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The Impacts of the 2008 Global Financial Crisis on Developing Countries: The Case of the 15 Most Affected Countries

Hasan Cömert
Department of Economics,
Middle East Technical University, Ankara, Turkey
E-mail: hcomert@metu.edu.tr
Phone: + (90) 312 210 3044

Esra Nur Uğurlu
Université of Paris 13
E-mail: esra.ugurlu@edu.univ-paris13.fr

The impacts of the 2008 global financial crisis on developing countries: the case of the 15 most affected countries[1]

Hasan Cömert[2]
and
Esra Nur Uğurlu[3]

Abstract

Benefiting from an event analysis, we investigate the transmission mechanism through which the recent global crisis impacted the 15 worst affected countries and the reasons behind the weak performances of these countries. The overall evidence shows that the trade channel was the most important mechanism in the transmission of the crisis from advanced economies to developing countries. The role of the financial channel varied in different countries. Some countries encountered massive financial reversals; some others experienced different degrees of financial stops. In general, as expected, the most affected countries in our set are the ones that experienced both financial reversals and a dramatic decline in their exports. Although almost all these countries experienced spectacular growth performances from 2002 to 2008, they also accumulated significant vulnerabilities, which were mainly related to the structural problems of their integration into the world economy during the same time period. Furthermore, those countries that were unwilling or unable to conduct considerable countercyclical fiscal and monetary policies were among the most affected ones in our sample.

Key words: Comparative Country Studies, Developing Countries, Financial Crises, Financial Flows, Trade
Jel Codes: O570, O10, G02, F320, F100

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[1] A version of this paper will appear as a chapter in a forthcoming book (Edward Elgar Publisher), *The Global South After the Crisis (edited by Hasan Cömert and Rex McKenzie).* The names of the authors are in alphabetical order by authors' last name. This does not necessarily reflect the relative contribution of the authors.

[2] Middle East Technical University, hcomert@metu.edu.tr.
[3] Université of Paris 13, esra.ugurlu@edu.univ-paris13.fr

1 Introduction

The financial crisis that originated in the US subprime mortgage market in 2007 to 2008 spread quickly to the rest of the world and became a global crisis affecting both real economic and financial activities in virtually all countries in the world. There has been a growing literature on the impacts of the crisis on different economies. Among these studies, the popular perception regarding developing countries is that they weathered the crisis relatively well. Although this point is widely recognized in the literature[4], the heterogeneity among developing countries in their ability to cope with the crisis is often disregarded. In this vein, some countries experienced significant slowdowns comparable to, or even larger than, those in advanced economies. There have been some attempts to explain the heterogeneous effects of the crisis on different developing countries.[5] However, the existing literature on cross country differences is limited and fails to draw consistent conclusions. Many of them do not pay enough attention to the country selection procedures and country specific factors. Furthermore, these studies, in general, focus solely on econometric analysis. Although econometric methods may be useful for different purposes, it may also downplay the complex process of the events leading to the crisis.

In this study, we focus on 15 countries that were affected by the crisis most severely. These countries are Armenia, Botswana, Bulgaria, Croatia, Hungary, Kuwait, Latvia, Lithuania, Mexico, Moldova Paraguay, Russia, Romania, Turkey and Ukraine. We utilize an event analysis in order to capture the dynamic process behind the relatively bad performance of these countries. Our aim is twofold: first, we explore the transmission mechanisms through which the recent global crisis affected these

[4] For example: Ceballos, Didier, Hevia and Schmukler (2013); Eichengreen (2010); Cömert and Çolak (2014).

[5] For instance, the IMF working paper (2009) written by Berkmen, Gelos, Rennhack and Walsh, using cross country regressions, tries to explain the differences in the impacts across developing countries. They utilize growth forecast revisions for this purpose. They primarily associate the decline in revisions to financial linkages and, contrary to our findings, they attach secondary importance to the trade channel. In another study, focusing on policy responses and recovery period, Didier, Hevia and Schmukler (2011) explore the cross country incidence of the crisis for 183 countries. Similarly, Rose and Spiegel (2009) conduct an econometric analysis on a cross section of 85 countries to measure the crisis incidence. Contrary to common perceptions, they do not find strong evidence that associates international linkages with the incidence of the crisis. However, these studies don’t pay enough attention to country specific factors that may not be easily captured by a panel data econometrics.

countries. Second, we attempt to reveal the common characteristics of these countries that made them more vulnerable to the crisis[6,7].

There is always some arbitrariness in selecting a set of countries on which to conduct comparable and meaningful research. Here, we attempt to overcome this problem by only focusing on relatively big countries hit hardest by the crisis in terms of GDP growth. To this end, all countries were first ranked according to the IMF specification in terms of GDP growth rates in 2009.[8] Then 15 relatively big countries with the lowest growth rates were selected. Since very small economies experience very frequent fluctuations, we excluded some very small island countries such as Grenada, Montenegro, Antigua and Barbuda, The Bahamas, Samoa, Solomon Islands, Trinidad and Tobago, St Kitts and Nevis, Madagascar and Barbados from our sample.[9] In this way, we are able to focus on countries with significant economic scale and population size[10].

The main findings of this study are as follows. First, the overall evidence shows that the trade channel was the most important mechanism in the transmission of the crisis from advanced economies to the countries under investigation. The degree of openness, the geographical concentration and the composition of export products were important factors contributing to the deterioration of the export performances in these countries. Countries that we selected were particularly affected by the contraction in global demand because of limited trade partners and products that they export. More specifically, they faced very sharp contraction in their export growths since they either

[6] It should be noted that a complete cross country analysis would only be possible if the countries that were least affected are also analyzed and comparisons between the least and the most affected ones are made. However, that discussion is beyond the scope of this paper. We are considering comparing the least and the worst affected countries as a further research agenda.

[7] Apart from some regional studies, there are not many studies focusing on a set of worst affected countries. Many existing studies focus on Central and Eastern European Countries. Berglöf, Korniyenko, Plekhanov and Zettelmeyer (2009), Kattel (2010), Sprenger and Vincent (2010), ECB Bulletin (July 2010), Aslund (2011) and Bartlett and Prica (2012) discuss the effects of the crisis on Central and Eastern European countries.

[8] As a selection criterion, even if we use the difference in the average GDP growth of countries from 2002 to 2008 and GDP growth in 2009, the countries in our set remain mostly intact.

[9] We have eliminated the UAE from the analysis because trade and financial account data were unavailable for this country.

[10] Since our main focus is on economic factors, the role of other factors such as the existence of political crises in the growth performance of these countries was also investigated. Among the selected countries only Russia went through a political crisis (Russia-Georgia War in 2008). Therefore, we mentioned the effect of this war on Russia and other countries in the region such as Ukraine and Moldova in our discussion. With regard to the effects of natural problems, the effect of drought at the start of the crisis in Paraguay was considered as well, since it is a country highly dependent on agricultural exports, particularly soybeans.

produced manufactured goods with high income elasticity, exporting them to the US or the European markets, which were the epicenters of the crisis, or they were commodity exporters. Second, the role of the financial channel varied in different countries. Some countries encountered massive financial reversals while others experienced varying degrees of financial stops. In general, as expected, the most affected countries in our set are the ones that experienced both a dramatic decline in their exports and financial reversals. Third, although the countries under investigation experienced high growth rates before the crisis, they also accumulated significant vulnerabilities in the same period, which were mainly related to the structural problems of the integration of these countries into the world economy. In this vein, many of these vulnerabilities were related to massive financial flows, which went hand in hand with exchange rate appreciation, decreasing competitiveness, domestic (especially private sector debt) and foreign indebtedness, and high current account deficits. Fourth, the majority of countries under investigation were either unwilling or constrained in their ability to conduct countercyclical monetary and fiscal policies. In terms of monetary policies, early and significant reductions in policy rates were not realized. In terms of fiscal measures, there was limited fiscal space and, in the case of the transition countries trying to join the EU, entry requirements limited the ability of these countries to take countercyclical measures. As a result, these countries could not mitigate the effects of the crisis by using expansionary policies.

The organization of the rest of the paper is as follows. In the second section, the general performance of countries in the pre crisis period is discussed. The third section focuses on the impact of the crisis on the 15 selected countries. The fourth section investigates the policies taken by the countries under investigation in response to the crisis. The last section concludes.

2 Performances of the developing countries prior to the global crisis

After getting over the global downturn in 2001, developing countries as a group entered the new millennium in a much better economic environment than they did in the previous two decades and experienced historically high rates of growth. From 2002 until 2007, developing countries grew on average at 7.16 per cent. In this sense, the overall performance of these countries was better than the advanced countries (Table 1.1).

Table 1.1: GDP growth of different group of countries before and during the crisis (percentage change)

	1990-2001 average	**2002-2007 average**	**2008**	**2009**
World	3.15	4.48	2.69	-0.38
Advanced Economies	2.77	2.60	0.1	-3.43
European Union	2.31	2.53	0.58	-4.41
Emerging Market and Developing Economies	3.85	7.16	5.84	3.09
Central and Eastern Europe	1.85	5.70	3.16	-3.61
Commonwealth of Independent States	-1.61	7.60	5.34	-6.44
Developing Asia	7.19	9.22	7.32	7.70
Latin America and the Caribbean	2.82	4.082	4.23	-1.22
Middle East and North Africa	4.34	6.24	5.04	2.99
Low Income	2.80	5.36	5.49	5.23
Lower Middle Income	3.41	6.69	4.48	4.99
Middle Income	3.88	6.82	5.56	3.10
Upper Middle Income	4.03	6.86	5.87	2.56
High Income	2.50	2.69	0.36	-3.56

Source: IMF, WEO, October 2013 and World Development Indicators (WDI)

Although almost all developing countries experienced positive GDP growth rates during this period, it masks the vastly different growth patterns of individual economies over the last several decades. For example, countries from developing Asia and the Commonwealth of Independent States (CIS)[11] experienced the largest output increase. On the other hand, growth rates were lower in Central and Eastern European

[11] CIS, a group of alliance countries, refers to former Soviet Republics excluding Baltic States Estonia, Latvia and Lithuania. Formally, these CIS countries are: Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russian Federation, Tajikistan, Turkmenistan, Ukraine and Uzbekistan. Georgia left the group after the Russian-Georgian War of 2008.

countries (CEE)[12] and more volatile in Latin America, the Middle East and Sub Saharan Africa regions (Table 1.1).

