The Influence of Internal and External Factors on the Return of The Composite Stock Price Index with Country Risk Beta Modeling

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***Abstract*--The purpose of this research to examine and analyze the influence of the interaction of internal and external factors of return of MSCI ACWI IMI to the return of IHSG (Composite Stock Price Index) by using country risk beta. Data was collected by documentation techniques and then analyzed by multiple linear regression analysis. The results showed that(1) The interaction of exchange rate of rupiah to US Dollar with a return of MSCI ACWI IMI has positive and significant influence to country risk beta, (2) The interaction of interest rate of SBI for 6 months with the return of MSCI ACWI IMI has positive and significant influence to country risk beta; (3) The interaction of inflation with return MSCI ACWI IMI has negative and significant influence to country risk beta, (4) The interaction of Indonesia economic growth with return of MSCI ACWI IMI has negative and significant to country risk beta; (5) The interaction of the world oil price with return of MSCI ACWI IMI has positive and not significant to country risk beta, and (6) the return of MSCI ACWI IMI has negative and significant to country risk beta.**

Keywords--internal and external factors; return of Composite Stock Price Index; and country risk beta

I. INTRODUCTION

Portfolio theory states that investors only consider risks that cannot be eliminated by diversification. so that the size of the relevant investment risk is the systematic risk that is generated by beta [1]. Beta is a measure of the volatility of securities returns or portfolios of market returns. Beta is used by investors in the capital market as a risk measurement tool before making an investment. thus, it can be said that the stock beta is a measure of the sensitivity of a security or a portfolio of changes in market returns.

Economic development of a country cannot be separated from the existence of a capital market which is seen as an effective means to accelerate the development of a country. capital market is a barometer of a country's economic condition so that the capital market is also called one of the main indicators of the country's economy (Leading Indicator of Economy). Similar economists like Cameron [2]: Golsmith [3]: McKinnon [4]: and Shaw [5] stated that there is a link between financial intermediaries and economic growth.

According to Harvey [6] there are 2 (two) platforms for emerging export of portfolio are very difficult to do: (1) distribution of equity is not normal, (2) there are differences in the aspects of influence of the negative effects. Bekaert and Harvey's research [7]-[9] states that unexpected results are influenced by local factors and global factors.Thus, it can be said that the return from an investment is not only affected by the activities in the company, but also influenced by the external factors of the company. According to Harvey [6], the country is a variant of the security of the country's securities against world securities. Count risk or country risk beta is a systematic risk where this risk cannoteliminated by diversification. In international diversification contexts, beta is the measure of the level of profitability of countries in

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terms of the level of global profit and profitability. Countries are referred to in this study as systematic risk or market risk.

According to Harvey [6] the country is always changing with time. Studies conducted by Francis and Fabozzi [10] say that there is a systematic risk difference in the stock market which is in a downward condition (bearish) or increases (bullish).The study used a treasure beta review as previously done by Harvey [6]; Harvey and Zhou [11], Erbetal. [12], Gangemietal. [13]; Andrade dan Teles [14]; Verma and Soydemir [15]; and finally Verbenik et al. [16]. Country approach is an extension of the Capital Assets Pricing Model (CAPM) introduced by Sharpe [17], Lintner [18] and Mossin [19]. According to Causal et al. [20] country risk consists of two basic components, namely: (1) domestic risks and (2) external (global) risks. Gangemietal. [13] states that interactions between internal factors and external factors with global market returns can influence the country risk beta and return from a country's index. Based on Harvey's argument [6], the country risk beta research can be tested by using the return of the composite stock price index. Halin is caused because of the previous studies that have been carried out also use state index output to test the country's country risk beta. Country risk is referred to in this study is a coefficient of parameters from interactivity to external and external factors with global stock indexes.

This research goal is to test and analyze the following.

1. The Influence of Interaction of the exchange rate of rupiah to US Dollar with return MSCI ACWI IMI to country risk beta.
2. The Influence of interaction of the interest rate of SBI for 6 months with return of MSCI ACWI IMI to country risk beta.
3. The Influence of interaction of inflation with returnof MSCI ACWI IMI to country risk beta.
4. The influence of interaction of Indonesia economic growth with return of MSCI ACWI IMI to country risk beta.
5. The Influence of interaction of The world oil price with return of MSCI ACWI IMI to country risk beta.
6. The influence return of MSCI ACWI IMI to The return of IHSG(Composite Stock Price Index)

II. LITERATURE REVIEW

A. Country Risk Beta

Investment is a consumption that is delayed while the time to be consumed is greater in the future [21]. In terms of the scope of its business, investment can be divided into 2, namely real investments such as: Building, land, gold and Financial Investment (Financial Investment) such as: stocks and bonds, where each investment has a different risk and return [22].

