CHAPTER 3

ASSET PRICES IN THAILAND

This chapter reviews the market condition in three different periods. They are, pre-crisis, during-crisis and post-crisis. It focuses on financial market, property market and stock market. The purpose of this analysis is to explain why these markets are related.

3.1 Financial Market

3.1.1 Prior to Economic Crisis Period

The Bank of Thailand announced financial liberalization policy and its requirements in 1990. One of the most important requirements is setting up Bangkok International Banking Facilities (BIBF), empowering financial institutions and 47 foreign banks to provide loanable fund which can be divided into 3 parts; out-in which is transferring foreign capital to domestic, in-out which is transferring domestic capital to foreign countries, and out-out which is transferring capital from one place to another. However, it showed that Thailand had only “out-in” practice by transferring foreign capital for credit fancier and companies in stock market.

Theoretically, borrowing international capital whose interest rate is low to produce goods and services seems to work well if private sectors can utilize the borrowing capital effectively.

Because there was large difference between foreign interest rate and domestic rate, all financial institutions took this opportunity to arbitrage by using short term loan to lend money to those sectors which need long term loan, and since the domestic rate was set at the high level, the investment growth was limited.

The only sector which can be profitable at that time was real estate sector. Therefore, most financial institutions lent capital for speculating land and real estate development which led to over-investment in real estate sector while others lent the capital to investors in stock market to buy equities. In addition, personal loan was growing since people borrowed money to buy cars which later forced government to solve traffic problems by borrowing money to build roads. Not only did financial institutions seek the loan outside country, large private sectors also looked for foreign capital.

While everything was happening, the Bank of Thailand did not warn the market about the exchange rate. Moreover, it repeatedly emphasized that there was no plan to depreciate the baht.

Since 1995, the Bank of Thailand could see too much short term capital inflow transferring into the market. At that time, 70 percent of foreign debt was caused by private sectors. Instead of using floating exchange rate policy, the Bank of Thailand ignored the fact and used other policies which were ineffective. When trade account in 1995 showed that Thailand was deficit by 373,000 million baht and was worse off in 1996, foreign investors' confidence about the ability to repay started to fall. Therefore, they stopped to inject the capital, while the Bank of Thailand had "financial sector cannot fail" policy. Later, it provided more capital into financial sector.

The ignorance of solving Bangkok Commercial Bank led to cut off foreign loan from foreign investors while Thais started to withdraw their money for fear that banks would be soon run. The liquidity was slump. The Bank of Thailand tried to bail out the financial sector until it could not support anymore. This costed approximately 500,000 million baht which wasted to support the policy. Later, the Bank of Thailand disclosed surprising information that it did use money from banks to bail out financial institutions in the total amount of 1.4 trillion baht.[1] Finally, the financial crisis erupted.

3.1.2 During and After Economic Crisis Period

The effect from financial crisis occurring in 1997 led to the fluctuation of the domestic liquidity in 1998. Since foreign investors' and lenders' confidence were low, the net capital outflow increased and foreign loan was requested to repay. While

[1] National Institute of Development Administration (2008).

survivals limited their domestic loan credit, authority forced many financial institutions to shut down. As a result, liquidity was continuously plunged. However, from the second quarter of 1998 to the end of 2001, liquidity started to get better because the policy maker used the expansionary monetary and fiscal policies, by lowering the interest rate and issuing bonds to repay banks and financial institutions while non-performing loan decreased.

During 2002-2005, liquidity and loaning credit got gradually better because the whole economy started to recover after the crisis. When considering credit in each private sector, such sectors as industries, commercials, and merchandises were granted loanable fund while personal loan was increasing. Yet, the Bank of Thailand closely kept tracking and monitoring the loanable fund from those financial institutions in order to ensure that borrowers could repay their debts.

In 2005, the growth rate of loan in industrial sector was diminishing. But the investment rate was still stable because private sectors commenced to use other sources of fund such as issuing equity or debt. However, in the second half of year 2006-2007, loan growth slowed down, especially in private sectors' investment since domestic demand decreased continuously which was caused from the high oil price and the political uncertainty.

3.1.3 Financial Regulation: BASEL ll

Normally, the way commercial banks have been doing business since the beginning is linked to the sufficiency of mutual fund regulated by the Bank of Thailand. The Bank of Thailand adopts the regulations based on international practice such as Bank for International Settlement (BIS) or Basel Capital Accord in 1993. It used Basel 1 for regulating commercial banks. However, BIS developed Basel ll in the year 2001 (new capital accord) to comply with the complicated financial business. Thailand, therefore, adopts Basel ll as well.

