The Global Financial Crisis: Impact on Asia and Emerging Consensus

Two full years since the onset of the crisis, policy makers have been putting into practice demand management policies to mitigate the impact of the crisis and sow the seeds for a strong recovery. Asia, while less exposed to the crisis than the G3, has been actively engaged in fiscal and monetary stimulus, supported in some cases by international financial institutions such as ADB. This paper reviews the impact of the crisis on Asia and policy measures introduced by various countries to mitigate the impact. Lessons learned and new insights are also elaborated.

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CONTENTS

I. Introduction 1

II. The Impact of the Crisis on Asia and Policy Measures Adopted 2

III. ADB’s Countercyclical Support Program 10

IV. Global Financial Crisis: What Have We Learned? 11
   A. Countercyclical Fiscal Stimulus: Was It Effective? 11
   B. Countercyclical Fiscal Stimulus: Emerging Consensus 12
   C. Monetary Accommodation: Lessons for the Central Banks 13
   D. Is There a Need for Change in the Monetary Policy Framework? 13
   E. What Are Macroprudential Policy and Instruments? 14
   F. Building Blocks of Macroprudential Instruments 14
   G. Proposed Changes in the Central Banks’ Operational Framework 15

V. Conclusion 17

References 18

Appendixes
1. An Assessment of ADB’s Countercyclical Support Facility 21
2. The Effect of Statutory Preemption on Credit Disbursement 25
I. INTRODUCTION

1. The financial crisis, initially traced to subprime mortgage market in the United States (US) and the resulting deleveraging process by global financial institutions involved in highly complex financial transactions, marks the first global financial crisis of the 21st century. Few countries linked to the global financial markets and international trade were spared from the sudden downturn as the financial system imploded in September 2008. The propagation or succession of interlinked events was visible to all—from the sudden and unexpected freezing of the securitization industry to the ensuing adjustment through shrinking of bank balance sheets and the resulting pervasive flight to quality. The confluence of these events wreaked havoc across markets and countries around the world.

2. In the US, the credit squeeze and the ensuing impact on real estate and housing asset markets led firms and households to reduce spending, resulting in a sharp economic slowdown. Across the rest of the world, economies reeled as banks began calling in loans to reduce the large counterparty credit risk, including those in seemingly riskier emerging markets. These first round effects soon gave way to second round effects through slower export demand, further weakening global economic growth.

3. The emerging consensus points to the important role of the buildup of global imbalances in the lead-up to the crisis. On the one hand, there were proponents of the large and unsustainable US current account deficits and in particular the increasing indebtedness of US households that drove the demand for foreign financing. On the other hand, there were the advocates of the savings glut vision of events (Bernanke 2007) that emphasized the importance of expenditure switching and a “corrective” move toward greater domestic-led growth—from an excessive dependence on export-led growth—particularly in the large current account surplus countries in Asia. A reduction of the capital flows from emerging markets to the US would in itself reduce the demand for safe-haven US government securities and lead to the requisite adjustment in the US current account deficit.

4. More recently, there has been a more nuanced view of the global imbalances that emphasizes the unique role of the US financial markets to effectively intermediate world savings. In particular, the US has an unrivalled comparative advantage to produce safe assets (Caballero 2010; Caballero, Farhi, and Gourinchas 2008). The inability of the US financial markets to generate a sufficient stock of these safe assets given the global demand or flow for these assets led to an overstretching of its financial system. Thus, the risk transferring mechanism away from bank balance sheets into special purpose vehicles and other structured products under the “originate and distribute” model of banking—and the explosion of securitization of subprime and other lower grade assets into AAA securities through collateralized debt obligations (CDOs)1 and supported by the monolines and insurance companies—were a reflection of how the US financial system coped with the large global demand for safe assets. Perhaps a major lesson that comes out of this analysis—and which has not yet been fully appreciated—is the importance of accelerating financial market development in Asia and in particular developing sound and liquid financial instruments as a means to contain the pressure for safe assets in the US and the risk of global financial instability.

5. Ultimately, it is important to review the incentive structure that led to this course of events. The microeconomic causes of the crisis broadly fall into three areas (BIS 2010): flawed incentives, failures of risk measurement and management, and weaknesses in regulation and

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1 According to the International Monetary Fund’s Global Financial Stability Report (2009), global issuance of CDOs increased from $185 million in 2000 to $1.3 trillion in 2007.
supervision. The crisis revealed distorted incentives for all the economic agents and especially the resulting mispricing of risk traced to a very low interest rate policy in the US in the lead-up to the crisis. Both consumers and investors borrowed heavily and invested in overly complex products supported by credit ratings that were significantly flawed. Many years of “light” financial markets regulation and undue reliance on market discipline also proved to be ineffective in correcting the buildup of systemic risk.

6. Against this backdrop of the role of global imbalances, there has been increasing body of research on lessons from the crisis, including on the sources and impact of the crisis (Roubini and Nimh 2010). However, of equal importance is the research on measures to mitigate the crisis. There has been wide debate among economists on their role and the contribution of the shortcomings in economic management (see Krugman 2009 and resulting replies by Cochrane 2009 and Lucas 2009). Given these events—and quick policy responses—economists have been reexamining the scope for countercyclical demand management measures, in particular, the role of fiscal and monetary policy to effectively accommodate an external shock.

7. Two full years since the onset of the crisis, policy makers have been busy putting into practice demand management policies—including fiscal and monetary policies—to mitigate the impact of the crisis and sow the seeds for a strong recovery. Asia, while less exposed to the crisis than the G3 of Europe, Japan, and the US—has been actively engaged in fiscal and monetary stimulus, supported in some cases by international financial institutions such as the Asian Development Bank (ADB).

8. This paper reviews in section II the impact of the crisis on Asia and the policy measures introduced by various countries to mitigate the impact. The role of the ADB in fostering recovery in the developing countries is discussed in section III. Lessons learned and new insights are elaborated in section IV. Finally, we conclude in section V.

II. THE IMPACT OF THE CRISIS ON ASIA AND POLICY MEASURES ADOPTED

9. The global economic crisis led to a synchronized global slowdown starting in the second half of 2008. Transmission through trade and financial channels generally increased output volatility and overall economic vulnerability, particularly in those countries with strong links to international markets. The impact of crisis, however, differed among economies depending on the degree of dependency to external demand and credit. Asia in general was not excessively affected although there are discernible patterns within countries and subregions in Asia. Many of the more export-dependent countries in Asia, particularly the Republic of Korea, as well as many of the Southeast Asian economies, experienced a marked slowdown in export demand that had important spillover effects into the rest of the economy. Countries such as Thailand, for example, experienced a steep decline at the onset of the crisis resulting from the collapse in external demand. Export growth in 2009 was down by 13.9% in Thailand, 13.7% in the Republic of Korea, 21.1% in Malaysia, and 22.3% in the Philippines. On the other hand, South Asian countries, less integrated to global supply chains and international financial markets, were less affected. India’s gross domestic product (GDP) fell at a less dramatic pace, as it has a lower export-to-GDP ratio compared to most East Asian economies. The People’s Republic of China (PRC)—while increasingly becoming the world’s manufacturing base—was initially strongly affected by the export slump with export growth in 2009 declining to 16.1%.

