



# Quantitative Easing and Emerging Markets

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## Abstract

This research uses an event-study approach to analyze the effect of Federal Reserve quantitative easing announcements on emerging market economies.

Using a daily panel data of fifteen emerging economies, the period examined is from November 1, 2008 to December 1, 2014; from one month before the first announcement of quantitative easing to one month after the last announcement of tapering.

Results show that markets have a larger response to tapering news than easing news.

Due to the severity of the financial crisis of 2008, the Federal Reserve implemented a variety of unconventional monetary policy to support the U.S. financial markets. The most well-known is quantitative easing; purchasing large amounts of government securities from the markets to lower longer term interest and mortgage rates.

Three rounds of quantitative easing [QE] have had differing effects—intended and unintended—on U.S. financial as well as foreign markets. The concern with this credit policy is the potential to affect not only domestic financial markets, but asset pricing globally.

Policymakers in emerging markets maintain that QE policies have created disproportionate global liquidity. One of the spillover effects of QE was a sudden surge of capital inflows, particularly to emerging markets (EMEs), triggering currency appreciation and financial imbalances in these economies. Thus, a sudden withdrawal of funds out of EMEs by way of QE tapering raised fears of financial instability in these countries.

Existing literature widely documents the vulnerability of emerging economies to episodes of sudden surges and stops of capital flows out of the U.S. during these three rounds of quantitative easing. Especially for emerging economies, capital flow volatility can have significant economic costs, as past work finds that surges and stops of foreign funds are correlated with currency crises and other financial woes. Policymakers hoping to reduce these vulnerabilities and moderate these negative impacts are recommended to clearly identify these episodes and understand the underlying implications.

