

## THE TRADING FACTORS, RISK BASED FACTOR AND FIRM CHARACTERISTICS AS DETERMINANTS OF LQ45 FIRM STOCK RETURNS LISTED IN INDONESIA STOCK EXCHANGE

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### ABSTRACT

This research aims to analyze whether trading factors, risk based factor and firm characteristics influence LQ45 firm stock returns that are listed in Indonesia Stock Exchange. This research use sample of LQ45 firms in Indonesia Stock Exchange. The data chosen is time series from 2013-2016. The variable used in this research consist of dependent and independent variables. Dependent variable in this research is firm stock returns and the independent variables are trading volume, bid-ask spread, beta, firm size and market to book value (MBV).

This research use multiple regression analysis using software SPSS 23 to analyze the relation of independent variables to dependent variable. As the result, out of 5 independent variables there are 4 independent variables that positively and significantly influence firm stock return. They are consist of trading volume, bid-ask spread, beta and market to book value (MBV). Meanwhile firm size doesn't influence firm stock returns significantly.

**Keywords :** *stock return, trading volume, bid-ask spread, beta, firm size, mbv*

### INTRODUCTION

#### Background

The capital assets pricing model (CAPM) proposed by Sharpe (1964), Lintner (1965) and Black (1972) argues that the market portfolio is the only factor underlying security returns. However, the arbitrage pricing theory (APT) originated by Ross (1976) challenges that a multi-factor generating process determines the stock return. Ross (1976) does not define the factors underlying stock returns. Recently, Fama and French (1993, 1995, 1996a, 1996b, 1997) argued that a three-factor model is enough to explain stock return behaviors. The three factors are the market portfolio, the size-related factor and the book-to market- related factor. Basically, CAPM, APT and the Fama-French three-factor model show that stock returns are determined by certain common factors. Crosssectional stock returns are determined by the risk premium of the common factors. Fama and French (1993) shows that the documented anomalies in stock returns would disappear once the market, size-related and book-to-market-related factors are considered the common factors for security returns. With the Fama-French three factor model, common factors rather than firm characteristics determine the stock returns.

Fama and French (1993) from Chen and Eva (2002) indicates that stock return patterns can be explained by the risk-based factors. The risk load underlying the risk-based factors is responsible for cross-sectional stock return behaviors. Stock risk

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indicated by beta will influence the expected return since the term of investment is still valid which stated that high return high risk. Investor would more likely to demand higher return if the stock is risky. Firms also have to bargain more return to gain investors' attention to their stock.

However (Kent Daniel and Sheridan Titman, 1998) challenges that stock returns are related to the firm characteristics of book-to-market ratio and size. Moreover, they argue that firm size and book-to-market characteristics are still significant for stock returns even though the risk load for a size-mimicking portfolio and book-to-market-mimicking portfolio are controlled. Research from Chen and Eva (2002) indicates 2 kinds of factor affecting stock return in Taiwan, they are risk based and firm characteristic. They do not agree if each factor can stand alone affecting the stock return since the research indicates a significant intercept of risk based and firm characteristic to stock return in Taiwan.

Furthermore they agree that factor of firm characteristic which in this case book to market ratio can't be significantly influence stock return without book to market related calculation of risk based factor. Firm characteristics in this research are gained from market to book value and firm size. Research from Merton [26] indicates that expected return is increasing in the asset systematic risk (beta), residual risk, and market value. Further he finds that market to book value is related to spread which shows illiquidity of a stock. This relation is supported by the result from Chui and Wei (1997) that state stocks with lower trading volume would experiences higher returns. Lower trading volume happen when investors don't get much public information about asset. This lower trading volume is indicated by higher spread. If contradict situation happen, when more information is publicly available about asset, bid-ask spread decrease because the trading volume increase.

However research from Amihud and Mandelson (1989) indicates that beta, bid spread, residual risk and size affecting stock return. Furthermore they found that only beta and bid spread of stock trading have really significant influence to stock return. Beta is somehow the measurement of risk based factor and bid ask price is included in trading factor. Chui and Wei (1997) argue that trading volume may be significant for stock returns. Further in their research they found that stocks with lower trading volume would experiences higher returns. This shows the negative relationship that needs to be indicated why this phenomenon happen.

