

Chapter 2

Impact of the 2008 Global Financial Crisis

In order to present the impact of the 2008 global financial crisis, this chapter will graphically compare the real GDP growth, total general government debt, unemployment rate, and consumer price inflation of the six countries from 2005 to 2010. Then, the chapter will elaborate qualitatively on the impact of the financial crisis on each country's economy individually in the sequence of *Brazil, Russia, India, China, Korea, and South Africa (BRICKS)*.

BRICKS countries, except Korea, are emerging economies with sizeable domestic markets. For the original four BRIC countries, strong economic growth since 2001 has increased disposable incomes, thereby creating a large stratum of middle class consumers. In 2002, they had 20.6 million households with an annual disposable income over US\$10,000. By 2007 this number catapulted to 90.1 million households. In 2007, consumer expenditure as a share of GDP amounted to 35.0% in China, 48.0% in Russia, 54.1% in India, and 61.0% in Brazil (Eghbal 2008). After a decade of growth, BRIC economies have built up strong consumer demand, which is the primary engine for growth. Although South Africa with an area 12 times as large as South Korea, its population of only 48 million is similar to South Korea. However, as mentioned earlier, South Africa has a market of the whole Africa with around one billion people for it to tackle.

At the initial stage of the 2008 global financial crisis, there was a general belief in these countries that they could remain largely insulated from the crisis and provide an alternative engine of growth for the world economy. As the financial crisis continued to roil credit and stock markets around the globe, it seemed that no country was being spared the consequences; the BRICKS countries were no exception (Khemka et al. 2008; Draper et al. 2009; Bajpai 2010a, b; Kim 2010c).

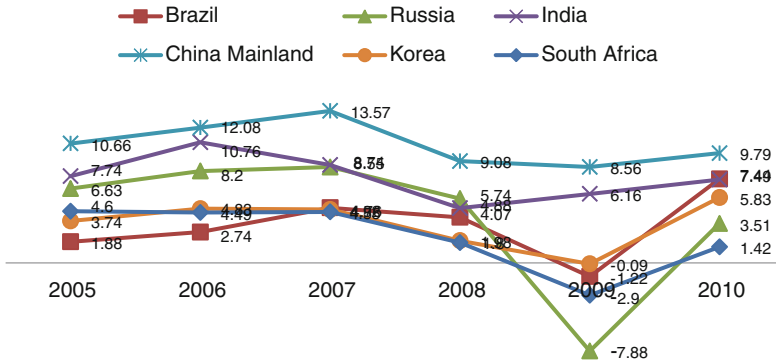


Fig. 2.1 Real GDP growth per capita of Brazil, Russia, India, China, Korea, and South Africa from 2005 to 2010

Comparisons of the Six Countries

This section presents four graphs in order to examine the BRICKS countries as a whole; namely, the percentage of real GDP growth per capita, total general government debt percentage of GDP, unemployment rate of labor force, and consumer price inflation from 2005 to 2010.

Figure 2.1 shows that from 2007 to 2008, all the countries had GDP growth decline, except Brazil remained relatively stable. In 2009, China and India are the only two countries that still had strong growth, with 8.56% vs. 6.16%, respectively. The other four countries in this cluster all had an obvious dip in real GDP growth in 2009, with Russia declining the most to -7.88% . However, all six economies rebounded with positive growth in 2010. Russia has the largest scale of GDP growth fluctuation over the six years and ended in 2010 surpassing South Africa only.

Figure 2.2 shows the total general government debt percentage of GDP. The reason for reporting government debt is based on past research findings. After researching 800 years financial crises, Reinhart and Rogoff (2009) commented that the overhang of public and private debt is the most important impediment to a normal recovery from recession. As such, we have included government debt as an indicator of the health of the recovery. Figure 2.2 indicates that the government debt percentage of GDP for the BRICKS countries remains relatively stable over the six years, with roughly three clusters.

