CHAPTER 6

CONCLUSIONS AND POLICY IMPLICATIONS

6.1 Conclusions

From what actually happened and empirical studies, including in this study, it can be concluded that the crisis happening in many countries results from the fact that asset prices are very much higher than their fundamental or trend, or so called "bubble in asset". This is the main factor to lure investors to enter the market and start to speculate. If there is no mechanism to control irrational increased price, bubble will continuously inflate, and eventually bust. This, of course, harms every economic sector and economy as a whole as occurred in Japan in the 1990s, Thailand in 1997, or the U.S. in 2007 which shared common mistake; the irrational in price of stock and property. Therefore, this thesis aims to study about the price and the bubble in both markets in Thailand and their relationship as information for the Bank of Thailand to regulate the bubble, or use monetary policies to slow down the expansion of bubbles.

The first purpose of this thesis is to study the possibility of the Bank of Thailand in regulating asset prices or bubbles in both markets. In terms of regulating stock market, it is found that the fluctuation of stock price is not only reflected by domestic factors, but also such international factors as global economy and Dow Jones Index in the U.S. Even though the relationship between Thai stock index and Dow Jones index has correlation only 12%, but if the Dow Jones index dramatically fluctuated, the impact on Thai stock market would be high as well, as observed in the fall of Lehman Brothers, Merrill Lynch and American International Group (AIG) which highly has impact on Dow Jones index and dynamically affects Thai stock market in a month later. Circuit breaker had been declared twice at that time. Moreover, this study aims to examine an impact on bubble bust in stock market as well, and finds that there is a limitation in tools reducing the fluctuation which can regulate through margin requirement regulation and circuit breaker regulation when the market is irrational high and low. In addition, the stock market recovers faster

when comparing with other markets, as observed from the economic crisis in the mid 1997 where the recovery began in 1999.

When bubble busts in property market, the impact spreads to other sectors such as financial sector, industrial sector and labor market. And when considering the recovery in property market, it is quite slow to recover from the bust. As observed, the market recovered after crisis in 2003.

Moreover, this study also investigates the relationship between the price of stock and property. It indicates that the stock price is more sensitive than the property price around 2 years and 9 months because the investors in stock market is more sensitive from many factors and reflects the economic situation quite well, but in durable goods like property market, there is a time lag of demand and supply, causing the price to be sticky.

Therefore, the Bank of Thailand should control the asset prices or the bubbles in property market rather than in stock market since the change in the property market will be gradual, and suit for policies which need time to adjust. Unlike the stock market, the price seems to change faster based on economic situation through period of time. Yet the recovery of the market is quite fast, and the impact is relatively smaller than the effect of property market bust.

The second purpose of this thesis is to find the threshold of size of bubble and duration of bubbles which the Bank of Thailand should take necessary actions by using Hodrick-Pascott (HP) Filter which is the tool to determine the deviation of asset prices from their trend or the bubbles in the market. In stock market, the stock index is used as a determinant to prove the bubble. It is found that the size and duration of bubbles are both significant. If the proportion of the change in bubble is at 0.4 more than 15 months, it proves to be worthwhile looking into. And if the duration is more than 3 years, the bubble is most likely to be busted. Despite of studying in SET, the study looks further in the stock market in the U.S., and finds comparatively the same result – not only the size that matters, the duration is also important.

For the studying about bubble in property market in Thailand, this thesis uses housing price index to indicate the bubble. Before the property market busted, the bubble size had increased continuously and reached its highest in the first quarter of 1998 at 0.1 which stays in the positive area for one year and 3 months. However, it

is unclear at which size or the duration of bubbles should be aware of due to the limitation of information.

Moreover, it is found that the bubbles in both markets tend to follow the economic situation, but in different period. As mentioned, when GDP growth changes, it would create change in stock bubble and property bubble, respectively. In addition, empirical finding shows the causality between the manufacturing production index (an indicator of economic growth) and the stock index and the land transaction (an indicator of asset prices) which supports the above statement. The finding confirms that the manufacturing production index causes the stock index and the land transactions in different lag: for the stock index around 3 months, but for the land transaction around 5 months. Therefore, it can be concluded that the adjustment in stock market is faster than property market, and the variables can be used either the price index or the bubble itself to determine the situation.

The last purpose of this study is to examine the effectiveness of monetary policy transmission channel which the Bank of Thailand can implement its policy instrument to deflate the asset prices or bubbles by using vector autoregressive model (VAR). There are 5 endogenous variables; monetary base, repurchase rate, stock index, land transactions and manufacturing production index, and one exogenous variable; the Dow Jones Industrial Average Index.

The empirical study from the VAR model in variance decomposition shows that the repurchase rate shock affects on the variations in Thai stock index and the manufacturing production greater than the monetary base shock. However, the monetary base shock has an influence on the variations in the land transactions greater than the repurchase rate shock in the first 8 months. After that, the variations in the land transactions are affected by repurchase rate shock grater than monetary base shock.

Using at the impulse response function, the effectiveness of the repurchase rate and the monetary base shock on asset prices (stock index and land transactions) and aggregate demand (manufacturing production index) is investigated. The conclusion is in line with the theory which indicates the shock of the monetary base (MB) and repurchase rate (RP) have an impact on asset prices and aggregate demand in the positive and the negative direction in the long run. However, in the sixth to

tenth month, the shock of monetary base affected Thai stock index in the negative area due to the recession in that period, and the stock market is sensitive to many factors. Therefore, it adjusts due to the economic situation rather than monetary base. Moreover, if considering the size of effect on Thai stock index, the manufacturing production and the land transactions, it is found that effect of repurchase rate shock is larger than the monetary base shock.

Therefore, when considering variance decomposition and impulse response function, the interest rate channel and the equity price channel are more effective than the credit channel in stock market and property market. However, the change in the property market will be gradual and suit for policies which need time to adjust. Moreover, the recovery of the market is quite slow, and the impact is relatively larger than the effect of stock market bust. Therefore, the monetary policy which is suitable and more effective in regulating the asset price, or, at least, reduces the fluctuation is to use the policy through interest rate channel.

6.2 Policy Implication

The asset prices are significant to the economic stability. If the price is very sensitive or bubbles are inflated for a long time, it may harm the economic stability as occurred in Japan in the 1990s, Thailand in 1997, and the U.S. in 2007.

Therefore, the authority should consider asset prices as the factor to adjust appropriate monetary policy. The prices that should be looked into closely is stock price and property price. If the proportion of change of bubble in SET is fluctuated in positive area at the high level more than 15 consecutive months, the regulator should keep its eyes on to prevent it from the bust. It should be remarked that the effectiveness of using monetary policy will decrease when the bubble size is large more than 3 years. Speaking of the bubble in property market, even though, the size and duration cannot be exactly defined when the authority should take actions due to the limitation of gathering data, it is worthwhile to observe the bubble in stock market as a good indicator to take appropriate actions since the bubble in stock market reflects the real economic situation better than the property one.

For the effectiveness of using monetary policy to control asset prices and aggregate demand, this study finds that the repurchase rate is more effective than the monetary base. Therefore, the regulator should pay more attention to bubbles through interest rate channel and equity price channel in property market and stock market. However, Bank of Thailand should regulate the property price rather than the stock price. Therefore, the interest rate channel is more effective to reduce the fluctuation of the asset prices. This suggestion differs from the study of Chen (2001) and Ito and Iwaisako (1995). Their studies are based on Taiwan and Japan environments which are quite different from Thailand in using the monetary policy and period of study. They suggest that the lending channel is more important than the interest rate channel in determining asset prices. However, the Bank of Thailand has started to determine factors in financial market since 2000, and found that using monetary base targeting is less effective than using inflation rate targeting since the relationship of money supply and the economic expansion after crisis in 1997 is not stable. Therefore, after IMF program, the Bank of Thailand agrees to use the inflation-targeting framework. The monetary policy stance is signaled through the policy interest rate (repurchase rate) which supports the effectiveness of regulating the asset prices and bubbles.

6.3 Limitations of the Study and Suggestions for Future Study

As the size and duration of bubbles can be found by many methods, this study employs Hodrick-Prescott Filter. Considering the result by using many methods to determine the bubbles might give variety of thoughts and help when indicating threshold of bubble size.

In addition, the housing price index data is only available during 1995-2007. Therefore, the threshold of size and duration of the bubbles cannot be determined exactly because it cannot be divided into the exact period. Therefore, if information were available, it would help to further investigate the threshold of size and duration of the bubbles.

Analyzing VAR model must have monthly information available but the data for gross domestic product (GDP) and housing price index (HPI) are quarterly data. Therefore, this study employs the proxies which are manufacturing production

index and land transactions. If the data on GDP and HPI is available on monthly basis, the effectiveness of monetary policy will be more accurate than using the proxy. All of these are suggestions for future research.