2 See ADB 2010.
10. Aggressive and timely government stimulus policy measures—led by across-the-board policy rate cuts and in some cases supported by quantitative easing, liquidity support measures, and “too big to fail” provisions—across the global economy led in the first instance to a halt in the decline in external demand. Fiscal stimulus measures soon followed with some countries such as India and the PRC successfully ensuring speedy approvals of measures to strengthen domestic demand as a means to compensate for slack in external demand, as well as to put in place social safety net provisions. As per Figure 1, Asia’s recovery followed the more conventional V-shaped recovery path, and by the last quarter of 2009—approximately 1.5 years since the onset of the downturn in the second quarter of 2008—the major Asian economies were growing at pre-crisis growth rates. Of interest on the upside is the greater resilience of the economy in the PRC which at its trough maintained a growth rate of 6.5%. On the downside, Thailand experienced a more rapid downturn where political developments possibly contributed to an actual contraction of the economy centered around early 2009. The evolution of industrial production—a higher frequency indicator and proxy for GDP growth—against its trend rate provides clearer evidence of the downturn in these economies (Figure 2). While countries with relatively large domestic economies such as the PRC and Indonesia experienced less of a downturn, countries such as Thailand and the Philippines were more adversely affected. Looking forward, it is of interest that with the exception of India, latest data (as of May 2010) point to all these countries currently operating above trend, suggesting possible capacity constraints in the manufacturing sector in the future.

Figure 1: Quarterly Real Gross Domestic Product Growth Rates
(year-on-year, %)

Source: CEIC Data Company Ltd.; Economist Intelligence Unit (EIU).
Figure 2: Index of Industrial Production (IIP) and Its Hodrick-Prescott Filter (HP) Trend

a. People’s Republic of China (Jan 2001=100)  
IPI (Manufacturing)  
IPI - HP

b. India (1993–1994=100)  
IPI (Manufacturing)  
IPI - HP

c. Indonesia (2000=100)  
IPI (Manufacturing)  
IPI - HP

d. Thailand (2000=100)  
IPI (Manufacturing)  
IPI - HP

e. Philippines (2001=100)

For the People’s Republic of China, value added of industry is used as a proxy for Index of Industrial Production.  
Source: CEIC Data Company Ltd.

11. The strong economic recovery reflected in the V-shape path was arguably supported by timely fiscal and monetary policy measures introduced across economies in the region. Aggressive fiscal expansion planned by the governments was in general much larger than those of industrial economies (as a share of GDP) (Zhang, Thelen, and Rao 2009). According to the authors, the leading fiscal stimulus programs as a share of GDP included Thailand (17.2%), the PRC (13.3%), Viet Nam (9.7%), and the Republic of Korea (6.6%). While tax cuts were arguably the main stimulus drivers in developed countries, infrastructure projects made up about half of the stimulus packages in the emerging economies in Asia (ADB 2010). This reflects in large part the importance of investment and in particular infrastructure financing as a
driver of growth in Asia. The Government of India rolled out three demand-side fiscal stimulus packages mainly composed of additional plan expenditure, and different tax relief and incentive measures (Carrasco, Hayashi, and Mukhopadhyay 2010). The Government of Thailand responded with two fiscal stimulus packages worth 17% of GDP mainly to revamp the production sector. The PRC responded with a 4.0 trillion yuan ($600 billion or 13% of GDP) comprehensive stimulus package spread over all sectors of the economy, particularly in infrastructure and development projects.

12. Another salient feature to note is that despite the strong fiscal stimulus measures that were adopted, countries in Asia have maintained a certain rigor in keeping to prudent fiscal deficits. Across a selection of countries, with the exception of India, fiscal deficits have been contained under 5% of GDP (Table 1). Going forward, policy makers will have to carefully review what the appropriate balance is between maintaining some reduced form of growth supporting fiscal stimulus while committing to a path of fiscal consolidation to ensure macroeconomic stabilization over the medium term. Getting the appropriate balance right is ever more important in view of the 2010 sovereign crisis in Europe that adversely affected the peripheral European economies. While debt levels are important, countries will ultimately have to closely monitor the gap between growth rates and interest rates to avoid the risk of any potential debt sell-off as witnessed in Greece in 2010.

Table 1: Fiscal Balance, Central Government

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</thead>
<tbody>
<tr>
<td>People’s Republic of China (PRC)</td>
<td>–1.2</td>
<td>–0.8</td>
<td>0.6</td>
<td>–0.4</td>
<td>–2.8</td>
</tr>
<tr>
<td>India</td>
<td>–6.5</td>
<td>–5.4</td>
<td>–4.0</td>
<td>–8.5</td>
<td>–9.7</td>
</tr>
<tr>
<td>Indonesia</td>
<td>–0.5</td>
<td>–0.9</td>
<td>–1.3</td>
<td>–0.1</td>
<td>–1.6</td>
</tr>
<tr>
<td>Philippines</td>
<td>–2.7</td>
<td>–1.1</td>
<td>–0.2</td>
<td>–0.9</td>
<td>–3.9</td>
</tr>
<tr>
<td>Thailand</td>
<td>0.2</td>
<td>0.1</td>
<td>–1.1</td>
<td>–0.3</td>
<td>–4.8</td>
</tr>
</tbody>
</table>

= negative figures.

13. Turning to monetary stimulus, monetary authorities across the region responded decisively on two fronts. First, additional liquidity support facilities and other measures to safeguard the stability of the banking system were pursued. Second, the central banks adopted a monetary easing policy stance through aggressive targeting of lower policy rates in order to bolster credit expansion and private investment. The actions pursued thereby sought, on the one hand, to ensure financial stability objectives and, on the other hand, to safeguard employment and economic activity without compromising inflation objectives and thereby engineer a soft landing. The Reserve Bank of India (RBI) most proactively decreased its repo rate by 425 basis points in approximately 7 months (Figure 3). The cuts in policy rates were accompanied by strong moral suasion. Despite additional liquidity in the money market in India, there was some inertia as lending rates were initially slow to adjust, thus exposing the underlying limitations of the monetary accommodation (Carrasco and Mukhopadhyay 2010).3 While the disinflationary process was supportive of the policy rate cuts and the pursuit of monetary stimulus initially, as the economy recovered, inflation has added pressure to raise interest rates perhaps faster than the government would have ideally desired.

3 This paper demonstrated that despite a demand constrained credit regime between December 2008 and July 2009, banks were reluctant to reduce lending rates. This phenomenon was explained in terms of the initial conditions as lending rates reflect in part costs of deposit mobilization that in this case reflected the restrictive monetary policy stance in the first half of 2008.
Figure 3: Policy (Repo) Rates

Note: For the PRC, central bank benchmark lending interest rate is used.
Sources: Reserve Bank of India, Bank of Indonesia, Central Bank of the Philippines, Bank of Thailand, CEIC Data Company Ltd.

14. From Figure 3, it can be seen that all other selected countries followed with sharp policy rate cuts in a closely synchronized manner. Looking forward, of interest is that India—which together with the PRC has been leading the recovery in Asia—has already turned to a tightening policy stance.