It emphasizes the researcher that somehow trade activity affects stock return as well showed by bid-ask spread. Then in this paper the researcher will combine those three factors to indicate the stock return. This research will indicate whether those three types of factors of trading, risk based and firm characteristic affect stock return in Indonesia. The research is conducted in LQ45 stocks since the LQ45 stock is the most consistent in financial performance. LQ45 stock is categorized as blue chip stock that has high capitalization and value. The LQ45 stock provides data that is needed in this research. The trend of financial performance in LQ45 stock is increasing from year 2013-2016 proven by consistent firms included in LQ45 stock during 2013-2016.

More than that, LQ45 stock is owned by most investors in Indonesia, therefore the analysis would be more practical and visible impacted firms and investors in Indonesia. Furthermore to measure the influence to stock return in LQ45 stock, the trading factor will be gained from bid-ask spread and volume of stock trading in certain period. The risk based factor will be measured by beta and firm characteristic will be indicated by firm size and market to book value (MBV). After all, trading factors, risk and firm

characteristics affecting stock return in Indonesia are investigated using a detail empirical design.

## **LITERATURE REVIEW**

Pathirawasam (2011) reveals that stock returns are positively related to change in trading volume. In recent studies researchers have found relation between stock returns and trading volume (Chen, Firth and Rui, 2001; Khan and Rizwan, 2001; Lee and Rui, 2002; Pisedtasalasai and Gunasekarage, 2008). Furthermore Lischewski (2012) finds that portfolios with high trading volume tends to be followed by high returns and vice versa. Khaled & Titi (2013) reveals that trading volume responds positively to stock return. Furthermore Khan & Rizwan (2008) indicates that trading volume has significant and positive effect to stock returns. Research conducted in Palestine Exchange by Darwish (2012) indicates that there is positive relationship of trading volume and stock return.

However result from Chui and Wei (1997) stated stocks with lower trading volume would experiences higher returns. This shows negative relationship between trading volume and stock return. Negative result also detected by research from Lee and Rui (2002) which said trading volume doesn't cause stock market returns in US, Japan and UK markets cause of market efficiency. Research from Wang (2000) also indicates that trading volume has negative relationship with firm stock return.

Amihud & Mandelson (1989) indicates that there is significant positive relation between the increasing function expected return and bid-ask spread. Furthermore research from Wang (2000) using data on future markets of Nasdaq show that trading volume, bid-ask spread and price volatility are jointly determined. With regard to volatility estimation, his results indicate a positive relationship of bid-ask spread and a negative relationship of trading volume to stock return. However Clark et al. (2004) reveals that there is negative relation of bid-ask spread and stock return in NYSE.

Actual or realized returns will almost always deviate from expected returns anticipated in the beginning of the investment period. It is assumed that investors will prefer investments with the highest expected return suitable to their risk aversion (Bodie et al, 2008). Research from Amihud (1989) indicates that expected return is an increasing function of beta. It shows that there is a positive relationship beta and stock return. Fama and Mac Beth (2014) states that beta is not enough to measure the stock return. They believes that other factor takes role in that particular thing. Friend, Westerfield and Granito in Amihud (1989) said that there is significant positive relation between the increasing function expected return and systematic risk (beta). Research from Rizaldi & Imam (2016) reveals that Beta has important role than other variables like MVBV and influence stock returns positively. Furthermore (Chen, 2013) observes Shenzhen Stock Exchange and indicates that there is significant and positive relation of beta and stock return. However research by Verma (2011) reveals that there is positive relation between Beta and stock return but not significant. Other research by Thriou et al (2010) indicates that stocks with higher betas have higher return. It means there is positive relation of beta and stock return.

However research from Mazviona et al (2014) said that beta not that significant in explaining stock returns. Chen (2015) indicates that beta negatively related to return in Shanghai Stock Exchange. Research from Huang (1997) finds inverse relationship between return and beta.. Li et al (2005) also indicates significant negative relationship

of return and beta in six markets. Chui and Wei (1998) finds a flat relationship between stock return and beta in Hongkong, Korea, Malaysia, Taiwan and Thailand.

