



## Balance-of-payments anti-crises<sup>☆</sup>



Michael Kumhof<sup>a</sup>, Isabel Yan<sup>b,\*</sup>

<sup>a</sup> Research Hub, Bank of England, Threadneedle Street, London EC2R 8AH, United Kingdom

<sup>b</sup> Department of Economics and Finance, City University of Hong Kong, Tat Chee Avenue, Kowloon, Hong Kong

### ARTICLE INFO

#### Article history:

Received 26 June 2015

Revised 12 February 2016

Accepted 15 February 2016

Available online 9 April 2016

#### JEL Classification:

F41

E52

E58

E63

#### Keywords:

Foreign exchange reserves

Foreign exchange intervention

Price level targeting

Exchange rate targeting

### ABSTRACT

China and Switzerland have recently experienced foreign exchange reserve accumulation far in excess of what would be implied by the literature on optimal reserves. Using a dynamic general equilibrium model, we show that the credible expectation of an upper limit to how many reserves a country is willing to accumulate would lead to a balance-of-payments anti-crisis. This is characterized by an accelerated pre-crisis accumulation of foreign exchange reserves, followed by a collapse of the monetary target that is instantaneous under exchange rate targeting and gradual under price level targeting. We argue that Switzerland has recently experienced such an event.

© 2016 Elsevier Inc. All rights reserved.

*“There are surely limits on the tolerance of foreign investors for increased claims on the United States ... International debt accumulation at these rates cannot go on forever ... As a matter of arithmetic, any reduction in the U.S. current account deficit must be matched by reductions in current account surpluses elsewhere.”*

Lawrence H. Summers, Per Jacobsson Lecture, 2004 ([Summers, 2004](#))

*“China has made a conscious strategic decision to alter its growth strategy. Its 12th Five-Year Plan, enacted in March 2011, lays out a broad framework for a more balanced growth model that relies increasingly on domestic private consumption. ... With rebalancing will come a decline in China’s surplus saving, much slower accumulation of foreign-exchange reserves ...”*

Stephen Roach, Project Syndicate, October 21, 2013 ([Roach, 2013](#))

*“China’s war chest of foreign currency reserves has become a headache as its continued rise could stoke inflation in the long term. ... Frankly speaking, foreign exchange reserves have become a big burden for us, because such reserves translate into the base money, which could affect inflation ...”*

Chinese Premier Li Keqiang, Reuters, May 11, 2014 ([Reuters, 2014](#))

<sup>☆</sup> Isabel acknowledges financial supports from the General Research Fund (GRF) (project no. 9041615) and National Natural Science Foundation of China (project no. 71403061), and research support from the Global Research Unit (GRU) of the City University of Hong Kong.

\* Corresponding author. Tel.: +852 34427315.

E-mail addresses: [michael.kumhof@bankofengland.co.uk](mailto:michael.kumhof@bankofengland.co.uk) (M. Kumhof), [efyan@cityu.edu.hk](mailto:efyan@cityu.edu.hk), [isabelkian@gmail.com](mailto:isabelkian@gmail.com) (I. Yan).

“Managing these [foreign exchange] reserves is currently a major challenge, and has become the subject of much scrutiny by both the media and SNB watchers.”

Fritz Zurbrugg, Member of the Governing Board, Swiss National Bank, Financial Times, November 8, 2012 ([Financial Times, 2012](#))

## 1. Introduction

Recent debates about the world monetary system<sup>1</sup> have been motivated in large part by the perception that the existing system has contributed to the development of large current account imbalances that are costly to the surplus countries and therefore ultimately unsustainable. As discussed in [Dooley et al. \(2004\)](#), [Park \(2007\)](#), [Adams and Park \(2009\)](#), [Cook and Yetman \(2012\)](#), [Steiner \(2013\)](#) and [McKinnon \(2014\)](#),<sup>2</sup> part of their cost is due to the fact that the current account surpluses have contributed to explosive central bank foreign exchange reserve accumulation, to the point that reserves now exceed, often by a wide margin, what is required for liquidity purposes or as an insurance device against sudden reversals in capital inflows ([Flood and Marion \(2002\)](#), [Rodrik \(2006\)](#), [Summers \(2006\)](#), [Jeanne \(2007\)](#), [Alfaro and Kanczuk \(2009\)](#), [Jeanne and Rancière \(2011\)](#) and [Obstfeld et al. \(2010\)](#)).<sup>3</sup>

As the reserve assets are low-yielding, with higher-yielding alternatives not available on the required scale, this has large opportunity costs for the surplus countries. [Rodrik \(2006\)](#) estimates the cost of reserves as the spread between the cost of private sector short-term foreign borrowing and the yield on the Central Bank’s holdings of liquid foreign assets. This spread equals several percentage points in normal times, resulting in a social cost of reserve accumulation of close to 1% of GDP for many developing countries. Similarly, [Hauner \(2005\)](#) estimates an opportunity cost of international reserves of 0.2–0.6% of GDP for a group of emerging countries. Apart from concerns with returns, there are also concerns with risk, specifically with exchange rate risk building up on central bank balance sheets.

