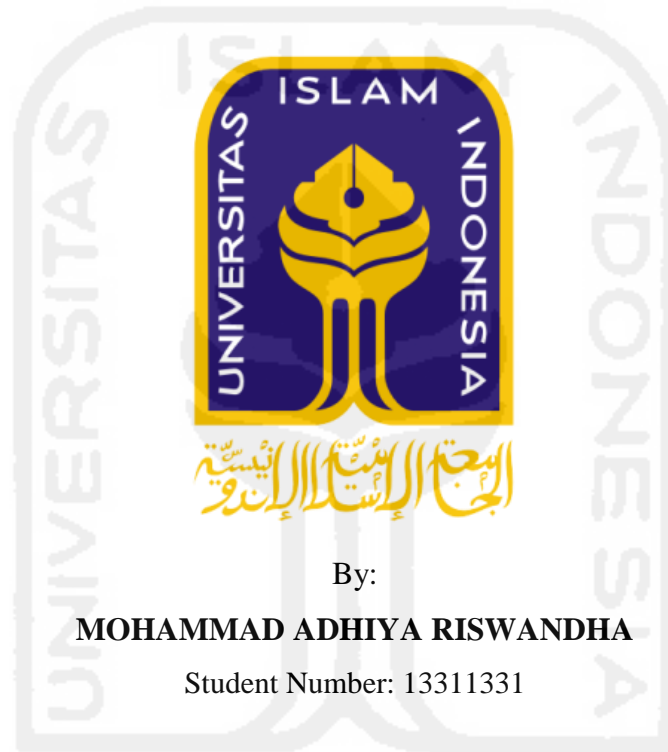


**A STUDY OF CONTRARIAN AND MOMENTUM STRATEGIES
BASED PORTFOLIOS IN INDONESIAN STOCK MARKET**

A RESEARCH JOURNAL

Presented as Partial Fulfillment of the Requirements
to Obtain the Bachelor Degree in Management Department



By:

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DEPARTMENT OF MANAGEMENT

INTERNATIONAL PROGRAM

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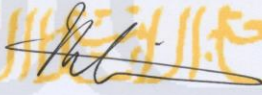
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A Study of Contrarian and Momentum Strategies Based on Portfolios in Indonesian Stock Market

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ABSTRACT

This paper attempts to examine the effectiveness of contrarian and momentum strategy in Indonesian Stock Market by forming various portfolios on the basis of formation period and holding period. The period of the study was conducted from 2011-2017 and the samples used in this study were stocks listed in EIDO index. To increase the power of the test, this study applied two methods to evaluate the performance to select winner and loser stocks. The first method used market-adjusted model to calculate the abnormal return of the stock while the second method used capital assets pricing model. Besides, this study used overlapping technique by replicating the formation portfolio into 9 times over the period 2011-2013. The results of the study document that the effectiveness of contrarian and momentum strategy is sensitive toward the formation of portfolio and for how long portfolios were held which means that not all formation and holding periods were proven to be effective and significant to generate abnormal return. In the context of contrarian strategy, the effectiveness to generate abnormal return is only proven to be significant within 6 months portfolio formation with short-term 3 and 12 months holding period, while momentum strategy is proven to be effective and significant to generate abnormal return under 3 months portfolio formation for short-term horizons 3 month holding period.

Keyword: Contrarian Strategy, Momentum Strategy, Behavioral Finance, Indonesian Stock Market

BACKGROUND

There has been a huge debate among scholars for the last decades regarding the shifting paradigm from neoclassical into the one that currently well known as behavioral based paradigm. In neoclassical or traditional finance, efficient market hypotheses proposed by Fama (1970) has become the foundation as well as pillars. The basic assumption of efficient market hypotheses is that the movement of the price in the past cannot be used to predict the price in the future. However, several years later many researchers criticized Fama (1970) by providing empirical evidences showing that there are psychological biases that consequently make investors behave irrationally in the

market. The finding of Kahneman and Tversky (1979) was the first documented that not all investors are rational in making his/her investment decisions. These challenges led to the introduction of behavioral finance theory.

