DIPONEGORO JOURNAL OF MANAGEMENT *Volume 10, Nomor 4, Tahun 2021, Halaman 1-15*
http://ejournal3.undip.ac.id/index.php/djom ***ISSN (Online): 2337-3806***

Impact of Stock Liquidity to Momentum Return (Studies on Consumer Goods Companies Listed in Indonesian Stock Exchange (IDX) in 2016 – 2020)

Jihad Alvaro Sukmaputra, Erman Denny Arfinto [1]
Departemen Manajemen Fakultas Ekonomika dan Bisnis Universitas Diponegoro
Jl. Prof. Soedharto SH Tembalang, Semarang 50239, Phone: +622476486851

The purpose of this research is to analyze the impact between bid ask spread, trading volume activity, turnover, depth, and price impact to momentum return in consumer goods stock listed in Indonesia Stock Exchange (IDX) in 2016 – 2020. The independent variables in this research are bid ask spread, trading volume activity, turnover, depth, and price impact, while the dependent variable in this research are momentum return.

Sample in this research were selected using purposive sampling method with some selected criteria. Consumer goods companies listed in IDX in 2016 – 2020 were chosen 58 compannies as a sample. The statistic method that used in this research are descriptive analysis, classical assumption test (Normality test, Heteroscedasticity test, Multicollinearity test, and Autocorrelation test), multiple regression analysis, and hypothesis test (F-statistic test, determinant coefficient, and T-statistic test).

The results showed that bid ask spread has a positive significant on momentum return, trading volume activity has a positive significant on momentum return, price impact has a negative significant on momentum return, depth has a negative insignificant on momentum return, and turnover has a negative insignificant on momentum return.

Keyword: Stock Liquidity, Momentum Return, Bid Ask Spread, Trading Volume Activity, Turnover, Depth, Price Impact

I. INTRODUCTION

Capital market can be view as a mediator for sellers and buyers to do the transaction of a company's shares. The capital market has an important role because the capital market has contributed to the national economic stabilities. In addition, the capital market also plays a role as an investment function because it provides an opportunity for investors to obtain financial returns in accordance with the characteristics of the selected investment.

In a simply way, what people do for investment is to make a certain amount of money at a later date. The investment objective is to obtain a high level of return with a certain level of risk (Yuliani, 2013). Most of the investors, especially the beginner investors, are expected higher return with lower funds expending and lower risks. Usually, that kind of expectation are based on the investors that rarely doing the research about the investment concepts and strategies. The type of investors that are often to do the research and studies about the investments are more rational, because they have many determinations that can measures how much they will be got from investing.

The investment objectives for investors are depending on the investor's goals. For example, an investor which aims to obtain funds to pay for retirement funds in the future will probably choose investing in a mutual fund portfolio because it hopes that investing in mutual funds will provide a relatively certain income than investing in stocks. Meanwhile, for fund deposit institutions, such as banks has a goal to obtain a higher return. They usually prefer investing in securities that are easily traded, but gives a high return expectation. There is also an investor that only targeting for trading purposes, which that they buy and sell in a short time. The traders or short time investors are expected to get the money as fast as they can.

The basic things of the investment decision process are understanding the relationship between the expected return and the risk of an investment. In generally, the relationship between risk and expected

[1] *Corresponding author*

return on an investment is a direct and linear relationship. This means the greater the risk an investment, the greater the rate of return expected from these investments and occur the other way. The relations like that have fulfill the question why not all investors just invest in that asset offers the highest rate of return. Besides paying attention high returns, investors must also consider the level of risk that must be carried.

Normally, investors expect their investment returns to be as high as the best. However, essential considerations must still be considered, including how much risk can be incurred by the investment. Generally, the higher the risk, the higher the estimated rate of return. Mostly, investors tend to be rational. A rational investor would not like uncertainty or risk. Investors approach to risk may depend on the preferences that these investors are exposed to risk. Investors who are more aggressive would prefers for a higher investment risk, followed by a high expected rate of return. Likewise, investors who do not have a courage to take a high risk, of course, they cannot expect high rate of return.

The consideration made by investors is to accept certain risks in order to get a return certain, or the greater the risk that investors dare to bear, the greater the return expected. To anticipate fluctuations in return and risk, investors usually do invest in multiple stocks or stock portfolios with the expectation of fluctuations in the returns of those stocks formed in the portfolio is not very sharp. The occurrence of a fluctuating stock price movement from each company indicates that the stock price continues to move along with demand purchase of shares from investors. Of course, this will cause its own risks. Investors take the maximum return on a certain risk to obtain a certain return on risk minimal. This means that the investment risk that arises is a form of reality that occurs which risk is always difficult to avoid but is managed to occur in very minimal amounts.

Investors in making every investment decision are always trying to minimize various risks that arise, both short-term and long-term risks. Any changes in various micro and macroeconomic conditions will also encourage their formation various conditions that require an investor to decide what to do and a strategy what is applied so that he still gets the expected return. Investment risk can be interpreted as the possibility of a difference between actual return and expected return.

