

Hasan Cömert

Corresponding author

Middle East Technical University,
Ankara,
Turkey

✉ hcomert@metu.edu.tr

**Mehmet Selman
Çolak**

Central Bank of the Republic of Turkey,
Ankara,
Turkey

✉ mselman.colak@tcmb.gov.tr

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Can Developing Countries Maintain Financial Stability after the Global Crisis? The Role of External Financial Shocks

Summary: The recent global turmoil severely affected some developing economies. However, in general, these nations survived the crisis with less damage compared with advanced countries. The majority of developing countries did not experience a financial system collapse. What were the main factors behind their relatively better performance? We argue that the main reason was the relatively moderate financial account shocks, in terms of both magnitude and duration, experienced by developing economies during the global crisis. This was due to the fact that advanced countries could not fully serve their roles as safe havens during the recent global turmoil. Furthermore, developing countries enjoyed greater autonomy and legitimacy in implementing expansionary monetary and fiscal policies in an environment in which international cooperation partially met the need for an international lender of last resort. If the returns in advanced countries become more attractive, developing countries may face larger external financial shocks in future crises.

Key words: Financial stability, Developing countries, Global crisis, Financial flows, Safe haven, Sudden stop.

JEL: E52, E58, F31, F32, G01.

The history of developing countries is full of severe financial crises. These were experienced intensely in the 1980s and 1990s, and the most recent ones were experienced by Turkey and Argentina in 2001 and 2002, respectively. Nevertheless, after these last crises, the financial system of developing economies seemed to stabilize. No further destructive financial crises have taken place in the developing world after 2002, and there has been a positive trend in many macroeconomic variables in these economies. Some even argue that there has been a decoupling trend among developed and developing countries based on the impressive high growth and other positive macroeconomic achievements, such as low budget deficits, relatively low inflation, relatively stable exchange rates with massive international reserves, and restructured financial markets, in these countries (Joshua Aizenman et al. 2012; Ayhan M. Kose, Christopher Otrok, and Eswar Prasad 2012). Although some developing economies were severely hit by the global turmoil in 2008, most developing countries survived the crisis with less damage compared with advanced nations, and the majority of them did not experience a financial collapse.

In this study, we investigate the reasons behind the relatively better performance of developing countries in the global crisis. We argue that such performance is mainly related to the fact that these emerging markets have not actually been tested by a substantially large financial account shock. The financial account shocks that hit developing countries during the global crisis were not as large as those observed in the 1980s and 1990s in terms of both magnitude and duration. Although sudden stops in the financial accounts of developing countries during the global crisis led to a credit squeeze or a depreciation of currencies, these economies were, in general, affected by the crisis mainly through the trade channel rather than the financial channel.

Why developing economies were not tested by a destructive financial shock in the recent crisis can be explained mostly by the fact that the financial markets of advanced countries could not fully serve their roles as safe havens during the global crisis. Massive liquidity accompanied with low returns in advanced countries shortened the duration of sudden stops. Furthermore, given the turmoil in the US and the prolonged instability in the Eurozone, developing countries enjoyed greater legitimacy and autonomy in implementing expansionary monetary and fiscal policies, which partially offset their inadequate aggregate demand problems for a while. If the financial assets in advanced countries become much more attractive, developing countries may face larger external financial shocks in the future. Even large reserves, flexible exchange rate regimes, and healthy balance sheets on paper, along with some other so-called strong fundamentals, would not be enough to avoid a financial collapse. If the shocks were also associated with domestic problems and/or political instability, their magnitudes and impacts shocks would be even greater.

In this study, the incidence of crisis is defined as the year in which a recession or a sharp fall in the GDP growth rate of an economy occurs; hence, the outbreak of the global crisis is dated 2008 and 2009. The aggregate growth rates of developing and developed countries, as classified by the International Monetary Fund (IMF) and based on the list used in this study, were 5.8% and 0.1% in 2008, and 3.1% and -3.5% in 2009 (Figure 1). Furthermore, whereas 67 of 154 (43%) countries categorized by the IMF as “developing” experienced a recession in at least one of the years 2008, 2009 and 2010, 32 of 35 (91%) countries in the “developed” category also underwent a recession in at least one of those years. This clearly depicts that developing economies outperformed developed ones in terms of growth performance during the crisis. The list of countries in the IMF classification and their corresponding growth rates are shown in the Appendix.

The rest of this report is organized as follows. Section 1 summarizes the related literature. Section 2, first, discusses the channels through which developing countries were affected by the global crisis. Then, in this section, we compare the magnitudes and durations of the financial shocks in the recent crisis with those experienced by developing countries in past crises. Section 3 explores the importance of the safe haven phenomenon in explaining the magnitude of the financial shocks in the recent crisis. In Section 4, we focus on the role of loose monetary policy in the north and the greater legitimacy enjoyed by developing countries in implementing expansionary fiscal and monetary policies during the last crisis. Finally, we provide the conclusion,

along with some remarks on possible scenarios in developing countries in the near future.

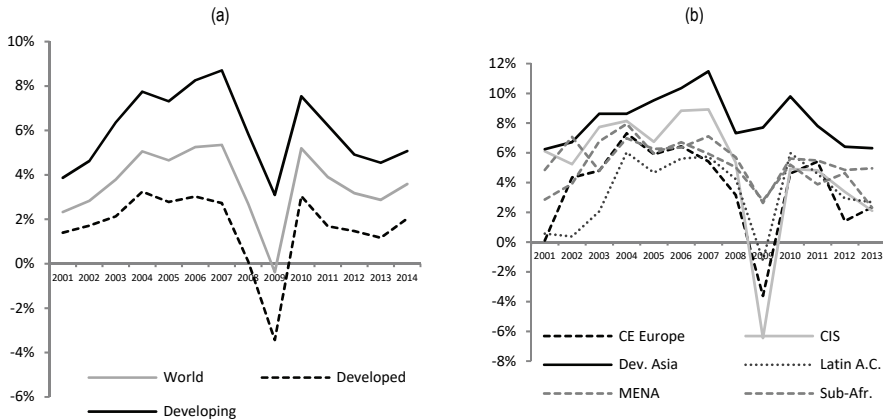
1. Literature Review

The literature has also tried to answer the question of why developing countries performed better during the global turmoil. In general, the literature claims that improved current accounts compared with the 1990s, the implementation of flexible exchange rate regimes, and the accumulation of large international reserves explain the major part of the success of these economies. In this vein, John Ammer, Fang Cai, and Chiara Scotti (2011) argue that the solid performance of developing countries in the global crisis was the result of a flexible exchange rate regime and less problematic current accounts. Similarly, Pelin S. Berkmen et al. (2012) and Charalambos G. Tsangarides (2012) claimed that the policy of flexible exchange rates helped developing countries whether the financial shocks and the countries that adopted less control on these rates performed better in the global crisis. An IMF report (International Monetary Fund 2012) emphasized the role of large reserves in the rapid exit, with moderate damage, of developing countries from the global financial crisis. Ricardo Llaudes, Ferhan Salman, and Mali Chivakul (2010) asserted that the pre-crisis levels of reserves helped to mitigate the initial growth collapse in developing countries. Roberto Alvarez and Jose De Gregorio (2013) empirically found that exchange rate flexibility, looser monetary policy, and better macroeconomic management were crucial for the robust performance of emerging markets during the crisis. In the present work, we argue that all the domestic factors emphasized in the literature might have played some roles in the relatively good performance of developing countries; however, they are not sufficient to provide the bigger picture. Only a few studies have claimed that the success of developing countries in the global crisis was mainly related to the external environment and that domestic policies played limited roles (Mehmet Selman Çolak 2012; Yılmaz Akyüz 2013, 2014; Çolak and Hasan Cömert 2013). We follow this line of research and, as stated in the introduction, support our claims by using descriptive statistics, as well as theoretical, historical, and institutional discussions. In this sense, as a first step, we investigate in the next section the main transmission mechanisms through which the global crisis affected developing countries.

2. Transmission of Global Crisis to Developing Countries

As indicated in Figure 1, the aggregate growth rates of developing economies were much higher than the averages in the world and in developed countries during the recent crisis. Among the developing countries, the hardest hit country group was the Commonwealth of Independent States (CIS), which had a growth rate of nearly -6.4% in 2009; the best performing group was developing Asia, which had the highest growth rate of 7.3% in 2008. The recent crisis affected developing countries through trade, financial flows, and expectation channels. Investigating the magnitude and duration of the trade and financial shocks that developing countries experienced is relatively easy; however, it is not that easy to explore the impacts of the expectations channel. In general, because the most visible impact of the expectations channel is in the form of more

financial reversals (and dollarization), and it is difficult to explore the role of expectations independently, we focus on the first two channels. In the recent crisis, among these two channels the more influential between these two channels was the trade channel (including the transfers channel), which was observed through a sharp fall in export levels and remittances even though sudden stops and, in some cases, sudden reversals inflicted heavy costs on some countries, particularly those in the Central and Eastern Europe or CEE group (Cömert and Esra Uğurlu 2014).