The existence of behavioral finance in the literature created market anomaly (George & Elton, 2001). behavioral finance theory explains why investors make financial or investment decisions irrationally by combining their behavior as well as cognitive psychology with economics and finance. In contrast to traditional efficient market hypothesis, in behavioral finance theory, there is a possibility to beat the market by predicting and forming trading strategies in the market (Conrad & Kaul, 1998). A trading strategy is defined as purchasing or selling securities in the stock market by using the previous security price at a particular observed period as its base. Two popular strategies currently being investigated as well as being applied by most practitioners are momentum and contrarian strategies. Both momentum and contrarian strategies are truly triggering a dramatic resurgence debate among academics scholars whether or not return on assets can be predicted by using past performance as its based. Momentum and contrarian strategy showed that the anomaly in the market does exist and most importantly these strategies prove that the market is not efficient.

De Bondt and Thaler (1985) were the first to document the phenomenon of long-term reversal in the US market. The past loser stocks have been proven to give abnormal returns for long investment horizons and also the past loser stocks successfully outperformed the long-term past winner stocks. Specifically, De Bondt and Thaler (1985) documented that firms with poor performance over the past three to five years have better performance in the future. Besides, this strategy can earn the following excess return of about 8% in the US market.

The works of De Bondt and Thaler (1985) was further being criticized among scholars. Some have argued that the results of theirs technically can be explained by the systematic risks of investor's portfolio and the size effect. Afterwards, Jegadeesh and Titman (1993) documented the profitability of short-term momentum strategies where buying past winners and selling past losers successfully earned abnormal return. They found that in the short-term period of 3-12 months, the price will follow its trend or what is so called as price continuation

The success of both momentum and contrarian strategies in the market surely has attracted a high attention among academician's as well as practitioners. Many researchers have developed the works of De Bondt and Thaler (1985) and Jegadeesh and Titman (1993) regarding these strategies. Rouwenhorst (1998) tried to explore a broader spectrum by using 12 European Countries as his objects. He documented that price continuation is present in 12 samples of European countries. The similar work has also done by Schneider and Gaunt (2012) in Australian Stock markets where the results showed that the price continuation exists

The increase of the interest among scholars in exploring these anomalies surely enriches the literature. However, even if there has been many empirical and statistical evidence supporting the existence of these strategies, there are still few researches being

conducted in emerging markets. Consequently, it makes a huge gap in the existing literature. The basis of those statements is that by nature there has been a high tendency of developed markets that differs from emerging markets. Thus, the anomalies of efficient market hypotheses are supposed to be tested in the wider range especially in emerging markets.

Very few researches examining the effectiveness of momentum and contrarian strategies in Indonesian stock exchange is becoming a high motivation for the researcher to conduct this research. Furthermore, this study will use the data of monthly stocks price in Eido index as samples that will make this study quite unique since most researcher use LQ45 as their samples to analyze the phenomena in Indonesian Stock Market. Thus, this study surely will enrich the literature as well as fill the gap in the existing literature.

LITERATURE REVIEW

The Efficient Market Hypotheses

The efficient market hypothesis (EMH) has been the central proposition of finance for the last decades (Shleifer, 2000). EMH was first introduced by Fama (1970). He defined Efficient Market Hypothesis under the assumption that security prices at any time “fully reflect” all available information. In addition, the efficient market hypothesis is associated with the idea of a “random walk”, where the logic of this idea is that if the flow of information is unimpeded and information is immediately reflected in stock prices, a change of price in a particular day will reflect only that day’s news and obviously will be independent with the price change today (Malkiel, 2003). In conclusion, there is no scope for investors as well as traders to predict the future prices and earn abnormal return in the market under efficient market hypotheses concepts.

