COMPARATIVE ANALYSIS OF MARKET RETURNS AMONG COUNTRIES IN SOUTHEAST ASIA

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ABSTRACT

This research aims to analyze the differences and the relationship between the market returns of Indonesia stock market with that of Singapore, Vietnam, Thailand, Malaysia and the Philippines in Southeast Asia. The research utilized quantitative method with time series data. The population for the research are Jakarta Composite Index (JCI), Straits Times Singapore (STI), VN-Index, SET Index (SETI), FTSE Malaysia (KLSE), and PSEi Composite. The sampling for the research are Southeast Asian countries included in the Asean Benchmark Indices Comparison for 2016-2018 period. The data was analyzed using comparative and correlation tests. The results of the research show that the market return of Indonesia stock market does not have a difference with Singapore, Vietnam, Thailand, Malaysia and the Philippines. Meanwhile, market returns in Thailand, Malaysia, and Philippines stock markets have significant relationships with the market return in Indonesia's IDX. The investors are suggested to use other variables, such as inflation, rupiah exchange rate, interest rates, gross domestic product, global economic conditions, trade relations between countries, social situations, politics, security, and various other issues to determine an investment. For further research, other stock indices in other countries may be used as variables, such as indices that become reference for investors and market observers with strong relationships to IDX, such as the United States' Dow Jones Industrial Average (DJIA), or China's Shanghai Stock Exchange Composite (SSEC).

KEYWORDS: *market return, Southeast Asia.*

PREFACE

The price of shares listed on Jakarta Composite Index (JCI) is moving in line with several factors in Indonesia. JCI movement is related to macroeconomic factors, one of which is the inflation rate and rupiah exchange rate. Inflation is the increase in the price of goods and service, while rupiah exchange is a comparison rupiah value to other foreign currencies. Each country has its own exchange value.

Spyrou (2004), noted that in several developing countries other than Indonesia, inflation has a positive relation with the return on investment from shares. Sutanto et al. (2013), in an empirical study stated that global gold price, Nikkei 225 Index, and Dow Jones Index had a positive and significant influence on the

JCI. Meanwhile, rupiah exchange rate has a negative and significant influence on the JCI. Zuhri and Endri (2008), empirical study there are several stock exchange pairs that have a long-term relationship namely Indonesia with Thailand, Indonesia with Malaysia, and Indonesia with the Philippines, the results of his research detected a strong long-term link between the Indonesian stock exchange and the Malaysian and Philippine stockexchanges. In addition, Zulkifli et al. (2018), prove that returns are affected by return on assets (ROA), return on equity (ROE), debt to equity ratio (DER), firm size, and growth.

Southeast Asian countries are divided into two groups, namely Mainland Southeast Asia (ATD), consisting of Cambodia, Laos, Myanmar, Thailand and Vietnam; and Maritime Southeast Asian (ATM) (Brunei, Philippines, Indonesia, Malaysia, Singapore and Timor Leste). Asean Benchmark Indices Comparison, a comparison of selected index performance, listed six countries namely Singapore, Vietnam, Thailand, Malaysia, Philippines and Indonesia as below:
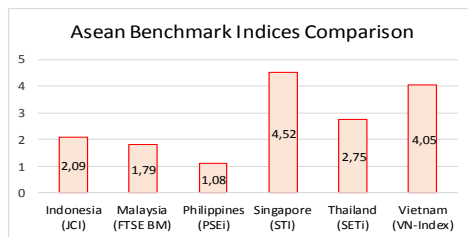
*Source: * number in percentage*

Chart: CNBC Research Indonesia Source: Reuters, November 2018.

Figure 1. Stock Price Index in Southeast Asian Countries.

Based on Figure 1.1, JCI is ranked 4th (2.09%), higher than Malaysia (5th, 1.79%) and Philippines (6th, 1,08%) but lower than Singapore which ranked 1st (4.52%), Vietnam (4.05%), and Thailand (2.75%). This rank was possibly due to inflation variables, rupiah exchange rate and (macroeconomic), Spyrou (2004) and Sutanto *et.al* (2013). Zulkifli et.al (2018), empirical studies stated that returns were influenced ROA, ROE, Debt to Equity Ratio (DER), Firm Size, and Growth (financial performance).

