

## ABSTRACT

This research aimed to study the impact of macroeconomic variables and unexpected macroeconomic variables on the sector of energy index return volatility in a case study of Stock Exchange of Thailand during period 2005 to 2015.

This data were collected by monthly data from January, 2005 to January, 2015 and there were twenty-four factors for the independent variables which consisted of twelve macroeconomic variables and twelve unexpected macroeconomic variables. These independent variables were agriculture producer price index, consumer price index, current account, employment, exchange rate, industrial production index, interest rate, money supply (M2), oil price, producer price index, rubber producer price index, and trade balance. And There was one dependent variable; the sector of energy index. For producer price index, agricultural producer price index, rubber producer price index, consumer price index and industrial production index was collected from Bureau of Trade and Economic Indicies. Exchange rate, money supply (M2), oil price (Gas95), current account, trade balance, interest rate and employment was collected from the Bank of Thailand. And energy index was collected from the Wall Street Journal. All of independent factors and dependent variable were tested to be stationary data by unit root test. The ARMA model was used for the unexpected macroeconomic variables and the dependent variable to find the best equation. Finally GARCH types model were used for dependent variable to find the equation of conditional variance volatility and put the independent variables to test the significant relationship between independent variables and dependent variable.

For the empirical results showed the significant relationship between the independent variables and dependent variable at 5% level of confidant or 0.05 level of confidant. There were only three unexpected macroeconomic variables that affected to the volatility of energy index return in long term; consisted of employment, interest rate, and trade balance. The unexpected employment had the positive impact on the energy index return volatility at the coefficient value was 13.79653, the probability value was 0.0001. The unexpected interest rate had the negative impact on the energy index return volatility at the coefficient value was -11.43533, the probability value was 0. And the unexpected trade balance also had the negative impact on the energy index return volatility at the coefficient value was -1, the probability value was 0. While the other macroeconomic variables and unexpected macroeconomic variables didn't have the statistically significant relationship with the energy index return volatility.