



## THE G20 FORUM AS AN OPPORTUNITY TO IMPROVE COOPERATION BETWEEN EMERGING AND ADVANCED ECONOMIES<sup>3</sup>

The past few decades have been marked by the increasing integration and interconnectedness of the global economy, driven by trade-liberalizing policies, the removal of controls previously imposed on capital, and technological progress. The new global order is also characterized by the rise of emerging economies markets as significant global players, which has in turn reinforced the degree of global interconnectedness between all countries. The far-reaching global impact of the 2008 crisis, which began after the meltdown of the US subprime mortgage market, points to the breadth and depth of global connections and to the blurred boundaries between domestic and global economic affairs. Most importantly, the crisis revealed a whole range of growing vulnerabilities of the global economic system—from the rising systemic risk in financial markets to spillovers across countries or policy areas—and brought inter-governmental cooperation to the forefront of debates on global economic relations.

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<sup>1</sup> <http://www.tepav.org.tr/tr/ekibimiz/s/1293/Feride+Inan>

<sup>2</sup> <http://www.tepav.org.tr/tr/ekibimiz/s/1274/Gunes+A.+Asik>

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This paper takes as its point of departure the urgent need for a coordinated strategy to raise global awareness of the importance of collective decision-making and collective action. It aims to raise awareness on spillovers across countries or policy areas during the crisis period and afterwards, and how policy coordination among nations can help in mitigating adverse spillovers.

Chapter 1 reviews global economic interconnections, which are growing stronger and more complex, with an emphasis on the rising leverage of new actors in world economic affairs. The impact of the 2008 financial crisis on advanced and emerging economies is briefly discussed. Attention is drawn to transmission channels on emerging economies including the collapse of global trade related to merchandise and commodity exports and/or financial market spillovers.

Chapter 2—taking into account the impact of negative spillovers of advanced economy policy decisions on emerging markets—first examines the theoretical literature on monetary policy cooperation. It will then review the scope for international policy coordination during the crisis (monetary and other collective responses by G20 countries), and how these may have helped to prevent contagion across borders. On the other hand, unconventional monetary policies (UCMP) pursued by advanced economy central banks during and after the crisis (i.e. ultra-low policy rates and quantitative easing, and then tapering) will be discussed as examples where policy cooperation failed. Lastly, the spillover effects of major macroeconomic policy decisions on emerging economies, during the crisis period and afterwards, will be examined by taking into consideration different experiences among emerging economies based on domestic policy dynamics, including domestic saving rates, current account deficits, dependence of growth on short term capital flows, and exchange rate volatility, among others.

Chapter 3 lays-out recommendations that aim to provide a framework for cooperation among G20 countries, most importantly between advanced and emerging economies.

## CHAPTER 1: BACKGROUND

### 1. Towards an Interconnected Global Economy

In the past few decades, *globalization*—driven by trade-liberalizing policies, the removal of capital controls, and technological progress—has brought the world closer together. Global economic integration and interconnectedness is increasing rapidly and becoming more complex. The new global order is also characterized by a shift in the centre of gravity of the global economy toward emerging economies. The rise of emerging economies, as significant players, has in turn reinforced the degree of global interconnectedness. While China has taken the lead, other emerging markets have also increased their presence in global economic affairs, as reflected by the rise to prominence of bodies such as the BRICS countries (O'Neill, 30 November 2001)<sup>4</sup> and more recently the G20. The relative decline of western powers (Quah

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<sup>4</sup> Jim O'Neill from Goldman Sachs launched the idea of the 'BRICS' comprising 'Brazil, Russia, India and China' in 2001.

2011, Cox 2007, Hoge 2004), and the changing distribution of soft power (Nye 2004), point to a new world order in the making<sup>5</sup>.

Global flows have been growing rapidly in the past three decades. The striking rise in international flows is attributed to various developments, including technological progress (particularly in transport and communication), economic policy (that eliminated restrictions on global trade, capital, and financial flows),<sup>6</sup> rising trade in commercial services, the spread of global value chains (GVCs), as well as the integration of developing economies and regions into production networks.

According to the McKinsey Global Institute (2014), the value of combined flows of goods, services, and finance peaked at \$25.9 trillion in 2012, compared to just \$2.6 in 1980, and \$5 trillion in 1990. Trade in goods (including commodities) remains the largest type of flow at \$17.8 trillion in 2012, almost four times larger than both services and cross-border financial flows that stood at \$4.2 trillion and \$3.9 trillion, respectively. However, financial flows grew faster than any other type of flow: from \$470 billion in 1980 to a peak of \$12 trillion in 2007 (or from 4 percent of global GDP to 21 percent of GDP, respectively). Cross-border bank flows during this period increased about ten-fold, reaching \$5 trillion in 2012 (McKinsey Global Institute 2014).

Moreover, trading networks have been expanding rapidly and the composition of global trade and finance has been changing on account of the rise of the significance and interconnectivity of the emerging economies and other developing countries.

Emerging markets and other developing countries significantly increased their share of global trade, while advanced economies' share of global trade declined. Between 1980 and 2011, the share of developing economies, as a whole, in world exports and imports rose from 34 percent to 47 percent, and from 29 percent to 42 percent, respectively (WTO 2013).

The economic surge of China has played a major role in the growing influence of emerging markets. China, with a strong position in global value chains, has become the world's top merchandise exporter since 2009, with its share of global exports climbing to 13.7 percent in 2013. The next three largest exporters are the United States (9.8 percent), Germany (9 percent), and Japan (4.4 percent). On the import side, China is the second largest importer in the world (with its share of global imports at 12.1 percent in 2013) after the United States (14.4 percent), and ahead of Germany (7.4 percent) and Japan (5.2 percent) (*Ibid.*).

Moreover, emerging markets have increased their presence in global financial flows. In 2012 the financial flows into emerging markets accounted for 37 percent of global financial flows, compared to just 7 percent in 1990. Between 2002 and 2012, annual financial inflows and outflows involving emerging markets grew by 22 percent and 20 percent, respectively, while

<sup>5</sup> However, several authors have debated the extent to which economic and political power is truly shifting away from the advanced world. See Cox, Michael (2012) "Power shifts, economic change and the decline of the West?" *International Relations*, 26 (4).

<sup>6</sup> On the policy front, trade liberalization pursued through successive GATT negotiations and at the country-to-country facilitated cross-border market integration; financial liberalization vis-à-vis capital account opening and the removal of exchange controls that constituted the post-Bretton woods Washington Consensus facilitated global integration of capital and financial markets.

the share of financial flows among developed regions fell from 89 percent to 57 percent (McKinsey Global Institute 2014).

The increased participation of emerging markets in the global economy is also reflected in their increasing share of global output, which has shifted dramatically since the 1990s, and is expected to outpace that of advanced economies in the next five years (*The Economist* 2011).

Furthermore, according to a study done by Danny Quah (2011) the world's economic centre of gravity is steadily shifting eastwards on account of the rising influence of China and the rest of East Asia. Quah's (2011) findings—taking into account the average location of global GDP as a whole—show a sharp shift in the average location of global GDP from the mid-Atlantic in 1980 and to the east of Helsinki and Bucharest by 2008; by 2050, the WECG is expected to sit between India and China<sup>7</sup>.

