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Countries After the Global Crisis?:
The Role of External Financial Shocks

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Can Financial Stability be Maintained in Developing Countries

After the Global Crisis?:

The Role of External Financial Shocks¹

Hasan Cömert² & Mehmet Selman Çolak³

Abstract

In the recent global turmoil, even though some developing economies were severely affected, in general, developing countries survived the crisis with less damage than advanced countries. The majority of developing countries did not experience a financial system collapse. What are the main factors behind this performance? We argue that the main reason was relatively moderate financial account shocks both in terms of magnitude and duration during the global crisis. This was caused by the fact that advanced countries could not fully serve their roles as safe havens during the global crisis. 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 and crises.

Key Words: Developing Countries, Recent Global Crisis, Financial Flows, Financial Markets

JEL Codes: E52, E58, F32, F31, G15

¹ We are very grateful to Gerald Epstein for his very insightful comments on the paper. All remaining errors belong to us.

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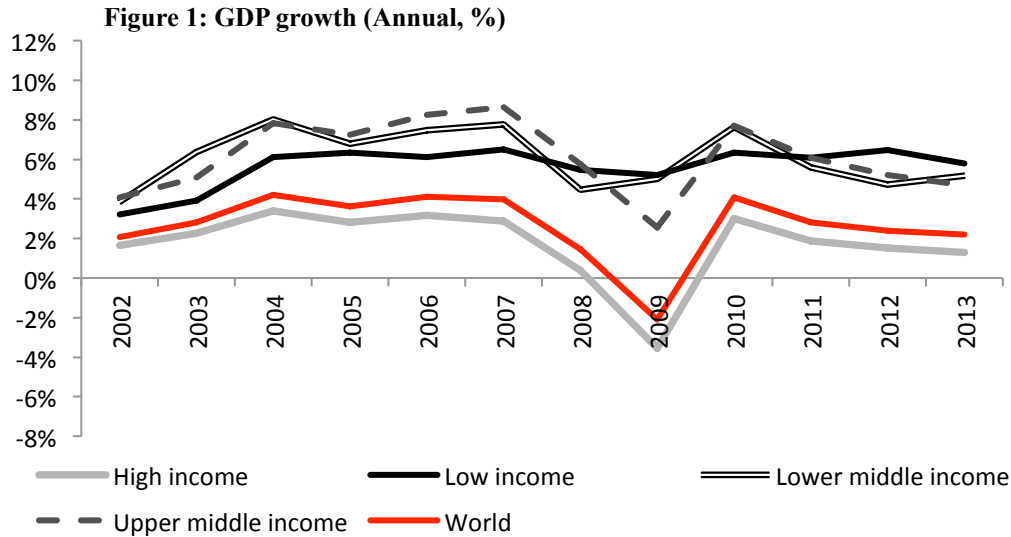
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1. Introduction

The history of developing countries is full of severe financial crises experiences. These crises were observed intensely in the 1980s and 1990s and the last ones were the experiences of 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 took place in the developing world after 2002. There has been a positive trend in many macroeconomic variables in these economies. Some even argue that there has been a de-coupling trend among developed and developing countries by looking at 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 (Kose, Otrok and Prasad, 2012; Aizenman, Jinjark, Lee and Park, 2012). Even though the global turmoil in 2008 hit some developing economies destructively, in general, developing countries survived the crisis with less damage than advanced countries. The majority of developing countries did not experience a financial collapse.⁴ Furthermore, as Figure 1 suggests, the average growth rate of low and medium income level countries was much above the world and developed countries' averages during the recent crisis. Also, the recovery from the crisis was more rapid in developing economies.

⁴ Even some of the countries worst affected by the crisis did not encounter financial collapses.



Source: WDI (World Development Indicators)

What are the reasons behind the relatively better performance of developing countries in the global crisis? The answers in the literature have varied on this question. However, in general, the literature claims that the improved current accounts compared to 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, Ammer, Cai and Scotti (2011) discuss 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. An IMF report (2010) emphasizes the role of large reserves on the rapid exit of developing countries from the global financial crisis with moderate damage. Llaudes, Salman, and Chivakul (2010) assert that the pre-crisis levels of reserves helped to mitigate the initial growth collapse in developing countries. Alvarez and Gregorio (2013) empirically find that exchange rate flexibility, looser monetary policy and better macroeconomic management were crucial for robust performance of emerging markets during the crisis. Some others claim that the policy of flexible exchange rates helped developing countries weather the financial shocks and the countries adopting less control on the rates had a better performance in the global crisis (Berkmen, Gelos, Rennhack and Walsh, 2012; Tsangerides, 2012). There are only a few studies that claim that the success of developing countries in the global crisis is mainly related to the external environment, and domestic policies played limited roles (Çolak, 2012; Comert and Çolak, 2013; Akyüz, 2013 and Akyüz, 2014).

In this paper, 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 grasp the bigger picture. We argue that the relatively better performance of emerging markets during the crisis is mainly related to the fact that these markets have not actually been tested by a relatively big financial account shock. Financial account shocks that hit developing countries in the global crisis were not as large as the shocks observed in the 1980s and 1990s, both in terms of magnitude and duration. Even though sudden stops in the financial accounts of developing countries in the global crisis led to credit squeeze or depreciation of currencies, they were, in general, affected by the crisis mainly through the trade channel rather than financial channel⁵. In this vein, although the financial channel was important especially in Eastern European countries, overall, many developing countries either did not experience financial flow reversals or the reversal they faced lasted for a very short time period⁶.

In this paper, we will focus on the factors that are ignored by the literature. Why developing economies were not tested by a destructive financial shock in the recent crisis can mostly be explained by the fact that financial markets of advanced countries could not fully serve their roles as safe havens in the global crisis⁷. Massive liquidity accompanied with low returns in advanced countries shortened the duration of sudden stops. Furthermore, given the turmoil in the US and prolonged instability in the Euro Area, developing countries enjoyed greater legitimacy and autonomy in implementing expansionary monetary and fiscal policies, which partially offset

⁵ Trade shocks accompanied by financial shock led to more damages in some developing countries.

⁶ In this paper, for the sake of clarity, we use the terms sudden stop and capital (financial) reversal to explain two distinct movements in financial flows. In this sense, 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 utilize the term financial (capital) reversals to refer to negative growth in net financial flows. Some treat sudden stops and financial reversals as the same phenomenon (see Calvo and Mishkin, 2003). We believe that for the sake of clarity it would be better to treat them separately because sometimes, they may have significantly different implications. In general, almost all financial reversals put some strain on central bank foreign exchange reserves and exchange rates in developing economies. However, a sudden stop may only cause a slow credit growth in these economies rather than having considerable negative implications for reserves and exchange rates.

⁷ As explained in the text, we don't argue that treasury bonds in the US and other developed countries lost their safe haven status. However, private assets of advanced countries lost their safe haven status. Domestic players in advanced countries preferred treasury bonds and tried to liquidate their assets issued by private entities. Meanwhile, foreign players stopped purchasing private assets of developed countries and/or liquidated their holdings. Therefore, we claim that advanced countries especially US financial markets could not fully serve their roles as safe havens during the recent crisis. We are not the first ones claiming this. Acharya and Schnabl (2010) also claim that, in the last crisis, the commercial papers of the US and EU lost their safe haven role completely. In a situation in which some of the developing countries are in stress as in the case of the Asian crisis and financial markets in developed countries are relatively in good shape, as documented in the text, massive capital flights may easily take place from many developing countries. However, in a situation in which advanced countries cannot fully serve their roles as safe havens, it would be misleading to attribute the resilience of developing countries to domestic policies.

inadequate aggregate demand problems in developing countries for a while. If the financial assets in advanced countries become much more attractive, developing countries may face larger external financial shocks. Even large reserves, flexible exchange rate regimes and healthy balance sheets on the papers with some so-called other strong fundamentals would not be enough to avoid financial collapses. The magnitudes, and in relation to this, the impacts of these shocks would be greater if these shocks are also associated with domestic problems or/and political instabilities. Indeed, many developing countries may pay a huge cost for their ignorance of the fragilities accumulated in the last couple of years in the near future. In this sense, developing countries seem to enter into a period in which low growth and/or an increase in uncertainty and volatility are much more pronounced.

The outline of the paper is as follows: Firstly we will discuss the channels through which developing countries were affected by the global crisis. In the second part, we will compare the magnitudes and durations of financial shocks in the recent crisis with the shocks experienced in the past developing country crises. Thirdly, we will discuss the importance of the safe haven phenomenon in explaining the magnitude of financial shocks in the recent crisis. In the fourth part, our focus will be on the role of loose monetary policy in the north, and greater legitimacy enjoyed by developing countries in implementing expansionary fiscal and monetary policies during the last crisis. We will conclude the paper with some remarks on possible near future developments in developing countries.

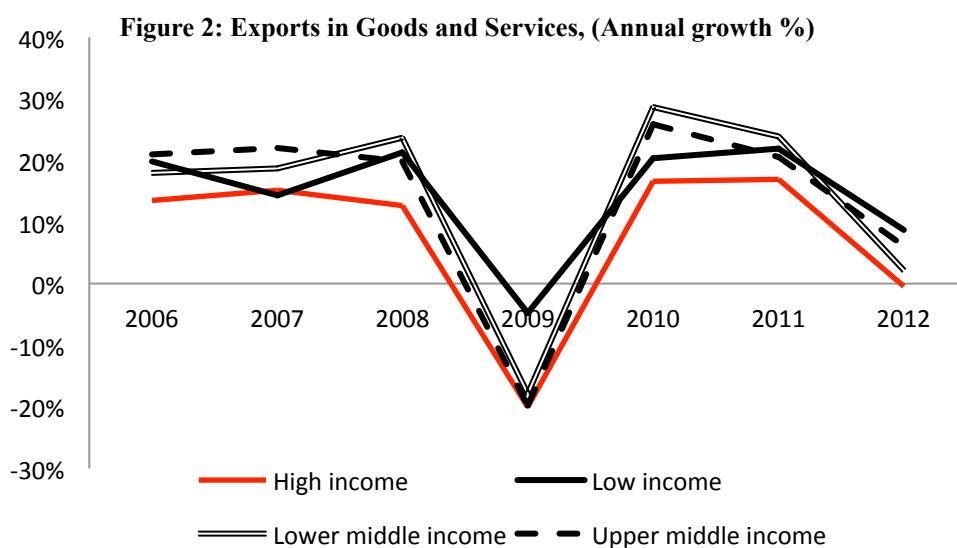
2. Transmission of Global Crisis to Developing Countries

The recent crisis has affected developing countries through, trade, financial flows and expectation channels. It is relatively easy to investigate the magnitude and duration of the trade and financial shocks developing countries experienced; however, it is not that easy to explore the impacts of expectations channel. In general, since the most visible impacts of expectations channel would be seen in the form of more financial reversals (and dollarization), and it is difficult to explore the role of expectations independently, we will focus on the first two channels. In the recent crisis, among these two channels the most influential one was the trade and transfers channel, which was observed via a sharp fall in export levels and remittances even though sudden stops and in some cases sudden reversals inflicted heavy costs on some countries such as Baltic and Eastern European ones (Cömert and Uğurlu, 2014).