The regulations of Base ll are composed of 3 pillars which are minimum capital requirement (pillar 1), supervisory review process (pillar 2) and market discipline (pillar 3). The second and third are added in Basel ll.

Note that, the most important is the first pillar which is related to the regulations of minimum fund because Basel ll has weighted on capital adequacy ratio (CAR) by adding operational risk into the consideration apart from market risk and credit risk.

The second pillar has 4 principles. That is the process in assessment of fund, the process in checking fund and strategies to obtain fund, the process to retain fund over minimum requirement, and the process of intervention to retain fund at the requirement. It also provides a framework for dealing with all the other risks bank may face, such as systemic risk, pension risk, concentration risk, strategic risk, reputation risk, liquidity risk and legal risk, which the accord combines under the title of residual risk. It gives banks a power to review their risk management system.

The third pillar greatly increases disclosures that the bank must make. This is designed to allow the market to have a better picture of the overall risk position of the bank and to allow the counterparties of the bank to agree on each transaction appropriately.

As mentioned above, these are potential impacts to commercial banks to be prepared. From customer's perspective, borrowers are influenced as well because the new regulations may cause banks to charge different interest rates – the risk of borrowers is the main consideration: good (bad) borrowers receive low (high) rate of interest. As risk controls interest rate, it is difficult that banks can increase their market share based on price competition. Consequently, these regulations will substantially help control the bubbles, and economic stability.

3.2 Property Market

3.2.1 Prior to Economic Crisis Period

The beginning of property boom was during 1986-1997. It came from a significantly change from an agricultural-based economy into an industrial-based economy. Because of this transformation, wealth had accumulated resulting in the boom in housing and real estate for over a decade.

During 1987 to 1990, a lot of symptoms of the boom emerged. Off-the-plan projects were sold very quickly. Other real estate products apart from housing were also boom. These included hobby farm land subdivisions, golf courses, office buildings, and such like. Speculations prevailed on nationwide basis. As observed, a lot of foreigners came to speculate on properties in Thailand whereas real estate was not allowed to be owned by them. Therefore, many foreigners found the solution to invest by paying for the booking fee and down payment. At the date of the completion and transfer, if they could find another buyer to buy their units at a lot higher price than they originally booked, they made profits.

In 1990, the real estate market slowed down due to the Gulf War. Speculative and extravagant real estate projects faced difficulties. While land and other luxurious projects became less popular for speculation due to the drop in prices, people began speculating low-income housing, particularly low-income condominiums.

However, the supporting from Board of Investment (BOI) to encourage housing developments by offering 5 years income tax exemption to developers who developed low-income housing units also participated in the expanding of this boom. From 1994 to 1996, most new projects came from condominiums and townhouses with an increasing growth rate from 3% in 1987 to 34% in 1997 due to the massive speculation in the housing sector.

In 1996, the supply of real estate exceeded the actual demand in almost all sectors of the property market. Many developers began to experience cash flow problem. In 1997, most developers abandoned many of their ongoing projects. Since approximately 70% of overall real estate developments in Thailand were housing units. The resulting crash in this sector was devastating to the rest of economy. When the property price bubble had begun to collapse in 1996, it made banking systems so weakening before experiencing an exchange rate crisis, a financial crisis, and a business cycle bust in 1997.

3.2.2 After Economic Crisis Period

Real estate activities accelerated strongly again in 2003 after the market had bottomed out in 2000, with housing demand being a major driving force. The value of land transactions for the entire kingdom totalled 437 billion baht, up by 64.6 percent from the previous year. The major factors supporting buoyant real estate activities in 2003 included low interest rate environment and high growth of housing credits extended by commercial banks, both of which made home-owning much more affordable. As of the end-September 2003, the outstanding level of personal housing credits was 444.9 billion baht, growing by 15 percent year-on-year.

In 2004, the real estate market continued to grow satisfactorily, albeit at a slower pace than in 2003. House prices continued to rise, reflecting persistent housing demand. In 2004, the single-detached house price index (including land) increased by 5.4 percent year-on-year, and the townhouse price index (including land) expanded by 3.5 percent year-on-year. However, the increase in housing price was modest given the increase in the construction cost.