Notes: The classification of countries is made according to IMF World Economic Outlook (WEO) database as of October 2013. CE Europe - Central and Eastern Europe, CIS - Commonwealth of Independent States, Dev. Asia - Developing Asia, Latin A. C. - Latin America and Caribbean, MENA - Middle East and North Africa plus Pakistan and Afghanistan, Sub-Afr. - Sub-Saharan Africa. The details can be found in Appendix.

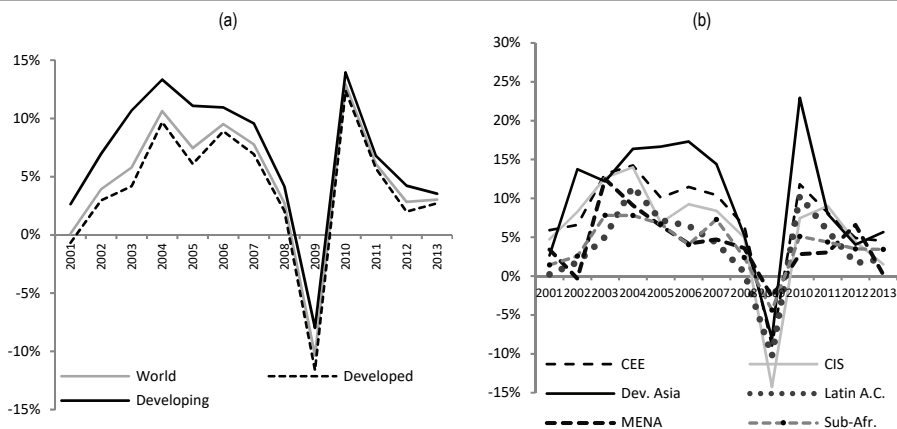
Source: International Monetary Fund (2014a)¹.

Figure 1 Annual GDP Growth Rates, %, (a) Developed vs. Developing, (b) Developing Regions

2.1 Trade Channel

Not surprisingly, the exports of developing countries plummeted due to a significant decline in demand for their exports of goods and services from the crisis-hit developed countries. Due to the multiplier effect and the dependence of the manufacturing industry on export revenues in developing economies, the fall in exports had a significant adverse impact on growth. The main question is how big the export shock was in response to the sharp decline in the growth performance of advanced countries. The aggregate export squeeze of developing economies was nearly 8% in 2009, which was very close to that of developed countries (10%). The magnitude of the shock varied among country groups (Figure 2). The biggest export shock was experienced by CIS countries, which had -14% growth whereas Middle East and North Africa (MENA) countries experienced a moderate export shock (-2%).

¹ **International Monetary Fund (IMF)**. 2014a. World Economic Outlook Database. <https://www.imf.org/external/pubs/ft/weo/2014/02/weodata/index.aspx> (accessed June 14, 2014).

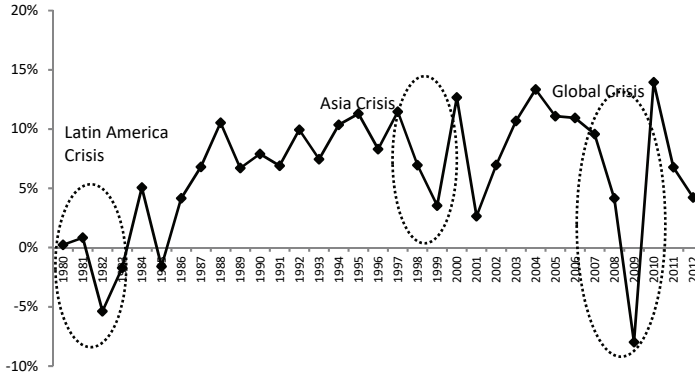


Source: IMF (2014a).

Figure 2 Growth Rate of Export Volume, Annual %, (a) Developed vs. Developing, (b) Developing Regions

The best way to interpret the magnitude of this export shock is through a comparison with the trade shocks observed in previous global crises. The export shock in the recent turmoil was apparently much greater than those in past crises (Figure 3). For example, a similar export squeeze was observed in the 1982 Latin American debt crisis, during which some developed countries experienced a slowdown; however, the magnitude of that export decline was lower than that in 2009. Similarly, during the Asian financial crisis of 1998, the export growth rate of developing countries declined but never reached negative. In fact, an increase in exports is more likely to be observed during a classic crisis in a developing country, as in the case of the Turkish, Argentinian, Mexican, and many other crises, due to the massive depreciation of local currencies, mainly related to financial reversals. In these earlier crises, the export growth remained positive or even increased. Moreover, a fall in economic activities in developing countries has always been accompanied by a sharp decline in imports due to the high contents of imported intermediate goods in production in developing countries. As a result, these countries experienced considerable improvements in their current accounts during the crises of the 1980s and 1990s.

A shock to exports has a significant multiplier effect on the GDP of an economy. This impact will be larger in developing countries because they have idle capital and large unemployment. Also, their manufacturing industries are dependent on export revenues for the purchase of imported intermediate goods. Manufacturing is the main industry for growth in many developing economies. A sharp fall in exports will have an obvious impact on the manufacturing industry.

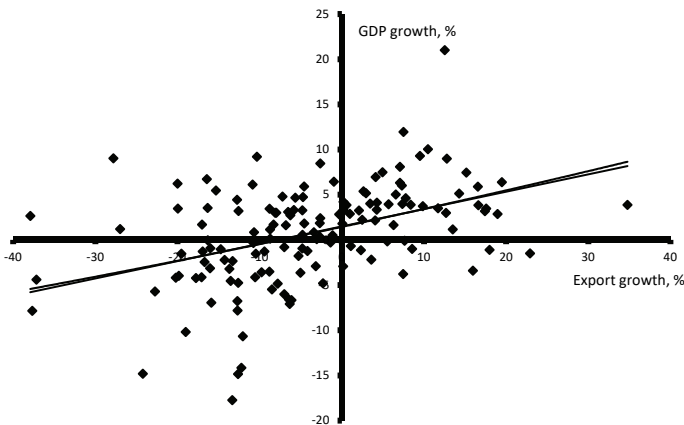


Notes: The incidence of crisis is defined as the year when a sharp decline in GDP growth occurred in the country group where the crisis originated from. In this sense, the outbreak of Latin America Debt Crisis is dated 1982, Asia Crisis is 1998 and Global Crisis is 2008.

Source: IMF (2014a).

Figure 3 Exports of Goods and Services, All Developing Countries, Growth Rate

Figure 4 shows the association between export and GDP growth in 2009 for all developing countries. As expected, the majority of developing countries are found either in the lower left or in the upper right region of the figure. Besides, as indicated in the figure, apart from some outliers, many countries with negative export growth had very low GDP growth rates. This supports the idea that the slowdown in the growth rates of developing countries in the recent crisis can be related mostly to large trade shocks that have not been observed in any past crises.



Notes: Some countries with missing data and some outlying observations are excluded. 142 developing countries are depicted from 154 countries according to IMF classification.

Source: IMF (2014a).

Figure 4 The Relation between Export and GDP Growth in 2009, All Developing Countries

2.2 Financial Channel

Another channel through which the crisis is transmitted to developing countries is the financial channel. This channel is described as the liquidity or exchange rate shocks experienced by the financial system of developing countries due to a sudden stop or capital reversals in international financial flows.

For clarity, we use the terms sudden stop and capital (financial) reversal to denote two distinct movements in financial flows. We define the concept of “sudden stop” as a just decrease in net financial flows relative to the previous period without implying a net negative financial flow movement. We use the term capital (financial) reversal to refer to a negative growth in net financial flows. Some consider sudden stops and financial reversals as the same phenomena (Guillermo Calvo and Frederic Mishkin 2003). However, we believe that, for the sake of clarity, it would be better to regard them as separate concepts because they may sometimes have significantly different implications. In general, almost all capital reversals put some strain on the central bank foreign exchange reserves and exchange rates in developing economies. However, a sudden stop may cause only a slow credit growth in these economies rather than having considerable negative implications for reserves and exchange rates. During the crisis, we observed a relatively moderate and short sudden stop in net financial flows in many developing regions. The largest decline in net flows in all developing countries was observed in 2008 (Table 1). The net flows scaled by GDP were 4% in 2007 and fell to 1% in 2008, which means that there was a 3% sudden stop in 2008.