Trade linkages have also evolved since the 1990s with respect to trade within and between advanced and developing economies, North-North, South-South, and North-South. When considering exports of manufactured goods, the share of North-North trade dropped steadily from 56 per cent in 1990 to 36 percent in 2011. South-South trade increased steadily from 8 percent in 1990 12 percent in 2000 peaking at 24 percent (\$4 trillion) in 2011 (UNCTAD 2013). The rising South-South linkages in trade can be partially explained by primary commodity demands of emerging economies, most notably of China, which buys commodities from Africa and Latin America and, in turn, exports consumer goods to these regions.

The next section looks at the impact of the 2008 financial crisis on advanced and emerging economies, which points to the breadth and depth of global connections and to the blurred boundaries between domestic and global economic dynamics.

## 2. Collapse of Lehman in 2009

The 2008 financial crisis that began in the United States has been widely viewed as the worst global economic downturn since the Great Depression of the 1930s. The United States and other advanced economies with deep connections to global financial institutions suffered the most. Emerging markets were also affected by spillovers related to the collapse of global trade and/or due to financial market spillovers. The far-reaching global impact of the crisis points to the breadth and depth of global connections, and to the blurred boundaries between domestic and global economic dynamics.

What started as a meltdown of the US subprime mortgage market in 2007 quickly spread throughout the US financial market<sup>8</sup> and entered a critical phase when subprime-related losses forced Lehman Brothers to file for bankruptcy in September 2008. The impact of the "Lehman

<sup>7</sup> Based on extrapolation of growth in about 700 locations across Earth.

<sup>8</sup> As early as April 2008, the IMF estimated huge potential losses from falling housing prices and rising number of defaults in the US mortgage market as well as losses from other US-originating loans and securities related to commercial real estate (IMF 2008).

shock” soon turned a severe credit crunch into a truly global crisis, with most economies around the world experiencing declines in growth rates, income, and employment.

Global economic growth experienced the largest straight fall seen in the post-war era, falling by 6 percentage points from its pre-crisis peak to its lowest point in 2009 (IMF 2010a). Advanced economies experienced a 7.5 percent decline in the real GDP in the last quarter of 2008 and an overall decline of 3.2 percent in 2009. The US was affected the most throughout 2009, as its housing market continued to decline, real GDP fell by 2.6 percent, and unemployment rose to over 10 percent (IMF 2010b).

Faced with the collapse of financial markets and global trade, as well as problems of their own, Europe and other advanced economies were soon feeling the brunt. Japan’s output fell by 1.2 percent and 5.2 percent in 2008 and 2009, respectively (*Ibid*). The Euro Area contracted by 4.1 percent in 2009 (*Ibid*), and soon a major sovereign debt crisis ensued in European countries, including Greece, Ireland, and Portugal<sup>9</sup>.

The implosion in advanced economies also hit emerging market economies. At the peak of the crisis, between the third quarter of 2008 and the first quarter of 2009, emerging markets contracted by 4 percent (IMF 2010a). The experience of emerging markets, however, was heterogeneous—underscoring differences in global financial and trade linkages, as well as individual policy contexts (i.e. with respect to financial sector regulation, capital account balance, and exchange rate policy) (*Ibid*).

Regionally, the most affected emerging and other developing countries were in Central and Eastern Europe, the CIS countries, and Latin America and the Caribbean. Real GDP growth dropped in other emerging economies, such as China and India (from 14.2 percent to 9.6 percent for China, and 9.9 percent to 6.4 percent for India, between 2007 and 2008), and fell below zero in Brazil (recorded -0.2 percent in 2009), Mexico (recorded -6.5 percent in 2009), and Turkey (4.7 percent in 2009) (IMF 2010b).

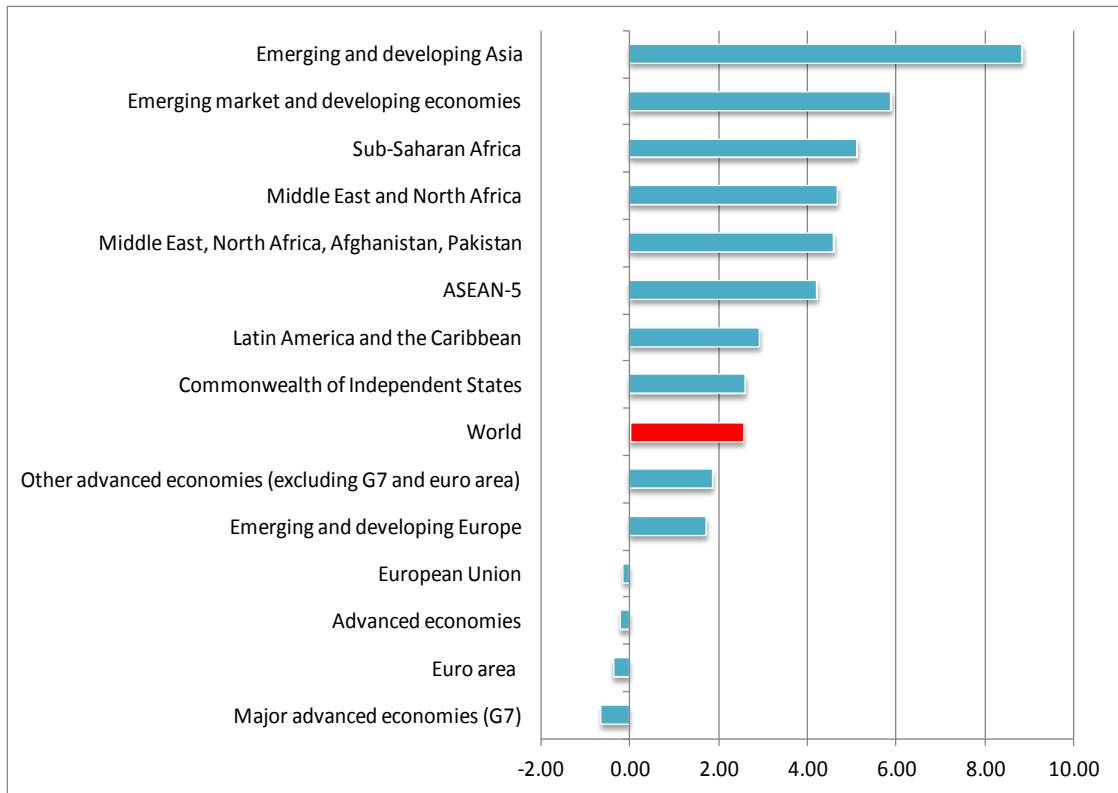
The main channel of contagion was the collapse of global trade—related to merchandise and commodity exports—and/or financial market spillovers. Merchandise exports of most emerging markets were affected in late 2008 and early 2009, as the monthly value of exports dropped 30 percent at the peak of the crisis, compared to growth rates of around 20 percent before the crisis (IMF 2010a). Emerging market commodity exporters, such as Brazil, Russia and Argentina, saw their earnings decline. Countries with sizable external imbalances (such as Brazil, Turkey, India) faced the risk of financial contagion.