In light of these concerns some governments have been looking for policy alternatives. China, whose foreign exchange reserves had started to grow rapidly in the early 2000s and stood at over 40% of annual GDP in early 2015, started to look to policies that rebalance demand and growth toward domestic sources, in the hope that this would slow or stop reserve accumulation. And Switzerland, whose foreign exchange reserves had started to grow rapidly around 2009 and stood at over 80% of annual GDP in early 2015, on several occasions indicated its concern with the consequences of its CHF/EUR exchange rate cap for the central bank’s balance sheet.

The Chinese rebalancing objective has been supported by IMF policy advice,<sup>4</sup> and was a key element of the 12th Five-Year Plan of March 2011 ([Roach, 2013](#)). The policy met with considerable success, as the Chinese current account-to-GDP ratio declined by eight percentage points between 2007 and 2013/4.<sup>5</sup> But even this has not been sufficient to decisively slow foreign exchange reserve accumulation. The Chinese concern with this has been expressed in repeated statements from leading policymakers. For example, in March 2007 China’s central bank governor announced that his country would stop accumulating foreign exchange reserves ([Reuters, 2007](#)). As shown in the top left panel of [Fig. 1](#),<sup>6</sup> this followed several years of very large and accelerating Chinese reserve growth. However, the central bank kept accumulating reserves until 2009 when reserve accumulation flattened out, albeit only temporarily. In an April 2011 speech at Tsinghua University, the central bank governor again emphasized that China was making strong efforts to scale back its accumulation of foreign exchange reserves, as over-accumulation had led to excess liquidity. In his view, China’s reserves had already surpassed the reasonable needs of China ([Wall Street Journal, 2011](#)). For more than a year following this speech, reserve accumulation did slow down, but it resumed strongly around the end of 2012. Finally, in May of 2014 Chinese Premier Li Keqiang made a very similar statement ([Reuters, 2014](#)). This was again followed by a trend reversal in reserve accumulation.

The pattern of Swiss reserve accumulation is shown in the top right panel of [Fig. 1](#). Again, rapid reserve accumulation dominated the pattern, and policymakers expressed concerns with this ([Financial Times, 2012](#)). But there were also several brief periods that looked like potential trend reversals.

The question, on which there has so far been very little work in the literature, is how an economy would behave if such trend reversals turned out to be permanent. This paper attempts to answer that question. The recent Swiss experience turned out to provide a live case study.

We suggest that it is useful to examine this question through the lens of a familiar literature - the literature on first-generation balance of payments crises following [Krugman \(1979\)](#), [Calvo \(1987\)](#), [Calvo and Vegh \(1999\)](#), and [Kumhof et al. \(2007\)](#). The critical difference between our paper and that literature is that in the latter the central bank holds decreasing

<sup>1</sup> Calls for changes to the world monetary system have been made by, among others, Russia ([Johnson, 2008; 2013](#)) and China [Zhou \(2009\)](#); [Otero-Iglesias and Zhang \(2014\)](#).

<sup>2</sup> Other countries outside developing Asia have also experienced a massive increase in foreign exchange reserves since the late 1990s. See [Rodrik \(2006\)](#).

<sup>3</sup> [Obstfeld et al. \(2010\)](#) point out that the fear of a sudden flight from domestic to foreign assets implies that the demand for international reserves should be proportional to M2, and that this can explain observed reserves in many emerging markets well during their sample, which ends in 2004. However, they find that in the last years of their sample a substantial fraction of China’s reserves was left unexplained. Between that time and early 2015 Chinese reserves grew by a factor of seven.

<sup>4</sup> See [International Monetary Fund \(2005, 2009\)](#).

<sup>5</sup> Note that this can only partly be explained by the effects of the Great Recession, as by 2013/4 global demand had experienced a significant recovery.

<sup>6</sup> The figure shows both gross and net foreign exchange reserves. The latter deduct from gross reserves the central bank bond liabilities issued for the purpose of sterilizing reserve accumulation.

متن کامل مقاله

دریافت فوری ←

**ISI**Articles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات