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Lessons from the 1997 and the 2008 Crises in Korea

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The Korean economy was hit harder than anticipated by the global financial crisis. In the first phase, large capital outflows led to a severe liquidity strain in the foreign exchange market, resulting in a rapid depreciation of the exchange rate. Then, in the second phase, the contraction of global demand led to a collapse of exports and a sharp decline in economic activity, raising concerns about a full-fledged financial crisis in Korea. This paper describes how the global financial crisis spilled over into the Korean economy and how the Korean government responded to the financial turmoil. It also provides the background and rationale for the Korean government's decisions to adopt specific policy measures. Based on Korean experiences during the 1997 and the 2008 crises, this paper documents the lessons learned from the past two crises and identifies several important policy issues.

Key words: capital market, financial crisis, fiscal policy, foreign exchange reserve, global financial safety net, monetary policy

JEL codes: E65, F34, G28

1. Introduction

In the last 15 years, the Korean economy was hit hard by two financial crises: the 1997 Asian financial crisis and the 2008 global financial crisis. Learning from the financial crisis in 1997, Korea upgraded its macroeconomic and financial management system to avoid making the same mistakes again.[1] The Korean government strengthened the regulation and supervision on financial institutions and markets, regularly monitored foreign exchange liquidity conditions, and, in particular, took foreign exchange reserve management very seriously. Thanks to these efforts and the enhanced soundness of the financial and nonfinancial sectors, the government anticipated that the impact of financial turmoil in the advanced economies on the Korean economy would be limited in scale and severity. The government believed the situation in 2008 was different and thus might have expected a slowdown of the Korean economy, but not a crisis. Unfortunately, however, the Korean

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economy suffered again from equally large and unexpected capital outflows after Lehman Brothers collapsed in September 2008, even though it eventually managed to avoid the apocalypse.

In retrospect, the global crisis spilled over into the Korean economy in two phases in 2008. In the first phase, Korea suffered from a serious loss of confidence by global investors, resulting in large capital outflows similar to the case of 1997. In the fourth quarter of 2008, the capital account deficit reached $42.6 billion which is equivalent to over 20% of gross domestic product (GDP). The government introduced many policy measures to help restore foreign investors' confidence such as providing guarantees for the external liabilities of Korean banks, using its large foreign reserves to ensure foreign exchange liquidity, and explaining the structural differences between 1997 and 2008 to international investors. However, these measures proved ineffective. It was the bilateral swap arrangements with the Federal Reserve that eventually stabilized the financial markets in Korea. It was ironic that the USA restored confidence in the Korean economy, while the USA was the ground zero of the global crisis. However, the positive effect of the Federal Reserve bilateral swaps did not last long.

In the second phase, the export dependence of Asian economies triggered market pessimism, and the global crisis unavoidably spilled over to the real sectors of the Asian economies. The expectation was that the crisis in advanced economies would hurt Asia at least as much as the West because of its heavy reliance on exports to advanced economies. Indeed, Korea, one of the more open economies in the region, was vulnerable to the contraction of global demand. The year-on-year growth rate of Korean exports plummeted from 27% in the third quarter to −9.9% in the fourth quarter of 2008 and to −24.9% in the first quarter of 2009. From then on, it became beyond just a liquidity problem.[2]

To prevent the liquidity crisis from becoming a full-scale credit crisis, the Korean government, together with other advanced economies, agreed to implement a historically unprecedented globally coordinated expansionary policy response. Fortunately, the Korean economy managed to rebound relatively fast as the global market started to recover from March 2009. The swift recovery also reflected the resilience of the Korean economy, resulting from efforts that enhanced the soundness of financial institutions and the corporate sector after the 1997 crisis.

The objectives of this paper are twofold. First, we describe how the Korean economy was affected, in two phases, by the global crisis and how the Korean government responded to the financial turmoil. We also explain the background for the Korean government's adoption of specific policy measures, along with the resultant controversies in designing and implementing them. Second, based on Korean experiences during the two crises, we raise several important policy issues relating to the effectiveness of monetary and fiscal policies in crisis management, the pros and cons of holding large foreign reserves, and the implications of the subprime crisis on financial regulation and capital market development in Asia. We believe that these are relevant not only to Korea but also to other Asian countries.

