International Impact of Macroprudential Policies

An Analysis of Heterogeneous Financial Standards in a Global Perspective (Job Market Paper)

This paper examines the effectiveness of macroprudential policies in reducing credit growth in countries open to cross-border banking activities. For the analysis, we develop a two-country dynamic stochastic general equilibrium model with collateral constrained investors and global banks. The existence of cross-border lending activities is the source of transmission of shocks across countries. The macroprudential policies analyzed are loan-to-value ratios and capital requirements also known as the capital adequacy ratio, which are formulated as Taylor-type rules. Our results show that the effectiveness of capital requirement financial regulations may be undermined if borrowers can increase credit from foreign banks originating from a country with more relaxed financial restrictions. We find that when cross-border lending is permitted, national financial regulators can improve management and regulation of credit growth by complementing the capital adequacy ratio with time-varying loan-to-value-ratios. We also show that international coordination of capital adequacy ratio can reduce credit build up.

A Cross-Country Analysis of the Necessity for Macroprudential Policy Coordination

We empirically analyze how international cross-border lending originating from advanced countries responds to the usage of capital requirements and loan-to-value ratios in advanced and emerging countries over the period of 2000-2014. We study whether macroprudential policies in countries involved in cross-border credit are useful in reducing credit growth in times of financial vulnerability such as times of rapid credit growth across countries. The debt to service ratio is our measure of financial vulnerability. We find that in some countries, tight macroprudential policies increase international bank lending, which undermines their effectiveness in reducing credit growth. In fact, a rapid rise of credit increases financial fragility of any countries as it comes with excessive risk taking and a rise in the probability of borrowers defaulting on their credit. Hence, policymakers of countries open to cross-border banking activities should take into consideration the changes of macroprudential policies of other countries with which they are involved in cross border lending.

The Impact of Macroprudential Policies on Transmission of Shocks across Countries

We study the implications of macroprudential policies across countries on the transmission of shocks, when international investment activities are allowed. In a two-country DSGE model where international investors are borrowing constrained and pledge international assets, we introduce a time-varying LTV ratio that adjusts to the variation of credit growth. We examine the effect of these policies under a productivity and a borrowing capacity shock. The results show that implementing a time-varying LTV ratio in financially linked countries reduces transmission of shocks and the fluctuation of macroeconomic variables when one of the financially linked countries experiences a negative productivity or borrowing capacity shock. In fact, a time-varying LTV ratio adjusts with the deviation of a financial indicator value from its steady state and mitigates the reduction of the collateral value due to the negative shock. This helps investors to continue borrowing and producing when a country experiences a negative productivity or financial shock. In addition, a time-varying LTV ratio minimizes the transmission of shocks across countries linked through international financial investment. As credit does not fluctuate because of the LTV adjustment, international investors balance sheets, investment and productivity do not fluctuate a lot.