

CHAPTER 6

CONCLUSION AND RECOMMENDATION

6.1) Conclusion

There are two categories of tests for stock market bubbles. The first category compares prices to fundamentals, which are believed to determine prices. However, these tests are actually joint tests of the no-bubble hypothesis, the model used to relate fundamentals such as dividends to the stock prices, and the time series properties of the fundamentals themselves. Additionally, this category of tests assumes linearity relating all the observations in a series to the value of prior observations using one set of parameters. However, rational speculative bubbles suggest nonlinear patterns in returns. A second category of bubble tests examines returns for empirical attributes of bubbles such as autocorrelation, skewness, and kurtosis, which result from bubbles. However, these attributes are not unique to bubbles.

This paper derives a testable implication from the rational speculative bubble model called duration dependence. Unlike attributes such as autocorrelation, skewness, and kurtosis, the test is unique to bubbles. The test also specially addresses nonlinearity by allowing the parameters (probabilities of ending a run) to vary depending on the length of the run and on whether the run is of positive or negative abnormal returns.

For bubbles to exhibit the characteristics of a long run-up in price followed by a crash, the bubble process must be skewed, with many small positive abnormal returns (no crash) and relatively few large negative abnormal returns (crash). For such bubbles to be rational, the bubble must be positive and explosive; that is the expected value of the bubble must be increasing over time to compensate investors for the possibility of a crash. The skewness and explosiveness of bubbles, combined with serially random innovations in fundamental value, result in observed abnormal returns that exhibit duration dependence. If bubbles are present, then the probability that a run of positive abnormal returns ends declines with the length of the run.

To study the possibility of bubble in the Stock Exchange of Thailand (SET), the empirical study was constructed by employing the model called “Duration Dependence” which proposed by Grant McQueen and Steven Thorley (1994). The tests are based on **abnormal continuously compounded real monthly returns** for value-weighted portfolios of all stocks in Stock Exchange of Thailand (SET) from April 1985 to February 2000 excluding the stock market crash period during July 1997 to December 1998. According to the result, there is no sufficient evidence to show that the hazard rate is serially dependent. Therefore, it can be concluded that the duration dependence model cannot reveal or fail to show the bubble existence in the Stock Exchange of Thailand (SET) for the runs of both positive and negative abnormal returns. The above results may be affected by many factors as the followings:

- **Factors Affecting Securities Trading in the SET in 1990-1996.**

During the study periods, there are many external and internal factors that affect the securities trading in the SET both positively and negatively. Some factors contribute to the bubble, while some dilute the bubble until the duration dependence model cannot investigate the bubble. In this part we will clarify those factors in a different periods separately:

Factors affecting securities trading in the SET in 1990:

- 1) Positive factors affecting securities trading included:
 - 1.1) High overall economic, trade and investment growth.
 - 1.2) Growth of more than 40 percent in profits of listed and authorized companies. This made the returns from securities investment relatively attractive in 1990.
 - 1.3) Exchange control deregulation that came into effect in May 1990, permitting foreign investors to remit proceeds from the sale of stocks for an amount not exceeding US\$ 500,000 without prior permission from the Bank of Thailand. This relaxation greatly facilitated foreign investors' repatriation of portfolio investment funds.

- 2) Negative factors affecting securities trading included large volatility in securities prices during the second half of the year, which was due to the following factors:
 - 2.1) The increase in oil prices and domestic interest rate following the Persian Gulf crisis which raised production costs and dampened the general investment climate, thus rendering returns from securities investment unattractive.
 - 2.2) The inactive trading in foreign stock markets, causing foreign investors to partially remit funds out of the country.
 - 2.3) Internal political uncertainties.

Factors affecting securities trading in the SET in 1991:

- 1) Positive factors included high liquidity and a downturn trend in domestic interest rates in the second half of the year, which made returns on stock investment more attractive.
- 2) Negative factors affecting securities trading included:
 - 2.1) Domestic political change which discourage investment by foreigners.
 - 2.2) Slower growth in trade and investment.