Some changes in economic policies in developing countries might have played a role in the acceleration of growth in the pre crisis period. However, the exceptional growth performance of countries was significantly related to the positive global outlook after 2001.[13] In general, the growth was fueled by a mix of four ingredients: 1) high global demand, 2) exceptional financing, 3) high commodity prices and, 4) for a significant number of countries, large flows of remittances mainly resulting from the consumption and property bubbles in the advanced economies (Griffith-Jones and Ocampo, 2009). In other words, policies implemented in advanced economies created a favorable environment for all countries in trade activities, financial flows and commodity prices until the outbreak of the financial crisis.

After 2001, advanced economies started to pursue expansionary monetary policies. In the US, policy makers decided to use monetary expansion in order to minimize the depth and the duration of the crisis arising from the bursting of the US high tech bubble in 2000 and the September 11 attacks of 2001. In Japan and in Europe the Central Banks brought the interest rates down to unusually low levels in order to break out of deflationary spirals. More importantly, financial innovations and many other institutional changes taking place in the US and advanced countries enabled financial firms in the center to expand their balance sheets almost limitlessly (Cömert, 2013). Given increased financial openness, financial account liberalization and ease of conducting financial activities, financial capital started to flow into emerging market countries with higher returns. In this process, due to significantly improved risk appetite, the spreads between the emerging market debt instruments and advanced countries decreased, which resulted in a sharp decline in the cost of external financing for developing countries (Akyüz, 2012). In other words, many developing countries

[12] CEE refers to a group of countries including Albania, Bulgaria, Croatia, the Czech Republic, Hungary, Poland, Romania, the Slovak Republic, Slovenia, Estonia, Latvia and Lithuania. Among these countries, six of them (Bulgaria, Croatia, Hungary, Latvia, Lithuania, and Romania) are in our set.

[13] Although it has recently become much more obvious that a positive global outlook was a driving force behind the overall positive performance of developing countries from 2002 to 2008, many economists and institutions including the IMF argued that the performance of the developing countries in this period was the outcome of the improvements in their policies and institutional structures. For instance, IMF October 2008 World Economic Outlook widely stresses sound policy choices in developing countries, which enabled them to achieve lower fiscal deficits, inflation levels and historically high levels of international reserves.

were able to take advantage of abundant and cheap borrowing opportunities from the rest of the world.

The growth of exports and improvements in current account balances in the Global South were also significantly affected by the developments in the advanced countries. The high US consumption and corresponding current account deficits gained momentum in the 2000s as US financial institutions generated massive cheap credits. The growing external deficit of the US led to improvements in the current accounts of its trade partners, the majority of which were developing countries from the Global South.[14] In this way, the US acted as a locomotive for the rapid expansion of export growth in developing countries. Although smaller in size when compared to the US, the European Union and the UK were also running current account deficits in the pre crisis period. Furthermore, the high growth performance of China and India together with some other BRIC countries such as Brazil generated extra demand for many raw materials and goods of other developing countries. In relation to these developments, improvements in the current account balances of developing countries were further enhanced by rises in commodity prices.[15]

Countries in the South also enjoyed a rapid growth of workers' remittances. In middle income and upper middle income countries remittances amounted to 1.93 and 1.10 per cent of GDP respectively. The increase in remittances particularly in India, Mexico, Indonesia, China and Moldova brought about considerable improvements in the current account balances.

Although positive shocks from advanced economies played a major role in shaping the growth performances of many of these countries, some macroeconomic policies may also have had a positive impact on this process (Bibow, 2010). Many country governments in the South conducted macroeconomic reforms mainly aimed at reducing inflation and strengthening their public finance positions and financial markets in the beginning of the 2000s[16]. Overall, many developing countries achieved lower inflation rates, better public debt indicators and, in some cases, healthier banking

[14] Countries with the highest shares in the US imports are as follows: China (19 per cent), EU (16.7 per cent), Canada (14 per cent), Mexico (12 per cent) and Japan (6.4 per cent). In other words, developing countries have a share of more than 50 per cent in the US's total imports.
[15] In the period 2002 to 2008, out of 106 developing countries, 42 countries had surpluses, 52 countries had almost balance and the rest had considerable deficits in their current accounts.
[16] Many of these countries took measures to strengthen their financial markets as well.

systems relative to those in the 80s and 90s. However, interestingly, these were not independent of the positive global outlook and the massive financial flows to the emerging market countries. Domestic currency appreciation improved the debt to GDP ratio in many cases due to the fact that an important part of total debt in developing countries is denominated in foreign currencies whereas GDP is measured in local currency[17]. High financial flows going hand in hand with local currency appreciation may also improve the balance sheets of financial institutions by decreasing the value of foreign liabilities in domestic currency. Moreover, a positive global outlook stimulating high growth may increase tax revenues, which may contribute to the improvement in public balance in developing countries. Last but not least, currency appreciations related to high financial flows served as anchors to inflation in many developing countries (Benlialper and Cömert, 2014).

Overall, thanks to global outlook and some policy measures, while the Global South enjoyed high growth rates and some positive macroeconomic trends, important vulnerabilities started to be formed in this period as well. As we will discuss in the following sections, this pattern is very apparent in the countries in our set.

2.1 Performances of developing countries in 2009

The financial crisis that began in the advanced countries in 2008 spread all around the world through different channels. In this environment, the Global South could not sustain its high growth performances. However, overall, the South was affected at varying degrees by the crisis. In Table 1.2, the 15 most affected countries are listed. It is observed that growth rates in these countries fell significantly in 2009 compared to the previous years. Also, their economic performance was way lower than both the world average (-0.3 per cent) and the developing economies' average (3.1 per cent). In our sample, four countries experienced a more than 14 per cent decline in their GDP in 2009 and the other 11 countries were faced with negative growth rates ranging from about 4 per cent to 8 per cent.

[17] An appreciation of domestic currency would decrease the debt to GDP ratio by causing an increase in GDP converted in foreign currency.

Table 1.2: Countries most severely affected by the global crisis

	2002-06average	2007	2008	2009
Latvia	8.99	9.6	-3.27	-17.72
Lithuania	8.01	9.79	2.91	-14.84
Ukraine	7.44	7.6	2.3	-14.8
Armenia	13.32	13.74	6.94	-14.15
Botswana	5.18	8.68	3.90	-7.84
Russia	7.03	8.53	5.24	-7.8
Kuwait	9.74	5.99	2.48	-7.07
Croatia	4.71	5.06	2.08	-6.94
Hungary	4.20	0.11	0.89	-6.76
Romania	6.16	6.31	7.34	-6.57
Moldova	6.80	2.99	7.8	-6
Bulgaria	5.95	6.44	6.19	-5.47
Turkey	7.21	4.66	0.65	-4.82
Mexico	2.76	3.13	1.21	-4.52
Paraguay	3.83	5.422	6.35	-3.96
Developing Countries	6.86	8.701	5.87	3.11
World	4.31	5.348	2.705	-0.381

Source: IMF, WEO, October 2013

Although all countries under investigation were hit very hard by the trade channel, the role of the financial channel varied in different countries (Table 1.3). Some countries experienced massive financial reversals; others experienced different degrees of financial sudden stops. Apart from Romania, which encountered about 15 per cent in export shock, all countries in our sample experienced more than 20 per cent in export shock. Although financial flows to all countries decreased, only four countries in our sample experienced unexpected financial reversals. In general, as expected, the most affected countries were the ones that experienced both a dramatic decline in their exports and financial reversals. However, our analysis in this section also supports the idea that, unlike the experiences in the 80s and 90s, even some of the worst affected countries in our sample did not experience financial reversals during the recent crisis.

Table 1.3: The magnitude of trade and financial shock

	Trade Channel		Financial Channel		
Countries	**Export of Goods (% Growth) (average 2006-08)**	**Export of Goods (% Growth in 2009)**	**Financial Account/GDP (average 2002-08)**	**Financial Account/GDP (average 2005-08)**	**Financial Account/GDP in 2009**
Latvia	24.12	-22.58	13,57	20.28	-6.97
Lithuania	27.65	-31.35	7,97	12.31	-7.09
Ukraine	25.63	-41.23		7.19	-9.31
Armenia	3.87	-32.67		7.41	16.4818
Russia	24.99	-36.27		-0.21	-2.30
Kuwait	24.80	-37.40		-38.61	-25.17
Croatia	17.06	-25.60	9,20	11.82	10.4419
Hungary	20.82	-24.56	8,21	10.44	2.75
Romania	41.62	-15.81	8,53	14.8	0.84
Moldova	11.39	-21.18		14.49	0.15
Mexico	10.86	-21.21		1.94	1.74
Bulgaria	24.20	-27.21	16,92	31.01	5.46
Turkey	21.53	-22.12		7.31	1.66
Botswana	2.96	-28.47		4	1.12
Paraguay	26.04	-20.28		2.93	0.17
MI	21.18	-21.02		-	-
UMI	21.42	-21.26		-	-
Developing Countries	-	-		2.68	1.43

Source: IMF, WEO, October 2013 and WB, WDI

The fifteen countries can be grouped in different ways for different purposes. For example, these countries can be divided into two subgroups by focusing on commodity exporters and non commodity exporters. They can then be grouped according to the magnitude of their trade and financial shocks. Although we will refer to these distinctions in our discussions, since the Eastern Bloc (transition countries)

[18] We think that the positive record of Armenia in its financial account is resulted from the IMF loan of $540 million. The decline in net financial account starts after 2009. (Source: interview with the prime minister of Republic of Armenia, adopted from http://www.gov.am/en/interviews/1/item/2883/ in 6/24/2014).

[19] The decline in net financial flows in Croatia started after 2009. (Net fin. Acc./GDP ratio fell to 2.94% in 2010 from its ratio of 10.44% in 2009).

dominate our sample, we will divide these countries into two groups, namely 'transition countries' and 'others'[20]. In this sense, Armenia, Bulgaria, Croatia, Hungary, Latvia Lithuania, Moldova, Ukraine, Russia and Romania are in the first group of countries. These economies have historical similarities. After sharing a similar economic system for decades, they hastily moved to a market based economic system at the beginning of the 1990s. For these countries, Russia and Europe have been very important as exports markets and sources of remittances. The second set of countries includes Kuwait, Turkey, Mexico Botswana and Paraguay. As can easily be seen, Mexico and Turkey are relatively big upper middle income countries that have had strong ties with the epicenters (US and Europe) of the crisis. Kuwait, Botswana and Paraguay are commodity exporter countries.

