

OIL PRICE SHOCKS AND STOCK MARKET BEHAVIOR :
EMPIRICAL EVIDENCE FOR THE U.S. AND EUROPEAN COUNTRIES

Jung Wook Park

Dr. Ronald Ratti, Dissertation Supervisor

ABSTRACT

This dissertation analyze the relationship between oil price shocks and stock market for the US and 13 European countries with monthly data from 1986.1 – 2005.12. Three countries (Denmark, Norway and the UK) among 13 European countries are oil exporting countries. Unrestricted multivariate Vector Autoregression (VAR) with 4 variables (interest rates, real oil price changes, industrial production and real stock returns) is estimated as well as impulse response function and variance decomposition. With regard to impact of oil price shocks on the stock market, in most oil importing countries oil price shocks have significantly negative effect on the stock market in the same month or in one month, while among oil exporting countries only Norway shows a significantly positive response of real stock returns to oil price shocks. Comparing the impacts of oil price shocks and interest rate (monetary) shocks on the stock market, in most oil importing countries oil price shocks have a greater impact than interest rate shocks, except for a few countries where monetary policy responds systemically to oil price shocks by raising interest rates, which leads to a decline in real stock returns. Therefore, taking into account the response of monetary policy to oil price shocks, oil

prices play a crucial role in the stock market of oil importing countries. On the contrary, in oil exporting countries oil price shocks have a smaller impact on the stock market than interest rate shocks, and monetary policy does not respond to the oil price shocks. According to the literature, oil price shocks have an asymmetric effect on economic activity and the stock market in that oil price increases have a greater impact than oil price decreases. However, in this dissertation, the asymmetric pattern is a little different. In the sub-sample period (1996.5-2005.12) when oil price increases more frequently than oil price decreases and the average magnitude of oil price increases is smaller than that of oil price decreases, stock markets in most countries are more influenced by oil price decreases than oil price increases in the variance decomposition analysis. In particular, statistically significant evidence at the 5% level is found that oil price decreases have a greater impact on real stock returns than oil price increases after the mid 1990's in the US.