Table 1 Net Financial Flows/GDP

Years	Central and Eastern Europe	Emerging and developing economies	Developing Asia	Latin America and the Caribbean	Middle East and North Africa
2004	6.32%	1.56%	4.00%	0.24%	-5.23%
2005	8.84%	1.86%	2.96%	0.50%	-3.02%
2006	9.11%	0.92%	1.67%	0.05%	-5.37%
2007	10.80%	4.09%	3.48%	3.10%	-0.63%
2008	9.02%	0.90%	0.95%	1.80%	-2.55%
2009	4.93%	2.53%	2.92%	2.13%	1.32%
2010	6.67%	2.98%	4.42%	3.39%	-1.76%
2011	6.30%	1.80%	3.20%	3.60%	-6.77%
2012	4.93%	0.71%	0.87%	3.27%	

Notes: Net financial flows are net inflows in the form of FDI, portfolio and other investment minus net outflows. In other words, it is equal to net financial account minus change in reserves and errors and omissions.

Source: IMF (2014a, b)².

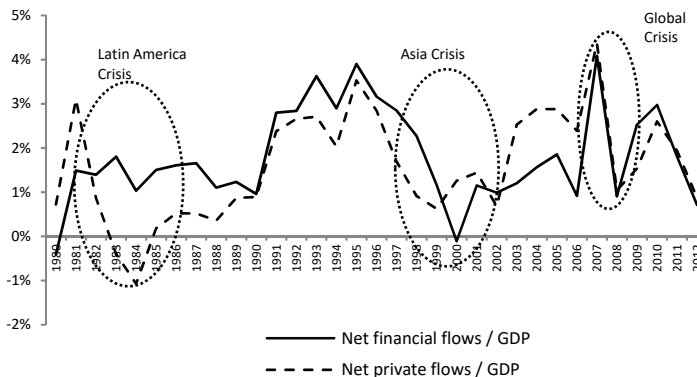
The only exception was the case of Central and Eastern Europe (CEE). The sudden stop in this region in 2008 was larger than those in other developing regions. The rate was nearly 5% in 2009, compared with 11% in 2007 (Table 1). This 6% sudden stop might actually be related to the high proximity of the region to the European and Russian financial markets and the large presence of European-based institutions in the banking system of these economies. The financial systems of the EU and Russian economies were severely hit by the crisis; this caused net financial flows to the region

² **International Monetary Fund (IMF)**. 2014b. IMF eLibrary Data. <http://data.imf.org/regular.aspx?key=61404590> (accessed June 10, 2014).

to stop by large amounts. However, it seemed that, with the exception of CEE, all developing country regions generally experienced relatively moderate financial shocks during the crisis.

2.2.1 Comparison of Net Flow Adjustments

To gain a better picture of the nature of the recent financial shocks, we compared the magnitude and duration with those of previous shocks. In terms of magnitude, the comparison between the financial shocks in the last crisis and those in the 1998 Asian crisis showed that the financial account reversals were much greater in the 1998 episode in all developing economies (Figure 5). The net flows as a percentage of GDP started to decline in all developing countries in 1997. For three years, the net financial flows continued to decrease; it became negative in 2000, indicating that the sum of net purchases of developing countries' assets by foreigners (net financial inflows) and the net foreign asset purchases by citizens of developing countries (net financial outflows) became negative. Nevertheless, the financial flows in the global crisis declined only in 2008, mostly without showing a reversal trend. Indeed, the ratio of the net financial flows to GDP in 2008 (0.9%) was very close to the average ratio from 2001 to 2006 (1.2%). In 2009, the net flows started to increase again. This indicates that the financial account shock during the global crisis was shorter and smaller in magnitude compared with that in the Asian crisis.



Source: IMF (2014a).

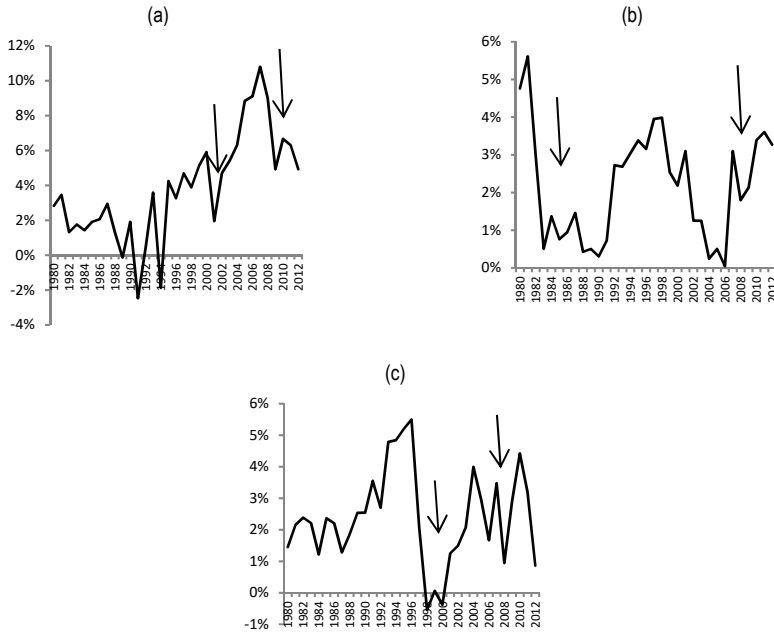
Figure 5 Net Financial and Private Flows, % of GDP, Developing Countries

There was no striking difference in the magnitude of shocks between the recent crisis and the Latin American crisis of 1982. However, the net financial flows relative to GDP were at low levels during the entire 1980s. The ratio was around 1.5% and remained so for about 8 years. This may indicate that, for a long time during the 1980s, developing countries could not attract much financial flows due to the crisis. In the global crisis, as explained above, developing countries experienced only a 1-year sudden stop, which resulted in net flows equal to nearly 1% of GDP. Hence, although we could not adequately differentiate the magnitude of the financial account shocks

between these two crises based on the net flows data, the duration of these shocks may be clearly differentiated between the crises. Besides, given the fact that many developing countries had closed their financial accounts at that time, the spillover effect of the Latin American debt crisis would not be observed in the data on the aggregate net financial flows of developing countries. For this reason, investigating the components of the net flows can give a clearer picture.

Net financial flows consist of net public and private flows when categorized by source of funds. Private flows are managed by profit-seeking nonpublic entities. They are more sensitive to risks, and their reaction is larger during turbulent periods in risky economies. The sources of public flows are principally government agencies, international organizations, or central bank funds. The objective of public flows may not be large returns, and for a crisis-hit developing economy, these public flows often come as assistance funds from other countries or international funding organizations, such as the IMF and the World Bank. Hence, public flows are generally more stable and tend to increase in crisis periods in developing countries. This can make the net flows picture flatter, which sometimes impedes observing the actual magnitude of the financial shocks during crises. Many developing countries started structural programs under the auspices of the IMF and the World Bank at the beginning of the 1980s, which enabled them to have access to IMF and World Bank credits. For these reasons, we also explore the trends in private flows, which show the difference between investments made by nonresident private agents in the reporting country and investments abroad by private residents of the reporting economy. As shown in Figure 5, the net private flows amounted to 3% of GDP in all developing countries in 1981. This began to fall during the debt crisis in 1982. For three years, developing countries experienced negative net private flows, indicating that private investors left these economies until the middle of the 1980s. This shock was clearly much larger than the recent one in terms of both magnitude and duration.

The above picture becomes clearer when we investigate the shocks that hit different country groups instead of focusing on all developing countries (Figure 6). In the regions from which those former crises originated, the shocks were much more severe compared with the current crisis. For example, in the Asian crisis, the net financial flows relative to GDP in developing Asia amounted to 2% in 1997, after which the region experienced negative net flows for three consecutive years. In the recent global crisis, there were no financial reversals, apart from a sudden stop that took place in Asia. This sudden stop was observed only in 2008, with net flows equal to 1% of GDP. After 2008, the financial flows to the region exceeded their pre-crisis levels. The data on net private flows depict a more striking picture (Figure 7). The flows from foreign private sector agents, who are, as previously mentioned, highly sensitive to risks, declined sharply in developing Asia during the Asian crisis compared with the recent global crisis. The shock in the recent crisis led to a moderate sudden stop in private flows, whereas the shock during the Asian crisis led to large reversals for three years.

