THE EFFECT OF MACROECONOMIC FACTORS ON STOCK EXCHANGE OF THAILAND HIGH DIVIDEND INDEX

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Abstract

The objective of this study is to identify macroeconomic factors effecting on the Stock Exchange of Thailand High Dividend Index (SETHD) in Thailand. Sample used time series data to perform an analysis test. Sampling period held 12 months from July 2011 to June 2012. The research was conducted by using simple linear regression analysis as a statistical method. Sampling variables can be classified into two categories, quarterly basis, and monthly basis. Gross National Product, Gross Domestic Product, GNP per capita, GDP per capita are four independent macroeconomic factors analyzed in quarterly basis. Other nine independent factors are analyzed in monthly basis. Dependent variables used in this research including SET Index and SETHD Index. The research found that four macroeconomic factors are affected to the SETHD Index significantly. Three of them which are Interbank Overnight Lending Rate, Bangkok Interbank Offered Rate, and Minimum Lending Rate have negative relationship to the SETHD Index. Another macroeconomic factor which has positive relationship to SETHD Index significantly is Inflation Rate (INFLAT). Understanding factors effecting SETHD Index which representing Thailand high dividend stock will be benefit to investors, especially in ASEAN Trading Link. Future research direction should include data in longer period to improve accuracy of statistical interpretation result.

Keywords: ASEAN Trading Link, SETHD Index, macroeconomic factors, Thailand

Introduction

The integration of ASEAN stock exchanges combines under ASEAN Trading Link model. Domestic investors and retail marketplace will have a chance to access wider variety of products providing them with more investment alternatives throughout the ASEAN Trading Link. Malaysia, Singapore and Thailand are serves as the foundation of the ASEAN Trading Link to providing a single entry-point access to three of the largest stock markets of the ASEAN Exchanges collaboration. These three markets offer nearly 3,000 listed companies with a market capitalization of USD1.4 trillion which equivalent to 70% of the total market capitalization of ASEAN. Malaysia and Singapore are the first two connected markets in ASEAN Trading Link since September 18, 2012 while Thailand will becoming the third exchange to link with ASEAN Trading Link in late October 2012 (ASEAN Exchange, 2012). Figure 1 presents the current trading system among collaborative members and the trading system under ASEAN Trading Link model.
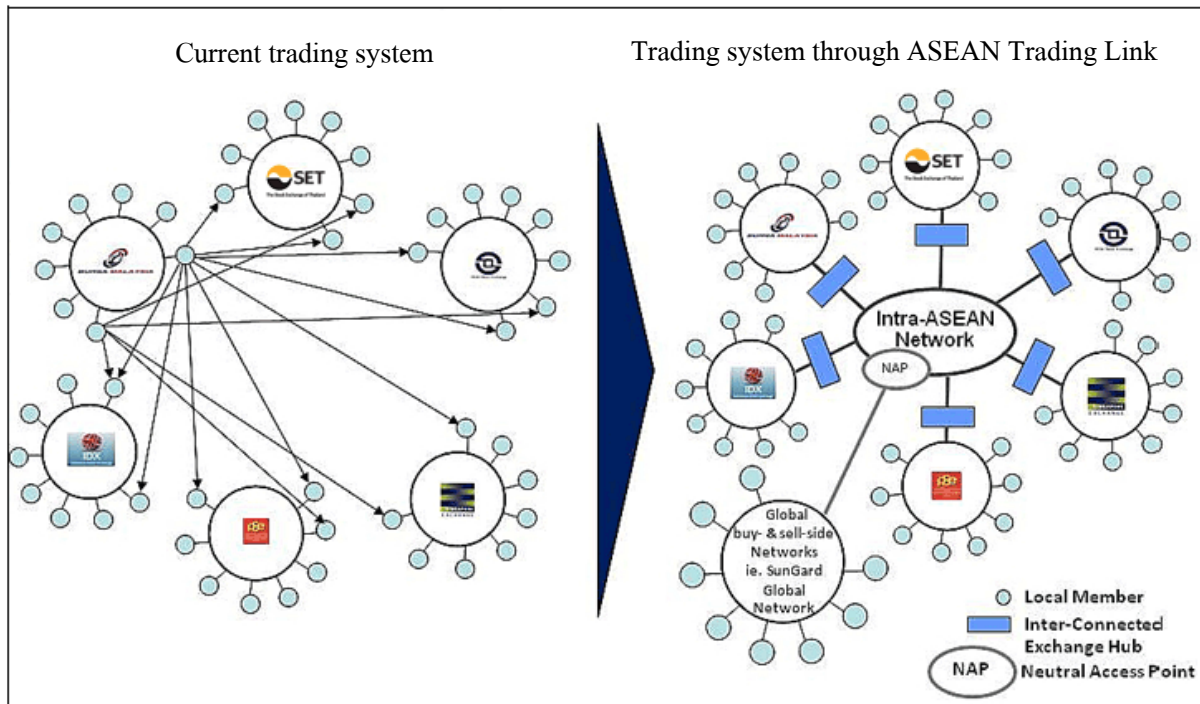
Figure 1 Current Trading System and Trading System with ASEAN Trading Link

