A Study on short momentum phenomenon

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ABSTRACT: This study aimed at examining the phenomenon of short-term momentum in the Southeast Asian capital market. The sample capital markets were Singapore, Thailand, and Indonesia, with years of observation over the 2014 to 2016 period. Tests were carried out using the one-sample t-test to test whether there are abnormal returns on the winner and loser stock portfolios. The results of the study show that winner stock portfolios listed in the LQ45 (Indonesia), STI (Singapore), and SET50 (Thailand) indexes have positive and significant abnormal return results. While the testing of loser stock portfolios has a negative and significant average abnormal return.

Keywords: abnormal return, short momentum, winner stock, loser stock

1 INTRODUCTION

The Efficient Market Hypothesis (EMH) theory developed by Fama (1970), assumes that investors have a rational thinking in making investment decisions based on the latest information. Stock prices in an efficient capital market will reflect all information so that investors will not get abnormal returns (Fama, 1970). However, in fact, in the capital market until now there have been anomalies caused by investor irrationality. Jegadeesh & Titman (1993); Chan et al (1996); and Najmudin (2009) argue that the portfolio strategy by buying winner shares and selling loser shares can provide a significant average yield return. Investors can use contrarian portfolio strategies or momentum strategies in forming a stock portfolio. Investors with contrarian investment strategies will buy loser shares and sell winner-predicated shares (DeBondt & Thaler, 1985). Investors believe that there will be a price reversal in the next period. Whereas, investors with momentum investment strategies will buy winner shares and sell loser shares (Jegadeesh & Titman, 1993). Investors believe that stocks with good performance in the past will continue in the future.

Jegadeesh & Titman (1993) popularize momentum investment strategies. The existence of a momentum investment strategy without transaction costs was found on the New York Stock Exchange (NYSE) and American Stock Exchange (AMEX) which is included in the developed market category. Investors tend to buy shares with good performance in the previous period and sell shares with poor performance in the upcoming period. The momentum investment strategy has been proven to provide significant abnormal returns for investors in the investment period of 3-12 months. The short-term momentum phenomenon also occurs in Vietnam due to the low level of individualism in Vietnamese culture (Alphonse & Nguuyen, 2013).

The formation of prices in momentum occurs because investors react excessively to company earnings and information contained in the previous period (Chan et al., 1996). This condition also occurs in a short period of time where both winner and loser shares show a fixed performance due to non-excessive reactions from investors (Najmudin, 2009). Short-term momentum was also found in 23 developed and developing countries over the 1980 to 1995 period (Chan et al, 2000). However, thenHameed and Yuanto (2002) oppose the existence of momentum strategies in Asian capital markets because no significant abnormal returns have been found. The difference in the results of the study occurred because of the influence of state factors in the winner and loser stock returns in the capital market (Hameed & Yuanto, 2002).

Sasmikadewi & Dewi (2017) conducted a study of the comparison of winner-loser stock portfolio performance based on momentum investment strategies in the Indonesian capital market. Sasmikadewi & Dewi (2017) also scrutinized that there was no significant difference between winner and loser stock portfolio performance. This proves

that in the financial sector companies, there is no finding of a short-term momentum phenomenon.

Other studies on the Turkish stock market included in the emerging market category were conducted by Ejaz & Polak (2015). Ejaz & Polak (2015) pointed out the existence of a very strong short-term momentum phenomenon in the Turkish stock market and lasted for 3-12 months. Short-term momentum will begin to disappear after 12 months. Mansouri et al (2012) conducted a study on the effect of the size and liquidity of the company on the occurrence of profit momentum in the Tehran Stock Exchange. The results of this study by Mansouri et al (2012) were very contradictory because negative abnormal returns were found on the momentum strategy in the Tehran Stock Exchange in all periods. Forner & Marhuenda (2003) who conducted research on contrarian strategies, as well as momentum in the Spanish Stock Market, found that the 12-month momentum strategy produced positive and significant benefits.

Fama & French (2012) conducted a research on the size, value, and momentum in the returns on international stocks. The samples used were small and large stocks in 23 countries included in the developed markets category, namely the North America region, Japan, Asia Pacific, and Europe. Fama & French (2012) uttered that Japan as a country giving a low rating to individualism should be able to generate momentum because stock prices will react slowly to information. However, the results of Fama & French (2012) research showed that momentum only occurred in North America, Asia Pacific, and Europe in all sizes of companies, while Japan did not show any momentum in any size group.