There are two types of risk in stock market, which is unsystematic risk and market risk. Unsystematic risk refers to the risk that is not caused by general market movements but caused by the security itself or that problem faced by certain industries. This risk can be avoided by doing diversification. Market risk or systematic risk refers to the risk that caused by movement the market in general, like changes in the economy of a country, tax changes and the energy crisis world. This risk cannot be minimized by diversification even investors who have diversify with either will be affected (Safelia, 2012).

In the risk classification referred above, strategies are taken to mitigate this in a diversified way. Concept of this diversification is an attempt to divide the risk into a number of assets or investments in the form of a portfolio. A very common quotes for every investor, which is "don't put your eggs in one basket". From this phrase, it can be interpreted that if we have any securities that are not put in one industry only, if the industry has failed, then all of our securities are subject to the same risk. However, if we distribute securities around a variety of portfolio-based sectors, the amount of risk posed by each of our securities can differ.

One way to minimize risk is to use an investment strategy. There are many investment strategies that used by investors, such as contrarian investment and momentum strategies. A contrarian stock selection strategy consists of buying stocks that have been losers and selling short that have been winners. The strategy is formulated on the premise that the stock market overreacts to news, so winners tend to be overvalued and losers undervalued (Chan, 1988). On the other hand, the strategy of buying winner stock in the past period and then selling them in the future when the stock price increases is called the momentum strategy (Jegadeesh & Titman, 1993). Both of these strategies are using information as a reference in making decisions in stock trading. The difference is based on the clarity of information circulating regarding company stocks. Investors who use contrarian investment strategies pay more attention to specific information about company stocks. Meanwhile, the momentum investment strategy is adopted by investors when information is unclear.

One of the strategies that common in many investors are momentum strategies. Momentum strategy is a behavioral investment strategy, which uses past equity prices to forecast future prices. Momentum is a stock characteristic that can be used to predict stock returns (Jegadeesh & Titman, 1993). The idea of the self-financing strategy of momentum is that investors buy equities if the equity prices have started to rise, and sell equities if the equity prices have started to fall. In this strategy, investors believe that if the prices are underpriced, they can sell it and expect abnormal return from it.

Investors are prioritizing to choose companies that have liquid stocks because of the possibility of acquiring a substantial profit in the future and investors will get it profits through dividend distribution. In addition to the number of shares outstanding, investors basing his decision on various information he has, both information publicly available as well as private information. Significant impact on decisions about investment attractiveness of a stock is not only generated by expected returns, company stability, openness towards investors, but also by liquidity. Investors prefer liquid shares and in the case of illiquid shares they need a certain bonus thus making liquidity a risk factor (Norvaisiene and Stankeviciene 2014).

Damodaran (2012) in their books "Investment Philosophies" has classified two kinds of investment strategies, which is passive and actives strategies. In a *passive strategy*, these types of investors are investing in a stock or company and wait for the investment to pay off. Thus, a portfolio manager who buys stocks with low price-earnings ratios and stable earnings can be categorized as passive strategy. In an *active strategy*, this type of investors is investing in a company and then try to change the way the company is run to make it more valuable. Venture capitalists can be categorized as activist investors since they not only take positions in promising businesses but also provide significant inputs into how these businesses are run.

Liquidity is the fundamental aspects that is necessary to pay attention for investors for an investment decision making. But the fact is, not all stocks easily transacted, or having difficulty in liquidity. Simple liquidity show ease for selling and buying effects on a reasonable price. So, if to sell and buy a certain number of stocks must wait or if the spread is between demand and sales are relatively large, or sale of stock in quantity relatively large will affect the price market substantially, one might say that the stock is not liquid. One of factors that determine the value of a stock is the liquidity level of these stock. More and more quickly an asset can be turned into money then the higher liquidity. Therefore, stock liquidity is determined by whether the stock is easily traded in a short period of time and attractive to investors. One of the attractions so that a stock is attractive to investors is a cheap price as well low transaction cost fee.

Liquidity also has a significant impact to the asset pricing. Liquidity plays an important role in isolation and in combination with other well-known risk factors, which is market, size, book-to-market equity, and momentum. This provides a more accurate and complete model of asset pricing (Keene, M.A., et al. 2007). Assets that are not liquid and offered at a high price would be traded at a low price.

Fama and French (1992) argue that while liquidity is an obvious concern, since the combination of size and book-to-market factors underlies it, it does not need to be specifically measured and accounted for. On the other hands, other cross-sectional studies such as Chordia, Subrahmanyam, and Anshuman (2001), show that liquidity must be separately accounted for individually. These studies show that liquidity remains an important factor in returns after evaluating for size, book-to-market, and other variables. In particular, they document those average returns are negatively related to liquidity fluctuations and that estimated returns are positively related to trading volumes in the currency and negatively related to the dollar volume variance coefficient. The recent discussions on the emergence of liquidity commonality raises a new question about the role of liquidity in the asset pricings.