3 Transition economies

In the years preceding the crisis, the transition economies under consideration encountered unabated capital and output growth. Latvia, Lithuania, Armenia, Ukraine and grew by more than the average of developing countries. In particular, the Baltic States (Latvia and Lithuania) grew at very high rates (approximately 7.5 per cent between 2002 and 2008). Romania, Moldova and Bulgaria grew at an average phase with other CIS countries.

Apart from Russia, who has had current account surpluses, these economies, from the beginning of the decade to 2008, enjoyed strong financial inflows from the rest of the world (Table 1.3). Table 1.4 demonstrates that, as a general rule, the growth of domestic credit to the private sector was higher in the CIS countries than the world averages for upper middle income. Credit growth reached more than 200 per cent in Lithuania, Romania, Bulgaria and Ukraine. It was more than 100 per cent for Armenia, Latvia and Russia. Even the credit growth in Croatia and Bulgaria, which was less than 100 per cent, was way beyond the world and upper middle income averages. In connection with large financial inflows and rapid credit growth, there was a rapid rise in consumption. Investment and asset prices in some countries (especially in the Baltic States) also increased. For instance, in Latvia total investment as percentage of GDP

[20] A region based classification is possible as well. Transition economies and Turkey can be investigated in terms of their proximity to Europe. Mexico, Paraguay, Botswana and Kuwait can be put into the category 'others'.

increased to approximately 40 per cent of GDP from its level of 25 per cent in 2002. Similarly, in Lithuania the investment to GDP ratio increased from 20 per cent in 2002 to 31 per cent in 2007. The growth in consumption and investment expenditures were higher in these countries than the rest of the world averages (Table 1.4) [21].

Furthermore, as described in a monthly bulletin of the ECB (July, 2010), wealth effects[22] arising from rising asset prices increased domestic demand. Combined with expansionary fiscal policies implemented by several countries such as Romania and the Baltic states, macroeconomic policy also contributed to high GDP growth rates in these countries.[23]

[21] Rapid credit expansion also caused real estate bubbles in some countries that are analyzed in this paper. For instance, housing bubbles in Baltic States are widely discussed in the literature. According to a study by Krusinskas (2012), three Baltic states (Latvia, Lithuania and Estonia), two of which are discussed in this paper (Latvia and Lithuania) experienced housing bubbles as housing prices rose out of proportion with the income of these countries' residents. For other countries that we investigated, there are some debates on whether they experienced a housing bubble or not. For most countries, house price data is unavailable or only became available for the years following the global crisis. Therefore, given the scope of this paper and ongoing debates in literature, we cannot firmly assert the existence of housing bubbles in the countries that we analyze. However, existing literature helps us to conclude that increases in house prices were observed prior to the crisis in many countries. For further discussion, we can suggest the following studies:
Manookian and Tolasa (2011), 'Armenia's Housing Boom Bust Cycle', retrieved from https://www.imf.org/external/country/arm/rr/2011/112811.pdf on 8/18/2014.
Abotalaf (2011), 'Kuwait Economic Report', retrieved from http://www.capstandards.com/CSR_KuwaitEconomicReport_Feb2011.pdf on 8/18/2014.
Crowe, Dell'Ariccia, Igan and Rabanal (2012), 'Policies for Macrofinancial Stability: Managing Real Estate Booms and Boosts' retrieved from https://www.imf.org/external/np/seminars/eng/2012/fincrises/pdf/ch12.pdf
[22] Wealth effect refers to the change in consumption expenditures that accompanies a change in perceived wealth. For example, when asset prices rise, agents feel that the value of their portfolio rises and they feel more comfortable and secure about their wealth, leading them to consume more out of their wealth.
[23] High GDP growth trend based on financial inflows and increased consumption is emphasized for these countries by many others. For example the ECB report in July 2010 argues that, in the years preceding the crisis, Eastern European countries grew rapidly at unsustainable rates. In this sense, Dudzińska (2011) associates high growth rates observed in Latvia between 2004 and 2007 mainly to substantial inflows of foreign capital, which stimulated domestic demand. Similarly, Stoicui (2012) maintains that the growth in Romania in the pre crisis period is mainly related to the boom in the domestic consumption of durable goods, which also induced a large current account deficit.

Table 1.4 Investments, consumption and credit growth

	The Growth of Domestic Credit to Private Sector (% of GDP) from 2002 to 2007	Annual Percentage Growth of Final Consumption Expenditure		Total Investment (% of GDP)		Growth of hh annual consumption expenditure in 2009	Growth of total investment in 2009
		2002	**2007**	**2002**	**2007**		
Latvia	172	6.1	12.8	25.728	39.959	-24.08	-34
Lithuania	271	4.6	10.3	20.340	31.231	-17.82	-57
Hungary[24]	78	6.8	-1.5	24.670	22.433		
Romania	244	3.7	9.6	22.002	30.975	-6.55	-23
Croatia	42	6.8	6.1	26.072	34.093	-23.25	
Bulgaria	225	3.2	7.1	19.681	34.093	-7.68	-17
Russia	115	7.6	16.9	20.035	25.360		
Ukraine	229	4.7	13.4	20.191	28.210	-16.03	-28
Armenia	100.36	7.92	16.50	18.15	38.16	-19.88	-38
Moldova	114	7.5	10.9*	21.661	38.106	-4.5	-23
UMI Countries	8	2.0	7.1				
MI Countries	11	2.3	7.6				
Developing Countries				24.921	29.496		
World	7	2.4	3.4	21.970	24.563		

Source: IMF, WEO, October 2013 and WDI

Note: Domestic credit to private sector refers to financial resources made available to the private sector through loans, purchases of non equity securities, trade credits and other accounts receivable that establish a claim for repayment. Some cells are left blank because the data was not available for these aggregates. Hungary experienced negative growth in 2007. For this reason, consumption data for Hungary is negative in 2007.

***** 2006

However, as mentioned before, the high growth took place along with an increase in monetary/financial vulnerabilities. As foreign capital continued to flow in, real appreciation of exchange rates and credit growth accelerated. As a result, consumption expenditures, some of which fed imports, increased and current account

[24] Hungary, entered crisis in 2007. For this reason, consumption data is negative for 2007 on 8/18/2014

deficits worsened. The current account deficit of Bulgaria, Latvia, Moldova, Lithuania, Romania, Croatia, Armenia and Ukraine reached enormous amounts: 25.2 per cent, 22.4 per cent, 15.2 per cent, 14.4 per cent, 13.42 per cent, 7.3 per cent, 6.4 per cent and 3.7 per cent respectively (Table 1.5). In other words, these countries accumulated liabilities to be paid to the rest of the world in the future, which made them highly dependent on financial flows.[25]

[25] The effects of financial inflows in creating higher levels of external indebtedness can be summarized as follows. Accordingly, large financial inflows resulted in rapid credit growth, which fed consumption expenditures and put upward pressures on asset prices. As rises in asset prices created excess demand pressures, their effects were translated into high inflation and appreciated REERs. As a result, in the countries under investigation and in many other upper middle income countries, there was decreasing competitiveness in international markets and, relatedly, higher Current Account deficits.

Table 1.5[26]: Inflation, real exchange rate and current account

	Inflation		REER / REER Index		CA Balance (% of GDP)	
	2002	**2007**	**2002**	**2007**	**2002**	**2007**
Latvia	1.95	10.1	-2.9	6.6	-6.66	-22.44
Lithuania	0.34	5.82	2.8	3	-5.15	-14.47
Hungary	5.26	7.93	84.5	100.2	-6.99	-7.27
Romania	22.5	4.83	82.3	111.6	-3.33	-13.42
Croatia	1.67	2.87	90.8	97	-7.2	-7.26
Bulgaria	5.8	7.57	75.8	91.1	-2.37	-25.2
Russia	15.78	9	65.1	91.8	8.43	5.48
Ukraine	0.75	12.8	102.3	115	7.48	-3.69
Armenia	1.071	4.55	94.18	124	-6.228	-6.401
Moldova	5.21	12.4	71	87.4	-1.19	-15.24
Kuwait	0.797	5.47			11.18	36.79
Mexico	5.037	3.97	111.4	99.12	-1.883	-1.368
Turkey	5.134	8.76			-0.269	-5.838
Botswana	8.026	7.08			3.83	15.11
Paraguay	10.51	8.13	110	126.2	9.808	5.606
Emerging Markets	7.11	7.81			-1.12	-3.73

Source: IMF, WEO, October 2013 for Inflation, CA deficit, Eurostat REER and REER Index
Note: Since the REER index data was not available for Latvia and Lithuania, REER data from the Eurostat are given for these two countries. In the remaining countries, the REER index was used. Data was not available for cells that have been left blank.

The high current account deficits and dependency on financial flows were important factors, but these were not the only vulnerabilities. In many of the countries that we investigate here, total debt was denominated primarily in foreign currency (from euro to yen), making corporate and household borrowers, and hence creditor banks, vulnerable to a depreciation of the exchange rate (Berglöf et al, 2009). Another significant characteristic of the debt structure was related to the high levels of debt

[26] Definition of the data: Private nonguaranteed external debt comprises long term external obligations of private debtors that are not guaranteed for repayment by a public entity. Data is in current U.S. dollars.
Description of private debt/GDP: The private sector debt is the stock of liabilities held by the sectors' non-financial corporations and households and nonprofit institutions serving households. The instruments that are taken into account to compile private sector debt are securities other than shares, excluding financial derivatives and loans; that is, no other instruments are added to calculate the private sector debt. Data is presented in consolidated terms, i.e., data does not take into account transactions within the same sector.

accumulation by the private sector. Table 1.6 demonstrates that private debt/GDP ratio increased significantly in all countries, whereas, except for Hungary, government debt/GDP ratio decreased in countries for which data are available. In other words, although these countries enjoyed improvements in their public balances, they continued to accumulate debt in different forms.

