

CHAPTER 5

Conclusion

5.1 Conclusion

The rapid spread of QE effect from United States to emerging economies has expressed lots of worries that the expansion of FED balance sheet will cause the large number of dollars flow to these countries. Moreover, they also concern that the QE taper will cause the capital outflows from the region, resulting in financial market further volatility. A large number of the studies on the impact of QE have employed utilized linear framework, thus falling to capture asymmetries linked with regime switches (Payaslioglu, 2008). This thesis has the objectives to provides a new empirical framework to examine the effectiveness of Quantitative Easing (QE), including purchasing mortgage backed securities, treasury securities and others asset in the United States on Thailand, Indonesia and Philippines' financial markets (TIP) in the post- QE introduction period. The Markov Switching Bayesian Vector Autoregressive (MS-BVAR) model of Nason and Tallman (2013) applied after the process proposed by Sims and Zha (2008) was employed as analytical tool in the present study. Data for the investigation were of secondary type including the monthly time series of value of purchasing U.S.'s Mortgage back securities (MBS), value of purchasing U.S.'s Treasury securities (TS), value of Fed's balance sheet (FB), Stock exchange of Thailand index (SET), Jakarta Composite index (JKSE), Philippine Stock Exchange composite index, THB/USD, IDR/USE, PHP/USD, Thai government bond yield, Indonesia government bond yield, and Philippines government bond yield from 14 January 2009 to 10 July 2014 covering 68 observations.

Within the Bayesian framework, inferences are sometime depending on the priors, lag term, and regime, employed. The results of Marginal log likelihood in this study provides an evidence that Normal-wishart prior, two changes point with 1 lag term, which has a highest Marginal log likelihood, were suggest as the best fit pattern for

estimating MS-BVAR model in TIP stock market, TIP exchange market, and TIP bond market.

We learned that when the Fed started the quantitative easing programs they aroused the TIP financial markets. I also found that the heterogeneous effects, with regards to the QE programs. In TIP stock markets case, the results indicate that the expansion of Treasuries securities purchase program, in high growth regime, will increase the Philippine Stock Exchange Composite Index in the next month. Nevertheless, in low growth regime, the expansion of Treasuries securities and Mortgage Backed Securities purchase program will decrease the decrease in Jakarta Composite Index. In Stock Exchange of Thailand, it has not been affected by U.S. QE both in the high growth regime and low growth regime because one thirds of the market capitalization was hold by foreign investors. Therefore, the low proportion of foreign stock holding and domestic stock holding is represented as a weak integration with foreign investment. In TIP exchange markets case, the impact of U.S. QE is not likely to effect on the TIP exchange markets, except Indonesia rupiah in low growth regime. The capital flows probably were not sufficient to cause their currencies change. Moreover, TIP central banks stands ready to intervene in the foreign exchange market if there have a severe effect to the economy. Lastly, in TIP bond markets case, the expanding Fed's balance sheet could lowered Indonesia government bond yield. On the other hand, the impact of treasury securities program increase Thai government bond yields up 5.15, in the high growth regime, while an increase in Mortgage Backed Securities purchases will push Thai government bond yields down to 3.57 basis points. It is surprising to see that the impact on Thai bond market was increase a bond yield (despite it should decrease a bond yield) in the high growth regime. This suggests that Thai bond market is more affected by domestic monetary policy than by foreign policy those regimes.

Moreover, the best fitting MS-BVAR also produces a regime for the positive effect of QE programs to the TIP financial markets, including the announcement of QE programs, expansion of purchasing programs, and a positive signal from (Federal Open Market Committee: FOMC), which are all placed within the high growth regime. On the other hand, the severe political event, the flooding disaster, speculative shock in financial markets, and QE tapering, are placed within the low growth regime by the MS-BVAR. Furthermore, the result of regimes probabilities present those TIP stock

markets and bond markets have a possibility to stay in the high growth regime more than low growth regime while TIP exchange markets have a possibility to stay in the high growth regime less than low growth regime. Moreover, these models produce an impulse response function which indicates that the feedback of QE programs differs considerably between the regimes. In the high growth regime, the shock in purchasing treasury securities has a positive effects on Philippine Stock Exchange composite index and Thai bond yield while the innovation shock to Fed's balance sheet produce a positive response to Indonesia bond yield. In the low growth regime, the shock in to Fed total asset has a positive effect on Indonesia rupiah. However, a shock to purchasing treasury securities creates a negative response in Indonesia rupiah. The best fitting MS-BVAR also generates FEVDs which characterize the dynamic behavior of the TIP financial markets to the shock of QE programs. The results provide that TIP financial markets are mainly changed by their own shock. However, there are some effects of QE programs to the TIP financial markets. Apart from their own shock, Mortgage Backed Securities is likely to affect TIP financial markets more than other programs.