Fama (1970) classified three forms of efficient market hypothesis based on its information characteristics. Those are weak form, semi strong form, and strong form. In the weak form of market efficiency, the only relevant information is that the change of price in the past or past information. Past information means that the information that has happened. According to random walk theory, past information cannot be used to predict the future value since it is only a reflection of current value in the market. In other words, in the weak form of market efficiency, investors cannot be able to use past information to get abnormal return. In the semi strong form of market efficiency, a market can be called as efficient if all prices in the market are the reflection of public information. Public information means that the information that can be easily accesses by public such as financial statement of a company, profit announcement, dividend payment, merger, acquisition, and so on. Therefore, in the semi strong form of efficient market, none of investors can utilize public information to get abnormal return. In the strong form of market efficiency, a market can be called as efficient if all prices in the market are the reflection of both public and private information (available information). In this form, even if investors have private information that only several people can access, it cannot be used to gain abnormal return because the price of stock is already becoming the reflection of all available information in the market including private information.

Critics toward Efficient Market Hypothesis in Literature and the Appearance of Behavioral Finance

In the past, efficient market hypothesis was generally accepted by economist. However, more recently, many scholars started to criticize the existence of this concept. There has been a fundamental debate among scholars as well as practitioner regarding the validity of this concept. Many papers documented that stock prices are predictable and from that moment academicians started to believe that stock prices are at least partially predictable.

Kahneman and Tversky (1979) were the first stated that not all investors are rational in making investment decisions. There are psychological aspects involved in making a decision. Thus, investors are getting bias in making decision and that bias is structured and systematic. Although this concept is relatively new, it has been successful to expand quickly in fields that seeks to provide explanation for the market inefficiency and investors' decision by combining behavioral and cognitive psychological theories with conventional economics literature.

According to Baker and Nofsinger (2010), an underlying assumption of behavioral finance is that the information structure and the characteristics of market participants systematically influenced individual's investment decisions as well as market outcomes. Shefrin and Statman (2000) further complements the foundation of behavioral finance by introducing three main ideas in behavioral finance. The first is that there is bias or psychological distortion that influences decision-making process. The second is behavioral finance argued that human behavior is influenced by problem formulation. Thus, everyone has different frame. They make decision based on subjectivity. Last but not least is that behavioral finance argues that the market is not efficient. Non-efficient market assumed that information is not fully integrated to the price. Thus, if the investors were not rational, they would tend to overestimate and underestimate toward the value of assets.

Investors Overreaction and Contrarian's Strategy Implication

The concept overreaction is extremely essential in behavioral finance field and has become one of the biggest challenges toward efficient market hypothesis. Kahneman, Slovik and Tversky (1982) were the first introduced this concept in the literature. Afterward, De Bondt and Thaler (1985) used this concept to explore more to explain the connection between psychology and security price. This concept showed that investors tend to overreact toward recent information that creates deviation of stock price from its real value and return to its fundamental values over the period of time. Consequently, investors would overvalue a good performance stock and on the other hand would undervalued stock that has a bad performance. Thus, the concept of overreaction and the underlying assumptions successfully brought out the contrarian strategy among investors buying the past loser stocks and selling the past winner stocks to earn abnormal return.

In line with the work of De Bondt and Thaler (1985), Kumar (2016) documented the presence of contrarian strategies in the US market. He proved that portfolios based on the contrarian strategy were providing the significant positive returns for all holding periods. In conducting the research, he selected 100 stocks from 1st January to June 2013

belonging to Standard and Poor (S&P) Index considered for the analysis. The results of his study is the contrarian strategy earned positive results regardless of the type of holding periods with 95% confidence level for 1-10 year period.

The success of the contrarian strategy was further being explored not limited to the US stock market only, but also to emerging markets. Dhankar and Maheswari (2014) reported that the contrarian strategy showed a significant positive return in the long-term in Indian stock market. In conducting the study, they used a month-end closing adjusted price of all the stocks traded on National Stock Exchange (NSE) over a period from January 1997 to March 2013. Similarly, the study of this strategy in emerging market was also conducted by Wu (2011) in Chinese market. Wu (2011) reported that there is a strong phenomenon of overreaction that consequently made contrarian strategy proved to be a great success. She found that all holding periods formed produce positive excess return in the long-term.