The remainder of this paper is organized as follows. Sections 2 and 3 describe the causes and progress of the 2008 crisis in Korea by dividing it into two phases. They also describe the government policy responses during those periods. Section 4 documents the similarities and differences in the lessons we learned from the two crises. Section 5 concludes.

2. First Phase: Loss of Credibility

2.1 Capital outflows and foreign exchange shortage

When the subprime mortgage problems surfaced in mid-2007 in the USA and Europe, the Korean government anticipated that the impact on the Korean economy of the financial turmoil in advanced countries would be rather limited in scale and severity. Before the bankruptcy of Lehman Brothers in mid-September 2008, policymakers seemed to believe that the healthy positions of the domestic banking system and nonfinancial corporations as well as foreign exchange reserves amounting to $242.7 billion (equivalent to about 5 months of imports of goods and services) could shield the Korean economy from the financial chaos in advanced countries.

However, the situation quickly got worse than anticipated. The severity of the spillover from the global financial crisis can be seen clearly from the sudden and large-scale capital outflows from Korea. The capital account recorded a deficit of $42.6 billion in the fourth quarter of 2008, which is equivalent to over 20% of GDP. Before the fall of Lehman Brothers, due to uncertainties in the global market, equity capital flowed out continuously from mid-2007 at a moderate speed. But immediately after the collapse of Lehman Brothers, the unprecedented credit crunch in the global market forced banks in advanced economies to withdraw their funds from Asia and, in particular, from Korea, which has one of the relatively liquid capital markets in Asia. As the rollover of external borrowing was effectively stopped, the sudden capital outflows led to a severe liquidity strain in the foreign exchange market in Korea and resulted in sharp depreciations of the exchange rate and huge increases in credit default swap (CDS) premiums. The exchange rate of the Korean won against the US dollar rose to 1467.80 on October 28, a 42.5% increase from its value of 1030.1 at the end of May. The CDS premium, a proxy for foreign currency funding costs, skyrocketed to 675 basis points (bps) on October 27 from 91 bps in early August. The stock price also plummeted by 29.3% between August 1 and the end of October. From the Korean government's perspective, a shock of such a magnitude was way outside their expectations, and the bad memory of the 1997 crisis reemerged.

The huge capital outflows in the fourth quarter of 2008 were mostly attributed to a large deficit in other investments, which include trade credits, loans (borrowings), currency and deposits, and others. Other investments accounted for $35.6 billion out of the total capital account deficit of $42.6 billion. Among other investments, in particular, short-term borrowings by deposit-taking institutions (domestic banks and branches of foreign banks) were responsible for the large deficit during the period.

The sudden capital outflows were definitely due to creditor banks' liquidity constraints. But this does not explain why Korea was particularly hit more severely than other

Asian countries. The global investors' sudden loss of confidence in the Korean economy played a pivotal role, which can be attributed to many factors. Despite its sustained effort to strengthen its external sector, Korea's high dependency on large and short-term external debts was the major culprit. The stigma effect from the 1997 crisis was also important.

Indeed, the rapid increase in borrowings by the banking sector, especially since 2006, resulted in large external debts, and thus increased the vulnerability of the Korean economy to the global credit crunch. The external debt was only $187.9 billion at the end of 2005, but it grew rapidly, thanks to large-scale borrowings by domestic banks and branches of foreign banks, reaching $426.1 billion in the third quarter of 2008. This level of total external debt was equivalent to 175% of GDP. Then, the external debt-to-GDP ratio increased to 206% in the fourth quarter of 2008 before it decreased steadily since 2009.[3] This high debt-to-GDP ratio is comparable to the ratio during the Asian crisis in 1997–1998.[4] Moreover, short-term external debt, whose original maturity is less than a year, increased more rapidly from $65.9 billion at the end of 2005 to $189.6 billion in the third quarter of 2008. Thus, the short-term debt to total external debt ratio reached 45% in the third quarter of 2008, similar to the 48% in the first quarter of 1997. Despite large foreign reserves, the ratio of short-term debt to reserves increased to 79.1% in the third quarter of 2008. Moreover, as of the end of 2008, total current external debt (debt with remaining maturity of less than a year) due in 2009 was $193 billion, which comprises short-term debts and long-term debts due in 2009. Thus, the ratio of current external debt to foreign exchange reserves became close to one.

