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Financial crisis, US unconventional monetary policy and international spillovers

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ABSTRACT

We study the impact of US quantitative easing (QE) on both the emerging and advanced economies, estimating a global vector error-correction model (GVECM). We focus on the effects of reductions in the US term and corporate spreads. The estimated effects of QE are sizeable and vary across economies. First, we find the QE impact from reducing the US corporate spread to be more important than that from lowering the US term spread, consistent with Blinder's (2012) argument. Second, counterfactual exercises suggest that successive US QE measures might have prevented episodes of prolonged recession and deflation in the advanced economies. Third, the estimated effects on the emerging economies are diverse but generally larger than those found for the United States and other advanced economies. The estimates suggest that US monetary policy spillovers contributed to the overheating in Brazil, China and some other emerging economies in 2010 and 2011, but supported their respective recoveries in 2009 and 2012. These heterogeneous effects point to unevenly distributed benefits and costs of cross-border monetary policy spillovers.

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1. Introduction

The 2007–2009 US subprime mortgage crisis and the Great Recession have had a major impact on the design and implementation of monetary policy. Following the crisis, the Federal Reserve lowered the federal funds rate target rapidly to near zero, and has taken additional measures considered "unconventional" (Table 1).

The unconventional policy actions taken by central banks in a number of major economies have led to a burgeoning literature on their effectiveness. Most work has focused on their domestic effects and relied on event studies analysing the announcement effects of quantitative easing (QE) on asset prices: some studies have also employed regression analysis. Amongst others, D'Amico and King (2010), Doh (2010), Gagnon et al. (2010, 2011), Joyce et al. (2011), Krishnamurthy and Vissing-Jorgensen (2011) and Meaning and Zhu (2011, 2012) provide estimates for the Federal Reserve's and the Bank of England's large-scale asset purchase programmes.

A better understanding of the monetary policy spillovers associated with QE measures may help policymakers to cope with the challenges posed by such policies and to assess the need for international policy coordination. Yet we know very little about the impact of the unconventional policies on real activity, and so far there has been little research on their cross-border spillovers, especially on emerging economies.[1]

Several studies examine the cross-border financial market impact of QE policies. Relying on event studies of US asset purchases, Neely (2010) finds that US QE lowered bond rates in the other advanced economies by 20–80 basis points and depreciated the US dollar by 4–11%. Glick and Leduc (2012) show that commodity prices on average fell upon the announcements of US asset purchases, despite a decline in long-term interest rates and US dollar depreciation. Chen et al. (2012, 2014a) and Rogers et al. (2014) provide evidence on the international spillovers of the unconventional measures implemented by the Bank of England, the European Central Bank, the Federal Reserve and the Bank of Japan. Fratzscher et al. (2013) find that earlier US QE measures were highly effective in lowering sovereign yields and raising equity prices. But since 2010 such measures have had a muted impact on yields across countries. Chen et al. (2014b) introduce estimated shadow federal funds rates in a global VAR to assess the domestic and global impact of US unconventional monetary policy. They find that US QE might not have only prevented US recessions but also had substantial global spillovers. International Monetary Fund (2013a, 2013b) finds that unconventional monetary policies have successfully restored market functioning and intermediation in the early phase of the global financial crisis, but their continuation carries risks.

There are two major views on the spillovers of the unconventional monetary policies implemented in the major advanced economies. The first view considers that such policies are designed for domestic contingencies; any spillovers are unintended and primarily an issue for other policymakers to address. This echoes the Obstfeld and Rogoff (2002) proposition that there are only small gains from policy coordination once individual central banks implement policies optimised to achieve domestic macro stability. Moreover, Ostry and Ghosh (2013) consider uncertainties and disagreement about the cross-border effects of QE policies a major obstacle to policy coordination.

The second view argues that QE policies are less benign. Amongst other things, they depreciate domestic currencies and inflate risk-adjusted interest rate differentials vis-à-vis other economies, leading to potentially large capital inflows and consumer and asset price inflation pressures abroad. Besides concerns with competitive devaluation, Rajan (2013) highlights the potential danger of "competitive asset price inflation". Taylor (2013) points out that, while the Obstfeld and Rogoff (2002) proposition may be true in normal times, sizeable cross-border spillovers seen in recent years have changed the cost–benefit analysis. This would particularly be the case if QE measures represent "deviations from rules-based policy" which create incentives for other central banks to deviate from rules-based policies. The cross-border effects of QE may also be perceived as beneficial or harmful by those affected,

[1] To assess the macroeconomic effects of QE measures Chen et al. (2012, 2014a, 2014b) estimate a global VAR model and Gambacorta et al. (2012) employ a panel VAR model. Hofmann and Zhu (2013) study the effects on inflation expectations of Federal Reserve asset purchases and find that these were well-anchored and such purchases had little impact.