Journal of International Money and Finance 55 (2015) 27–59

Contents lists available at ScienceDirect

Journal of International Money and Finance

journal homepage: www.elsevier.com/locate/jimf

U.S. unconventional monetary policy and transmission to emerging market economies☆

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ARTICLE INFO

Article history:
Available online 28 February 2015

JEL Classification:
F42
G15
E58

Keywords:
Unconventional monetary policy
Emerging markets
Large-scale asset purchase program
Quantitative easing
Federal Reserve

ABSTRACT

We investigate the effects of U.S. unconventional monetary policies on sovereign yields, foreign exchange rates, and stock prices in emerging market economies (EMEs), and we analyze how these effects depend on country-specific characteristics. We find that, although EME asset prices, mainly those of sovereign bonds, responded strongly to U.S. unconventional monetary policy announcements, these responses were not outsized with respect to a model that takes into account each country's currency regime and vulnerability to U.S. financial conditions.

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1. Introduction

After the May 2013 Federal Open Market Committee (FOMC) announcement, which financial markets perceived as the beginning of the end of accommodative monetary policies in the United States, sovereign yields in emerging market economies (EMEs) increased substantially and their currencies depreciated notably. Converse movements were observed in 2008, when the FOMC announced its first large-scale asset purchase program (LSAP). At that time, the sovereign bond yields of these

☆ The analysis and conclusions set forth are those of the authors and do not indicate concurrence by other members of the research staff or the Board of Governors.

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http://dx.doi.org/10.1016/j.jimonfin.2015.02.016
0261-5606/Published by Elsevier Ltd.

economies fell along with U.S. yields and stock prices were boosted. While there are a number of models and economic channels that can help to explain the transmission of U.S. monetary policy to foreign asset prices, a remaining key empirical question that we address in this paper is whether unconventional monetary policy announcements in the United States have had outsized effects beyond what the average relationship between EMEs and U.S. financial conditions would suggest. Moreover, there is little empirical evidence on what makes some EMEs more exposed than others to changes in U.S. monetary policy.

In this paper, we investigate the effect of U.S. conventional and unconventional monetary policy on sovereign bond yields, foreign exchange rates, and stock prices in 17 EMEs. Our contribution to the literature is twofold. In our first contribution, we investigate the transmission of U.S. monetary policy shocks to asset prices of EMEs. Specifically, we use the method in Rigobon (2003) to identify the impact of monetary policy shocks on asset prices of EMEs in a vector autoregressive model. We find that the effect of U.S. monetary policy shocks is significant in many countries, especially for local-currency sovereign yields, but the magnitude and the persistence of the effect varies considerably across countries. In our second contribution, we explore the drivers of the cross-country variation in the responsiveness to U.S. monetary policy shocks. To do so, we propose a monthly panel-data model where the exposure to U.S. financial conditions linked to changes in monetary policy is driven by country-specific variables. We find that the deterioration of a country's economic conditions significantly increases its exposure to changes in U.S. financial conditions. We then combine these two contributions to investigate whether monetary policy shocks related to unconventional monetary policy announcements had outsized effects on asset prices of EMEs. In particular, we compare the average observed response of yields of sovereign bonds of EMEs—the asset for which we find the most direct impact—around unconventional monetary policy announcements with the response implied by our panel-data model, taking into account each country's characteristics. We find that, except for Brazil, the average observed response is safely within the confidence intervals of the model-implied response. This finding indicates that, while U.S. unconventional monetary policies have had an impact on EMEs asset prices, this impact has not necessarily been unusually different from the typical impact that changes in U.S. financial conditions have had historically. We now describe our empirical strategy in more detail.

To identify conventional and unconventional monetary policy shocks in the United States and to estimate the impulse-response function for assets in the United States and in each EME, we follow the method in Wright (2012). This method identifies the impact of monetary policy shocks under the assumption that the volatility of these shocks is higher on days when the Federal Reserve (FED) made key announcements about its unconventional monetary policies. The set of unconventional monetary policy announcements we employ is comprised of announcements related to the LSAPs and the maturity extension program (MEP) or Operation Twist. We also include several FOMC announcements and speeches in 2013 that were perceived by investors as less accommodative than expected, such as the May FOMC statement, or perceived as more accommodative, such as Chairman Bernanke's NBER speech on July 10. We find that U.S. monetary policy shocks have an effect on U.S. financial variables; specifically, on domestic interest rates, such as those of 10-year sovereign and high-yield bonds, in line with the evidence in Rogers et al. (2013). We also find that U.S. monetary policy shocks have a significant effect on the yields of sovereign bonds of most EMEs in our sample. Moreover, the estimated effect of monetary policy shocks on the sovereign bond yields of some countries, such as Brazil, is even larger than the effect on U.S. sovereign yields. We also document that, although monetary policy shocks have heterogeneous effects on EME exchange rates and stock prices, this effect is, in most cases, insignificant.

To understand what drives the heterogeneity in the average responses of EME asset prices to U.S. monetary policy shocks, we propose a monthly panel-data setup with country-specific variables. The model allows us to assess how different country-specific characteristics affect the average response of EME asset prices to changes in U.S. financial variables that are significantly affected by U.S. monetary policy shocks. In particular, to measure the unexpected component of changes in U.S. monetary policy, we use changes in U.S. 10-year sovereign yields and high-yield bond spreads to characterize, respectively, the interest rate channel and the risk channel of monetary policy transmission. We find that several country-specific variables drive the transmission of U.S. monetary policy to EME asset prices. In