To be fair, there were many reasons why the Korean government thought this time was different. In responding to concerns about external debts, the Korean government believed that a significant portion of external debt was in fact risk free for the following two reasons.

First, among the total external debt of $379 billion as of end-2008, $103 billion was supposed to be non-obligatory debt, meaning it was not subject to any repayment burden. For example, $39 billion was incurred as a result of advanced receipts (or unearned revenue) for shipbuilding contracts, which would be cleared off from the books at the time of the delivery of the ships. Excluding these non-obligatory debts, the net external debts of the Korean economy came to $276 billion, significantly smaller than the claimed $379 billion. The increase in demand for hedging against foreign exchange rate risk by shipbuilding companies caused more complexity.[5] Because of the large size of the shipbuilding contracts and the long time interval between orders and delivery, the shipbuilding companies in Korea are exposed to high exchange rate risks and thus have a great incentive to hedge the risks. Thus, they open forward contracts with banks, and accordingly, banks are left with exposures to exchange rate risks in the future. The banks, then, borrow foreign currency and convert these into domestic currency in the spot market to hedge the risks in its forward position. As the government argued, although these forward contracts raised the current external debts, the level of debts would be reduced at the maturity date of the forward contracts. When shipbuilding companies deliver foreign currency to banks with the received payment at the maturity date, banks can repay the external debts with the proceeds. This is the reason why the Korean government argued that the external debts

in Korea were overly exaggerated. But the Korean shipbuilders and banks never imagined that their counterparties, whose credit ratings were higher than theirs, could become credit constrained and fail to honor their contracts.

Second, among the short-term external debts of $149.9 billion, $72.4 billion was owed to the branches of foreign banks. Therefore, Korean domestic banks and corporations owed only $77.5 billion, which was about a third of the foreign exchange reserves. In other words, the short-term borrowings by the branches of foreign banks from their headquarters accounted for about half of the short-term external debts. The Korean regulator never imagined that it needed to monitor the short-term liquidity of foreign bank branches since they were believed to have access to ample liquidity from their headquarters. Moreover, the external debts of domestic banks tend to fluctuate with their external assets over time, while this tendency is not found for the branches of foreign banks. Since 2006, the external assets of domestic banks also started to increase, though not as much as external debts, but the external assets of branches of foreign banks virtually remained unchanged while their external debts significantly increased. This means that the external assets-liabilities of foreign bank branches were not matched, while domestic banks were advised to do so. The Korean government never thought this was a problem. No one imagined that global banks, which had higher credit ratings than the sovereign rating of Korea, could actually default! The global financial crisis taught us that regulating foreign bank branches should become a new important issue for Asian policymakers.

Another indicator of vulnerability that foreign investors and media focused on after the onset of the crisis was the high loan-to-deposit ratio in the banking sector. A high loan-to-deposit ratio implies that banks heavily rely on borrowing to finance domestic lending, suggesting a high leverage ratio of the banking sector. The loan-to-deposit ratio reached almost 120% at the end of 2008, which is higher than the average ratios in other Asian countries' banking sector (usually less than 100%).

In response to this concern, the Korean government argued that the loan-to-deposit ratio is not a good internationally comparable indicator of leverage. For example, certificates of deposit (CDs) are not included in deposits, thereby increasing the loan-to-deposit ratio. The loan-to-deposit ratio in Korea was around 100% once CDs were included. Unlike other countries, the Bank of Korea Act classifies CDs as deposit liabilities for which banks are mandated to set provisions. Furthermore, most CDs in Korea were sold at bank counters, and they are essentially the same instrument as ordinary time deposits in nature.[6] In fact, the rollover ratio of CDs is higher than that of deposits, and the banks regarded CDs as a stable source of funding in Korea. However, once the crisis occurred, individual country characteristics were not taken into account in foreign investors' perceptions.