The empirical study conducted by Pasaribu and Kowanda (2013) used short-term and long-term periods that analyze the dynamics of interaction of the International stock price index (KLSE, STI, PSEI, and SSE) and macroeconomics against JCI. The research result stated that in the short-term, KLSE, PSEI, SSE have positive and significant effect on the JCI. Meanwhile, STI has a negative and significant impact on the JCI. However, for the long term, it turns out that only PSEI and SSE have positive and significant impacts on the JCI.

This research utilized time series data. Arestis and Demetriades (1997), stated that causality is better detected using time series analysis approach. Meanwhile, Shofiyullah (2014) conducted a comparative study between Jakarta Islamic Index and FTSE Bursa Malaysia Hijrah Shariah Index using comparative model, analyzing two different independent tests sample averages. The results show that there is no difference in the performance of the Jakarta Islamic Index and FTSE Bursa Malaysia Hijrah Shariah Index.As for Sutanto et.al (2013), research stated that the Nikkei 225 Index and the Dow Jones Index have a positive and significant influence on JCI.

Based on the phenomena and results of previous studies outlined above, this research is conducted to analyze by examining the comparison of the stock indices with the title of "Comparative Analysis of Market Returns Among Countries in Southeast Asia."

There are several issues to be discussed in the research, such as whether there are differences in the market returns of each country in Southeast Asia (between Indonesia and Singapore, Vietnam, Thailand, Malaysia and Philippines)

OBJECTIVES

This research aims to estimate and predict the market returns comparison of several countries in Southeast Asia, and as a source of reference for investors to determine their investment decisions, as well as further research to get an overview of empirical studies of return markets that can be studied with previous theory and empirical studies. The originality of this research analyzes the stock price index included in the Asean Benchmark Indices Comparison Category.

THEORETICAL

Langrall dan Mooney (2005) stated that, "*probability is a way of describing events that cannot be explained through causal or deterministic means*". This concept states that events in a given paradigm are bound by causality in such a way that each condition (of an object or event) is fully determined by previous conditions.

Akerlof (1970), stated that The Market for Lemon discusses the pressure on competition in the market that negatively affects the quality expectations of certain goods (Holt and Sherman, 1999). These low quality items are called as lemons. Akerlof (1970), tried to state the existence of the goods in the market and its effect on the buyer. He analyzed asymmetric information as a problem that occurs in the market. The concept of lemon and asymmetric information is a response to issues in the market that might be a strange things to the economists before finally presented by Akerlof (1970). The concept explains the existence of a second-hand market that is dominated by goods of poor quality, or commonly called lemon goods. However, prospective buyers are less likely aware of lemon goods condition due to the asymmetric information, which is the gap between the seller and the buyer in the information about the goods to be purchased, as well as the shares to be bought by investors, they are certainly expecting optimal rate of return.

Asymmetric information, as stated by Akerlof (1970), is "The Market for Lemons" which suggests the occurrence in the market that the average value of a commodity tends to decline, even for goods in good quality. Sellers who are not up to no good will deceive buyers by giving the impression that the goods they sell are good. This is what causes the Adverse Selection, which is how the decisions to be taken are based on weak information. This condition will cause selection problems that may cause losses, so many buyers avoid fraud and refuse to make transactions in such market, or refuse to spend big money in the transaction. As a result, sellers who actually sell good products are affected because they are only low-valued by buyers, and eventually the market will be filled with poor quality goods.

METHODOLOGY

Research Design. The research uses comparative and correlational designs in order to test differences and

analyze the relationship between one variable to other variables.

Population and Sample. The research population is stock price indices in Southeast Asia countries consisting of: Cambodia, Laos, Myanmar, Thailand, Vietnam, Brunei, Philippines, Indonesia, Malaysia, Singapore and Timor Leste. The sampling technique is purposive sampling method. Based on countries that meet the criteria, there are six samples that have been determined as follows: (1). The Southeast Asian countries' stock price indices, namely Indonesia, Singapore, Vietnam, Thailand, Malaysia and Philippines, included in the Asean Benchmark Indices Comparison category. (2). Stock price index data, from 2016 - 2018.