The common reason for why liquidity could impact expected returns is that investors holding stocks know that they will face transaction costs when they sell their stocks at some point in future. Investors would also discount stocks with higher transaction costs or capital constraints (Amihud & Mendelson, 1986). The most common transaction cost benchmark is Spread, the cost of trading at the best bid or ask price. Bid-ask spread is a reflection of the size of transaction costs. A large bid-ask spread will result in investors holding their share ownership longer. Investors who trade at the bid-ask price will try

not to sell or hold their shares at a certain price that can cover the costs incurred to buy the stocks (Sari, Abundanti, 2015).

In stock return, bid ask spread plays an important roles. Investors should demand a higher expected return for higher spread stocks in order to compensate them for higher trading costs. Investment decisions should therefore rely not only on the risk inherent in the security, but also on its liquidity. In addition, it is important to remember that while an investor can reduce the security risk by owning a diversified portfolio or hedged stock markets, there is nothing he can do on his own to avoid the expense of illiquidity (Amihud & Mendelson, 1986).

The second liquidity component that must be consider is depth. The presence of a centralized market does not ensure that an asset can be liquidated without loss: if the market is not adequately deep, traders can face unfavorable market price changes in regard to their transactions. However, since the depth of the market depends on the entry decisions of all potential traders, each trader will determine the market's absorption ability on the basis of his conjectures about the actions of others: as often happens in circumstances where externalities are at work, multiple reasonable assumptions can emerge, based on the initial conjectures that each trader makes (Pagano, 1989).

The commonly renowned and examined dimensions of liquidity are spread and depth. However, early literature from Kempf, et al (2015) also highlights another important dimension of liquidity, which is resiliency. The research examines that resiliency is a fundamentally significant factor of liquidity in the framework of overall market quality. Resiliency is also strengthened when indication related risks are lower. Trading with various determinant indicator is often related with higher resiliency, but less so for smaller stocks and in information intensive periods (Kempf, et al, 2015).

Investors anticipate having to sell their shares at some point in the future, and recognize that when they do so, they will face transactions costs (Baker, M. & Stein, C, J. 2002). Their research finds out behavioral bias among the investors regarding to the liquidity. There are a number of underlying behavioral mechanisms that might give rise to under-reaction. For example, dumb investors might be overconfident in their priors and hence reluctant to revise these priors when new information comes in (Baker, M. & Stein, C, J. 2002). The research by Galariotis, E.C., Krokida, S. & Spyrou, S.I. (2016) also examine about the liquidity proxies for investor sentiment, they discovered that herd behavior is more dominant in high sentiment stocks depends on the duration and that in major stock markets there might be a two-way relationship between sentiment and herding.

The role of liquidity in herd behavior has been neglected when it comes to herd behavior towards consensus. Sias (2004), for example, shows that as liquidity increases, the investors are less likely to herd, while Poon, Rockinger, and Stathopoulos (2013) find that bid–ask spreads and liquidity risk increase with the sell-side herding during financial crisis. Wermers (1999) also indicates that the investors do not choose less-liquid assets; their increased demand for liquidity funds may result in aversion to smaller stocks that are usually less-liquid.

Discussing about stock liquidity and investing purposes is always interesting. It is mandatory for investors (wherever the investing purposes) to understand the basic knowledge about the liquidity, especially the liquidity and its role in momentum return. But unfortunately, writer has not found the researches that specifically discuss about the impact of liquidity to momentum return.

The primary aim of every investor is to gain more profit. Investors are prioritizing to choose companies that have liquid stocks because of the possibility of gaining a substantial profit in the future and investors will get it profits. Hence, many investment strategies must be devised properly in order to win the market. One of the strategy is momentum strategies.

This research are important for investors because this research are analyze investor anomalies and how liquidities are affecting stock returns. It is necessary for investor to pay attention in decision making process, and the author hopes that this research findings can be viewed as a reference for the investors in the decision making process. This research aims to raising awareness for the investors, especially newbie investor, to not investing a stock just based on feelings that comes from news, without do the comprehensive analysis. Besides that, this research also aims to be contributed in realizing many investors, at least in Indonesia, in raising awareness to the importance of investment literacies.

This research is using consumer goods stocks because these types of stocks are attractive to investors. In addition, consumer goods stocks are also considered to have fluctuating liquidity levels. Thus, the stocks contained in the index will always change. Based on the research background that has been described, this research is entitled "Impact of Stock Liquidity to Momentum Return (Case Studies on Consumer Goods Companies Listed in Indonesian Stock Exchange (IDX) in 2016 – 2020).

There are several reasons why investors must to pay attention to the liquidity issues. The liquidity of a stock is how fast the stock is slow can be bought and sold. Liquid stocks mean they are frequent traded. This liquidity can be seen through trading volume activities. If the stock volumes that are traded are greater than the volume of the listing stock, the more liquid the stock are trading volume activity increases. It must to take carefully for investors when there is a strange transaction volume, which can be indicated by the fluctuated trading volume.