2.2 Policy responses

In the first phase of the global crisis, the critical problem was the loss of foreign investors' confidence and the subsequent liquidity problem in the foreign exchange market. The memory of the 1997 crisis started to haunt Korean consumers and businesses. Financial institutions and companies stopped lending to each other for fear of counterparty risks

under the very uncertain conditions. It was a typical liquidity crisis, not a credit crisis, and restoring confidence was a major challenge. The Korean government reacted by providing liquidity to domestic financial markets and payment guarantees for foreign currency borrowings by domestic banks. Since most foreign governments also provided guarantees to their banks, it was an inevitable choice to avoid reverse discrimination.

The government and the Bank of Korea also provided foreign exchange liquidity to financial institutions using foreign exchange reserves to some extent. Korea managed large foreign exchange reserves of over $240 billion, but it did not fully utilize the reserves in the first phase of the crisis. There was a criticism about the government's less active use of foreign reserves even if it has enough holdings to cover short-term external liabilities. However, it is not the level of short-term liabilities but trade finance that made the government cautious about managing its foreign reserves. The government has to prepare for the possibility that access to dollar liquidity – especially trade finance – could be cut off for an extended period of time. A sharp decline in foreign reserve holdings could limit the government's ability to respond to a shortage of trade finance in the future, which could exacerbate the domestic recession and the already weakened foreign investors' confidence in the Korean economy.

The domestic financial market, in particular, money market credit conditions in Korea, also began to deteriorate very rapidly after the onset of the crisis. An increase in uncertainty about how much Korean financial institutions invested in the failed foreign banks, along with the pessimistic view on the future of the Korean economy by foreign investors and media, motivated domestic financial institutions to hoard cash and refuse to lend to each other, causing a credit crunch in the money market. In particular, non-bank financial institutions such as securities companies were severely hit due to their high dependence on short-term wholesale borrowing rather than deposits. The Bank of Korea was initially reluctant to supply liquidity to non-bank financial institutions, but aggressive and nonconventional intervention by the US Federal Reserve made it hard for the Bank of Korea to avoid supplying liquidity to non-bank financial institutions as well.

During the period of the first phase of the global crisis, the government's efforts primarily focused on restoring foreign investors' confidence. It might be true that the evaporated confidence was the underlying reason why the Korean economy was hit harder than other emerging market economies. Some of the skepticism was very unfair and, in part, stemmed from the memories of the 1997 crisis in Korea. Many investors again questioned the transparency and credibility of government statistics as they did in 1997. The government undertook efforts to improve investor relations (IRs) around the world and stressed that "this time is different" to foreign investors.

However, these government IR efforts turned out to be ineffective, and ironically, it was the bilateral swap arrangement with the Federal Reserve on October 29, 2008 that eased the concerns about a currency crisis and stabilized the foreign exchange market.[7] The bilateral swap arrangements with the Federal Reserve were effective because they were not subject to the stigma effect. As announced by the Federal Reserve in its press release, the swap arrangement was designed to mitigate the spread of difficulties in obtaining US dollar funding in fundamentally sound and well-managed economies. Brazil, Mexico,

Korea, and Singapore were included and identified as large and systemically important economies. The stigma effect was effectively minimized as the Federal Reserve swap did not single out a country, unlike the case of a bilateral International Monetary Fund (IMF) program. In fact, the Korean government declined the bilateral offer from the IMF to subscribe to its new lending facility, the Flexible Credit Line (FCL) in mid-October, as it feared the stigma effect would worsen investors' confidence even though the FCL carried less conditionality than its standard program loans. It was an ironical moment since it was the USA that initiated this crisis and then restored the confidence in the Korean economy.

Meanwhile, Korea did not avail itself of the Chiang Mai Initiative Multilateralization (CMIM) swaps, a regional safety net among ASEAN+3 countries (Association of Southeast Asian Nations plus Japan, Korea, and China), because the CMIM is an ex post crisis-resolution mechanism, not an ex ante crisis-prevention mechanism, and Korea was not in a default situation. In addition, the CMIM requires the IMF's supervision if more than 20% of the swap arrangement amount is used.

