Dollar Funding, Bank Currency Mismatch, and the Transmission of Exchange Rate Policy

Mai Li*

Columbia University

October 25, 2019

Abstract

This paper studies a novel transmission channel of exchange rate policy in emerging markets that acts through financial institutions. According to this "credit-supply channel", banks in emerging markets fund themselves in US dollars, lend in the local currency, and bear foreign exchange risk if hedging is imperfect. This currency mismatch exposes banks to exchange rate fluctuations and can make economies prone to sudden stops. To ascertain the significance of this transmission mechanism, I focus on a large and unanticipated currency depreciation episode following the US Fed's decision to taper the size of security purchase and exploit the heterogeneity in bank pre-determined exposure to currency risk. Using loan-level data in Taiwan during 2012-15, I provide evidence that the effect of depreciation on credit supply is contractionary. Banks with higher net USD liability cut more lending and are less likely to extend credit to firms with a preexisting relationship. In turn, firms with more dependence on the affected banks hardly switch to alternative funding sources and disproportionately decrease investment and employment as compared to other firms that rely less on these banks. I find that the credit-supply effects of depreciation on investment and employment are both economically and statistically significant. The extent to which the credit-supply channel contributes to the overall effect of the exchange rate policy is shown to be sizeable after taking into account of the competing channels, namely, the exporter trade channel and the corporate credit constraint channel.

*I am extremely grateful to my advisors Martin Uribe, Stephanie Schmitt-Grohé and Jesse Schreger for their constant guidance, support and encouragement. I would like to thank Hassan Afrouzi, Andres Drenik, Matthieu Gomez, Émilien Gouin-Bonenfant, Harrison Hong, Jennifer La'O, Martina Jasova, José Scheinkman, Shang-Jin Wei and my colleagues for their valuable comments. I thank the participants in the Economic Fluctuation Colloquium, the Financial Economics Colloquium, and the Monetary Colloquium at Columbia University. All errors are my own.
Department of Economics, Columbia University, New York, NY 10027, ml3689@columbia.edu