Brazil and India form the high-debt cluster of around 50% GDP; Korea and South Africa form the middle-debt cluster of around 30% GDP; and China and Russia make up the low-debt cluster of below 20% GDP. In 2005, the debt level of China (17.64%) and Russia (14.16%) were relatively close. With the oil price hike, Russia as a major oil export country continued to reduce its government debt to only

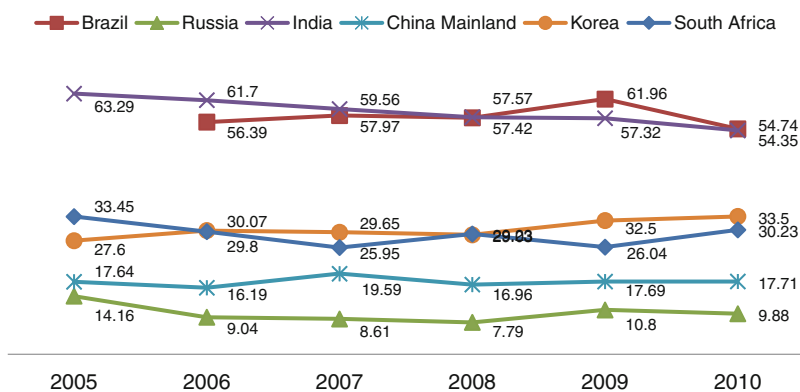


Fig. 2.2 Total general government debt (% GDP) of Brazil, Russia, India, China, Korea, and South Africa from 2005 to 2010

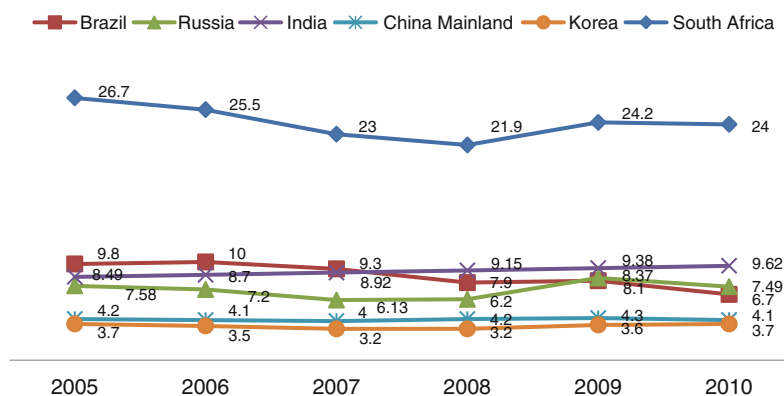


Fig. 2.3 Unemployment rate of Brazil, Russia, India, China, Korea, and South Africa from 2005 to 2010

9.88% in 2010, whereas China remains at the same debt level over the six years. In contrast to the obvious decline of real GDP growth in Fig. 2.1, the government debt levels of these six countries were not affected by this financial crisis, even with special stimulus packages.

Figure 2.3 indicates that the unemployment rates of these six countries are relatively stable, with the exception of South Africa in 2008. The figure shows three clusters as well. Over the years, China and Korea had unemployment rates of less than 5%; Brazil, India, and Russia had rates between 5 and 10%; and South Africa had a high rate of around 25%. Comparing the unemployment rate between 2005 and

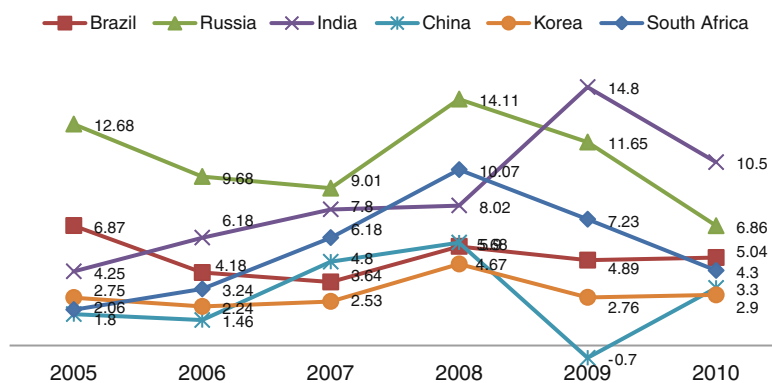


Fig. 2.4 Consumer price inflation of Brazil, Russia, India, China, Korea, and South Africa from 2005 to 2010

2010, Brazil and Russia experienced a reduction; China and Korea remained about the same; and India and South Africa had unemployment increases after the financial crisis. These statistics indicate that the employment of these countries, except India and South Africa, was not negatively impacted by this global financial crisis.

Figure 2.4 shows more ups and downs of consumer price inflation (CPI) among the six countries, compared to the previous three figures. The development pattern of CPI is similar for Brazil and Korea. CPI development for China and South Africa followed a similar path from 2005 to 2008, with South Africa having a higher rate than China. In particular China had a deflation in 2009, which was very likely due to excess production capacity and depressed global demand during the crisis (Branigan 2009). The deflation did raise slight concerns within the Chinese government before things returned to normal in 2010. In 2008, South Africa had recorded its highest CPI in six years. However, this was not sustained as it proceeded to experience two years of continuous decline in 2009 and 2010. As for India, it had the highest post-crisis CPI in 2009 and 2010 among the six countries. Russia's CPI had an early reaction to the financial crisis and rose to 14.11% in 2008, yet in 2010 it slid to 6.86% lower than its 2005 level. Examining the six countries together, India's CPI in 2010 was the highest of all and more than double its 2005 level.