3. The Second Phase: Collapse of Exports

3.1 Financial excess or global imbalances?

The swap arrangement with the Federal Reserve was a turning point in the stabilization of the Korean financial market. But its positive effect did not last long. From mid-November, the credit crunch problems again began to worsen. This time, it was not just Korea but the whole East Asia which lost global confidence. The argument goes that, even though the crisis started from the West, Asia would suffer at least as much due to its heavy dependence on exports to advanced economies. A contraction of global demand would lead to an export collapse and sharp declines in economic activity, which would deteriorate the balance sheets of Asian corporations and banks. Then, the balance sheet effects could trigger a banking crisis eventually. This possibility could become a reality particularly in Korea because income-elastic capital goods and durables account for a large part of Korean exports.[8]

Together with the changes in market sentiments, a subtle reinterpretation of the global financial crisis emerged. At first, it was argued that the crisis was caused by the failure of regulations and supervision on financial institutions. Thus, the initial policy reactions in the international community such as the G-20 focused on strengthening financial regulations. But from the beginning of 2009, the root cause of the global crisis started to be challenged. Some countries asserted that the global imbalances, partly due to excessive current account surpluses in Emerging Asia, allowed the funding costs to remain low for a prolonged period of time in the USA and therefore fueled housing market bubbles and the growth of global financial markets. The export-oriented structure of Asian economies became an easy target for this criticism.

For the Korean government, this doomsday scenario for East Asian countries was much harder to defend. In the first phase of the crisis, the loss of confidence in the Korean economy was, by nature, a short-term problem and stemmed from, in part, misunderstandings and the distrust of foreign investors on the transparency of the Korean

government. In contrast, the concern raised in the second phase was a long-term and structural problem.

In fact, the Korean and East Asian economies witnessed a collapse in exports from December 2008. The year-on-year growth rate of Korean exports plummeted from 27% in the third quarter of 2008 to –9.9% in the fourth quarter, and further plunged to –24.9% in the first quarter of 2009. The sharp drop in the exports of other East Asian countries including Japan was equally shocking.[9] The danger of the crash in exports leading to a recession and the threat of a banking crisis became real in Asia, and required new policy responses. The government had to aggressively rely on expansionary monetary and fiscal policies to boost the real economy and to protect the vulnerable financial sector. In Korea, construction, shipbuilding, and the export sectors were heavily hit, and the government needed to accelerate corporate restructuring in order to prevent further spillovers of corporate difficulties to the banking sector. Protecting the banking sector from emerging credit risks, not just from a liquidity crisis, became an urgent task. The effectiveness of policy measures in responding to the crisis in the second phase were largely owed to the experiences gained during the 1997 crisis and the institutions that were created to deal with it (Tsutsumi *et al*., 2010).

3.2 Macroeconomic policies

Monetary policy

Just like many other central banks in the world, the Bank of Korea conducted an aggressive expansionary monetary policy by cutting the base interest rate. The base rate was lowered from 5.25% to 2% in six steps between October 2008 and February 2009. The monetary easing in 2008 and 2009 undoubtedly contributed to promoting financial market stability and supporting economic recovery.

In addition to monetary easing, the Bank of Korea broadened the eligible securities and counterparties for open market operations. In November and December 2008, it made bank debentures and some government agency bonds eligible for use in open market operations. At the same time, 12 security companies were additionally selected as the central bank's counterparties for repo operations. Moreover, in December 2008, the Bank of Korea paid the banks one-off interest of W500.2 billion on their required reserve deposits to immediately improve bank balance sheets.

Fiscal policy

To invigorate the domestic economy, the Korean government also carried out a massive fiscal stimulus package. Together with the supplementary budget plan, the size of fiscal expansion in Korea turned out to be larger than those in most of the other countries. According to the IMF (2009), the size of crisis-related discretionary measures in Korea amounted to 3.6% of GDP in 2009, which was the largest fiscal expansion among G-20 countries. It should be also noted that the implementation lag of fiscal policy was much shorter in Korea than in advanced economies. The government executed about 60% of the combined annual original and supplementary budgets by the first half of the year in order

to maximize the fiscal effects on the economy in a timely manner. To expedite the implementation of the fiscal stimulus, the Korean government even advanced its new year annual operation-plan briefing for each ministry to mid-December in 2009, instead of the usual schedule of late-January to February in the new year.

Although the central government debt increased from less than 10% of GDP in 1996 to 30% in 2006, its sound fiscal position relative to other major countries enabled Korea to implement a large-scale fiscal stimulus in response to the global financial crisis.[10] In designing the fiscal stimulus plan, the Korean government tried not to commit to irreversible fiscal spending such as increasing entitlement programs in order to maintain its long-run sound structural fiscal stance.