Based on the results of several previous studies described earlier, this study was conducted by observing the increase or decrease in stock prices in several countries incorporated in ASEAN-3, namely Indonesia, Singapore, and Thailand to answer the problem of whether there is an abnormal return on winner and loser stock portfolio in several ASEAN-3 Stock Exchanges (Indonesia, Singapore, and Thailand).

2 RESEARCH METHODS

This study used the short-term momentum phenomenon in 49 winner and 41 loser stocks in the Indonesia, Singapore, and Thailand Stock Exchanges over the 2014 to 2016 period. This study applied the Jegadeesh and Titman method (1993). However, the period of formation and testing period used was 6-monthly overlapping. In this study, the variables used were winner-loser stock portfolio performance based on momentum investment strategies for companies listed in the LQ45 index on the IDX, STI on the Singapore Stock Exchange, and the SET50 index on the Thai Stock Exchange over the 2014 to 2016 period. Winner-loser stock portfolio performance was measured by abnormal return (AR) derived from daily data, adjusted closing price, issuers of LQ45, STI, and SET50 indexes over the 2014-2016 period.

Abnormal returns are the difference between the actual profits obtained around the occurrence of the announcement and the profits of the market index (Chan et al., 1996; Lasfer et al., 2003; Najmudin, 2009). The results of these calculations show the day when the most powerful reaction will occur in each stock. Abnormal returns can be calculated using the market adjusted model with the following formula (Jogiyanto, 2003; Jones, 2007; Wiksuana, 2009).

Abnormal returns are used to test a particular event in the capital market to find out whether there is an anomaly that causes a difference between the actual and the expected profit. The use of a market-adjusted model to calculate abnormal return assumes that this model is the best to estimate the return of a stock where the fluctuation of stock prices is in line with the market price index at that time. In addition, the use of market adjusted models does not require an estimation model because estimated stock returns are the same as market returns (Sasmikadewi & Dewi, 2017). While, according to Najmudin (2009), daily stock returns (Ri, t) can be known by finding the difference between the final closing price of the day (Pi, t) with the closing price of the previous day (Pi, t - 1) then divided by closing prices at the end of the previous day (Widiastuti & Jaryono, 2011; Aulia et al., 2016.

The determined research samples were then re-classified into 2 categories, namely winner and loser stocks. Samples categorized as winner stocks are stocks that have good performance and returns above the average during the research period. While, samples included in loser stocks are company stocks that have poor performance and provide very negative returns during the research period. The one-sample t-test was used to test Hypothesis 1 on whether there are abnormal returns on winner and loser stock portfolios in several ASEAN-3 Stock Exchanges (Indonesia, Singapore, and Thailand).

3 RESULTS AND DISCUSSIONS

The hypothesis testing for winner and loser stock portfolios were done by using a one-sample t-test for the formation period and the specified test period. The results of winner and loser stock portfolios testing in the LQ45, STI, and SET50 indexes, which aims to find out whether abnormal returns occur in Indonesia, Singapore, and Thailand over the 2014-2016 period can be seen in Table 1.

Table 1. Test result

Portfolio	Rata-rata Abnormal Return	Significance
Winner$_{LQ45}$	0.3860	0.002*
Loser$_{LQ45}$	-0.1188	0.008*
Winner$_{STI}$	0.2025	0.009*
Loser$_{STI}$	-0.1381	0.001*
Winner$_{SET50}$	0.2141	0.018*
Loser$_{SET50}$	-0.1144	0.013*

*Significant at the 5% level

Table 1 shows the test results of hypothesis 1. From the table above, it can be seen that the average value of abnormal returns for winner and loser stock portfolios listed in the LQ45, STI, and SET50 index categories. Table 1 indeed shows the results of hypothesis testing. Test results of winner stock portfolios in the LQ45 index on the portfolio show an average abnormal return of 0.3860 with a significance value of 0.002. These results indicate that winner stocks have abnormal returns. The loser stock portfolio shows the average abnormal return of 0.1188 with a significance value of 0.008. Winner stock portfolio in the STI index has a significance value of 0.009. The loser stock portfolio in the STI index has a significance value of 0.001. Winner stock portfolio in the SET50 index is 0.2141 with a significance value of 0.018. The loser stock portfolio in the index SET50 is -0.1144 with a significance value of 0.013. Based on the results of the one-sample t-test, the winner stock portfolio is still categorized as the winner stock and the loser stock portfolio is still included as the loser stock with a significance level of less than $\alpha = 5\%$.