- 2.3) Psychological impact of political transformations in Eastern Europe and the Soviet Union, and stock scandals in Japan and the United States which caused volatility in major stock markets such as NEW York and Tokyo.

Factors affecting securities trading in the SET in 1992:

- 1) Positive factors included the declined in domestic interest rates and the high liquidity, which stimulate more investment in securities.
- 2) Negative factors affecting securities trading included:
 - 2.1) The domestic political incident in May.
 - 2.2) Stock price manipulation, as evidenced by a highly concentrated turnover in certain securities.
 - 2.3) The psychological impact of the measures taken to deal with the problem of stock price manipulation by requesting finance and securities companies to report margin loans granted to certain customers and certain stocks, and by taking legal action against alleged stock price manipulators.

Factors affecting securities trading in the SET in 1993:

- 1) Major positive factors included:
 - 1.1) Operations of listed companies in the last quarter of 1992 had been more profitable, especially commercial banks, resulting in the bullish trading activities in the first 2 months of 1993.
 - 1.2) The political atmosphere, after the Government had won the no-confidence debate in the House of Representatives in June, became more stable and clearer.
 - 1.3) Economic forecasts by various government agencies in July and December were favorable, with the expectation for continues expansion of the Thai economy and low inflation rate. Moreover, the fact that Thailand was removed from the Priority Foreign country (PFC) listed of the United States also boosts investors' confidence in the Thai economy.
 - 1.4) This year saw the continuation in interest rate reductions, the persistent high liquidity in the financial system throughout the year, as well as large inflows of foreign capital into the Securities Exchange of Thailand.

- 2) Major negative factors included:

- 2.1) The incident where one listed finance company in the SET ceased its operation in February due to a liquidity problem.
- 2.2) Allegation made by the SEC at the end of April on the 30 parties for stock-price manipulation.
- 2.3) Occasional political factors such as the stability of the Government before the no-confidence debate, separation of the political parties in the Government in July, the cabinet reshuffle in September, labor strike: as well as foreign political factors such as the dissolution of Parliament in Russia in September.
- 2.4) Controversy over the second-stage express way and uncertainty in the large-scale investment projects in connection with registered companies in the SET.

Factors affecting securities trading in the SET in 1994:

- 1) Major positive factors included:
 - 1.1) The operating results of the most listed companies were on the whole satisfactory in the first three-quarters, particularly the commercial banking group, as well as finance and securities companies.
 - 1.2) Economic expansion as forecasts by authorities was still higher than 8 percent. Furthermore, the economies of the Asian region

showed signs of faster growth than the economies of other regions.

- 1.3) Securities business exhibited signs of growth due to the fact that the SET extended the afternoon trading session from 4.00 p.m. to 4.30 p.m., effective from November 1. While the SEC allow the securities companies to establish representative offices overseas in order to mobilize foreign funds was also another positive factor.

2) Major negative factors included:

- 2.1) The weakening of the stock index in major international markets such as New York and Hong Kong during certain periods of the year.
- 2.2) The rise in interest rates on account of six increases in the US Fed Funds Rate, raising the said rate in total by 2.5 percent from last year. In addition, domestic banks continuously posted higher interest rates, leading to increases in the deposit rate by 2.5 percent, as well as in the Minimum Lending Rate (MLR) by 1.25 percent in 1994.
- 2.3) The volatility of world financial markets as a result of the substantial weakening of the US dollar against the Yen and DM.
- 2.4) Share capital increased by listed companies, especially a number of finance and securities companies, to support their business

expansion, and in preparation for their application to become a commercial bank. Moreover, public offering of shares by large companies, such as Electricity Generating Public Companies induced investors to set aside funds for the subscription of the share capital increase and new shares issued.