For The Stock Exchange of Thailand (SET), a top three of ASEAN market capitalization has reach its highest SET index closed up at 1,305.66 points on October 2, 2012. SET is being the top index performer among Asia's main stock markets which reflecting the attractiveness of the Thai stock market and strong fundamentals of Thai listed companies. Figure 2 shows the performance of Thai Stock market comparing with other countries. As of July 2011, The Stock Exchange of Thailand officially launched the SETHD Index to enhance the variety of SET's products and help fill investors' needs, which is in accordance with Thailand's capital market development plan under the concept of "New services and products enhancing the business sector's financial strength, and increase alternatives for possible returns at every stage of investment". SETHD Index stands for SET High Dividend 30 Index that reflecting top 30 dividend stocks in SET and measures the performance of the high dividend-paying companies in Thailand's market. SETHD Index is a strategy index that reflects price movement of stocks that have large market capitalization and are highly liquid, and have constantly paid high dividend yields in Thailand stock exchange market. SETHD Index is used as a benchmark for alternative (Stock Exchange of Thailand, 2012).

With a fundamental financial analysis point of view, investors mostly consider to invest in the company's stock that generates high profit margins which mostly comes from the company's operating profit. This kind of company can be considered as a cash cow business when the profits that company gained are exceeds the need to maintain for other business purposes such as product improvements (Hemvajirawarakorn, 2004). These profits will contribute to the shareholders in terms of dividend per share. In general, companies in cash cow business have a market share that result in the high profit margin. As a result, profit that generates from the business activities will be convertible into the forms of dividend yield to shareholders. Dividend yield of the company will reflect the turnover and performance stability of the company operations. Therefore, most investors consider investing on alternative stocks that generate high dividend yield at first.
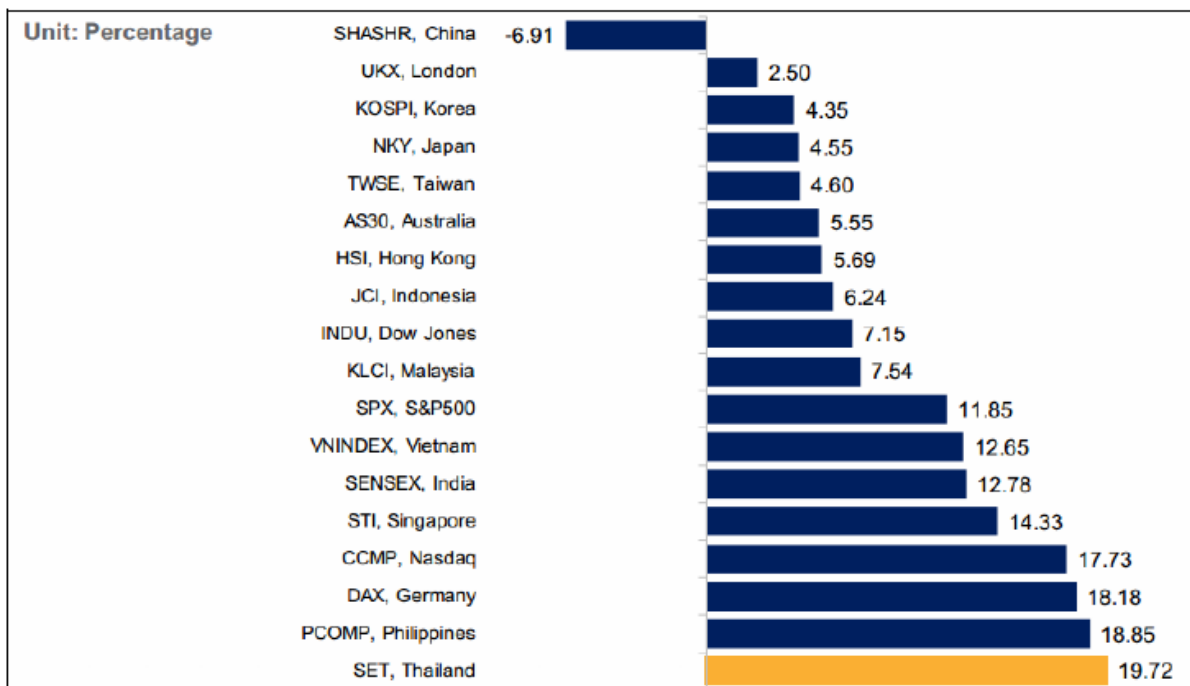
Figure 2 Index Performance of the Thai Stock Market Compared with Other Countries (between the end of Year 2011 and Aug 2012)