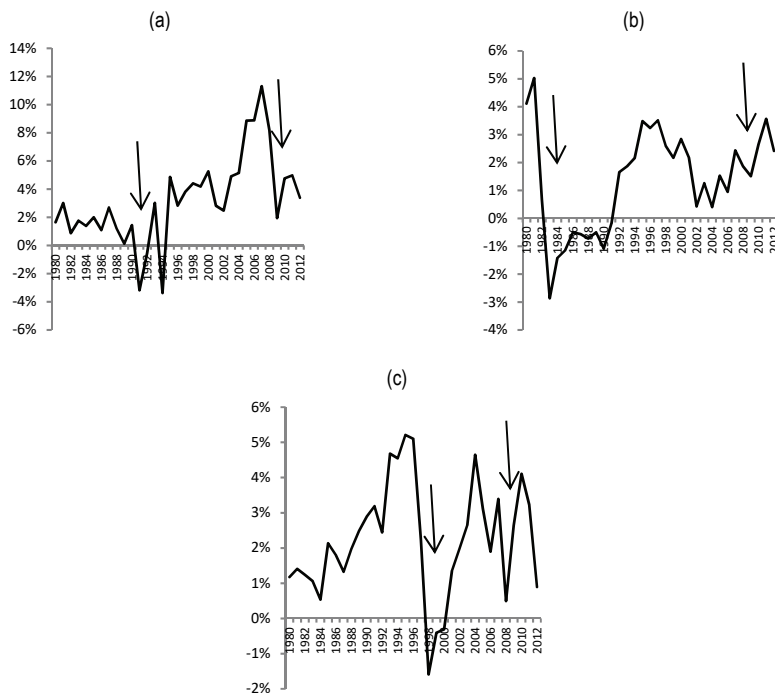


Source: IMF (2014a).

Figure 6 Net Financial Flows/GDP, (a) Central and Eastern Europe, (b) Latin America and the Caribbean, (c) Developing Asia

Similarly, a comparison of the shock that hit Latin America at the beginning of the 1980s with that observed in the same region in the recent crisis showed that the recent crisis is smaller in magnitude and shorter in duration. In the aftermath of the Latin American debt crisis, the net financial flows to the region fell from 6% of GDP to 1% of GDP. The flows as a share of GDP remained at around 1% until 1990. In the global crisis, there was only a slight decrease in the net flows relative to GDP in Latin America. Hence, the recent turmoil is less destructive than the one in the 1980s, although a sudden stop occurred in the latter. Furthermore, the data on net flows indicate that the shock that affected the Latin American region during the 2002 Argentinean peso crisis was more severe than the global crisis in terms of both duration and magnitude. A similar picture can be observed if we focus on net private flows (Figure 7).

Thus far, we have shown that the entire developing world and country groups faced milder financial account shocks in the recent worldwide turmoil compared with previous crises. One could argue that a discussion focusing on large regions and developing countries in general would be misleading because strong flows to some economies might have smoothed out the shock in the aggregate data. However, focusing on individual countries that experienced crucial financial problems in the 1980s and 1990s supports the findings presented above.



Source: IMF (2014a).

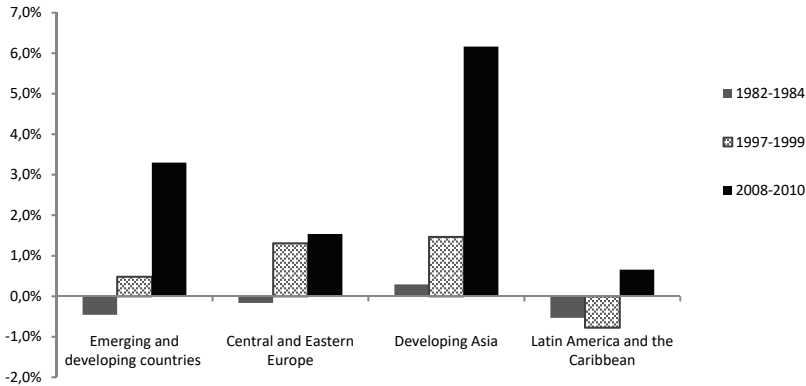
Figure 7 Net Private Financial Flows/GDP, (a) Central and Eastern Europe, (b) Latin America and the Caribbean, (c) Developing Asia

2.2.2 Reserve and Exchange Rate Adjustments

As previously mentioned in this paper, some experts have argued that the financial shocks that hit developing countries during the global crisis were strong enough but that massive reserves accumulated in the pre-crisis period protected them from experiencing a financial collapse. In other words, according to this view, the impacts of the financial shocks might have been cushioned by the intervention of the central banks in the form of foreign reserve sales. However, based on the foreign exchange reserve movements in developing economies, the majority of developing countries did not resort to very high exchange market interventions in the recent turmoil compared with previous crisis periods. Indeed, although some countries had to use their reserves, many developing countries continued accumulating reserves.

Figure 8 shows the three-year average change in FX reserves relative to GDP in developing country groups during three episodes of global crisis. The data imply that the entire developing world experienced reserve losses during the Latin American crisis, which shows that both sudden stops and domestic dollarization were extremely large in the 1980s. During the Asian crisis, developing countries accumulated limited reserves, nearly 0.2% percent of GDP in 1998. Nevertheless, during the global crisis, developing countries continued to accumulate reserves amounting about 3% of their

GDP. This accumulation was larger than in previous crisis periods, which indicates that the financial shock, in terms of sudden stops and dollarization, and the risk perception of central bankers in developing countries in the recent global turmoil were not very high.



Notes: Each three-year period represents a global scale crisis. 1982-1984, 1997-1999, and 2008-2010 stand for the Latin American debt crisis, the East Asian crisis, and the global financial crisis, respectively. The height of bars shows the averages of annual changes in foreign exchange reserves relative to GDP in three-year period.

Source: IMF (2014a).

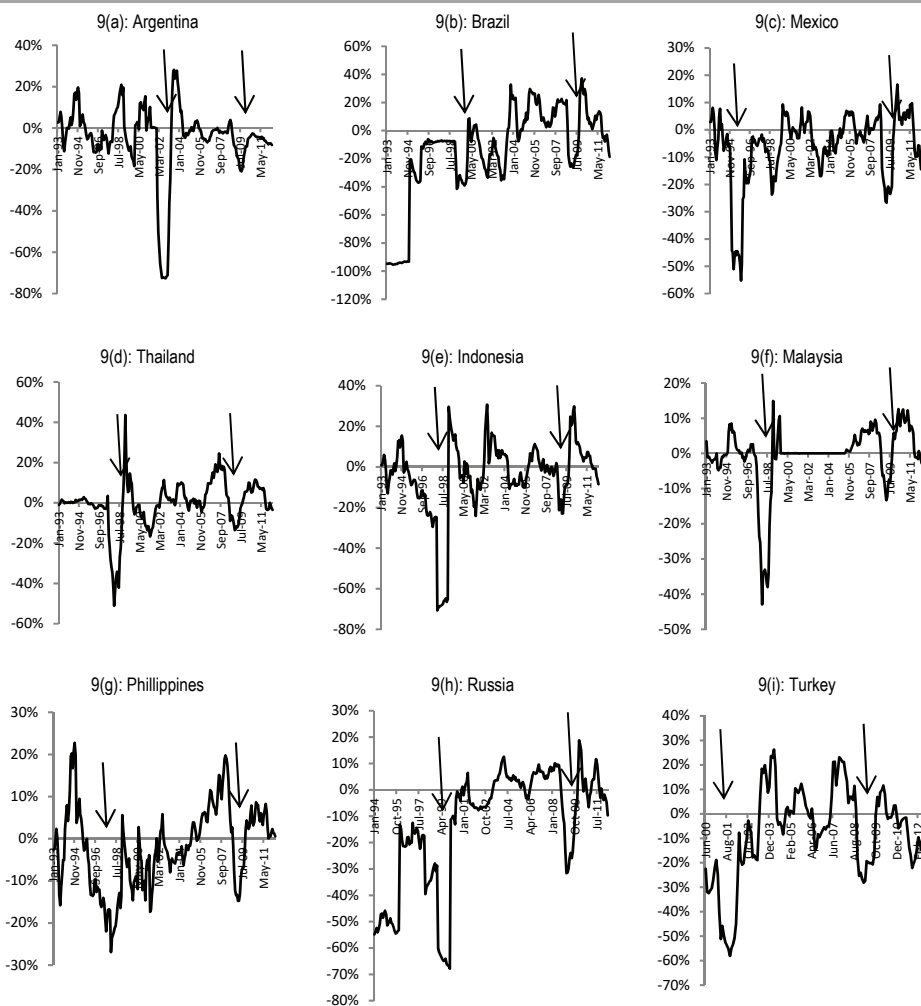
Figure 8 Change in FX Reserves/GDP during Major Crises

Investigating some countrywide experiences can shed more light on the magnitude and duration of the shocks that hit central bank reserves in developing countries. Figure 9 shows the reserve adjustments in some developing countries that were hit by the financial crises in the 1980s and 1990s. With the exception of Indonesia, the adjustments were stronger in earlier crises than in the recent one. Indeed, Brazil, Mexico, and the Philippines did not resort to reserves and even accumulated more reserves in the course of the global crisis.

