

## Testimony

### International Impacts of the Federal Reserve's Quantitative Easing Program

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#### Summary and Policy Conclusions

**Impact of Quantitative Easing (QE):** As the world's largest economy, its financial epicenter, and the issuer of the primary reserve currency, actions by the US Federal Reserve ("Fed") will inevitably affect other countries via trade and exchange rates, capital flows, and overall financial conditions. The Fed's monetary easing policies, including QE, have contributed to greater capital flows and exchange market pressures in the emerging markets (EMs). But other pull factors, notably growth in the EMs themselves, have been at least as important.

QE has generally, and on balance, had a positive impact on emerging markets (EMs) and the global economy. But in some instances they have added to pressures and volatility for EMs, complicating macroeconomic management, and the impact has depended significantly on the global macroeconomic situation as well as the situation in particular countries.

QE1, for example, was unambiguously positive for the world and the EMs because it minimized, even eliminated, the tail risk of the near-collapse of the world economy in the aftermath of the Lehman Brothers crisis. QE2, on the other hand, occurred when the global macrofinancial context was less dire and at a time of macroeconomic heating in many EMs, provoking complaints from Brazil in particular. Moreover, monetary easing and economic weakness characterized other industrial economies too, contributing to capital flows to the EMs. The threatened withdrawal of QE3 in May 2013 created the opposite types of pressures in EMs, namely capital outflows and sharp currency adjustments. But pressures were not uniform and were felt acutely in macroeconomically vulnerable economies.

**The Fed's international role of liquidity provision:** The Fed has focused on its exclusively domestic responsibilities while also cooperating with partner countries. It provided dollar

liquidity (via swap lines) to the central banks of Brazil, Mexico, Singapore, and South Korea in the aftermath of the Lehman Brothers crisis. It provided large amounts of similar liquidity to central banks in Europe and the Bank of Japan. These actions contributed to calming conditions during the recent global financial crises.

**QE and currency manipulation:** In the aftermath of the Asian financial crisis in the late 1990s, a number of countries, especially in East Asia, ran up large current account surpluses and accumulated foreign exchange reserves often supported by heavy foreign exchange intervention. QE policies have not reinforced these tendencies. In fact, the QE era has coincided with a reduction in imbalances and reserve accumulation.

QE policies will affect asset prices and exchange rates in other countries. But these policies should not generally be viewed as equivalent to currency manipulation. They are primarily aimed at, and have their most important effects, on domestic asset prices and the domestic economy. QE policies thus qualify as predominantly domestic policies. The overall effect of QE policies will typically be to enhance demand for domestically produced goods and services without necessarily reducing demand for foreign goods. Currency manipulation, on the other hand, will tend to have a zero sum aspect, switching demand rather than enhancing total global demand.

**QE, trade, and capital controls:** It is now well accepted—including by the International Monetary Fund (IMF), which has re-evaluated its earlier stance—that capital account management policies can legitimately be part of the policy arsenal for countries struggling to maximize the gains from, and minimizing the costs of, financial globalization. However, there is some difference of views on the extent to which US bilateral investment treaties (BITs) and free trade agreements (FTAs) —particularly those with Chile, Singapore, and Korea—circumscribe the ability of partner countries to use such policies.

## **Policy Conclusions**

**1. The onus of dealing with the impact of the Fed's actions lies preponderantly with the EMs themselves.** They can insulate themselves from Fed actions by being less financially integrated as China has chosen to do. They can also insulate themselves by following sound macroeconomic policies that would allow them to reap the benefits of, and appropriately respond to, capital inflows when the Fed eases monetary policy. And they can cope with the consequences of sharp outflows when the Fed tightens through a combination of macroeconomic (South Korea), reserve (India), and capital account management (Brazil) policies.

**2. The US Congress should work with the administration to ensure that the necessary legislation to augment the IMF's resources—pending since 2010—is included in the upcoming omnibus appropriations bill.** Financial crises will always happen, and the magnitude of such crises could well be larger in the future, implying the perennial need for international mechanisms to provide financing for both preventing and responding to crises. The Fed cannot be the main instrument for providing such financing: That job will, and should, be

that of the IMF either as direct financier or as coordinator of other financial mechanisms. Congressional passage of the IMF legislation would contribute to making the IMF stronger and more legitimate and the world better protected against crises while also reducing the burden on the Fed.

**3. Greater clarity in US bilateral investment and free trade negotiations with partner countries would help them deal better with capital flows and complement the Fed's constructive international role.** The negotiations on the Trans-Pacific Partnership (TPP) offer an excellent opportunity for clarifying that the United States does not aim to circumscribe or eliminate legitimate policy instruments by its trading partners—macro-prudential controls on inflows and broader controls on balance-of-payments grounds—to respond to the pressures from financial globalization and to crises.

