CHAPTER IV

DATA

In this study, I use daily excess returns of the SET index from the Stock Exchange of Thailand (SET) and the government bond index from the Thai Bond Market Association (Thai BMA). The SET is an officially regulated securities market. Its primary roles are to serve as a center for the trading of listed securities and to undertake any business related to the stock market. The Thai BMA, previously known as the Thai Bond Dealing Center (Thai BDC), is a securities business related association under the Securities and Exchange Commission Act. The primary roles of the Thai BMA are to facilitate the operation of the secondary market for bond trading and to be a forum for discussing issues on the bond market development.

The sample period runs from 4 Jan 1999 to 31 Dec 2005. I choose to start the sample in 1999 because the Thai bond market has been actively traded after Thailand's economic crisis in 1997 and the government bond data has also been available since 1999. Importantly, the Thai government and related agencies have increasingly issued new bonds in order to raise fund for the purpose of economic development after the crisis.

This paper uses a total return index as a proxy of the government bond index. The total return index is calculated by a percentage change in gross price and adjusted for a loss of the accrued interest on the coupon payment day by adding the coupon value to the gross price. Note that, the gross price of a bond is its net price plus the accrued interest. Thus, the total return index takes into account the price of the bond, any interest that the bond accrues and payments of each bond, which are reinvested in the index.

I calculate daily continuous compounded returns of the SET index and the government bond index using the following formula;

$$\text{Return } (r_t) = \ln (\text{Index}_t / \text{Index}_{t-1})$$

Daily excess returns on the SET index and the government bond index, which are defined as risk premiums in the study, is the difference between daily returns of these assets over daily three-month treasury bills rate, collected from the Bank of Thailand (BOT).

Risk premium $(R_t) = r_t - r_{f,t}$; $r_{f,t}$ = daily three-month treasury bills rate

The types of announcements in this study represents wide areas of the economy such as real economy, inflation, confidence index, and export-import measures, which are described as follows;

- <u>Trade balance announcement</u> The announcement of the trade balance may reflect new useful information about the supply and demand for domestic currency in the foreign exchange markets and also the performance of the domestic trade announcement in a global context. Such trade balance information is useful not only to private economic agents, but also in assessing central bank attitudes and policies for managing monetary aggregates, interest rates, and inflationary expectations.

- <u>Consumer confidence index</u> The consumer confidence index is a well perceived leading economic indicator. Empirical evidence shows that the consumer confidence indicator is highly correlated with the current state of the economy and is a predictor of future economic strength.

- <u>Inflation</u> The expected impact of inflation on interest rates and bond yields is straightforward, at least in the short term. There are two most plausible hypotheses regarding the financial market reaction to inflation announcements. The first is the expected inflation hypothesis, which states that positive inflation surprises lead to an upward revision of inflation expectations, thus raising short-term interest rates. The second is the policy anticipation hypothesis, which argues that higher-than-expected inflation makes agents in the financial market expect a tightening of monetary policy. Again, short term interest rates are likely

to increase, while long term rates may either increase or decrease. This is due to the fact that the action of the central bank lessens expectations of long-term inflation.

- Real economic activity Real economic activity, such as industrial production and gross domestic product (GDP), brings information about the current state and short-term prospects of the economy. It is widely accepted that the stock price levels are positively related to the levels of real economic activity. Intuitively, the stock returns are a function of the future cash flow stream, which is highly dependent on the future economic conditions. Also, interest rates and bond yields could be affected if the information about real economic activity is expected to have an impact on the central bank's monetary policy.

This study considers only the announcement event. Macroeconomic news releases dates are collected from;

- Monthly press releases on economic condition from the BOT, which represents the information about real economic activities, such as manufacturing production index, industrial capacity utilization, private consumption indicators.

- Quarterly GDP announcement from the National Economic and Social Development Board (NESDB).

- Monthly trade balance announcements from the Ministry of Commerce.

- Monthly inflation announcement, which includes consumer price index (CPI) and producer price index (PPI) announcement, from the Ministry of Commerce.

- Monthly consumer confidence index (CCI) announcement from the University of the Thai Chamber of Commerce (UTCC).

Note that the BOT announces economic data, such as manufacturing production index, industrial capacity utilization, private consumption indicators, on the same day. Also, the Ministry of Commerce announces consumer price index and producer price

index on the same day. This study is therefore unable to separate the news effect on such economic data. However, monthly BOT press releases on economic condition can be viewed as the news about real economy, while CPI and PPI announcements can be viewed as overall inflation announcement.

Table 4.1 shows the distribution of macroeconomic announcements across the days of the week. Macroeconomic announcement dates in this study totals 351 days, or account for 20% of the sample. Note that, the announcements seem to disperse across the days of the week.

Table 4.1: Macroeconomic release dates across days of the week

	Monday	Tuesday	Wednesday	Thursday	Friday	Total
BOT press release	10	11	12	13	38	84
CCI	1	35	13	31	4	84
Inflation	28	18	13	11	13	83
GDP	26	2	0	0	0	28
Trade balance	21	14	20	14	15	84
Total	84	79	56	66	66	351