CHAPTER I

INTRODUCTION

1.1 Research Background

Capital market plays a very important role for the development of any nation. Volatility oscillates the volume of trade in the market which directly impacts the stock price and ultimately affects the stock returns. Further, it affects the financial behavior of the investors in taking investment decision (Yadav, Aggarwal, and Khurana, 2015). The investors decide to invest through volatility in the market, ie buying or selling certain stocks. It is better if the investors can understand the causal relationship between the trading volume and stock returns because it will help him to frame different market strategies for gaining returns and avoiding losses.

Empirical investigations on stock markets traditionally focus primarily on stock prices. Due to various undesirable stochastic properties of stock price, especially non-stationarity, most researchers concentrate on stock return rather than prices (Al-Jafari and Tliti, 2013). Based on a set of available information about the company, its stock return reflects investors' expectations on the future performance of the company. The arrival of information flowing into the market causes investors to adjust their expectations and become a major source of price movements and returns. Because

investors are heterogeneous in their interpretations of new information, stock returns may not change even though new information is revealed to the market. This will happen if some investors interpret it as good news while others think of it as bad news. Therefore, price changes reflect the average reaction of investors to the news. While, stock returns can only change if there is a positive trading volume.

As with return, trading volume and volume changes reflect a set of relevant information available in the market. Unlike stock price and return, revisions in investor expectations always lead to an increase in trading volume which therefore reflects the amount of investor reaction to the news.

Chen et al. (2001) define trading volume as the daily number of shares traded and volume has predictive power for stock returns volatility regardless of the measure of volatility used (Léon, 2007). According to Al-Samman and Al-Jafari (2015), many practitioners and academics consider trading volume as an important technical indicator to measure the strength of the market because trading volume contains useful information about stock behavior (Hsieh, 2014). Theoretically, there are many reasons why traders should pay attention to trading volume. High price volatility is corresponded with low volume implying the market is illiquid. On the other hand, low price volatility is correlated with high volume indicating that the market is highly liquid. An increase in volume causes broker revenue to increase as well, and market makers have a greater chance of making a profit as a result of higher turnover.

The role of arrival of information flow into the market in generating market volatility becomes a very debatable issue in the financial literature. The efficient market hypothesis (EMH), put forwarded by Fama (1970), claims that an efficient market incorporates the available information and therefore investor would not able to make abnormal returns. However, it makes sense to be trusted if the investors able to understand the available information, they can predict the market movement. Also, many scholars believe that trading volume can be considered as a good proxy for the arrival of information flow into the market because quantifying the rate of information flow is difficult. It is argued that trading volume is higher on the day with larger return innovations and releases of any public information, which eventually may cause the price movements (Clark, 1973; Lamoureux and Lastrapes, 1990; Andersen, 1996).

Thus, the volume-volatility relationship has attracted much attention from researchers during the past three decades in order to improve the understanding of the microstructure of stock market. Karpoff (1987) cited four reasons for discussing price-volume relation. First, it provides insight into the structure of financial markets, such as the rate of information flow to the market, how the information is disseminated, the extent to which market prices convey the information, and the existence of short sales constraints. Second, the relationship between price and volume can be used to examine the usefulness of technical analysis. For example, Murphy (1985) and De Mark (1984) emphasized that both volume and price incorporate valuable information. A technical analyst gives less significance to a price increase with low trading volume than to a

similar price increase with substantial volume. Third, some researchers, such as Garcia et al., (1986) and Weiner (2002) have investigated the role of speculation to price volatility (stabilizing or destabilizing), where speculation is closely related to trading volume. Finally, as Cornell (1981) pointed out, the volume-price variability relationship may have important implications for fashioning new contracts. A positive volume-price variability relationship means that a new futures contract will be successful only to the extent when there is enough price uncertainty associated with the underlying asset.

Thus, considerable attention is given to examining the relationship between stock market volatility and trading volume. Several theories were developed to explain the relationship between stock market volatility and trading volume. The theoretical underpinning of volume-volatility relationship may be directly drawn from Mixture of Distribution Hypothesis (MDH) introduced by Clark (1973), or Sequential Information Arrival Hypothesis (SIAH) developed by Copeland (1976).

Developed by Clark (1973), Epps and Epps (1976), Tauchen and Pitts (1983), Lamoureux and Lastrapes (1990), Andersen (1996), Bollerslev and Jubinski (1999), Abanto-Valle et al. (2014), the MDH remains always at the basis of all researches that address the relationship between trading volume and price or returns volatility. This hypothesis assumes that daily price changes are driven by a set of information flow and the arrival of unexpected news is accompanied by the above average trading activity. The MDH also posits that asset prices and trading activity

(volume) tend to be positively related because they are together reliant on a common underlying driving factor, which is thought to be the rate of information flow. The joint distribution of trading volume and price is assumed to be bivariate normal conditional on the same underlying latent news arrival. Due to the fact that the random arrival of new pieces of information is unobservable, data on trading volume levels are used as a proxy for it. According to the MDH, all market traders react simultaneously to new information, causing the transition of prices toward new equilibria to occur instantly. This implies that the information content of past observations of trading volume has no significant predictive power for explaining asset price movements, and vice versa, since these two variables exhibit perfect synchronicity in their adjustment to new unexpected information signals (Bollerslev and Jubinski, 1999; Darrat et al., 2003).