15. To better understand the drivers of growth during the downturn and the subsequent recovery phase requires a breakdown of the components of GDP growth (Figure 4). Private investment tends to precede recovery because of its forward-looking nature. Private consumption, on the other hand, will follow as recovery is transformed into higher income. Noteworthy across these countries is the significant volatility in gross exports, which at least three-quarters contributed to the declining GDP growth. On the upside, the recovery phase has been driven similarly by a strong rebound in external demand. Among the five selected major Asian economies, investment (fixed capital formation) is picking up in India, the Philippines, and Thailand. Consumption, on the other hand, increased its contribution in Thailand, but is muted in others. In the Philippines and Indonesia, workers’ remittance inflows were one of the more important and resilient sources of fund transfers, that served to buoy consumption. To a lesser extent, fixed capital formation has closely followed the V-shape recovery phase, which is not surprising given the relative importance of investment and in particular infrastructure spending on growth in Asia. While public spending and external demand contributed to the recent recovery of economic growth, restoration of private domestic demand—consumption and investment—is essential for sustainable economic growth. Looking forward, policy makers will have to have a strong sense of the robustness of the economic recovery through the close monitoring of a tailored set of leading indicators such as business sentiment and expectation indices. This will be a critical factor in determining the timing of exit from the stimulus measures, as a premature withdrawal may lead to stalling recovery.

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4 The PRC does not report quarterly national accounts breakdown by component and hence a very rough proxy is used in this analysis.
Figure 4: Contribution to Gross Domestic Product Growth, Demand-Side

16. With signs of possible excess demand in many of the Asian countries setting (Figure 2), there have been early signs of buildup of inflationary pressures if not outright inflation (Figure 5). In fact, the most salient feature of Figure 5 is the close correlation with Figure 1 that traces the V-shaped economic recovery. Accordingly, monetary authorities have begun to tighten monetary policy to stabilize prices. The RBI increased repo rates by 125 basis points since the beginning of 2010 to curb double-digit inflation (Figure 3). The Bank of Thailand increased repo rates by 50 basis points since the third quarter of FY2010 (ending 30 September 2010).

* For the PRC, total retail sales of consumer goods are used as proxy for private consumption, while fixed assets investment is used as proxy for fixed capital information. Figure 4a shows the year-on-year growth rate of each demand item.
Source: CEIC Data Company Ltd.
The People’s Bank of China raised its benchmark lending rate in October 2010 after almost 2 years. This has certainly elevated the macroeconomic and monetary management challenges. Establishing a robust recovery will depend to a large extent on the ability to ensure effective policy coordination, and achieve macroeconomic stability. High inflationary expectations will certainly erode export competitiveness in many developing economies. On the other hand, high inflationary expectations could force many central banks to take a sharper and premature retreat from monetary accommodation than what is warranted. Needless to say, this will make the reversal of fiscal stimuli more difficult.

17. An important feature to consider in trying to forecast the outlook for these economies is to take a broader view and attempt to first discern the intensity of the recovery in the G3 economies. While there has been much speculation about the degree of decoupling achieved across the Asian economies, some element of prudence is warranted. There may be some support to suggest that over the years, as the countries in Asia have become wealthier, the share of consumption in GDP has grown. There may also be some who suggest that investment may be less driven by the export sector outlook than previously. However, the storyline in the observed rapid recovery of Asian economies as compared to the G3 economies is more likely explained by the amount of stimulus introduced—particularly in those countries that implemented large stimulus packages. Against this backdrop, significant uncertainty remains as to whether the recovery will indeed be V-shaped or whether it eventually becomes W-shaped across economies in Asia. The latest Asian Development Outlook 2010 Update of September 2010 suggests some slowdown in FY2011 in some of the economies as compared to FY2010 (Table 2).

Figure 5: Inflation, Year-on-Year (%)
Table 2: Growth Rate of Gross Domestic Product
(% per year)

<table>
<thead>
<tr>
<th></th>
<th>FY2009</th>
<th>FY2010a</th>
<th>FY2011a</th>
</tr>
</thead>
<tbody>
<tr>
<td>China, People’s Republic of</td>
<td>9.1</td>
<td>9.6</td>
<td>9.1</td>
</tr>
<tr>
<td>India</td>
<td>7.4</td>
<td>8.5</td>
<td>8.7</td>
</tr>
<tr>
<td>Indonesia</td>
<td>4.5</td>
<td>6.1</td>
<td>6.3</td>
</tr>
<tr>
<td>Philippines</td>
<td>1.1</td>
<td>6.2</td>
<td>4.6</td>
</tr>
<tr>
<td>Thailand</td>
<td>−2.2</td>
<td>7.0</td>
<td>4.5</td>
</tr>
</tbody>
</table>

− = negative figure.
a Indicates projected growth.

Social and Environmental Impacts of the Crisis

The global financial crisis is likely to increase the incidence, and in some cases exacerbate the vulnerability of the poor and disadvantaged groups, relative to other sectors of the society. This is largely due to the fact that the crisis came as an additional shock to the world economy (that was recovering from earlier dramatic hikes in the prices of food and fuel). The immediate economic effects were evident in output growth, trade, and foreign investments. Global attention and policy agenda significantly shifted from poverty and hunger reduction to macroeconomic and financial stability measures. And while the scale of fiscal stimulus packages was large, governments have allocated modest funds for social protection services (UNESCAP-ADB-UNDP 2010).

World trade contracted as the economy entered into a rapid phase of global recession in late 2008. Such trade shocks eventually led to job losses and unemployment in export-led enterprises, particularly concentrated in regions supplying these firms. The PRC, for instance, saw massive job losses of rural–urban migrants in manufacturing, construction, and wholesale and retail services when export demand collapsed. Job losses reduced migrant workers by 20 million (15.3% of total migrant workers)a (Bhaskaran and Ghosh 2010). This also undermines the ability of households to purchase basic supplies, forcing them to adopt long-term unwanted coping mechanisms such as pulling children out of school and eating less than the normal minimum requirement (McCord 2009). Job losses also have gender-specific impacts and often place a disproportionate burden on women (UN 2009). This is based on the notion that women are likely to get laid off first as men were considered to be breadwinners. However in an empirical study conducted by Jansen and von Uexkull (2010), they found no evidence of gender bias in job losses in India, further indicating that male and female workers have been affected equally.

The actual poverty targeting measures (i.e., access to credit, food subsidy, employment generation programs in the rural areas, and health and other social facilities) have been (so far) relatively marginal. Moreover, current policies focusing on fiscal consolidation may have major adverse impacts on social spending unless specific attention is provided to protect poor and marginalized sections of the population (Ortiz et al. 2010). Kyrili and Martin (2010) reported that two-thirds of 56 developing countries surveyed are cutting budget allocations in 2010 to one or more “priority” pro-poor sectors, which include education, health, agriculture, and social protection.

Significant potential adverse environmental impacts are also expected. According to a study conducted by Kahn and Kotchen (2010), effective environmental policies are concurrent with economic booms. In particular, there is some concern arising that governments are likely to cut back on some climate- and energy-related funds to address ballooning deficits arising from large fiscal stimulus packages. Moreover, recession may represent an exogenous shock that ultimately reduces concern for issues related to environment and thus risk undermining earlier efforts within this field. Interestingly, despite anticipated high cost of mitigation (coinciding with cumulating debts due to large stimulus packages), the PRC, Indonesia, and India committed to quantitative carbon emission targets early this year.

a This may also be due to the passage of the new Labor Contract Law (that requires employers to sign permanent contracts with all workers who have been with the same employer for at least 10 years) and tight macroeconomic policies (in response to the inflation problem that preceded the crisis).
III. **ADB’S COUNTERCYCLICAL SUPPORT PROGRAM**

18. ADB also played its part in helping developing Asia in its endeavor for growth recovery. It recognized early on the exceptional nature of financial requirements resulting from the global financial market failure in September 2008, and put in place new modalities and facilities as well as innovative procedures in response to the crisis.