## **Introduction**

This testimony will address four issues relating to the Fed's policies: the impact of QE on emerging markets; the Fed's international role of liquidity provision; QE policies and currency manipulation; and QE policies, trade, and capital controls. In each case, a factual discussion of these issues will be followed by the policy lessons that might be drawn.

### **I. Impact of Quantitative Easing (QE) Policies on Emerging Markets**

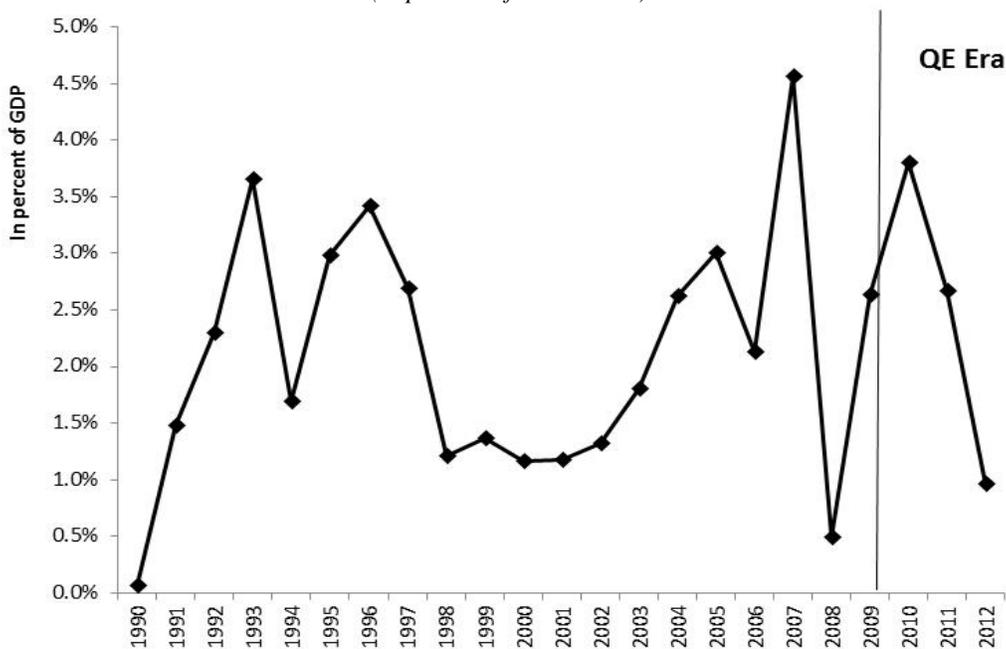
The period since late 2008 has been characterized by central bank hyperactivity, especially in the industrial economies. In order to provide policy support to stave off a financial collapse and then to shore depressed levels of activity, central banks moved to slash rates at or close to the zero bound, and then to expand their balance sheets through policies that have been called quantitative easing (QE). At the center of this has been the US Federal Reserve (hereafter referred to as "the Fed"), which has seen policy rates at 0 to 0.25 percent since December 2008, and has witnessed an explosion (near quadrupling) of its balance sheet from US\$900 billion prior to the Lehman Brothers crisis to about US\$4 trillion today.

The domestic consequences of the Fed's actions have been extensively analyzed and scrutinized. The focus today is on its external consequences. The United States is the world's largest economy (in market exchange rates), the financial epicenter of the world, and the dollar is the world's primary reserve currency. As such, the Fed's actions will necessarily have consequences (or "spillovers") for the rest of the world via three channels: trade and exchange rates (a healthy US economy will absorb exports from the rest of the world; a lower dollar will increase US exports to the rest of the world), capital flows (lower short and long term interest rates will push capital flows to the rest of the world and vice versa), and global risk-taking and stability (a stable US economy reduces risk-premia around the world and encourages investment).

*What has been the impact of the Fed's actions on capital flows and exchange rates in the EMs?*

The early part of the QE era (QE1 and QE2) witnessed large net flows of capital to EMs (as a share of EMs' GDP; figure 1). But flows have declined since and did so well before the threatened withdrawal of QE in May 2013.