In general, the above four figures for the BRICKS countries indicate that total general government debt and unemployment rates are relatively stable over the six years, whereas real GDP growth and CPI are more visibly impacted by the 2008 financial crisis with clear ups and downs. Among these six countries, India has the highest unemployment rate and consumer price inflation in 2010 after it recovered from the financial crisis. The fact that these two numbers have not resumed to their 2005 level for India while the other countries already have deserves some attention by Indian policy makers.

In what follows, we briefly describe the impact of the 2008 global financial crisis on the BRICKS countries. The depth of the report depends on the English literature available for each economy. For readers to gain a general picture about the efforts that each economy has expended to mitigate the negative impact of the financial crisis, we have summarized the details of stimulus packages implemented by the six countries in Appendix 1. Please note that the reported package is based on publicly available data and is not an exhaustive list. In addition, the reported amounts of stimulus packages were based on the exchange rate at the time of each stimulus, and thus vary. Readers can also refer to Appendix 2 for the important meetings conducted by key global leaders during the financial crisis.

Brazil

Brazil is the largest, most populous and the leading economic power in South America. After record growth in 2007 and early 2008, the onset of the global financial crisis hit Brazil in September 2008, as global demand for Brazil's commodity-based exports dwindled and external credit dried up (CIA 2012). However, Brazil only experienced approximately two quarters of economic recession and was one of the first emerging markets to begin recovering with improvement showing in the second quarter of 2009 (Mendonça 2010).

Before the crisis, Brazil had foreign reserves of US\$205 billion in 2008 and property loans only accounted for 2.3% of the GDP in December 2008 (Cárdenas 2008; Mendonça 2010). Its banks had low foreign liabilities with only 30% of bank assets foreign-owned. In addition, all the banks have complied with an 11% capital requirement since 1995 (higher than the 8% ratio usually recommended by the Basel agreements). However, nearly half of Brazil's exports are commodities, which are sensitive to global supply and demand. As a result, based on the Economic Commission for Latin America and the Caribbean (ECLAC 2009) of the United Nations, between December 2008 and January 2009, the number of jobs fell by 755,000; between January and September of 2009, goods exports slid by 25.9% from the previous year; and exports of manufactured and semi-manufactured goods slumped by 32% and 30.8%, respectively. In addition, stock prices declined 20%, while spreads on Brazilian debt rose by more than 170 basis points (Cárdenas 2008).

In response to the downturn, Brazil's economic stimulus package focused on bringing inflation under control, generating higher investments, creating a floating exchange rate, and implementing prudent management of public finances and the fiscal measures for sustained economic growth. Its strong institutional framework and cautious monetary policy led to reduced inflation (Mendonça 2010). To boost investment, the government increased capital spending and investments in infrastructure and energy. It also started up an extensive program of government incentives and subsidies for housing construction (Cárdenas 2008). In an effort to limit the appreciation of the Brazilian currency, the government increased dollar reserves and capital controls.

There are three major factors that allowed Brazil to better resist the global downturn than many other countries. First, Brazil's recent sound policies and improved balance of payments made its economy more resilient to external impact (Gurria 2009). Second, the policies that centered on inflation, a floating exchange rate and prudent management during the crisis were appropriate (Gurria 2009). Third, Brazilian exports began to enjoy a positive benefits from the strong Chinese recovery. In 2009, China was the largest trade partner of Brazil and was the destination for 13% of its exports (Mendonça 2010).

In summary, the swift and comprehensive coping measures, including monetary and financial policy, exchange-rate and foreign-trade policy, sectoral policies, labor and social policies, and fiscal policy (Valadão and Porto 2009) of the Brazilian government helped minimize the negative impact of the financial crisis. Readers can refer to Appendix 1 for the details of Brazilian stimulus packages.

Russia

Russia has undergone significant changes since the collapse of the Soviet Union. It has moved from a globally isolated, centrally planned economy to a more market-based and globally integrated economy (CIA 2011). Russia enjoyed a decade of high, uninterrupted economic growth between 1999 and 2008, with annual real GDP growth averaging 6.9% during this period (Thessaloniki 2011). In 2009, Russia was the world's largest exporter of natural gas, the second largest exporter of oil, and the third largest exporter of steel and primary aluminum. However, this heavy reliance on commodity exports makes Russia vulnerable to the fluctuation of global commodity prices. As a result, its economy was one of the hardest hits by the 2008 global economic crisis as oil prices plummeted and the foreign credits that Russian banks and firms relied on dried up.