3.3 Recapitalization of banks

After the onset of the global financial crisis, there had been massive bank recapitalizations in advanced economies in the process of bailing out and bank restructuring. As economic conditions worsened, the Korean government was also pressured by the media and the markets to recapitalize domestic banks, even though Korean banks were adequately capitalized with their average Bank for International Settlements (BIS) capital adequacy ratio recorded at 12.8% at the end of 2008. The argument for further enhancing their capital basis was underpinned by three reasons.[11] First is to prevent reverse-discrimination, since all troubled banks in the West were recapitalized or publicly owned. Without government support, Korean banks would not be able to secure foreign funding in international markets. Second, in return for injecting more capital, the government could encourage domestic banks to extend loans to small- and medium-size enterprises (SMEs) more aggressively to ease the credit crunch. Third, given the increasing uncertainty, pre-emptive policy measures were called for in order to safeguard the soundness of the banking sector. Since loan losses resulting from a deep recession could cause a substantial fall in bank capital, additional bank capital was required for a precautionary purpose.

However, injecting public money involuntarily to normally operating private banks was not legally feasible and economically desirable. Their BIS ratios were above 9% even at the end of 2009. It was unlike the case of 1997 and the case of advanced economies after the subprime crises whose banks were either de facto defaulted or asking for voluntary capital injection. To circumvent these difficulties, the Korean government decided to create a fund which can provide banks with credit lines. In December 2009, the Korean government announced the launch of the Bank Recapitalization Fund with a size of W20 trillion, which is expected to increase the average BIS ratio by 1.5% point.

Figure 1 describes the structure of the Bank Recapitalization Fund. On a voluntary capital call basis, banks can access the Bank Recapitalization Fund by issuing preferred shares, hybrid bonds, or subordinated bonds to the Fund whenever they need to raise capital. In order to minimize the possible stigma effect, the government assigned a credit limit per bank that depended on their asset sizes irrespective of their credit ratings. The Korean government expected that the Fund would help domestic commercial banks raise their BIS capital adequacy ratio when needed. The Bank Recapitalization Fund aimed to support banks to make loans more aggressively, rather than to pursue financial

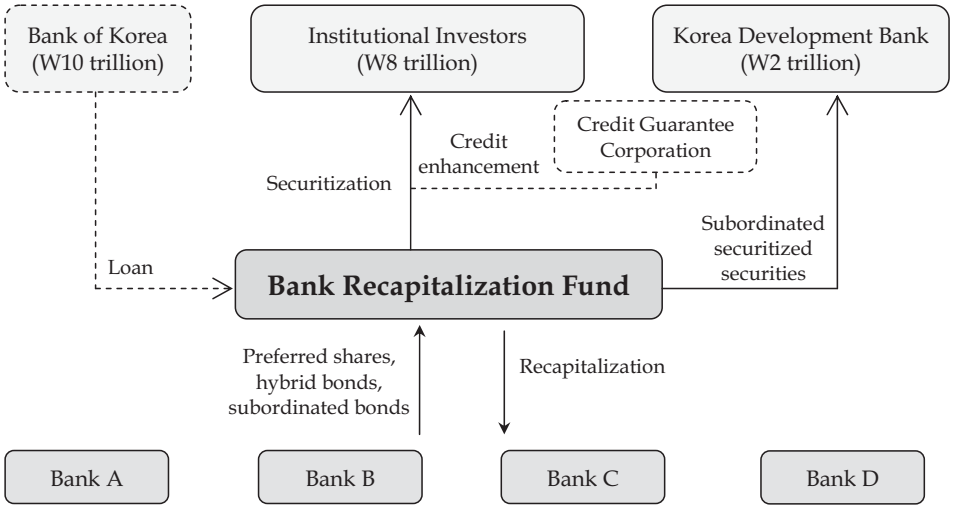

Figure 1 Bank recapitalization fund.

restructuring as in the case of the troubled banks with large nonperforming loans in advanced countries. By enhancing the soundness of the banking sector, the Fund was intended to provide a safety net to prevent bank panics and encourage banks to keep on lending during times of crisis.