**Figure 1 Net capital flows to emerging markets, 1990–2013**  
(in percent of EMs' GDP)

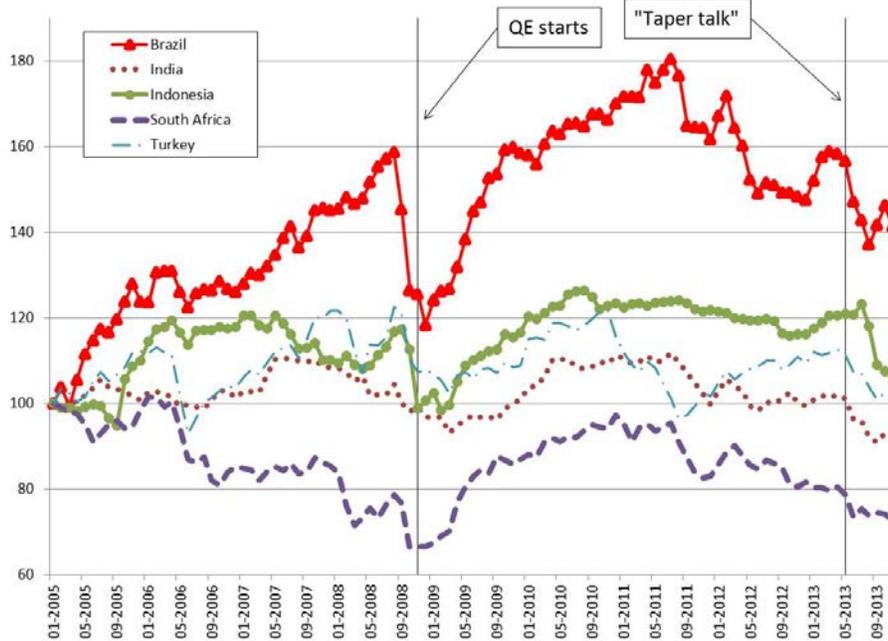


Sources: International Monetary Fund, International Financial Statistics and World Economic Outlook

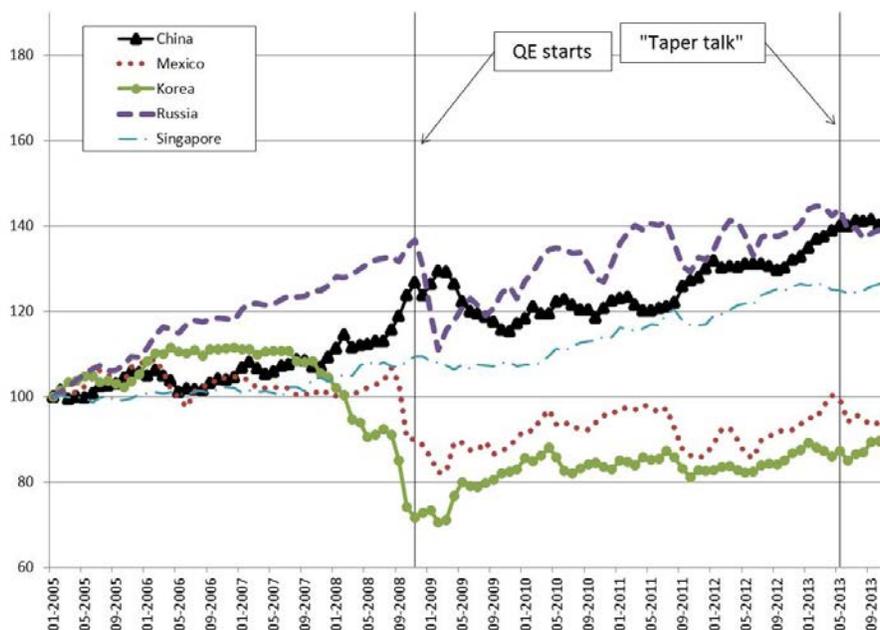
The same pattern applies to the evolution in most EM currencies (figures 2A and 2B), with sharp appreciations (of the real effective exchange rates, which more accurately reflects the economy's competitiveness) until the middle of 2011 followed by declines well before May 2013.

Three points bear emphasis: Net capital flows to EMs were smaller than in the run-up to the Lehman Brothers crisis, they started declining well before the exit from QE, and flows were not all caused by US QE. According to research by the IMF, reductions in bond yields in the United States and in global risk-aversion (another consequence of QE policies) do “push” capital out to selected EMs. But the share of total inflows that is attributable to such QE policies is “not preponderant” and the “correlation between capital flow surges and US QE rounds is loose.” (p. 9, IMF 2013a). Put differently, “pull factors” operating in the EMs themselves, most notably rapid growth, has an even larger impact on capital flows. As figure 3 illustrates, the growth differential between emerging markets in Asia and that in the United States before the Lehman Brothers crisis and during the first two QE periods were about the same. Both the pre-2007 experience, when capital flows to EMs peaked even without any QE, and the decline in flows during the late QE era, are suggestive of the powerful role of pull factors. Finally, it must be remembered that the push factors were operating not just from US QE policies. Monetary easing and economic weakness characterized other industrial economies too, contributing to capital flows to the EMs.