Concerning the market in Asean, Luxianto (n.d) attempts to explore the presence of overreaction phenomenon as well as the effectiveness of using contrarian strategy in Indonesian stock market. For evaluation period, the researcher formed portfolios into three methods. The first method used was the cross section relative return, the second method used was the cross section relative return plus risk component, and the third method used was its own historical performance as a comparison. The results of his study for all those three methods proved that the contrarian strategy is strategically used for loser stocks in a long-term period.

In addition, Ali, et al. (2013) also documented the presence of return reversals in Malaysian stock exchange. The results of their study showed that short-term contrarian strategies proved to be a great success where there is a positive excess return for all sectors during 1 to 4 weeks holding periods. The phenomenon of overreaction is also happened in European countries. Mun, Vasconcellos, and Kish (1999) documented that contrarian strategy is effectively applicable in both French and German stock markets. Furthermore, they also reported that German stock on average is having higher returns compared to French return.

Investors Underreaction and Momentum's Strategy Implication

The concept of underreaction implied that there is a state where investors are reacting slowly to recent news. In psychological term, these behavior is called as conservatism (Barberis, Shleifer, & Vishny 1998). Jegadeesh and Timan (1993) were the first who introduced the momentum strategy which is buying past winner stocks and selling past loser stocks. Their study is in contrast to contrarian strategy proposed by De bondt and Thaler (1985). The results of the study found that trading strategies of buying past winners and selling past losers showed significant abnormal returns over 1965 to 1989 periods. Specifically they proved that selecting stocks based on their past 6-month returns and holding them for 6 months resulted a compound excess return of 12.01% per year or average.

Similarly, Conrad and Kaul (1998) also conducted a research where the momentum strategy proved to be successful in the US market. The data used in their research is NYSE security prices from 1926-1947. Specifically they also reported that momentum strategy yields significant profits at medium period. The success of the framework developed by Conrad and Kaul (1998) then followed by Zhou, Geppert, and Kong (2010)

in the case of China stock market. In contrast with the case in the US market, they documented that at trading horizons of one, nine, twelve, eighteen, twenty-four, and thirty-six month, momentum strategies generated significantly negative returns for A-share market. At the same time, in the case of B-share market, momentum strategies also generated significant and negative returns above twelve months.

Momentum strategy proved to be successful in Istanbul Stock Exchange. Ersoy and Unlu (2013) attempt to examine the effect of size, book-to-market ratio in explaining the presence of momentum. The results of the studies found that momentum strategy gives significant positive returns for an investor for the intervals of six months. The results are further being investigated to examine the role of size and book-to market and it. They found that the results of their study are robust and can be explained by size and by book-to-market effect. Schneider and Gaunt (2012) attempt to examine the presence of momentum strategies in Australian market. The results of their study reported that there is a presence of momentum effect and in 6-12 months proved to be the strongest effect. This study is consistent to the prior work in the US market.

Julio and Catia (2014) conducted a research to explore the presence of price return continuation in Portuguese stock market. In explaining their theory, they used monthly data from January 1988 to April 2012. The result showed that over 3-12 months of holding period, momentum strategies successfully generate excessive positive returns. The success of momentum strategies does not necessarily guarantee that it will be effectively applicable for all markets. O'Sullivan and O'Sullivan (2010) documented that Irish market appears to be quite efficient. The results of their study documented that momentum strategy does not prove to be profitable in Irish equity market.

Rouhenworst (1998) came up with a more sophisticated research by examining the presence of price continuation in a broader scale which is European as well as emerging markets. His study was actually the extended study by Jeegadeesh and Titman (1993) to non –US markets. Specifically, he examined 12 countries in Europe. The results of his study showed that the price continuation is present and momentum in European markets correlated with the US market.

Similarly, Chakraborti (2015) did a research to examine the presence of momentum trading strategies in the scope of global stock market. In conducting his research, he used monthly data of market indices from three regions of the world namely Asia-Pacific region, European region, and the United States from 2004 – 2015. The results of his study documented there is a similarity pattern between European region and the United States where the momentum strategy proved to be profitable for both regions in the short-term period. Moreover, he further found that momentum strategy in European region is more profitable compared to the United States region.