Data Analysis Technique. The data is analyzed with average difference test between one group and other groups with independent t-test and one way ANOVA test and correlation analysis. Before testing hypotheses. The data stationary is tested in this research.

RESULT

a. Stationary Test

Table 2
Stationary Test

Country	Augmented Dickey-Fuller (ADF) test statistic	
	t-Statistic	Prob.*
Indonesia	-4.845	0.000
Singapura	-8.206	0.000
Vietnam	-4.733	0.001
Thailand	-5.073	0.000
Malaysia	-5.515	0.000
Philippines	-2.995	0.046

Source: 2019 data, processed

Based on Table 2, it shows all the market returns of each country in Southeast Asia produce an Augmented Dickey-Fuller (ADF) value with a probability smaller than 0.05, which means the data is stationer.

b. Average Difference Test

Table 3
Independent t test

Country	Levene's Test for Equality of Variances		t-test for Equality of Means	
	F	Sig.	t	Sig. (2-tailed)
Indonesia with Singapura	2.049	0.157	0.877	0.383
Indonesia with Vietnam	4.285	0.042	-0.490	0.625
Indonesia with Thailand	0.352	0.555	0.417	0.678
Indonesia with Malaysia	0.043	0.836	1.365	0.177
Indonesia with Philippines	5.912	0.018	0.759	0.451

Source: 2019 data, processed

Based on Table 3, it shows Levene's Test for Equality of Variances with a probability value of 0.157, greater than 0.05, which means that the market return of Indonesia and Singapore has the same variance. Indonesia and Thailand have a probability value of 0.555, greater than 0.05, which has the same variance. Indonesia and Malaysia have a probability of 0.836 or having the same variance (homogeneous). On the other hand, market return of Indonesia and Vietnam have probability value of 0.042 or smaller than 0.05, which means it has an unequal variance. Lastly, Indonesia and Philippines probability value is 0.018, that means both countries indices also have unequal variance (not homogeneous). The results of this research indicate that the t-test for Equality of Means has a probability value of 0.383, 0.625, 0.678, 0.177, and 0.451, or greater than 0.05. That means that there is no difference in the market return between Indonesia and Singapore, Vietnam, Thailand, Malaysia and Philippines.

c. Correlation Test

Table 4
Correlation Test

Country	Correlations test statistic	
	Pearson Correlation	Sig.
Indonesia with Singapura	0.177	0.301
Indonesia with Vietnam	0.266	0.116
Indonesia with Thailand	0.480	0.003
Indonesia with Malaysia	0.545	0.001
Indonesia with Philippines	0.622	0.000

Source: 2019 data, processed

According to Table 4, the probability value market return in Indonesia and Singapore is 0.301 or greater than 0.05, which means it is not related, so is the market returns of Indonesia and Vietnam with the probability value of 0.116. On the other hand, market returns of Indonesia and Thailand have a relationship since both has a probability value of 0.003 or lower than 0.05. The same case goes with Indonesia and Malaysia with a relationship value of 0.001. Indonesia and Philippines have the same relationship because the probability value is 0,000.

The market return of Indonesia has a relationship with the three countries, namely Thailand, Malaysia and Philippines. Philippines has a stronger correlation with Indonesia because it has a correlation coefficient with Pearson correlation value of 0.622, compared to Thailand and Malaysia. Zuhri and Endri (2008) stated that, a strong long-term link between the Indonesian stock exchange and the Malaysian and Philippine stock exchanges.

d. ANOVA Test

Table 5
ANOVA Test

ANOVA				
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.004	5	.001	.673	.644
Within Groups	.260	210	.001		
Total	.264	215			

Source: 2019 data, processed

Based on Table 5, the probability value is 0.644 or higher than 0.05, which means the variance of the six groups, namely Indonesia, Singapore, Vietnam, Thailand, Malaysia and Philippines, has no difference in each Southeast Asian country.

DISCUSSION

a. The difference and relationship of market returns in Indonesia and Singapore.