In addition to the financial flows, high commodity prices were another driver of growth in Russia, Ukraine and Armenia[27]. These countries produced a relatively narrow spectrum of industrial products compared to other countries in this group. For example, Russia and Ukraine based their exports on mainly the oil and steel industries respectively. Armenia sells mainly metals and some precious minerals. Since commodity prices were rising prior to the crisis, these three countries benefited from rising prices and the concomitant rise in export revenues. As a result, Russia in particular was able to achieve current account surpluses. In fact, it was the only country with current account surplus in this group of countries.

The situation in Moldova was slightly different to other countries in the set. The country based its growth performance prior to the crisis mainly on its exports to Russia and on remittances of workers living in Russia. The main export commodities of Moldova were agricultural products. When Russia entered into a political and economic crisis because of the Russia-Georgia war and banned Moldovan wine exports, the country faced huge difficulties. Therefore, the economic environment in Moldova had already deteriorated prior to the crisis.

[27] In the Russian case financial flows did not reach the levels of other transition countries. However, since the Russian economy has been giving current account surpluses, positive financial flows put significant extra pressure on domestic currency and credit expansion in this country.

Table 1.6: Debt structure

	Private Debt (%of GDP)		General Gov. Gross Debt (% of GDP)		External Debt Stocks (% of GDP)	
	2002	**2007**	**2002**	**2007**	**2002**	**2007**
Latvia	51.2	123	13.6	9.1		
Lithuania	29.8	77.9	22.2	16.8		
Hungary	65.5	139.8	55.9	67	23.70	65.44
Romania	30.9	66.8	24.9	12.8	12.91	23.41
Croatia	64.2	117.3	34.7	32.8		
Bulgaria	32.8	137.3	52.4	17.2	6.95	32.50
Russia			40.30	8.511		
Ukraine			33.53	12.31	6.45	27.60
Armenia			38.105	14.249	15.09	10.84
Moldova			66.19	25.15	20.35	26.29
Kuwait			32.333	11.832		
Botswana			42.951	37.562	4.53	4.39
Turkey			74	39.907	13.43	19.60
Botswana			8.31	8.212		
Paraguay			58.445	19.325	7.38	4.13
Developing Countries			51.49	34.61		

Source: IMF, WEO, October 2013 General Gov. Gross Debt, Eurostat for private debt add WB for External Debt Stocks/GDP and REER Index
Note: External debt stocks/GDP data is obtained by dividing ‘External debt stocks, private nonguaranteed’ to GDP (current USD).

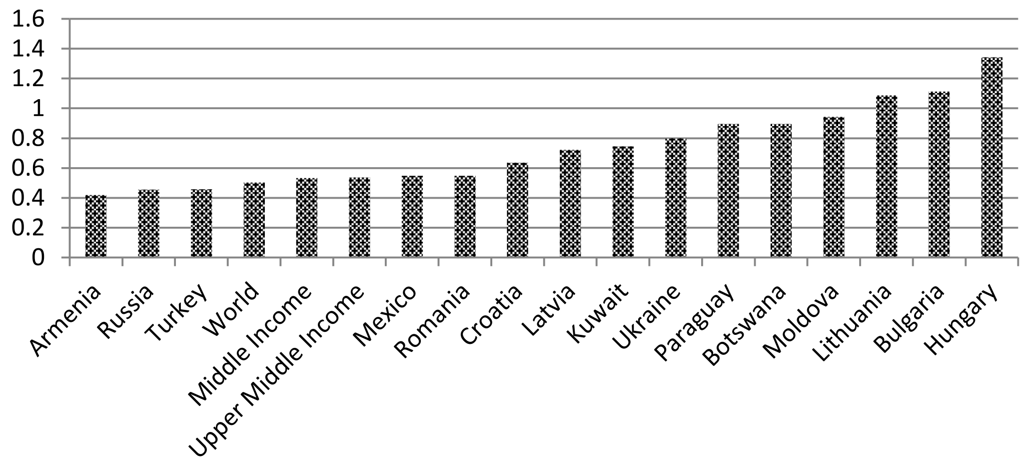
To sum up, it would not be misleading to state that, although these countries were experiencing their golden age in terms of growth performance from 2002 to 2007 and 2008, important vulnerabilities, which were mainly related to the structural problems in the integration of these countries into the world economy, emerged in the same period.

3.1 Trade channel

As the recession deepened in advanced countries during the second half of 2008, the economies in our sample were seriously affected by the contraction in global trade due to their high dependence on advanced country markets for their exports.

The overwhelming majority of the countries have a very high trade to GDP ratio. In this sense, the trade to GDP ratios in 12 of the 15 countries were considerably higher than the middle income, upper middle income and world averages. Given the high degree of openness (Figure 1.1), the trade channel is crucial in explaining the impact of the crisis on the transition economies. In general, the trade channel played a role during the recent crisis upper middle income countries through two mechanisms. Firstly, the demand for goods and services plummeted in 2008. Immediately thereafter, the prices of commodities began to fall.

Figure 1.1: Trade openness (X+IM)/GDP



Source: WB, WDI, 2008 data was used

As the global economy entered into a recessionary period, the decline in global demand was accompanied by a drop in commodity prices. For example, after reaching a peak of $133 per barrel in July 2008, the price of oil fell by more than 70 per cent to an average of $39 per barrel in February 2009. Similar declines were observed in the prices of metal products such as copper.[28]

The decline in global demand affected all the transition countries, whereas the decline in commodity prices mainly hit commodity exporting countries (Ukraine, Russia and Armenia). Overall, both effects implied that exporter countries sold their

[28] The decline in commodity prices can also be seen from commodity price indexes. For example, the crude oil price index fell from 181.87 in 2008 to 115.787 in 2009. Similar declines were observed for the metals price index (169.03, 2008 to 136.53 in 2009) and the agricultural raw material price index (113.367, 2008 to 93.929 in 2009).

goods and services at lower prices. As a result, as Table 1.3 demonstrates, all countries experienced a sharp decline in the growth of exports of goods in 2009 compared to the pre crisis period. The magnitude of the export shock the transition economies experienced varied from about 15 per cent to 40 per cent. As expected, commodity exporters Armenia, Russia and Ukraine were faced by a more than 30 per cent decline in their exports. In other words, the trade shock hitting the Russian, Ukraine and Armenian economies was considerably larger than of other upper middle income countries.

Although global turmoil affected all export activities regardless of the final destination of exports, geographical concentration played a significant role for all of the countries that we discuss. For example, the strong dependence of the transition countries on other European countries and the interdependence between these countries significantly contributed to the deterioration of export growth in these economies, especially as many of these economies have had strong ties with the Russian economy.

It is observed that EU countries constitute the majority share of export partners of the countries in this sample[29] (WTO). For instance, the share of EU countries in total exports reaches 70 per cent in Romania. In Ukraine and Moldova the share is below 50 per cent (25 per cent and 47 per cent respectively, but this ratio is still quite high). However, these countries have strong trade relations with Russia, which experienced a sharp decline in its GDP. Although it is difficult to reach a conclusive verdict, the contagion effect might have been weaker if these countries had diversified trading routes prior to the crisis.

In addition to the degree of openness and geographical concentration, the composition of export products was an important factor in the deterioration of export performances in these countries. As the analysis carried out by Berkmen et al (2009) demonstrates, the countries exporting manufactured goods to advanced countries were hit hard by the decline in demand compared to countries exporting food. Given the high income elasticity of the demand for manufactured goods, it is reasonable to conclude that the ten countries that are discussed in this section were severely affected by the

[29] This is related, to a large extent, to geographical proximity and economic integration provided by the European Union.

crisis since industrial products constitute the majority of their exports (except for Armenia and Russia) (based on WTO data).[30]

To some extent, in some countries the degree of the importance of the trade channel was also influenced by the choice of exchange rate regimes. In general, countries may lose competitiveness in international markets if their trading partners devalue their currencies. Among the countries that we discuss in this section, Latvia and Lithuania were members of the European Union. Therefore, their currencies were pegged to the euro. Since membership of the European Union requires the adoption of the euro in due course, these countries were not allowed to devalue their currencies due to the Maastricht criteria (which define the preconditions for the adoption of the euro). Therefore, these countries faced a tradeoff between maintaining their peg and their commitment to the Union, and gaining competitiveness in international markets. In both countries national authorities decided to maintain their peg at the cost of reduced competitiveness. For example, policy makers in Latvia discredited devaluation because adherence to the euro peg was seen as the only reasonable long term strategy to secure access to international lending facilities and investment (Reinert et al, 2010). Similarly, Lithuania gave priority to a stable fixed exchange rate in order to be able to be a part of the euro zone. According to Purfield and Rosenberg (2013), the Baltic countries' real effective exchange rates appreciated against the euro while many trading partners' currencies depreciated, contributing to reduced competitiveness in international markets and further deterioration of export performances.

3.2 Financial channel

According to many economists, the majority of developing countries did not encounter a financial collapse during the recent crisis relative to the crises in the 1980s and 90s. However some of the transition economies were among exceptions thanks to very hasty liberalization, rapid deregulation and strong linkages between their financial markets and those of European countries. In the period from 2002 to 2007 these policy initiatives contributed to the buildup of vulnerabilities that lay just below the surface. As

[30] The shares of the manufacturing sector (which is an important subset of industrial products) in total exports are given as: Bulgaria (48.9 per cent), Croatia (61.3 per cent), Hungary (83.7 per cent), Latvia (57.3 per cent), Lithuania (54.2 per cent), Romania (77.7 per cent), Armenia (27.2 per cent), Moldova (54 per cent), Ukraine (57.4 per cent) and Russia (19.3 per cent) (Source: WTO).

we previously stated, the significant share of credits in these countries was denominated by foreign currencies, particularly in the CEE countries in our set. In the same vein, the loans taken in foreign currency were central to the transmission of the financial crisis into the Central and Eastern European (CEE) countries (Sprenger and Vincentz, 2010)[31]. Since these countries were in the process of integration into the euro zone, they ignored the risks related to exchange rate volatility. Additionally, many firms that borrowed in foreign exchange before the crisis had foreign currency incomes coming from exports. As a result, investors and households found foreign currency loans manageable. However, the boom in financial markets came to an end with the global crisis. With the emergence of a global turmoil, borrowing in foreign currency opportunities decreased as foreign banks reduced their net assets. As asset holdings were reduced, credit to these CIS countries also dried up[32].

