

THE INVESTIGATION OF THE PROFITABILITY OF MOMENTUM STRATEGY IMPLEMENTATION IN ISLAMIC STOCKS IN INDONESIA

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ABSTRACT

Increased public awareness of the importance of investment in Indonesia has prompted interest in household investment in stocks. This awareness is also accompanied by efforts to comply with the provisions of sharia considering the majority of Indonesian people are Muslims. Indonesian stock exchange authorities have long capture these prospects and begin to establish stocks that categorized as Islamic stocks since 2000. However, people are having lack of ability in trading strategies that makes them reluctant to invest in stocks. Common people requires a fairly easy strategy to implement that can generate profit. One form of a simple strategy is momentum strategy. This study aims to investigate whether an investment in shares of sharia in Indonesia can produce a profit if short-term momentum strategy is used. The objects of this study is several listed stocks in Indonesia Sharia Stock Index (ISSI). The sampling method using purposive sampling method. The sample of this study using stocks that are always listed in the Jakarta Islamic Index (JII) or 30 most liquid stocks of ISSI. Observations period were made during the period 2006-2008. The method used to investigate the profitability of the momentum strategy is to calculate the average value of future returns resulting from past winner and past loser stocks in the investment period 3 daily, weekly, monthly, 3 monthly, 6 monthly. The findings showed that the application of the partial momentum strategy by buying stocks that have the highest return in the past can produce significant positive return in the investment period of monthly and 6 monthly. The application of full momentum strategy produce significant positive return on investment period monthly, 3 monthly and 6 monthly. Muslim Investors can apply momentum strategies in the investment period of one to six months to make a profit.

Keywords: return, momentum strategies, stock islamic, Jakarta Islamic Index.

Introduction

Investment strategy implemented by investors in the capital market is generally divided into passive investment strategies and active investment strategies. Passive investment strategy assumes that the capital market is efficient and does not occur mispricing, while the active investment strategy assumes that capital markets are inefficient and mispricing occurs so that investors can use it to generate a return.

Investors who hold an active investment strategy does not fully believe in the concept of efficient capital markets. According to them, the theory of efficient capital markets is not entirely true. Research conducted by De Bondt and Thaler (1985) and Jegadeesh and Titman (1993) concludes that stock prices rationally reflect the availability of information so that investors can earn positive returns by implementing momentum strategies and contrarian strategies. Momentum strategy is a strategy that is implemented by making a purchase of stocks that performed well in the past and sell stocks perform poorly in the past, while the contrarian strategy is the opposite. Compared to the contrarian strategy, the momentum strategy is a strategy that is easier and it makes sense to apply the investor. This is supported by the results of several studies in developed countries that have consistently shown that the application of the momentum strategy generates a positive return in the short and medium term. This trend also occurred in developing countries are also showing strength against the same conditions, including Indonesia.

The development of global investment shows the growth of investment in the capital markets of developing countries are driven by the entry of global investors to the domestic market as well as domestic investors increase itself. Indonesia is one country that is becoming an attractive investment destination. Indonesia has the largest Muslim population in the world with the proportion of the Muslim population in Indonesia, about 87.18% of the total population of Indonesia (www.bps.go.id). Increased public awareness of the importance of investment in Indonesia has prompted interest in household investment in stocks. As a biggest islamic country, this awareness is accompanied by the Efforts to comply with the provisions of Islamic compliance, considering the majority of Indonesian people are Muslims.

Indonesian capital market authorities have long tried to capture these prospects. Indonesian stock exchange authorities have long time captured Reviews These prospects and begin to establish stocks that Categorized as Islamic stocks since 2000.

However, people are having lack of ability in trading strategies that makes them reluctant to invest in stocks. Common people requires a fairly easy strategy to implement that can generate a profit. One form of a simple strategy is momentum strategy. This study aims to Investigate whether an investment in Islamic stocks in Indonesia can produce a profit if the short-medium middle term of the momentum strategy implemented.