One can argue that developing countries did not use their reserves much because many of them had started implementing flexible exchange rate regimes after 2000, given that pure flexible exchange rates do not require reserves to defend the rate. If this were the case, we should see the immediate implications of the shocks in the form of exchange rate adjustments. However, the existing data do not indicate that the burden of the adjustment was shouldered by flexible exchange rate regimes. Indeed, although developing countries underwent some depreciation of their currencies, it was not a big adjustment in terms of magnitude and duration compared with their previous experiences (Figure 10).

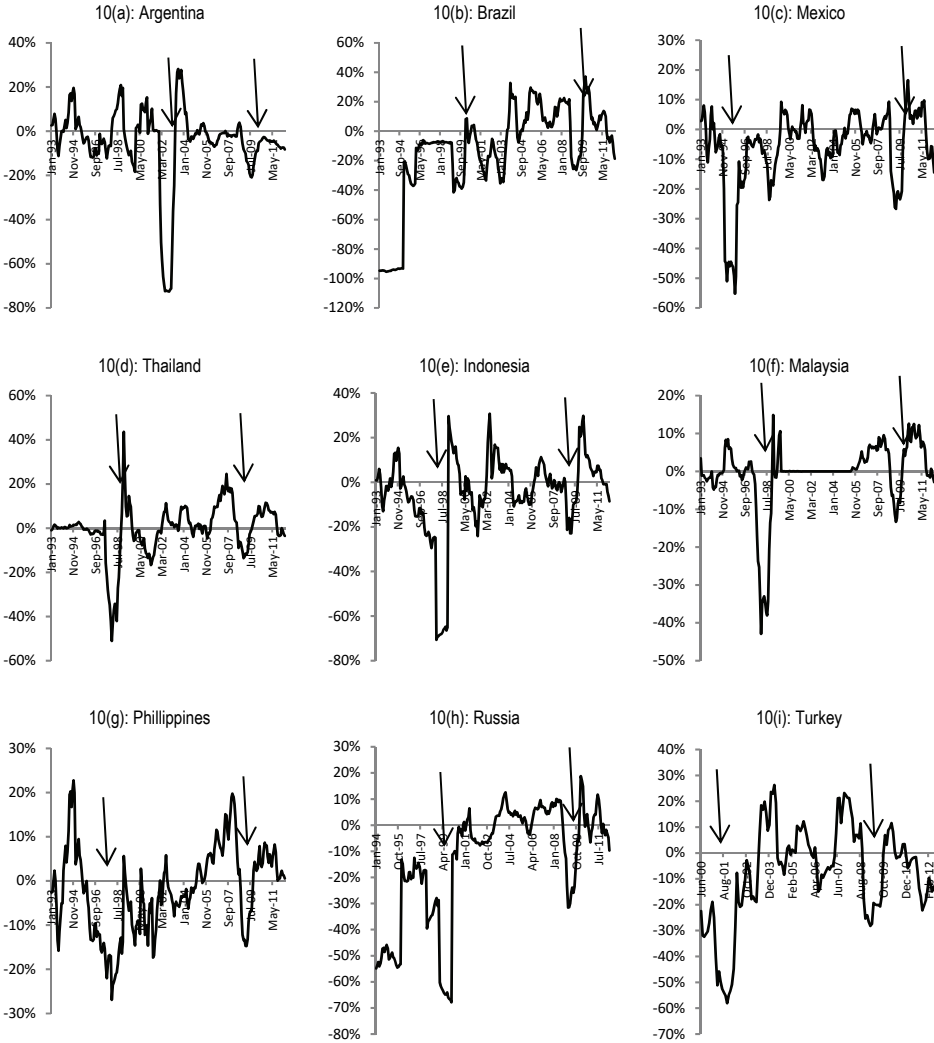
The main difference between a fixed and a flexible exchange rate lies in the commitment structure of central banks. In this vein, although central banks commit to defending a fixed rate under a fixed exchange rate regime, they do not have to commit to defending a certain level under a flexible one. As a result, some argue that speculative attacks would not be observed in flexible exchange rate regimes. However, as many economists convincingly discuss in the fear of floating literature, the

implications of sharp exchange rate movements under a flexible exchange rate regime would not be very different from devaluations under fixed exchange rate regimes. Therefore, central banks in developing countries frequently feel obliged to intervene in foreign exchange markets to decrease the volatility of the rates. However, as discussed above, the central banks in developing countries did not resort to considerable reserve sales in response to the recent crisis.



Source: IMF (2014a).

Figure 9 Change in FX Reserves/Total Reserves



Source: FXTOP Currency Converter (2014)³.

Figure 10 Annual % Change in the Value of Local Currencies against USD, Monthly Average Exchange Rates

3. The Importance of Safe Havens during Crises

Why were developing economies not tested by a financial account shock despite the worldwide financial disruption? As discussed in the introduction, some may argue that the existence of good economic fundamentals and policies in developing economies

³ FXTOP Currency Converter. 2014. Historical Exchange Rates Database. <http://fxtop.com/> (accessed June 08, 2014).

before the crisis would explain the relative mildness of the financial shocks that hit those countries during the crisis.

Here, we offer as an explanation another factor that has been mostly ignored by the literature. We argue that the main reason behind the relatively small shocks experienced by developing countries is the fact that the financial markets in developed countries could not fully carry out their safe heaven roles during the recent crisis, as opposed to the 1980s and 1990s. Besides, as discussed in Section 4, the massive expansionary monetary policies in advanced countries enabled developing countries to have a short period of sudden stop by increasing liquidity amid the high volatility and uncertainty that prevailed together with low returns in advanced economies. Developing countries also enjoyed greater autonomy and legitimacy in implementing expansionary monetary and fiscal policies without much fear of larger financial shocks in an environment in which international cooperation partially met the need for an international lender of last resort through swap operations and credit lines.

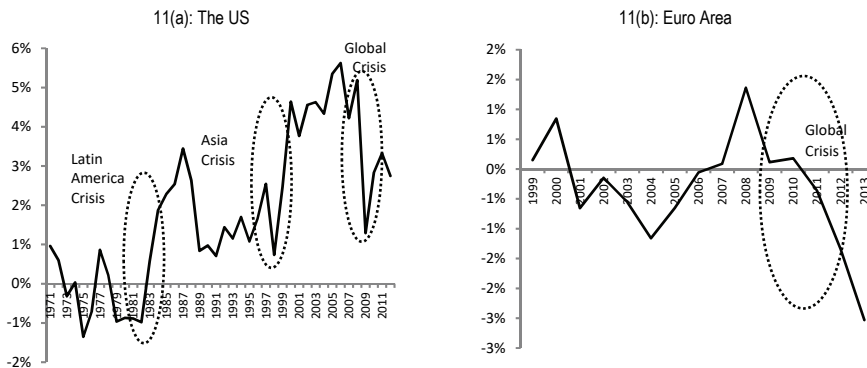
Safe havens are described in the literature as relatively less risky financial instruments or currencies that investors opt for in times of increasing global financial risks (Aditya Kaul and Stephen Sapp 2006; Maurizio M. Habib and Livio Stracca 2012). In general, the US dollar, Swiss franc, Japanese yen, English pound, and assets denominated in these currencies are considered to be safe haven currencies (Angelo Ronaldo and Paul Söderlind 2010). Furthermore, gold has been a traditional safe haven in times of global turbulence (Dirk G. Baur and Thomas McDermott 2010; Cetin Ciner, Constantin Gurdgiev, and Brian M. Lucey 2013). The countries from which these instruments originate are called safe haven countries. In almost all previous crises in developing countries, the US and other developed countries held their safe haven status, and investments in crisis-hit countries were diverted to these safe countries. Both commercial papers and treasury assets of advanced countries were regarded as safe havens in those crisis periods. For instance, in the Asian crisis, about 100 billion dollars' worth of investments were diverted from South Asian countries to European banks and the US financial system (Eric Van Wincoop and Kei-Mu Yi 2000). In other words, during the previous crises, not only treasury bonds but also assets issued by private institutions attracted funds that were leaving developing countries.