Jegadeesh & Titman (1993) explained the way that momentum strategies work, which is that investors buy stock if the stock prices have started to rise, and sell stock if the stock prices have started to fall. In this strategy, investors believe that if the prices are underpriced, they can sell it and expect abnormal return from it. Our study here should be able to help clearing this gaps that can caused the failure of the investment goals. This research must answer the problem that averages investors have, which is behavioral bias among the investors regarding to the liquidity. There are a number of underlying behavioral mechanisms that might give rise to under-reaction. For example, dumb investors might be overconfident in decision making, and herd behavior is more dominant in high sentiment stocks depends on the duration and that in major stock markets. Herding behavior is also dangerous when the investors are chosen to not carefully analyze the stocks. Furthermore, this study will also answer the other gaps, which that there is no research that examine the relation between stock liquidity and momentum return specifically. In particular, the researches above didn't provide completes research about stock liquidity to momentum return.

Based on the researches above, there are no research that examine the relation between stock liquidity and momentum return specifically. In particular, the researches above didn't provides completes research about stock liquidity to momentum return. This paper aims to plug these major gaps in the literature. It is necessary to find the aim of this research, which is to find out how the stock liquidity influences the momentum strategies. Besides, consumer goods stocks are attractive to investors. In addition, consumer goods stocks are also considered to have fluctuating liquidity levels, so it is relevant to making consumer goods stocks as a research objects in order to find the gaps.

Based on the research gap and gap phenomenon above, then some research questions can be formulated as follows:

1. Does the trading volume activity have an impact to momentum return?
2. Does the bid ask spread have an impact to momentum return
3. Does the turnover have an impact to momentum return?
4. Does the price change impact have an impact to momentum return?
5. Does the depth have an impact to momentum return?

II. LITERATURE REVIEW

2.1. Hypothesis Development

1. The relation between Bid Ask Spread with Momentum Return

Bid ask spread refers to the difference in the highest purchase price that a trader is willing to buy a stock with the lowest selling price that a trader has willing to sell these stocks. If there is a decrease in the stock price fraction, it will cause a decrease in the bargaining range, resulting in a decline of a stock returns.

Barberis, Shleifer, and Vishny (1998) in investor sentiment theory stated that past stock returns are an important factor for investor sentiment. Stock that are illiquid can increase bid ask spread which also increase the transaction can cost towards the stock. This can influence the stock reputation which can caused overreaction to responses this as a bad news.

Amihud and Mendelson (1989) has examine the relation between bid ask spread (with other variables) and stock returns. In the research, the research methods are Pooled cross-section and Time-series estimation. The result finds that Bid Ask Spread has a positive impact to stock return.

H_1: Bid ask spread has a positive impact to momentum return

2. The relation between Trading Volume Activity with Momentum Return

Trading volume activity is a comparison between the numbers of stock traded at a certain time with the number of company stocks outstanding in a certain period. The greater the volume of trading activity, the more likely it is to gain profit, which will increase the return that will be earned and, of course, make investors more confident in the potential of the issuer to make a profit.

Daniel, Hirshleifer, and Subrahmanyam (1998) in overconfidence theory stated that the investors tend to overestimate the quality of information signals they have generated about stock values. Investors tend to be overconfidence in responding a stock that has the bigger Trading Volume Activity, because a big TVA will provide a large return, and a stocks that have a big TVA tends to have a good sentiment, so it is clearly that the stocks are liquid, and a liquid stocks are easy to transact and make transactions that can be carried out continuously.

Moreover, the research by S.-G. Jun et al. (2003) has explained about how the relation between trading volume activity (with other variables) and stock return. The research finds that trading volume activity has a positive impact to stock return.

H_2: Trading volume activity has a positive impact to momentum return

3. The relation between Turnover with Momentum Return

Low turnover stocks exhibit more reversals than high turnover stocks. This could arise because demand shocks are attenuated at the monthly frequency as compared to the weekly frequency, which would suggest that turnover may be a poor proxy for non-informational trades at the monthly frequency (Avramov D., et al, 2006). High turnover indicates effective management, but the high turnover can also be caused by the company's assets that are depreciated, so it is depend on the company conditions.

If the turnover are high, the stock are more easier to changes hand to hand, and when the investor are not holding their stock in a long time, they just receive a small return. A great turnover indicates the investor that realizing their return too soon. This phenomenon can be called as a *"disposition effect"*. According to Odean (1998), disposition effect is the tendency of investors to hold losing investments too long and sell winning investments too soon.

Disposition effect reflects to the investors that realizing their return too soon. Odean (1998) stated that investors chose to hold their loser stock and sell winner stock, because they believe that in the future, loser stock will soon became winner stock. Daniel, Hirshleifer, and Subrahmanyam (1998) in overconfidence theory has stated that investor are overconfidence with their abilities and they believe that they are actually win, while in reality, it is just temporary. Datar et al. (1998) has done the research that examines the relation between turnover and stock returns. The result finds that Turnover rate variable exhibits a reliable negative relation with returns.