During 2005-2006, overall real estate activities slowed down in line with a weaker demand, mainly as a result of rising oil prices, inflation and political uncertainty. Consequently, consumer confidence declined and potential home buyers postponed their purchases as reflected in a decline of 7.6 percent in the number of land transactions.

3.3 Capital Market

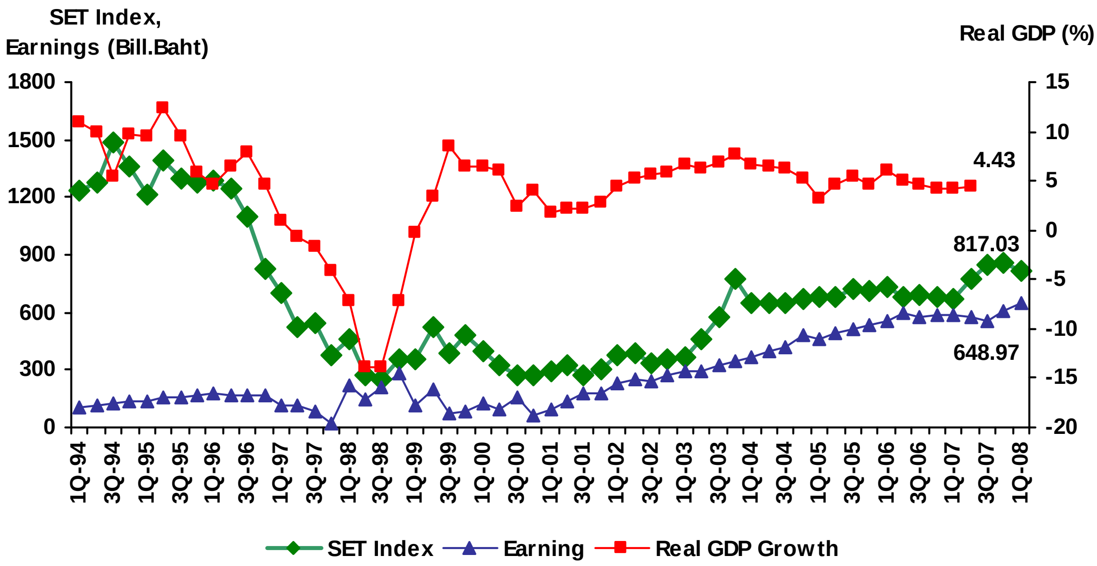
3.3.1 Prior to Economic Crisis Period

The development of the Stock Exchange of Thailand (SET) is derived from the strong economic growth which increases the size and plays more roles in macro economy. From the yield perspective, capital market gives the higher return than any other markets. The money return is four times higher than those from the interest rates. Deducted by inflation rate, the return on bidding the stock is still three times higher than the gain received from bank account. Therefore, in the 1990s, it attracted many investors to invest in this market. In 1976, the SET index laid the minim level at 76.43 points but it went to the peak at 1,753.73 points on January 4th, 1994.

In addition, the stock index movement is aligned with economic trend, the performance of companies in SET market and foreign investors, as shown in Figure 3.1.

Figure 3.1

The Relationship between Economic Situation and SET Index



Source: Stock Exchange of Thailand

Note: Earnings are calculated by 12 month accumulated earnings before interest and taxes.

3.3.2 During and After Economic Crisis Period

Economic crisis in 1997 affected the stock index which decreased sharply to 214.53 points in the third quarter of 1998. This problem occurred because most sectors relied too much on the economic situation. Therefore, during economic crisis period, the stock index fluctuated more than other periods.

