Systemic Risk for Financial Institutions in the Major Petroleum-based Economies: The Role of Oil

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The oil rich countries, Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and UAE of the Gulf Cooperation Council (GCC), are heavily petroleum-dependent economies that are underpinned by huge foreign assets and powered by foreign labor. The oil dominance in these countries implies that a marked change in the level of oil prices will significantly affect all the sectors of their economies and may exacerbate their financial systemic risk, thereby harming the stability and the functioning of their financial sectors. In turn, the harm could have further negative consequences for the cyclical sectors. Notably, these countries attempt to coordinate their policies to achieve their common goal of realizing full economic integration through the GCC. Within such a business environment that is characterized by heavy oil dependence, high financial interconnectedness and strong propagation of risk, the examination of the risk tolerance of GCC financial institutions to oil price and volatility movements presents itself as an interesting case study, particularly in the wake of the recent global financial crises and the recent reoccurrence of the collapses in oil prices. For this reason, this paper attempts to address two major questions related to the financial sectors of those petroleum-exporting economies, which possess large foreign assets but are still vulnerable to oil price risk. First, do oil shocks cause stress to petroleum-based financial institutions? Second and more relevant, what is the impact of the movement of the level of oil prices on the systemic risk indicators for those financial institutions? To investigate the impact of oil price variations on a GCC financial institution's systemic risk, we have collected data on the stock prices for the financial companies as well as on the levels of national market indexes for the GCC area for the period from March 2004 to November 2018. Building on these data, we proceed to the estimation of the systemic risk measure proposed by Adrian and Brunnermeier (2016), the ΔCoVaR. By estimating ΔCoVaR, we observe the presence of remarkable increases in risk levels during the financial crises and achieve a better risk measurement when oil returns are included in the risk functions. Moreover, the estimated spread between the CoVaR without and with oil returns is absorbed in a time range that is longer than the duration of the oil shocks. This indicates that drops in oil prices have a longer effect on risk and financial institutions and require more time to account for their impact. From a policy perspective, our study indicates that oil price movements must clearly be considered when focusing on systemic risk measurement, monitoring and management in those petroleum-based economies. Neglecting the oil price in the set of state variables and excluding its long-lasting impact at least up to one month, will lead to an incorrect measurement of the systemic risk impact for financial companies, and hence on their financial stability. Our findings provide new evidence about the impact of oil shocks on the GCC financial system and have a clear implication for risk management regarding the protection strategies in the portfolios based on this market.

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