Monetary Policy and Capital Controls in Commodity Exporting Economies

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Abstract

This paper aims to examine the effects of commodity price shocks on emerging economies under financial constraints and evaluates the impact of related policies. A small-open-economy New Keynesian model with manufacturing and commodity sectors is presented, and a nonlinear collateral constraint on external borrowing is introduced. The model is calibrated to represent commodity-exporting emerging economies, and simulations are conducted to examine the dynamics of the aggregate variables in response to external commodity price shocks. The simulation results demonstrate that a negative shock on the commodity price can induce a financial crisis, which is often referred to as a "Sudden Stop" in the literature, in a similar way as other shocks such as productivity or foreign interest rate shocks. Namely, a drop in the commodity price lowers output, consumption, and external borrowing, thereby depressing the collateral capital price and causing further declines in borrowing. Moreover, the paper shows that the magnitude of financial crises resulting from a commodity price shock can be mitigated through the implementation of specific policy measures. These measures include a monetary policy rule with low responsiveness to inflation or capital control measures, such as taxes or subsidies on capital inflows.

Keywords: Collateral constraint, Commodity price, Emerging economy, Financial friction, Inflation, Real exchange rate, Sudden Stop

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