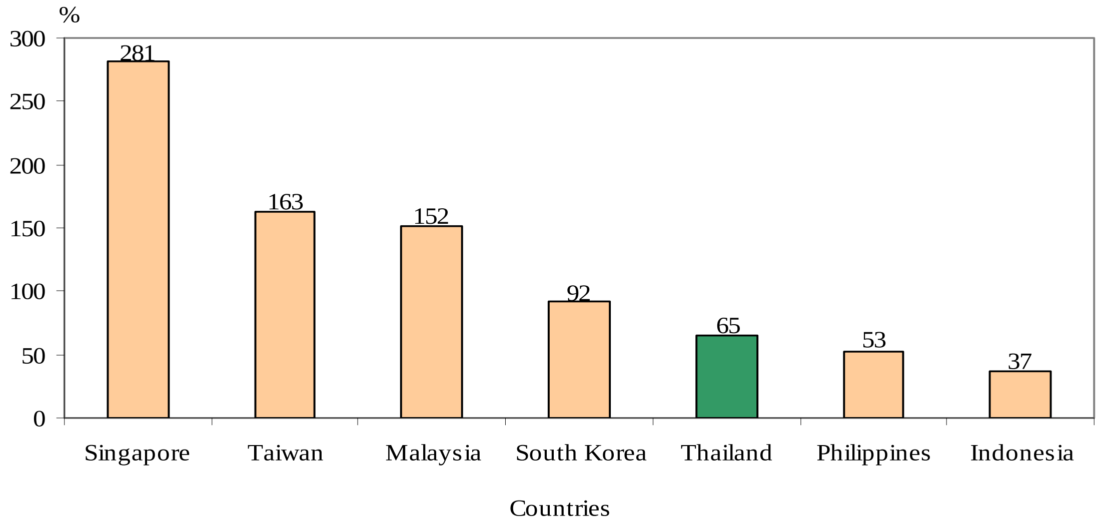
After economic crisis period, the highest stock index was at 907.28 in the last quarter of 2007. Nowadays, the capital market and money market are twice as large as financial market. SET registered companies continued to grow and, so far, there are more than 500 companies registered in stock market.

3.3.2.1 Thai Securities Market in Asia

Market capitalization to GDP and P/E ratio are still small when comparing with other stock markets elsewhere, as shown in Figure 3.2, Figure 3.3 and Figure3.4.

Figure 3.2

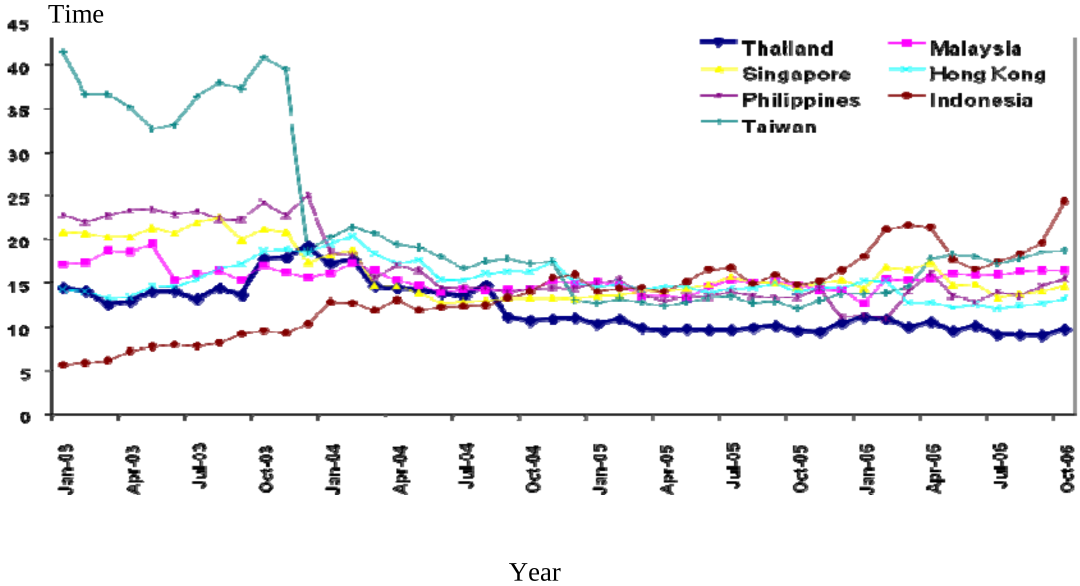
Market Capitalization to GDP Comparison: Asian Countries (Year End 2006)



