	1.37%
	S.D.	2.08%	2.40%
	Max	7.27%	6.81%
	Median	1.36%	1.40%
	Min	-3.43%	-3.09%
	Sharpe ratio	-0.50	-0.25
LS	Mean	0.13%	0.74%
	S.D.	1.79%	2.17%
	Max	6.45%	6.03%
	Median	-0.16%	0.52%
	Min	-3.74%	-3.20%
	Sharpe ratio	-0.91	-0.51
VA	Mean	1.45%	2.01%
	S.D.	2.54%	2.84%
	Max	9.42%	8.49%
	Median	1.24%	2.22%
	Min	-3.61%	-3.36%
	Sharpe ratio	-0.22	0.01
Market	Mean	0.57%	0.23%
	Sharpe ratio	-0.27	-0.33

Discussion and Conclusion

This research was conducted during the COVID-19 pandemic from 2020 to 2022, a time marked by significant fluctuations in the Thai stock market. These results suggest that investing in large-cap stocks from the SET100 index yields higher returns compared to investing in sustainable stocks from the SETTHSI index, particularly in highly volatile investment situations. This finding may be attributed to the fact that SETTHSI stocks are well-suited for

long-term investment, given their emphasis on sustainable companies.

The findings further indicate that utilizing the Value Averaging (VA) strategy proved to be the most effective approach when investing in stocks from both SETTHSI and SET100 indices. These findings reveal that stocks with strong fundamentals within the SET100 category offer favorable short-term returns even in periods of market volatility. The VA investment strategy outperforms both DCA and LS strate-



gies in terms of returns. This superiority can be attributed to VA being an investment approach where investors establish a specific target amount for their investment to grow over time. Subsequently, investors make adjustments to their investments based on the variance between their actual account balance and the target balance. When their account balance falls below the target, investors allocate more funds, and conversely, when the account balance exceeds the target, they invest less. When comparing the impacts of investment between VA and DCA, the results align with previous academic articles that have highlighted the greater efficiency of the VA strategy compared to the DCA strategy (Panyagometh, 2013, p. 26).

In conclusion, individual investors may consider choosing VA over LS and DCA as their short-term trading strategy, especially when they prefer crisis investment and investing in large-cap stocks. Because Value Averaging (VA) is an investment strategy with the goal of reaching a predetermined target value over time. In value averaging, the investor establishes a target value for their portfolio and makes consistent contributions to steadily approach that target. VA has demonstrated a higher IRR compared to DCA or random investing. Throughout the entire period, VA consistently outperformed, as indicated by Marshall (2000, p. 98).

The summary indicates that investing in stocks from the SET100 index typically yields higher returns compared to investing in stocks from the SETTHSI index. However, stocks in the SETTHSI index also demonstrate lower risk

than those in the SET100 index, aligning with the Risk-Return Tradeoff principle. Ultimately, the choice for investors to allocate funds to either index depends on their individual risk tolerance levels.

Research Suggestions

1. In future research endeavors, it would be beneficial to broaden the scope to include other asset classes. This could involve the examination of securities such as debt instruments, mutual funds, and various financial instruments.

2. The choice of time periods or investment durations can greatly influence the outcomes of investment studies. Researchers might consider exploring different time frames to determine the most suitable periods for making investment decisions.

3. It is advisable to consider the use of a variety of indicators beyond solely relying on the Investment Rate of Return (IRR). Alternative indicators, such as those evaluating the ratio of excess return to standard deviation, can offer valuable insights into investment performance.

4. The limitation of scope of research in the restricted timeframe studied, encompassing only 36 months during the COVID-19 period. Future studies may benefit from an extended research more than 5 years or over.

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