The macroeconomic factors play an important role in the movement of stock price (Chutiwong, 1996). According to Thai Securities Institutes, economic situation have a direct impact on the price of stock in broad scope. The reason that the movement of stock price increase or decrease differently beyond the economic cycle is that, economic consequence impact differently on business that operates in the market in terms of positively impact or negative impact, and highly impact or lower impact the business turnover. For example, inflation rate, interest rate, and unemployment rate goes high when the economic gone into contraction stage. This impact lowering the demand in the market because customer have concerned about their future disposable income which result in GDP goes down as a demand decrease. Economic stage will become an important compass in evaluating intrinsic stock process. To analyze the economic situation, there are several tools used for analyze economic situation. In Thailand, government policies and related economic indices are used for analyzing economic situation (Sawethanan, 1999).

In securities market, there many of listed companies from several industries sector consist in the market. Both SET index, SETHD index are representing whole market movement. In accordance with fundamental analysis theory, macroeconomic factors which can representing country's economic situation in broad scope could be appropriate to describe the movement of SET index, SETHD index. However, there are many of macroeconomic factors that use to describe economic situation. Macroeconomic factors used in this research are based on Thailand Securities Institutes (TSI) and several empirical researches that made a conclusive on factors affecting SET index (Thailand Securities Institutes, 2005, 2011). Therefore, the macroeconomic factors affecting the SETHD Index which reflects a price movement of those high dividend stocks in SET Index are analyzed in this study.

Methodology

This research utilizes the form of longitudinal study in descriptive research designs. The design will focus on characterizing the time series data of meta macroeconomic factors, monetary factors, industrial production factors, and consumption expenditure factors that influencing on SET Index and SET High Dividend 30 Index (SETHD Index) in Thailand's capital market during July 2011 to June 2012. Figure 3 demonstrates the conceptual framework for this study.
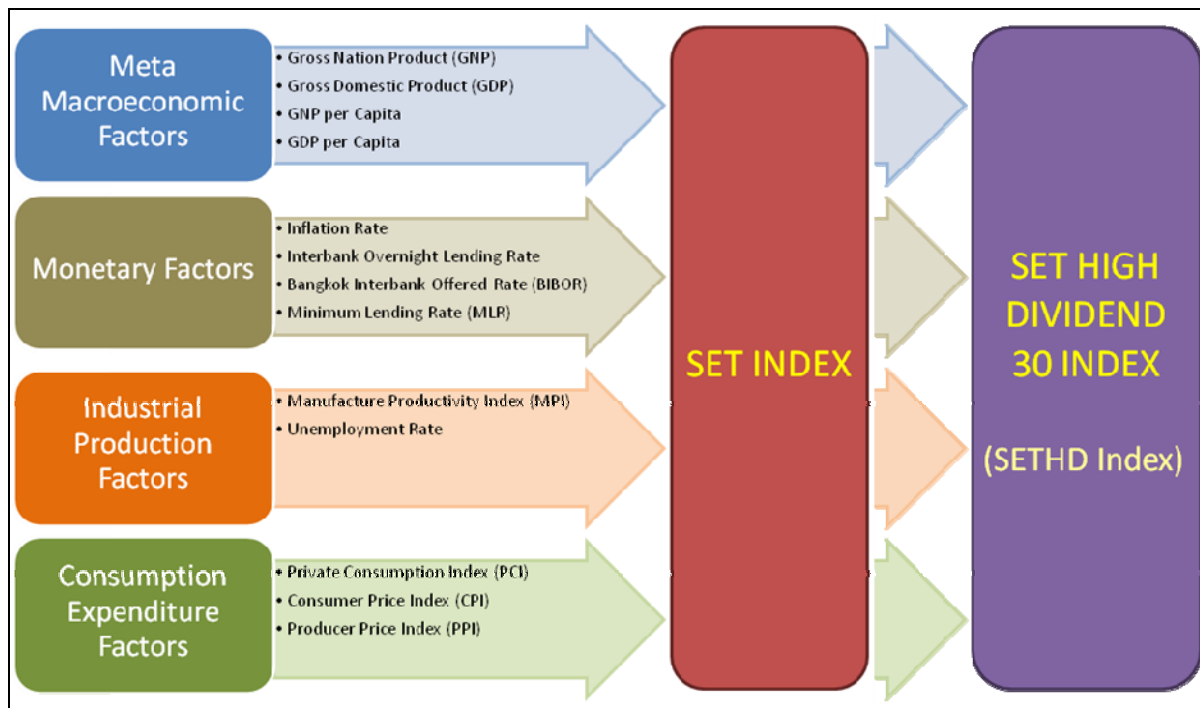