In addition, the Russian Central Bank owned around US\$100 billion in mortgage-backed securities from the two American mortgage giants Fannie Mae and Freddie Mac that were taken over by the U.S. government afterwards (Delasantellis 2008). Consequently, Russian stock exchanges including MICEX and RTS lost 70% of their value and trading was suspended many times during the market turmoil. Russia's GDP contracted nearly 8% in 2009, industrial production tumbled by nearly 11%, plummeting exports collapsed by 36% and State revenues fell by almost 5% of GDP from 2007 to 2009 (Aslund et al. 2010). Losses were especially severe in finance and energy. To combat the economic downturn, Russia's initial fiscal policy response focused on supporting the financial sector and providing fiscal support for enterprises to revive export dependent industries. For instance, on September 17, 2008, the government provided the country's three biggest banks with US\$44 billion (1.13 trillion rubles) loan in order to boost liquidity (Nicholson 2008). As the crisis from the financial sector spilled and started to afflict domestic demand, growth, and employment, the policy focus has begun shifting to households, infrastructure, and small- and medium-sized enterprises (Bogetic 2009).

What made things worse was that Russia began a military campaign against Georgia in response to Georgian ground attacks on South Ossetia in August 2008. This move was widely interpreted as Russian aggression and risky behavior, which resulted in capital outflows of around US\$40 billion, thereby causing industrial production to decline nearly 14% year over year in March 2009 (Palmieri 2012).

To counter the crisis, the government enacted a stimulus package for fiscal measures implemented in 2008 amounting to more than US\$113 billion (2.9 trillion rubles) or about 6.7% of GDP, larger than that implemented in most G20 countries (Bogetic 2009), thus increasing government expenditures from 33.7% of GDP to 40.6% of GDP (Aslund et al. 2010).

In total, the Central Bank of Russia spent one-third of its US\$600 billion international reserves in late 2008 to slow the devaluation of the ruble (CIA 2011). Russia's stimulus policies can be largely categorized as macro coping policies and sectoral financial support. Specifically, macro-level policies included significantly increasing social welfare spending, cutting corporate tax profits by 4%, increasing tariffs on many imports, cutting the reserve requirement on liabilities, broadening the definition of eligible securities available for collateral, and expanding Russia's oil and gas assets in Europe and Asia for future growth and recovery. Sectoral financial support included buying out the foreign loan obligations of select companies, injecting billions of rubles into state controlled banks, and compensating certain banks for loan losses (Palmieri 2012).

Eventually, Russia's economy emerged from recession in the third quarter of 2009 after two quarters of negative growth (Nicholson 2009). According to the World Bank, Russia's strong short-term macroeconomic fundamentals made it better prepared than many emerging economies to deal with the financial crisis. Russian's recovery was also led by increased oil prices (which have risen from US\$34/bl in early 2009 to around US\$85/bl in 2010), stronger Russian domestic demand, a more flexible exchange rate to cope with the backdrop of oil price volatility, the moderation of rising unemployment by an increase in part-time employment and involuntary vacations as a temporary adjustment (Aslund et al. 2010).

As an energy rich country, Russia's economic rise and fall has become a global concern. In a BRIC-countries-focused knowledge forum conducted by the Wharton School at the University of Pennsylvania, Khema commented that the Russian government acted in a very organized, focused, and coordinated manner. This restored confidence in the banking system to some extent by announcing increased liquidity into the system, guaranteeing deposits, talking about cuts in oil export taxes and announcing significant investments in public infrastructure (Khemka et al. 2008). The forum concluded that the Russian government has been very proactive and done an excellent job projecting a clear plan and implementing that plan from the early stage of the crisis. In retrospect, another forum sponsored by Carnegie Foundation also reported that the Russian government's fiscal stimulus was an appropriate response to the shocks of the financial crisis, and resulted in the relatively quick recovery of the Russian economy (Aslund et al. 2010).

India

At the outbreak of the US sub-prime mortgage problems, much of Indian government's reaction to the crisis was based on the notion that it was a financial sector problem and that India's real sector was insulated and decoupled (Debroy 2010). The following facts further strengthen such a conception: First, Indian banks have strong balance sheets and are well capitalized and well regulated (Jha 2008). Second, India has a healthy external balance, with high levels of foreign exchange reserves (US\$283.94 billion in October 2008) and low ratio of short-term external debt to GDP. Third, India's growth in the last few years has been driven predominantly by domestic consumption and domestic investment with external demand accounts of less than 15% of its GDP (Taindian News 2008; United Nations 2009).