Setbacks notwithstanding, between 2007 and 2009, most emerging markets and other developing countries continued to grow on the whole, while advanced economies experienced negative growth (Figure 1). Similarly, among G20 member countries, advanced countries’ economies contracted, while emerging markets grew on average between 2007 and 2009 (Figure 2).

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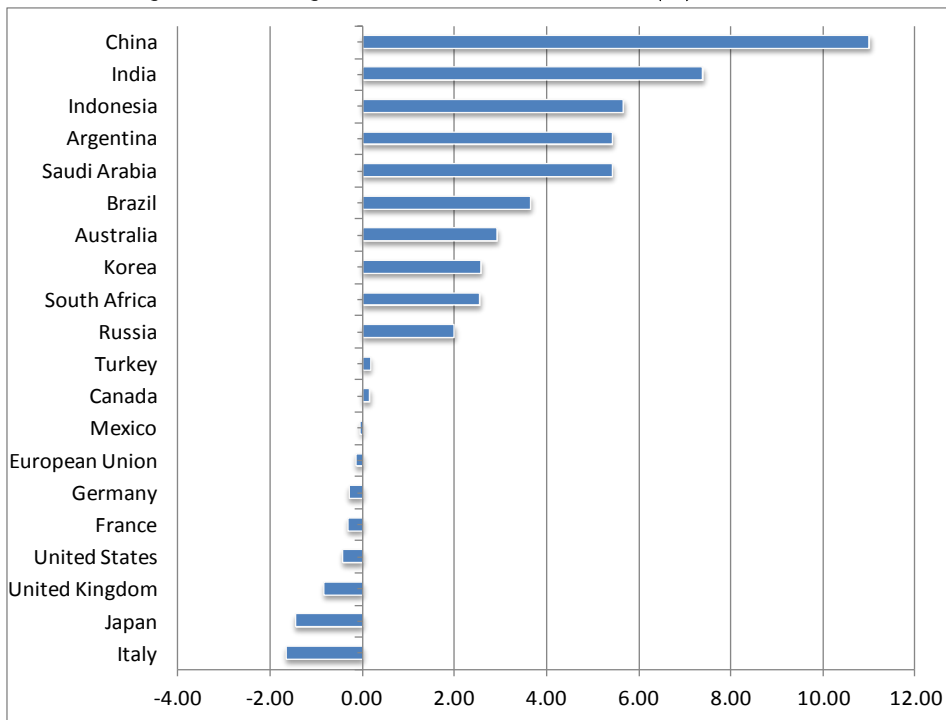
<sup>9</sup> Major contributors to the Euro crisis include the leverage of the US financial system and its collapse, growing global financial and trade interdependencies, financial deregulation in the Euro Zone (similar to the US) as well as fiscal choices made by individual governments and imbalances in the Eurozone (between South and North) (Lin and Treichel 2012)

**Figure 1. Average Growth By Groups of Countries, (%) 2007-2009**



Source: IMF, World Economic Outlook, April 2014

**Figure 2. Average Growth of G20 Countries, (%) 2007-2009**



Source: IMF, World Economic Outlook, April 2014

The global spillovers of the crisis is also reflected in the sharp decline of all types of global flows, including goods, services and financial. According to the McKinsey Global Institute (2014), while goods and services flows have picked up, surpassing their 2007 peak in 2012, global financial flows have remained far below their pre-crisis peak, accounting to about 5 percent of global GDP in 2012, compared with 21 percent in 2007. The drop in financial flows has been particularly severe in advanced economies (reflecting cut backs of cross-border activity by global banks, as well as of cross-border investments in the Eurozone), which remained 75 percent below their 2007 peak, compared to a drop of only 25 percent for emerging markets (McKinsey Global Institute 2014).

The next chapter looks at some of the discussion surrounding policy cooperation. It will review the scope for international monetary policy coordination during the crisis, and the impact of negative spillovers of uncoordinated monetary policy based on decisions made by major advanced country central banks during and after the crisis.

## **CHAPTER 2: POLICY COOPERATION**

The crisis showed the growing vulnerabilities of the global economic system—from the rising systemic risk in financial markets, to spillovers across countries or policy areas, and brought inter-governmental cooperation to the forefront of debates on global economic relations. Chapter 2, taking into account the impact of negative spillovers on emerging markets, first examines the theoretical literature on monetary policy cooperation before and after the crisis. For instance, the post-crisis theoretical models which focused on the impact of policy coordination under unconventional monetary policy showed that the impact of policy coordination was quantitatively much more significant than what the earlier models suggested. Second, the chapter will put forth successful examples of policy coordination and/or cooperation between G20 countries during the crisis, and how these may have helped avoid contagion across borders. Lastly, unconventional monetary policies (UCMP) pursued by advanced economy central banks during and after the crisis (i.e. quantitative easing and tapering) will be discussed —drawing on the impact of these policies on emerging markets — as examples where policy cooperation failed.

### **1. Benefits of Policy Cooperation: A Theoretical Approach**

The crisis called into question fundamental assumptions of earlier models on policy cooperation, which focused largely on the impact of policy coordination under conventional monetary policy. These earlier models suggested that as long as countries implemented unilateral domestic optimal policies, outcomes in policy coordination and the absence of coordination showed similar effects. In contrast, the post-crisis literature—taking into account the fact that rates were reduced to the zero bound limit by systemically important central banks—shows that impact of policy coordination is quantitatively much more significant than what the earlier models suggested.

During the Great Moderation period up until the Global Economic Crisis, the predominant view in orthodox economic literature—given the condition of conventional monetary policy—was that the benefits of international policy coordination were empirically small. This strand of literature usually relied on linear models that yielded small and temporary effects of policy interest rates on output, and did not take into account nonlinearities associated with economic crisis, especially with respect to financial markets (Benes, Kumhof, Laxton, Muir, Mursula 2013, page, 5). The literature suggested that if each central bank followed its own monetary policy rule—which was optimal for domestic price and output stability—the international monetary system would operate in the so-called “near an internationally cooperative equilibrium (NICE)” where there would be little additional gains from central banks optimizing policies jointly (Taylor, 2013; pages 3-5).

The reasoning behind this set of theoretical results are based on Mundell-Fleming New Keynesian international monetary models that suggest the cross-border impacts of conventional monetary policy changes nearly cancel each other out through exchange rate movements. For instance, in a two-country model, a monetary expansion in one country results in a fall in price level in the other country, due to exchange rate impact on pricing decisions and enabling real balances to rise. Theoretically, depreciation of the currency in country A corresponds to expected appreciation in country B, while the negative impact of appreciation is offset by the impact of higher demand from country A of country B’s exports (Taylor, 2013; page 8-10). Thus, through trade and financial links, the economies revert back to equilibrium even without international policy coordination. The exceptions to this literature—Hamada (1974), Canzoneri and Henderson (1991), Ghosh and Masson (1994), and Subacchi and van den Noord (2012)—argue that externalities resulting from cross-border spillovers will imply Pareto-inefficient outcomes in the absence of coordination. However, they also argue that coordination benefits are higher for larger economies compared to smaller ones as the world trade prices are close to autarky prices (Ostry and Gosh, 2013; page 7-8).