The ratio of financial account balance to GDP in the transition countries can be seen in Table 1.3[33]. Accordingly, in all countries the ratio decreased compared to the pre crisis period. However, the importance of the financial channel was more significant for Latvia, Lithuania, Ukraine and Russia. In these countries macroeconomic vulnerabilities such as high current account deficits (except for Russia) generated adverse expectations for foreign investors and high vulnerability of the domestic financial system (Griffith-Jones and Ocampo, 2009). As a result, rapid withdrawals of private financial flows occurred. For the Russian case, the Georgian-Russian war had already decreased the appetite of international investors for Russian assets. In the remaining countries, a

[31] The main motive behind the high share of foreign currency credits was lower interest rates that paid for these credits relative to domestic currency denominated credits.

[32] This has created significant stress in these countries since they ran up dangerously large current account deficits (except for Russia) and took on substantial international debt (Boorman, 2009). In other words, as our study demonstrated, the countries with large current account deficits were disproportionately hit by the crisis as foreign investors deleveraged and capital flows dried up.

[33] Although the analysis of the financial channel is highly complex since there are various types of financial instruments and several ways in which financial intermediaries like international banks or global bond markets operate, the general picture of the financial channel can be seen by focusing on the developments in the financial account. 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 understanding 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.

reversal of financial flows did not occur but they faced a sudden stop and were left with no credit or liquidity[34].

As explained before, in the transition economies financial flows also served to feed domestic demand by contributing to consumption and investment expenditures in the pre crisis period. Therefore, when international financing opportunities were limited and the cost of external financing increased, contractions in consumption and investment took place through a decline in credit to domestic players (Table 1.4). Total investment declined by 57 per cent, 41 per cent , 38 per cent, 34 per cent, 28 per cent, 23 per cent, 23 per cent and 17 per cent in Lithuania, Moldova, Ukraine, Latvia, Russia, Hungry, Armenia and Croatia respectively[35]. Additionally, a decline in consumption contributed to the sharp decline in domestic demand.

In countries such as Latvia, Ukraine and Russia the banking sector experienced particular stress due to a lack of liquidity. Increased foreign ownership of CIS banks, in some cases, turned out to be a source of fragility as these banks withdrew lending to their subsidiaries from developing and transition countries in order to strengthen their very weak positions in developed countries (Griffith-Jones and Ocampo, 2009)[36]. As a result, the balance sheets of financial institutions contracted and governments had to support the banking system with liquidity injections. For example, in Latvia, Swedish banks, which had strong connections with the Latvian banking sector, reacted to the crisis early and severely by withdrawing money from their Latvian investments. This resulted in deterioration of the balance sheet of the one of the largest Latvian banks, Parex (Dudzińska, 2011). Similarly, Russia and Ukraine experienced stress in their banking sectors. In Ukraine, many banks were unable to refinance foreign loans and meet their obligations. As individual depositors tried to withdraw their money, a run on the banks developed and a banking crisis emerged (Shkura and Peitsch, 2011). In Russia the effects of the global crisis on the banking sector were much more severe, with 47 Russian banks failing after September 2008 (Fidrmuc and Süß, 2009).

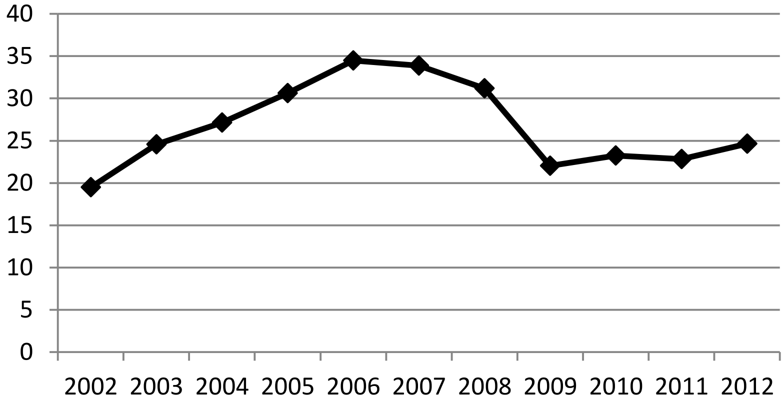
[34] The decline in financial flows into Croatia started after 2009. Although the magnitude of the decline seem low from the figure, a sharp decline of financial flows occurred in Croatia after 2009. The net financial account to GDP ratio fell to 2.94 per cent in 2010 from its ratio of 10.44 per cent in 2009.

[35] An ECB bulletin (2010) also highlights similar points.

[36] Financial institutions in advanced countries found themselves in a very bad situation when asset prices lost their values and the interbank lending market froze. Therefore, these institutions stopped lending (sudden stop). And some of them started to call back their lending or withdrew funds from their subsidiaries in developing countries to strengthen their balance sheets in their headquarters (financial reversal).

In addition to export revenues and financial inflows, remittances provided another source of income from advanced economies to upper income CIS countries in the pre crisis period. However, as advanced economies became caught up in the crisis, remittances provided a channel for the transmission of the crisis to these countries. Among the countries that we have focused on, Moldova was particularly affected by this channel. With the slowdown in the Russian economy, incomes of Moldavian immigrants in Russia fell sharply and they could not send money back to their families at home in Moldova (Figure 1.2).

Figure 1.2: Personal remittances received in Moldova (% of GDP)



Source: WB, WDI

3.1 Other countries

As discussed above, the 15 most affected countries are dominated by the transition economies, which were affected by the trade channel and various degrees of financial flows shocks. The remaining five countries include Kuwait, Botswana, Paraguay, Mexico and Turkey. The first three countries can be considered as commodity exporters with current account surpluses. However, Mexico and Turkey are relatively big upper middle income countries with strong industrial bases with a relatively mild and high current account deficits respectively. Although the majority of the countries investigated in this section experienced considerable sudden stops, as elaborated in the following sections, the trade channel can be considered the main channel through which the crisis spreads into these countries. Pre crisis conditions in these countries were relatively better than in the first set of countries although the

Turkish case demonstrates some characteristics of the transition economies such as high current account deficits. After investigating pre crisis conditions in these countries, we will shift our focus to the transmission mechanisms.

Mexico and Turkey focused on fixing several traditional sources of fragilities in the pre crisis period. Mainly, they gave priority to reforming their macroeconomic policy framework. Accordingly, they shifted to a flexible exchange rate system and adopted an inflation targeting regime as a framework to conduct monetary policy. Inflation rates were reduced from 17.3 and 71.28 per cent (average between 1990 and 2002) to 4.32 and 12.46 percent (average between 2003 and 2008) in Mexico and Turkey respectively.

In Mexico the more stable macroeconomic environment was reflected in export performance and the availability of credit; exports of goods and services increased by approximately 10 per cent between 2002 and 2008. The current account was in a moderate deficit position with an average 1.25 per cent deficit between 2002 and 2008. In the pre crisis period financial resources from abroad became more available to the economy. In relation to this, domestic credit to the private sector (as percentage of GDP) grew by 40.98 per cent from 2002 to 2007 (Table 1.4). In line with increasing availability of credit, there were moderate increases in consumption and investment expenditures as well. Final consumption expenditures increased to 3.82 per cent in 2007 from its negative level of 0.05 per cent in 2002. As for investment expenditures, there was a slight increase in total investment to GDP ratio from 2002 to 2007. However, the level stayed at around 20 per cent, which cannot be considered high enough among emerging market countries, especially compared to the Asian countries. The Mexican economy did not experience a rapid credit boom accompanied by high investment and consumption increases before the crisis. Its vulnerability lay in the fact that the Mexican economy was limited in its diversity and was highly dependent on export revenues and financial flows coming from the US. Indeed, trade with the US made up 78 per cent of Mexico's total trade.

After the crisis of 2001, Turkey entered into a new economic era. As a response to the crisis of 2001, a new program under the auspices of the IMF, which included many structural reforms, was put in practice (Cömert and Çolak, 2014). For instance, new regulations for the banking system were introduced, privatization attempts were accelerated, and the Central Bank was turned into an independent body and started to implement inflation targeting policies. As a result of these reforms, Turkey managed to decrease the high inflation rates that were prevalent in 1990s, and there was an important decline in the public debt to GDP levels after 2002.

Similar to other countries in our set, Turkey also benefitted from the abundance of global liquidity in the pre crisis period. For instance, partially thanks to high financial inflows, domestic credit to the private sector (as percentage of GDP) grew by 103.12 per cent between 2002 and 2007 (Table 1.4). The bonanza of financial flows caused a considerable appreciation in the Turkish lira that worked as an implicit exchange rate peg curbing inflation and improving the balance sheets of economic agents (Benlialper and Cömert, 2014).

Although a group of academics and politicians interpreted the period after 2002 in Turkey as a prosperous period (Karagöl, 2012), several structural macroeconomic problems continued to persist. For instance, investment rates continued to stagnate at around 20 per cent[37]. Although exports rapidly increased prior to the crisis, because of structural problems (such as high dependence on imports to produce export products) and the appreciation of TL, the current account deficit widened significantly. The current account deficit to GDP ratio increased from 0.26 per cent in 2002 to 5.53 per cent in 2008 and was 4.02 per cent on average during this period. In relation to this, as will be elaborated on in next sections, Turkey had relatively low diversification in its exports markets. Additionally, although the inflation rate was reduced after 2001, it was still relatively high given the global disinflation environment[38]. Last but not least, the unemployment rate remained at a high level, with an average rate between 2002 and 2008 of 9.25 per cent despite the apparent economic growth. For this reason, a substantial number of economists, such as Telli, Voyvoda and Yeldan (2006), Yeldan and Ercan (2011), and Sonat and Herr (2013), concluded that the growth that the Turkish economy experienced after 2002 has been 'jobless growth'.

[37] This shows that the Turkish economy did not devote enough resources to investment in machinery or technology, which play important roles in terms of productivity, capacity utilization and sustainable growth paths in developing countries.

[38] For instance, a study by Benlialper et al (2015) demonstrates that Turkey had the second highest average inflation rate between 2002 and 2007 compared to 25 developing countries with similar GDP size and economic structure.