However, in the last crisis, the commercial papers market in developed countries lost their safe haven role completely (Marcin Kacperczyk and Philipp Schnabl 2009). Instead, gold, oil, and some government papers, such as the US and German treasury bonds, took on the safe haven role. The main reason for this was that the volatility in the financial and nonfinancial private sector in advanced countries discouraged global investors from investing in commercial papers in the north. The safe haven position of government papers of the US and Germany (although especially the US was in crisis) remained intact because the euro and dollar were the main reserve currencies for developing economies (Roland Beck and Ebrahim Rahbari 2011). The monetary authorities in developing countries kept their reserves as treasury bonds and/or converted their private paper holdings into treasury bonds. Furthermore, because investors' confidence in private financial assets had waned, and treasury bonds and bills were considered safer and more liquid, treasury bonds attracted demoralized domestic players as well. This large demand for government papers of developed countries and the relatively very low policy rates pulled down the interest rates of these

papers. However, as a result, this situation (the volatility in the financial system and low returns in the bond market of advanced countries) led many global investors to either keep their existing portfolios in emerging markets or reconsider moving into emerging markets as soon as their balance sheets allowed. In fact, as Ken Miyajima, Madhusudan S. Mohanty, and Tracy Chan (2012) showed, global inflows into local currency government bonds of emerging markets have surged since 2008. Excluding the recent periods, Miyajima, Mohanty, and Chan (2012) were right in stating that the local currency government yields of emerging markets behaved more like safe haven yields.

3.1 Financial Flows to the North during the Global Crisis

The trends in financial inflows and outflows in the US and the Eurozone during financial crises can provide many clues about the safe haven status of advanced countries. These economies constitute the significant portion of the financial systems of advanced countries. Figure 11 shows the net financial flows into the US and Eurozone economies. Because the Eurozone is relatively new, data on this region are available only after 1999. In the case of the US, the overall sudden stop in financial flows amounted to about 5% of GDP (Figure 11a). This is an indication that global investors reduced their holdings of American assets in their portfolios. Nevertheless, in previous major crises, the net financial flows into the US economy showed an increase. For example, for 6 to 7 years after the 1982 Latin American debt crisis, South America struggled with negative financial accounts (see Figures 7 and 8), whereas the US economy experienced a constant increase in net financial flows. Similarly, in the period of 1998–2000, there were negative net flows to East Asian countries (see Figures 7 and 8),



Source: Bureau of Economic Analysis (BEA 2014)⁴ and European Central Bank (ECB 2014)⁵.

Figure 11 Net Financial Flows, % of GDP

⁴ **Bureau of Economic Analysis (BEA).** 2014. US International Economic Accounts. <http://www.bea.gov/international/index.htm#bop> (accessed June 04, 2014).

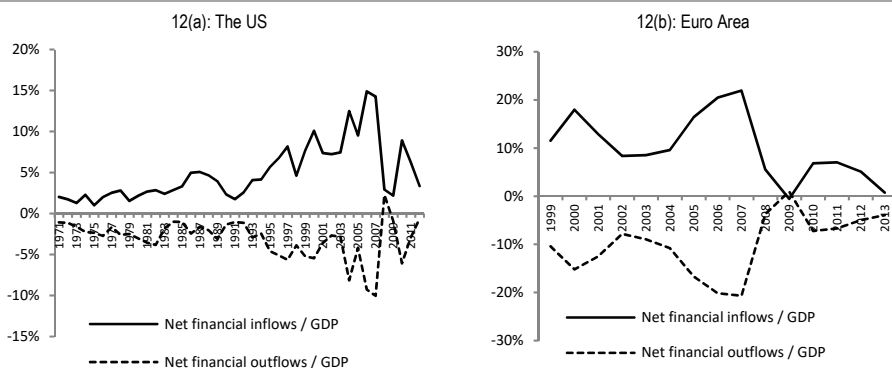
⁵ **European Central Bank (ECB).** 2014. Statistical Data Warehouse. <http://sdw.ecb.europa.eu/> (accessed June 04, 2014).

whereas the net financial flows to the US economy increased. These findings could be best explained by the fact that the US financial markets carried out their safe heaven roles during those previous periods of crises.

After 2008, a more tragic picture was observed in the Eurozone, in which a sudden stop took place in 2009, which turned into a financial account reversal after 2010 (Figure 11b). With the explosion of the European debt crisis, the net reversals worsened. The unprecedented fall in net financial flows can be read as a sign that the Eurozone cannot function properly as a safe haven in the global crisis.

3.2 Composition of Financial Flows to the North

What explains the fall in net flows in advanced economies? The descriptive statistics reveal two important observations regarding financial inflows and outflows. First, there was a substantial sudden stop in financial inflows into the US economy and the Eurozone (Figure 12). In the US, the ratio of net financial inflows to GDP dramatically fell from 15% in 2007 to 3% during the crisis, indicating that the sudden stop amounted to 12% of GDP. In the Eurozone, the net inflows scaled by GDP plunged from 22% to -1% in 2009, indicating that there was an unprecedented sudden stop and financial account reversal. Because the inflows represent the investments of foreigners in these economies, this finding explicitly shows that foreign investors did not opt for assets of advanced economies during the crisis.



Notes: Outflows are asset items and recorded with a negative sign in financial accounts. Hence increasing or positive rates in the figure indicate net outflows are decreasing and declining rates imply net outflows are increasing.

Source: BEA (2014) and ECB (2014).

Figure 12 Net Financial Inflows and Outflows, % of GDP

The second observation is that there was also a considerable drop in investments by the US and Eurozone citizens abroad in 2008 and 2009, and the net financial outflows from these economies dramatically declined in these years (Figure 12). This implies that investments abroad by residents of advanced countries halted. Global investors partially returned to their motherland in the face of the liquidity needs of their headquarters.

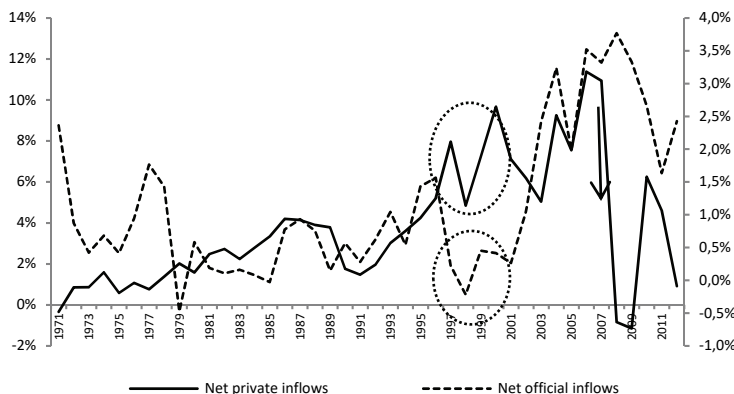
Despite the unavailability of European data, we can trace the destinations of financial inflows and outflows for the US. As indicated in Table 2, US financial players stopped investing in European assets and even withdrew their capital from the EU. The net outflows from the US to the EU was -6.3% of GDP in 2007 and 1.8% in 2008, indicating a sharp decline in the existing US investments in the EU. In general, US investors believed that the EU economy was not safe enough. Nevertheless, in the other regions, which mostly consist of developing economies, the net outflows (the purchase of US citizens) either did not decline or declined only slightly. The purchase of assets of Asian economies by US players even increased (from -0.22% to -0.41%) with the emergence of the crisis. We observed a reduction (from -2.2% to 0.55%) in the net inflows from the US to Latin America; however, this change was smaller compared with the flows to the Eurozone. As discussed in Section 2, this clearly eased the pressure on financial accounts in developing countries.

Table 2 US Residents' Net Capital Outflows, by Region, % of the US GDP

Years	Africa	Middle East	Latin America	Asia and Pacific	European Union
2002	0.00%	-0.03%	-0.20%	-0.35%	-1.19%
2003	-0.02%	0.00%	0.14%	-1.05%	-1.94%
2004	0.03%	-0.01%	-2.09%	-1.06%	-3.99%
2005	-0.04%	-0.06%	-0.57%	-0.93%	-1.74%
2006	-0.04%	-0.08%	-1.95%	-0.82%	-6.07%
2007	-0.07%	-0.10%	-2.18%	-0.22%	-6.29%
2008	0.01%	0.12%	0.55%	-0.41%	1.82%
2009	-0.04%	-0.11%	0.53%	-0.37%	-0.20%
2010	-0.10%	0.03%	-1.94%	-1.81%	-1.43%
2011	0.01%	0.03%	0.49%	-1.04%	-1.46%
2012	-0.02%	-0.07%	1.43%	-0.51%	-0.82%

Source: BEA (2014).