Moreover, Table 1 shows that there are significant abnormal returns on winner and loser stock portfolios in several ASEAN-3 Stock Exchanges (Indonesia, Singapore, and Thailand) over the 2014 to 2016 period. One-sample t-test results show that winner stock portfolios listed in the LQ45, STI, and SET50 index in the test have positive and significant abnormal return results. Whereas, the negative and significant abnormal return results occur in the loser stock portfolio. The results of this study prove that hypothesis 1 is accepted, namely abnormal returns occur on winner and loser stock portfolios in several ASEAN-3 Stock Exchanges (Indonesia, Singapore, and Thailand) over the 2014 to 2016 period. The results of this study support the results of research conducted by Ejaz & Polak (2015) which conclude that significant abnormal returns occurred from the 16 momentum investment strategies that lasted very strongly for 3-12 months. The results of this study are also consistent with the research of Jegadeesh & Titman (1993), Forner & Marhuenda (2003), Najmudin (2009), Fama & French (2012), and Bassiouny & Ragab (2014) which state that the 12-month momentum strategy produced a positive and significant abnormal return. However, the results of this study do not support the results of previous studies conducted by Mansouri et al (2012) and Sasmikadewi and Dewi (2017) who scrutinize that negative abnormal returns were found on the momentum strategy in all periods.

According to Najmudin (2009), the occurrence of abnormal returns is strengthened by the amount of the average difference in abnormal returns for winner stock portfolio which is higher than the loser stock portfolio. Winner stock portfolio shows continuous improvement and positive performance results compared to the results of negative loser stock portfolio performance.

4 CONCLUSION

Based on the results of the hypothesis using the one-sample t-test, it was found that winner stock portfolios listed in the LQ45, STI, and SET50 indexes had positive and significant abnormal return results. While the testing of loser stock portfolios had a negative and significant average abnormal return. This signifies that the market is still not efficient, so investors can still get abnormal returns from the transactions they make. Investors can implement an investment strategy by buying stocks with good performance in the previous period and selling stocks with poor performance in the previous period over a 12-month investment period in an effort to obtain abnormal returns. This strategy is carried out because investors assume that stock prices with good performance in the past will continue to rise, whereas stocks with poor performance will be sold because stock prices will continue to decline in the upcoming period. Investors can form a portfolio consisting of a combination of several winner and loser stocks to diversify the risks

received and obtain optimal profits. This is due to the winner stock portfolio will produce superior performance compared to the loser stock portfolio in the coming period. Therefore, investors will benefit greatly in the short term due to buying winner stocks and selling loser stocks.
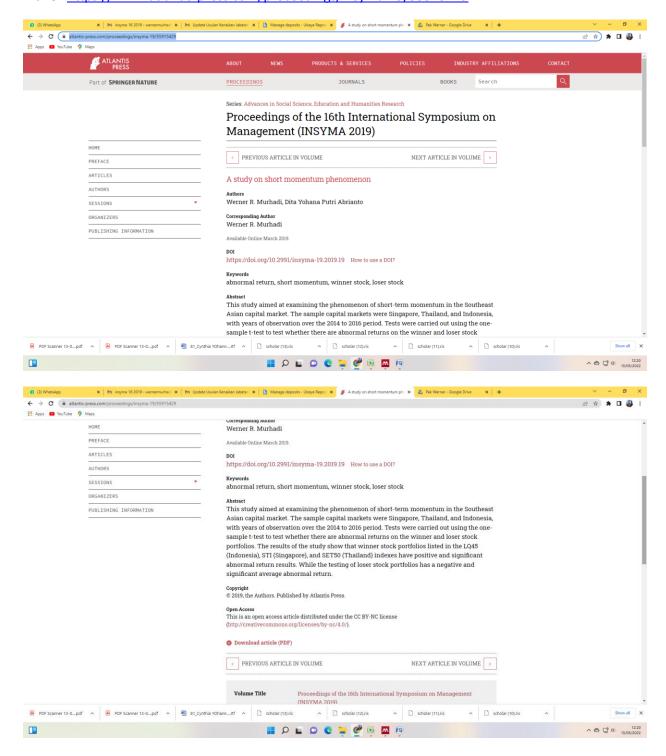
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