Source: Stock Exchange of Thailand

Figure 3.3

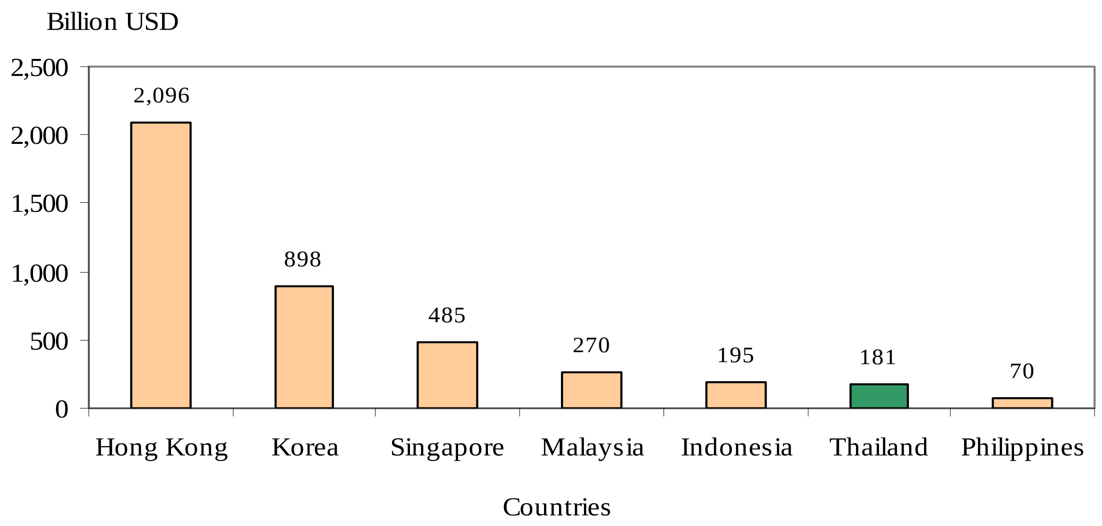
P/E Ratio of Selected Countries (2003-October 2006)



Source: Stock Exchange of Thailand

Figure 3.4

Market Capitalization (June 2008)

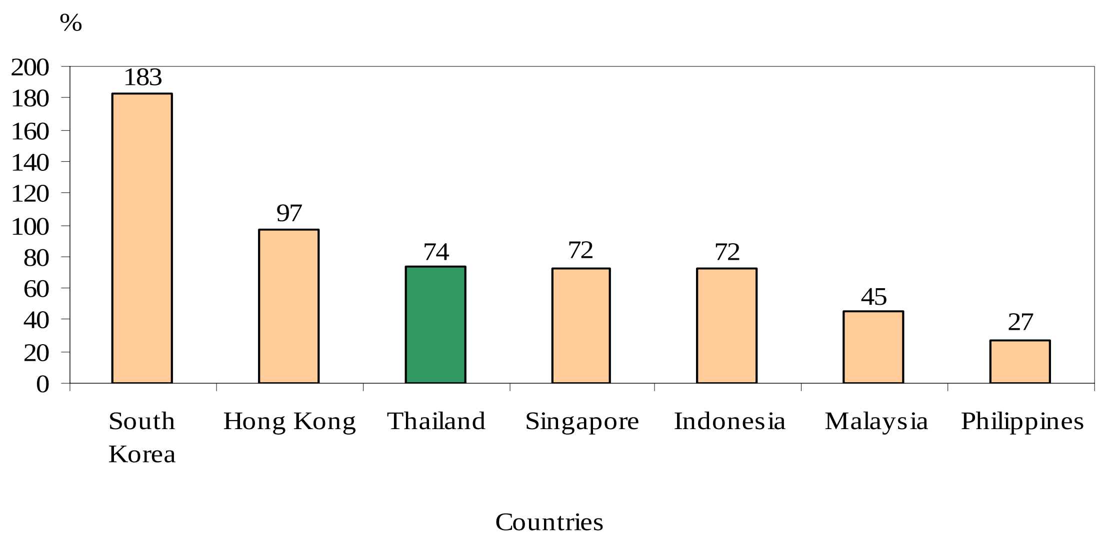


Source: Stock Exchange of Thailand

Although not many companies register in stock market, when comparing within the region, SET has high liquidity, as demonstrated in Figure 3.5.

Figure 3.5

Share Turnover Velocity (Turnover: Market Cap) (June 2008)



Source: Stock Exchange of Thailand

3.3.2.2 Thai Securities Market in the World

The yield gaining in SET is increasing, comparing with other stock markets in June 2007. From domestic market capitalization point of view, SET was ranked at the 36^{th}. Since it has market value around 181,000 million U.S. dollar which is 80 times smaller than New York Stock Exchange, 12 and 3 times smaller than Hong Kong and Singapore, respectively.