Figure 3 Conceptual Framework

This research covers only available and accessible data concerned on economic analysis level. Industry analysis level and securities analysis level are excluded. Other factors such as political factors, social factors, technological factors, and microeconomic factors such as industry competition factors, internal company strategies, and company's financial strength are excluded in this study. All domestic macroeconomic factors that influenced on SET Index will be used in this research to test the influence on SETHD Index as well.

As SETHD Index official launched since July 2011, the period of study will cover historical time series data from July 2011 to June 2012 as a secondary data in monthly and quarterly basis. Table 1 shows the sampling used in analyzing process for both dependent and independent variables. Independent variables used in analysis can be classified into four groups including Meta Macroeconomic Factors, Monetary Factors, Industrial Production Factors, and Consumption Expenditure Factors. Ordinary least squares method (Khumyoo, 2000) is selected to analyze in this research. Simple linear regression analysis is selected to test how each independent variables have significant relationship to the dependent variables and how does it effect to the change of dependent variables individually. The results of this step will focus outstanding independent variables that influences on dependent variables.

Table 1 Sampling Used In Analyzing Process

Secondary Data	Monthly Basis	Quarterly Basis
Dependent Variables		
SET Index	✓*	✓**
SET High Dividend 30 Index (SETHD)	✓*	✓**
Independent Variables		
Meta Macroeconomic Factors:		
Quarter Gross Nation Product (QGNP)		✓
Quarter Gross Domestic Product (QGDP)		✓
Quarter GNP per Capita		✓
Quarter GDP per Capita		✓
Monetary Factors:		
Inflation Rate	✓	
Interbank Overnight Lending Rate	✓	
Bangkok Interbank Offered Rate (BIBOR)	✓	
Minimum Lending Rate (MLR)	✓	
Industrial Production Factors:		
Manufacture Productivity Index (MPI)	✓	
Unemployment Rate	✓	
Consumption Expenditure Factors:		
Private Consumption Index (PCI)	✓	
Consumer Price Index (CPI)	✓	
Producer Price Index (PPI)	✓	

* Conversion from daily basis to monthly basis
** Conversion from daily basis to quarterly basis

Results

After simple linear regression analysis has been performed, the result can be concluded as following table. Table 2 presents the statistic results of each macroeconomic factor tested with SET Index as dependent variable. From simple regression analysis result, there are six macroeconomic factors have relationship to the SET Index significantly. The three macroeconomic factors that have negative relationship significantly to the SET Index are Interbank Overnight Lending Rate (IOLR), Bangkok Interbank Offered Rate (BIBOR), and Minimum Lending Rate (MLR). The other three factors including Consumer Price Index (CPI), Private consumption Index (PCI), and Inflation Rate (INFLAT) have positive relationship significantly to the SET Index.

Table 3 shows the statistic results of each macroeconomic factors influencing SETHD Index as dependent variable. It shows that there are four macroeconomic factors having relationship to the SETHD Index significantly. Among four factors, three of them that have negative relationship significantly to the SETHD Index which are Interbank Overnight Lending Rate (IOLR), Bangkok Interbank Offered Rate (BIBOR), and Minimum Lending Rate (MLR). The last factor, Inflation Rate (INFLAT), has positive relationship significantly to the SETHD Index.