19. Indonesia was the first country to benefit from crisis-related assistance. In response to Indonesia’s restricted access to credit markets in the third quarter of 2008, ADB catalyzed agreements with development partners for contingency funding. As a standby loan facility, the Public Expenditure Support Facility provided insurance in the event Indonesia was unable to meet immediate borrowing requirements within agreed market conditions. In other words, Indonesia was allowed to borrow from the facility if the resources cannot be borrowed from the market at an interest that is less than or equal to a predetermined threshold interest rate. Early demonstration of funding availability and continued policy dialogue on an appropriate macroeconomic framework helped restore confidence in financial markets and enabled the government to raise $3.7 billion from the market in 2009.

20. As the scale of financial crisis contagion and the second round effects of global demand destruction became clear, ADB took additional proactive measures to support developing member countries (DMCs) to cope with the challenges of the global economic crisis. Its response was tailored to the specific circumstances and needs of each country. The magnitude of ADB’s additional support was also consistent with the huge resource requirements of DMCs’ countercyclical fiscal programs and emerging financing gaps.

21. ADB established a new, time-bound budget support instrument, the $3 billion Countercyclical Support Facility (CSF), to assist DMCs eligible to borrow ordinary capital resources (OCR). In 2009, ADB approved CSF assistance to five countries for $2.5 billion (Bangladesh, Indonesia, Kazakhstan, the Philippines, and Viet Nam), all of which was disbursed in the same year. In addition, significant assistance ($35 million) was provided to the Maldives to support economic development and mitigate the effects of the crisis. In addition, ADB allowed borrowing member countries to front-load up to 100% of their biennial allocation during 2009 to address the effects of the crisis. ADB also expanded its Trade Finance Facilitation Program from $150 million to $1 billion to cushion the impact of the global downturn on international trade.

22. In view of the lessons learned and to assess the effectiveness of countercyclical stimulus policies, the following analyzes ADB’s crisis response to three core criteria: timely, targeted, and temporary nature of the assistance. We applied these criteria to assess the five CSF loans. The results are in Appendix 1. The main findings are summarized below:

23. **Timely.** Fast disbursement is critical for assistance to be effective at times of crisis. Abbreviated and streamlined business processes to access CSF led to faster processing, on average, 3 months between DMCs’ request and Board approval, and 2 months between Board approval and disbursement. As budget support, CSF ensured that sufficient resources for DMCs’ countercyclical programs are front-loaded under a single tranche, released upon loan approval and against a letter from the Minister of Finance committing to countercyclical demand management policies with clear budgetary implications. Most governments also introduced policy measures to expedite disbursements, but capacity constraints in key spending ministries appear to have caused delays in the effective utilization of allocations for some projects or programs.
24. **Targeted.** All CSF loans included specific components to mitigate the social impacts of the crisis, by promoting the strengthening of social safety nets and helping to generate employment. Income support for targeted beneficiaries at the lower end of the income distribution contributed substantially to boost demand through strong multiplier effects, as poorer and lower-income households have a relatively higher propensity to consume. In addition, the CSFs also ensured sustained external financing for ongoing and planned infrastructure projects so as to maintain the growth momentum. Labor-intensive infrastructure projects prioritized support for sectors considered key for economic development and integration. Export sectors hurt by the crisis and strategic sectors (e.g., agriculture, transport, and energy) also benefited from tax cuts or subsidies. Small and medium-sized enterprises (SMEs) received such support and were provided refinancing facilities as well. Moreover, crisis-related programs supported by the CSF also included measures for rebuilding private sector confidence, most importantly where the financial system needed recapitalization or restructuring. However, in some cases, support for large infrastructure projects with longer procurement and disbursement periods may not qualify for genuine countercyclical support.

25. **Temporary.** The CSF was put in place as a transitory sovereign lending instrument due to expire at the end of 2010. Only OCR-eligible countries with strong macroeconomic management and a sustainable debt position had access to the CSF. Moreover, CSF programs were built on continuous policy dialogue and ADB-supported fiscal consolidation reform programs. Therefore, the rationale for withdrawing fiscal stimulus in line with the economic recovery and the need to return to a path of fiscal consolidation is understood by CSF borrowers. Nevertheless, with the robustness of the global recovery uncertain, the ripple effects of reduced export and remittances receipts still uncertain, and banks still resisting credit expansion, the withdrawal from fiscal stimuli remains gradual in most Asian countries. Nonetheless, complete reversal from policies, such as fuel subsidies and subsidies or tax cuts for key sectors, are likely to remain politically sensitive for many governments.

IV. **GLOBAL FINANCIAL CRISIS: WHAT HAVE WE LEARNED?**

A. **Countercyclical Fiscal Stimulus: Was It Effective?**

26. The previous section highlighted the path, the nature, and the drivers of the recovery in selected Asian economies. There should be no disputing that countercyclical stimuli—both fiscal and monetary policies—contributed in some form to the recovery. Despite some earlier skepticism, especially against effectiveness of discretionary fiscal policy, it is likely that policies such as tax cuts, and additional government spending on consumption and investment (with long gestation periods) supported economic activity in the worst period of the crisis.

27. Doubts on fiscal policy measures seem to have emerged primarily from inconclusive empirical evidence of Ricardian equivalence. Adherents of Ricardian equivalence predicted that the private sector would react to increase government stimulus by saving rather than spending the extra disposable income in anticipation of future tax increases. Others advocated, based on the Mundell–Fleming model under a flexible exchange regime, that additional public expenditure will be offset by declining exports through higher interest rate and exchange rate appreciation (Corden 2010; Grenville 2010).

28. An empirical test covering 24 countries, including 8 major industrialized countries, 6 non-Asian developing countries, and 10 developing Asian countries, confirmed that monetary policy measures had a significant effect in supporting economic growth (ADB 2010). While fiscal policy measures were not significant for the whole sample of 24 countries, government expenditure
had a positive and significant impact to support output in the sub-sample of developing Asia. Tax cuts were however insignificant. This result appears to support the proposition that only a part of tax cuts was consumed by households and firms.

**B. Countercyclical Fiscal Stimulus: Emerging Consensus**

29. As the economies recovered in Asia, policy makers gradually started unwinding the fiscal expansion. Finding the right timing and degree of exit or reduction in stimulus, however, remains a major challenge for policy makers. While too much stimulus may crowd-out the private sector activities particularly in those economies that are now close to precrisis growth rates, a premature withdrawal may risk the economy returning to recession. The following provides key pointers that may provide a clearer direction on issues related to fiscal stimulus.

30. **Burden of too much fiscal stimulus.** Excessive fiscal expansion could crowd out private investment through higher inflation and affect long-term capital accumulation. Increasing uncertainty in the future level of taxation could also distort private sector activities. As large fiscal deficits continue, concern on debt sustainability and weakening of economic fundamentals will further burden these economies. Asian economies have had a record of strong fiscal discipline even after 1997 crisis and, looking forward, it is expected that in the postcrisis period, fiscal authorities will pursue a fiscal consolidation path in order to reduce vulnerabilities to unanticipated future shocks. A recent empirical study confirmed an inverse relationship between the size of debt and subsequent economic growth (Kumar and Woo 2010). An average 10% increase in the debt-to-GDP ratio is associated with a slowdown in annual real per capita GDP growth of around 0.2%. The adverse effect largely reflects slower labor productivity growth due to reduced investment. A study using the IMF’s Global Integrated Monetary and Fiscal Model (GIMF) simulated the tradeoff between the short-run “pain” and the long-run gain from fiscal consolidation (Clinton et al. 2010). The “pain” arises from the negative multiplier effects of lower government spending, while the gain arises from lower real interest rates and a lesser possibility of distortionary taxes in the future associated with lower debt levels.