The data in Figure 12 indicate that there was a significant sudden stop in the financial inflows to the US; however, there was no financial account reversal. This might have led some to think that the shock to the US was not that significant. However, the composition of the inflows indicates that the shock was considerable. In particular, the exodus of private investors from the US was large enough. The positive net inflows (indicating a sudden stop) stemmed from the large positive public inflows to the US economy (Figure 13). During the crisis, the public inflows to the US economy, which consist mostly of central bank reserve assets of developing countries, did not fall but even increased slightly. These reserves were mainly invested in US treasury securities or bonds, which have an exclusive government guarantee. The increase in the public inflows indicates that the developing countries did not have much need to use up their reserves during the crisis, which supports our above-mentioned finding that developing economies were not much exposed to depreciation pressure on their currencies. This picture is completely different from that in the Asian crisis, during which public inflows to the US halted and remained at very low levels until 2001, means that developing countries were hit hard by the crisis and used large amounts of FX reserves to ease the impacts of the turmoil.



Notes: Net public inflows are the US assets purchased by the foreign public resources, and private inflows are the US assets purchased by the private sector agents. Net public inflows data is depicted in the right axis in the figure.

Source: BEA (2014).

Figure 13 The Composition of Net Inflows, the US, % of GDP

To fully understand the situation of the US financial markets during the crisis, the trends in private inflows into the US markets should also be investigated, given that private investors hold diversified portfolios and are more sensitive to risks. During the Asian crisis, when the US markets were considered relatively safe, the private inflows to the US economy increased in the period of 1999-2000, following a slight decline in 1998 (Figure 13). Considering that there were huge reversals in financial flows from Asian and other developing countries at that time, the funds leaving these economies went to the safe haven, the US. In contrast, there was a reversal in private inflows to the US economy during the recent crisis, indicating that private investors who were sensitive to risks did not prefer the US economy.

We showed that there was no decrease in the public inflows to the US economy during the recent crisis. Here, the main question is how this increase would occur in a country that is not fully a safe haven. Investigating the types of US financial instruments purchased by public sources may give us some clues. During the crisis, the public flows were withdrawn from private sector assets and were mostly directed to the safer US government papers (Table 3).

We did not see such substitution between US government papers and private assets during the Asian crisis. At that time, because the periphery was in turmoil, the central banks of many developing countries recalled their reserve investments from the US, which resulted in a total plunge in the public flows to the US government papers and private assets. In short, when the periphery is in trouble, developing economies recall their official investments; when the periphery is stable and the center is in trouble, they substitute government assets for private assets.

Table 3 Composition of Net Public Inflows, the US, % of GDP

Years	Net total public inflows	US Government and treasury securities	Securities by the US banks and security brokers	Others
1995	1.48%	0.98%	0.46%	0.04%
1996	1.62%	1.53%	0.07%	0.02%
1997	0.23%	-0.04%	0.27%	0.00%
1998	-0.23%	-0.08%	-0.11%	-0.04%
1999	0.47%	0.32%	0.14%	0.01%
2000	0.43%	0.34%	0.06%	0.03%
2001	0.27%	0.51%	-0.29%	0.06%
2002	1.09%	0.86%	0.20%	0.03%
2003	2.50%	2.01%	0.44%	0.05%
2004	3.36%	2.66%	0.58%	0.12%
2005	2.05%	1.69%	0.21%	0.16%
2006	3.65%	3.22%	0.17%	0.26%
2007	3.43%	1.96%	0.78%	0.69%
2008	3.88%	4.20%	-1.05%	0.73%
2009	3.44%	3.55%	-0.49%	0.38%
2010	2.75%	2.52%	-0.05%	0.28%
2011	1.41%	1.11%	0.20%	0.09%

Source: BEA (2014).

4. Expansionary Monetary Policy, Low Returns in the Center, Swap Operations, and the Legitimacy of Implementing Unconventional Measures

In this section, we briefly explore some other external factors that contributed to the resilience of developing countries during and after the recent crisis. In response to the crisis, advanced countries first decreased their policy interest rates gradually then slashed their policy rates dramatically. The US federal funds rate decreased from 5.25% in 2007 to 0.07% in 2011. After some hesitation, the European Central Bank (ECB) followed suit. However, the sharp cuts in policy rates were not very effective. In fact, as Cömert (2013) reported, the US federal funds rate had gradually lost its effectiveness even before the crisis, due mainly to deregulation and financial innovations. In the face of the ineffectiveness of the short-term interest rate policy, the Federal Reserve (Fed) and other central banks in advanced countries were forced to introduce unconventional monetary policy tools to prevent the total collapse of their financial system. They started pumping massive liquidity to financial markets, mainly through direct purchase of different classes of private assets.

These developments increased the maneuvering capability of developing countries in several ways. First, as a result of the almost zero interest rate policy, many developing countries were able to cut their interest rates as well without fear of financial reversals. During periods in which the returns in advanced countries are relatively high and safe, developing countries may not dare to take these actions. Second, the massive liquidity expansion in advanced countries spilled over to developing countries. As a result, the financial sudden stops in developing countries lasted a relatively

very short time. Third, swap agreements between major monetary institutions (i.e., the Fed and IMF) and emerging markets during the recent crisis helped some developing countries avoid the bottleneck of “original sin” for a while. Thus, the countries that benefited from swap agreements had direct access to world currencies, such as the euro and US dollar. The most popular examples of such agreements US \$30-billion swap lines between the US Fed and the central banks of Brazil, Korea, Mexico and Singapore in October 2008 (Aizenman, Yothin Jinjarak, and Donghyun Park 2011). During the crisis, the outstanding volume of swap agreements worldwide reached US \$500 billion (Gian-Maria Milesi-Ferretti and Cedric Tille 2011). These swap agreements partially met the need for an international lender of last resort. Fourth, developing countries enjoyed greater autonomy and legitimacy in implementing expansionary monetary and fiscal policies without much fear of bigger financial shocks, given the unconventional and expansionary policies implemented by the advanced countries. Even the IMF, once the vanguard of free capital mobility, argued that capital controls and other heterodox policies could be used in some circumstances (IMF 2012).

As a result, in a world in which treasury bond returns were low and private assets were risky in advanced countries, developing countries were hit by relatively mild financial reversals. Because of massive expansionary policies and low returns in advanced countries, the duration of sudden stops was shorter. In some cases, swap operations eased the pressure faced by some developing countries. Furthermore, as opposed to their experiences in previous crises, developing countries enjoyed greater autonomy in designing their policies during the last crisis. Hence, some developments in advanced countries worked to the advantage of developing countries. As emphasized in previous sections, these developments may be more important than domestic policies in explaining why developing countries did not experience a financial collapse.

5. Conclusion

Our findings indicate that developing countries were mainly influenced by the crisis through the trade channel. The majority of developing countries did not experience financial reversals. In this sense, the resilience of the financial markets in developing countries has not yet been tested. The relatively good performance of developing countries can be largely explained by the fact that the financial markets of advanced countries could not fully serve their roles as safe havens during the global crisis. Massive liquidity accompanied with low returns in advanced countries shortened the duration of sudden stops. Swap operations also eased the pressure on some developing countries. Furthermore, given the turmoil in the US and the prolonged instability in the Eurozone, developing countries enjoyed greater legitimacy and autonomy in implementing expansionary monetary and fiscal policies, which partially offset their inadequate aggregate demand problems for a while. However, developing countries might have entered a difficult period especially after 2013. Some recent developments seem to be consistent with this possibility. For instance, since May 2013, many developing countries have been adversely affected by expectations of an increase in US interest rates after the tapering decision of the Fed. In this vein, although the tapering has been carried out in very small amounts, and no significant change in the

policy rates of advanced countries has taken place, many developing countries have experienced considerable fluctuations in their exchange rates. Some economists question whether developing countries have reached the end of a relatively successful and stable period (Akyüz 2013; Andrés Velasco 2013). If the US and EU economies become safer with higher yields, it is highly possible that developing countries would encounter larger financial shocks in the form of sudden stops and reversals. A sudden and quick exodus of financial flows may lead to pressure on the exchange rates in developing countries. Depending on the magnitude of such exodus, the intervention of central banks could be ineffective and domestic players could start closing their foreign currency positions due to speculations and balance sheet concerns. Mounting demand for foreign currency by both foreign and domestic actors would accelerate the depletion of reserves. Because reserves have been accumulated through past financial flows in many emerging markets with current account deficits, the reversals of these flows would easily drain the reserves (Akyüz 2014). Furthermore, the residents' run toward foreign currency would add to this drain, and the extent of the domestic run would be very difficult to estimate because it is often speculative and self-fulfilling (Çolak 2012). In other words, in developing countries, particularly those with current account deficits, even high reserves would be easily depleted. Hence, the amplitude of reserves and the robustness of balance sheets may not be enough cushion in case of large external shocks in developing countries.