The Bank Recapitalization Fund was financed by a W10 trillion loan extended by the Bank of Korea along with W2 trillion from the Korea Development Bank. The fund would securitize its investment on bank debentures and raise W8 trillion from institutional investors. The structure of the Bank Recapitalization Fund is carefully designed to minimize the concerns about the use of taxpayers' money which would inevitably invite the debates on government control over the normally run private banks. Thanks to the legal and financial institutional infrastructure (such as the introduction of the securitization laws) that the Korean government developed after the financial crisis in 1997, the introduction of the fund was made possible.

In retrospect, the Bank Recapitalization Fund was a success story. It provided a safeguard to banks against possible substantial losses, yet the safeguard was never used and did not cause any fiscal burden. However, from January, the media wrongly categorized the policy as a failure on the ground that banks seldom utilized the fund. It was difficult to explain that the best insurance policy is the one that was not used as no accident happened. Unfortunately, the government could not stand public criticism and mandated the banks to use the fund, urging them to extend loans to SMEs and the poor. The policy to protect the soundness of the banking system thus turned to be part of the expansionary and redistribution policy packages.

3.4 Corporate restructuring

One of the many vital lessons Korea learned from the 1997 financial crisis is that preemptive corporate restructuring is crucial to minimize the cost of financial restructuring

and employment adjustment. As economic conditions deteriorated further, problems in the construction and shipbuilding industries got worse from December. In fact, even before the onset of the crisis, many construction companies had financial difficulties due to their overexpansion during the housing boom periods. Shipbuilding companies were severely hit by the rapid drop of logistics transactions due to the collapse in world trade, the significant capital loss due to exchange rate depreciation, and their high leverage in foreign currency denominated debts.

However, many troubled companies were still muddling through, barely surviving the dire conditions, yet had not filed for bankruptcy. They were creating uncertainties in the market and absorbing liquidity, further aggravating the credit crunch. But unlike the case in 1997, the government could not initiate direct corporate restructuring as most of the firms were not officially nonviable. Instead, the government had to facilitate the corporate restructuring process through creditor financial institutions. Creditor financial institutions were asked to jointly evaluate the credit risks of corporations in the struggling industries such as construction and shipbuilding. The corporations were classified into four groups according to their future viability: group A (normal); group B (temporary liquidity shortage); group C (showing signs of insolvency but viable); and group D (nonviable). Different actions were then taken for each group. Corporations classified as group A and group B could receive further liquidity support, while corporations in group C and group D were placed under workout programs and bankruptcy procedures, respectively. The government even enacted "the Fast Track" service to expedite the classification process. Corporations could volunteer to be classified by the creditor financial institutions so that they could be placed under restructuring programs or receive proper liquidity support expeditiously. One of the lessons that the Korean government learned from the 1997 crisis was the importance of coordinating creditor institutions' joint decisions in order to avoid delays in corporate restructuring and the consequent larger social costs.

4. Lessons from the 1997 and 2008 Crises

4.1 Comparison of macro policy responses

Monetary policy

The monetary policy stance taken by advanced economies in the recent global crisis was quite different from those prescribed to Korea by the IMF during the 1997 crisis. In 1997, the Bank of Korea had to raise the base interest rate from approximately 12% to almost 30% as part of the IMF adjustment program. Many Koreans believed that the higher interest rates ultimately aggravated the banking crisis and led to deep contractions in economic activity. They questioned why advanced economies did not adopt the same tight monetary policy in 2008.

Other things being equal, when a currency crisis is triggered by a plummeting in the value of the currency, central banks in emerging market economies are faced with a dilemma of monetary policy directions. If the central bank raises interest rates to encourage capital inflows, it may be able to defend the currency. However, higher interest rates

would deteriorate the balance sheets of banks and corporations, leading to a severe economic downturn and possibly a banking crisis. On the other hand, if the central bank lowers interest rates, it may not be able to maintain the value of its currency.

In 1997, the IMF believed that the top policy priority should be given to restore confidence in the currency market in Korea and insisted that interest rates be raised to resume capital inflows, despite its negative effects on the banking and corporate sectors. In fact, the 1997 crisis was regional while the 2008 crisis was truly global. No global investor could afford to invest abroad at this time as they had to take care of their internal problems first. Thus, in line with monetary easing in other countries, the Bank of Korea was able to cut interest rates without a significant impact on capital flows.