But, the hypothesis of SIAH developed by Copeland (1976) questions the instantaneous relationship as predicted by MDH and provides a different explanation. Within the framework of SIAH, on the other hand, shifts to new equilibria are not of such an instantaneous nature. That is, the dissemination of new pieces of information into the hands of market traders takes place sequentially rather than synchronously and, as a result, the forces of demand and supply interpret and respond to these information signals at various speeds. There exist intermediate equilibrium processes culminating with a general condition of market equilibrium. Hence, the overall market equilibrium is supposed to evolve through a series of successive individual equilibria. Under this scenario, the information contained in past values of trading volume may have the

ability to improve the prediction of price changes, and vice versa. This implies a positive causal relationship running from either trading volume or price changes to the other variable. The theories of SIAH and MDH believe that the knowledge of trading volume can be used to predict price volatility in the stock market.

According to Tran (2016), emerging stock markets generally provide investors with relatively high returns compared to developed markets. It is due to the fact that emerging economies have developed rapidly after undertaking many important reforms including financial liberalization. Higher returns encourage the investors to invest and increase capital inflows, whereas in a volatile environment, the returns are uncertain and hard to predict effecting investment eventually.

To date, this relationship is an interesting topic to investigate further of their existence in the stock market. In this paper, researcher investigate the relationship between stock market volatility and trading volume in Indonesian stock market by using daily closing price and trading volume data of LQ45 Index from February 2013 to February 2018. The company stock in the LQ45 Index is chosen as the target of this research because LQ45 index itself consist of 45 companies that have the highest market capitalization and overall performance from other companies in Indonesian stock market.

1.2 Problem Statement

Based on the explanation in the research background, the main problem of this study is "Is there any dynamic and causal relationship between stock market volatility and trading volume in Indonesian stock market from February 2013 to February 2018?"

1.3 Scope of the Research

This research will be complex if there is no limitation of the research. This research decided research scope as limitation. The scope of this research is the research only will investigate the relationship between stock market volatility and trading volume. This is an explanation of each part on the research.

1. Researcher will use data of LQ45 Index in Indonesian stock market. LQ45 Index consist of 45 companies that is considered to have the highest market capitalization, has a good growth prospect, good financial conditions, and high transaction value and frequency.
2. The data that is used in this research are companies always listed on the LQ45 Index from February 2013 to February 2018. The company that did not match this criterion will be excluded from this research.
3. The variables that will be explained in this research are stock price and trading volume.

1.4 Objective of the Research

In general, it can be said that a research has a purpose. The main purpose of this research is to investigate whether there is dynamic and causal relationship between stock market volatility and trading volume in Indonesian stock market from February 2013 to February 2018.

1.5 Benefit of the Research

The results of this study are expected to provide benefits, especially investors in taking investment decisions in the stock market. The benefits of this study can be described as follows:

1. For Investor, the results of this study are expected to be useful information for investors as consideration and reference in investment decision making.
2. To Author, this research is expected to make a better knowledge and understanding to the author about the relationship between stock market volatility and trading volume.
3. The Readers, this research can help reader to acknowledge about stock market volatility and trading volume.
4. For Next Researcher, the results of this study are expected to provide insight and reference for next researchers who are interested to conduct studies in the same field.

1.6 Originality of the Writing

This research followed the previous research that has been done before in other country's stock market and using different type of data. All of the writing in this research was collected, analyzed, explored, and studied thoroughly by the researcher.

1.7 Writing Structure

This research is divided into 5 chapters, which are:

Chapter I: Introduction

This chapter provide the research background, problem statement, scope of the study, research objective, benefits of the research, originality of the writing, and writing structure.

Chapter II: Theoretical Background

This chapter consist of concept and theory that is relevant with the problem statement of this research. This chapter will be divided into three part, the first one is about the literature review, the second one is about the previous study done by other researcher or other related study with the topic that became a reference in this research, and lastly is about the hypothesis development that will represent the findings of the research of the study in detail.

Chapter III: Research Methodology

This chapter contain the population, sample, data collection method, research variables, and data analysis method.

Chapter IV: Data Analysis

This chapter contain the analysis of the collected data and the interpretation of the result of the data analysis.

Chapter V: Conclusion

This chapter contain the conclusion, managerial implication, limitation of the research, and the suggestion for future research.