Furthermore, —in contrast with the literature, which suggests that unilateral monetary policies might be suboptimal when goods and financial markets are perfectly linked—Obstfeld and Rogoff’s (2002) new open-economy macroeconomic model shows that the benefits of international policy coordination may be small. This holds true even when cross-country goods and financial markets are fully integrated — although the impact of international cooperation in setting monetary policy rules will depend critically on how nominal rigidities interact with other distortions in the economy. The Obstfeld and Rogoff model takes into account two countries of equal size with nominal rigidities, and that produce differentiated goods, and where global monetary policy can replicate the flexible wage equilibrium. Like in previous models, monetary policy rules affect the expected real exchange rate, which creates a wedge between domestic and foreign welfare. The smaller the cross effects of the monetary policy rule on real distortions, the less need for cooperation. On the other hand, the benefits of coordination are greatest when both goods and capital markets are imperfectly integrated, as opposed to when they are perfectly integrated. The latter result contrasts with some of the literature, which suggests that unilateral monetary policies might be suboptimal when goods and financial markets are perfectly linked. The findings by Obstfeld and Rogoff (2002) suggest that lack of coordination in rule setting is a secondary problem compared with the overall



gains from domestic macroeconomic stabilization by each country (unless the risk aversion of the economic agents is very high). Moreover, their estimations show that even when cooperation is theoretically beneficial, empirical benefits are small.

Some alternative literature notwithstanding, there was more or less a consensus on the relatively low impact of coordination prior to the 2008 crisis. However, as major central banks such as the US Federal Reserve deviated from conventional monetary policies (i.e. zero bound interest rates), and at the same time implemented large-scale balance sheet operations, assumptions on “a near international cooperative equilibrium” have been called into question. More specifically, unconventional monetary policies, coupled with zero-bound interest rates during the times of the crisis, meant that spillovers to other countries were no longer negligible, as standard theory had suggested.

Cross border contagion has not only been observed empirically, but it is also theoretically plausible. The open economy models of Mundell-Fleming suggest that aggressive policy deviations in certain countries may generate adverse effects on economic performance that can be globally transmitted, and are hard to counteract by other countries’ monetary policy. In these models, the exchange rate channel generates beggar-thy-neighbour results due to depreciation of the home currency and appreciation of foreign currency—because of the aggressive changes in monetary policy—as opposed to enriching-thy-neighbour results through recovery and higher export demand in the home country. According to Taylor (2013), recent research with multi-country empirical models—such as Taylor’s multi-country model (TMCM) and IMF’s GPM6 model—show strong transmission channels on output, mainly through the exchange rate. In TMCM, the dollar depreciates by 1.4 percent for each percentage point decrease in US interest rate, and by 1 percent in GPM6 model (Taylor, 2013: page 13).

Moreover, in addition to the impact through the exchange rate channel, Bruno and Shin (2012) show that low interest rates in certain countries encourage risk-taking and borrowing in dollars by firms from other countries in order to finance projects at home, even when projects are denominated in local currencies. As a result, the local exchange rate keeps appreciating with a lower foreign interest rate and forces the home country’s central bank to lower the interest rates further down, as opposed to the level required for domestic stability. Indeed, as explained in Taylor (2013, pages: 20-22), many central banks, such as Norges Bank and the Bank of Japan, lowered interest rates as a reaction to lower interest rates abroad. In the case of Norges Bank, the policy rate was reduced to 2 percent, as opposed to the domestic monetary policy rule of 4 percent.

Benes, Kumhof, Laxton, Muir, and Mursula (2013) – offering an alternative model to the current strand of literature - puts emphasis on exchange rate channels and offers alternative assumptions, including nonlinearities and financial accelerator mechanisms. The model assumes *i)* a zero-interest-rate floor that limits the ability of government to keep lowering the policy rate to stimulate the economy; *ii)* a minimum capital adequacy floor that limits the ability of banks, after lending losses, to make further loans and thereby create purchasing power; and *iii)* high loan-to-value ratios that, through fast increasing lending spread, limit the ability of borrowers to spend.

Under conventional monetary policy, the model yields similar results as those of models on international monetary policy coordination during non-crisis times. The novelty of Benes et al.'s (2013) model, however, is the consideration of the zero-interest-rate floor for nominal interest rates, as well as the emphasis on fiscal and macro-prudential policies. Benes, et al., (2013) use the Global Integrated Monetary and Fiscal (GIMF) model of the IMF that integrates 5 regions of the world, namely *i)* the United States, *ii)* the Euro Area, *iii)* Japan, *iv)* Emerging Asia, and *v)* the rest of the world. The model provides an ex-ante simulation of the effectiveness of the policy measures during 2009-2010 on these five regions, and offers an estimation of how much lower GDPs would have been in the absence of these policies. The model features several realistic elements, such as liquidity-constrained households as a percent of the population. Additionally, the model assumes that entrepreneurs and retailers face monopolistic competition and nominal rigidities in price setting. Moreover, other assumptions are incomplete asset markets and complete home-bias in domestic government debt and in ownership of domestic firms. The model also introduces a financial accelerator mechanism to highlight the importance of international cooperation in crisis management.<sup>10</sup>

The quantitative results of Benes, et al., (2013) show that in 2009 and 2010: *i)* without fiscal stimulus, GDP would have been lower by 1.8 percent in US, and by 2.3 percent in the rest of the world; *ii)* in the absence of both the support to the financial sector and fiscal stimulus, external finance premia would have been higher by 200 basis points and GDP would have been lower by an addition of 2.7 percent in US, and 3.6 percent in the rest of the world, as compared to simulation in (i); and *iii)* in the absence of support to the financial sector and fiscal stimulus as well as assuming a sizeable demand shock that results in loss of confidence, the simulations show that GDP would have been lower by an additional 2.2 percent in the US, and by 3.2 percent in the rest of the world, as compared to simulation in (ii). Simulating two years of monetary accommodation, the model generates considerable impact on GDP, but the impact for any country is higher when all countries implement the stimulus simultaneously, as opposed to one country implementing the stimulus in isolation. In the model without the financial accelerator, the increase in GDP averages around 50 percent, but when the financial accelerator is introduced, the impact on GDP is 80 percent higher. These results stem from the fact that the combined nonlinearities of the zero-interest-rate floor and the financial system not only directly increase the domestic fiscal multipliers, but also increase the spillovers to other countries through financial markets, more than the goods market. Therefore, internationally coordinated fiscal stimulus packages expand domestic output in each region to such an extent that their debt-to-GDP ratios fall in spite of increases in spending or reductions in tax rates.

Overall, the Benes, et al., (2013) study makes a strong case that international fiscal and macro-prudential policy coordination during the crisis differed fundamentally from the international coordination of conventional monetary policy before. This is due to the fact fiscal or macro-prudential stimulus during the recent crisis was primarily transmitted through

<sup>10</sup> The key feature of the financial accelerator in Benes, et al., (2003; page 18) is that, following a contractionary shock to corporate net worth, the real interest rate faced by the corporate sector increases persistently because it takes several years to rebuild lost net worth. Due to the shock to corporate net worth, net dividend distributions are reduced, which negatively affects consumption. Corporate net worth is equal to the market value of the firm's physical capital minus the value of the firm's financial liabilities.

international financial markets, while the older literature on international policy coordination stressed the role of goods market transmission.