3.4 Relationship between Financial Market, Property Market and Capital Market

By examining 3 markets consisting of financial market, property market and capital market, it can be concluded that the problems were occurred at the same period of time, which is in 1997. Originally, the real estate had busted which led to the plunge in stock market during the time when the stock index fell from 1,419 points to 204 points in 1998, decreasing around 86% of the whole market. Finally, more NPL emerged, leading to the depreciation of Thai baht and financial crisis.

Besides the example in Thailand of 1997, the relationship between these three markets was well demonstrated in the U.S. context in 1929 and 2007. The first bust was occurred from the bubbles in many sectors including real estate and stock market. Once the bust occurred in 1929, Dow Jones Industrial Average plunged by 90% from 386 points to 40 points for 35 consecutive months or almost 3 years while the gross domestic product (GDP) went negative during that period.

The latter which occurred in 2007 stemmed from subprime credit causing from debtors borrowed money for investing in property market. The main reason for this problem is that bank loan had been reconstructed by supplying loan from issuing bonds. As banks could easily consolidate money from new source of fund, more money was granted to subprime customers with higher interest charged, typically, with fixed interest rate in the first 2 years. However, after 2 years, most debtors could not repay the high rate of interest which caused more NPL in the financial institutions. Subprime lending expanded rapidly in the U.S. in 2006. One-fifth of the buyers were subprime customers, and subprime mortgage increased to 1.3 trillion U.S. dollar in 2007.

Since the number of debtors could not repay their loan were increasing, it directly affected price of real estate. Thereafter, when the property price diminished, the recession in real estate sector occurred. Obviously, this recession led to the loss of financial institutions. For example, Lehman Brothers, one of the biggest financial institutions in the world, declared self-capital accumulation which affected Merrill Lynch and American International Group (AIG). Moreover, the problem of subprime also impacted on real sector as noticed in General Motors (GM). Its General Motors Acceptance Corporation (GMAC) finance arm made a loss of 305 million U.S. dollar because of charges taken at its housing finance unit. GM is in the middle of a restructuring process that will involve cutting more than 34,000 jobs and closing 12 plants.

Finally, the total impact significantly caused the whole economy slow down, and the fall of the U.S. stock market. Dow Jones Index declined from 14,198 points in mid-October to 9,180 points – decreasing 35% of the whole market value while the Federal Fund Rate dropped from 5.25% in September 2007 to 1% in October 2008.

The financial impact in the U.S. has been widely spread to other stock markets around the world. SET authority needed to halt the bids for 30 minutes (circuit breaker) twice on October 10^{th} and 27^{th}, 2008 because the stock price was highly fluctuated. The stock market reached the new low from 387.43 points to 342.01 in October 27^{th} which was the lowest in first five years and five months.

Although the U.S. and Thai economies differ from each other in both market sizes and characteristics what they have in common is the close link between financial market, property market and capital market.

3.5 Comparison of Asset

Table 3.1

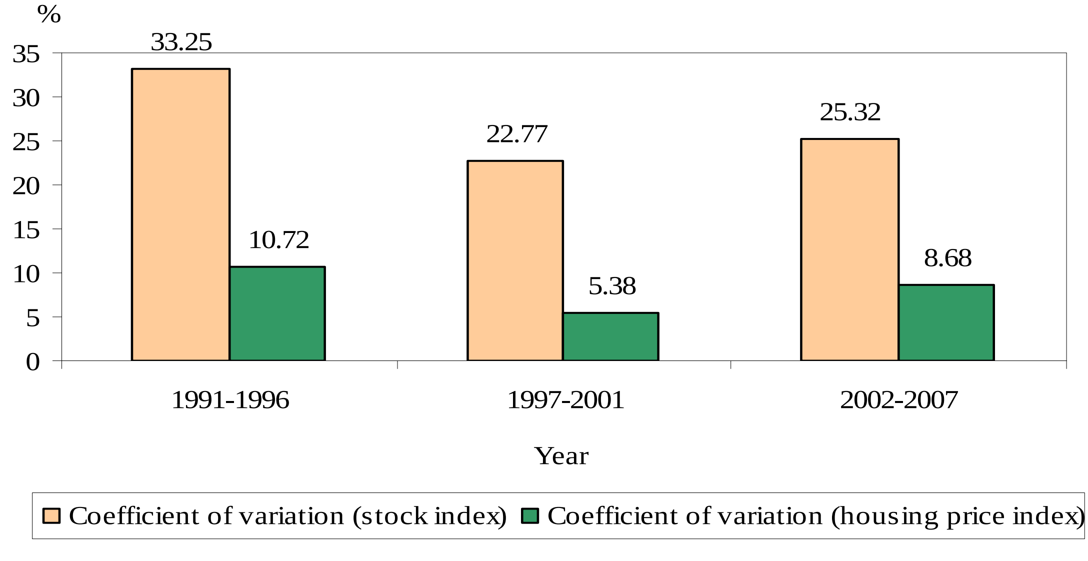
Comparison of Asset Prices between 3 Periods

