Journal of Economics and International Trade 경제통상연구
Vol.2, No.2, November 2021
Print ISSN 2733-5852
https://ieit.pusan.ac.kr/ieit/index.do

원유시장과 주식시장 간 변동성 전이 효과와 최적 리스크 포트폴리오 전략 : 동아시아 원유 수입국을 대상으로

고희운[a] 주택도시 보증공사 연구위원
최기홍[b] 부산대학교 경제통상연구원 전임연구원
김부권[c] 부산대학교 경제학부 박사과정

Optimal Hedge Ratio and Volatility Spillover Effect in Oil-importing East Asian Countries.

Hee-Un Ko, Ki-Hong Choi, Bu-Kwon Kim
Korea Housing & Urban Guarantee Corporation, South Korea
Institute of Economics and International Trade , Pusan National University, South Korea
Department of Economics, Pusan National University, South Korea

Received 01 October 2021, Revised 22 October 2021, Accepted 01 November 2021

Abstract

Various multivariate GARCH models are used to measure risk and spillover effects. However, it is still not decided which model is the most efficient. In this study The volatility spillover effect between the stock market return and the crude oil market return in the top four East Asian oil-importing countries(China, Japan, South Korea and Taiwan) are investigated. DCC-GARCH and BEKK-GARCH models and the ADCC-GARCH models and the ABEKK-GARCH models are applied. This study also used the variance and covariance of each model to examine the optimal risk portfolio strategy and hedging ratio for each country and to analyze which model is efficient. The findings are as follows.

First, for the BEKK model, there was no spillover effect in the rest of the countries except China and Japan. However, in ABEKK model, there is the spillover effect in all of countries.

Second, according to the optimal risk portfolio strategy and hedging ratio between stock markets and crude oil markets, the ADCC model for Korea, the BEKK model for China, and the ABEKK for Taiwan and Japan were found to be efficient models.

Keywords: volatility spillover effect, ADCC, ABEKK, hedge ratio

a First author(주저자), E-mail: cloud3817@naver.com
b Co-author(공동저자), E-mail: stoltz@nate.com
c Corresponding author(교신저자), E-mail: kimbk8824@pusan.ac.kr