According to Harvey [6] beta country risk is sensitivity (covariance) of the natural yields of the global food market. Gangemi et al., [13] stated that risk risk is a function of the exposure of a country to the world market. According to Europe. [23] country risk beta is the systematic risk of a portfolio of an investment and this risk is very difficult to eliminate by diversification. Valdez and Wood [24] and Reilly and Brown [21] say that country risk is called politicsopolitics because of the risks associated with the political conditions of a country. According to Levi [25] country risk statistics and politics are defined as exposure to changes in value in an investment or position that is caused by government actions or a mixed hand of government on the economic path that results in good or bad impacts on a company.

B. Country Beta Approach

Capital Assets Pricing Model (CAPM) is a cornerstone in modern portfolio theory. CAPM theory was first introduced by Sharpe [6] which have been widely used in modern financial literature to calculate the beta coefficients of individual stocks. According to the CAPM theory, beta is the only relevant factor for measuring risk risks. To estimate risk risks, a market model can be used. Country beta review is a quantitative method for analyzing country economy, this is due to the difference between equity market returns a country with a world equity market.

III. RESEARCH METHOD

A. Design Research

This study examines and analyzes the effect of the interaction of internal factors and external factors with the return of MSCI ACWI IMI on the return of the composite stock price index and tests and analyzes the effect of MSCI ACWI IMI return on the return of the combined price index using Harvey's Country Beta Approach (2016). The independent variables used in this study are the rupiah exchange rate against the USD, the 6-month SBI interest rate, inflation, Indonesia's economic growth, world oil prices, and the return of MSCI ACWI IMI.

The dependent variable used in this study is the return index Joint Stock Price (CSPI. Data Analysis Techniques used in this study are Linear Multiple Regression Analysis

IV. RESULTS AND DISCUSSION

Based on the results of data analysis conducted to test and analyze the effect of internal interactions and external factors on the composite stock price index with country risk beta modeling. The results

of the analysis can be seen in the calculation of the t test using a significant level of 5% (Table 1).

TABLE 1. THE RESULTS OF THE T TEST INFLUENCE OF INTERNAL FACTORS AND EXTERNAL FACTORS ON THE COMPOSITE STOCK PRICE INDEX

Model	Unstandardized coefficients		Standardized Coefficients	T	Sig
	B	Std Error	Beta		
(Constant)	33.419	5.537		6.035	.000
Rupiah exchange rate	.510	.104	.466	3.740	.000
SBI	.420	.102	.345	4.886	.000
Inflation	.630	.104	.445	6.648	.000
Indonesian economic growth	.430	.103	.544	5.453	.000
World Oil Prices	.5.20	.105	.460	1.320	.000
Return MSCI ACWI IMI	.320	.106	.360	3.540	.000

Table 1 shows that for the short term the rupiah exchange rate, Indonesian interest rates, Indonesia's economic growth, world oil prices, and Indonesia's economic growth have a positive effect on the country risk beta and return on the composite stock price index. MSCI Inflation and Return negatively affect the country risk beta and return the composite stock price index

A. Effect of Interaction of Rupiah Exchange Rate on USD on return on composite stock price index

Based on the estimation results it was found that the interaction of the rupiah exchange rate against the USD had a significant positive effect on the country risk beta. The results of this study mean that the fluctuating rupiah exchange rate against USD will be followed by an increase in country risk beta. If the rupiah exchange rate is depreciated, then the negative reaction of market participants to sell their shares of their company. The depreciation of the rupiah exchange rate against the USD will make the stock price on the Indonesian stock exchange cheaper if calculated in USD. The positive influence above was caused by the financial crisis in the United States in mid-2007 and peaked in September 2008. The impact of the financial crisis was greatly felt by the foreign exchange market and the Indonesian capital market.The rupiah exchange rate in the foreign exchange market experienced a sharp depreciation in mid-2008 and continued to depreciate to reach the lowest level in early 2009 which amounted to Rp.11,900.00 per USD.