H_3: Turnover has a negative impact to momentum return

4. The relation between Depth with Momentum Return

According to Kyle (1985), depth shows the tradable volume at a certain price level or the ability to absorb transactions at a certain price level. The bid depth is the number of stocks or dealer will buy at the current bid price. The momentum strategy users usually take an advantage of the depth momentum, which is that they will buy or sell the stocks with the current level that they believe it can make a profit in the future.

Daniel, Hirshleifer, and Subrahmanyam (1998) in overconfident theory stated that some or all investors are overconfident about their abilities, especially when the stock condition are depth, which indicates stable stocks. When the overconfident investors believes that their abilities are good enough in handling a stable stocks without pay attention to general information, in the short time, there will be many investors that overreacts to the stocks and do the transaction immediately, so it can increase momentum return and liquidity. The research by Lee, Jieun (2011) has examine the relation between depths (with the

other variables) to stock returns. It is concluded that arbitrage costs provide a sufficient condition for limiting arbitrage and that institutional investor's use momentum trading to improve price efficiency.

H_4: Depth has a positive impact to momentum return

5. The relation between Price Impact with Momentum Return

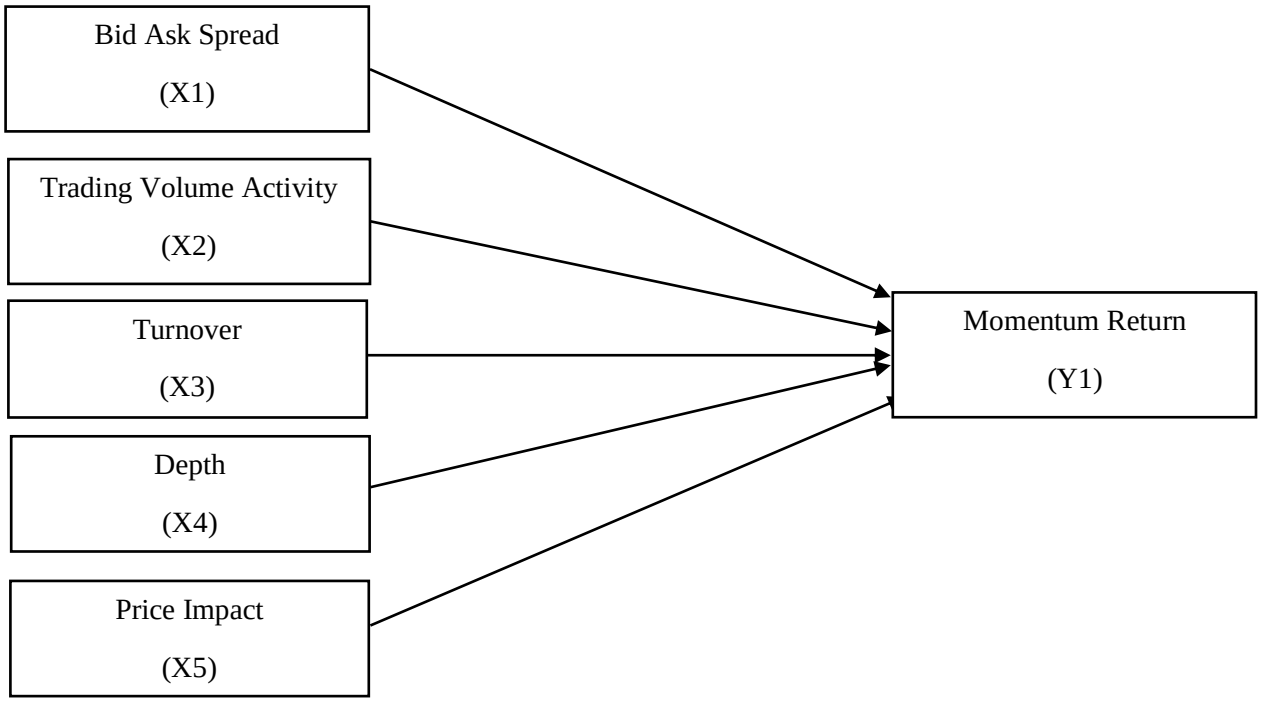
Price impact describes the correlation between the incoming transactions and the corresponding price change. The fact that buying and selling trade can drive prices up and down is intuitively obvious and is clearly proven empirically. Barberis, Shleifer, and Vishny (1998) in investor sentiment theory stated that the past stock returns are an important factor for investor sentiment. Price impact represents a correlation between recent prices with volume. When the stock prices increase, it is followed by the trading, so that many investors competes to buy these stock because that stock are more liquid, so it caused a greater trading volume, it is because the increasing stock prices causes good sentiment. Lee, Jieun (2011) has examine the relation between price impacts (with the other variables) to stock returns. The result finds that that arbitrage costs provide a sufficient condition for limiting arbitrage and that institutional investor's use momentum trading to improve price efficiency.