5.2 Recommendation

Based on these results, I suggest that QE may have a direct substantial effect on the TIP financials markets. Therefore, if the Fed withdrawals the QE programs, it might have an effect on the TIP financial market so the TIP government, TIP center bank, and investors should emphasize on the each QE program and take matters with extreme caution when a shock occurs.

In the case of Thailand' financial markets, I found that the impact of QE is negligible accept for bond market. The impact of treasury securities and Mortgage Backed Securities purchase program push Thai government bond yield up. This suggests that domestic economy might offset the impact of QE. The Thai economy has sound fundamentals, but political uncertainty is an important factor that investors are concern before making investment decisions. I found that the domestic political uncertainty in Thailand is likely to have an impact on the investment environment in Thai bond market. Therefore, Thai government should display confidence toward foreign investor by rebuilding confidence and coordination between foreign government agencies and Thailand Moreover, business regulations by local governments may not convenience to

the private sector, so local government should reduce business regulation to encourage an investment.

In Indonesia' financial markets case, QE has been affected to all financial markets. In the case of stock market, an increasing treasury securities and Mortgage Backed Securities purchase reduce Jakarta Composite Index during the period of QE tapering. Therefore, the President Director of the Indonesian Stock Exchange should emphasize in capital controls in order to limit the impact of any sudden withdrawal of fund. In exchange market case, Indonesia rupiah displayed volatility in the period of tapering. The expansion of Fed's balance sheet will appreciate Indonesia rupiah, while the expansion of Treasuries Securities purchase program will depreciate Indonesia Rupiah. This volatility will play an important role for firms who export goods and import raw materials. Depreciation will make exports goods cheaper and exporting firms will benefit. An appreciation will make exports goods more expensive and decrease the competitiveness of exporting firms. Thus, Indonesia policy makers should protect themselves against the spillover effects by intervening in foreign exchange markets in order to make it stay in an appropriate level. In bond market case, the expansion of Fed's balance sheet will decrease Indonesia government bond yield in the period of expansion of QE. On the contrary, if Fed reduce Fed's balance sheet, it will increase Indonesia government bond yield. I suggest that Indonesia economic fundamentals stills strong and it will draw foreign capital back into the market. Therefore, investors should be cautious in investing and wait for accumulate a stock which has a good fundamental.

In the case of Philippines financials markets, Philippines Stock Exchange index is driven by Treasuries securities purchase. Investors should monitor in Treasuries securities purchase and accumulate a stocks, which its price reflect their fundamental, rather than a speculative stock. Furthermore, the Board of the Philippine Stock Exchange markets should be taken into consideration in US monetary policy. Policy maker should be prepare for the changes in US policy environments and should clearly understand the effects of policies changes. In the case of bond markets, the expansion of treasury securities purchase will decrease Philippines government bond yield in the period of expansion of QE. On the contrary, if Fed reduces treasury securities purchase, it will increase Philippines government bond yield. Although Philippines has a huge current account surplus and GDP growth depend on consumption rather than

investment, the Monetary Board of BSP (Bangko Sentral ng Pilipinas) should be prepare to the capital outflow in the period QE withdrawal. Moreover, they should control the policy rate in order to stabilize bond market.

5.3 Further study

Future research in this field can expand the scope of the impact of QE on other countries with factors such as oil price, interest rates, and gold price, as well as performing counterfactuals based on actual realizations of QE tapering by following its implication. Moreover, the this study estimated the potential of quantitative easing programs and quantitative tapering on the TIP financial markets by using Markov Switching Bayesian Vector Autoregressive (MS-BVAR) model which allows all parameters, including intercept, coefficients, and variance, to vary with the state. Therefore, restriction of parameter shift should be employed in order to create an appropriate model which has fit to the data.