B. Effect of Interaction of SBI Interest Rates on Returns of the composite stock price index

Based on the estimation results, it is found that the interaction of Indonesian interest rate has a significant positive effect on country risk beta.The results of the study mean that an increase in the interaction of interest rates on Indonesian interest rates will be followed by an increase in country risk beta. This is in accordance with the theory which states that the high interest rate causes investors to switch their investments from the stock market and move them to short-term securities or deposits.

C. Influence of Inflation Interaction on Return of the composite stock price index

Based on the estimation results found that the interaction of inflation on the return of the composite stock price index has a significant negative effect on country risk beta. The results of this study mean that the higher the inflation rate will be followed by the low country risk beta. The results of this study are contrary to the theory, where an increase in the inflation rate actually decreases the country risk beta which is a systematic risk. If you take the investment in shares on the Indonesia Stock Exchange compared to Indonesia's inflation rate, then the yields obtained from the Indonesia Stock Exchange's stock investments are far greater than the average Indonesian inflation in Indonesia, which is 6.2% (Indonesia Stock Exchange 2014). Inflation in Indonesia has been classified in the category of low inflation, which is below 10%. This proves that investment in shares in the Indonesia Stock Exchange is more profitable than the magnitude of the increase in inflation in Indonesia, so that it becomes an interesting evaluation compared to ASEAN countries. and is an attraction for investors to keep investing in the Indonesian capital market.

D. Influence of Indonesian Economic Growth Interaction on Returns of the composite stock price index

Based on the estimation results found that the interaction of Indonesia's economic growth has a significant negative effect on country risk beta. The results of this study indicate that Indonesia's economic growth has a negative effect on country risk beta. This indicates that the increase in Indonesia's economic growth for the long term has been responded positively by the stock market players because economic growth is an outcome variable of interest rates, exchange rates, and inflation so that the impact on the performance of the new capital market will be felt in the future.

E. Influence of the Interaction of World Oil Prices on the Return of the Composite Stock Price Index

Based on the estimation results it was found that the interaction of world oil prices had a positive and not significant effect on the country risk beta. This means that the increase in world oil prices has no effect on country risk beta. The non-influence of world oil prices on the country risk beta can be explained because the oil price prevailing in Indonesia is the price of fuel oil that receives subsidies from the Indonesian government, so that the rise and fall of world oil prices does not affect or only have little effect on fuel oil in Indonesia. The Indonesian government runs a subsidized fuel oil program with the aim of helping its people, and consequently the price of fuel oil in Indonesia is one of the countries with the lowest fuel oil prices in the world.

F. Influence of the MSCI ACWI IMI Return on the Return of the composite stock price index

Based on the estimation results found that the return of MSCI ACWI IMI has a significant negative effect on country risk beta. The results of this study explain that the return of MSCI ACWI IMI has a negative influence on country risk beta. This is in accordance with the theory and hypothesis proposed. The significant effect of MSCI ACWI IMI return on the country risk beta indicates that the Indonesia Stock Exchange is integrated with the global stock market.

The United States crisis has a negative impact on the capital markets in several countries including Indonesia, where as a result of the crisis the Indonesia Stock Exchange closed its stock trading on October 24, 2008 when the composite stock price index fell 92. 93 points (6.91%) to 1,244 , 864 which is the lowest position since June 2006.

In general, the return pattern of the composite stock price index is relatively the same as the MSCI ACWI IMI return movement which experienced a bearish phase in 2008 and again experienced a bullish phase in 2009, this shows that there is a link between the Indonesian capital market and the world capital market.

Nugroho's study results, et al [26] state that Indonesia's financial market has been integrated with global finance with varying degrees between types of financial markets as reflected in the influence of the development of significant and dominant global stock prices on domestic stocks.

V. CONCLUSION

Based on the results of the research and discussion above, it can be concluded as follows.

1. The interaction of exchange rate of rupiah to US Dollar with a return of MSCI ACWI IMI has positive and significant influence to country risk beta.
2. The interaction of interest rate of SBI for 6 months with the return of MSCI ACWI IMI has positive and significant influence to country risk beta
3. The interaction of inflation with return MSCI ACWI IMI has negative and significant influence to country risk beta.
4. The interaction of Indonesia economic growth with return of MSCI ACWI IMI has negative and significant to country risk beta.
5. The interaction of the world oil price with return of MSCI ACWI IMI has positive and not significant to country risk beta.
6. The return of MSCI ACWI IMI has negative and significant to country risk beta.

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