Kuwait, Botswana and Paraguay based their growth performances on high export revenues from high commodity prices. For instance, the exports of fuels and mining products constituted 94.7 per cent of total exports for Kuwait. As for Botswana, the mining sector has the biggest share in GDP[39]. In Paraguay, the export sectors were divided into three main sectors, namely agricultural products (58.5 per cent), fuels and mining products (31.1 per cent), and manufactures (8.8 per cent) (WTO).

From Table 1.4, we see that the increases in the domestic credit, consumption and investment expenditures in the countries under investigation in this section were much more moderate compared to the first group of countries that were severely affected by both the trade and financial channels.[40] As in the case of other countries, public debt had been decreasing. Although deteriorations were observed in some variables, such as current account balances in some countries, the magnitude of deterioration was smaller compared to the transition economies. Apart from Turkey, none of these countries suffered from significant current account deficits[41]. Rather, as mentioned before, it was generally the limited number of export partners and high dependency on commodity prices that exacerbated the effects of external shocks in these countries. In the Turkish case a large sudden stop[42] also put significant pressure on important macroeconomic variables.

3.2 Trade channel

As in the case of the transition economies, the countries that we consider in this section were affected by the trade channel through two main mechanisms: 1) the demand for their goods from advanced countries plummeted and 2) commodity prices declined.

As Table 1.3 demonstrates, it is evident that the export of goods declined significantly in 2009 compared to the pre crisis period in five countries under

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[39] The mining sector accounted for 34.7 per cent of GDP in 2011. Source: http://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/Bostwana%20Full%20PDF%20Country%20Note.pdf retrieved in 20.06.2015.

[40] Even though the credit growth in Turkey can be considered moderate relative to that in countries such as Latvia, Lithuania, Romania, Bulgaria and Ukraine, on average, the credit growth in this country was higher than that in other upper middle income countries.

[41] Botswana, Kuwait and Praguay had large current account surpluses whereas Mexico’s balance was slightly negative.

[42] Sudden stop means a slowdown in financial inflows to a country rather than a reversal of financial flows.

investigation. It seems that the magnitude of the trade shock more or less determined the size of GDP growth reduction among these countries. Export growth declined in Kuwait, Botswana, Turkey, Mexico and Paraguay by 37.4 per cent, 28.5 per cent, 22.1 per cent, 21.2 per cent and 20.3 per cent respectively. The magnitude of GDP declines was more or less in the same order: 7.8 per cent (Botswana), 7.0 per cent (Kuwait), 4.8 per cent (Turkey), 4.5 per cent (Mexico) and 3.9 per cent (Paraguay).

When we look at the trade partners of these countries, it is observed that European countries and the US have the biggest share in total exports from Turkey and Mexico respectively. The share of exports to the European countries from Turkey is 63 per cent[43] and the share of exports to the US is from Mexico is 78 per cent (WTO). Since diversification of export partners is highly concentrated and these partners were hit hard by the crisis, a sharp contraction in exports can be easily understood.

If we look at the composition of export products from these countries, it is observed that manufactured goods constitute the majority, making up of 70.8 per cent and 72.7 per cent of exports for Turkey and Mexico respectively. Since the elasticity of demand for manufactured products is high, it follows that demand for manufactured goods declined when the income levels in advanced countries deteriorated. For instance, the car industry, which is a very sizeable export industry in Turkey, was greatly affected by the global crisis (Sturgeon et al, 2009). Therefore, the lower external demand contributed negatively to export performance and GDP growth in the country. The lower export prices amplified the direct impact of a lower global demand and spread the global crisis specifically into commodity exporter countries.

Risks regarding high dependency on commodity prices were pronounced for commodity producer countries in many studies. For instance, Meyn and Kennan (2009) argue that Botswana was among the high risk countries since 80 per cent of exports were derived from mining, and writers suggest the direct transition of declining demand and prices into decreased investment and unemployment show up as reality later on. In the same study, Kuwait was among the most dependent country exporters in terms of share of oil in total exports. Paraguay was also partially vulnerable to the changes in commodity prices. Eventually, when the commodity boom came to a halt, varying degrees of reductions in export revenues and GDP growth rates occurred in these

[43] When we consider the European Union instead of Europe, the exports from Turkey to the European Union was 39 per cent.

countries depending on the degree of the importance of commodity exports and other factors including policy responses. However, as in the case of other commodity producers, these countries benefited from a fast recovery of commodity prices as well[44].

3.3 Financial channel

The transition economies experienced a significant decline in net financial flows. Moreover, in Latvia, Lithuania, Ukraine and Russia a reversal of financial flows occurred in 2009. Not surprisingly, these four countries were most affected by the crisis.

As for the countries that are discussed in this section (Turkey, Mexico, Kuwait, Botswana and Paraguay), they also experienced a decline in net financial flows. However, compared to the shock that advanced economies and the countries in the first group faced, the magnitude of the decline in financial flows was relatively small in these 5 countries.

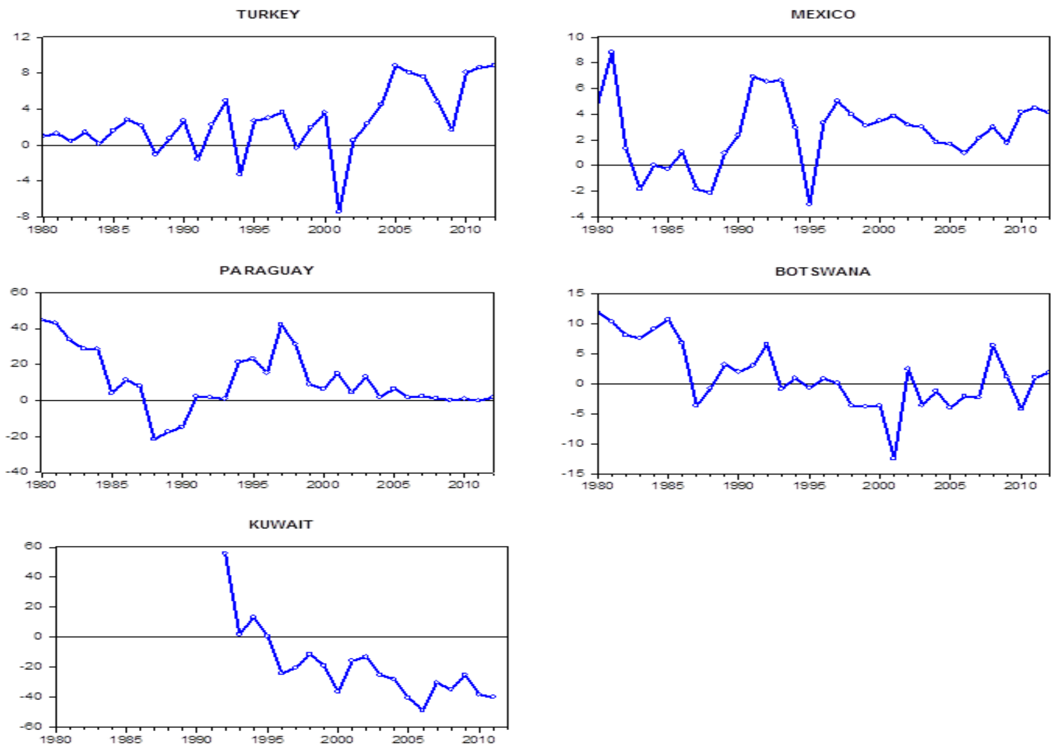
Figure 1.3 demonstrates financial flows relative to GDP for Turkey, Mexico, Paraguay, Botswana and Kuwait. For Turkey net financial flows reached 7.2 per cent of GDP in 2007 then declined to 1.65 per cent in 2009. Although this was a significant slowdown leading to a depreciation pressure on the lira and a decline in domestic credits, Turkey did not experience a reversal of financial flows. Overall, financial capital continued to flow into Turkey but in smaller amounts. If we compare this situation with the 1994 and 2001 crises, it is obvious that the magnitude and duration of the past financial shocks were much higher in Turkey. Both in 1994 and 2001 the reversal of net financial flows occurred with magnitudes 3.26 and 7.43 percent of GDP respectively (Cömert and Çolak, 2013). When we compare the financial shock that Mexico faced in 2009 with its past crisis experiences, it is obvious that the magnitude of the decline is much smaller compared to the shocks in 1983 and 1995. Similarly, from the figures below, it is observed that Paraguay and Botswana did not face a financial flow shock in 2009. Kuwait has traditionally been a capital exporter due to it historically massive current account surpluses; this did not change much in the recent crisis.

In relation to developments in financial accounts, in general, the financial systems of the countries in this group were not under severe pressure. In the literature

[44] The recent downturns in commodity prices after 2012 have adversely affected many commodity exporters.

the resilience of the financial sectors observed in the majority of the developing countries is mainly attributed to high reserve policies (Jeanne, 2007), adoption of the flexible exchange rate regime (Berkmen, Gelos, Rennhack and Walsh, 2011) and to the strong balance sheet indicators in the banking sectors. However, although all these factors might have played a role, they do not completely explain the resilience of the financial sectors. As our study shows, only a handful of countries with very poor pre crisis macroeconomic indicators experienced financial reversals. In this sense, we believe that the financial sectors of the majority of countries in the Global South were not overtly hurt by the crisis because the amount of net financial flows to these countries did not decline significantly. Furthermore, unlike many previous crises, sudden stops or reversals did not last long after the recent crisis. As a result, as even our sample consisting of the worst performing countries during the recent crisis demonstrates, the duration and the magnitude of the financial shocks hitting these countries were relatively mild. This partially explains why financial collapse did not take place in the majority of the countries in our sample.

Figure 1.3: Net financial account (% of GDP)



Source: Central Bank of Republic of Turkey for Turkey and IMF, BOP Statistics and BPM5 for others
Note: Data for Kuwait before 1991 was not available

4 Policy responses

Developing countries attempted to weather the crisis by using several policies. In terms of monetary policy responses, contrary to past crisis experiences, developing countries in general were able to conduct countercyclical policies by slashing policy interest rates and pumping liquidity to the financial markets. In past crises, governments in the Global South were forced to respond pro cyclically by increasing the interest rates in order to prevent capital flight, international reserve losses and currency runs. During the recent global crisis there were still risks associated with confidence and currencies. However, the slowdown in growth and widening interest rate differentials in favor of emerging market economies suggest that these economies had the incentive and leeway to cut interest rates (Moreno, 2010). Besides this, as explained above, since the financial markets in advanced countries were in total disarray, there were not many safe haven assets or financial markets, which enabled emerging market and other countries in the Global South to have some extra room for the conduct of expansionary monetary policy.[45]

Countries in the South as a group improved their fiscal positions prior to the crisis. Improved fiscal stances across the South allowed them to acquire enough fiscal space to design and implement packages to counteract the contraction in the world economy (Ceballos et al, 2013).