2.1 Trade and Remittances Channel

It was not surprising to see that the exports of developing countries plummeted due to a significant decline in the demand for the exports of these countries by the crisis-hit developed countries. And due to the multiplier effect and dependence of the manufacturing industry on the 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 a sharp decline in growth performance of the advanced countries.

The magnitude of the shock varies among developing countries depending on their relations with the advanced countries. We made an income level classification of export growth rates in developing countries in Figure 2. As expected, those countries with strong trade linkages with the advanced countries were affected more than others. In this vein, with the exception of the lowest income group, all groups experienced a fall in export levels by more than 20 percent in 2009. And the drop in the export growth rates in these groups was as high as the drop in exports in the north, which was at the center of the crisis.

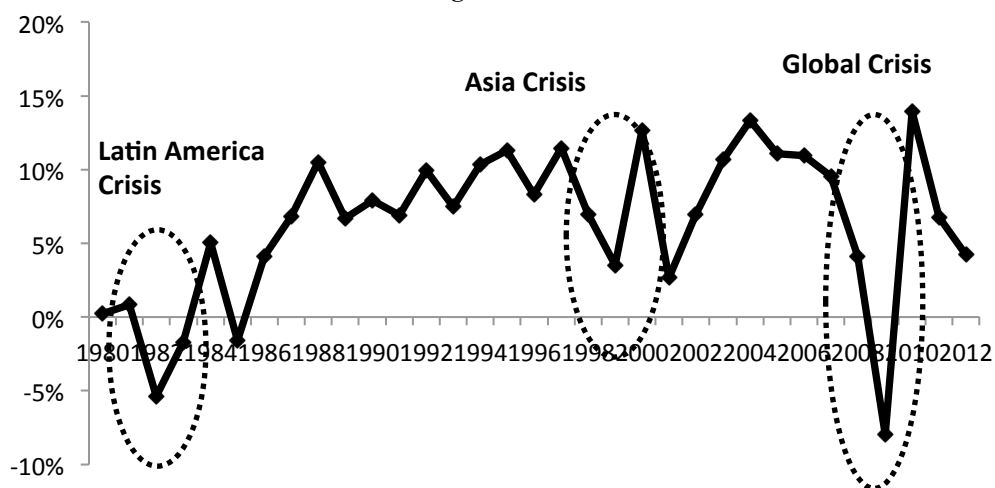


Source: WDI

In order to interpret the magnitude of this export shock properly, the best way is to compare the level of this shock with the trade shocks observed in the previous crises on a global scale. It is apparent that the export shock in the recent crisis was much greater than the past shocks (Figure 3). For example, a similar export squeeze was observed in the 1982 Latin American debt crisis when some developed countries experienced a slowdown; however, the

magnitude of this export decline was lower than the one in 2009. Similarly, during the Asian financial crisis, the export growth rate of developing countries declined but never became negative. In fact, an increase in exports is more likely observed in a classical developing country crisis as in the case of Turkish, Argentinian and Mexican and many other crises due to massive depreciations of local currencies mainly related to financial reversals⁸.

Figure 3: Exports of goods and services, all developing countries, growth rate



Source: IMF World Economic Outlook (WEO)

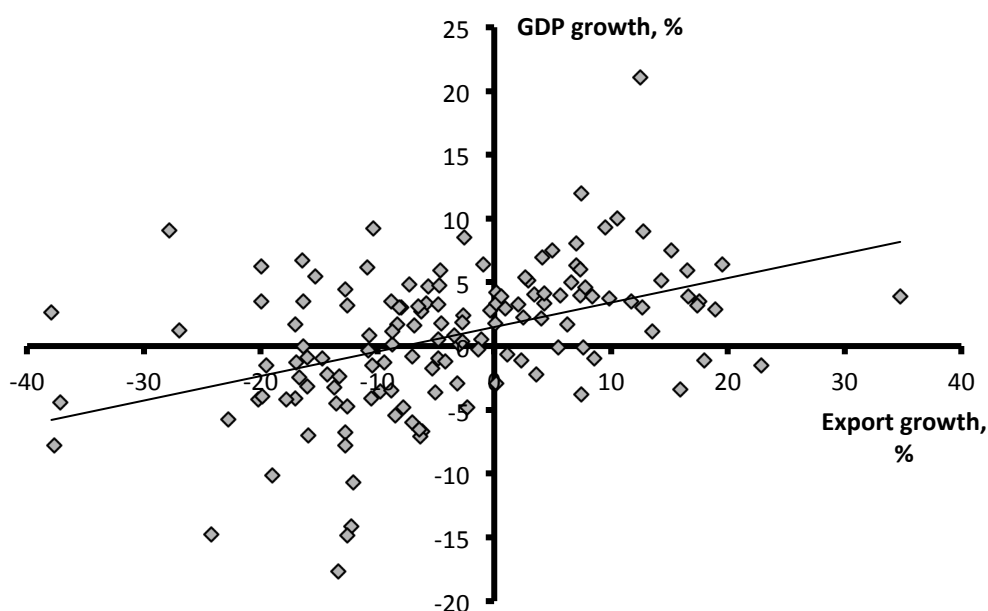
A shock to exports has a significant multiplier effect on the GDP in an economy. This impact would be larger in developing countries since they have idle capital and large unemployment. Also their manufacturing industries are dependent on export revenues in order to purchase imported intermediate goods. Manufacturing is the main industry for growth in developing economies. This sharp fall in exports had an obvious impact on the manufacturing industry in developing economies as well. Since the export revenues of developing countries fell sharply an excessive amount, which was not observed in any past crises, the slowdown in the growth rates of developing countries in the recent crises seems to be largely be related to the trade shock.

In Figure 4, the association between export and GDP growth in 2009 for all developing countries is depicted. As expected, the majority of developing countries are located either in the

⁸ In these earlier crises, the export growth remained positive or increased. Moreover, a fall in economic activities in developing countries has always been accompanied by a sharp decline in imports due to high imported intermediate goods contents of the production in developing countries. As a result, these countries experienced considerable improvements in their current accounts in the crises of the 80s and 90s.

lower left region or in the upper right region of the figure. Besides this, according to the figure, apart from some outliers, many countries with negative export growths experienced very low GDP growth rates. This supports the idea that the slowdown in the growth rates of developing countries in the recent crises can largely be related to big trade shocks that have not been observed in any past crises since 1945⁹.

Figure 4: The relation between export and GDP growth in 2009, all developing countries

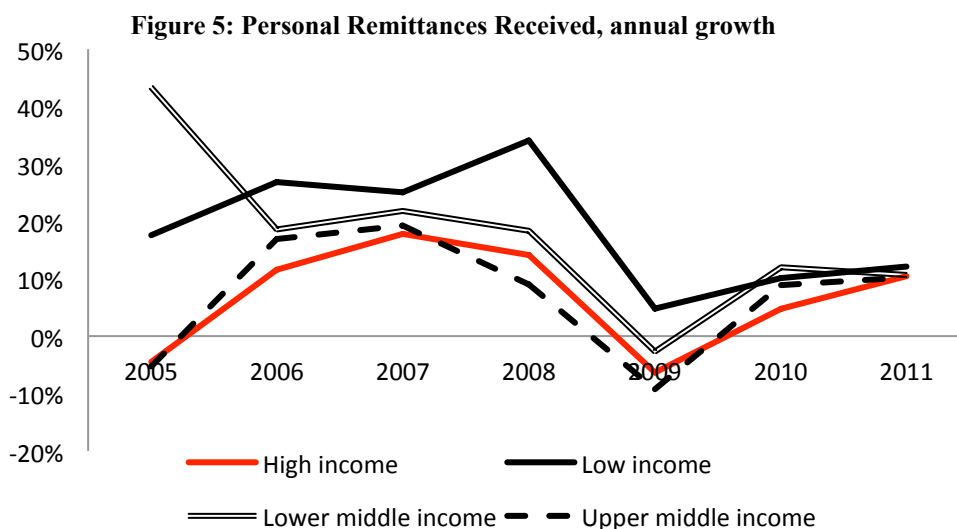


Note: Some countries with missing data and some outlying observations are excluded. 142 developing countries are depicted from 154 countries according to IMF classification. **Source:** WEO

A similar shock hit the remittances to developing countries. Remittances or income receipts in a broad perspective are major sources of foreign exchanges in these countries (Ratha, 2005). Figure 5 indicates the evolution of remittance transfers to different groups of countries. According to the figure, all income groups experienced a substantial decline in income transfers from other countries. In all income groups, the overall decline in foreign exchange earnings related to income transfers was more than 20 percent. According to Akyuz (2010), remittances add to growth in two ways. First, they moderate the pressure on the current account and allow domestic spending to rise without experiencing foreign exchange shortage. And second, income

⁹ Of course, heterogeneous performance of developing countries during the crisis is also related to other factors such as initial conditions and policies conducted in response to the crisis (see Cömert and Uğurlu, 2014). In relation to this, the differences in the magnitude and the duration of the financial shocks encountered by developing countries were also among the main determinants of the heterogeneous performances within this group of countries.

transfers from abroad were often translated into domestic consumption, which leads to higher demand, output and employment (Akyüz, 2010). For this reason, a fall in these transfers is expected to have a negative impact on the growth performance of an economy. This would be much more valid for developing countries where foreign exchanges are very crucial. In this sense, the large fall in income transfers to developing countries in 2009 could be an important source of the slowdown in their economic activities.