31. **Risk of a premature exit.** Premature withdrawal of stimulus may return the economies back to recession. The typical example is the great recession in 1937 when President Hoover refused to support the economy with fiscal stimulus. The economy only recovered after President Roosevelt expanded fiscal expenditure under the New Deal. More recently, Japan's tax increases and spending cuts in April 1997 inhibited the green shoots from blossoming during the 1990s recession only to reverse its fiscal stance and provide supplementary budget in 1998 (Koo 2008). Despite these lessons from history, timing of exit from stimulus remains a major challenge for policy makers. A more conservative view is for policy makers to closely monitor the output gap (and inflation) and exit from stimulus once the output gap is closed (Corden 2010).

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5 The government expenditure was however not significant for the whole sample including major industrial countries and non-Asian developing countries. Monetary policy was significant for the whole sample of countries.

6 See also Hur, Mallick, and Park (2010), which provides mixed evidence for crowding out.

7 In developing Asia, India has relatively high combined public debt to GDP ratio (around 82% of GDP in FY 2009); the Government of India modestly began to exit from fiscal stimulus in the current FY2010 budget by rolling back the central excise duties and committing to eliminate its current account deficit by FY2013 following the recommendations of the 13th Finance Commission. The PRC has a relatively healthier state of public finances—the public debt to GDP ratio stands at around 19% of GDP, excluding local government debt, pension liabilities, and other implicit liabilities. Low debt stock enabled the PRC to actively use fiscal policy for rebalancing purposes from export- and investment-led to domestic demand-driven growth (Park and Fernandez-Lommen 2010).
32. **Exit strategy needs to be tailor-made.** The exit strategy depends on the prevailing macroeconomic conditions in a country. Therefore, an exit strategy needs to be tailor-made. For example, in economies with urgent need of fiscal consolidation, monetary accommodation could continue supporting economic activity (ADB 2010; IMF 2010b). This sequential exit strategy would be possible whenever there is no inflationary pressure in the horizon that monetary policy would have to deal with. Therefore, this policy mix would not be an option for a country such as India, which started monetary tightening to address inflationary pressures attributed to higher food prices, excess liquidity, or other structural factors.

33. Similarly, understanding the sources of growth will be instrumental for policy makers to decide on the optimal sequence between reversal of tax cuts or sector-specific subsidies on the one hand and holding back on increased public expenditure on infrastructure, on the other. Many export-dependent countries may not want to withdraw export incentives, whenever the contribution of the domestic economy is small and uncertainties about recovery in the advanced countries persist.

34. **Need for structural reforms.** Growth-oriented structural reforms should complement the exit strategy to partially offset the effect of exit from fiscal stimuli. There is a long list of pending structural reforms in developing Asia. Tax reform should minimize distortions by lowering taxes on capital and labor, and maintain a buoyant tax system by creating supply-side responses. The introduction of a goods and service tax and/or valued-added tax is expected to elicit long-run supply responses. Private corporate debt market needs to be developed and deepened to mobilize long-term funds. Social safety nets should be strengthened to promote domestic consumption and facilitate a shift from export-led growth. Moreover, social safety nets also reduce the need for precautionary savings. More competitive distribution systems would lower retail pricing. Improving infrastructure would lift binding constraint on growth and development. More importantly, these structural reforms are also needed in many countries from the perspective of rebalancing growth (IMF 2010a).

C. **Monetary Accommodation: Lessons for the Central Banks**

35. The crisis raises two policy challenges for central banks. First, how should monetary policy strategic frameworks be modified to better prevent or mitigate the effects of financial crises? And second, how should a central bank’s operational framework adjust to cope with future potential crises (IMF 2010b)?

D. **Is There a Need for Change in the Monetary Policy Framework?**

36. The recent crisis has reopened the debate about the role of central banks in ensuring financial stability to avoid systemic risk. There is a consensus that financial stability generally enhances the effectiveness of monetary policy in maintaining price stability by facilitating the smooth transmission of monetary policy impulses including through the interest rate channel. It helps contain the propagation and impact of macroeconomic shocks through the financial sector, and by reducing the incidence of shocks originating in the financial sector, from bank failures, or the abrupt unwinding of sizeable imbalances in financial markets. However, more generally, there could be trade-offs between financial stability and price stability objectives.

37. Consider a situation of very low inflation and a prolonged period of very low interest rates that is causing an imprudent increase in leverage and the emergence of asset price

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8 This would be in line with a monetary policy objective function characterized by lexicographic preferences between inflation and output stabilization.
bubbles. In such an environment, the central bank may face a trade-off, if it aims at safeguarding financial stability by tightening the monetary policy stance because of the potential impact of the tightening on prices and output (Papademos 2009). Similarly, a trade-off will emerge when the financial system is under stress due to a liquidity crunch but inflation risks are a threat (BIS 2010; Papademos 2009).

38. Under the circumstances, there is a growing consensus that financial stability—to the extent that it weakens the principle of one instrument per goal—should not be included as part of the monetary policy strategy. Instead, macroprudential instruments should be used by the central banks to ensure financial stability (BIS 2010; Caruana 2010; IMF 2010b, Nier 2009; Papademos 2009; Viñal 2010).

E. What Are Macroprudential Policy and Instruments?

39. Macroprudential policy essentially broadens the perspective of traditional prudential policy, and its instruments promote sound practices and limit risk-taking at the level of individual financial institutions (Borio 2003, 2009; BIS 2010). Unlike monetary and fiscal policy instruments, macroprudential instruments are those instruments—within the realm of macroprudential regulations—that are used with the explicit primary objective of promoting the stability of the financial system as a whole (Table 3).

40. Macroprudential policy limits systemic risk by addressing the two key externalities of the financial system. The first is joint failures of institutions because of interlinkages and common exposures among them. The second externality is procyclicality. Procyclicality is the phenomenon of amplifying feedback within the financial system and between the financial system and the macroeconomy (Tobias and Shin 2010). As we have seen in 2010, procyclicality can promote the emergence of unsustainable booms. As boom turns to bust, procyclicality can magnify the disruption and cause a deep economic recession.

F. Building Blocks of Macroprudential Instruments

41. The first building block consists of designing a set of internally consistent macroeconomic policies involving both monetary and fiscal policies. Financial stability is a shared responsibility and therefore depends on a host of policies encompassing taxation, competition, governance arrangement, and others. It may also be noted that reasonable prudential policies may not suffice to maintain financial stability if they are not supported by practical monetary policies. For example, raising credit standards will not effectively contain excessive leverage if very low interest rates are maintained for so long that they foment excessive risk-taking. Fiscal authorities also have a role in financial stability. In terms of crisis prevention, which lies at the heart of macroprudential policies, fiscal authorities have an important role to play both in ensuring the long-term sustainability of public finances and in accumulating adequate fiscal buffers in good times (Caruana 2010).

42. The second building block consists of prudential policies. These should be implemented both at the microprudential level—to ensure that individual institutions are better capitalized, less leveraged, better able to manage risks, etc., and at the macroprudential level as well.