However, the majority of the countries we analyze in this paper could not utilize fiscal policy and/or monetary policy relative to many other developing countries. On the one hand, the majority of the countries that we consider were limited in their fiscal responses either by limited fiscal space or by the Euro zone entry requirements. On the other hand, the monetary policy responses of these countries were either ineffective and/or insufficient. In this sense, the lack of fiscal policy room and/or the will to boost economic growth and ineffective/insufficient monetary policy responses are among the reasons behind the very poor performance of the countries in our sample. As a result, these countries were not able to boost domestic consumption and investment to counter the impact of the crisis.

[45] For the details of this discussion see Cömert and Çolak (2014).

4.1 Monetary policy responses

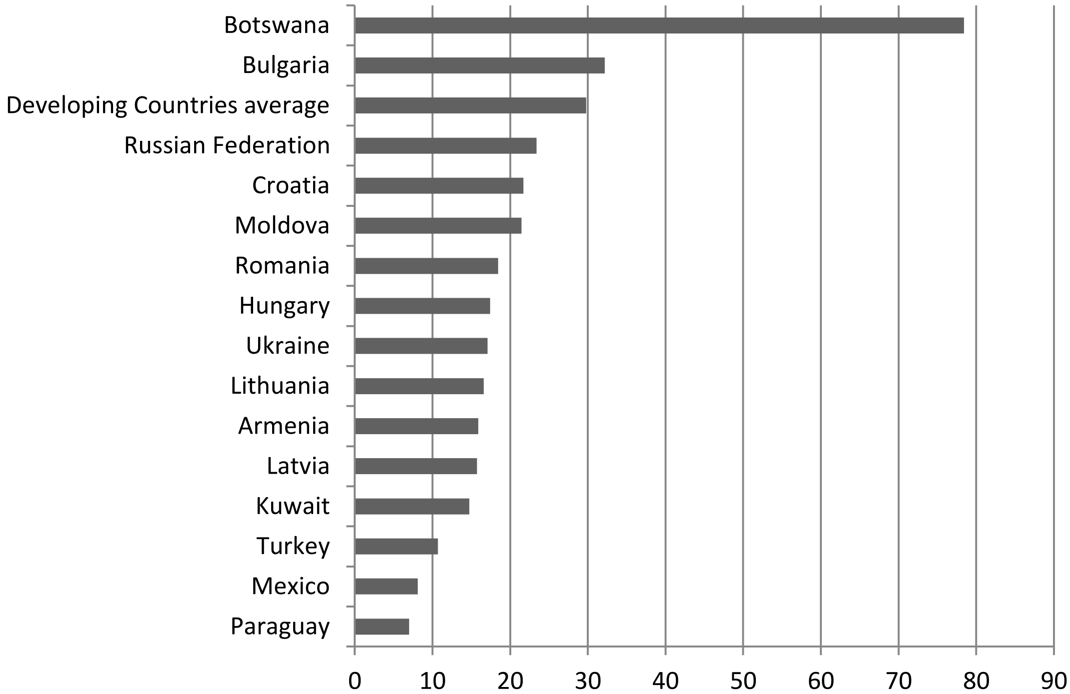
Analyzing policy responses in all these countries is an extensive subject that exceeds the scope of this paper. Therefore, in this section our primary aim is to understand whether there was an early reaction to the crisis in the form of a significant cut in policy rates. There existed heterogeneity in the ability of developing countries to undergo significant reductions in their policy rates. In Table 1.7 policy interest rates are given for certain time periods. Since the aim of the paper is to explain the contractions in the GDP growth rates in 2009, we only considered the reductions from 2008 to the first quarter of 2009.

An early and significant reduction in policy rates did not take place in any of the countries that we consider. In Moldova and Turkey policy rates were cut by more than 10 per cent; however, the reductions started when these economies were already in deep recession.

There are some attempts to explain the differences in the ability of countries to cut interest rates. In general, the exchange rate regime, inflationary outlook, fiscal situation and BOP constraints are seen as the main factors that created divergences in policy responses.[46] Akyüz (2009) points out that the Balance Of Payments (BOP) constraint is an important factor in preventing significant reductions in interest rates in some developing countries. In other words, the BOP repercussions to lower interest rates might prevent some countries from implementing expansionary monetary policies due to fear of financial reversals. Furthermore, one of the obstacles to implementing an effective monetary policy would be concerns about international reserves. Many studies stress that the vulnerabilities of developing countries to rapid deterioration in capital flows diminished since many of these countries had far higher levels of foreign exchange reserves in relation to previous crises financing needs.[47]

[46] For instance, the ECB report (July 2010) links the limited ability of CEE countries to reduce interest rates to inflationary pressures, risks about financial stability associated with exchange rate depreciations, the share of outstanding foreign currency loans to the private sector and to high government debt ratios.
[47] See, for example: How Did Emerging Markets Cope in the Crisis? (Moghadam, 2010)

Figure 1.4: Total reserves (% of GDP)[48]



Source: WB, WDI and authors' calculations
Note: Total reserves minus gold (current US$) data was divided by GDP (current US$), then the average between 2002 and 2008 was taken

In Figure 1.4 the level of reserves in relation to GDP is given for countries in our set. Comparing the existing data with that of the developing countries' average[49], it is observed that the level of reserve accumulation was lower for the majority of countries in our set, except for Bulgaria and Botswana[50]. We can conclude that the countries in our sample may not have had enough space in terms of reserve accumulation with which to cushion the impact of the crisis. Under this condition, the authorities may have been avoided slashing policy rates significantly because of a fear of financial reversals.

[48] Developing countries' average was calculated by taking the average of the data between 2002 and 2008 for developing countries that are among the top 50 countries in terms of GDP size. These countries are: China, Nigeria, Kazakhstan, India, Malaysia, Pakistan, Thailand, Argentina, Philippines, Indonesia, Venezuela, Colombia, Republic of Korea, Algeria, Egypt, South Africa, Chile, Poland and Brazil

[49] Detailed information about calculating this average is given in the note under the figure.
[50] The high level of reserves in Botswana is a result of high mining revenues registered under reserves.

Table 1.7: Policy rates

	Policy Rate				
Latvia	**Overnight Interbank Rate**	**2008Q3**	**2008Q4**	**2009Q1**	
		4.3	2.5	1.1	
Lithuania	**Overnight Interbank Rate**	**2008Q3**	**2008Q4**	**2009Q1**	
		4.6	3.6	1.0	
Ukraine	**Discount Rate**	**2008**		**2009**	
		12.0		11.0	12.0
Armenia	**REPO Rate**	**2008**		**2009**	
		7.75		7.25	7.75
Russia	**Refinancing Rate**	**2008Q3**	**2008Q4**	**2009Q1**	**2009Q2**
		11	13	13	11.5
Kuwait	**Discount Rate**	**2008Q3**	**2008Q4**	**2009Q1**	**2009Q2**
		5.750	3.750	3.750	3.000
Croatia	**Lombard Rate**				
Hungary	**Base Rate**	**2008**		**2009**	
		10		9.50	6.25
Romania	**Policy Rate**	**2008**		**2009**	
		10.25		9.5	8
Moldova	**Key Monetary Rate**	**2008**		**2009**	
		16.0		14.0	5.0
Mexico	**Overnight Interbank Rate**	**2008**		**2009**	
		8.25		4.50	
Bulgaria	**Base**	**2008**		**2009**	
	Interest Rate	5.77		5.17	0.55
Turkey	**Overnight rate until 2010,**	**2008**		**2009**	
	1 Week REPO rate after 2010	19.50		15.50	9.0
Botswana	**Bank Rate**	**2008**		**2009**	
		15.0		15.0	15.0
Paraguay	**14 day Interest Rate**				
Euro Area	**The interest rate on main refinancing operations**	**2008**		**2009**	
		2.50		1.0	
United States	**Federal Funds Rate**	**2007**	**2008**	**2009**	
		4.33	0.54	0.13	

Sources: Passport database (for overnight interbank rates, Latvia and Lithuania); IMF, IFS (refinancing rate of Russia, discount rate of Kuwait); Central Bank of Armenia (www.cba.am); National Bank of Ukraine (www.bank.gov.ua); The Central Bank of Hungary (www.mnb.hu); Banca Nationala a Romaniei (www.bnro.ro); Bulgarian National Bank (www.bnb.hg); Central Bank of Republic of Turkey

(www.tcmb.gov.tr); Bank of Botswana (www.bankofbotswana.bw); IMF, International Financial Statistics (for Moldova, Mexico, Euro Area and United States)
Note: Since countries use different interest rates as policy variables, there is no unity of data sources. Therefore, we have searched for policy interest rates of all countries individually. For some countries, data was available quarterly. We tried to determine the data period in a way that give us as much necessary information as possible. For some countries, only yearly data was available. For these countries, data is given for 2008 (at the end of the year), 2009 and 2010 (at the beginning and end of the year). Data was not available for the cells that have been left blank

The timeliness and the magnitude of the reduction in policy rates is an important indicator that shows the approaches of various countries to the crisis. However, policy measures can be translated into recovery in economic activity if reductions in policy rates can be reflected to market interest rates and, in relation to this, to real interest rates. In Table 1.8 real interest rates between 2008 and 2011 are given. When the rates in Table 1.7 and 1.8 are compared, it is observed that, although policy rates were cut from 2008 to 2009 in all countries, real interest rates increased significantly in this period. This might be caused by two factors. First, market interest rates might be unresponsive to the policy rates. This phenomenon would be a sign of the fact that policy interest rate cuts were not translated into other market interest rates such as lending rates. Given the fact that the countries in our sample countries face a lot of challenges in terms of the interest rate channel, these results are not surprising. Second, some economies under investigation such as Latvia and Lithuania were overheating before the crisis. Therefore, sharp declines in inflation rates resulting from global contraction in demand caused real interest rates to increase. For example, inflation decreased from 14.25 per cent to 3.26 per cent, from 11 per cent to 4 per cent, from 12 per cent to 0 per cent and from 11.9 per cent to 2.5 per cent in Latvia, Lithuania, Moldavia, Bulgaria and Paraguay respectively. As a result consumption and the investment inducing effects of interest rate cuts did not work properly in these countries.

