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International capital market frictions and spillovers from quantitative easing

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ABSTRACT

This paper analyzes the impact of large-scale, unconventional asset purchases by advanced country central banks on emerging market economies (EMEs) from 2008 to 2014. I show that there was substantial heterogeneity in the way these purchases affected EME currency, equity, and long-term sovereign bond markets. Drawing on the gravity-in-international-finance literature, I show that the degree of capital market frictions between EMEs and advanced countries is significant in explaining the observed heterogeneity in how these asset prices were affected. This result is robust to considerations of domestic monetary policy, exchange rate regime, and capital control policies in EMEs. Furthermore, I show that the size and direction of asset price movements in EMEs depended both on the type of assets purchased and on whether it was the U.S. Federal Reserve or other advanced country central banks engaging in the purchases.

1. Introduction

Throughout 2008–2014 several advanced economies engaged in unconventional monetary policy in response to the global financial crisis. These policies consisted primarily of forward guidance and quantitative easing (QE) by central banks. The U.S. Federal Reserve (the Fed) implemented the first and the largest of such programs, followed by the Bank of England (BOE), the Bank of Japan (BOJ), and most recently the European Central Bank (ECB).[1] Recent research has shown that these unconventional monetary policy programs had substantial international spillovers to emerging market economies (EMEs). In particular, following the Fed's implementation of forward guidance and

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[1] The BOJ also conducted QE programs during their extended period of low inflation in the early 2000s.

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announcements of their large scale asset purchase (LSAP) program, many EMEs saw a rise in foreign capital inflows, a rise in equity prices, a fall in sovereign debt yields, a real appreciation of currencies, and an increase in non-financial corporate debt.[2] More recently, the Fed's retreat from unconventional policy has been associated with nominal exchange rate depreciations and equity market contractions in EMEs.[3]

In this paper I add to the existing research by identifying and explaining the heterogeneous impact, defined as the change in asset prices, of the Fed's 2008–2014 LSAPs on currency, equity, and sovereign debt prices in a large sample of EMEs. In the central finding of the paper, I show that the degree of capital market frictions (or conversely, the degree of economic integration or exposure) between EMEs and the U.S. is significant in explaining the cross-country variation in EME asset price changes following the Fed's LSAPs, even after considering domestic capital control and exchange rate policies. This is very intuitive: countries that have fewer impediments to cross-border investment with the U.S. should have larger bilateral investment flows. I conjecture that because foreign monetary policy is transmitted through international capital flows, these measures of bilateral capital market frictions should also explain why certain countries are more affected by foreign monetary policy than others. Furthermore, I show that the spillovers to EMEs were driven primarily by purchases of U.S. government Treasury securities, and much less so by other types of assets purchased by the Fed. In a robustness exercise I contrast spillovers from the Fed's LSAPs with those from the BOE and BOJ's QE programs, and show that this pattern of spillovers to EME asset markets was not unique to the Fed's LSAPs.

The paper proceeds as follows. Section 2 describes the relevant literature on international spillovers of unconventional monetary policy. Section 3 describes the data. Section 4 discusses the methods and results for the analysis of country-specific heterogeneous spillovers. Section 5 estimates the cross-country average spillover and the impact of different types of assets purchased in the Fed's LSAPs. Section 6 discusses the methods and main results for the analysis of how bilateral capital market frictions are significant in explaining the observed spillover heterogeneity. Section 7 provides several robustness exercises, including studying spillovers from the BOE and BOJ's QE programs. Section 8 concludes.

2. Research context

Much of the existing research on the international transmission of the Fed's unconventional monetary policy has studied the impact of asset purchase announcements or forward guidance statements on foreign financial markets using event studies. Neely (2010), Chen et al. (2012), and Bowman et al. (2015), among others, find that unconventional monetary policy announcements in the U.S. reduced long-term nominal sovereign debt yields, caused currency appreciation, raised equity prices, and compressed credit default swap (CDS) spreads in foreign countries. Eichengreen and Gupta (2014), and Dahlhaus and Vasishtha (2014) find that announcements of QE tapering caused foreign asset prices to move in the opposite direction. Fratzscher et al. (2013) find both announcements and operations of LSAPs triggered an increase in investment into EME equities, but that it was primarily operations that were associated with rising asset prices. Similarly, Moore et al. (2013) and Lim et al. (2014) find that LSAP operations, through changes in U.S. interest rates, were associated with an increase in foreign ownership of EME debt and a reduction in EME sovereign yields. An event study on the impact of the Fed's announcements on the three asset prices, using my sample, shows no significant cross-country heterogeneity and so my focus is also on the Fed's LSAP operations.[4]

Unconventional monetary policy announcements and operations can affect foreign asset prices through signaling, portfolio balance, and risk channels. The signaling channel is activated as the Fed's LSAP operations provide a credible signal that future short-term interest rates will remain low, and therefore decreases

[2] See Lo Duca et al. (2014), Fratzscher et al. (2013), and speech by S. Honkapohja, Bank of Finland June 9, 2014, among others.
[3] See Aizenman et al. (2014) and Eichengreen and Gupta (2014).
[4] Results are available upon request. Given the lack of cross-country heterogeneity I find in the impact of announcements, there is no sufficient evidence to study the role of bilateral capital market frictions in the cross-country pattern of announcement spillovers.