## 2. Policy Cooperation During the 2008 Crisis: The G20 Forum's Rise to Prominence

The 2008 global crisis brought inter-governmental cooperation to the forefront of debates on global economic relations. Shared vulnerabilities in the global economy of interdependencies ranging from rising systemic risk in financial markets, to spillovers across countries or policy areas, made major economic powers willing to cooperate during the crisis years.

The establishment of the G20 in 1999 was a major step towards a more inclusive *global governance* system, acknowledging the rise to prominence of new global actors. However, in the early 2000s the G20 meetings were held only at the ministerial level between central bankers and finance ministers, and the platform was still less prominent than the G7. With the onset of the financial crisis—building on the momentum created by deteriorating economic conditions particularly in advanced economies—the G20 for the first time convened at the leaders' level in Washington in November 2008.

At the 2008 Washington Summit, G20 leaders declared that one of the chief reasons for the crisis had been "inconsistent and insufficiently coordinated macro-economic policies and inadequate structural reforms." Therefore, they declared their commitment to respond to the crisis collectively in order to restore global growth, strengthen the global financial system, and reform international financial institutions. They also agreed to follow up on a broader policy response to the crisis "based on closer macroeconomic cooperation, to restore growth, avoid negative spillovers, and support emerging markets and developing countries" (G20 2008).

Indeed, there were successful examples of coordination, particularly at the peak of the crisis that contributed to global economic recovery. These included G20 Leaders' initiatives toward strengthening the financial sector and the regulatory architecture, as well as increasing IMF resources and its lending capacity in 2009 and 2012. Moreover, many international financial governance institutions, which were dominated by advanced economies prior to crisis, became more inclusive in terms membership in order to better reflect the rising significance of emerging economies. The G20 leaders also followed through on their commitments to keep markets open to trade, while the summits often eased tensions between G20 member countries which helped counter domestic pressures for protectionism (Drezner 2014).

The global finance and investment rules and the financial regulatory architecture were significantly strengthened as a result of G20-led initiatives. At the onset of the crisis, at the G20 Washington Summit in 2008, four working groups were set up with the objectives of: *Enhancing Sound Regulation and Strengthening Transparency; Reinforcing International Cooperation and Promoting Integrity in Financial Markets; Reform of the IMF; and, Reform of the World Bank and other Multilateral Development Banks.*

In 2008, the IMF negotiated a set of voluntary “principles and practices,” also known as the Santiago Principles, addressing legal and institutional frameworks, governance, and risk management of sovereign debt funds.

In April 2009, the Financial Stability Forum was renamed the *Financial Stability Board* (FSB), and its responsibilities as a regulatory coordination body were expanded. Responding to the demands of Leaders in November 2008, membership of the erstwhile *FSF* expanded to include emerging economies such as China, India, Brazil, and others.

At the 2010 G20 Summit in Seoul, the Basel III banking standards were approved whereby the amount of capital reserves that banks must keep on hand were increased and countercyclical capital buffers were introduced. Moreover, the Basel Committee on Banking Supervision expanded its membership from 13 advanced economies to 27 members that included emerging countries. Similarly, China, India, and South Korea joined the Financial Action Task Force on Money Laundering.

The G20 also gave impetus to the IMF to respond to the crisis with all the necessary force. In 2008, the IMF created a short-term liquidity facility (SLF) to assist emerging countries with good track records that were facing immediate liquidity problems, and provided emergency funds to certain countries.

At the second G20 Leaders' Summit in London on April 2, 2009, G20 leaders undertook major financial commitments to restore credit, growth, and jobs in the world economy. As a result, the IMF's resources were tripled to \$750 billion and a new special drawing rights (SDR) allocation of \$250 billion was established. Moreover, a minimum amount of \$100 billion of additional lending by the multilateral development banks (MDBs), and \$250 billion of support for trade finance, was committed by G20 leaders. Furthermore, the leaders committed additional resources, from agreed IMF gold sales for concessional finance, to the poorest countries. All in all, the combined stimulus created by the G20 in 2008 and 2009 amounted to about \$2 trillion.

The G20 Summits also helped in easing tensions between member countries. For instance, the Forum played a major role in preventing the US congress from taking action against China for its undervalued currency. In turn, the Chinese Central Bank, prior to the Toronto Summit in 2010, pledged to allow its Renminbi to appreciate against other currencies, which then appreciated at about 5 percent annually for the following three years (Drezner 2014).

At the heart of the crisis, in late 2008 and early 2009, G20 leaders pledged to follow coordinated expansionary fiscal policies to support economic recovery. In late 2008, the G20 countries called for a coordinated fiscal stimulus of 2 percent of world GDP (Strauss-Kahn 2008). However, by the G20 Toronto Summit in May 2010, the fiscal stimulus consensus was waning. The US-backed macro-economic policy consensus to increase government spending was countered by the EU members of the G20, who—faced with the EU sovereign debt crisis—were embracing fiscal austerity (Drezner 2014).

There were also significant efforts to better coordinate monetary policy in the early stages of the crisis. One example of successful coordination was the US Federal Reserve's establishment of liquidity via swap lines with central banks of major advanced economies, and a few select emerging markets. In the immediate aftermath of the sub-prime crisis in December 2007, the activation of swap lines by the Federal Reserve entered into US dollar liquidity swap lines, with the ECB and the Swiss National Bank (SNB), which were extended to include a total of 14 central banks in major advanced economies and a few emerging markets by October 2008<sup>11</sup>.

Between December 2007 and October 2008 available liquidity under these swap lines increased almost ten-fold from \$67 billion to \$620 billion. The Fed continued to expand the swap amounts by removing the caps on its swap facilities with the ECB, the Bank of England (BoE), the SNB, and the Bank of Japan; the amounts of swaps peaked at \$580 billion in mid-December 2008 (Kapur and Mohan 2014). The Fed, however, has gradually decreased the number of swap arrangements it has to five central banks in major advanced economies. Moreover, the Fed's swap lines were in fact one-way swap facilities, whereby the Fed loaned dollars to other central banks, but did not borrow foreign currency from them.

Another example of monetary policy cooperation has been interest rate cuts by major central banks of advanced countries in an almost coordinated fashion. In the immediate aftermath of the Lehman collapse, central banks of six advanced economies<sup>12</sup> cut policy interest rates by 25- 50 basis points (Board of Governors of the Federal Reserve System 2008, Eichengreen 2013).

However, as the central banks approached the zero interest rate (ZIR) lower bound, they began to engage in unconventional monetary policies. As a result of quantitative easing policies, the balance sheets of advanced country central banks more than doubled between 2007 and 2012. While some argue that unconventional monetary policies, such as quantitative easing, prevented worst case scenarios during the crisis (Drezner 2014), these policies have also generated widespread critique, particularly from emerging markets, that have voiced complaints about the negative spillover effects on exchange rates and international capital flows (see Chapter 2.4, *Impact of Unconventional Monetary Policy on Emerging Markets*).