Factors affecting securities trading in the SET in 1995:

- 1) Major positive factors included:
 - 1.1) The B 20 billion market stabilization funds set up by a group of private financial institutions in March.
 - 1.2) Large inflows of the capital in the second quarter, resulting in foreign investors being net buyers in SET by more than B 40 billion.
 - 1.3) The fall in US interest rates following cuts in the Fed Funds rate target, twice, by 0.25 percentage point in both July and December.
 - 1.4) The cut in domestic deposit rates in September.

- 2) A number of negative external influences during 1995 included:
 - 2.1) The Mexican Financial crisis.

- 2.2) The expectation of repatriation of Japanese investment funds to finance reconstruction following the earthquake.
- 2.3) The collapse of Barings following losses from derivatives trading in February.
- 2.4) The depreciation of the US dollar vs Yen, which led to the funds outflow from the SET to the foreign exchange market.
- 2.5) The outflow of foreign investment to the US securities market in response to the sharp upward adjustment in the US market in November.

In addition, a number of domestic developments also contributed to the dampened market sentiment, including periodic tight liquidity, rising domestic interest rates, and the unfounded speculation of bath devaluation in the first quarter. In addition, there were some concerns regarding pressure on economic stability and the slowdown in corporate earnings, especially in the finance sector.

Factors affecting securities trading in the SET in 1996:

- 1) There is no positive factors in 1996
- 2) The decline in the stock market resulted mainly from domestic factors, including:

- 2.1) Pressure on economic stability and the slowdown of exports.
- 2.2) The restrictive monetary stance to curb inflation, which resulted in interest rate increases.
- 2.3) The lowering of credit rating of Thailand's short-term debt by a foreign credit rating agency.
- 2.4) The concern over the soundness of some financial institutions following problems in one commercial bank of which the authorities had to take control.
- 2.5) The concern over the problems in the real estates business which might impact on the operations of the financial institutions.
- 2.6) Political uncertainty over some periods.

6.2) Limitations

The result of the study is not only affected by those factors affecting the securities trading but also limited by the lack of sufficient data, which can be explained as follows:

- **The Limitation of Study Periods**

The capital market in Thailand has a short history from 1975 to present. Due to public unfamiliarity with stock trading in the early years (1975-1978) and stagnation period (1979-1985), there are a lot of uncertainties such as inflation rate coupled with an

increase in oil prices which bring high volatility into stock market. Moreover, in 1997-1998 there is a period of financial crisis that has a severe effect on the stock market. Therefore, we have to exclude those periods out of the study frame in order to get rid of the irrelevant effects, which squeeze the study periods to be rather short.

- **The Lack of the Information**

During the data collection process, we found that some information is not fully available for collection such as the one-month Treasury Bills and AAA corporate Bonds, which are needed for a proxy of risk premier. Therefore, to overcome this obstacle we need to choose some other factors such as the maximum and minimum lending rate as a proxy of risk premier instead of the lacked information. Therefore, the result of the study can be affected by the lack of information.

- **The Misrepresentative of SET Index**

To study the possibility of bubble in this paper, we use the SET Index as a representative for all stocks in the market which in reality the bubble may occur in some major sectors only such as finance and banking sector and real property sector. As a result when we combine all sectors together, the bubble may be diluted and consequently the duration dependence model cannot investigate it.

6.3) Recommendation

This study has attempted to investigate an evidence of bubble in the Stock Exchange of Thailand. While addressing many of the above limitations, the result of this study does not show any evidence of bubble. Therefore, to avoid the same limitations there are some recommendations to be recommended to those who would like to study about the bubble in the stock market in the future.

- In the process of identifying positive and negative abnormal returns, the researcher should consider other factors beside the term spread, dividend yield and the past stock returns, which have been already included in this study. The researcher may include the factors such as performance of the company, news affecting the investment and other economics factors which can determine the fundamental price into the consideration.
- Alternative models should be applied to investigate an evidence of bubble in stock market in order to compare with the result of duration dependence model.
- The investigation of bubble evidence should be constructed with respect to other markets such as real property, gold, bond and foreign exchange markets.
- Due to the lack of sufficient data, the researcher should try to rely on daily or weekly data instead of monthly data in order to come up with the efficient result.