THEORITICAL BACKGROUND

Momentum Strategy

Efficient capital market is defined as the stock market where their security's price reflects all relevant information. Fama (1970) classifies the information into three forms, price changes in the past, public information, and public and non-public information. Based on this classification, the efficiency of the capital market is divided into three types, namely the weak form efficiency, semi-strong form efficiency and strong form efficiency. Studies on the success of momentum strategies in generating a positive return is a rejection of market efficiency concept proposed by Fama, particularly weak form of efficiency. The success of this strategy shows that prices in the past can be used to predict future returns.

Jegadeesh and Titman (1993) have shown that the momentum strategy has produced positive returns in the US stock market. This evidence is also occurred in the European capital markets (Rouwenhorst, 1998; Bird and Whitaker, 2004), the British capital market (Hon and Tonks, 2003) and Chinese capital market (Kang et al., 2002; Naughton et al., 2008; Pan et al., 2012). Some of these studies show a positive return that can be generated by the momentum strategy in the short to medium term. Pan et al. (2012) documented the research results that the application of the momentum strategy can generate significant positive returns in a period of less than one month.

Several studies document the results that the momentum strategy can generate significant positive returns within a period of 3-12 months (Conrad and Kaul, 1998; Rouwenhorst, 1998; Kang et al., 2002; Forner and Marhuenda, 2003; Hon and Tonks, 2003 ; Mengoli, 2004; Shen et al., 2005; Soares and Serra, 2005; and Foster and Kharazi, 2008).

Behavior of investors on the momentum strategy described by the response of investors to the information in the form of underreaction to information. Underreaction shows that investors react slowly to an information and they believe that the stock price will then continue in the same direction.

Islamic Stock Exchange in Indonesia

Islamic capital market in Indonesia was launched in March 2003 as part of the Indonesian capital market and supervised by the Capital Market Supervisory Agency and Financial Institution namely Bapepam-LK. Although Islamic capital market formally organized in 2003, the activities of Islamic investment in capital market in Indonesia has actually started much earlier. The existence of this activities is driven by the increasing awareness and knowledge of Indonesian society, particularly Islamic investors, to invest in the stock market. Public interest to invest increased when the application of Islamic principles in the equity markets opened the opportunity for those who want to invest but still consider the principles of Islam.

The initial step development of the Islamic capital market in Indonesia began with the emergence of Islamic mutual funds on June 25, 1997 and followed by the issuance of Islamic bonds by the end of 2002 and then by the presence of the Jakarta Islamic Index (JII) in July 2000 (Alma and Priansa, 2009). JII is one of the stock indexes in Indonesia, which calculates the average price index of most liquid islamic stocks.

Indonesia Stock Exchange conduct periodic evaluation of which stocks to entry or exit from JII index. Stocks that will go to the JII must pass through the filter principles of Islam. Under the direction of the Islamic Supervisory Board and Danareksa Investment Management, there are four requirements that must be met in order for these stocks can get into the JII:

- a. The issuer does not run a gambling business and industries are classified as gambling or prohibited trade.
- b. The issuer is not classified as conventional financial institutions that implement the system of usury, including conventional banking and insurance.
- c. Businesses that do not manufacture, distribute, and trade food/beverage that prohibited by Islam (haram).
- d. Business that do not run the producing, distributing, and providing of goods or services that damage morale and detrimental.

In addition to the filter Shariah, stocks that go into JII have to go through some screening process, ie:

- a. Selecting a collection of stocks with the main types of business that are not contrary to Islamic principles and has recorded more than 3 months, unless it is included in the 10 large capitalization.
- b. Selecting stocks based on the annual financial statements or half-year ending where the ratio of liabilities to assets maximum 90% of total assets.
- c. Selecting the 60 shares of stock in the above arrangement in order of the average market capitalization (market capitalization) in the past year.
- d. Selecting the 30 stocks with the order based on the average level of liquidity based on regular trading value during the past year.

Basically, the difference with the conventional capital market can be seen in the Islamic capital market securities and the mechanisms in the transaction, while the difference in the value of sharia stock index with a conventional stock index value lies in the criteria of the issuer's shares that must meet the basic principles of sharia.

Research Design

The population in this study are shares of companies listed on the Indonesian Islamic Stock Index (ISSI). Sampling technique in this study was purposive sampling with sample selection criteria are as follows:

- a. The shares included in the index during the time period JII July 1, 2006 through June 30, 2008.
- b. Shares are actively traded and have not experienced delisting in observation period.
- c. Stocks that have the greatest frequency of trade deals during the observation period.

The application of convenience sampling technique resulted in a sample amount of 9 stocks. They are Bakrie Telecom, Tbk (BTEL), Bumi Resources Tbk (BUMI), Ciputra Development Tbk (CTRA), Indocement, Tbk (INTP), Kalbe Farma, Tbk (KLBF), Mine Coal Bukit Asam Tbk (PTBA), Telekomunikasi Indonesia, Tbk (TLKM), United Tractors Tbk (UNTR), and Unilever Indonesia, Tbk (UNVR).

This study used data obtained from the website of Indonesia stock exchange (www.idx.co.id) and the yahoo finance website (finance.yahoo.com) and the website dunia investasi (www.duniainvestasi.com).

Analysis to evaluate the profitability of the momentum strategy implementation is done by using past returns and future returns with the following steps:

1. Calculate the daily return obtained from daily stock price data by the formula

$$R_{it} = (P_{it} - P_{it-1}) / P_{it-1}$$
 Remarks:
 R_{it} = return of stock i at date t
 P_{it} = price of stock i at date t
 P_{it-1} = price of stock at date t-1
2. Specifies the time period of observation with criteria 3 daily, weekly, monthly, 3 monthly, and 6 monthly. Specifies the group past returns, future returns, based on the benchmark date (t_0) for each period of observation. The shortest observation time period is 3 day because the Islamic stock only allow buying and selling stock that are already settled (in hand). The settlement day in Indonesia Stock Exchange is T+3 day.
3. Calculating the accumulated past return each observation period for each stock.
4. Ranking the results of the calculation of past returns accumulation of each observation period for each stock. The three highest rank of accumulated return is past winner and the three lowest rank of accumulated return is past loser.
5. Calculate the accumulated future returns for stocks that have been classified as past winners and past losers in the previous step.
6. Recaps the results of the calculation of future returns accumulation for the entire benchmark date (t_0) at each observation period. Calculate future returns based on the classification of the application of momentum strategies: partial implementation of the strategy (buying only past winner stocks) and full implementation of the momentum strategy (the combination of buying of past winners stocks and selling past loser stocks).
7. The results of the data that has been summarized and then tested statistically different. Momentum strategy partially and full of momentum strategies were tested using one sample t-test.

Result And Discussion

In 3 daily investment period, partial implementation of the momentum strategy generates an average return of 0.004547 with a standard deviation of 0.10775 and the application of full momentum strategy generates an average return of -0.00853 with a standard deviation of 0.09864.

Table 1: Descriptive Statistics

Observation Period	Strategy	N	Mean	Standard deviation	Minimum	Maximum
3 day	Partial momentum	129	0.00455	0.10775	-0.45823	0.28184
	Full momentum	129	-0.00853	0.09864	-0.33741	0.37400
Weekly	Partial momentum	127	0.03019	0.17020	-0.49540	0.39133
	Full momentum	127	0.01151	0.17178	-0.57657	0.50735
Monthly	Partial momentum	121	0.13992	0.30645	-0.68070	1.08850
	Full momentum	121	0.09195	0.29637	-0.68541	1.19184
3 month	Partial momentum	105	0.43634	0.45910	-0.53633	1.58243
	Full momentum	105	0.28773	0.36682	-0.56283	1.11139
6 month	Partial momentum	81	1.03564	0.58614	0.05592	2.32685
	Full momentum	81	0.79735	0.67792	-0.72724	1.86514

