Research Working Papers

Asset Purchases in a Monetary Union with Default and Liquidity Risks

by: Huixin Bi, Andrew Foerster and Nora Traum

December 03, 2024

Central bank asset purchases can effectively stabilize economic conditions, especially in scenarios of elevated financial stress.

RWP 24-13, December 2024; updated May 2025

Using a two-country monetary union framework with financial frictions, we quantify the efficacy of targeted asset purchases, as well as expectations of such programs, in the presence of sovereign default and financial liquidity risks. The risk of default increases with the level of government debt and shifts in investors' perception of fiscal solvency. Liquidity risks increase when the probability of default affects the tightness of credit markets. We calibrate the model to Italy during the 2012 European debt crisis and compare it to key features of the data. We find that changes in investors' perception played a more significant role than increases in government debt in affecting the macroeconomy. When a debt crisis occurs, asset purchases help stabilize both financial markets and the economy. This stabilization effect can occur even if asset purchases are expected but never implemented. Moreover, expectations of potential asset purchases during a crisis alter the level of economic activity in periods when there are no crises.

JEL Classifications: E58, E63, F45

Article Citations

- Bi, Huixin, Andrew Foerster, and Nora Traum. 2024. “Asset Purchases in a Monetary Union with Default and Liquidity Risks.” Federal Reserve Bank of Kansas City, Research Working Paper no. 24-13, December. Available at https://doi.org/10.18651/RWP2024-13

Related Research

- Benigno, Gianluca, Andrew Foerster, Chris Otrok, and Alessandro Rebucci. Forthcoming. “Estimating Macroeconomic Models of Financial Crises: An Endogenous Regime-Switching Approach.” *Quantitative Economics*.

- Sims, Eric, and Jing Cynthia Wu. 2021. "Evaluating Central Banks' Tool Kit: Past, Present, and Future." *Journal of Monetary Economics*, vol. 118 (C), pp. 135-160. Available at https://doi.org/10.1016/j.jmoneco.2020.03.018

Author

Huixin Bi

Research and Policy Officer

Huixin Bi is a Research and Policy Officer in the Economic Research Department of the Federal Reserve Bank of Kansas City. Previously, Ms. Bi served as an economist at the Bank of Canada from 2010 to 2015. Her main areas of research are fiscal policy, sovereign debt and computational economics. She holds a B.S. in engineering from Nankai University in China, a M.S. in engineering at Rose-Hulman Institute of Technology, and a Ph.D. in economics from Indiana University.