DATA AND METHODOLOGY

This research used secondary data which is monthly security prices listed in Indonesian stock market specifically listed in EIDO index from January 2011-February 2017. All stocks were then converted in to stocks returns using the formula

$$R_i = \ln(P_t/P_{t-1})$$

Where:

- R_i = Realized return of i securities

- P_t = Monthly securities' price
- P_{t-1} = Previous monthly securities' price

To test the effectiveness of both contrarian and momentum strategies, the researcher used two approaches namely market adjusted model and capital assets pricing model approach respectively as follows:

Abnormal Return Market Adjusted Model

$$AR_{it} = R_{it} - R_m$$

Where:

AR_{it} = Abnormal return of i securities

R_{it} = Realized return of i securities

Abnormal Return Capital Assets Pricing Model

$$AR = (R_i - R_f) - (R_m - R_f)\beta$$

Where :

AR = Abnormal return of i stock

R_i = Realized return of i stocks

R_f = Risk free rate

β = Beta of the security

R_m = Expected market return

This study designed different combination of length of formation. In total, there were 6 different horizons of formation period (F=3, 6, 12, 18, 24, 36). Furthermore to increase the power of the test, we conducted 9 times of replication for formation period. The holding periods would be test to examine the effectiveness of both contrarian and momentum strategy. In determining the length of holding period, the rules applied similarly to the formation period where there would be 6 different horizons of holding period (H= 3, 6, 12, 18, 24, 36) and nine replications in total over the period 2011-2017. In addition, since bid-ask spread bounce, price pressure and lagged can impair the effect of continuation, the trading strategies were constructed by skipping one month between formation and holding period (Rouwenhorst, 1998).

Table 1. Formation and Holding Periods

Formation Period (J)	Holding Period (H)					
	3	6	12	18	24	36
3	3 x 3	3 x 6	3 x 12	3 x 18	3 x 24	3 x 36
6	6 x 3	6 x 6	6 x 12	6 x 18	6 x 24	6 x 36
12	12 x 3	12 x 6	12 x 12	12 x 18	12 x 24	12 x 36
18	18 x 3	18 x 6	18 x 12	18 x 18	18 x 24	18 x 36
24	24 x 3	24 x 6	24 x 12	24 x 18	24 x 24	24 x 36
36	36 x 3	36 x 6	36 x 12	36 x 18	36 x 24	36 x 36

In regard to test the hypotheses whether or not contrarian and momentum strategies are effective to generate abnormal returns with different formation and holding period in Indonesian stock market over the period of 2011-2016, each holding periods with different formation will be tested. To test the hypotheses, cumulative abnormal returns were used as proxy in this research. This research will use independent sample T test for both market adjusted model and capital asset pricing model. Thus, if during the test period:

- $ACAR_{Loser} > ACAR_{Winner}$ for both methods, it shows that contrarian strategy is effective to generate abnormal return
- $ACAR_{Loser} < ACAR_{Winner}$ for both methods, it shows that momentum strategy is effective to generate abnormal return