Note: Personal remittances comprise personal transfers and compensation of employees. Personal transfers thus include all current transfers between resident and nonresident individuals. Compensation of employees refers to the income of border, seasonal, and other short-term workers who are employed in an economy where they are not resident and of residents employed by nonresident entities (World Bank, 2014). **Source:** WDI

2.2 Financial Channel

Another channel through which the crisis transmitted into 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 that are closely related to developed countries.¹⁰

¹⁰ There are different approaches about which indicator would best describe the impact of financial flows on economies. Borio and Disyatat (2011) argue that gross flows are much more important indicators for this purpose. However, as Comert and Duzcay (2014) argue, although gross flows would be a much more meaningful indicator for developed countries, net flows are still crucial to understand the pressure on exchange rates which are the most important factors for asset prices and reserves in developing countries. Moreover, the difference between net flows and gross flows are not very significant in many developing countries. Therefore, we will focus on net financial flows in our discussion on developing countries whereas gross flows will be emphasized more in our discussion on the advanced economies. The trends in gross and net private flows will be discussed in some cases for the purpose of highlighting different risk perceptions of private players in different periods.

During the crisis, we witnessed a relatively moderate 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). In 2007, net flows scaled by GDP were 4% and in 2008 it fell to 1%, meaning that there was a 3% percent sudden stop in 2008.

The only exception would be the case of Central and Eastern Europe (CEE). The sudden stop in this region in 2008 was larger compared to other developing regions. In 2009, the rate was nearly 5%, while it was 11% in 2007 (Table 1). This 6% sudden stop might actually be tied to high proximity of the region to the European and Russian financial markets. The financial systems of the EU and Russian economy were severely hit by the crisis; hence this led net financial flows to the region to stop by large amounts. However, it seems that, overall, with the exception of CEE, all developing country regions experienced relatively moderate financial shocks during the crisis.

Table 1: Net Financial Flows / GDP					
	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%	

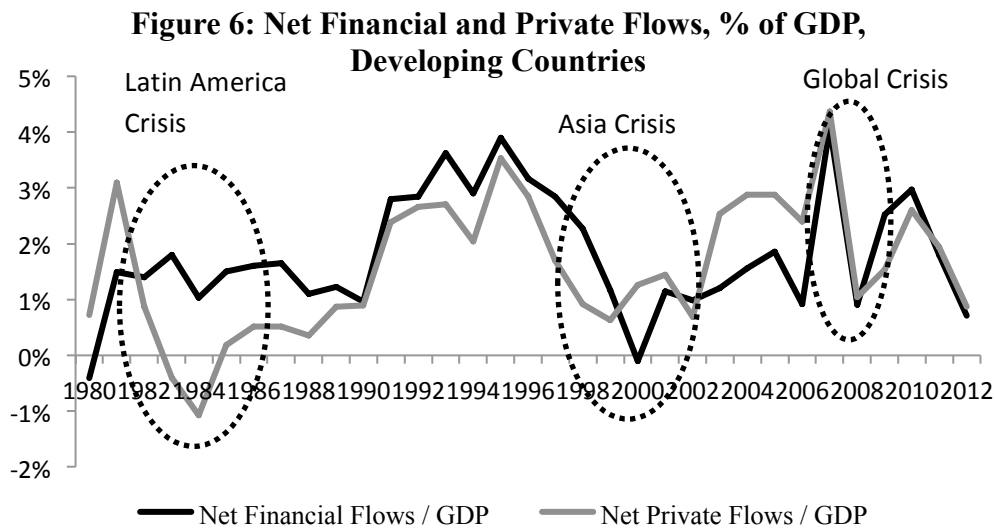
Source: IMF e-library and WEO

2.2.1 Net Flows Adjustments Compared to the Past

We also compared the magnitude and duration of the recent financial shocks with the previous ones to be able to have a better picture about the nature of the recent shocks. In this sense, when one compares the magnitude of the financial shocks in the last crisis with those in the 1998 Asian crisis, it is obvious that the financial account reversals were much greater in the 1998 episode in all developing economies (Figure 6). In 1997, net flows as a percentage of GDP in all developing countries started to decline. For three years, the net financial flows continued

decreasing and in 2000 it became negative, meaning that the sum of net purchase of developing countries' assets by foreigners (net financial inflows) and the net foreign asset purchases by developing country citizens (net financial outflows) became negative. Nevertheless, financial flows in the global crisis declined only in 2008 mostly without showing a reversal trend. Indeed, the overall level of financial flows to developing countries and emerging markets in 2008 was not much lower than the average of financial flows from 2001 to 2006. And in 2009, net flows started to rise again. In this sense, it is obvious that the financial account shock was shorter and smaller in magnitude in the global crisis compared to the Asian crisis.

Another developing country crisis that could be considered to have implications on a global scale was the Latin American debt crisis of 1982. When we first investigate net financial flows, this does not reveal a striking difference in the shocks between the recent crisis and the crisis of 1982. However, net financial flows relative to GDP were at low levels in the entire 80s. The ratio was around 1.5% and stayed at around this ratio for about 8 years. This may indicate that due to the crisis developing countries could not attract much financial flows for a long time in the 80s. In the global crisis, developing countries only experienced a 1-year sudden stop, which resulted in net flows equal to nearly 1% of GDP. Hence, although net flows data was not able to discriminate convincingly the magnitude of the financial account shock between these two crises, the distinction between the duration of the financial account shock between the crises may be apparent. Beside this, given the fact that many developing countries had closed their financial account at that time, the spillover effect of the Latin American debt crisis would not be detected in the aggregate net financial flows data for developing countries. For this reason, investigating the components of net flows can give a clearer picture.



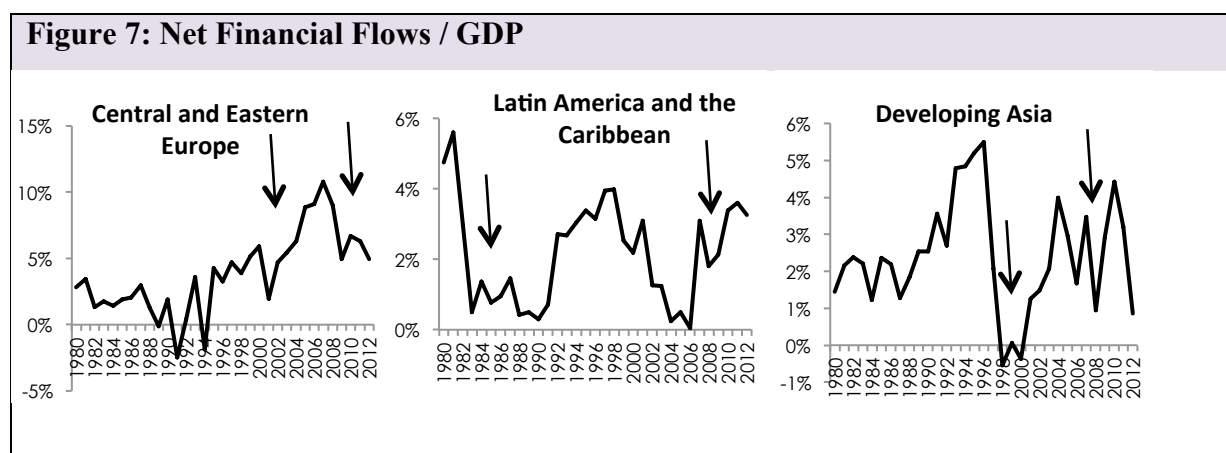
Source: IMF E-library

Net financial flows comprise of official and private flows. Private flows are managed by profit seeking non-official entities. They are more sensitive to the risks and their reaction is larger in turbulent periods in risky economies. The sources of official flows are principally government agencies, international organizations or central bank funds. The objective of official flows may not be large returns. And for a crisis-hit developing economy, these official flows often come as assistance funds from other countries or international funding organizations like the IMF and the World Bank¹¹. Hence, official flows are generally more stable and tend to increase in crisis periods in developing countries. This can make the net flows picture flatter and sometimes impedes observing the actual magnitude of the financial shock during crises. Moreover, many developing countries started structural programs under the auspices of the IMF and the World Bank at the beginning of the 80s, which enabled these countries to have access to the IMF and the World Bank credits. For these reasons, we also explore the trends in private flows data, which show the difference between the investments made by non-residents in the reporting country and investment abroad by residents of the reporting economy. As Figure 6 suggests, the net private flows amounted to 3% of GDP in all developing countries in 1981. Starting from the debt crisis in 1982, net private flows began to fall. And, for three years, developing countries experienced negative net private flows indicating that private investors left these economies in the middle of

¹¹For developed countries, official flows are usually central bank reserves of developing economies. During the periods of crises, developing countries use these reserves for the purpose of stabilising foreign exchange markets, hence official flows tend to fall in developed countries during turbulent times.