However, the contagion still spreads to India because of its rapid globalization since the 1990s (Kumar and Soumya 2010a, b). India's two-way trade (merchandise exports plus imports) as a proportion of GDP grew from 21.2% in 1997–1998 to 40.6% in 2008–2009. As a result, India was still hard hit by the crisis, with its stock market index plummeting from 20,873 in early January 2008 to 9,093 in late November 2008, a 56% fall over a period of 11 months (Joseph 2009a, b). Equity markets were down by more than 50%, and both export sectors and real estate sector have taken a very severe downturn because of credit issues in the market (Khemka et al. 2008). Around one million jobs were lost after September 2008, especially in sectors like gems and jewelry, garments, leather, and handicrafts (Debroy 2010).

The domino effect started when foreign institutional investors withdrew funds from all over the emerging markets to meet the liquidity requirements of their principals in the U.S. As a result, in India, there was a substantial decline in net capital inflows in the first half of 2008–2009 to US\$19 billion. This is significantly lower when compared to the US\$51.4 billion India posted the same period a year before (Bajpai 2010a, b). The U.S., European Union and the Middle East, which together account for three quarters of India's goods and services trade, were in a synchronized downturn (United Nations 2009). Then, three major channels—the financial channel, the real channel, and the confidence channel (United Nations 2009)—worked through their ways to the business sectors and the general public and then crumbled the economy. When activities came to a halt all of a sudden, it had a tremendous effect on the Indian Stock Market and exchange rates due to the supply and demand imbalance within the foreign exchange market (Bajpai 2010a, b). Consequently, India's industrial growth faltered, inflation was at double-digit levels, current account deficit was widening, foreign exchange reserves were depleting and the rupee was depreciating (Chandrasekhar and Ghosh 2008).

In response to such unexpected turmoil, the first priority of India's Ministry of Finance was to reassure the people of the country's stability in the financial system and of the safety of bank deposits in particular. The thrust of the various policy initiatives by the Reserve Bank of India (central bank) focused on providing ample rupee liquidity and maintaining a market environment conducive for the continued flow of credit to productive sectors (United Nations 2009).

To further counter the negative fallout of the global slowdown on the Indian economy, the central government announced three successive fiscal stimulus packages. The first package came about in early December 2008, the second one in early 2009, and the third one in early March 2009. Readers can refer to Appendix 1 for the details. The packages include: across-the-board central excise duty reduction by 4 percentage points; additional spending of US\$4.2 billion (Rs. 200 billion); additional borrowing by state governments of US\$6.3 billion (Rs. 300 billion) for plan expenditure; and assistance to certain export industries in the form of interest subsidy on export finance and refund of excise duties/central sales tax (Joseph 2009a, b). In addition, the sharp rise in government consumption growth cushioned the sharp drop in aggregate demand and prevented a much sharper fall in GDP growth in the second half of 2009. In total, fiscal stimulus administered by India was around 6% of GDP (Joseph 2009a, b).

In addition to the government's proactive fiscal policy, Indian banks and financial institutions were not tempted to buy the mortgage-supported securities and credit-default swaps (Tharoor 2010), which also safeguarded the economy from being slashed by the toxic financial instruments. In spite of the economic downturn, India is still the second fastest growth country during the financial crisis, next to China only. In summary, financial stability in India was achieved through perseverance of prudent policies which prevented institutions from excessive risk taking, and financial markets from becoming extremely volatile and turbulent. As a result, financial markets remained orderly and financial institutions, especially banks, remained financially sound (United Nations 2009) throughout this crisis.

China

China is the fourth largest country in the world geographically after Russia, Canada, and the U.S. Currently, China is also the world's second largest economy after the U.S. after adjusting for differences in cost of living (CIA 2011). In the roughly five-year period before the start of financial crisis, China underwent drastic economic changes that allowed it to be an economic superpower in 2008. The initial step came on December 11, 2001, when China became a member of the World Trade Organization (WTO)—a milestone in its integration with the world economy (WTO 2012). Since then, underpinned by rapid expansions of trade and deep structural changes, its economy has continued to deliver yearly double-digit growth. The speed of the integration of China into the world economy, coupled with excess demand worldwide, pushed up China's current account surplus to as much as 11% of GDP by 2007.