EMPIRICAL RESULTS

Table 2: Test for Market Adjusted Model

3 Months Formation	Holding Period (in Month)					
	3	6	12	18	24	36
ACARwinner (,1966747)	,0474465	,0440850	-,0321635	-,0289436	,0157762	-,0268235
ACARloser (-,2402556)	-,0383685	-,0670074	-,0490413	-,1125439	-,206299	-,2436376
Sig (2-tailed)	,004	,014	,784	,244	,008	,025
6 Months Formation	Holding Period (in Month)					
	3	6	12	18	24	36
ACARwinner (,2597362)	-,0145579	,0039703	-,0626554	-,0666280	-,0422938	-,1501018
ACARloser (-,3842773)	,0572053	,0359760	,0690440	,0011851	-,0425282	-,0020173
Sig (2-tailed)	,004	,354	,023	,317	,998	,123
12 Months Formation	Holding Period (in Month)					
	3	6	12	18	24	36
ACARwinner (,3887979)	-,0083193	-,0340607	-,0280300	-,0094939	-,0361075	-,1097890
ACARloser (-,5638444)	-,0101688	-,0285095	-,0705525	-,1505459	-,1789873	-,1804510
Sig (2-tailed)	,951	,901	,434	,013	,130	,506
18 Months Formation	Holding Period (in Month)					
	3	6	12	18	24	36
ACARwinner (,4833673)	-,0405556	,0015084	,0297054	,0439754	,0030047	-,1770643
ACARloser (-,7311924)	-,0016916	-,0271256	-,0850713	-,1223896	-,1233773	-,1336323
Sig (2-tailed)	,200	,457	,029	,011	,090	,737
24 Months Formation	Holding Period (in Month)					
	3	6	12	18	24	36
ACARwinner (,5648389)	,0090219	,0097236	,0158989	-,0200669	-,0559017	-,3159743
ACARloser (-,8692025)	-,0463258	-,0547412	-,0680797	-,0563531	-,0743473	-,0739747
Sig (2-tailed)	,051	,096	,110	,563	,822	,107
36 Month` Formation	Holding Period (in Month)					
	3	6	12	18	24	36
ACARwinner (,6992196)	-,0658024	-,1284296	-,1164056	-,0645922	-,2070130	-,5086132
ACARloser (-10,608,141)	,0050755	,0232732	,0100015	-,0630829	-,0530145	,0886711
Sig (2-tailed)	,104	,023	,128	,988	,237	,046

Source: Data Processing

Table 3: Test for Capital Assets Pricing Model

3 Months Formation	Holding Period (in Month)					
	3	6	12	18	24	36
ACARwinner (,5525795)	,0271352	,0047182	-,0646917	-,095494	-,0891410	-,1309322
ACARloser (-0,2134327)	-,0391696	-,0512847	-,0347683	-,078662	-,1613863	-,2283604
Sig (2-tailed)	,044	,262	,648	,822	,398	,299
6 Months Formation	Holding Period (in Month)					
	3	6	12	18	24	36
ACARwinner (,2376606)	-,0429870	-,0283654	-,0851471	-,1042420	-,0751069	-,1295049
ACARloser (-,3356696)	,0243121	,0109926	,0172094	-,0554158	-,0932528	-,1884734
Sig (2-tailed)	,022	,263	,050	,432	,807	,557
12 Months Formation	Holding Period (in Month)					
	3	6	12	18	24	36
ACARwinner (,3028528)	-,0312485	-,0485354	-,0815797	-,0405687	-,0396748	-,1893592
ACARloser (-,5546813)	,0001212	-,0321820	-,0597275	-,0993663	-,1517707	-,1902121
Sig (2-tailed)	,327	,719	,711	,402	,150	,994
18 Months Formation	Holding Period (in Month)					
	3	6	12	18	24	36
ACARwinner (,3883180)	-,0223919	-,0068930	-,0099850	,0098679	-,0377880	-,2084361
ACARloser (-,6683470)	,0065122	-,0199502	-,0422086	-,1326959	-,1361565	-,1285366
Sig (2-tailed)	,270	,731	,551	,030	,194	,538
24 Months Formation	Holding Period (in Month)					
	3	6	12	18	24	36
ACARwinner (,4515581)	,0110926	,0012095	,0361788	-,0122810	-,0741322	-,2957667
ACARloser (-,8099382)	-,0378405	-,0539295	-,1165536	-,0917252	-,0894742	-,0578093
Sig (2-tailed)	,068	,136	,007	,217	,862	,103
36 Month Formation	Holding Period					
	3	6	12	18	24	36
ACARwinner (,5525795)	-,0303009	-,0880548	-,1666820	-,0884581	-,1912208	-,4805660
ACARloser (-,9811530)	-,0085870	,0008827	-,0203896	-,0478533	-,0183865	-,0307363
Sig (2-tailed)	,496	,121	,107	,703	,186	,112

Source: Data Processing

The Effectiveness of Contrarian Strategy

Based on the independent t test for each portfolio formation and holding periods, this study exhibit that not all formations and holding periods made were proven to be effective to generate abnormal return in Indonesian stock market. The findings documented that only a particular formation period with specific holding period that effectively generated abnormal return in Indonesian stock market over the period 2011-2017. The contrarian strategy is proven to be effective in generating abnormal returns

only within 6 and 36 months portfolio formation where ACARloser outperformed ACARwinner. However, only 3 and 12 months holding periods in 6 month portfolio formation were proven statistically to be significant where $ACAR_{loser} > ACAR_{winner}$ portfolio with market adjusted model and capital assets pricing model.

Thus, it can be concluded that contrarian strategy is only effective to generate abnormal returns within short-term 3 months and 12 months holding period with 6 months portfolio formation. The result of the test was contradictive with the findings of De Bondt and Thaler (1985) where contrarian strategy was only effective to generate abnormal return and outperformed the winner portfolio as well as the market in the long-term period. The lying argumentation behind the contradiction of result is because of different of time period and different type of market. However, when refer to the study of Mun, et al. (1999) and Ali, et al. (2013) that have similat type of market which is stocks market in emerging countries, the findings was silmilar where contrarian stratgy is sensitive toward the portfolio formation period as well as holding periods. Besides, the results also similar where contrarian strategy is proven to effective for short-term horizons.

The Effectiveness of Momentum Strategy

In the context of momentum strategy, the results were similar to the effectiveness of contrarian strategy where not all formation and holding periods were proven to be significant to generate abnormal return in Indonesian stock market. The study documented that 3, 18, 24 portfolio formation exhibited that $ACAR_{winner} > ACAR_{loser}$. However only in 3 month and 24 month portfolio formation was consistently having positive returns and only 3 months with 3 months of holding period ACARwinner was consistently and statistically proven to be higher than ACARloser in the positive way for both methods. In 3 months holding period, p value was less than α ($0.004 < 0.05$ and $0.044 < 0.05$ with market adjusted model and capm respectively). In 6 month holding period, the t test exhibit the significant results fro market adjusted return in which p value was less than α ($0.014 < 0.05$). However, when referred to capital assets pricing model, 6 month holding period was not statistically proven to be significant where p-value $> \alpha$ ($0.262 > 0.05$).

Thus, it can be concluded that the momentum strategy is effective to generate abnormal returns only in the short-term 3 month holding period with 3 months portfolio formation. The result is similar to what Jeegadesh and Titman (1993) and most results in the main international literature finding where there is a price continuation in the short-term. Furthermore, this study is in line with Julio and Catia (2014) findings where momentum strategy is only effective to be used for a particular formation and holding period in the short-term horizon.

CONCLUSION

Based on the research findings and discussion, this study concluded that not all portfolio formation and holding periods were proven to be effective as well as significant in generating abnormal return in Indonesian stock market. Yet, a particular formation and holding periods are still proven to be effective and significiant to generate abnormal return. This study documented that contrarian strategy is proven to be significant and

effectively used only within the 6 month formation with the short-term 3 and 12 months holding periods. Meaning to say, Investors may be able to use the contrarian strategy to generate abnormal return by constructing portfolios based on the past 6 month performance and hold their portfolios for short-term 3 and 12 months.

In the context of the momentum strategy, this study documented that not all formation and holding period for momentum strategy is effective to generate abnormal returns in Indonesian stock market. Although this study document that most portfolio formations captured the phenomenon of price continuation, but only 3 month formation with 3 month holding period is proven to be effective and significant in generating abnormal returns with market adjusted and capital asset pricing model. Thus, this study implied that investors may be able to use the momentum strategy to generate abnormal return by constructing portfolios based on the past 3 month performance and hold their portfolios for short-term 3 and 6 months.

In addition, the researcher would like to recommend for future researcher to add other models such as three factors by Fama and French (1993) in answering research questions regarding contrarian and momentum strategy,

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