**Figure 2A Real effective exchange rates of the “Fragile Five,” January 2005–September 2013**  
*(index; increase denotes appreciation)*

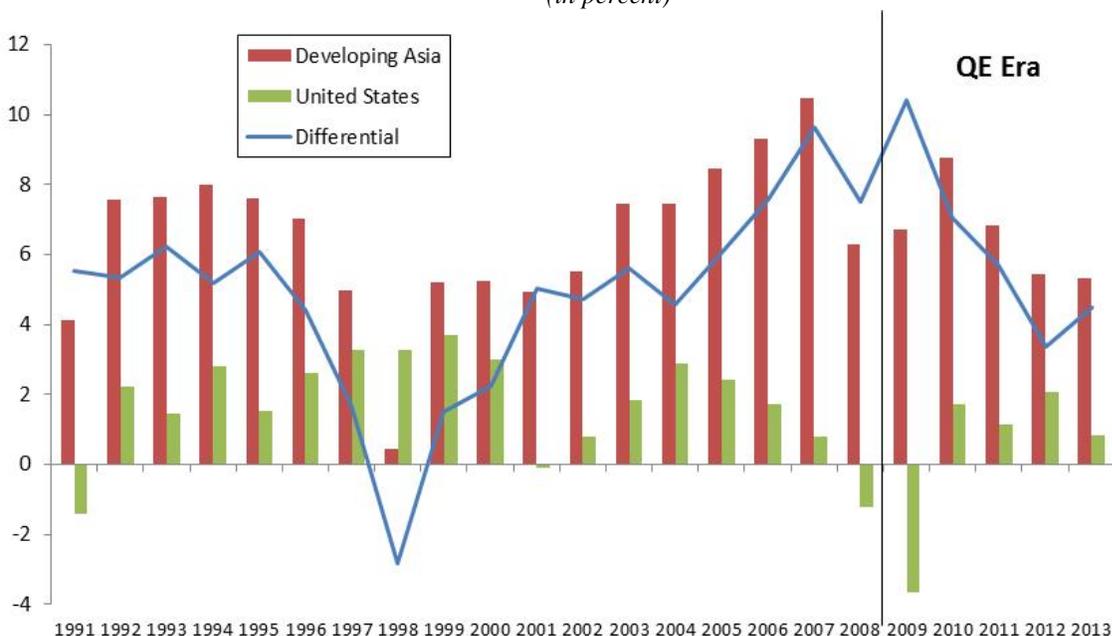


**Figure 2B Real effective exchange rates of other EMs,” January 2005–September 2013**  
*(index; increase denotes appreciation)*



Source: Bank of International Settlements

**Figure 3 GDP growth of developing Asia and the United States, 1991–2013**  
(in percent)



Source: IMF, *World Economic Outlook*

*What has been the broader impact of the Fed's actions?* On balance, it has been positive. But occasionally it has complicated management for emerging market and other economies, and the impact has depended significantly on the global macroeconomic situation as well as the situation in particular countries. Three examples illustrate these points.