	1991-1996	1997-2001	2002-2007
Coefficient of Variation (Stock index)	33.25%	22.77%	25.32%
Coefficient of Variation (Housing price index)	10.72%	5.38%	8.68%
Correlation between Stock Index and Housing Price Index	0.45	-0.13	0.62

Source: Author's calculation using the data from the Stock Exchange of Thailand and the Bank of Thailand.

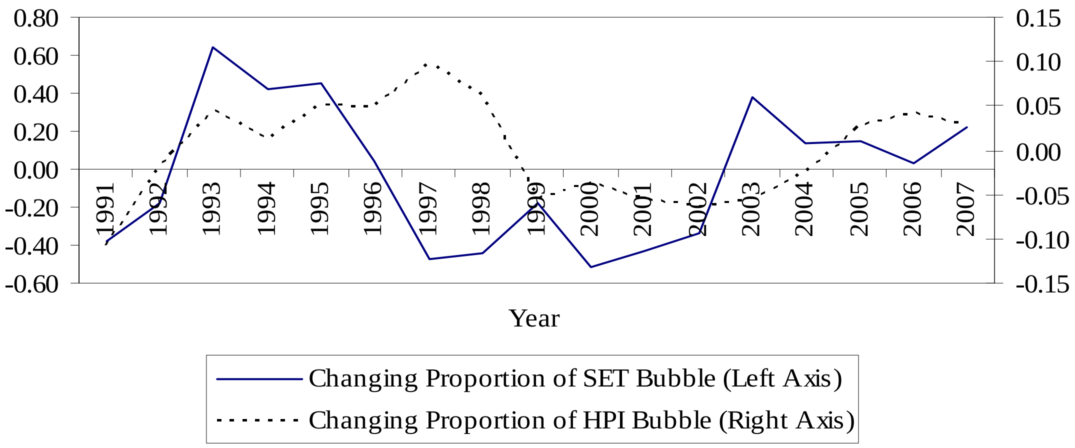
Figure 3.6

Variance of Asset Prices



Source: Author's calculation using the data from the Stock Exchange of Thailand and the Bank of Thailand.

Figure 3.7
Stock Bubble and Housing Bubble



Source: Author's calculation using the data from the Stock Exchange of Thailand and the Bank of Thailand.

Referring to the Table 3.1 and Figure 3.6, they suggest that, all of three periods, the stock index had been fluctuated more than housing price index. Since, the stock price is more sensitive to many factors and reflects the economic situation than the housing price.

Before economic crisis 1997, the variance of stock index and housing price index was at 33.25% and 10.72% respectively. The correlation between stock index and housing price index was 0.45 because the relationship in both market followed the economic situation which had the high speculation. Moreover, the stock bubble and housing bubble[1] were positive value which aligned with the economic boom as shown in Figure 3.7.

After the bust or crisis period (1997-2001), the variance of stock index and housing price index decreased to 22.77% and 5.38% respectively. Besides, the correlation between stock price and housing price dropped to -0.13 and the bubble size in both markets was decreasing to the negative value. This is because time lag between two markets as stock price had been down and up before the housing price.

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[1]The stock bubble and housing bubble are calculated by Hodrick-Prescott (HP) Filter method which is mentioned in Chapter 4.

When considering after crisis period (2002-2007), it is noticed that the variance of stock index and housing price index increased to 25.32% and 8.68% respectively. The correlation between stock index and housing price index was rising to 0.62 while stock bubble and housing bubble expanded to positive value again. Since in 2002, the economy entered the recovery stage, supported by low interest rate, causing the property market start to expand again. In 2003, the average value of land transactions per month was close to the year with the highest level of transactions before the 1997 crisis[1].

After reviewing asset prices in Thailand, the next chapter discusses methodology employed in this study.

[1] Bank of Thailand (2003).