In the period of 1 week or weekly, the application of the partial momentum strategy generates an average return 0.03019 with a standard deviation 0.1702 and a full implementation of the strategy generates an average return -0.01151 with a standard deviation 0.17178. At the 1-month period, the application of the partial momentum strategy generates an average return 0.13992 with a standard deviation 0.1702 and a full implementation of the momentum strategy generates an average return -0.09195 with a standard deviation 0.29637. At the 3 monthly period, the application of the partial momentum strategy generates an average return 0.43634 with a standard deviation of 0.45910 and a full implementation of the strategy generates an average return -0.28773 with a standard deviation 0.36682. At the 6 monthly period, the application of the partial momentum strategy generates an average return 1.03564 with a standard deviation of 0.58614 and the application of the full momentum strategies in the 6 monthly period resulted in an average return -0.79735 with a standard deviation 0, 67 792.

The statistical results showed a tendency of increase in the rate of profit by implementing a momentum strategy in the longer term. Application of the momentum strategy in full yield greater benefits than partially implemented.

Table 2: Return Significance Test Result

Period	Strategy	N	Mean return	t-stats.	Sig.
3 daily	Partial momentum	129	0.00455	0.479	0.633
	Full Momentum	129	-0.00853	-0.982	0.328
Weekly	Partial momentum	127	0.03019	1.234	0.219
	Full Momentum	127	0.01151	0.755	0.452
Monthly	Partial momentum	121	0.13992	1.999	0.048
	Full Momentum	121	0.09195	3.413	0.001
3 monthly	Partial momentum	105	0.43634	1.218	0.225
	Full Momentum	105	0.28773	8.037	0.000
6 monthly	Partial momentum	81	1.03564	5.022	0.000
	Full Momentum	81	0.79735	10.585	0.000

Strategy 3 daily of partial and full daily momentum implementations is not able to generate returns significantly as indicated by the significant value in 0633 and 0.328. Insignificant return also showed from the application of the weekly period that has significance of 0219 (partial) and 0,452 (full).

Significant positive return can be obtained through the application of the momentum strategy in the period of monthly, 3 monthly, and 6 monthly, except for the partial application of the momentum in the period of 3 monthly.

Momentum strategy is a strategy that buying stocks that performed well in the past (past winners) and selling stocks that performed poorly in the past (past losers). The results showed that the partial momentum strategy can generate significant positive returns for the period of monthly and 6 monthly and full momentum strategies generate positive returns in the period of monthly, 3 monthly, and 6 monthly.

These results are consistent with several previous studies documenting the research results that the momentum strategy can generate significant positive returns over the medium term, i.e. 3-12 months (Conrad and Kaul, 1998; Rouwenhorst, 1998; Kang et al., 2002; Forner and Marhuenda, 2003; Hon and Tonks, 2003; Mengoli, 2004; Shen et al., 2005; Soares and Serra, 2005; and Foster and Kharazi, 2008).

The market, in this case embodies a set of investors, react slower to absorb information so that price changes occur gradually. Positive return in the past will be continued in next period and, vice versa, negative returns in the past will be continued in the next period returns.

Conclusion

This study aims to analyze the profitability generated by the application of the momentum strategy in stocks in Indonesia sharia. These results lead to the conclusion that Islamic investors in Indonesia can apply momentum strategies either partial or full to generate a positive return within a period of 1 month, 3 month and 6 months. Application of the momentum strategy can generate higher returns by applying the strategy on a longer term. Islamic investors, with more limited stocks available compare to general investors, still make a profit even with select Islamic stocks as investment options.

This research is expected to provide a solution for investors who want a strategy that is fairly easy to implement, i.e. by applying the momentum strategy in the short to medium term; monthly to 6 monthly. Subsequent research suggested using a sample of more stocks Islam so that alternative of stocks can be bought is wider.

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