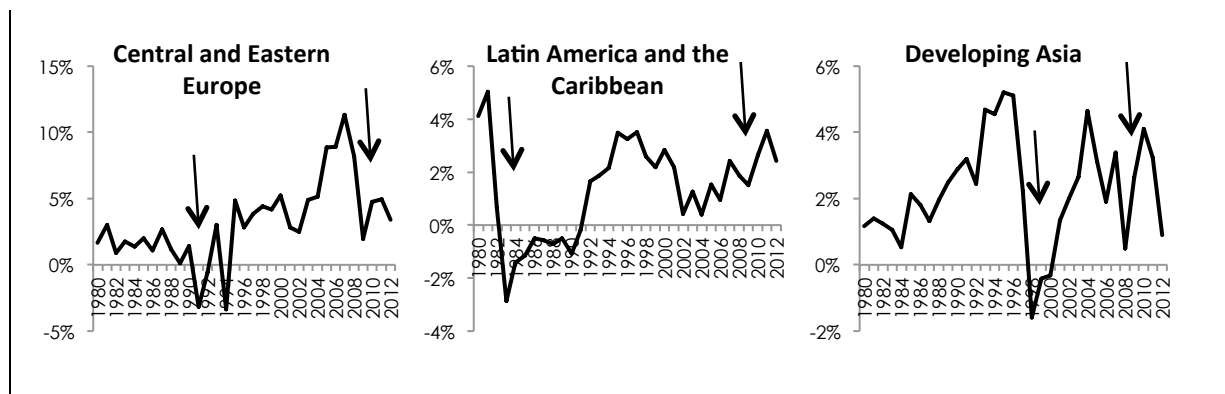
the 80s. This shock is clearly much larger than the recent shock both in terms of magnitude and duration.

When we investigate the shocks hitting different regions instead of focusing on all developing countries, the picture discussed above becomes more apparent (Figure 7). Especially, in the regions from which those former crises originated, the shocks were much more severe than the current crisis. For example, in the case of the Asian crisis, net financial flows relative to GDP in developing Asia in 1997 amounted to 2%. After 1997, the region experienced negative net flows in three consecutive years. Nevertheless, in the recent global crisis, there were no financial reversals apart from a sudden stop that took place in Asia. The sudden stop was only observed in 2008 with net flows equal to 1% of GDP. After 2008 the financial flows to the region exceeded their pre-crisis levels. Net private flows depict a more striking picture (Figure 8). The flows by the foreign private sector agents who are highly sensitive to the risks declined sharply during the Asian crisis compared to the recent global crisis in Developing Asia. While in the recent crisis the shock led to a moderate sudden stop in private flows, during the Asian crisis it led to large reversals for three years. In short, both the magnitude and duration of the financial shock were milder in Asia during the recent crisis relative to the last big shock that took place in the region.



Source: IMF E-library

Figure 8: Net Private Financial Flows / GDP



Source: IMF E-library

Similarly, if we compare the shock which hit Latin America in the beginning of the 1980s with the shock observed in the recent crisis in the same region, it is obvious that the recent one was smaller in magnitude and shorter in duration. In the aftermath of the Latin American debt crisis, net financial flows to the region fell from 6% of GDP to 1% of GDP. The flows as a share of GDP stayed around 1% till 1990. However, in the global crisis, there was a small drop in the net flows relative to GDP in Latin America. Hence, the recent turmoil is less destructive relative to the one in the 1980s, albeit there was a sudden stop in the latter one. Furthermore, the net flows figure indicates that the shock affecting the Latin American region during the 2002 Argentinian peso crisis was more severe than the global crisis in terms of duration and magnitude as well. A similar picture can be seen if we focus on net private flows as well (Figure 8).

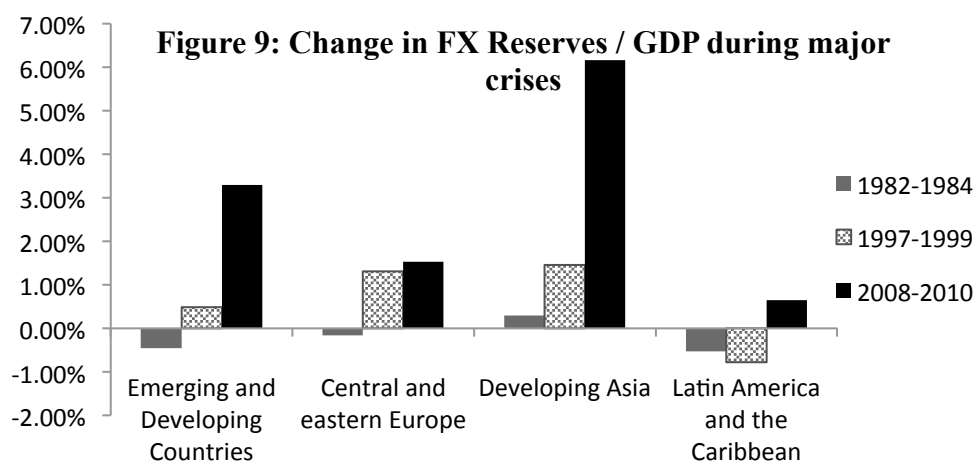
We depicted, up to this point, that the entire developing world and regions faced milder financial account shocks in the recent worldwide turmoil compared to the previous crises. One would argue that the discussion focusing on large regions and developing countries in general would be misleading because strong flows to some economies might have smoothed out the shock to the aggregate data. However, as Comert and Colak (2014) show, focusing on individual countries that witnessed important financial problems in the 80s and 90s supports the findings above.

2.2.2 Reserve and Exchange Rate Adjustments

As mentioned in the first part, some experts argue that although financial shocks hitting developing countries were strong enough, massive reserves accumulated in the pre-crisis period were mainly responsible for the relatively better performance of developing countries. In other words, according to this view, the impacts of the financial shocks might have been smoothed out

by the interventions of the central banks in developing countries in the form of foreign reserve sales.¹² However, when we check the foreign exchange reserve movements in developing countries, it is obvious that the majority of developing countries did not resort to very high exchange market interventions in the recent turmoil compared to previous experiences. Indeed, although some countries had to use their reserves, many developing countries continued accumulating reserves.

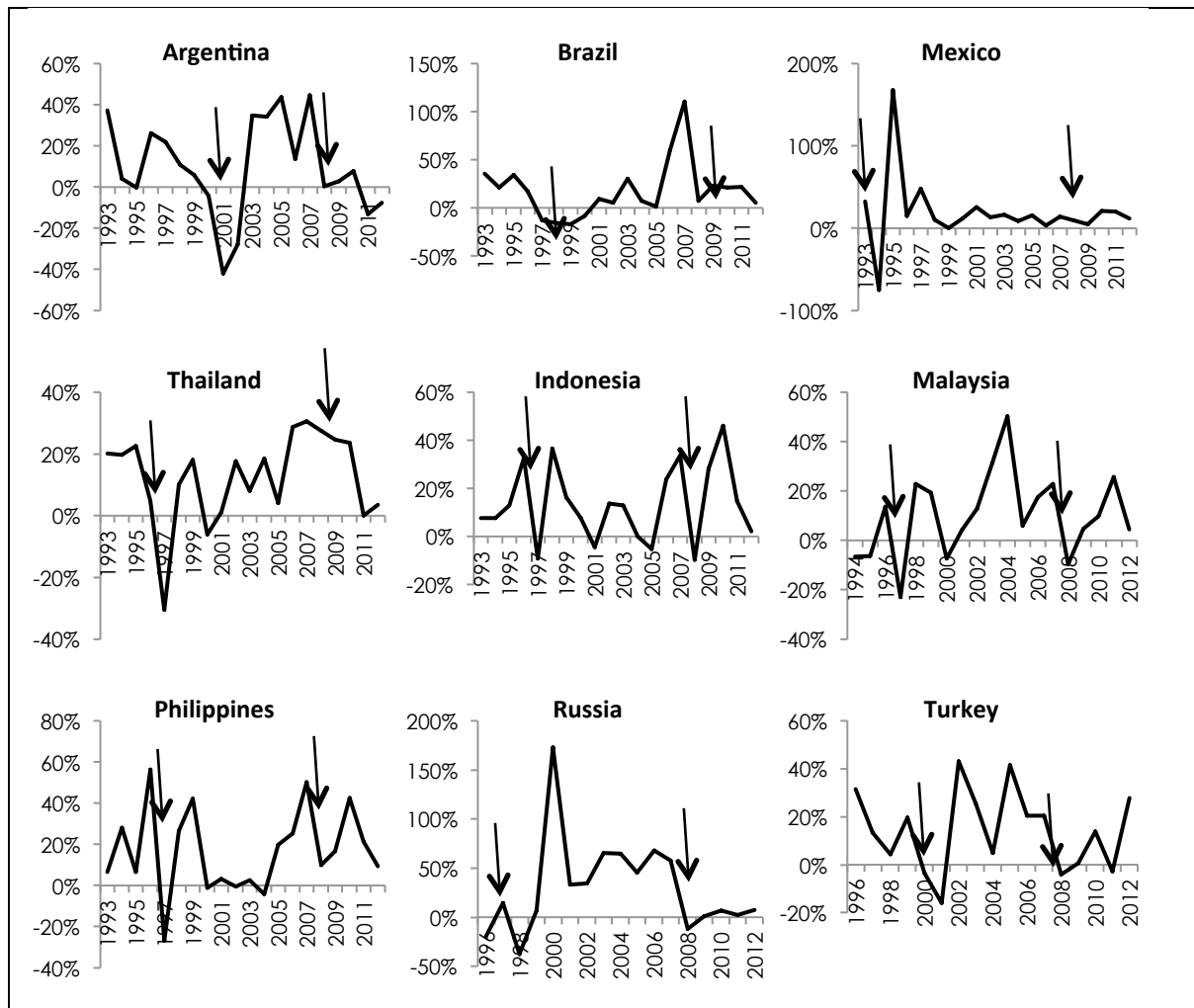
Figure 9 exhibits the average change in reserves relative to GDP in developing regions in three periods of global scale turbulence. It implies that the entire developing world experienced reserve losses during the Latin American crisis. This shows that both sudden stop and domestic dollarization were extremely large in the 1980s. During the Asian crisis, developing countries accumulated limited reserves, nearly 0.2% percent of GDP in 1998. Nevertheless, in the global crisis developing countries on average continued to accumulate reserves amounting about 3% of their GDP. This accumulation was larger than previous crises, which demonstrates that the financial shock in terms of sudden stops and dollarization and the risk perception of central bankers in developing countries were not very high in the recent global turmoil.