H_5: Price impact has a positive impact to momentum return

2.2. Research Model

Based on this research, the research model that will be used for the writer perspectives can be explained in picture 2.1, which is:

Figure 2-1 Figure of Research



Source: Variaous Journals

III. RESEARCH METHODS

Sample in this research were selected using purposive sampling method with some selected criteria. Consumer goods companies listed in IDX in 2016 – 2020 were chosen 58 compannies as a sample. The statistic method that used in this research are descriptive analysis, classical assumption test (Normality

test, Heteroscedasticity test, Multicollinearity test, and Autocorrelation test), multiple regression analysis, and hypothesis test (F-statistic test, determinant coefficient, and T-statistic test).

IV. RESULT AND FINDING

4.1 Multiple Regression Analysis

Multiple regression analysis was used to measure influence or the relationship between the independent variable and the independent variable with dependent variable. Here are the result of the analysis:

Table 4.1 Result of Multiple Regression Analysis

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	,000	,000		3,771	,000
	BA100	,010	,004	,080	2,560	,011
	DEPTH100	-8,150E-9	,000	-,042	-1,353	,176
	PriceImpact	-,001	,000	-,094	-3,116	,002
	Turnover	-7,371E-10	,000	-,034	-1,125	,261
	TVA	,003	,002	,054	1,983	,049

a. Dependent Variable: R100

Source: Output SPSS 22

Based on the table above, multiple regression analysis can be represented as:

$$Y = 0{,}080\ BA100 - 0.042DEPTH100 - 0.094PI - 0.034TO + 0.054TVA + e$$

The multiple regression analysis shows that Trading Volume Activity (TVA) and BA100 have positive coefficients. Meanwhile, turnover, Depth, and Price impact have a negative coefficient.

4.2. Hypothesis Test

4.2.1 F Statistic Test

Basically, the F test shows whether all the independent variables included in the model have a joint influence on the dependent variable. The output results from the F significance test will be described in table below:

Table 4.2 Result of F Statistic Test

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,000	5	,000	5,255	,000[b]
	Residual	,006	1082	,000		
	Total	,007	1087			

a. Dependent Variable: R100

b. Predictors: (Constant), TVA, PriceImpact, DEPTH100, Turnover, BA100

Source: Output SPSS 22

From the F test, the calculated F value is 5,255 with a probability of 0,000. Because the probability is much smaller than 0.05, the regression model can be used to predict the value of stock return or which means the variables BA100, TVA, Turnover, Depth, and price impact are equally able to relate to Momentum Returns (R100).

4.2.2 Determinant (R^2) Coefficient

The coefficient of determination (R2) measures how far the model's ability to vary the dependent variable. Every time the independent variable are added, the R2 value will increase regardless of whether the variable has a significant effect on the dependent variable.

Table 4.3 Result of Determinant Coefficient

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,454[a]	,324	,219	,00245	1,877

a. Predictors: (Constant), TVA, PriceImpact, DEPTH100, Turnover, BA100
b. Dependent Variable: R100

Source: Output SPSS 22

Table above shows that the standard error value of the estimate (SEE) is 0.00245. The smaller the SEE value will make the regression model more precise in predicting the dependent variable.

4.2.3 T-Statistics Test

T-statistic test is used to test the effect of independent variables on the dependent variable individually. To see the effect of the independent variable partially on the dependent variable, it can be seen in the t value and its significance value. Here are the T-Statistics Test results:

Table 4.3 Result of T-Statistic Test

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	BA100	,921	1,086
	DEPTH100	,942	1,061
	PriceImpact	,995	1,005
	Turnover	,987	1,013
	TVA	,954	1,048

a. Dependent Variable: R100

Source: Output SPSS 22

Based on the table above, the variables BA100 and TVA have a positive significant impact on stock returns with t values of 2.560 and 1.983 and a significance value of less than 0.05, which is 0.011 and 0.049. Price impact has a negative significant impact on stock returns with t values of -3,116 and a significance value of less than 0.05, which is 0.002. Furthermore, Turnover, and Depth has a negative no impact on R100, becouse the significance value for each variable is more than 0.05.

Related to the proposed hypothesis, this study has 5 hypotheses to test the variation of the independent variables towards R100. Hypothesis 1 is that Bid Ask Spread (BA100) has a positive impact on R100. Hypothesis 1 test shows that the t value is 2.560 with a significance of 0.011. The significance value of the test is less than the significance level of 0.05. Thus, at the 5% significance level BA100 has a positive effect on stock returns. This means that **Hypothesis 1 are accepted**.

Hypothesis 2 is that Trading Volume Activity (TVA) has a positive impact on R100. Hypothesis testing 2 shows the t value of 1.983 with a significance of 0.049. The significance value of the test is less than the significance level of 0.05. Thus, at the 5% significance level, TVA has a positive impact on R100. This means that **Hypothesis 2 are accepted**.

