## **CHAPTER 1**

#### **INTRODUCTION**

#### 1.1 Statement of the Problem

In the last two decades, many countries have experienced the large fluctuations in the asset prices, or so called "bubble". Stiglitz (1990) gave the basic intuition of bubble as follows: "if the reason that the price is high today is only because investors believe that the selling price will be high tomorrow – when "fundamental" factors do not seem to justify such a price – then a bubble exists". If there are no mechanisms to control the bubbles, it will perpetually inflate, and eventually bust as occurred in Japan in the 1990s, Thailand in 1997 and the United States of American (the U.S.) in 2007.

An economic history has shown many examples about economic crisis associating with asset price bubbles such as; Chen (2001) and Ito and Iwaisako (1995) who study the relationship between asset price bubbles and aggregate credit toward Taiwan and Japan. The empirical results suggest that higher property price stimulates economy via wealth effect which encourages investment and consumption spending. Therefore it has an impact on loan. In addition, the lending channel is more important than interest rate channel in the determination of asset prices. However, increasing of fundamental stock and property price cannot be easily isolated from the bubbles.

In the case of the U.S., there are two opposite views to regulate the bubbles. According to the Economist (2007 and 2008), the suggestions are that even though credit and asset price boom can make bubble and finally leads to bust, central bank should not interfere the market. However, the Economist (2002) and Krugman (2002) conclude that Federal Bank could do many things to deflate the bubbles through monetary policy transmission channels.

Moreover, Disyatat and Vongsinsirikul (2002) studied about Monetary Policy and the Transmission Mechanism in Thailand during 1989-2001. The empirical results point to a transmission mechanism in which investment is particularly sensitive to monetary shocks. In part of transmission channel, the exchange rate and asset prices channels are less significant than the interest rate channel. In addition, the role of bank lending declines along with the sensitivity of retail rates to money market rates.

Consequently many articles mainly discuss what happened in other countries which do not study the case in Thailand.<sup>1</sup> Since different countries have their own endowment, the roles of the Bank of Thailand regarding to the bubble regulation is worth to be examined, especially when Bank of Thailand switched its monetary policy from monetary targeting to inflation targeting in 2000.

Economic crisis in 1997 affected the Thai economy as a whole, including both firms and households. A year after the crisis emerged, 12,278 business firms, 56 non-bank financial institutions and 1 commercial bank had to be shut down while nonperforming loan (NPL) sky-rocketed to 50% of total loan in economic system as well as unemployed workers increased to 1.3 million.<sup>2</sup> Not only did it deteriorate Thai economy, but also spread the chain effect all over Asia.

The root cause of above economic crisis was solely from the rapid economic growth from 1990 to 1995 which stimulated investors to find investment opportunities in Thailand. The major culprit was foreign direct investment from international investment while the minor cause was the stock investment. Moreover, the capital inflow was credit loan, half of which was short-term.

In addition, since April 1<sup>st</sup>, 1990, the Bank of Thailand announced financial liberalization policy and its requirements. One of the most important requirements was setting up Bangkok International Banking Facilities, or BIBF. From Figure 1.1, the setting encouraged financial institutions to increase their loan rapidly while the ratio of loan to deposit was also higher from less than 1 in 1990 to 1.35 in 1995 and 1.43 in 1997. Because of the high credit loaning, it lowered the interbank interest rate, as shown in Figure 1.2. Since domestic liquidity was high, it drove property and stock price sky-rocket which covered the trouble, especially, in property market. This phenomenon can be called "economic bubble".

<sup>&</sup>lt;sup>1</sup> Ito and Iwaisako (1995), Chen (2001), Krugman (2002), Brissimis and Vlassopoulos (2007) and The Economist (2007 and 2008).

<sup>&</sup>lt;sup>2</sup> Bank of Thailand (1998).

Figure 1.1 Loan/Deposit Ratio



Source: Bank of Thailand

Figure 1.2 Interbank Lending Rate



Source: Bank of Thailand

However, poor management leads to NPL problem. Referring to Figure 1.3, in June 1998, NPL was 2,090 billion baht or about 50% of total loan and reached the new height at 2,709 billion baht in March 1999; especially in real estate sectors, as it was one of the sectors that took major part of total NPL.

Figure 1.3 Gross NPL and Proportion of NPL to Total Loan



Source: Bank of Thailand

As mentioned above, during the 1990s, it was another era of real estate expansion in Thailand since the government also played a part to support property market. Thereafter, entrepreneurs accessed to loan easier, leading to opportunity to expand their investment. According to Lauridsen (1998), 755,000 housing units in total were built in Bangkok. This was twice as high as the estimation according to national plan. Loan from financial institutions to property developers increased as well. In 1993, the loans totalled 264 billion baht. In 1996, they went up to 767 billion baht<sup>1</sup> which supported the rising of property price, as shown in Figure 1.4.

In addition, the figure clearly states that the price in stock market fluctuated during pre-crisis period. The stock price started to rise since 1985 and reached its peak at 1,700 in 1993, or increased more than 1,100% since 1985.

<sup>&</sup>lt;sup>1</sup>Lauridsen (1998).



Figure 1.4 Land Price Index and Stock Price

Sources: Agency for Real Estate Affairs and Stock Exchange of Thailand

However, the Bank of Thailand (BOT) had policies to slow down economy before 1997. As authority did not regulate fiscal policy strictly, BOT, therefore, used monetary policy to absorb money supply in economy through repo market which substantially drove market interest rate higher. The aggregate demand started to decline while the fixed exchange rate caused more problems. If the country were to allow free flow of capital mobility, BOT would not regulate aggregate demand effectively because the higher interest rate encouraged debtors to borrow from international rather than domestic loan and attracted outsider to invest in Thailand.

Consequently, BOT could not control the capital inflow through repo market. BOT, then, considered signing swap contract in international financial market. That is selling U.S. dollar and purchasing baht in exchange with purchasing U.S. dollar and selling baht in the future. Swap was used roll over the capital inflow. However, BOT used this tool so late that Thai currency was speculated.

One method which BOT looked over was resolving the root cause; blocking capital to flow into Thailand. At last, in August 1995, BOT commanded the deposit

without interest requirement, but this was not so effective. Moreover, this policy was too late because non-performing loan was so high.<sup>1</sup>

Therefore, before 1997, BOT had many resorts to relieve the bubbles occurred, but these could only solve as corrective actions without eliminating root cause, considering capital inflow control and real assessment on asset prices. Moreover, many factors made the monetary policies ineffective and the timeliness was not matched with the situation. Finally, the bubble size as a portion of the asset prices had large size until it collapsed in mid-1996.<sup>2</sup>

The lesson learnt from the economic crisis in 1997 is that after the International Monetary Fund (IMF) program, BOT made an extensive reappraisal of both domestic and external environment. It concluded that the targeting of money supply would be less effective than the targeting of inflation. The main cause for change was that the relationship between money supply and output growth became less stable over time, particularly, since the financial crisis. In conducting monetary policy under the inflation-targeting framework, the monetary policy stance is signaled through the policy interest rate (repurchase rate) which would help to rebuild confidence and credibility of the central bank and monetary, going forward.<sup>3</sup> In addition, BOT started to look more on the asset prices. For example, when the real estate expanded again in 2004, it successfully issued the policy to control loan amount; ordering commercial bank to report all projects which loan amount is over 100 million baht in order to check the correctness and stability of those projects. This policy effectively slowed down the expansion of real estate sectors.

Moreover, many countries pay more attention in the asset prices as well as the case of subprime and economic crisis in the U.S. While in the South East Asian Central Banks (SEACEN) summit, every country agreed that the central bank should make sure that it can handle subprime problem properly while many resorts might need to be issued in order to prevent the problem in stock market and property market.

Even though this event occurred a while ago, it seems that the situation is most likely to recur. Therefore the aim of this study is to find the effectiveness of

<sup>&</sup>lt;sup>1</sup> Thailand Development Research Institute (2008).

<sup>&</sup>lt;sup>2</sup> Haemrattanakorn (2000).

<sup>&</sup>lt;sup>3</sup> Bank of Thailand (2008).

monetary policy transmission channels in which the Bank of Thailand can implement its policy instrument to deflate the bubbles. Since the transmission channels may impact on economic system, knowing the combination and control could help those financial institutions, regulators and monetary policies makers to avoid unnecessary economic fluctuation in the future.

# 1.2 Objectives of the Study

1. To study the possibility of the Bank of Thailand in regulating asset price bubbles in stock market and property market.

2. To find the threshold of size and duration of bubbles which the Bank of Thailand should take necessary actions.

3. To examine the effectiveness of monetary policy transmission channels which the Bank of Thailand can implement its policy instrument to deflate the asset prices or the bubbles.

## 1.3 Scope of the Study

This study analyzes the relationship between interest rates and credit as the factors affecting the asset price bubbles in stock market and property market from 1990 to 2008.

### 1.4 Organization of the Study

This study is organized into six chapters. The first chapter is an introduction which includes statement of problem, objectives, scope and organization of the study. The second chapter describes theoretical framework which includes review of related literature. The third chapter is an overview of financial market, property market and stock market in Thailand. The methodology and sources of data are employed to test the model in the fourth chapter. In addition, empirical results are shown in the fifth chapter. The last chapter presents the conclusions which include summary of the result, limitations and some suggestions for further study.