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9 Leverage targeting leads to upward sloping demand curve of a financial instrument and downward sloping supply curve. The perverse nature of the demand and supply curve is even stronger when the leverage of financial intermediary is procyclical. In other words, leverage rises during boom and declines during bust. When securities prices go up, the upward adjustment of leverage entails purchases of securities that are even larger than that for the case of constant leverage. This, in turn, leads to higher prices of securities and consequent strengthening of balance sheet, leading to further rises in leverage (Tobias and Shin 2010).
43. The third building block for financial stability is the institutional framework for the effective enforcement of regulation and monitoring. Financial stability cannot be achieved without functional market discipline and effective monitoring.

44. Finally, the last building block, which spans the other three, is international cooperation—in terms of standard setting, monitoring of fragilities, cross-border resolution regimes, and others.

Table 3: Asian Experience with Macroprudential Tools

<table>
<thead>
<tr>
<th>Objective</th>
<th>Tools</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manage aggregate risk over time (i.e., procyclicality)</td>
<td>Countercyclical capital buffers linked to credit growth</td>
<td>People’s Republic of China (PRC)</td>
</tr>
<tr>
<td></td>
<td>Countercyclical provisioning</td>
<td>PRC, India</td>
</tr>
<tr>
<td></td>
<td>Loan-to-value (LTV) ratios</td>
<td>PRC; Hong Kong, China; Republic of Korea; Singapore</td>
</tr>
<tr>
<td></td>
<td>Direct controls on lending to specific sectors</td>
<td>Republic of Korea, Malaysia, Philippines, Singapore</td>
</tr>
<tr>
<td>Manage aggregate risk at every point in time (i.e., systemic oversight)</td>
<td>Capital surcharges for systemically important banks</td>
<td>PRC, India, Philippines, Singapore</td>
</tr>
<tr>
<td></td>
<td>Liquidity requirements and/or funding</td>
<td>India, Republic of Korea, Philippines, Singapore</td>
</tr>
<tr>
<td></td>
<td>Limits on currency mismatches</td>
<td>India, Malaysia, Philippines</td>
</tr>
<tr>
<td></td>
<td>Loan-to-deposit requirements</td>
<td>PRC, Republic of Korea</td>
</tr>
</tbody>
</table>


45. It may, however, be noted that macroprudential policies have its limitation and need to be used in conjunction with other policies to be effective (Gopinath 2010). Macroprudential measures are well suited to enhance resilience of the financial system but their effect on aggregate demand and inflationary expectations are weak compared to interest rates. It is also important to acknowledge what macroprudential regulation cannot do: it cannot manage economic cycles or target asset prices. It can only provide instruments to respond to these developments to cushion the financial system from potential stresses. It is in this context that the imperative for involvement of central banks becomes evident as otherwise the required synergy between monetary management and macroprudential management will be lost.

G. Proposed Changes in the Central Banks’ Operational Framework

46. Some aspects of liquidity provision and crisis management proved to be too rigid to address problems in specific markets and institutions that caused systemic stress during the financial crisis. Thus, a growing consensus has been emerging to make the following important changes in the operational framework of the central banks (Chailloux et al. 2008).

47. Higher reserve levels. Central banks typically vary their liquidity provision to match reserve demand and thus stabilize market interest rates. Before the crisis, reserve levels were in some cases very small in relation to funding volumes. Larger equilibrium levels of reserves could help to better absorb liquidity shocks and thereby enhance policy flexibility and systemic resiliency. Larger reserve levels could also be useful in economies with more complicated...
financial structures, where stresses can rapidly increase the volatility of reserve demand. Reserve levels could be raised by raising reserve requirements. Alternatively, under a voluntary reserve targeting scheme such as that adopted by the Bank of England in 2006, institutions can choose to raise their own targets in response to stresses.\(^\text{10}\)

48. **Management of capital inflows.** The scale of capital flows into Asian and Latin American countries has been exceptionally strong following the dollar carry trade triggered by loose monetary policy and quantitative easing in the US. The majority of economies in Asia and many in Latin America are likely to intervene in the foreign exchange market to stop appreciation of the domestic currency, and in so doing build higher reserve levels. However, this can pose a serious dilemma for the central bank in the wake of strengthening inflationary pressures. Although some of the capital inflows will be sterilized, there are limits to sterilization, and sometimes these are self-defeating, as an apparently successful operation may raise domestic interest rates and stimulate even greater capital inflows. Unfortunately, many emerging economies also lack the tools available to run a classical sterilization policy, or find it simply too costly to do so. Some other emerging economies may take a different view, allowing the domestic currency to appreciate to facilitate rebalancing of growth. The equity markets in these countries may see less upside, but there could still be plenty of scope for currency gains for macro traders. In any event, monetary management needs to resolve the policy dilemmas with minimum distortions and may require coordination at the global and regional levels.

49. **Effectiveness of statutory preemption.** Central banks’ policy of statutory preemption for moderating credit growth may not be fully effective as it may fail to curb banks’ potential to lend. The Reserve Bank of India used two channels to limit the credit offtake in the first half of 2008 (before the onset of the financial crisis) to moderate high inflation: (i) by limiting the supply of loanable funds, and (ii) by pushing the lending rates higher. The cash reserve ratio (CRR) and the repo rate were increased repeatedly to achieve this objective. However, credit growth remained robust. See Appendix 2 for an explanation. Thus, more innovations and consultations are needed to enhance the effectiveness of the standard monetary policy instruments.

50. **Broader definition of collaterals.**\(^\text{11}\) When injecting liquidity, whether intraday for payment system purposes, short-term or long-term open market operations (OMO), or overnight in standing credit facilities, it is standard practice for central banks to take collateral. Central banks do not take collateral with a view to reusing it during the life of the operation, but primarily to protect themselves against credit risk and have tended to focus on the value of collateral rather than on its liquidity. A narrow pool of high quality collateral, may be sufficient to provide the bulk of the market with the bulk of its needs, most of the time, through OMO. But some banks, which do not normally hold such collateral may have occasional need to borrow from the central bank. A broader eligible list for securities can allow access to a wider range of counterparties for emergency use, of course, with adequate attention to proper pricing and monitoring to reflect credit risk.

51. **Maturity structure of central bank assistance.** As the market turmoil continued and term funding from the market disappeared, it became clear that what many banks wanted was not more central bank money, but longer-term central bank money. This also raises questions about the balance of maturities in the central banks’ lending. It is clear that central banks need

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\(^{10}\) We are fully aware that holding excess foreign exchange reserves has implicit costs. These costs could be classified in the following ways: (i) the spread between the private sector’s cost of short-term borrowing and the yield that the central bank earns on its liquid foreign assets; and (ii) the spread between the interest on domestic government bonds and the yield on reserves, popularly known as the fiscal cost of reserves. Of course, these explanations preclude central banks’ desire for investing in safe and liquid assets.

\(^{11}\) See also Goodhart 2008.
to monitor the balance sheet impact of current and likely future operations in order to ensure that they can continue to implement effectively the desired monetary policy stance as well as undertake any needed financial stability interventions.

52. Cross-border liquidity provision. The disruption of cross-border funding linkages can have large and unforeseen consequences. The swap arrangements between central banks during the crisis were effective in countering global shortages of liquidity. The central banks should be able to establish these arrangements on a timely basis if and when they are needed.

V. CONCLUSION

53. The good news derived from the analysis above is that emerging economies in Asia in general have weathered the financial crisis better than most of the more advanced economies. While GDP growth declined, active fiscal and monetary policies have likely contributed to a relatively quick rebound and an observed V-shaped recovery. Indeed most of the economies returned to their precrisis growth rates in a period of approximately 1.5 years.

54. The bad news is that there remains significant uncertainty in the future for these economies. There is evidence to suggest that the increase in consumption and investment—reflecting the direct targeting of stimulus policies—may explain the divergence between growth rates in Asia and the G3. However, there is a view that the Asian economies continue to rely heavily on export markets in the more advanced economies suggesting that while there may have been some decoupling, it was more transient in nature. Despite the uncertainty, ADB forecasts robust albeit slightly lower GDP growth rates for Asia in 2011 as compared to 2010.

55. Of keen interest is how those economies leading the recovery phase—such as the PRC and India—will fare as signs of overheating become more apparent. In fact, in countries such as the PRC, India, and Thailand, policy rates are already on the increase. What is apparent is that under the current low interest rate global outlook and with some of the more advanced economies pursuing quantitative easing, emerging economies and particularly those leading the recovery will have to cope with sterilizing large capital inflows, potentially adding greater pressure on exchange rates. In this context, concerted efforts will be required to ensure that there can be an agreement—perhaps at the G-20—to address the buildup of imbalances and to place the global economy on a more stable growth path.

56. The analysis has also reviewed lessons and the emerging consensus on stimulus measures. On the fiscal front, key lessons include the guiding principle for effective fiscal stimulus, namely, timely, temporary, and targeted interventions. Other important lessons include assessing the optimal size of stimulus, the risk of a premature exit, the need for tailor-made exit strategies, and the continued pursuit of structural reforms. On the monetary front, the emerging consensus is that monetary policy should be pursued with preferably one objective—inflation stabilization—but strongly supported by an effective macroprudential operative framework with a view to avoiding systemic risks. Other important measures for close monitoring include banks having higher levels of reserves (actively being pursued under Basel III), including broader definitions of collateral for lending, maturity structure of wholesale lending and emergency facilities, and promoting cross-border swap or other pooling facilities in case of difficulties in coping with external shocks and sudden market sell-offs.
REFERENCES


### APPENDIX 1

**An Assessment of ADB’s Countercyclical Support Facility**

<table>
<thead>
<tr>
<th></th>
<th>Timely</th>
<th>Targeted</th>
<th>Temporary</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Countercyclical Support Facility (CSF)</strong></td>
<td>• Established on 16 June 2009 with $3 billion for budget support</td>
<td>• CSF access criteria:</td>
<td>• Transitory sovereign lending instrument</td>
</tr>
<tr>
<td></td>
<td>• Processing time averaged 3 months between DMCs’ request and Board approval, compared with 14 months for other loans in 2009; 2 months between Board approval and disbursement, compared with 11 months for other loans</td>
<td>• Adverse effect of the global crisis</td>
<td>• Balance of $500 million available until 31 December 2010 only</td>
</tr>
<tr>
<td><strong>Bangladesh</strong></td>
<td>• The CSF loan of $500 million was approved on 13 October 2009, 4 months after the government approved an expansionary budget in June 2009.</td>
<td>• CSF ensured funding for social safety net programs by covering 30% of their financial needs. $551 million was spent on social safety nets, including food-based assistance, stipends to keep students in school, employment generation for the hardcore poor, rural maintenance project for disaster-prone areas, and pensions.</td>
<td>• Allocations for social safety net programs, subsidies, and PPP continue.</td>
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<td></td>
<td>• Support for small and medium-sized enterprises (SMEs) through refinancing and lending schemes and training.</td>
<td>• Support for implementation of investment projects under a new public–private partnership (PPP) scheme cannot be effective as a pure countercyclical facility.</td>
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<td>Timely</td>
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<tr>
<td>Indonesia</td>
<td>The CSF loan of $500 million was approved on 7 October 2009, 8 months after the government rolled out its stimulus package in February 2009.</td>
<td>Labor-intensive infrastructure works aimed at improving the welfare of targeted groups.</td>
<td>Stimulus spending on infrastructure, temporary payroll tax relief to labor-intensive enterprises and indirect tax relief to families are expected to be reversed when the economic recovery sets in.</td>
</tr>
<tr>
<td></td>
<td>Unconditional cash transfers were fully implemented within few months, conditional cash transfer implementation started slowly.</td>
<td>Scaled-up social assistance programs include conditional cash transfer related to children’s school attendance and regular checkups of children under the age of 5 and pregnant mothers at health clinics. Block grants to elementary schools in need and a new social health insurance scheme also channeled resources to the poor.</td>
<td>Many tax-related measures, including permanent tax cuts were not temporary in nature and difficult to reverse.</td>
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<td>Shovel-ready capital maintenance and increased material spending augmented income and consumption.</td>
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<td></td>
<td></td>
<td>Low-cost housing was built for poor and isolated families and for students.</td>
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<td></td>
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<td>Investment to enhance the competitiveness of agriculture and downstream traditional distribution of food products was expected to benefit farmers through new jobs and micro-small and medium-sized informal traders.</td>
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<tr>
<td></td>
<td></td>
<td>However, construction of new national roads, bridges, rail infrastructure, and airports will not have growth impact in the near term.</td>
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<td></td>
<td></td>
<td>Tax cuts designed to have an immediate impact on stimulating household consumption and to foster production include reduction in value-added tax (VAT) and import duties on raw materials and capital goods.</td>
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<tr>
<td>Kazakhstan</td>
<td>Philippines</td>
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<tr>
<td><strong>Timely</strong></td>
<td><strong>Timely</strong></td>
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<tr>
<td>• The CSF loan of $500 million was approved on 10 September 2009, 10 months after the government approved an anti-crisis plan in November 2008.</td>
<td>• The CSF loan of $500 million was approved on 24 August 2009, 7 months after the government approved a stimulus package in January 2009.</td>
<td></td>
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<tr>
<td>• Of the anti-crisis plan, 67% was disbursed to intended beneficiaries by the end of 2009.</td>
<td>• CSF helped protect social spending and scale up social assistance programs, primarily for the conditional cash transfer program, public employment programs, and education and health expenditures. families.</td>
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<tr>
<td><strong>Targeted</strong></td>
<td><strong>Targeted</strong></td>
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<tr>
<td>• Employment generation program to support key sectors (including finance sector, real estate market, and agro-industry) benefited 250,000 people in 2009, including socially vulnerable groups.</td>
<td>• Comprehensive livelihood and emergency employment programs designed at the end of 2008 targeted redundant workers in the export sector, returning overseas workers, unemployed youth, and poor families.</td>
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<tr>
<td>• Repair and reconstruction of roads, schools, and health facilities focused on shovel-ready projects.</td>
<td>• Conditional cash transfers provided income support to poor families meeting conditions related to pre- and postnatal care, schooling, and immunization.</td>
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<tr>
<td>• New credit and refinancing provided to 2,000 SMEs and 30,000 borrowers.</td>
<td>• Quick-disbursing infrastructure investment in the social sector and agriculture included construction and repair of schools, libraries, and health facilities, as well as the farm-to-market road program.</td>
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<tr>
<td>• Bank recapitalization and deposit infusion facilitated refinancing of existing firms’ debt. This approach was chosen as the best option (over direct transfers) to enable project completion at a cheaper financing cost.</td>
<td>• Tax breaks and subsidized rice programs were not well targeted, thus undermining their effectiveness.</td>
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<tr>
<td>• Reduced tax rates (corporate tax and VAT).</td>
<td>• Employment generation program, supported under the CSF loan, was designed to be temporary.</td>
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</table>

**Temporary**

<table>
<thead>
<tr>
<th>Kazakhstan</th>
<th>Philippines</th>
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</thead>
<tbody>
<tr>
<td>• Employment generation program, supported under banks’ recapitalization was also a temporary support.</td>
<td>• However, the reduced rates are difficult to reverse.</td>
</tr>
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</table>

**Philippines**

• The government’s support for banks’ recapitalization was also a temporary support.