Table 1.8: Real interest rates and inflation

	Real Interest Rate (%)				Inflation	
	2008	**2009**	**2010**	**2011**	**2008**	**2009**
Latvia	-2.21	17.99	12.15	-0.05	15.25	3.26
Lithuania	-1.24	12.56	3.88		11.08	4.16
Ukraine	-8.62	6.88	1.86	1.41	25.20	15.90
Armenia	42.03	15.80	10.60	12.91	9.01	3.54
Russia	-4.86	13.05	-2.95	-6.12	14.10	11.65
Kuwait	-7.10	30.89	-9.17	-13.4	6.30	4.61
Croatia	4.14	8.45	10.46	6.57	6.06	2.37
Hungary	4.65	7.21	5.28	5.58	6.06	4.21
Romania	-0.47	12.52	7.59	4.36	7.84	5.58
Moldova	10.78	17.99	4.75	6.305	12.70	0.006
Mexico	2.55	3.41	1.13	0.05	5.12	5.29
Bulgaria	2.25	6.71	8.12	5.44	11.95	2.47
Botswana	7.2	10.0	-6.3	5.2	12.62	8.10
Paraguay	15.1	25.7	18.8	6.9	10.15	2.59
Turkey					10.44	6.25

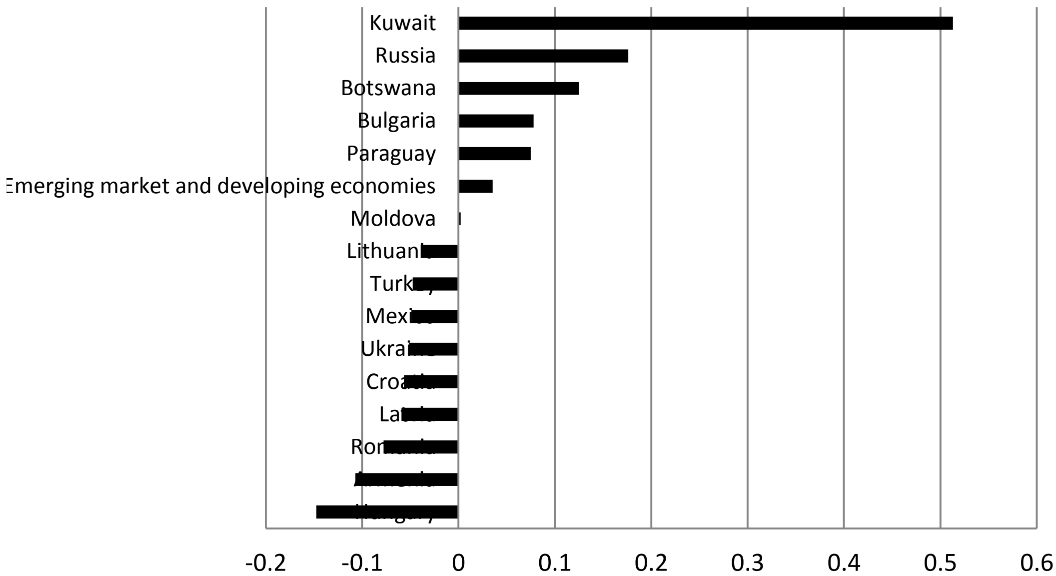
Source: WDI & IMF, WEO 2014
Note: Real interest rate is the lending interest rate adjusted for inflation as measured by the GDP deflator. Inflation refers to percentage change in consumer prices index

4.2 Fiscal policy responses

One of the main weaknesses of the countries under the investigation was the lack of proper fiscal response to the crisis due to limited fiscal space, among other considerations. In Figure 1.5 fiscal positions of these countries are shown by a very simple index. A negative value indicates that the country had fiscal deficit prior to the crisis. Therefore, the smaller the index, i.e., small positive or negative numbers, the smaller the fiscal space that a country can use to respond to the crisis. From the figure it is observed that the fiscal space was highly constrained in the majority of countries[51]. In countries where the majority of the government revenue was constituted by high commodity prices (Kuwait, Russia, Botswana and Paraguay), the situation was different. They seemed to have enough fiscal space.

[51] It was also lower than the developing countries' average.

Figure 1.5: Fiscal positions before the crisis



Source: IMF, WEO, October 2013
Note: Fiscal positions of the countries before the crisis are calculated as follows: (2005-08 average fiscal deficit/gdp)÷(2005-08 average government. revenue/gdp)

However, overall, the majority of the countries were not prepared for the crisis in terms of fiscal space. In Table 1.9 fiscal developments after the crisis are demonstrated. It is observed that, in the majority of countries, the growth of total government expenditure was lower than the developing countries' average. Interestingly, only Paraguay, who had more fiscal space relative to others, seemed to utilize considerable expansionary fiscal policies. This may explain a mild GDP decline in Paraguay relative to other countries in our set. Beside this, Romania and Turkey also were engaged in some expansionary policies though Turkish fiscal expansion was initiated relatively late (Cömert and Çolak, 2015).

Table 1.9: Government expenditures

	Growth of General Government Total Expenditure (as % of GDP)		General Government Final Consumption Expenditure (annual % growth)	
	2008	**2009**	**2008**	**2009**
Latvia	20.86	2.14	1.53	-9.15
Lithuania	7.32	18.06	7.34	-1.88
Ukraine	8.23	2.36	1.1	-2.4
Armenia	-0.82	28.40	-1.85	-1.22
Russia	3.61	20.57	3.4	-0.6
Kuwait	34.20	4.42		
Croatia	-3.30	6.36	-0.24	0.44
Hungary	-2.76	4.47	1.07	-0.63
Romania	4.59	3.98	6.84	9.49
Moldova	-2.35	8.90	11.64	-2.86
Mexico	12.29	6.12	3.03	2.24
Bulgaria	0.66	2.86	-0.98	-6.48
Turkey	2.71	11.84	1.74	7.77
Botswana	30.94	8.57	4.98	2.96
Paraguay	-6.91	27.03	3.5	13.67
Emerging Markets	5.28	5.17		
UMI			5.67	6.81
MI			6.59	7.55
Advanced Economies	4.79	10.14		
Euro Area	2.55	8.63	2.323302	2.583143

Source: WB, WDI & IMF, WEO
Note: General government final consumption expenditure (general government consumption) includes all government current expenditures for purchases of goods and services (including compensation of employees). It also includes most expenditure on national defense and security, but excludes government military expenditures that are part of government capital formation.

Five of six CEE countries (Bulgaria, Hungary, Latvia, Lithuania and Romania) in our set were already members of the European Union prior to the crisis and also candidate countries for the euro zone[52]. According to the Maastricht criteria, which

[52] Latvia, Lithuania and Hungary joined the European Union in 2004. Romania and Bulgaria became members in 2007.

define euro zone entry criteria, the public deficits were not expected to exceed 3 per cent. Therefore, these countries faced a tradeoff between their commitment to the euro and taking countercyclical measures. As a result, these countries had to adopt fiscal consolidation and applied pro cyclical fiscal policies during and after the crisis. Moreover, the IMF and EU financial support programs, coming with several conditions, prevented some from implementing expansionary fiscal policies. For example, in Latvia, Hungary and Romania the requirements of the IMF and EU financial support programs imposed strict financial consolidation through wide ranging revenue and expenditure measures from 2009 onward (ECB report, July 2010). Similarly, Bulgaria and Lithuania also adopted comprehensive fiscal measures in order to prevent rapid budget deterioration. As a result these countries could not use fiscal policy to tackle the impact of the crisis and experienced large GDP declines.

5 Conclusion

The 2008 global crisis that originated in the US had a pronounced affect throughout the world. The global economy contracted by 2.15 per cent in 2009. Although developing countries as a group weathered the crisis relatively well, some countries experienced significant contraction in their GDP growth rates. In this chapter we have analyzed the impact of the crisis on the 15 countries that recorded the lowest GDP growth rates in 2009.

Understanding the dynamic process of the crisis is not an easy task due to the heterogeneous nature of pre crisis conditions and the importance of different channels during the crisis in different countries. However, it is still possible to discern general patterns. The overall evidence shows that the trade channel was the most important mechanism in the transmission of the crisis from advanced economies to the countries in our sample. Fluctuations in commodity prices and a limited number of export markets, together with high income elasticity of exports goods, played important roles in this channel. This implies that export led growth strategies have their own limitations and are very sensitive to cycles in western countries.

The role of the financial channel varied in different countries. Some countries encountered massive financial reversals while others experienced different degrees of financial stops. In general, as expected, the most affected countries in our set are the ones that experienced both a dramatic decline in their exports and financial reversals. Although almost all these countries experienced spectacular growth performances from 2002 to 2008, they also accumulated significant vulnerabilities, which were mainly related to the structural problems in the integration of these countries to the world economy, during the same time period. In this sense, massive financial flows prior to the crises were responsible for the accumulation of considerable vulnerabilities among the countries in our set. As the increasing recent emphasis on macro prudential policies and the adverse effects of portfolio and other flows to developing countries implies, developing countries should take necessary steps against volatile flows, which are the sources of increasing vulnerabilities in developing countries. Furthermore, those countries that were unwilling or unable to conduct considerable countercyclical fiscal and monetary policies were among the most affected ones. Our study suggests that all countries should work on timely and proper fiscal and monetary responses instead of being relatively inactive in the face of global shocks.

Overall, our analysis demonstrates that how an economy is integrated to the world economy is a crucial factor to understanding why some countries were affected more than others by the crisis. Economies that experienced very hasty trade and financial flows integration without much institutional capacity accumulated especially huge vulnerabilities during the ‘great moderation’. Furthermore, those countries with more reliance on certain export markets and commodity exports are very vulnerable to the cycles in advanced countries. Therefore, our analysis implies that developing countries would be less exposed to external shocks by choosing a strategic integration to the world economy rather than embracing a fully fledged neoliberal agenda.

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