After the financial crisis hit, thousands of private companies in China closed down. In the first half of 2009, exports sank 21.8% and imports declined 25.4% (Heilmann and Schmidt 2010). The Chinese government estimated that as of 2007, there were 286,200 approved foreign-invested companies in China. Such firms employed more than 42 million people and accounted for 31.5% of gross industrial

output value (Morrison 2011). With the international money market crunch, capital flight from emerging countries is a common practice. The speed and scope of this hit came as a shock for Chinese policymakers. In an effort to mitigate the crisis, Chinese president Hu Jintao pledged an economic stimulus measure worth US\$586 billion (RMB 4 trillion) in early November of 2008, which amounted to 15.5% of the country's GDP in 2007 (Heilmann and Schmidt 2010). In addition, China also implemented measures such as increasing investments in public infrastructure, loosening monetary policies to increase bank lending and providing various incentives to boost domestic consumption (Morrison 2011). It is important to note that the size of China's stimulus package is comparable to that of the United States', while its GDP is only a third as large (Fleet 2010). Herd et al. (2011a, b) also reported that China responded to the 2008 crisis with fiscal stimulus far greater than that of other OECD countries.

China launched its Economic Stimulus Plan mainly to expand the public sector, including pumping more public investments into infrastructure for rail network, roads, and ports development. It also created measures to increase affordable housing, lower taxes on real estate sales and commodities, and ease credit restrictions for mortgage as well as small and medium enterprises (Fleet 2010). China's stimulus funding differs significantly from that in other countries, the central government contributes only about one-fourth of all funds by issuing bonds over a two-year period from 2008 to 2010. The remaining three quarters were to be provided by local governments, state-controlled enterprises, and the market (i.e., government-linked financial institutions and nonpublic firms under government guidance) (Heilmann and Schmidt 2010). That is, a large part of the stimulus package involved off-budget expenditure by local authorities, which resulted in the public expenditure rising by nearly 3% of GDP in 2009.

Critics pointed out that the share of the package was aimed at major infrastructure projects, as opposed to direct stimulus of consumption and the RMB 4 trillion stimulus package was more a policy than a package (Fleet 2010). Nonetheless, the package worked and recovery started to show by the second half of 2009. This time-frame preceded that of other major economies. As a result, companies were hiring again, restaurants were filling up and consumption statistics were turning upward. After the crisis, both the estimated output gap and the OECD composite leading indicators suggested that China is operating above capacity with its ongoing rapid economic transformation (Herd et al. 2011a, b).

Looking back at the stimulus decision-making process, the experience of focusing on public expenditure in the 1997 Asian Financial Crisis gave the 2008 Beijing policymakers valuable lessons to draw from. Beijing designed more than 50% of the entire RMB 4 trillion in the initial stimulus package to focus on infrastructure. In this manner, the money could be spent quickly and had a significant impact on employment where it was needed the most since many low-skilled workers had lost low-end export-processing jobs. In reality, much of the money actually found its way to private firms who were subcontractors to the initial state-owned enterprise beneficiaries, and it had a huge impact on consumer confidence (Fleet 2010). In addition, China included in its stimulus package a massive increase in liquidity; that

is, funds from the national government would not exceed around a quarter of the designated RMB 4 trillion. Also, the package stipulated that 40% of the amount would be provided by bank lending matched with reduced reserve requirements and interest rates cut (Heilmann and Schmidt 2010). Furthermore, the measures consisted of substantial regulatory change, including a lowering of down payments required for mortgages, reduction or elimination of value added tax (VAT), lower fuel prices and subsidies for smaller cars (fuel efficiency), and an expansion of subsidies for consumer goods purchases in rural areas.

In a knowledge forum conducted by the Wharton school at the University of Pennsylvania, Chou (Khemka et al. 2008) commented that the financial crisis was not a bad thing for China as its economy was growing too fast and needed to be held in-check. The preoccupation of the Chinese government for the last few years before the crisis had been how to cool down the economy and the real estate prices, which had become out of the reach of the common people. As far as China can, it had been trying to move away from being overly reliant on the exports sector of the economy. Therefore, the financial crisis offered an opportunity for China to adjust its economy to be more independent and resilient to future external impact.

In general, the fast and decisive government stimulus measures worked well in China. In addition to its own recovery, China also helped pull the world economy along during this financial crisis (Fleet 2010).