Lastly, in order to achieve greater policy consistency and generate policy cooperation among G20 members, the Mutual Assessment Process (MAP) was launched at the Pittsburgh summit. The MAP aimed to bring peer pressure to bear on member countries to follow optimal policies, with the IMF acting as a secretariat. The success of the MAP, however, has also been debatable with little evidence regarding adjustments made by major economies with respect to their economic policies under peer pressure from the MAP (Faruqee and Srinivasan 2012).

<sup>11</sup> The Federal Reserve established swap arrangements with the Reserve Bank of Australia, the Banco Central do Brasil, the Bank of Canada, Danmarks Nationalbank, the Bank of England, the European Central Bank, the Bank of Japan, the Bank of Korea, the Banco de Mexico, the Reserve Bank of New Zealand, the Norges Bank, the Monetary Authority of Singapore, the Sveriges Riksbank, and the Swiss National Bank. (Federal Reserve Website Available at [http://www.federalreserve.gov/monetarypolicy/bst\\_swapfaqs.htm#5619](http://www.federalreserve.gov/monetarypolicy/bst_swapfaqs.htm#5619))

<sup>12</sup> The Federal Reserve coordinated cuts in the federal funds rate with the lending rates of Bank of Canada, Bank of England, European Central Bank, Federal Reserve, Swedish Riksbank, and Swiss National Bank.

### 3. Lack of Policy Cooperation During and After the Crisis: the Case of Unconventional Monetary Policy (UCMP)

The G20 global governance system was by no means perfected during the crisis. There were disagreements on a wide range of macroeconomic policy issues, and coordination of fiscal and monetary policies that were occasionally successful waned down quickly. A case-in-point of uncoordinated decision-making has been aggressive unconventional monetary policies (UCMPs) pursued by advanced economies' central banks during the crisis (ultra-low policy interest rates and quantitative easing (QE) policies in advanced economies); and more recently, the reversing of these policies (the Fed's unilateral decision to end quantitative easing).

At the onset of the crisis, major central banks of advanced economies started to pursue unorthodox policies to counteract a financial meltdown. The US Federal Reserve<sup>13</sup> and other advanced country central banks—including the Bank of England, the European Central Bank (ECB), the Bank of Japan (BoJ), and the Swiss National Bank (SNB) among others—started to engage in unconventional monetary policies through quantitative easing (QE) and large-scale asset purchases (LSAP). These policies aimed to bring down policy interest rates, which had been constrained to the zero lower bound, and boost economic activity.

As a result, balance sheets of these central banks expanded rapidly and both short- and long-term interest rates dropped to record-low levels<sup>14</sup>. Furthermore, low interest rates in advanced economies, and the sharp increase in their balance sheet sizes, encouraged large amounts of capital to flock to emerging market economies (see Chapter 2.4, *Impact of Unconventional Monetary Policy on Emerging Markets*).

More recently, the US Federal Reserve announced that it would end quantitative easing and thus the issue of global monetary policy coordination or, rather its absence, has come into the spotlight. The reversing of the Fed's policies—to taper such massive quantitative easing—has caused significant economic turmoil within some emerging economies. The most vocal critique of the Fed's so-called tapering decision has been Indian Central Bank Chief Raghuram Rajan stating "the US should worry about the effects of its policies on the rest of the world" (Rajan 2014). The argument that the US Fed needs to acknowledge significant spillovers of its policy decisions on other economies has resonated strongly across the emerging world.

In the next section the spillovers of advanced economy monetary policy decisions to emerging markets are discussed, focusing on transmission channels including capital flows and exchange rates.

<sup>13</sup> The US Federal Reserve's quantitative easing policy was conducted in three phases: QE1 was announced from November 2008 to March 2009, and the targeted amount of assets to purchase oscillated around \$1.725 trillion. QE2 announced in March 2011, was valued at about \$600 billion. In September 2011, the Operation Twist was announced, worth \$667 billion and was extended in February 2012. The third QE programme in September 2012 whereby the Fed announced that it would pace purchases rather than commit to a total amount, was worth \$40 billion per month; the programme was extended to \$45 billion per month in December 2012. Lastly, the Fed announced "tapering" of its QE programme policy on June 19, 2013.

<sup>14</sup> Between the end of 2007 and September 2013 both the US Federal Reserve and the Bank of England's balance sheets nearly quadrupled; similarly, the Swiss National Bank (SNB) quadrupled its balance sheet to resist appreciation of its Swiss Franc. In contrast, the European Central Bank (ECB) and the Bank of Japan (BoJ) expanded their balance sheets by around 55 percent and 87 percent, respectively – a relatively moderate expansion compared to the Fed, BoE and SNB (Kapur and Mohan 2014).

#### 4. Impact of Unconventional Monetary Policy on Emerging Markets

There has been heated debate about the international spillover effect of unconventional monetary policy, including: First, the extraordinary monetary accommodation in advanced economies, characterized by ultra-low policy interest rates and quantitative easing (QE) policies that led to sharp expansion of their central banks' balance sheets between 2008 and 2013; second and most recently, the Fed's decision to begin tapering its quantitative easing programme.

There are multiple perspectives on the cross-border effects of unconventional monetary policies pursued by advanced economies since the onset of the crisis. One perspective sees only a positive impact, whereby quantitative easing, which helped domestic recovery in advanced economies, increased demand for emerging market exports and contributed to the global recovery. An alternative view is that the cross border impact has been negligible—a claim also recently supported by the IMF's most recent spillover report, arguing that "the share of total inflows that is attributable to QE or to the push factors is not preponderant, and the correlation between capital flows surges and U.S. QE rounds is loose. In the case of QQME, there is no evidence of net capital outflows yet" (IMF 2013, p.9).

Others have argued that emerging markets had their own domestic policies to blame for the vulnerabilities they faced after the Fed's tapering decision. It has been argued that the cause of volatility in emerging markets, for instance, after the Fed announced its tapering decision in mid 2013, was the failure of their own policies, which embraced global financial markets without setting up guards to protect themselves from excessive capital flows (Prasad 2014, Rodrik and Subramanian 2014).

Another view is that the spillover effects changed over time, depending on the different stages of quantitative easing. It is argued that, at the peak of the crisis, quantitative easing policies were highly effective in providing liquidity, stabilizing credit markets, as well as in strengthening trade credit and keeping up demand in advanced economies, which benefited emerging country exports. However, quantitative easing policies that were pursued at a later stage—when advanced economies recovered from the crisis (i.e. the US Federal Reserve asset purchases starting in November 2010)—were "less benign" (Chen et al 2012).