Hypothesis 3 is that Turnover has a negative impact on R100. Hypothesis testing 3 shows the t value of -1,125 with a significance of 0.261. The significance value of the test is more than the significance level of 0.05. Thus, at the 5% significance level, Turnover has a negative insignificant impact on R100. This means that **Hypothesis 3 are rejected**.

Hypothesis 4 is that Depth has a positive impact on R100. Hypothesis testing 4 shows the t value of -1,353 with a significance of 0.176. The significance value of the test is more than the significance

level of 0.05. Thus, at the 5% significance level, Depth has a negative insignificant impact on R100. This means that **Hypothesis 4 are rejected**.

Hypothesis 5 is that Price impact has a negative impact on R100. Hypothesis testing 5 shows the t value of -3,116 with a significance of 0.002. The significance value of the test is less than the significance level of 0.05. Thus, at the 5% significance level, Depth has a negative impact on R100, but the results of this study are different from the proposed hypothesis, where the proposed hypothesis is positive but the results of this study are negative, so **Hypothesis 5 are rejected**.

In summary, the table below are represents the results of hypothesis test:

Table 4.4 Summary of Hypothesis Test

Hypothesis	Decision	Description
H1: Bid ask spread has a positive impact to momentum returns.	Accepted	t=-2.560; sig.=0,011; min= -0.00145; max=0.144343; mean= 0.01643; std.= 0.01921
H2: Trading volume activity has a positive impact to momentum returns.	Accepted	t=1.983; sig.=0,049; min= 0.0016; max=0.5824; mean= 0.0199; std.= 0.0386
H3: Turnover has a negative impact to momentum returns.	Accepted	t= -1,125 sig.=0,261; min= 0.0015; max=0.4250; mean= 0.4367; std.= 0.49221
H4: Depth has a positive impact to momentum returns.	Rejected	t= -1.353; sig.= 0,176; min= 3.913821; max=11.3364; mean= 8.67731; std.= 2.67594
H5: Price impact has a positive impact to momentum returns.	Rejected	t= -3.116; sig.= 0,002; min= -0.7991; max=0.8474; mean= 0.0025; std.= 0,26577

4.3 Discussion

4.3.1 Impact of Bid Ask Spread to Momentum Return

Hypothesis Test 1 (H1) that is the impact of Bid Ask Spread (BA100) to Momentum Return has 2.560 of t value, which has 0.011 of significant value. It can be concluded that BA100 has a positive impact to momentum return, but it is significant because the significant values of BA100 are below 0.05. The data in this research found that bid ask spread are most likely increased than the return that are increased. The bid ask spread data in this research tend to be increasing while the return are increased too.

Stock that are illiquid can increase bid ask spread which also increase the transaction can cost towards the stock. This can influence the stock reputation which can caused overreaction to responses this as a bad news. Amihud and Mendelson (1989) has examine the relation between bid ask spread (with other variables) and stock returns. In the research, the research methods are Pooled cross-section and Time-series estimation. The result finds that Bid Ask Spread has a positive impact to stock return

4.3.2 Impact of Trading Volume Activity to Momentum Return

Hypothesis Test 2 (H2) that is the impact of Trading Volume Activity (TVA) to momentum return has 1.983 of t value, which has 0.049 of significant value. It can be concluded that TVA has a positive impact to momentum return, and it is also significant because the significant values of TVA are

below 0.05. It can be seen that the trading volume can increase company profit that can make investors more confident to earn profit.

The positive impact between TVA and momentum return can be happened because the bigger Trading Volume Activity will provide an increasing return because liquid stocks are easy to transact and make transactions that can be carried out continuously. This output are consistent with the research that has been conducted by S.G. Jun et al. (2003) that discuss about the liquidity and stock returns in emerging equity markets. Their also founded positive correlation between stock returns in emerging countries with market liquidity as measured by TVA. Their founded that market liquidity has a correlation structure between emerging equity markets and the global economy.

4.3.3 Impact of Turnover to Momentum Return

Hypothesis Test 3 (H3) that is the impact of Turnover to Momentum Return has -1,125 of t value, which has 0.261 of significant value. It can be concluded that Turnover has a negative impact to momentum return, and it is not significant because the significant values of Turnover are above 0.05.

The negative impact between turnover to momentum return indicates high turnover, which is the stock are easily changes hand to hand, and when the investor are not holding their stock in a long time, they just receive small return. This output are strengthen with the research that has been conducted by V.T. Datar et al (1998), which is that they found stock returns are having a strongly negative impact to turnover, referring those illiquid stocks provide higher average returns.

4.3.4 Impact of Depth to Momentum Return

Hypothesis Test 4 (H4) that is the impact of Depth to Momentum Return has -1.353 of t value, which has 0.176 of significant value. It can be concluded that Depth has a negative impact to momentum return, but it is not significant because the significant values of Depth are more 0.05.