Korea

The Republic of Korea has been one of the most successful emerging economies in recent decades (Pascha 2010). In Korea, private investments have typically supported the export economy since the 1960s, which resulted in exports of goods accounted for about 45% of GDP in 2008 and commercial services added an additional eight percentage points. Yet, even before the 2008 financial crisis, Korea was experiencing some macroeconomic problems, such as the high value of imports driven by higher prices for raw materials and energy. Job growth, domestic consumption, investment and corporate profits were all negatively affected by such development before the financial crisis set in.

At the onset of the crisis, Korea felt rather safe, because of its significant accumulation of foreign exchange reserves (US\$240 billion by September 2009), and the relatively sound financial situation of Korean banks and enterprises as compared to 1997 during the Asian Financial Crisis. However, due to the tightening of international liquidity, the government had to step in and promise a US\$30 billion infusion to support the banking system (Pascha 2010).

The global financial crisis hit the Korean economy through the sudden reversal of capital flow, which dried up the domestic and international liquidity. In the first six months of 2008, net FDI in South Korea turned negative for the first time since 1980 (OECD 2008). Capital outflow, which amounted to US\$54.5 billion in 2008, reduced the supply of foreign currency to the point that the exchange rate of the

Korean currency (won) lost over 50% of its value from the beginning of 2008 to the fourth quarter of 2009. In addition, the global contraction of demand reduced Korea's export by over 40% in the fourth quarter of 2008 (Yoon 2011).

Although the exposure of the Korean financial system to toxic financial assets was small, banks and enterprises were seriously affected by the international liquidity crunch and by the steep drop in export markets. An important aspect of Korea's crisis management was the stabilization of foreign exchange and currency markets. To this end, the Bank of Korea extended its existing swap agreements with the U.S., China, and Japan beyond their normal limits, amounting to US\$90 billion (Kim 2010c; Yoon 2011). In October 2008, the government responded by pledging more than US\$100 billion in loan guarantees and an infusion of US\$30 billion to prop up the Korean banking system, hoping that the additional liquidity would help Korean banks repay or roll over the banks' US\$80 billion in foreign currency loans that came due by June 2009 (OECD 2008). In addition, the government provided US\$55 billion of liquidity directly into the foreign exchange market as a credit mostly for trading companies to preserve their capacity to earn foreign currency (Yoon 2011). In the case of fiscal policies, the government expanded fiscal budget by more than US\$355 billion (50 trillion won, over 5% of GDP) since the second half of 2008, which included tax refund on oil consumption, fiscal spending based on supplementary budget in 2008, tax cuts, additional fiscal spending, and supplementary budget in 2009 (Kim 2010c).

Internally, for 2008 and 2009, Korea's total fiscal stimulus package amounted to US\$352 billion (49.6 trillion won), including US\$236 billion (33.2 trillion won) of public expenditure and US\$116 billion (16.4 trillion won) in tax reduction. The volume accounted for 4.5% of the GDP in 2009 (Yoon 2011). The largest stimulus package launched by the Korean government to boost public infrastructure was the Green New Deal. This comprised nine major projects totaling US\$36 billion (spread over four years), including around US\$6 billion to improve energy conservation in villages and schools, US\$7 billion on mass transit and railroads, and almost US\$11 billion on river restoration (Pascha 2010). In addition, special tax deductions were given to solar cell manufacturing plants, the cleaning of Korea's four biggest rivers and the erection of flood defenses. The Green New Deal met the social expectation that the stimulus scheme should create jobs. According to the plan, 960,000 positions were to be created within four years, with 140,000 of them coming in 2009 (Pascha 2010). Since most of these jobs are for manual labor, the Green New Deal was also considered as social policy on behalf of the weak and potentially underemployed. In parallel to the announcement of this project in January 2009, the Korean government announced its intention to support the so-called "new growth engines" of 17 specific industries including sustainable energy, information technologies, health care, and tourism (Pascha 2010).

Support for specific industries included helping the automobile industry in the form of a tax deduction of 30% (offered for a limited period) and setting up the Bank Recapitalization Fund in February 2009, in addition to the Bond Market Stabilization Fund established in December 2008. As part of a tax deduction for investments, a more favorable rate was also offered for investments in provincial

areas, which indirectly represented support for SMEs. As for consumer spending, the most important measures were the personal income tax reduction and the support for low-income households. Business benefits most from corporate tax reduction and from measures aimed at increasing the capital supply in the banking system. Readers can refer to Appendix 1 for the details.