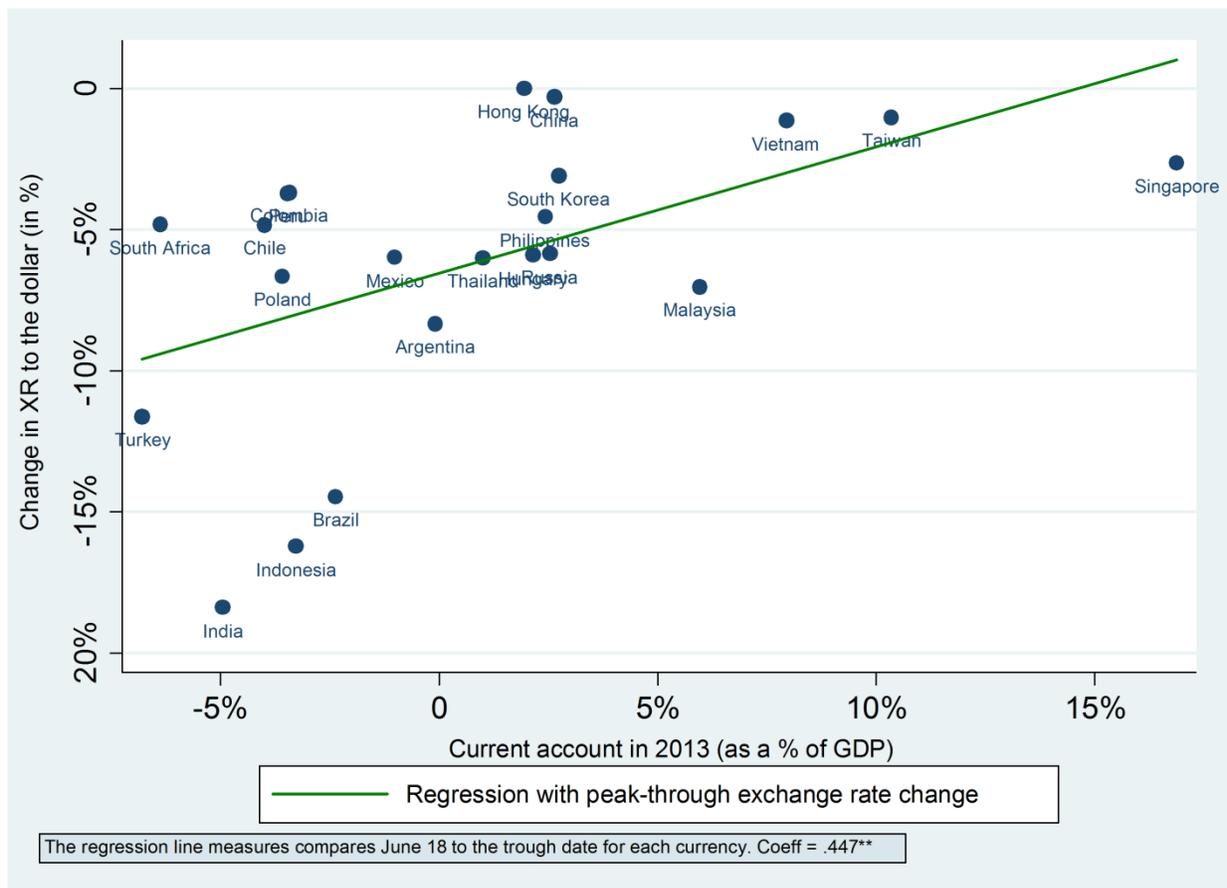
QE1, for example, was unambiguously positive for the world and the EMs because it minimized, even eliminated, the tail risk of the near-collapse of the world economy in the aftermath of the Lehman Brothers crisis. As the IMF's 2012 Spillover Report says: "Few countries complain about the Fed's QE1 action in 2008–09 or about the ECB's LTRO operations in 2011–12 because these occurred at times of near-collapse, when the global benefits of the action were unquestionable." (IMF 2012).

On the other hand, QE2—and to some extent QE3—occurred when the global macro-financial context was less dire and at a time of macroeconomic heating in many EMs. From the third quarter of 2009 until the summer/fall of 2011, economic growth was high and currencies appreciated substantially (figures 2A and 2B.) However, it is worth pointing out that the most vociferous complaints about Fed policies were expressed by Brazil, which had seen perhaps the most significant overheating. As figure 2A shows, the Brazilian real had become about 14 percent more appreciated in real effective terms in late 2011 relative even to the pre-Lehman peak in August 2008. For most other emerging market economies, on the other hand, the

depreciation seen after the Lehman Brothers crisis was either not fully reversed (Korea, Mexico, and South Africa) or reversed only marginally (India, Indonesia, and Turkey). Brazil and Russia, however, witnessed significant appreciations, reversing substantially the post-Lehman depreciation.

The third example relates not to QE but to its threatened withdrawal (of QE3) in May 2013. Chairman Bernanke’s statement triggered the opposite types of pressures in EMs, namely capital outflows and sharp currency adjustments. But the effects of the “taper talk” were not uniform across emerging markets. Acute pressures were felt especially by the macroeconomically vulnerable economies: Brazil, Indonesia, South Africa, India, and Turkey. These so-called Fragile Five all faced high current account deficits, rendering them vulnerable to reversals of foreign flows, and in many cases also faced a sharp deceleration in economic growth (figure 4).

**Figure 4 Taper talk, exchange rate pressures, and current account deficits**



Sources: Datastream, World Economic Outlook

Eichengreen and Gupta (2013) show that countries that had the largest currency appreciations and increases in the current account deficit in the period leading up to the "taper talk"

experienced the largest declines in currency and stock prices. China and Singapore, which had healthy reserves and current account surpluses, saw their currencies appreciate.

Policy implications: The onus of dealing with the impact of the Fed's actions lies preponderantly with the EMs themselves. They can insulate themselves from Fed actions by being less financially integrated as China has chosen to do. They can also insulate themselves by following sound macroeconomic policies that would allow them to reap the benefits of, and appropriately respond to, capital inflows when the Fed eases monetary policy. And they can cope with the consequences of sharp outflows when the Fed tightens through a combination of macroeconomic (South Korea), reserve (India), and capital account management (Brazil) policies. The Fed cannot be expected to calibrate its actions according to the needs of individual emerging market economies.