Research from Chen (2015) indicates that stocks with a high book-to-market ratio experience higher returns than stocks with a low book to market ratio. Furthermore She said that stock returns are related significantly to the firm characteristics of book-to-market ratio and size. Rosenberg et al. (1985) in Chen (2015) reveals that book to market ration has positive relation with stock return. Furthermore Puspitasari et al. (2011) indicates that price to book value dominantly affects stock return. Furthermore Nguyen et al (2004) indicates that firms with high market to book value have higher average returns than firms with low MVBV. It means that there is positive relation of MVBV to stock return. Zaretsky et al (2007) also said that B/M has significant and positive correlation to stock return.

However Rizaldi & Imam (2016) indicates that MVBV doesn't influence stock return significantly. Further research from (Shafana, 2013) indicates negative significant relationship of market to book value to stock return.

#### 2.9.5 The Effect of Firm Size on Stock Return

Research from Acheampong (2014) indicates that size has significant and positive relationship with stock returns. Furthermore he said that the effect of tradable shares is substantially stronger than that of non-tradable shares. It shows that there is significant component of size effect, when size is measured by tradable shares come from the difference in liquidity between large and small stocks. It means that big firms with large tradable shares generate lower stock returns than small firms. Rizaldi & Imam (2016) said that large firms consistently earn higher returns because it can response information faster. It means that there is positive relation of firm size and stock return.

However Amihud & Mandelson (1989) don't find any significant relationship between firm size and stock return. Furthermore research from Mazviona et al (2014) indicates that firm size has positive but insignificant effect on stock returns on Zimbabwe Stock Exchange. Ledakis et al (2011) indicates that small firms earn higher returns than large firms which shows negative relationship. Furthermore he said that the size effect phenomenon occurs where the small firms earn higher return than the large one. Research from Nguyen et al (2004) indicates that firms size has negative relationship to stock return. It because he finds evidence that large firms earn smaller return than small firms in Information Technology Stocks. Artmann et al. (2012) said small stocks deliver higher returns than large stocks and vice versa. He said negative relationship of size and return. Reinganum from Amihud & Mandelson (1989) also reveals that size has negative effect on stock returns.

Based on literature review from earlier research, the independent variables tested are trading related factors consist of trading volume and bid ask spread, risk factor measured by beta and lastly firm characteristic measured by market to book value and firm size. Firm characteristics are represented by firm size and market to book value because there is significant relation between those variables and stock return. Firm size and market to book value also can predict firm stock return accurately based on Fama and French's Three Factor Model. The dependent variable in this research is the stock return. All of those variables will be examined to find whether they positively and significantly affect the stock return. Therefore, hypotees is generated as follow:

H1: Trading volume has positive relation to stock return

H2: Bid-ask spread has positive relation to stock return

- H3: Beta stock has positive relation to stock return.  
 H4: Market to Book Value has a positive relation to stock return  
 H5: Firm size has a positive relation to stock return

**RESEARCH METHODS**

This research use secondary data as the main source. The data are obtained from Indonesia Stock Exchange (IDX) database of annual reports from year 2013 until 2016. Population used are firms whose stock listed in Indonesia Stock Exchange (IDX) consist of 561 firms. Then the sample chosen is the LQ45 firms cause the data needed are available and the market share of those companies are trusted and large that will make easier for the researcher to analyze the data. Hence there are 3 firms consist of PP Properti Tbk, Sri Rejeki Isman Tbk and Sawit Sumbermas Sarana Tbk just recently go public in 2013 and 2015 will no included in sample. Therefore the sample will consist of 42 firms listed IDX. This research will use multiple regression analysis with OLS equation. Therefore model specification for this research

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + e$$

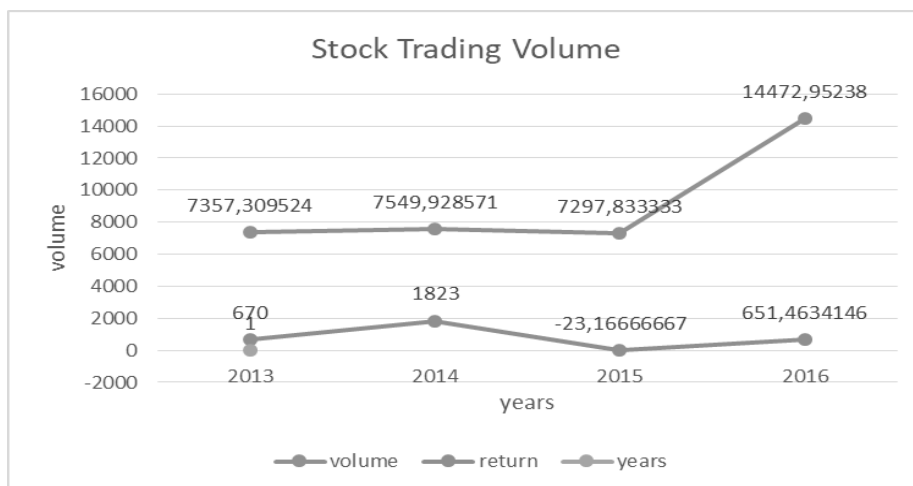
Where:

- Y is stock return in period t,
- $\alpha$  is the constant of the regression
- $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$  are the co-efficient of the regression
- $X_1$  is bid-ask spread
- $X_2$  is trading volume
- $X_3$  is beta stock
- $X_4$  is firm size
- $X_5$  is market to book value
- e is error term

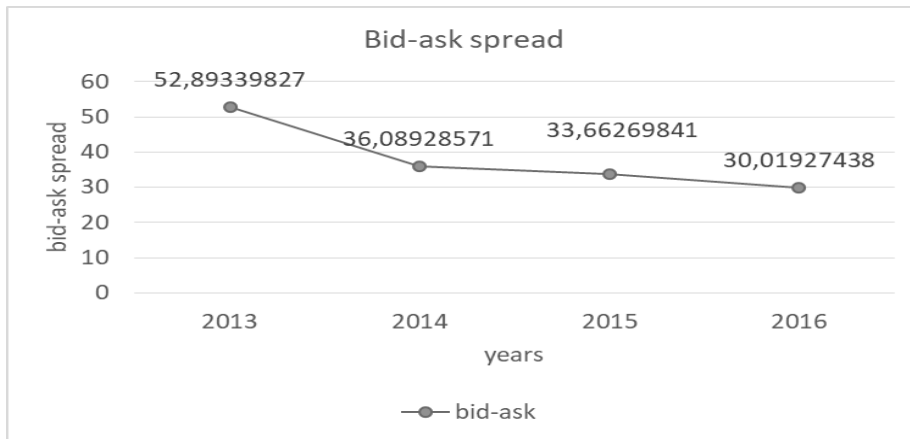
**ANALYSIS DATA AND DISCUSSION**

**General Description**

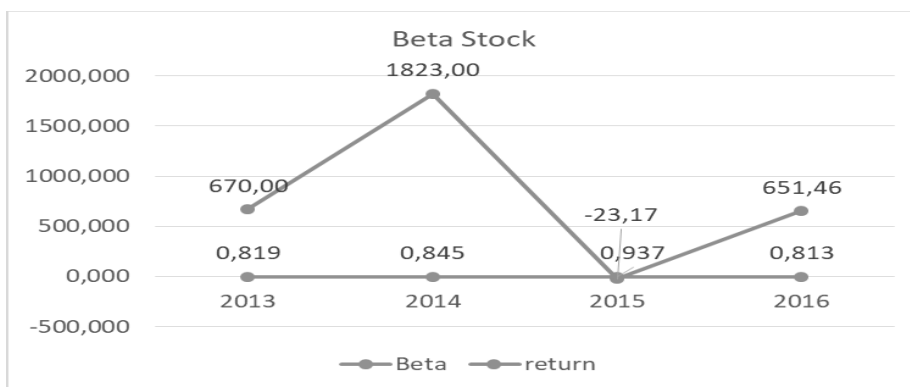
**Diagram 1. Stock Trading Volume**



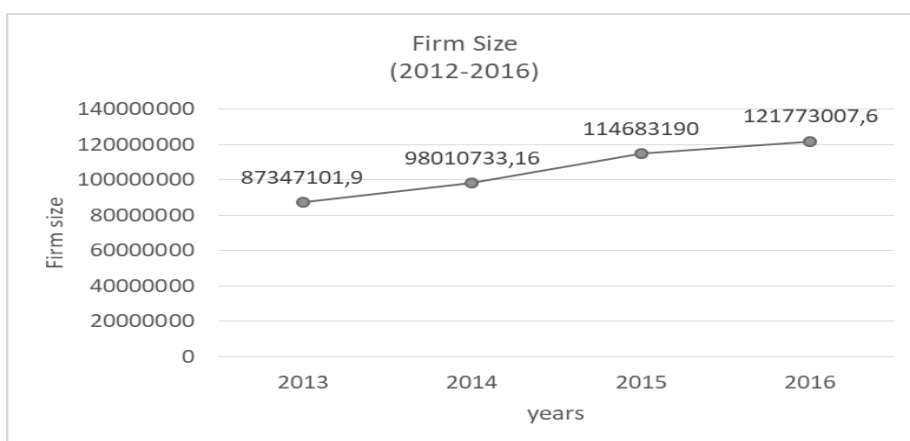
**Diagram 2. Bid-ask spread**



**Diagram 3. Beta Stock**



**Diagram 4. Total Asset**



The graph shows an increasing trend of trading volume, bid-ask spread, beta, firm size and market to book value to stock return in LQ45 firms during 2013-2016

### Descriptive Statistics Summary

#### Descriptive summary (real data)

The result below is compute with the real data from LQ45 firms. Researcher needs to transform the data to log form to get better result in terms of normal

distribution of those data. Therefore, the research will provide two descriptive statistics summary with real and transformation data.

**Table 1. Descriptive Statistics Summary**

	N	Minimum	Maximum	Mean	Std. Deviation
Trading Volume (million shares)	110	2	35.906	7.738,65	8.161,143
Bid-ask spread	110	1,14	172,92	29,42	32,812
Beta	110	0,03	1,79	0,91	0,414
Firm Size (billion Rp)	110	5.336	603.032	77.735,42	124.550,685
MBV (times)	110	0,01	8,74	2.40	1,441
Stock Return (%)	110	-64	100	33,37	31,150
Valid N (listwise)	110				

**Descriptive summary (transformation data)**

**Table 2. Descriptive Statistics Summary**

Descriptive Statistics					
	N	Mean	Std. Deviation	Minimum	Maximum
Log trading volume (million shares)	110	3,60	0,658	0,30	4,56
Log bid-ask spread	110	1,23	0,472	0,10	2,24
Beta	110	0,91	0,415	0,03	1,79
Log firm size (billion Rp)	110	4,59	0,474	3,73	5,78
mbv (times)	110	2,40	1,441	0,01	8,74
Return (%)	110	33,37	31,150	-64	100

The above data has already been log to get normal distribution value of each data. Transformation is conducted to several variables which has abnormal distribution. Those variables are trading volume, bid-ask spread, and firm size. Meanwhile beta, mbv and stock return are not transformed since the data have already distributed normally. After transformation process, overall data has a better distribution to be conducted normality data test. The total amount of data is 110.