Even though Korea was one of the G-20 economies hit hardest by the financial crisis (Pascha 2010), it was the first OECD country to escape from negative economic growth. By the summer of 2009, the IMF had revised Korea's growth projection for 2009 from -3% to -1.75% (Pascha 2010). Primary reasons include: first, Korea had better initial conditions than other economies because of reform measures after the 1997 Asian Financial Crisis; second, Korea had an international network to establish swap arrangements of US\$90 billion to stabilize its foreign exchange market (Yoon 2011); and third, the Korean government took effective and bold measures in a prompt manner. In addition, the increasing demand from its major trade partner—China was another major factor in Korea's recovery since the second quarter of 2009 (Kim 2010a, b). According to OECD (2010), the magnitude of fiscal stimulus package implemented by the Korean government in responding to the global financial crisis is 6.1% of GDP, the highest among OECD member countries adopting explicit crisis-driven stimulus programs (Kim 2010a, b).

South Africa

South Africa is a middle-income, emerging market with an abundant supply of natural resources. It also sports well-developed financial, legal, communications, and transport sectors with modern infrastructures supporting relatively efficient distribution of goods to major urban centers throughout the region (CIA 2012). Since its turn towards democracy in 1994, South Africa has improved its reputation as the leading economic power in Africa and has increasingly attracted global investors (Draper et al. 2009). Continuous integration into the global economy has led to notable increases in its productivity (Heritage 2012). South African growth was robust from 2004 to 2007 as the country reaped the benefits of macroeconomic stability and a global commodities boom (CIA 2012; OECD 2010).

However, its economy began to slow in the second half of 2007 due to a serious electricity crisis (CIA 2012). The 2008 global downturn struck South Africa after it had already passed its boom, with the economy slowing sharply as the country was experiencing its first recession in 17 years (OECD 2010). Thus, South Africa entered the crisis with a greater degree of vulnerability, having a large current account deficit, high interest rates, and high inflation (Padayachee 2012). The high interest rate halted growth in private consumption (OECD 2010).

South Africa's decline was led by manufacturing and mining where the sudden drop in export demand was reflected in a sharp reduction in private investments and subsequently in falling employment. Its GDP figure for the last quarter of 2008

came in negative, with manufacturing falling by 21.8%, the automobile industry (the main contributor to international trade tax revenues) was down over 30% year-on-year, and mining production continued to fall as global commodity prices remained depressed (Zini 2009). As a result, job creation was slowing down, consumers' expenditure declining, credit extension to the private sector shrinking, and housing prices dropping (Zini 2009). Unemployment was already high prior to the crisis and began rising further starting from the fourth quarter of 2008 (ILO 2010). Consequently, the country experienced a sharp deceleration of growth, dropping from more than 5% in 2007 to almost 2% in 2009 (OECD 2010). The Johannesburg Securities Exchange All-Share Index fell from a high of 32,542 on May 23, 2008 to a low of 18,066 on November 21, 2008 (Padayachee 2012). From October 2008, the nation suffered from capital withdrawal and a depreciation of its currency, the Rand (Draper et al. 2009). In December 2008 tripartite negotiations began among organized labor, business, and government to formulate a collective response to the crisis (ILO 2010).

Nevertheless, South Africa's decline in output was moderated by a countercyclical policy response, made possible by past fiscal prudence and by the resilience of the non-impacted banking system (OECD 2010). Furthermore, to remedy the problems, the government's policy response was prompt and focused on housing, education, social protection, public works, and health programs under the expansionary budget (Zini 2009). In addition, the Training Layoff Scheme, rolled out in September 2009, provides skills training and an allowance to employees during a negotiated layoff period, although they technically remain employed (ILO 2010).

According to OECD (2010), South Africa's downturn was fairly shallow: the peak-to-trough fall in output was smaller than in most OECD countries and emerging market economies. Its strong banking system supports the economy well, such as bankruptcy laws favoring creditors in recovering collateral for bad loans and conservative approaches on the part of both the regulator and the bank themselves (OECD 2010). Specifically, the strength of South Africa's banking sector includes strong profitability even during the financial crisis, low level of non-performing loans with comfortable capital cushions, and lack of direct exposure to problematic assets from the U.S. and Europe. With healthy foreign reserves and continuous financial inflows, South Africa has no problem to fund the deficit of around -3.9% in 2009-2010 (Zini 2009). Therefore, despite the South African economy having been hard hit by the global financial crisis, no exchange rate shock or "sudden stop" was experienced (Draper et al. 2009).

Another important factor that mitigated the impact of the crisis was the previously approved ambitious capital expenditure plan in energy and transport by public enterprises. This plan was not revised downward, which greatly supported output during the decline. Monetary policy was also eased, but not particularly aggressively. During the financial crisis, no emergency actions, such as capital support for banks or quantitative easing to support lower interest rates, were needed (OECD 2010).

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