The market returns of Indonesia and Singapore has no difference and relationship. The results of this research are consistent with Hamid et.al. (2010), that stated that Singapore's capital market in inefficient in weak form. The result shows that both countries have no relationship, so they are not consistent with Anriansyah et.al. (2018) research that stated JCI and STI have a two-way causality relationship. Supported by Park (2010), that stated the relationship between the Indonesian capital market and Singapore is considered strong. This is consistent with Santosa (2013), stating the JCI has a relationship with the Singapore, Thailand, Malaysia, Philippines and China stock price indices.

b. The difference and relationship of market returns in Indonesia and Vietnam.

The market returns of Indonesia and Vietnam has no difference and relationship. Phan and Zhou (2014), stated that the capital market in Vietnam is inefficient in weak form. In that research, it was stated that Indonesia is one of the Asean countries that shows inefficient capital market in a weak form. This implies that the returns to be obtained are unpredictable. The research result for these two countries have no relationship. This research is consistent with Ardliansyah (2012), stating that the Indonesian capital market has no relationship with Vietnam.

c. The difference and relationship of market returns in Indonesia and Thailand.

The market returns of Indonesia and Thailand has no difference. However both countries have relations. The research result is consistent with Kasilingam et.al. (2014) and Hamid et.al. (2010), that stated capital market in Thailand is inefficient in a weak form, meaning that Indonesian and Thai capital markets have no differences. In terms of a relationship between both countries capital market, this is consistent with Arsyad (2015), stating that the Thai capital market has a negative correlation with the Indonesian market, if the Thai stock market index increases, it will cause a decline in the Indonesian stock market. This is in line with Santosa (2013), Hendrawan and Gustyana (2011) research that prove the linkages between the Indonesian and Thai capital markets.

d. The difference and relationship of market returns in Indonesia and Malaysia.

The market returns of Indonesia and Malaysia has no difference. However both countries have relations. The research result is in line with Hamid et.al. (2010), that stated the capital market in Malaysia is inefficient in a weak form, meaning that the Indonesian and Malaysian capital markets have no difference.The research result shows both two countries have a relationship, in line with Arsyad (2015), stating that the Indonesian capital market has a long-term positive relationship with the Malaysian capital market .The

results is also supported by Santosa (2013), that stated a positive correlation between JCI and FTSE Malaysia (KLSE).

e. The difference and relationship of market returns in Indonesia and Philippines.

The market returns of Indonesia and Philippines has no difference. However both countries have relations. The research is consistent with Hamid et.al. (2010) that stated the capital market in Philippines is inefficient in a weak form, which means the capital markets in Indonesia and Philippines have no difference. In terms of the relationship, the result is in line with Arsyad (2015), that stated the Indonesian capital market has a long-term positive relationship with the Philippines capital market.

CONCLUSIONS

a. According to research result, the market returns in Indonesian stock market have no difference with Singapore, Vietnam, Thailand, Malaysia and Philippines, associated signaling theory. For three countries in Southeast Asia provide empirical evidence that the information contents in these countries' stock exchange will be responded in the same direction by investors and market players on the Indonesian Stock Exchange because it has a significant relationship. Thailand, Malaysia and Philippines act as the senders of stock movement signals and the Indonesian Stock Exchange acts as the recipient. Investors or market participants will interpret the information signal in the form of investment behavior to determine buying or selling decisions.

b. The research found information asymmetries, in form of the imbalance of information held by the company's management and shareholders and differences in information between one investor and the other investors in each country. The impact will lead to a divergence, in which a trend differences occur with cross-directional movement, positive and negative.

c. There are also conditions that the decisions are taken based on weak information (adverse selection), so investors must carefully respond the investment in finding market information and then conduct an analysis to get the right idea of investment decision.

SUGGESTIONS

a. This research advises investors to use other variables that are not analyzed in this study, possibly by analyzing other variables, such inflation, rupiah exchange rate, interest rates, gross domestic product, global economic conditions, trade relations between countries, social situations, political, security, and various other issues that can provide both positive and negative sentiments to trading in the stock exchange of each country.

b. Changes in stock indices are not necessarily influenced by stock indices found in each Southeast Asian country, because many factors influence the index movements. In the future research, the research advises to find out the differences and relationships in the stock indices examined in this study, or add other stock index in other countries that have not been used as variables in this research, such as the indices that become reference for investors and market observers, with strong relationships to IDX, such as the United States' Dow Jones Industrial Average (DJIA), or China's Shanghai Stock Exchange Composite (SSEC)

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