Critics, on the other hand, argue that unconventional monetary policies undertaken by advanced economies' central banks threatened domestic macro-economic and financial stability in emerging markets. The argument that the US Fed needs to acknowledge significant spillovers of its policy decisions on other economies has resonated strongly across the emerging world. The most vocal critique of the Fed's so-called tapering decision has been Indian Central Bank Chief Raghuram Rajan (Rajan 2014). According to this view, the ultra-low policy interest rates, and sharp expansion of central bank balance sheets in advanced economies, gave strong impetus to large-scale and volatile capital flows to fast-growing emerging markets, and put appreciation pressures on emerging market currencies. Conversely, the Fed's decision to begin tapering its quantitative easing policy in May 2013 led

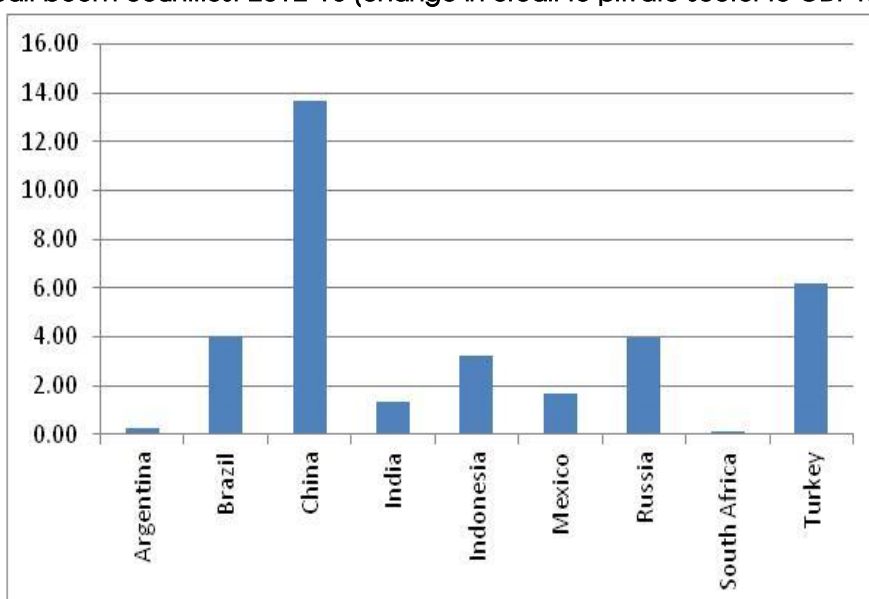
to a reversal of capital flows from emerging markets and to large currency depreciations in these countries.

One issue has been the volatility of capital flows to emerging markets. Kapur and Mohan (2014) argue that the volatility of capital flows is largely dependent on macro-economic and financial developments in the source countries. Interrupting capital flows to emerging markets have been the Euro Zone sovereign debt crisis in 2011 and the Fed's announcement to begin tapering its quantitative easing policy in May 2013. Therefore, in explaining surges/ reversals of capital flows, conditions in international capital markets or so-called *push factors* prevail over conditions in the borrowing countries (so-called *pull factors*) (Kapur and Mohan 2014).

Moreover, the impact of quantitative easing on emerging economies has been different across countries. Cross-border spillovers reflect on the type and scale of the country's exposure, its cyclical positions, and the type and scale of domestic policy response to capital inflows.

In its World Economic Outlook Report in 2011, the IMF—taking into account the potential destabilizing impacts— argues that emerging market economies need to guard against overheating and credit booms. In particular, China, Brazil, Colombia, India, Indonesia, and Turkey were considered to be at relatively higher risks of credit boom and financial instability (WEO 2011 pp18). Another IMF study (2013), titled “Unconventional Monetary Policies – Recent Experience and Prospects,” suggested that the impact of volatile capital inflows will largely depend on the cyclical position of individual countries and the stability of their financial systems. In developing countries with shallow financial markets, unconventional monetary policies are more likely to lead to financial market volatility, excessive credit growth, housing price bubbles, and, therefore, major financial turmoil. Figure 3 shows the magnitude of credit booms in selected emerging market economies.

Figure 3. Credit boom countries: 2012-13 (change in credit to private sector to GDP ratio, yoy, pp.)



Source: IMF Fiscal Monitor, 2014



Furthermore, the responses of emerging economies to the crisis have been heterogeneous. In order to alleviate the impact of the global crisis, some emerging markets responded with fiscal stimuli. This is in sharp contrast to the fiscal consolidation efforts during past crises episodes — for instance in Argentina in 2000-01, Brazil in 1998-99, Indonesia in 1997-98, Mexico in 1995, Russia in 1998-99, and Turkey in 2001. Table 1 shows the cyclical adjusted primary balance of a selection of emerging market economies. Overall fiscal policy was counter-cyclical on average during 2008-2012, as opposed to pro-cyclical fiscal behaviours in the past.

Table 1: Fiscal Policy in Countries with Credit Booms

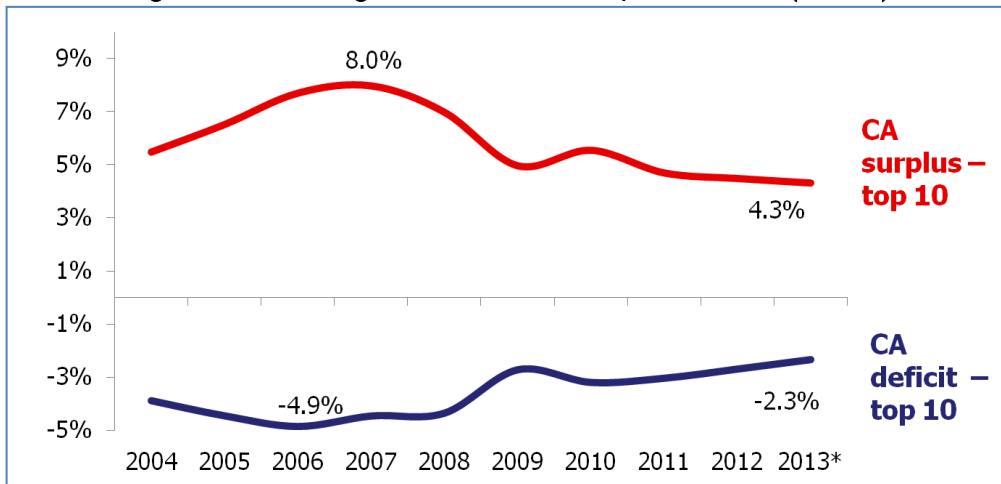
	<b>Δ Cyclically adjusted primary balance (pp.)</b>	
	<b>2012-2008</b>	<b>2013-2008</b>
<b><i>Rapid credit growth and current account deficit countries</i></b>		
Turkey	-0.50	-0.63
Brazil	-1.24	-1.53
Indonesia	-2.18	-2.67
<b><i>Rapid credit growth and current account surplus countries</i></b>		
China	-0.57	-0.2
Russia	-4.18	-5.64
<b><i>Others</i></b>		
Argentina	-3.01	-3.84
India	1.68	2.37
Mexico	-2.62	-2.57
S. Africa	-3.04	-2.71

Source: IMF Fiscal Monitor, 2014 and Özatay, 2014

Moreover, emerging markets with high current account deficits and rapid credit growth—which were not able to respond to the crisis with full fiscal stimulus—responded by both partial fiscal stimulus and macro-prudential measures. Countries like Brazil, Indonesia, and Turkey, which suffered from high current account deficits, also took additional macro-prudential measures, taking into account the risks associated with credit booms. In 2011, Brazil and Indonesia initially raised policy rates, but reduced them by the end of 2011. In Turkey, starting in 2010 until the second half of 2011, the policy rate was decreased; however, required reserve ratios were increased. In the second half of 2011, these policy measures were reversed in response to high capital volatility. This episode shows how difficult it is to manage domestic monetary policy when capital flow volatilities are high.