Note: Each three-year period represents a global scale crisis. 1982-84, 1997-99, and 2008-10 stand for the Latin American debt crisis, the East Asian crisis, and the global financial crisis, respectively. The height of bars shows the average change in foreign exchange reserves relative to GDP. **Source:** IMF WEO

Figure 10: Change in FX Reserves / Total Reserves

¹² A high level of reserves might have served as insurance, which might have prevented financial reversals as well. Although this argument may have some merits, it is very difficult to investigate the validity of this argument. Reserves would never be enough if reserve losses exceed a certain threshold, which would be different for a different set of countries. In this sense, whether there is an optimum amount of reserves that can prevent financial reversals is not very clear.



Source: IMF E-library

Investigating some countrywide experiences can shed more light on the magnitude and the duration of shocks hitting central bank reserves in developing countries. Figure 10 depicts reserve adjustments in some developing countries that were hit by financial crises in the 80s and 90s. With the exception of Indonesia, the adjustments were stronger in earlier crises than 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. All these figures validate the argument that reserves needed to compensate for damages from the financial shock were higher in the crises of the 80s and 90s.

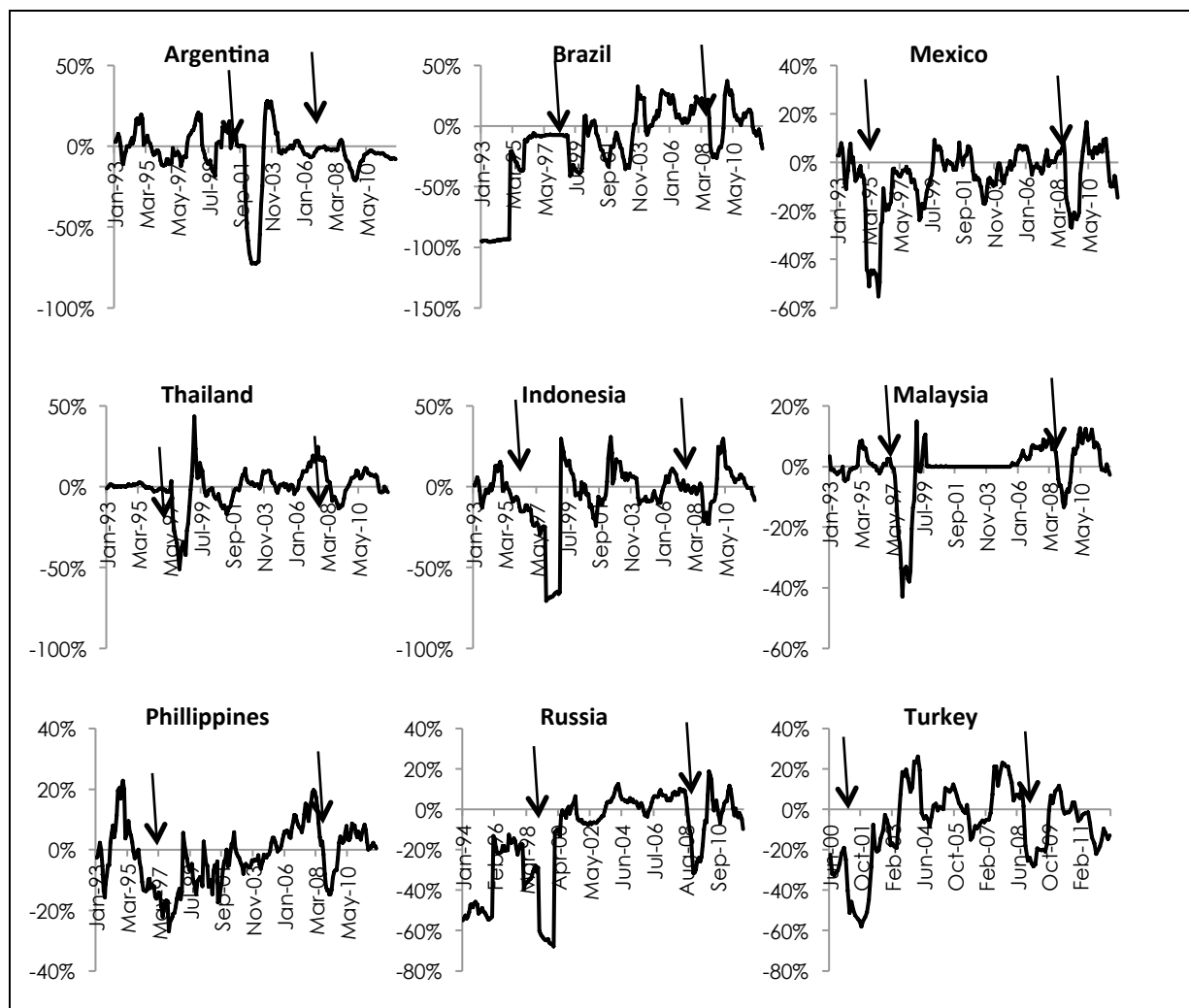
It can be argued that developing countries did not have to utilize their reserves much because many of them had started implementing flexible exchange rate regimes, especially after 2000. If this is the case, we should see the immediate implications of the shocks in the form of exchange rate adjustments. However, existing data do not imply that the burden of the adjustment

was shouldered by flexible exchange rate regimes. Indeed, although developing countries experienced some depreciation in their currencies, it was not a big adjustment in terms of magnitude and duration relative to previous experiences of developing countries (Figure 11).

The main difference between a fixed exchange rate and a flexible exchange rate lies in the commitment structure of central banks. In this vein, while central banks commit to defending a fixed rate under a fixed exchange rate regime, they don't 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 we discussed above, central banks in developing countries did not resort to considerable reserve sales in response to the recent crisis. This can be seen as further evidence for the relative mildness of the shock developing countries encountered. As a result, it seems that developing economies in general were not tested by destructive financial account turmoil in the global crisis¹³.

Figure 11: Annual % Change in the Value of Local Currencies against USD, Monthly Average Exchange Rates

¹³ However, since especially other flows in the form of borrowing of banks and non-financial firms and trade credits stopped significantly, this might cause some declines in credit expansion, which would adversely influence the growth performance of developing countries.



Source: FXTOP

3. The Importance of Safe Havens during Crises

Why were developing economies not tested by a financial account shock even though the world was financially disrupted? As discussed in the introduction, some may argue that good economic fundamentals and policies in developing economies before the crisis would explain the mildness of the financial shock hitting those countries during the crisis. Although this argument may have some merits, it has some problems as well. First, it is also easy to claim that good economic fundamentals in developing countries from 2002-2007 were mostly related to benign international economic conditions. High demand for the goods of developing countries from the advanced countries and massive financial inflows to them created a bonanza for developing countries in this period. Second, as the history of financial crises demonstrates, cross border

financial movements may have some self-fulfilling characteristics that may not respect the initial fundamentals of countries. Beside this, the fundamentals once considered good can be easily considered as bad fundamentals retrospectively. For example, for many, the Asian countries had very good initials before the Asian crisis of 1997-98. Nevertheless, the same economists started finding many deficiencies in these fundamentals after the crisis. Likewise, the economic performance of the US and advanced countries was deemed as “great moderation” just before the global crisis. However, after the crisis, even those economists who were proud of the fundamentals of these economies started preaching how external and internal vulnerabilities emerged within these economies before 2008. In other words, they began blaming fundamentals and policies, which were praised once, for the crisis.

We believe that those focusing on good policies or some pre-crisis macroeconomic trends in developing countries miss the bigger picture. Here, in order to explain the relatively mild financial shocks experienced in developing countries, we will focus on another factor that has been mostly ignored by the literature. We argue that the main reason behind the relatively small shock experienced by developing countries is the fact that especially financial markets in developed countries could not perform fully their safe heaven roles during the recent crisis as opposed to the 80s and 90s. Beside this, as will be discussed in part four, massive expansionary monetary policies in advanced countries enabled developing countries to have a short period of sudden stop by increasing liquidity in a situation in which high volatility and uncertainty prevailed together with low returns in these economies. Developing countries also enjoyed greater autonomy and legitimacy in implementing expansionary monetary and fiscal policies without much fear of the bigger financial shocks in an environment in which international cooperation partially meet 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 which investors opt for in times of increasing global financial risks (Kaul and Sapp, 2006; Habib and Stracca, 2012). In general, the US Dollar, Swiss Franc, Japanese Yen and English Pound and the assets denominated in these currencies are considered to be safe haven currencies (Ronaldo and Soderlind, 2010)¹⁴. Furthermore, gold has been a traditional safe haven in times of global turbulence (Baur and McDermott, 2010; Ciner, Gurdigev and Lucey, 2013).

¹⁴ These assets tend to appreciate when there is an increase in risk perception.

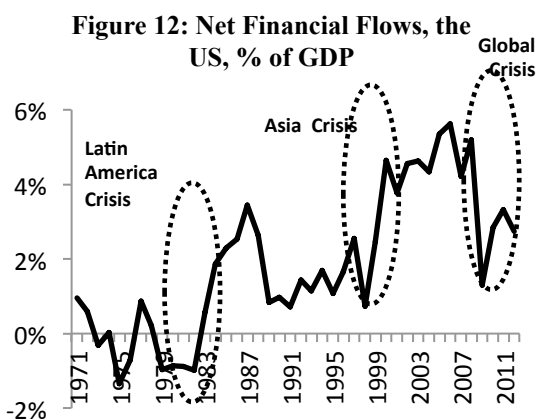
The countries from which these instruments emanate are called safe haven countries. In almost all previous developing country crises, the US and other developed countries held their safe haven status and investments in crisis-hit countries fled to these safe countries. Both commercial papers and treasury assets of the advanced countries were regarded as safe havens in these crises. For instance, in the Asian crisis, about 100 billion dollars worth of investments flew from the South Asian countries to European banks and to the US financial system (Wincoop and Yi, 2000). In other words, during the previous crises not only did treasury bonds attract funds moving away from developing countries but also assets issued by private institutions were attractive. However, in the last crisis, the commercial papers of the US and EU lost their safe haven role completely (Acharya and Schnabl, 2010). Instead, gold, oil and some government papers like the US and German treasury bonds took the safe haven role¹⁵. The main reason is that the volatility in the financial and non-financial private sector in advanced countries discouraged global investors from investing in commercial papers of the north. The main factor behind the safe haven position of the US and German government papers (even though these countries were in crisis) were that the Euro and dollar are the main reserve currencies for developing economies (Beck and Rahbari, 2008). The monetary authorities in developing countries kept their reserves as treasury bonds and/or converted their private paper holdings into treasury bonds. As a result, during the crisis, their reserve investments in these bonds soared. Furthermore, since investors' confidence in the private financial assets melted down 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 by domestic players and especially by the main central banks in the developing world and 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 either to keep their existing portfolios in emerging markets or reconsider to move into the emerging markets as soon as their balance sheets allowed. In fact, as Miyajima, Mohanty and Chan (2012) demonstrate global inflows into Emerging Market local currency government bonds have surged since 2008¹⁶.