Table 2 Independent Variables Tested with SET Index

Dependent Variable: SET Index							
SYMBOL	R Square	Adjusted R Square	F	Sig. F or p-value	t Stat	T Critical Value	F Critical Value
IOLR	0.8883	0.8771	79.4881	0.0000*	-8.9156	2.2281	4.96
BIBOR	0.6994	0.6693	23.2654	0.0007*	-4.8234	2.2281	4.96
MLR	0.6028	0.5631	15.1782	0.0030*	-3.8959	2.2281	4.96
CPI	0.4623	0.4086	8.5988	0.0150*	2.9324	2.2281	4.96
PCI	0.4516	0.3967	8.2345	0.0167*	2.8696	2.2281	4.96
INFLAT	0.4306	0.3737	7.5633	0.0205*	2.7501	2.2281	4.96
MPI	0.1958	0.1154	2.4349	0.1497	1.5604	2.2281	4.96
PPI	0.1655	0.082	1.9831	0.1894	1.4082	2.2281	4.96
QGDP	0.1144	-0.3283	0.2585	0.6617	0.5084	4.3027	18.51
QDPC	0.1007	-0.3489	0.224	0.6826	0.4733	4.3027	18.51
UNEMPLOY	0.0932	0.0026	1.0283	0.3345	1.0141	2.2281	4.96
QGNP	0.0377	-0.4434	0.0784	0.8058	0.28	4.3027	18.51
QNPC	0.0284	-0.4575	0.0584	0.8316	0.2416	4.3027	18.51

* Significant at 0.05 level

Table 3 Independent Variables Tested with SETHD Index

Dependent Variable: SETHD Index							
SYMBOL	R Square	Adjusted R Square	F	Sig. F or p-value	t Stat	T Critical Value	F Critical Value
IOLR	0.7957	0.7753	38.9436	0.0001*	-6.2405	2.2281	4.96
BIBOR	0.6675	0.6342	20.0743	0.0012*	-4.4804	2.2281	4.96
MLR	0.5733	0.5306	13.4362	0.0043*	-3.6655	2.2281	4.96
INFLAT	0.4799	0.4279	9.2258	0.0125*	3.0374	2.2281	4.96
PCI	0.3241	0.2565	4.7947	0.0534	2.1897	2.2281	4.96
CPI	0.3192	0.2511	4.6888	0.0556	2.1654	2.2281	4.96
PPI	0.1458	0.0603	1.7064	0.2207	1.3063	2.2281	4.96
MPI	0.1035	0.0138	1.1544	0.3079	1.0744	2.2281	4.96
UNEMPLOY	0.0714	-0.0214	0.7692	0.4011	0.877	2.2281	4.96
QGDP	0.0325	-0.4512	0.0673	0.8196	0.2594	4.3027	18.51
QDPC	0.0255	-0.4618	0.0523	0.8404	0.2286	4.3027	18.51
QGNP	0.0004	-0.4993	0.0009	0.9789	0.0298	4.3027	18.51
QNPC	0	-0.5	0	0.9956	-0.0062	4.3027	18.51

* Significant at 0.05 level

Discussion and Conclusion

In addition, this research compares macroeconomic factors that influence on both SET Index and SETHD Index. The result can be drawn into tabula comparison as shown in Table 4.

Table 4 Comparison of Macroeconomic Factors Influencing on both SET Index and SETHD Index

	Dependent Variable: SET Index					Dependent Variable: SETHD ndex			
Rank	**Symbol**	**R^2**	**Adj. R^2**		**Rank**	**Symbol**	**R^2**	**Adj. R^2**	**t Stat**
1	IOLR	0.8883	0.8771	-8.9156	1	IOLR	0.7957	0.7753	-6.2405
2	BIBOR	0.6994	0.6693	-4.8234	2	BIBOR	0.6675	0.6342	-4.4804
3	MLR	0.6028	0.5631	-3.8959	3	MLR	0.5733	0.5306	-3.6655
4	CPI	0.4623	0.4086	2.9324	6	CPI	0.3192	0.2511	2.1654
5	PCI	0.4516	0.3967	2.8696	5	PCI	0.3241	0.2565	2.1897
6	INFLAT	0.4306	0.3737	2.7501	4	INFLAT	0.4799	0.4279	3.0374

From Table 4, there are six macroeconomic factors affecting the SET Index and four macroeconomic factors affecting the SETHD Index significantly. For both SET and SETHD Index, three macroeconomic factors affected both Index with negative relationship. Those are Interbank Overnight Lending Rate (IOLR), Bangkok Interbank Offered Rate (BIBOR), and Minimum Lending Rate (MLR). Another macroeconomic factor which has positive relationship to both SET Index and SETHD Index significantly is Inflation Rate (INFLAT).

As Thailand's capital market has a high performance among Asia's main stock markets, understanding factors effecting SETHD Index which representing Thailand high dividend stock will be benefit to investors, especially in ASEAN Trading Link. This research shows the analysis of the effect of macroeconomic factors on SETHD Index using short period of analysis because the SETHD Index has launched since July 2011. Simple regression analysis in this research projected a preliminary concept of each macroeconomics factors individually. Future research direction should include data in longer period to improve accuracy of statistical interpretation result. Moreover, multiple regression analysis method such as auto correlation, unit root test, etc. should be further used to find out the instant model to predict SETHD Index.

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