As the IMF's 2013 Spillover Report concludes:

“Significant as spillovers are, there is much that spillover recipients can do to position themselves in such a way as to minimize the risks. In particular, they need to fully use macroeconomic and macroprudential levers (including capital flow measures (CFMs), both on inflows and outflows, as necessary, though not as a substitute for other needed policy adjustments) to reduce any vulnerabilities that may have emerged, build buffers, and continue to undertake reforms that will raise potential output and thereby maximize the strength of the pull factors. Only thus will they be able to face the potential stress of the upcoming monetary policy normalization in a position of strength and resilience.”

Emerging markets themselves have drawn these lessons and worked toward building their resilience to changes in future Fed policies. For example, the start of tapering in December 2013 had a relatively muted impact on many emerging markets, including the so-called Fragile Five.

## **II. The Fed's Quiet International Role: Swap Lines**

The Fed's mandates are exclusively domestic but its actions have international consequences as discussed above, so that the Fed cannot be unmindful of the consequences of its actions on the rest of the world.

*How has the Fed straddled these two considerations?* Effectively. In the immediate aftermath of the Lehman Brothers crisis, the Fed provided dollar liquidity (via swap lines up to a limit of US\$30 billion) to the central banks of Brazil, Mexico, Singapore, and South Korea, which faced an outflow of dollars and hence feared a financial meltdown (table 1). The swap lines contributed significantly to calming conditions in late 2008 and 2009.

For example, my colleague Olivier Jeanne (2010) argues that the experience of Korea with US swap lines was very favorable: “South Korea entered the crisis with about \$270 billion of foreign

exchange reserves (amounting to approximately 30 percent of its GDP). The level of reserves started to decrease (and the won to depreciate) in early 2008, a trend that took a sharp turn for the worse after Lehman Brothers' failure in September. Reserves then fell abruptly to about \$200 billion while the currency sharply depreciated, and Korean banks started to encounter difficulties in rolling over their short-term foreign debt. It is only after Korea entered a \$30 billion swap arrangement with the US Federal Reserve in October 2008 that the exchange rate and reserves stabilized. The Korean central bank was then able to reconstitute its stock of reserves (returning to the precrisis level by the end of 2009). The real economy was relatively spared throughout, with an unemployment rate that never exceeded 4 percent.”

**Table 1: Swaps agreed by the Federal Reserve of the United States to other central banks**

Central bank counterparty	Line size (US\$ bns)	Total amount extended (US\$ bns)*	Average interest rate (%)	Foreign currency	Average exchange rate	Total foreign currency amount received (bns)	Number of transactions
ECB	Unlimited	8,011.00	1.54	Euro	1.35	5,942.00	271
Bank of England	Unlimited	918.00	1.78	British pound	1.65	540.00	81
Swiss National Bank	Unlimited	465.00	1.49	Swiss franc	1.13	521.00	114
Bank of Japan	Unlimited	387.00	1.41	Japanese yen	94.56	37,494.00	35
Danmarks Nationalbank	15	72.00	1.25	Danish krone	5.58	409.00	18
Sveriges Riksbank	30	67.00	1.09	Swedish krona	7.93	535.00	10
Reserve Bank of Australia	30	53.00	1.56	Australian dollar	0.68	77.00	10
Bank of Korea	30	41.00	1.72	South Korean won	1333	56,852.00	19
Norges Bank	15	29.00	1.37	Norwegian krone	6.64	198.00	8
Banco de Mexico	30	10.00	0.73	Mexican peso	13.28	128.00	3
Bank of Canada	30	N/A	N/A	Canadian dollar	N/A	N/A	N/A

*Source: Papadia (2013)*

Similarly during the euro area crisis, the Fed offered swap lines to a number of central banks in Europe, including the European Central Bank (ECB), as well as the Bank of Japan. In many cases, these banks could draw unlimited amounts. Papadia (2013) estimates that the ECB, for example, drew up to half a trillion dollars. The main reason for the swaps granted by the Fed was “the unprecedented illiquidity in the foreign exchange swap market, combined with the substantial gap between lending and stable liabilities of non-US banks, in particular European ones.” Non-US banks could previously obtain funding in the swap market but this dried up during the euro area crisis, necessitating the injection of dollar liquidity.

Policy Implications: The success of the Fed’s international liquidity provision has prompted my colleague Ted Truman (2013) to argue that such mechanisms need to be institutionalized, with the IMF playing the key coordinating role: “Global financial crises are not a thing of the past. They are often caused by buildups of excessive domestic and foreign debt. But successfully addressing such crises and limiting negative spillovers often requires coordinated actions to prevent a contraction in global liquidity. Establishment of a more robust global financial safety net centered on central banks—because that is where the money is—would be a useful tool for addressing the inevitable future crises.”

