Unconventional Monetary Policy Shocks and the Spillovers to Emerging Markets

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Summary

Upon reaching the zero lower bound on nominal short-term interest rates, the US Federal Reserve and other central banks adopted a range of unconventional monetary policies. The measures are known as Quantitative Easing (QE). Among the measure adopted by the Fed were large scale asset purchases (LSAP) introduced in several steps (i.e. QE1, QE2, QE3) and a maturity extension program ("Operation Twist"). All measures are directed towards improving financial conditions for firms and thereby eventually supporting an expedited recovery from the financial crisis.

The LSAP program led to an explosion of the Fed's balance sheet and with it an abundance of global liquidity. A fraction of this liquidity spilled-over into emerging market economies (EME). In light of these concerns, quantifying the effect of QE on EME is very much needed, yet also very difficult. The challenges for empirical work are, first, to acknowledge the endogenous nature of QE, second, to isolated the unexpected component of QE announcements and, third, to link low-frequency macro data with high-frequency announcement effects.

In this paper we propose a new approach to estimating the response of EME to QE shocks. We combine the virtues of a standard vector autoregression (VAR), i.e. the ability to study policy in terms of unexpected shocks, with the information contained in QE announcements. For that purpose we set up a Qual VAR (Dueker, 1995) that integrates binary information on QE announcements into an otherwise standard monetary policy VAR. The Qual VAR is estimated on standard variables reflecting US real economic activity plus a measure of emerging markets' financial conditions.

The model uncovers the latent, unobservable propensity for QE through Markov Chain Monte Carlo techniques. We also derive impulse response functions for a QE shock and show that financial conditions in EME such as capital inflows originating in the US, exchange rates, equity prices and bond prices are significantly affected by QE. We can also decompose these variables into the part reflecting QE shocks and the remaining part driven by all other determinants. While the impact of QE1 on emerging markets is found to be limited, QE2 and QE3 explain a substantial fraction of emerging market variables.