¹⁵ Santis (2012) finds that higher risk aversion in Europe led demand for German government bonds to increase and re-pricing of all Euro-area spreads.

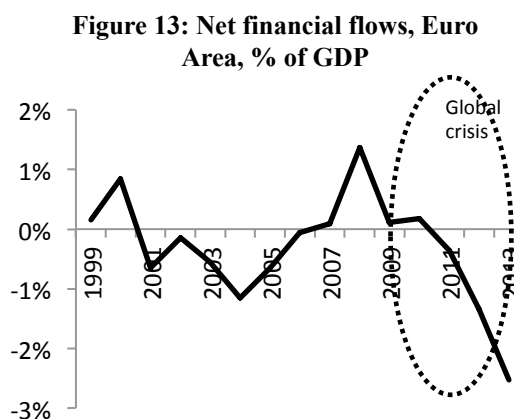
¹⁶ Miyajima, Mohanty and Chan (2012) goes one step further and state that emerging market local currency government yields have behaved more like safe haven yields.

3.1 Financial Flows to North during the Global Crisis

The trends in financial inflows and outflows in the US and the euro area during financial crises can give us many clues about the safe haven position of advanced countries. These economies constitute the significant portion of advanced countries' financial systems. In Figures 12 and 13 the net financial flows into the US economy and the Euro area are depicted. Since the Euro area is a new phenomenon, its data is available after 1999. For the US case, in the crisis of 2008, the overall sudden stop in the financial account amounted to about 5% of the US GDP (Figure 12). This is an indication that global investors reduced their holdings of American assets in their portfolios. Nevertheless, in the major previous crises, there was an increase in the net financial flows into the US economy. For example, for 6-7 years after the 1982 Latin American debt crisis, South America was struggling with negative financial accounts (see Figures 7-8) while there was a constant increase in the net financial flows in the US economy. Similarly, in the period of 1998-2000, while there were negative net flows to the East Asian countries (see Figures 7-8), net financial flows to the US economy were increasing. These circumstances could be best explained by the fact that the US financial markets perform their safe haven roles in those periods of crises. However, in line with increasing risk aversion, investors perceived that the US financial assets apart from treasury bonds were not safe during the recent global crisis.



Source: Bureau of Economic Analysis (BEA)



Source: European Central Bank (ECB)

A more tragic picture was observed in the Euro area after 2008. The Euro area witnessed a sudden stop in 2009, which turned into a financial account reversal after 2010 (Figure 13). With the burst of the European debt crisis, the net reversals worsened. The unprecedented fall in the net financial flows can be read as signs that the Euro-zone could not function well as a proper safe haven area in the global crisis.

3.2 Composition of Financial Flows to the North

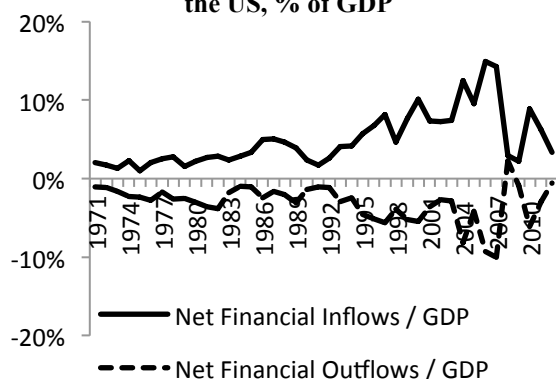
What explains the fall in the net flows in advanced economies? To have a better picture it would be better to focus on gross flows such as financial outflows and inflows. As discussed before, gross flows would be a much more meaningful indicator to investigate the implications of cross-border financial movements among developed countries. The gross flows figures neatly demonstrate how dramatic financial flow adjustments were in the center during the recent crisis.

The descriptive statistics reveal two important developments regarding financial inflows and outflows. First, there was a substantial sudden stop in the financial inflows into the US economy and the euro area (Figures 14 and 15). For the US case, while the ratio of net financial inflows to GDP was 15% in 2007, this ratio dramatically fell to 3% with the crisis, meaning that the sudden stop amounted to 13% of GDP. For the Eurozone, the net inflows scaled by GDP were 22% and plunged to -1% in 2009, indicating that there was an unprecedented sudden stop and financial account reversal. Since inflows are the investments of foreigners in these economies, this explicitly shows that during the crisis foreign investors did not opt for the assets of these economies. This situation discloses the perception of the global investors that the investment in the US economy and the euro area was unsafe at that time and many global financial actors who were leading cross-country flows were in trouble¹⁷.

The second observation is that there was also a considerable drop in the 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 15). This implies that the investments by the residents of advanced countries abroad halted. Global investors partially returned their motherland in the face of the liquidity needs of their headquarters.

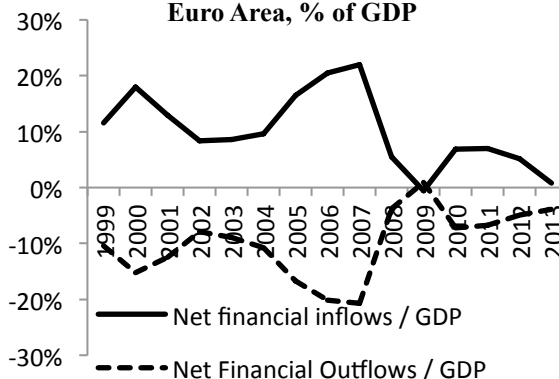
¹⁷ As will be discussed later on, since a big chunk of financial inflows to the US economy originated from Europe and vice versa, the decline in inflows to these regions are the signs of the magnitude of the trouble in these regions.

Figure 14: Net inflows and outflows, the US, % of GDP



Source: BEA

Figure 15: Net inflows and outflows, Euro Area, % of GDP



Source: ECB

Note: 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.

Even though the European data is not available, we can trace the destinations of financial inflows and outflows for the US case. As Table 2 suggests, the US financial players stopped investing in European assets. They even started withdrawing their capital from the EU. In 2007, net outflows from the US to the EU were -6.3% of GDP and it became 1.8% in 2008, indicating that the existing US investment in the EU sharply declined. In general, The US investors believed that the EU economy was not safe enough. Beside this US financial players were not in a position to make investments abroad. Nevertheless, if we look at the other regions, which are mostly composed of developing economies, net outflows (the purchase of US citizens) did not decline or declined slightly. The purchase of assets of the Asian economies by the US players even further soared with the emergence of the crisis (from -0.22% to -0.41%). We observe a reduction in the net inflows to Latin America from the US (from -2.2% to 0.55%) but this is a smaller shift compared to the EU case. And as we demonstrated in the second part, this clearly eased the financial account pressure on developing countries.

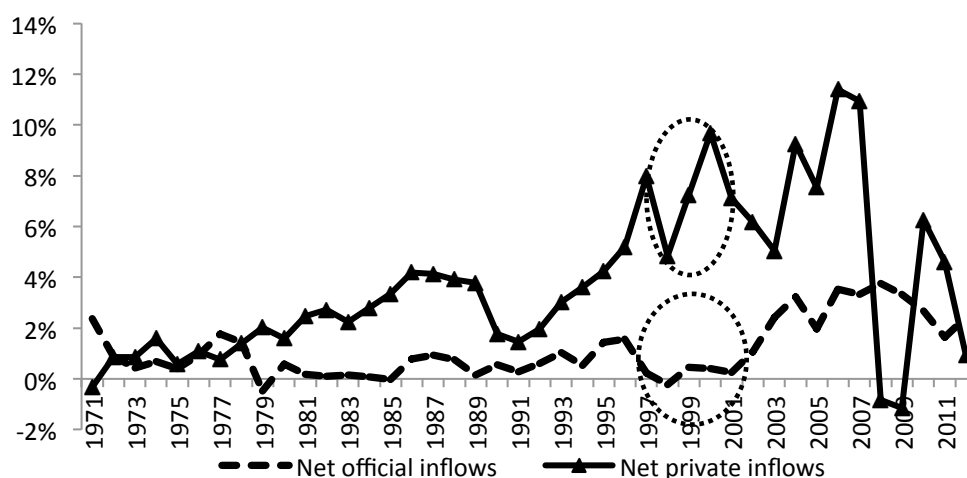
Table 2: US residents' net capital outflows, by Region, % of the US GDP

	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

There was a significant sudden stop in the inflows to the US but not a 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 really considerable. Especially, the escape of the private investors from the US was large enough. The positive net inflows (meaning sudden stop) stemmed from the significant positive official inflows to the US economy (Figure 16).

Figure 16: The composition of net inflows, the US, % of GDP



Note: Net official inflows are the US assets purchased by the foreign official resources, and private inflows are the US assets purchased by the other resources. **Source:** BEA

During the crisis, the official inflows to the US economy did not fall but even increased slightly. The official inflows to the US economy are mostly composed of central bank reserve

assets of developing countries. These reserves were mainly invested in the US treasury securities or bonds, which have an exclusive government guarantee. The increase in the official inflows means that the developing countries did not much need to use up their reserves during the crisis, which supports the findings of the preceding part that the developing economies were not much exposed to a depreciation pressure on their currencies. This picture is completely different from what happened in the Asian crisis. At that time, as the figure above suggests, official inflows to the US halted, meaning that developing countries were hit hard by the crisis and used their reserves to ease the impacts of the crisis.