But this in turn suggests that strengthening the IMF to make it more effective and legitimate should be a top priority for the international community and the United States. US support for the IMF is critical to preserving US global economic leadership. The IMF also provides the much-needed insurance against the next financial crisis. As my colleagues at the Center for Global Development (CGD) Nancy Birdsall and Clay Lowery (2013) recently argued, Congress should “approve at little budgetary cost to U.S. taxpayers an increase in resources at the International Monetary Fund (IMF) that will help protect Americans from the costs of the next global financial crisis... The hard work has already been done. As part of the G-20 coordinated response to the 2008–09 crisis, the United States led a negotiation with the other 187 IMF members to increase IMF resources and to make modest changes in the allocation of the shares across country members. All other major economies, including key U.S. allies, have long since endorsed the agreement in their legislatures. Embarrassingly, this straightforward and sensible deal is now being held up by the failure of Congress to act.”

### **III. QE and Currency Manipulation**

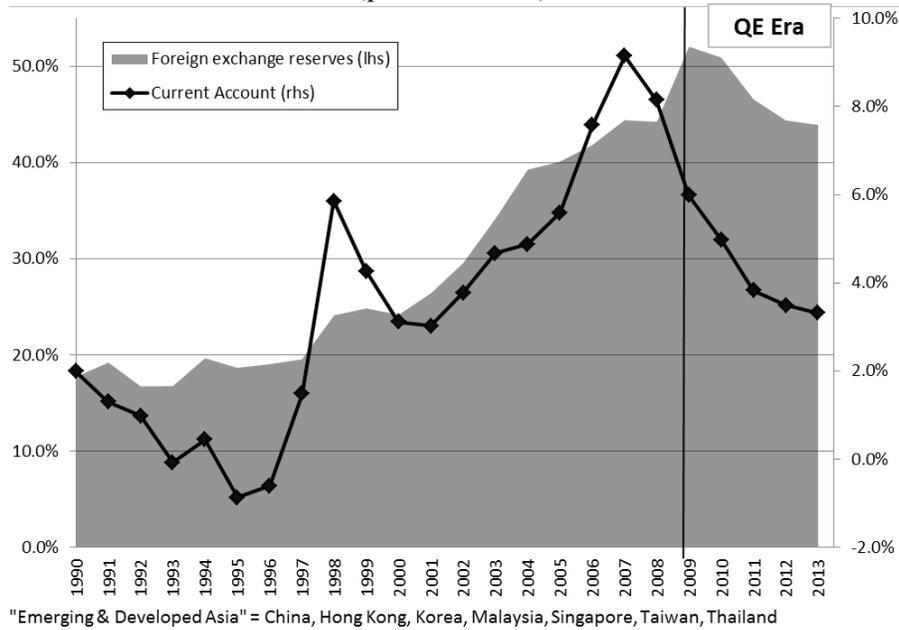
Two questions merit consideration.

*First, has QE provoked reserve accumulation and currency manipulation with detrimental effects for the US and the global economy?* No, it has not. Large external imbalances in the form of current account surpluses, sustained by currency intervention and reserve accumulation, began in the early 2000s in the aftermath of the Asian financial crisis. Initially, countries, largely in emerging Asia, chose to build up foreign exchange reserves as a form of insurance against financial crises. Thereafter, running surpluses, most notably in the case of China, became part of a mercantilist growth strategy aimed at boosting exports. China’s policy has had an adverse impact on the exports of other developing countries in particular. Aaditya Mattoo, Prachi Mishra, and I (2012) estimated that a 10 percent undervaluation of China’s real exchange rate reduces a typical developing country’s exports on average by about 1.5 to 2 percent.

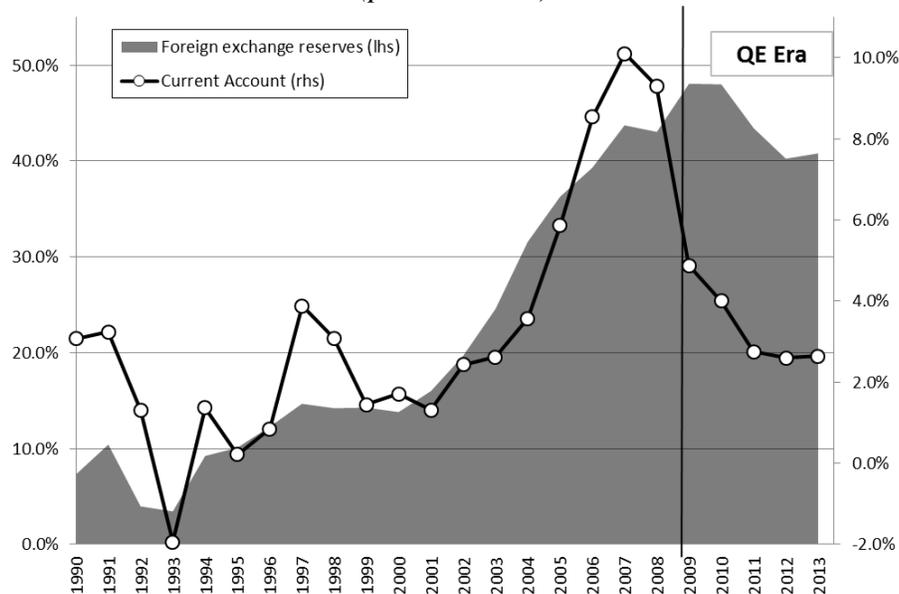
But these imbalances peaked in 2007. The era of QE has coincided with a sharp reduction in current account surpluses, an appreciation of currencies in Asia, especially China, and sharply