The negative impact between depth and return indicates the shallow of the market. If the market not deeper enough, it indicates unstable stock. That way, the level of investor confidence in the stock will be higher. Investors can take advantages the unstable market, even can control the market, so when the market is depth, investors can sell the stock in a good prices. According to Lee, Jieun (2011), the dealers adjust depth to protect themselves from informed traders (these types of traders are buying on good news and selling on bad news). Such strategies are just making stocks become illiquid during the high information asymmetry period. They also founded that market makers can changing arbitrarily to protect themselves by increasing depth, if they believe that some traders knows well the superior information.

4.3.5 Impact of Price Impact to Momentum Return

Hypothesis Test 5 (H5) that is the impact of Price Impact to Momentum Return has -3.116 of t value and has 0.002 of significant value. It can be concluded that Price Impact has a negative impact to momentum return, but it is significant because the significant values of price impact are below 0.05.

Price impact shows the correlation between the incoming transaction and the changing stock prices. The negative impact between price impact and momentum return are indicating the inefficiency of the investors in making a decision. There is an information bias, when there are good news related to the market, investors are not making a decision immediately. This anomalies causes the small return when the stock prices are increasing and the trading volume are small. According to the research by Weber, M., and Camerer, C (1991), this phenomenon can be categorized as "*Disposition Effect".* Referring to their explanation on the research, disposition effect is when the investors are sell winning stocks too early and losing stocks too long.

V. CONCLUSIONS

5.1. Conclusions

This research demonstrates new discoveries about the between liquidity and momentum return. Using the sample from 2016 – 2020, author finds its own challenges in compiling this research. The time gap in the sample, which is 5 years, are making the author has a huge amount of data that must to be

calculated. The huge amount of data can caused the findings of irrelevant data that cannot be processed, so it took more times to outliers the data, especially in the outstanding shares data, so it can be easily processed.

This section will summarized all of the results of findings, which is:

1. Our first hypothesis shows that Bid Ask Spread (BA100) has a positive impact to momentum returns. The T-Statistic test shows that BA100 has significant value. This can be happen because the greater the liquidity of the stock, the greater the bid ask spread which causes a greater return. Therefore, momentum investors need a large return on investment for these stocks, so the variable relationship between R100 and B100 is positive.
2. Our second hypothesis shows that Trading Volume Activity has a positive impact to momentum returns. The T-Statistic test shows that TVA has significant value. This can happen because the bigger Trading Volume Activity will provide a large return because liquid stocks are easy to transact and make transactions that can be carried out continuously.
3. The third hypothesis shows that Turnover has a negative impact to momentum returns. The T-Statistic test shows that turnover are not having a significant value. Turnover shows how fast and how many stocks that change hands during a period. The negative impact to momentum return indicates high turnover, which is the stock are easily changes hand to hand, and when the investor are not holding their stock in a long time, they just receive small return.
4. The fourth hypothesis shows that Depth has a negative impact to momentum returns. The T-Statistic test shows that depth are not having a significant value. Depth shows the number of stocks that are transacted. The negative impact between depth and return indicates the shallow of the market. If the market not deeper enough, it indicates unstable stock. That way, the level of investor confidence in the stock will be higher. Investors can take advantages the unstable market, even can control the market, so when the market is depth, investors can sell the stock in a good prices.
5. The last hypothesis test shows that Price impact has a negative impact to momentum return. The T-Statistic test shows that price impact has significant value. Price impact shows the correlation between the incoming transaction and the changing stock prices. The negative impact between price impact and momentum return are indicating the inefficiency of the investors in making a decision. There is an information bias, when there are good news related to the market, investors are not making a decision immediately. This anomalies caused the small return when the stock prices are increasing and the trading volume are small.

5.2 Limitations

This research has limitations, which is:

1. In the 5 variables that are tested, there are only 2 result that are consistent with the hypotheses and it is only 1 variables that has positive impact, which is TVA. This can happened because of the high rate of volatility in the stock market, so all prices, especially consumer goods stocks are highly fluctuates.
2. The result of R square in Autocorrelation test are surprisingly small, which is 0.219. The Durbin Watson Test results are 1.877 that the amount is quite good, but many of the variables founded that not significant. The research also founded that the variables in this research are not suitable for explaining momentum return phenomenon in Indonesia.
3. Using secondary data, so that data analysis is highly dependent on the results of data stock market movement reports. Hugh amount of the required data for this research is also can be said as an obstacles, because many data are not valid, so it cannot be calculated properly.

5.3 Suggestions

Based on the limitations above, authors has suggestions for the next researchers and investors, which is:

1. For further research, it is suggested that the research model are using model that have heteroscedasticity considering such as: ARCH, GARCH and the other proxies that can easily indicates the momentum research.
2. For investors, in order to planning momentum strategies, it is necessary to pay attention to TVA and turnover variables. In the result of multiple regression analysis in chapter IV, it is concluded in the table of beta that the largest number stands for TVA and turnover. TVA refers to every transaction that occurs on the stock exchange at the time and certain stocks, and turnover refers to how many times a stocks changes owners

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