We demonstrated that there was no decrease in the official inflows to the US economy during the recent crisis. Here, the main question is how this increase would occur to a country that is not a safe haven. If we investigate the types of the US financial instruments purchased by central banks of developing countries, we may have some clues. The table below shows which instruments were mostly chosen by the official sources. During the crisis, the official flows were mostly directed to the safer US government papers and were withdrawn from private sector assets.

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

Table 3: The composition of net official inflows, the US, % of GDP

Years	Net total official flows	US Government and Treasury Securities	Securities by the US. Banks and Security Brokers	Others
1993	1.08%	0.81%	0.22%	0.04%
1994	0.56%	0.54%	0.05%	-0.03%
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

To fully understand the situation of the US financial markets during the crisis, one should also investigate the trend in private inflows into the US markets since private investors hold diversified portfolios and are more sensitive to the risks. During the Asian crisis, when the US markets were considered relatively safe, after a small decline in 1998, there was an increase in private inflows to the US economy in the period of 1999-2000 (Figure 16). Considering that there were huge reversals of financial flows in the Asian and other developing countries at that time, the funds escaping from these economies came to the safe haven, the US. As opposed to this, there was a reversal in private inflows to the US economy during the recent crisis. In other words, the private investors who are sensitive to risks did not prefer the US economy during the recent crisis.

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

In this part, we will briefly explore some other external factors, which 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 followed suit. However, the sharp declines in policy rates were not very effective. In fact, as Comert (2013) documents, the US Fed interest rate had gradually lost its effectiveness even before the crisis due mainly to deregulation and financial innovations¹⁸. In the face of the ineffectiveness of the short-term interest rate policy, the Federal Reserve and other central banks in advanced countries were forced to introduce unconventional monetary policy tools in order to prevent their financial system from experiencing a total collapse. They started pumping massive liquidity to financial markets through mainly 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 fearing financial reversals. In a period in which 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, financial sudden stops to developing countries lasted a relatively very short time. In other words, the duration of the financial shock did not last long. Third, swap operations agreements during the recent crisis helped some developing countries avoid the bottleneck of “original sin” for a while. In this sense, the countries that benefited from swap agreements had direct excess to the world currencies such as the Euro and Dollar. The most popular example of Swap agreements is US\$ 30 billion swap lines between the US Fed and the central banks of Brazil, Korea, Mexico and Singapore conducted in October 2008 (Aizenman, Jinjark and Park, 2011). During the crisis, the outstanding volume of swap agreements reached US\$ 500 billion all over the world (Milesi-Ferretti and Tille, 2011). The 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 the bigger financial shocks given unconventional and expansionary policies implemented by the advanced countries. Even the IMF, once the vanguard of free capital mobility, started to argue that capital controls and other heterodox policies would be used in some circumstances (IMF, 2012).

As a result, in a world in which treasury bonds returns in advanced countries were low and private assets were risky in advanced countries, developing countries were hit by relatively

¹⁸ Greenspan (2004) call the delinking between Fed rate and long-term interest rates around 2005 as a conundrum.

mild financial reversals. In the existence of massive expansionary policies and low returns in advanced countries, the duration of the sudden stop lasted shorter. In some cases, swap operations eased the pressure faced by some developing countries. Furthermore, as opposed to the previous experiences, developing countries enjoyed greater autonomy in designing their policies during the last crisis. In this sense, some developments in the advanced countries worked for the advantage of developing countries. As emphasized during the text, rather than domestic policies, these developments can be more important in explaining why developing countries did not face a financial collapse.

5. Concluding Remarks and Possible Scenarios

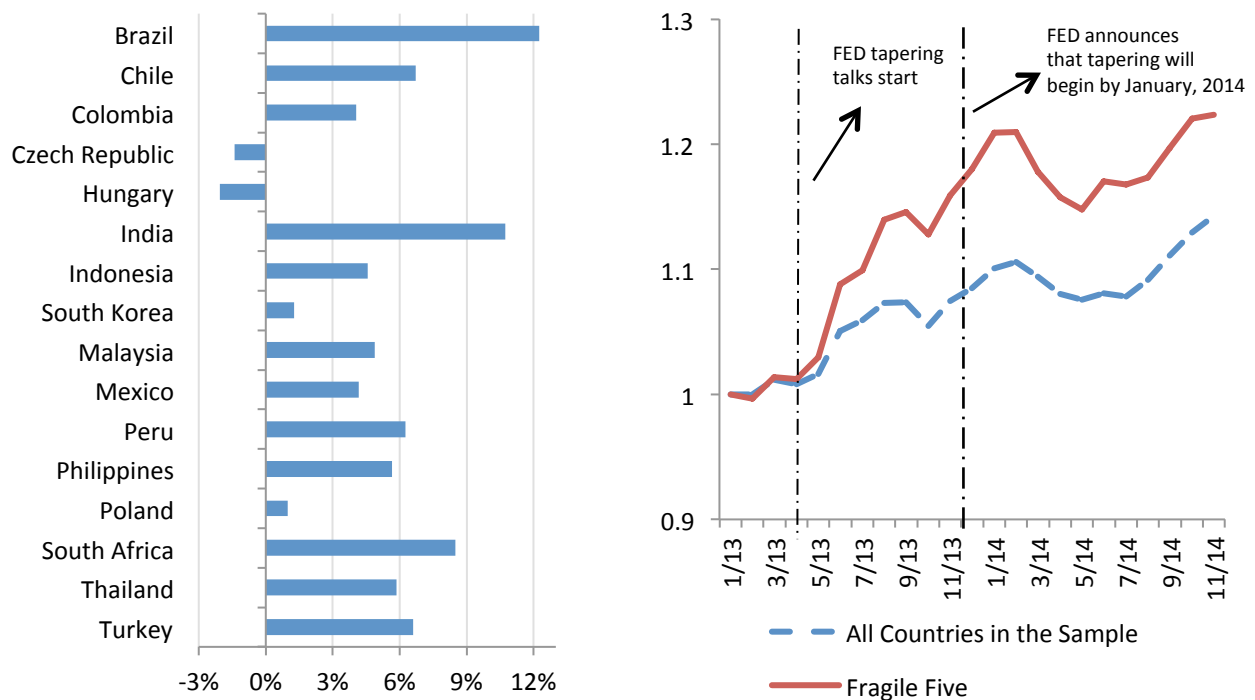
As highlighted several times in this paper, developing economies have not been tested by a destructive financial shock since 2002. The financial shocks that occurred in the recent crisis were very low both in magnitude and duration relative to the shocks in earlier crises in developing countries. It is very difficult to predict what would happen if developing countries were exposed to bigger shocks. However, in light of the previous developing country crises episodes we can discuss some possible scenarios that could come true in the near future.

The first possibility is that advanced countries' financial and real sectors recover, expansionary policies decelerate, and returns in industrial countries would rise in the upcoming periods. This would make private inflows to the north much more attractive and investor portfolios to be constituted more by advanced country assets and less emerging market assets. Under this scenario, in some fragile developing economies, some domestic and political factors would trigger financial account retrenchments. With the existence of proper safe havens, these financial account shocks would be greater and last longer. Depending on the magnitude of the shocks and the adequacy of foreign exchange reserves, some fragile developing economies would face new financial crises.

Some recent developments seem to be consistent with this possibility. For instance, in the second half of 2011, the signals about the recovery of the US economy led to capital retrenchments, considerable amounts of reserve losses, and currency depreciations in emerging markets. Similarly, since May 2013, as a result of the expectations about a rise in the US interest rates after the tapering decision of the FED, many developing countries have experienced significant volatilities. In this vein, even though the tapering has been adopted at very small

amounts, and no significant shift in the advanced country policy rates have taken place, as can be seen from Figure 17, many developing countries have faced considerable fluctuations in their exchange rates. Nowadays, some economists have asked if developing countries have come to the end of a relatively successful period (Akyuz, 2013; Velasco 2013). In case 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.

Figure 17: Vulnerability of developing countries to possible developments in advanced countries



Percentage changes in dollar exchange rate from March-May to June-August 2013.

The change in dollar exchange rates of developing countries (average across countries)¹⁹.

Source: Benjalper and Cömert (2015)

¹⁹ Following Aizenman et. al (2014) we set the dollar exchange rate of each country equal to 1 for January 2013. Then we took the average of the index across countries. The sample is the same with that of Figure 1. Fragile Five consists of Brazil, India, Indonesia, South Africa and Turkey.

A sudden and quick flight of the financial flows may lead to a pressure on the exchange rates in developing countries. Depending on the magnitude of the flight, the intervention of central banks would be ineffective and domestic players would start to close their foreign currency positions due to speculative and balance sheet concerns. Mounting demand for foreign currency by both foreign and domestic actors would accelerate the depletion of reserves. Since reserves have been accumulated via the past financial flows in many emerging markets with current account deficits, the reversals of these flows would easily drain the reserves (Akyuz, 2014). Furthermore, the residents' run towards foreign currency adds to this drain and the extent of the domestic run is very difficult to estimate since it is often speculative and self-fulfilling (Çolak, 2012). In other words, in developing countries, particularly in the ones 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 in the case of large external shocks in developing countries.

Another possible scenario is that the north is still not safe and their returns are still nearly zero. Under this scenario, capital flight into developing countries would continue as in the case during the period after 2009 due to monetary easing in the north. In this scenario, the developing country governments have two options. One option is that they apply classical policies and allow external capital to enter freely, which clearly makes the interest rates decline and business financing cheaper. Alternatively, they may apply prudential policies that slow down the credit expansion to avoid asset bubbles.