• However, the reduced rates are difficult to reverse.

• These were ongoing programs and only scaled up under the CSF.
<table>
<thead>
<tr>
<th>Timely</th>
<th>Targeted</th>
<th>Temporary</th>
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<tbody>
<tr>
<td>Viet Nam</td>
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<tr>
<td>• The CSF loan of $500 million was approved on 15 September 2009, 4 months after the government approved an expansionary budget in June 2009.</td>
<td>• CSF allowed the scaling up of social welfare spending and poverty alleviation programs.</td>
<td>• Temporary exemptions and deferred tax payments were used to provide tax relief to distressed firms. These measures were temporary in nature.</td>
</tr>
<tr>
<td></td>
<td>• Additional spending on infrastructure in 2009 accounted for 62% of the fiscal stimulus, achieved through carrying over savings from the infrastructure program in the 2008 budget and advancing infrastructure projects in the pipeline. Many of these projects are fast-disbursing and labor-intensive projects, but their effectiveness as a pure countercyclical support remains questionable.</td>
<td>• Similarly, interest subsidies and guarantees were announced to be available only for disbursements within a defined period.</td>
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<tr>
<td></td>
<td>• Priority projects included labor-intensive projects in transport, rural irrigation, and poverty reduction projects in the poorest districts.</td>
<td></td>
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<tr>
<td></td>
<td>• Tax cuts and deferred payments were extended to support small and medium-sized enterprises and firms in the textile and footwear sectors, and to bolster consumption.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Interest rate subsidies and credit guarantees were used to keep credit flowing, protect employment, and assist the poor and vulnerable groups.</td>
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APPENDIX 2

The Effect of Statutory Preemption on Credit Disbursement

1. We begin with an excess demand in the credit market. Original credit demand and supply curves were D and S, respectively (see Supply and Demand for Credit). There is an excess demand for credit at the rate of interest r. The Reserve Bank of India (RBI) increased the cash reserve ratio (CRR), which pushed the supply curve leftward. Total supply of credit reduced to A from B, leading to a larger excess demand for credit. Banks increased the interest rates to $r_1$ to mobilize additional deposits, which in turn, increased the supply of credit from A to C and reduced the demand. Even at this rate, a positive excess demand for credit remains in the money market signifying that some borrowers are willing to borrow but are being rationed. It may also be noted that the change in the excess demand for credit with respect to the initial position will depend on a host of parameters, namely, initial CRR and increase in CRR, elasticities of credit demand and bank deposits with respect to the interest rate, and the change in the interest rate with respect to an increase in CRR. The excess demand for credit can rise or fall following an increase in CRR, depending on a particular parametric configuration. We shall demonstrate this point further with the help of some simple equations.

Supply and Demand for Credit

The excess demand for credit is

$$E^d = D(r) - S(r)(1 - \alpha)$$

(1)

Where $D(r)$ is the demand for credit and $S(r)$ is total bank deposit. $\alpha$ is the Cash Reserve Ratio (CRR) and $r$ is the interest rate. Thus, $S(r)(1 - \alpha)$ is the supply of loanable funds.

$$\frac{\partial E}{\partial \alpha} = D'\frac{\partial r}{\partial \alpha} - (1 - \alpha) S'\frac{\partial r}{\partial \alpha} + S$$

(2)

---


2 We are ignoring the Statutory Liquidity Ratio (SLR). Ideally, equation (1) should be defined in the following way: $E^d = D(r) - S(r)(1 - \alpha - \beta)$, where $\beta$ is banks’ investment on government bonds. As we have discussed, banks also manipulate $\beta$ (subject to a stipulated floor) when $\alpha$ rises to augment its resources for lending.
Let us now define three elasticities:

- **Demand elasticity:** \( \frac{\partial D}{\partial r} D = -e^d \)

- **Supply (deposit) elasticity:** \( \frac{\partial S}{\partial r} S = e^s \) and

- **Elasticity of interest with respect to CRR:** \( \frac{\partial r}{\partial \alpha} r = e^r \)

Substituting three elasticities in equation (2) we get,

\[
\frac{\partial E}{\partial \alpha} = -e^d e^r D - (1 - \alpha) e^s e^r S + S
\]

Equation (3) can also be written in the following way:

\[
\frac{\partial E}{\partial \alpha} = -e^d e^r D - e^r S \left[ (1 - \alpha) e^s - \frac{\alpha}{e^r} \right]
\]

2. We shall now discuss some comparative static results.

**Case I:**

\[
\frac{\partial E}{\partial \alpha} < 0 \quad \text{if} \quad e^r > e^s \quad \text{and} \quad \frac{\alpha}{1 - \alpha}
\]

3. This essentially implies that with a rise in CRR, banks are able to mobilize higher deposits to neutralize completely increases in CRR. In other words, supply of credit (net of new reserve requirement) at point C is higher than supply at point B (see Supply and Demand for Credit). Consequently, the excess demand falls. It may be noted that the rate of interest rate is higher and the demand for credit is lower in the new situation. In other words, the policy of statutory preemption is not effective in moderating the volume of credit.

**Case II:**

\[
\frac{\partial E}{\partial \alpha} < 0 \quad \text{if} \quad (i) \quad e^s < e^r \quad \frac{\alpha}{1 - \alpha} \quad \text{and} \quad (ii) \quad e^d D \left[ \frac{\partial}{\partial \alpha} - (1 - \alpha) e^s \right]
\]

4. Here, the supply of loanable funds is higher than the supply that would have been there without a change in the rate of interest but lower than the initial supply (refer to point C, which lies between B and A in the diagram). Therefore, there is a net reduction in the volume of credit. But the decline in demand is more, resulting in a reduction in the excess demand. The policy is partially effective.

**Case III:**

\[
\frac{\partial E}{\partial \alpha} < 0 \quad \text{if} \quad (i) \quad e^s < e^r \quad \frac{\alpha}{1 - \alpha} \quad \text{and} \quad (ii) \quad e^d D \left[ \frac{\partial}{\partial \alpha} - (1 - \alpha) e^s \right]
\]

5. The only difference with the previous example is that the decline in demand is less, resulting in a rise in the excess demand for credit. Thus, the policy is partially effective as in the previous case. Moreover, as the excess demand is higher in the new situation, the pressure will remain on the interest rate to rise further.
Two full years since the onset of the crisis, policy makers have been putting into practice demand management policies to mitigate the impact of the crisis and sow the seeds for a strong recovery. Asia, while less exposed to the crisis than the G3, has been actively engaged in fiscal and monetary stimulus, supported in some cases by international financial institutions such as ADB. This paper reviews the impact of the crisis on Asia and policy measures introduced by various countries to mitigate the impact. Lessons learned and new insights are also elaborated.

About the Asian Development Bank

ADB’s vision is an Asia and Pacific region free of poverty. Its mission is to help its developing member countries reduce poverty and improve the quality of life of their people. Despite the region’s many successes, it remains home to two-thirds of the world’s poor: 1.8 billion people who live on less than $2 a day, with 903 million struggling on less than $1.25 a day. ADB is committed to reducing poverty through inclusive economic growth, environmentally sustainable growth, and regional integration.

Based in Manila, ADB is owned by 67 members, including 48 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.