### Multiple Regression Result

**Table 3. Multiple Regression Analysis Result**

	Coefficients <sup>a</sup>				
	Model		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1. (Constant)	19.103	36.892		.518	.606

*Bersambung*

Lanjutan

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Log_trading_volume	2.912	4.728	.062	.616	.025
Log_bid_ask_spread	4.764	6.580	.072	.724	.037
Beta	6.043	7.026	.080	.860	.004
Log_firm_size	3.429	6.289	.052	.545	.587
MBV	7.324	2.044	.339	3.583	.001

a. Dependent Variable: Stock\_return

Based on table 3, we assume linear regression as follow:

$$Y = 19.103 + 2.912X_1 + 4.764X_2 + 6.043X_3 + 3.429X_4 + 7.324X_5 + e$$

Where:

- Y : Stock return
- X<sub>1</sub> : Trading Volume
- X<sub>2</sub> : Bid-ask spread
- X<sub>3</sub> : Beta
- X<sub>4</sub> : Firm size
- X<sub>5</sub> : MBV
- e : Error term

Regression above can be interpreted as follow:

Firstly, regression coefficient for log trading volume is 2,912, indicates positive relation of stock trading volume to stock return. Thus escalation of 1 million trading volume will increase stock return of 2,912 million shares with assumption other variable is constant. Secondly, regression coefficient for bid-ask spread is 4,764 which indicates positive relationship of bid-ask spread to stock return. When the bid-ask spread increase stock return also increase and vice versa with assumption other variable is constant. Thirdly, regression coefficient for beta is 6,043 which indicates positive relationship of beta to stock return. When beta increases stock return will increase and vice versa, with assumption other variable is constant. Then, regression coefficient for firm size is 3,429 which indicates positive relationship of firm size to stock return. It means the larger the firm size the higher stock return that is gained and vice versa with assumption other variable is constant. Last, regression coefficient for MBV is 7,324 which indicate positive relationship of MBV to stock return. The higher mbv the higher stock return will be and vice versa with assumption other variable is constant.