The future of the financial system of developing countries is uncertain because it is very much dependent on the cycles in the north. In an era of highly mobile capital and trade liberalization, the implications of economic trends in advanced countries are very decisive for developing countries in many ways. However, the initial conditions of developing economies may worsen or improve their positions in their interactions with developed countries. In this sense, policy makers and economists should put more emphasis on the structural dependency of developing nations on advanced countries in order to derive meaningful lessons from the recent crisis.

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Appendix

Table 4 Country Groups According to IMF Classification and GDP Growth Rate (%)

	2008	2009		2008	2009		2008	2009
Advanced economies								
Australia	2.7	1.4	Hong Kong	2.1	-2.5	Portugal	0.0	-2.9
Austria	1.4	-3.8	Iceland	1.2	-6.6	San Marino	-5.1	-12.2
Belgium	1.0	-2.8	Ireland	-2.2	-6.4	Singapore	1.7	-0.8
Canada	1.2	-2.7	Israel	4.5	1.2	Slovak R.	5.8	-4.9
Cyprus	3.6	-1.9	Italy	-1.2	-5.5	Slovenia	3.4	-7.9
Czech R.	3.1	-4.5	Japan	-1.0	-5.5	Spain	0.9	-3.8
Denmark	-0.8	-5.7	Korea	2.3	0.3	Sweden	-0.6	-5.0
Estonia	-4.2	-14.1	Luxembourg	-0.7	-4.1	Switzerland	2.2	-1.9
Finland	0.3	-8.5	Malta	3.9	-2.8	Taiwan P.Ch.	0.7	-1.8
France	-0.1	-3.1	Netherlands	1.8	-3.7	United King.	-0.8	-5.2
Germany	0.8	-5.1	New Zealand	-0.8	-1.5	United States	-0.3	-2.8
Greece	-0.2	-3.1	Norway	0.0	-1.4			
Emerging markets and developing economies								
Central and Eastern Europe								
Albania	7.5	3.3	Kosovo	7.2	3.5	Poland	5.1	1.6
Bosnia	5.6	-2.9	Latvia	-3.3	-17.7	Romania	7.3	-6.6
Bulgaria	6.2	-5.5	Lithuania	2.9	-14.8	Serbia	3.8	-3.5
Croatia	2.1	-6.9	Macedonia	5.0	-0.9	Turkey	0.7	-4.8
Hungary	0.9	-6.8	Montenegro	6.9	-5.7			
Commonwealth of Independent States								
Armenia	6.9	-14.2	Kazakhstan	3.2	1.2	Tajikistan	7.9	3.9
Azerbaijan	10.8	9.3	Kyrgyz Rep.	7.6	2.9	Turkmenistan	14.7	6.1
Belarus	10.3	0.1	Moldova	7.8	-6.0	Ukraine	2.3	-14.8
Georgia	2.3	-3.8	Russia	5.2	-7.8	Uzbekistan	9.0	8.1
Developing Asia								
Bangladesh	6.0	5.9	Malaysia	4.8	-1.5	Samoa	4.3	-5.2
Bhutan	4.7	6.7	Maldives	12.2	-3.6	Solomon Is.	7.1	-4.7
Brunei	-1.9	-1.8	Marshall Is.	-1.9	-1.5	Sri Lanka	6.0	3.5
Cambodia	6.7	0.1	Micronesia	-2.6	1.0	Thailand	2.5	-2.3
China	9.6	9.2	Mongolia	8.9	-1.3	Timor-Leste	14.6	12.8
Fiji	1.0	-1.3	Myanmar	3.6	5.1	Tonga	2.6	3.3
India	3.9	8.5	Nepal	6.1	4.5	Tuvalu	8.0	-4.4
Indonesia	6.0	4.6	Palau	-5.0	-10.2	Vanuatu	6.5	3.3
Kiribati	2.8	-0.7	Papua N.G.	6.6	6.1	Vietnam	5.7	5.4
Lao P.D.R.	7.8	7.5	Philippines	4.2	1.1	Samoa	4.3	-5.2

Latin America and the Caribbean

Antigua B.	1.5	-10.7	Dominican R.	5.3	3.5	Panama	10.1	3.9
Argentina	6.8	0.9	Ecuador	6.4	0.6	Paraguay	6.4	-4.0
Bahamas	-2.3	-4.2	El Salvador	1.3	-3.1	Peru	9.8	0.9
Barbados	0.3	-4.1	Grenada	0.9	-6.7	St. Kitts N.	3.9	-4.2
Belize	3.8	0.0	Guatemala	3.3	0.5	St. Lucia	4.7	-0.1
Bolivia	6.1	3.4	Guyana	2.0	3.3	St. Vincent	-0.5	-2.2
Brazil	5.2	-0.3	Haiti	0.8	2.9	Suriname	4.1	3.0
Chile	3.1	-0.9	Honduras	4.2	-2.4	Trinidad Tob.	3.4	-4.4
Colombia	3.5	1.7	Jamaica	-0.8	-3.4	Uruguay	7.2	2.2
Costa Rica	2.7	-1.0	Mexico	1.2	-4.5	Venezuela	5.3	-3.2
Dominica	7.8	-1.1	Nicaragua	4.0	-2.2			

Middle East, North Africa, Afghanistan, and Pakistan

Afghanistan	3.6	21.0	Kuwait	2.5	-7.1	Qatar	17.7	12.0
Algeria	2.0	1.7	Lebanon	8.6	9.0	Saudi Arabia	8.4	1.8
Bahrain	6.3	3.2	Libya	2.7	-0.8	Sudan	3.0	5.2
Djibouti	5.8	5.0	Mauritania	3.5	-1.2	Syria	4.5	5.9
Egypt	7.2	4.7	Morocco	5.6	4.8	Tunisia	4.5	3.1
Iran	0.6	4.0	Oman	13.2	3.3	UAE	3.2	-4.8
Iraq	6.6	5.8	Pakistan	5.0	0.4	Yemen	3.6	3.9
Jordan	7.2	5.5						

Sub-Saharan Africa

Angola	13.8	2.4	Ethiopia	11.2	10.0	Niger	9.6	-1.0
Benin	5.0	2.7	Gabon	1.0	-2.9	Nigeria	6.0	7.0
Botswana	3.9	-7.8	The Gambia	5.7	6.5	Rwanda	11.2	6.2
Burkina Faso	5.8	3.0	Ghana	8.4	4.0	São Tomé	9.1	4.0
Burundi	5.0	3.5	Guinea	4.9	-0.3	Senegal	3.7	2.2
Cameroon	3.6	1.9	Guinea-Bis.	3.2	3.0	Seychelles	-1.9	-0.2
Cape Verde	6.7	-1.3	Kenya	1.5	2.7	Sierra Leone	5.2	3.2
Central Afr. R.	2.1	1.7	Lesotho	5.1	4.8	South Africa	3.6	-1.5
Chad	3.1	4.2	Liberia	6.2	5.3	South Sudan	n/a	n/a
Comoros	1.0	1.8	Madagascar	7.1	-4.1	Swaziland	3.1	1.2
Congo	6.2	2.8	Malawi	8.3	9.0	Tanzania	7.4	6.0
R. of Congo	5.6	7.5	Mali	5.0	4.5	Togo	2.4	3.5
Côte d'Ivoire	2.3	3.8	Mauritius	5.5	3.0	Uganda	10.4	4.1
Eq. Guinea	13.8	-3.6	Mozambique	6.8	6.3	Zambia	5.7	6.4
Eritrea	-9.8	3.9	Namibia	3.4	-1.1	Zimbabwe	-17.8	8.9

Source: World Bank (2014)⁶.⁶ World Bank. 2014. World Development Indicators.<http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators> (accessed June 05, 2014).