reduced currency intervention, although there has been some pick-up in currency intervention by China in 2013 (see figures 5A and 5B). The Fed's QE policies have thus not resulted in more currency manipulation.

**Figure 5A Current account balances and reserve accumulation in selected Asian countries**  
(percent GDP)



**Chart 5B Current Account Balances and Reserve Accumulation in China**  
(percent GDP)



Sources: International Financial Statistics, World Economic Outlook

*Second, is QE itself a form of currency manipulation, as some EM officials have on occasion suggested?* Not really. In response to US complaints about currency manipulation by China and other Asian economies, a number of emerging market countries, notably Brazil and to a lesser extent China, argued that QE policies were themselves a form of currency manipulation. QE affects asset prices in general, and by lowering US interest rates, it also tends to lower the value of the dollar in particular.

Given the size of the US economy and its central role in the international financial system, Fed policies will affect other economies via asset and currency movements. But QE policies are primarily aimed at, and have their most important effects, on domestic asset prices, and through them on the domestic economy. QE policies thus qualify as predominantly domestic policies in that they operate through domestic markets and domestic assets. The external effects of QE policies are usually by-products of their effects on domestic prices, and hence have smaller effects on other countries. Currency intervention is an external policy (one that operates in foreign assets) that is aimed primarily at increasing foreign demand for domestically produced goods and services.

The overall effect of QE policies will typically be to enhance demand for domestically produced goods and services without necessarily reducing demand for foreign goods. QE increases global demand for goods and services. Currency manipulation, on the other hand, will tend to have a zero sum aspect, switching demand rather than enhancing total global demand.

Policy implications: Currency manipulation may or may not be an important issue for the United States and the world to address. If it is, it should be addressed as part of the post-Doha agenda in the World Trade Organization (WTO) as Aaditya Mattoo and I (2009) have argued.

Alternatively, it could be addressed very carefully in the context of the TPP as my colleagues (Bergsten and Gagnon, 2012; Bergsten, forthcoming) have argued. One of the strong reasons to favor the former approach is that China's currency practices have affected other developing countries very significantly and not just the United States. But attempts to address currency manipulation should be independent of QE policies.

#### **IV. The Fed, US Trade Policy, and Capital Flows**

The Fed has been mindful of its international role, helping countries to deal with crises by extending dollar liquidity.

*But is there a need for additional actions on the trade side?* Yes, in particular, greater clarity in US bilateral investment and free trade negotiations with partner countries would help them deal better with capital flows and complement the Fed's constructive international role.

My colleagues, Olivier Jeanne and John Williamson, and I (2012) argued in our book that capital account management policies can legitimately be part of the policy arsenal for countries

struggling to maximize the gains from, and minimizing the costs of, financial globalization. The IMF in a series of recent papers has reversed its earlier position and has endorsed the use of such policies in certain circumstances (IMF, 2011a, 2013b). The United States government has also exhibited greater flexibility in this regard, reflected in its attitude to the measures imposed by Brazil.

However, there is some difference of views on the extent to which US bilateral investment treaties (BITs) and free trade agreements (FTAs)—particularly those with Chile, Singapore, and Korea—circumscribe the ability of partner countries to use such policies. This difference is captured in a letter from Congressmen Barney Frank and Sander Levin of May 23, 2012, to then US Treasury Secretary Tim Geithner. The issues relate to whether the language in BITs and FTAs permit the use of macro-prudential controls on capital inflows and whether they would permit controls on outflows such as those used by Malaysia and Iceland in the event of a serious crisis. Clearly, these policies should be used with the utmost care and in exceptional circumstances. But equally their use should not be entirely precluded.

Policy implications: The negotiations on the Trans-Pacific Partnership (TPP) offer an excellent opportunity for clarifying that the United States does not aim to circumscribe or eliminate legitimate policy instruments by its trading partners—macro-prudential controls on inflows and broader controls on balance-of-payments grounds—to respond to the pressures from financial globalization and to crises.

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