Based on that result we conclude that all variables positively affect stock return. The level of significance based on table above is that log trading volume has significance 0,025 ( $p < 0,05$ ). This result indicates significant relation of trading volume and stock return. The level of significance of log bid-ask spread is 0,037 ( $p < 0,05$ ) which indicates a significant relation of bid-ask spread to stock return. The level of significance of beta is 0,004 ( $p < 0,05$ ) which indicates significant relationship of beta and stock return. Level of significance of log firm size is 0,587 ( $p < 0,05$ ) which indicates insignificant relationship of firm size and stock return. Level of significance of MBV is 0,001 ( $p < 0,05$ ) which indicates significant relationship of MBV and stock return. Based on those result the trading volume, bid-ask spread, beta and MBV



influence stock return positively and significantly which means the hypothesis H1, H2, H3 and H5 are proven in this research. Unfortunately H4 that firm size influence stock return positively and significantly is not proven based on this research.

## **Discussion**

### **Effect of Trading Volume on Stock Return**

Stock trading volume affects stock return significantly and positively. The value of regression also indicates positive relation to stock return. This result is supported by research from Pathirawasam (2011) that said stock returns are positively related to change in trading volume. Furthermore Lischewski (2012) also support the statement that portfolios with high trading volume tends to be followed by high returns and vice versa. This result also linear with Khaled & Titi (2013) that claim trading volume responds positively to stock return. Furthermore research from Khan & Rizwan (2008) indicates that trading volume has significant and positive effect to stock returns. Same research in Palestine Stock Exchange by Darwish (2012) indicates that there is positive relationship of trading volume and stock return. This result happen based on the reason that the higher trading volume means that news is spreading well proven by high level of stock trading by investors. When the news spreading well investor get the good insight of the firms thus resulted in the increase of stock return. This result supports the hypothesis (H1) that trading volume influence stock return positively. The trading volume of LQ45 index has average of 36.678,02381 million shares, higher than other index in IDX. The trading volume in LQ45 is increasing during 2013-2016. The reason is because the LQ45 stock is included as blue chip stock in Indonesia. This firms always consistent in their financial performance for example in dividing devidend. In LQ45 stock index there is no replacement of firms for this last 4 years during 2013-2016 because the trend of financial performance of 45 firms is always increasing each year. LQ45 firms also has the highest market capitalization and the highest transaction value for at least 12 months. The LQ45 has a good prospect in the future because the profit is always growing and the liquidity is always consistent in financial performance. Proven by there is no LQ45 firms that has financial distress for the last 10 years. This factors give a good news to investors because based on signalling theory that firms will give a good signall to investor that their firms have a good prospect in the future. This factors make the investors trust the company resulted in increasing trading volume for the last 4 years. The high value of firms makes investor want to buy their stocks, thefore the demand of stock is increasing each year. This high demand creates the high return in LQ45 stock. Therefore the trading volume influence stock return significantly and positively in LQ45 firm stocks.

### **Effect of Bid-Ask Spread on Stock Return**

Regression result indicates positive and significant relation of bid-ask spread and stock return. This result is consistent with the finding from Amihud & Mandelson (1989) that claim significant positive relation between the increasing function expected return and bid-ask spread. Research from Wang (2000) also support the result in future markets of Nasdaq. Based on Amihud (1989) bid-ask spread is measurement of liquidity of firms therefore if the bid-ask higher the stock return will higher because it indicates illiquidity of the firms stock. This condition will be signalled by investor and increase their interest to buy the stock. Therefore the higher number of investor in a firm, the higher the stock return that will be gained in the future. Investor also can execute the

stock price higher because the credibility and expensive price of the stock in the market. The LQ45 bid-ask spread is always increasing from 2013-2016. This enhancement gives future prospects to investors that the stock price will always increasing each year. LQ45 firms become high capitalization firms which make them have a lot of tradable shares and hard to be manipulated. The demand of LQ45 stocks also high since the trend shows that the demand of stocks increase until 10% during this year. Supported by positive trend of market nowadays create a positive and high spread of stock, therefore in LQ45 index, the return can be higher. The investor would also likely have long term investment in LQ45 stocks this is resulted to high ownership cost which create a high demanded spread. The high spread in LQ45 create higher return and vice versa. Because investors would likely to make sure that their stock is liquid therefore the return is high. Therefore the bid-ask spread influence stock return positively and significantly in LQ45 firm stock return.

### **Effect of Beta on Stock Return**

In this research beta has significant influence to stock return. This result is linear with research from Amihud (1989) that claim that expected return is an increasing function of beta. Other research from Rizaldi & Imam (2016) also claim that beta has important role than other variables like mbv and influence stock returns positively. Furthermore (Chen, 2013) observes Shenzhen Stock Exchange and indicates that there is significant and positive relation of beta and stock return. On the theory basis, model of CAPM argue that high beta stocks should have higher returns to compensate investors for their higher risk. This result is linear with the theory of CAPM and some previous research that stated that beta is positively and significantly affects stock return. LQ45 stock is the most liquid or blue chip stocks in Indonesia. Somehow there are 4 firm stocks included in LQ45 have to opt out from LQ45 firms list in 2018 and replaced by other firms. Proven that the control towards stability of financial are really exist in LQ45 index. The beta stock in LQ45 influence return that the firms have to provide to investors. The high risk of stock will also influence the expected return of investors in Indonesia. Since investors in Indonesia mostly consider about risk to have a safe investment. Beta trend in LQ45 stock mostly normal below 1, this is shows that the change of price in market index affects the LQ45 stocks equally or less than the change in market. The stable value of beta is also impacted by external factors in Indonesia such as inflation. Fortunately the inflation in Indonesia during 2013-2016 is not increasing significantly, therefore the beta value is not growing so high. Therefore the LQ45 stock mostly liquid and safe for investors. The trend of beta in LQ45 stock is mostly normal from below and equal to 1, but many investors demand higher return to cover the risk of investment in Indonesia. Since in LQ45 blue chip stock consist of mature investors that well known with risk aversion, therefore the high beta in LQ45 stock will resulted to high return in order to cover investment risk. Therefore as the result, the beta influence stock return significantly and positively in LQ45 stock.

### **Effect of Firm Size on Stock Return**

The significance value t of firm size indicates no relation between firm size and stock return in this research. The value of regression coefficient indicates positive direction between firm size and stock return, but not significant. This result is different from research by Acheampong (2014) that claim size has significant and positive relationship with stock returns. It's also different with Rizaldi & Imam (2016) that

argue large firms earn higher returns because it can response information faster. Basically firm size has positive relationship to stock return but this research doesn't provide significant impact of firm size to stock return. This indicates other factors that have more significant impact to stock return.

However Amihud & Mandelson (1989) support this result where he doesn't find any significant relationship between firm size and stock return. Furthermore research from Mazviona et al (2014) indicates that firm size has positive but insignificant effect on stock returns on Zimbabwe Stock Exchange. In Zimbabwe the size doesn't significantly affect stock return because it is a common phenomena where ZSE is the market leader of respective industry and they have easier access to bank credit to fund the refurbishment and expansion of production infrastructure to enhance efficiency and competitiveness. Therefore, large or small firms will not affect their returns because of easy access of funds. This phenomenon also happens in LQ45 firms stock, the blue chip firms have easy access of funding in the bank.

Based on Chen and Jiang (2001) big firms tend to do diversification more than small firms. Therefore the risk and financial distress owned by big firms is lower than small firms. However good credibility of firms creates trust for firms to borrow more funds that will affect the expected return of investors because capital expenses will create risks for investor. Therefore expected return will be higher. But this risk can be covered because some diversification by big firms resulted to stable cash flow therefore at the end big firms will be more safe for investor. This indicates that investor would likely to consider safer investment than seeking for high return.

Based on research from Mazviona et al (2014), liquidity is indicated by ability of firms to pay their short term debts. Large firm size doesn't mean that the firms are liquid. The liquidity will be affected by management strategy to manage the financing activities. For example in determining source of funds whether it is from internal or external source. Therefore big and small firm size can't be indicator of liquidity since not all big firms are liquid and not all small firms are illiquid. At the end investors more likely to consider factor of liquidity without seeing the size of the firms. Investor will be more interest to invest in high liquidity firms that will result in high demand of stock and high stock price. Higher stock price will create higher stock returns for investors. Therefore firm size doesn't affect the stock returns as long as the liquidity exists. In LQ45 the phenomena of firm size will affect stock return is not exist. High capitalization owned by LQ45 firms doesn't create higher return of stock furthermore some firms have negative return even if the market capitalization is high. The LQ45 stock basically size is always growing each year during 2013-2016. This indicates escalation in asset that is owned by firms. The firms in LQ45 is growing larger each year. This is a good signal actually because investors more likely to invest on high growth of firms. But somehow because the investor consider more on the small investment to avoid the risk, they would more likely invest whether in large firms in LQ45 or small firms outside LQ45 index. Therefore in the terms of firm size, LQ45 can't prove the relation of firm size to stock return.

### **The Effect of Market to Book Value on Stock Return**

Based on this research, mbv has a positive and significant relation to stock return. This result is supported by research from Chen (2015) that indicates that stocks with a high book-to-market ratio experience higher returns than stocks with a low book to market ratio. Other research by Rosenberg et al. (1985) in Chen (2015) reveals that

book to market ratio has positive relation with stock return. On the other hand Puspitasari et al. (2011) indicates that price to book value dominantly affects stock return. Other research from Furthermore Nguyen et al (2004) also against the result that firms with high market to book value have higher average returns than firms with low mbv.. Zaretsky et al (2007) also claims that B/M has significant and positive correlation to stock return in NYSE and Nasdaq. Probability reason is because investor believe with firms that have low financial distress which categorized as more liquid firms therefore positive value of MBV usually create positive stock return. Higher MBV also indicated how much changing of stock price each period. If the direction is positive the investor will gain much return therefore the relation of MBV and stock return is positive.

Theory of signalling supports this hypothesis where in this theory stated that firm is signaling the investor that their firms are liquid and able to gain higher stock return because the large market share owned by firms. This signal will be received by investor and create larger market share that create liquid firms stock. LQ45 stock which is called blue chip stock of IDX has a high market to book value because their market capitalization is high than other firms. The trend of MBV in LQ45 is increasing during 2013-2016. This phenomena happen because the market trust LQ45 therefore their market value is higher than its own book value. This indicates how the market responds to the future prospect of LQ45 stock. LQ45 stocks are distributed and owned by public in a large amount. They also have a stable profit and financial condition that makes investors invest in their firms. Proven by for last 4 years the firms inside LQ45 index are stable in their position as blue chip stocks. With those power the LQ45 stock generate high MBV and create a high return for investors of their firms. Proven that average return of LQ45 firms is 92,19% which indicates a positive and high return resulted from high MBV of LQ45 stocks. Therefore the MBV influence stock return positively and significantly in LQ45 stock.

## **CONCLUSIONS & SUGGESTIONS**

### **Conclusions**

1. Trading factor is one of factor that affects stock return positively and significantly. This conclusion is taken by seeing the result that both factors that represent trading factor give positive and significant influence to stock return. Factors that affect stock return positively and significantly are stock trading volume and bid-ask spread.
2. Risk factor that is represented by beta affects stock return positively and significantly. This result is consistent from other previous research. The research is consistent with the theory of Fama and French Three Factor Model and CAPM theory.
3. Firm characteristics give positive impact to stock return but not significantly. Variables that represent firm characteristics are firm size and market to book value. Firm size doesn't affect stock return significantly but MBV affects stock return significantly. Therefore based on this research only one variable of firm characteristic that affects stock return significantly meanwhile other variable doesn't.

### **Suggestion**

1. Firms and investors can give more attention to trading factors and risk based factor in doing investment. Stock trading volume, bid-ask spread and beta are references for investors to take decision in order to gain higher return. Meanwhile if investor want to use firm characteristic as one of determination, MBV can be considered as reason of decision making in investment.
2. It will be better to add more potential variables related to stock transaction and firm as a whole so the research will be more comprehensive.
3. Future research can consider other firms beside LQ45 firms as the samples. The phenomenon will be more interesting thus the result will be more accurate and has variety.

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