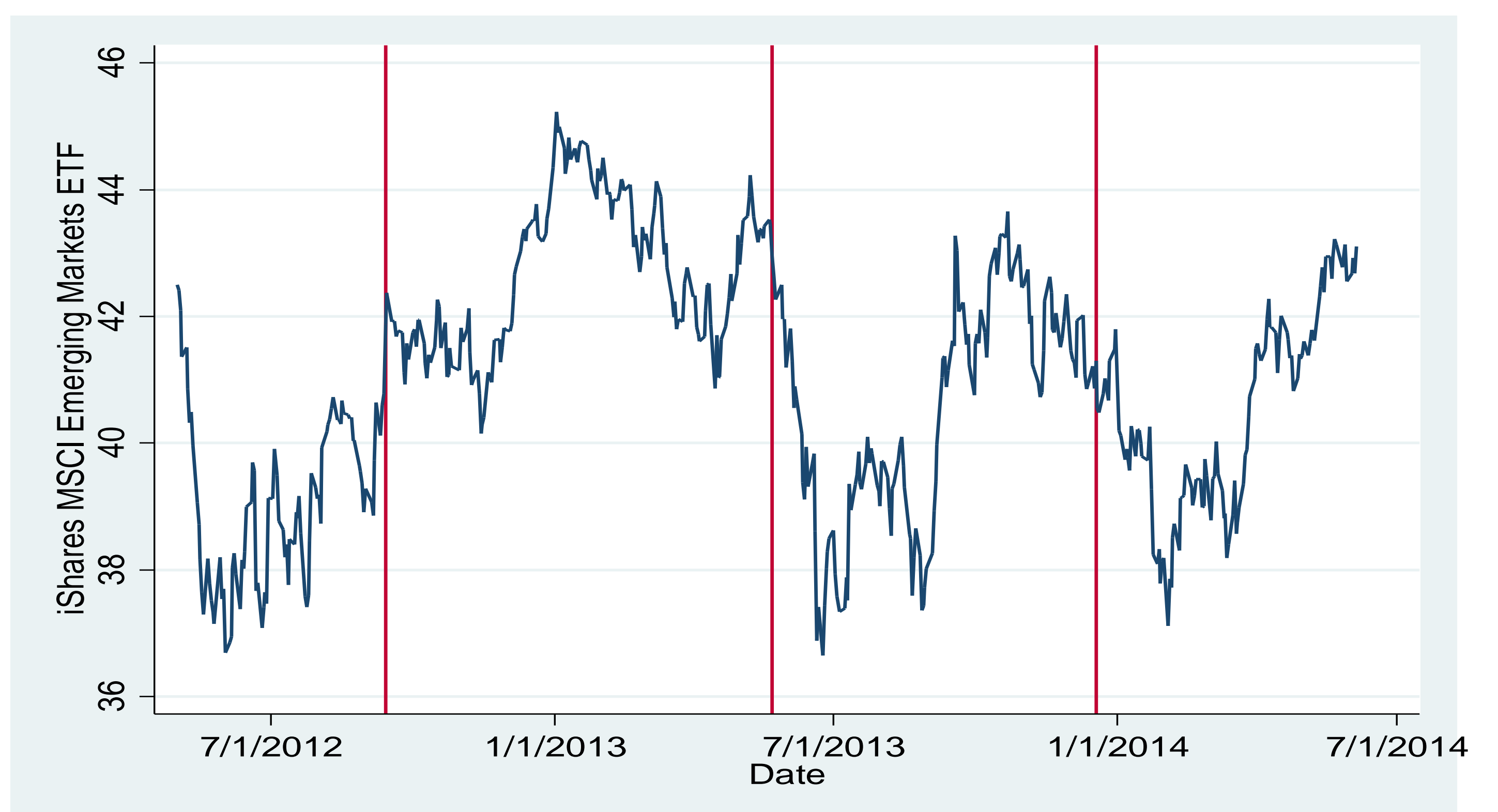


The Federal Reserve has been very visibly pursuing unconventional monetary policy since the 2008 financial crisis, particularly the large-scale asset purchases of long-term securities including Treasuries, Agency bonds and mortgage-backed securities [MBS]. The purchases of these securities are called quantitative easing (QE), for the purpose of reducing medium and long-term interest rates to stimulate economic activity. Quantitative easing has been considered unconventional since the conventional monetary policy taken by the Fed before the financial crisis was to target the short-term fed funds rate. However, the Fed exhausted its conventional monetary influence during the time of crisis when the fed funds rate reached its lower bound of zero, and unusually aggressive monetary stance was needed in order to prevent financial conditions from worsening.

## Event-Study Model

The objective of the model is to measure the immediate effects of the Fed's QE announcements on financial assets in emerging market countries. This model entails using recent emerging market stock market indexes, and improves on existing literature by adding explanatory variables of market volatility measure and flow of funds data.

$$P_{it} = \beta_0 + \delta_1 QEF_t + \delta_2 QEN_t + \delta_3 TF_t + \delta_4 TN_t + \beta_1 BONDSPREAD_t + \beta_2 TBILLRATE_t + \beta_4 VIX_t + a_i + u_{it}$$



iShares MSCI Emerging Markets ETF price movements from the start of QE3 to start of tapering. The first vertical line marks September 13, 2012, the beginning of QE3; the second marks the date of Ben Bernanke's May 22, 2013 speech signaling tapering; the third marks the official announcement of tapering, December 18, 2013.

## Questions to be answered in this study are:

1. What are the impacts of quantitative easing on emerging market economies [EMEs]?
2. Are these impacts different for easing versus tapering?
3. What can EMEs do to counter negative effects of QE?

## Linear Random Effects Regression

The model specification is to explain country currency rates and stock exchange prices for EMEs to reflect factors that are believed to be affected by the Fed's announcements, such as flow of funds and volatility data. Thus, the equation includes all the announcement dates in the specified period, plus variables that are indicators of the risk aversion and flow of funds, and volatility issues.

A random effects model is also more appropriate, as confirmed by a Hausman test. Additionally, the 2012 Chinn-Ito financial openness index (Chinn & Ito, 2008) to group the twenty-two EMEs into three groups based on their financial openness to examine how QE affects these countries with differing levels of openness.