On the other hand, data show that the global imbalances in fact improved during the quantitative easing period, in spite of the persistently high current account deficits of some countries such as Turkey. Figure 4 shows, between 2008 and 2013, the current account surpluses of the top ten surplus countries declined as a percent of total GDP, while the top ten deficit countries' deficits improved.

Figure 4. Total of highest 10 CA-deficit/surplus countries (% GDP)



Source: IMF WEO (2013)

Table 2 gives a more detailed breakdown of imbalances in countries with current account deficits during 2008-2013. Although the overall imbalances stemming from deficits seem to have weakened, countries such as Turkey, Brazil, India, and Indonesia diverge from other emerging markets, and are at higher risk as a result of tapering and the slowdown of global liquidity. The countries marked in red are those, which have seen increases in their current account deficits.

Table 2. Countries with Current Account Deficits

	Current Account/GDP (%)		
	2007-08	2012-13	Change
USA	-4.8	-2.7	2.1
India	-1.8	-4.6	-2.8
UK	-1.6	-3.3	-1.7
Brazil	-0.8	-2.9	-2.1
Canada	0.4	-3.3	-3.7
Turkey	-5.7	-6.7	-1
Australia	-5.3	-3.5	1.8
France	-1.4	-1.9	-0.5
Indonesia	0.8	-3.1	-3.9
South Africa	-7.1	-6.2	0.9
Poland	-6.4	-3.3	3.1
Mexico	-1.6	-1.3	0.3
Colombia	-2.9	-3.2	-0.4
Chile	0.4	-4.1	-4.5
Italy	-2.1	-0.4	1.7
Egypt	1.3	-2.9	-4.2
Belgium	0.3	-1.2	-1.4
Greece	-14.8	-2.2	12.6
Finland	3.4	-1.7	-5.1
Pakistan	-6.3	-1.5	4.8
Argentina	2.2	-0.4	-2.6
Portugal	-11.4	-0.3	11
Spain	-9.8	0.2	10
Ireland	-5.5	3.4	8.9
Kazakhstan	-1.7	4	5.7

Source: IMF WEO, 2013

In effect, countries that have experienced fast depreciation of their currencies after the Fed's tapering decision are now advocating for stronger international policy cooperation. In spite of examples of global monetary policy cooperation during the crisis period (See discussion on swap facilities above), however, attempting such cooperation is a challenge. Monetary policy that is domestically driven continues to be viewed as "the optimal arrangement" (Kapur and Mohan 2014)<sup>15</sup>. As discussed in the theoretical literature (See section above), however, the merits of monetary policy coordination is quantitatively much more significant under unconventional monetary policy than earlier models that were based on the impact of policy coordination under conventional monetary policy.

<sup>15</sup> During the St Petersburg Summit leaders reaffirmed this view stating that "Monetary policy will continue to be directed towards domestic price stability and supporting the economic recovery according to the respective mandates of central banks." Notwithstanding their stance that monetary policy should be domestically driven, the G20 Leaders added, "We recognize the support that has been provided to the global economy in recent years from accommodative monetary policies, including unconventional monetary policies. We remain mindful of the risks and unintended negative side effects of extended periods of monetary easing. We recognize that strengthened and sustained growth will be accompanied by an eventual transition toward the normalization of monetary policies. Our central banks have committed that future changes to monetary policy settings will continue to be carefully calibrated and clearly communicated" (G20 2013).

## CHAPTER 3: RECOMMENDATIONS

Important achievements during the crisis years notwithstanding, fiscal and monetary policies were not always coordinated, and those that were successful waned quickly, in spite of the declarations of G20 leaders' commitment to international cooperation.

The following recommendations propose an outline for international policy coordination, within the G20 framework, that have a major role to play in setting the direction of national policy debates and managing global interdependencies.

**1. The G20 must develop concrete, and achievable targets and measurable outcomes to address economic and development challenges at the global level.** In today's world, where countries are increasingly integrated into the global economy, inter-governmental coordination and global action is key to achieving domestic targets. However, targets set by global governance structures are often too vague or too abstract compared to policy objectives that are set domestically. An exception to this rule was the concrete commitments made by G20 Leaders to restore global economic growth during the peak of the crisis. Since then, however, the G20 Leaders' commitments have been increasingly vague, and are becoming too thinly spread across a wide-range of issues. The G20 Forum must once again spearhead concrete and achievable action statements to effectively address on going or emerging global economic challenges.

**2. The G20 framework can benefit from a "neutral assessor," who will provide national policymakers with non-biased analyses of policy outcomes.** We welcome Ostry and Ghosh's (2013) proposal of a "neutral third party assessor" to provide "analyses of alternative strategies and the resulting trade-offs" to national policymakers, who could then make more reasonable judgments. The "neutral assessors," in this case, could be the G20 troika of central bankers and/or finance ministers.

**3. The assessment framework must include an inclusive jobs and growth focus that emphasizes the needs of emerging markets and other developing countries.** While global inequality improved in favour of emerging economies - as most developing countries grew faster than advanced economies - many emerging markets lay considerably behind advanced economies in terms of income per capita. Global imbalances are further augmented by the North- South governance gap whereby there is little participation by Southern countries in the leadership of key international governance institutions, including the IMF and the World Bank. Any new global governance framework needs to develop inclusive and representative institutions taking into account the multiplicity of independent actors to tackle developmental challenges.

**4. The Mutual Assessment Process (MAP), which is driven by the G20 leaders themselves, has the potential to be an effective governance framework that is supported by transparent information exchange, and with accountability resting at the highest level.** G20 Leaders launched the Mutual Assessment Process (MAP) at the Pittsburgh summit in September 2009,

with the aim of measuring the consistency of policies in individual countries with the objectives of the Framework for Strong, Sustainable, and Balanced Growth (that was also launched at the same Summit). Additionally, the MAP aims to determine the type of action that will improve progress towards these objectives, and to assess how evenly benefits of collective policy action are distributed among G20 countries. As a country-led peer review mechanism, the MAP is an attempt to address credibility and accountability issues associated with processes such as the IMF's "multilateral consultation."

**5. The MAP needs to become a more inclusive discussion platform.** A wider array of actors should be invited to participate in the MAP discussions, including members of labour advocacy groups, business advocacy groups (SME advocacy groups, in particular), women's rights groups, and so forth. The participation of these groups is important to ensure the integration of interests and concerns of these groups into global policy discourse.

**6. The recent Argentinean default case demonstrates the urgent need for G20 to facilitate a more coordinated and globally inclusive financial architecture.** There has not been sufficient global policy consensus or coordination regarding the design of rules and regulations that govern global finance and investment. The US court's recent decision on the Argentinean default demonstrates the shortcomings of the global financial architecture. The G20 can facilitate the establishment of a global sovereign debt restructuring mechanism that can settle cases such as the Argentinean one.

**7. Swap facilities that were effectively used by the US Federal Reserve to improve global funding and credit markets during the crisis must be turned into permanent mechanisms to address global funding pressures when they arise.** At the peak of the crisis, the US Federal Reserve entered into US dollar liquidity swap lines with a total of 14 central banks in major advanced economies and a few emerging markets, but gradually decreased these to five central banks in major advanced economies. Therefore, we welcome the proposal by Eichengreen (2014) that the Fed should make permanent dollar-swap arrangements with emerging economies.

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