The first option is generally more appealing for ruling parties in emerging markets since it creates virtual growth and demand and consumption boom due to easy access to credit. However, this virtual boom is not sustainable in the long run. It widens current account deficits, increases indebtedness of the private sector and feeds asset price bubbles. Even in the absence of sudden stops or any indication of obvious macroeconomic problems, this process may end up with a Minsky type financial collapse if households or firms start to experience debt failures. The rise in house and stock market prices, soaring current account deficits due to appreciation of local currencies and credit expansions observed in developing countries after 2009 might be a signal of a Minsky type bubble. Alternatively, policymakers may want to avert these instabilities by

applying prudential rules. For example, they may conduct contractionary policies in order to decelerate the credit growth, moderate the current account deficits and increase saving rates. The contractionary policies increase the credit interest rates, reduce the credit growth and result in slowdown in aggregate demand, which is supposed to bring about improvements in current account. Since 2010, central banks in developing countries have put financial stability targets and macro prudential policies in their agendas due to these objectives. For example, the Turkish Central Bank targets about 15 % credit growth for the sake of financial stability. At the same time, the Bank has attempted to affect the composition and volatility of capital flows by different unconventional policies such as the Reserve Option Mechanism.

Nevertheless, the side effects of these policies are low growth, low consumption and investment rates and high unemployment. In 2012 and 2013, many developing countries experienced low growth rates due to these discretionary policies. Given unprecedented financial mobility and possible political pressures from different interest groups, sustaining these discretionary prudential policies would be very difficult.

Consequently, we discussed three possible scenarios for the future of developing countries. According to the first scenario, the returns in advanced countries became much more attractive with raises in policy interest rates. This would expose many fragile developing countries to capital reversals or sudden stops. The second scenario implies that developed countries will not solve their problems in the medium-run. This can cause short-term speculative inflows to soar into developing countries, making their financial system unstable. Negative expectations or domestic issues may contribute to financial instability, which may end up causing a financial crisis. The last scenario implies that developing country policymakers may apply prudential policies with high interest rates to avert the overheating pressures. However, this may lead to a slowdown in economic activity and large unemployment. Furthermore, in the absence of serious measures regarding financial flows, this option would not be sustainable as well. The future is blurred for the financial system of developing countries since their financial system is very much dependent on the cycles in the north. With the existing economic policies in developing countries, one of these three scenarios seems inevitable in the short and medium run.

There is a very dynamic but unequal relationship between developing countries and developed ones. Although the developments in advanced countries have had very important impacts on developing countries, it is very unlikely that, apart from some exceptions, economic

trends in developing countries may exert strong influences on the advanced world. In a world of highly mobile capital and trade liberalization, one can even argue that the implications of economic trends in advanced countries are decisive for developing countries in many ways. However, the initial conditions in developing countries may worsen or improve developing countries' positions in their interactions with the developed ones. In this sense, policy makers and economists should put more emphasis on this structural dependency of developing countries on the developments in advanced countries in order to derive meaningful lessons from the recent crisis.

References

- Acharya, V. V., & Schnabl, P. (2010). Do Global Banks Spread Global Imbalances: Asset-Backed Commercial Paper during the Financial Crisis of 2007–09. *IMF Economic Review*, 58(1), 37-73.
- Aizenman, J., Jinjara, Y., & Park, D. (2011). International reserves and swap lines: Substitutes or complements? *International Review of Economics & Finance*, 20(1), 5-18.
- Aizenman, J., Jinjara, Y., Lee, M., & Park, D. (2012). Developing countries' financial vulnerability to the euro crisis: An event study of equity and bond markets. *NBER Working Paper Series*, No. 18028
- Akyüz, Y. (2010). Global Economic Crisis and Asian Developing Countries: Impact, Policy Response and Medium Term Prospects. *TWN Global Economy Series*, No:27.
- Akyüz, Y. (2013a). Waving or Drowning: Developing Countries after the Financial Crisis. South Centre Research Paper 48, June, Geneva.
- Akyüz, Y. (2014). Crisis mismanagement in the US and Europe: impact on developing countries and longer-term consequences. *TEA Discussion Paper Series*, 2014 / 3.
- Alvarez, R., Gregorio, J. D. (2013) *Why did Latin America and Developing Countries Perform Better in the Global Financial Crisis than in the Asian Crisis*. Paper presented at Fourteenth Jacques Polak Annual Research Conference, Washington.
- [John Ammer](#), [Fang Cai](#), [Chiara Scotti](#) (2011), Has International Financial Co-Movement Changed? Emerging Markets in the 2007–2009 Financial Crisis, in Jonathan A. Batten, Peter G. Szilagyi (ed.) *The Impact of the Global Financial Crisis on Emerging Financial Markets (Contemporary Studies in Economic and Financial Analysis, Volume 93)* Emerald Group Publishing Limited, pp.231 - 253
- Baur, D. G., & McDermott, T. K. (2010). Is gold a safe haven? International evidence. *Journal of Banking & Finance*, 34(8), 1886-1898.
- Beck, R., & Rahbari, E. (2008). Optimal reserve composition in the presence of sudden stops: the euro and the dollar as safe haven currencies. *European Central Bank Working Paper Series*, No: 0916
- Benlialper, A., & Cömert, H. (2013), Implicit Asymmetric Exchange Rate Peg under Inflation Targeting Regimes: The Case of Turkey. *ERC Working Papers*, 13/08.
- Benlialper, A., & Cömert, H. (2015), Central Banking in Developing Countries After the Crisis: What Has Changed?. Unpublished manuscript. METU, Ankara.

- Berkmen, S. P., Gelos, G., Rennhack, R., & Walsh, J. P. (2012). The global financial crisis: Explaining cross-country differences in the output impact. *Journal of International Money and Finance*, 31(1), 42-59.
- Borio, C., & Disyatat, P. (2011). Global imbalances and the financial crisis: Link or no link? *BIS Working Papers*, No:346
- Bureau of Economic Analysis (BEA) (2014). *US. International Economic Accounts*. Retrieved from <http://www.bea.gov/international/index.htm#bop>
- Calvo, G., & Mishkin, F. S. (2003). The mirage of exchange rate regimes for emerging market countries. *NBER Working Paper Series*, No. 18028
- Ciner, C., Gurdgiev, C., & Lucey, B. M. (2013). Hedges and safe havens: An examination of stocks, bonds, gold, oil and exchange rates. *International Review of Financial Analysis*, 29, 202-211
- Cömert. H. (2013). *Central Banks And Financial Markets: The Declining Power of US Monetary Policy*. Edward Elgar Publishing, Northampton, US.
- Cömert. H.,& Uğurlu. E. (2014). *The Impacts of the 2008 Global Financial Crisis on Developing Countries: The Case of 15 Developing Countries Hit Hardest by the Crisis*. Unpublished Manuscript. METU, Ankara.
- Cömert. H., & Düzçay. U. (2014). *Küresel Dengesizlikler ve Kriz Tartışması Işığında Gelişmekte Olan Ülkelerde Cari Hesapları Yorumlamak*. Unpublished Manuscript. METU, Ankara.
- Cömert, H., & Çolak, S. (2013). Gelişmekte Olan Ülkelerdeki Kriz Sırası ve Sonrasındaki Trendleri Açıklamakta" Güvenli Liman Faktörü" ve Finansal Şokların Boyutunun Önemi: Türkiye Örneği, *ERC Working Paper Series*, 2013/10.
- Çolak, M.S. (2012). *The possibility of financial crises in developing countries under flexible exchange rate regimes: A multidimensional approach*. Unpublished Master's Thesis, Middle East Technical University, Ankara, Turkey
- De Santis, R. A. (2012). The Euro area sovereign debt crisis: safe haven, credit rating agencies and the spread of the fever from Greece, Ireland and Portugal. *European Central Bank Working Paper Series*, No. 1419.
- Ratha, D. (2005). *Workers' Remittances: An Important and Stable Source of External Development Finance*. World Bank, retrieved from <http://siteresources.worldbank.org/INTRGDF/Resources/>

- European Central Bank (ECB) (2014). *Statistical Data Warehouse*. Retrieved from <http://sdw.ecb.europa.eu/>
- FXTOP (2014). *Historical Exchange Rates Database*. Retrieved from <http://fxtop.com/>
- Greenspan, A. (2004). *Remarks on current account, before the Economic Club of New York*, New York, March 2, 2004.
- Habib, M. M., & Stracca, L. (2012). Getting beyond carry trade: What makes a safe haven currency?. *Journal of International Economics*, 87(1), 50-64.
- International Monetary Fund (IMF) (2012). *The Liberalization and Management of Capital Flows: An Institutional View*. Retrieved from <http://www.imf.org/external/pubs/ft/survey>
- International Monetary Fund (2014). *World Economic Outlook*. Retrieved from <http://www.imf.org/external/pubs/ft/weo/2014/01/weodata>
- International Monetary Fund (2014). *IMF E-library Data*. Retrieved from <http://elibrary-data.imf.org/DataExplorer.aspx>
- Kaul, A., & Sapp, S. (2006). Y2K fears and safe haven trading of the US dollar. *Journal of international money and finance*, 25(5), 760-779.
- Llaudes, R., Salman, F., & Chivakul, M. (2010). The impact of the great recession on emerging markets. *IMF Working Paper*, 10 / 237
- Kose, M. A., Otrok, C., & Prasad, E. (2012). Global Business Cycles: Convergence or Decoupling? *International Economic Review*, 53(2), 511-538.
- Milesi-Ferretti, G.-M. and Tille, C. (2011). The great retrenchment: international capital flows during the global financial crisis. *Economic Policy*, 26: 289–346.
- Minsky, H. (1986). *Stabilizing an Unstable Economy*. Retrieved from <http://digamo.free.fr/minsky86.pdf>
- Miyajima, K., Mohanty, M., & Chan, T. (2012). Emerging market local currency bonds: diversification and stability. *BIS Working Papers*, No: 391.
- Ronaldo, A., & Söderlind, P. (2010). Safe haven currencies. *Review of Finance*, 14(3), 385-407.
- Tsangarides, C. G. (2012). Crisis and recovery: Role of the exchange rate regime in emerging market economies. *Journal of Macroeconomics*, 34(2), 470-488.
- Van Wincoop, E., & Yi, K. M. (2000). Asia crisis postmortem: where did the money go and did the United States benefit?. *Economic Policy Review*, 6(3).

Velasco, A. (2013). *Emerging Markets' Nirvana Lost*. Retrieved from <http://www.project-syndicate.org/>

World Bank (2014). *World Development Indicators*. Retrieved from <http://data.worldbank.org/data-catalog/world-development-indicators>