Large foreign reserves and the lessons learned in 1997 in foreign reserve management played an important role in 2008. Cho (2010) argues that the most important factor that led to different foreign reserve situations was the government's approach to the foreign exchange market. In 1997, the government misunderstood that it could, probably should, control the foreign exchange market, and actually attempted to engineer a "smooth and orderly" depreciation from the beginning of 1997. This approach, however, only invited currency speculation and catalyzed reserve depletion in the end. In 2008, in contrast, the government let the exchange rate adjust to the shock rather than waste foreign reserves, which eventually saved the flexibility of monetary policy.

The high interest rate policy contributed to corporate restructuring after 1997. In 1997, major corporations in Korea were heavily indebted, and their average debt to capital ratio was well above 300%. Substantial foreign and domestic currency debts made them vulnerable to a sharp depreciation of the exchange rate and a sharp increase in domestic interest rates. However, in 2008, corporate sector debt was not a serious risk factor. It was household liabilities that caused more concern.

Fiscal policy

The expansionary fiscal stance during the 2008 crisis is parallel to the policy reactions during the 1997 crisis, ex post (Cho, 2010). However, in terms of timeliness, there is a noteworthy difference. Following the IMF's recommendation, the Korean government initially maintained a balanced budget when the currency crisis was triggered in 1997. After a severe recession emerged in mid-1998, the budget deficit was allowed and gradually expanded as the recession deepened. In the 2008 crisis, in contrast, the Korean government announced a fiscal expansion as soon as the global crisis was underway and carried out a fiscal stimulus package immediately. A supplementary budget of W10 trillion was implemented in November 2008, and an additional supplementary budget of W28.4 trillion was drawn up by March 2009. Considering the time lags common to fiscal policy effects, the early execution of fiscal spending in 2008 must have contributed to economic stabilization. In this sense, the Korean experience in 2008 demonstrated that more prompt expansionary fiscal programs in 1997 should have been implemented when they were needed most in order to offset the inevitable slowdown in economic growth. The Korean case in 1997 was different from the peripheral countries in Europe in 2008. Korea in 1997 had more fiscal space to utilize.

4.2 Bilateral swaps, foreign reserves, and global financial safety nets (GFSNs)

Probably the most unfortunate lesson that many emerging economies in Asia learned from the two crises is to reconfirm the belief that more foreign exchange reserves are better. After experiencing sudden reversals of capital flows and the consequent social loss in 1997, Asian emerging economies started to accumulate foreign reserves aggressively. In the past, sudden reversals of capital flows were typically associated with problems internal to the emerging market countries, such as mismanagement of the macroeconomy and weak financial regulatory systems. Accumulating foreign reserves is intended to be a part of precautionary policies to cover unexpected outflows in time of crises. The 2008 crisis, however, dramatically demonstrated that there could be other causes of capital flow reversals against which purely domestic safeguards do not provide a sufficient defense. The 2008 crisis had its origins in the advanced economies against the backdrop of the US subprime crisis. These events resulted in tightened liquidity conditions, initially in the financial centers of advanced countries and then eventually in emerging markets. As a result, Asian policymakers came to the conclusion that countries need to keep even larger amounts of foreign exchange reserves. The fact that countries with larger reserves generally fared better in the recent crisis may have further strengthened their belief.

In particular, small open economies, which are highly dependent upon international trade for their economic growth, are most likely to need sufficiently large foreign exchange reserves to shield their economies from adverse external shocks. When external finance is no longer available, the countries could suffer from drying up of trade finance, which, in turn, may lead to a severe downturn of exports and imports, and ultimately, of the whole economy. Faced with extreme uncertainties about the duration of the global crisis, therefore, Korea could not afford to actively use its foreign exchange reserves, which would be its last resort to guard against constrained external trade financing in the worst case.

However, holding large and excessive reserves is quite costly domestically and globally. The reserves are often held in safe assets that yield low returns and thus, the opportunity costs are not negligible. It is important to note that the costs of such policies are not only borne by the individual countries holding them. After all, holding excess reserves in safe assets diverts resources from other productive uses with potentially higher returns, which could contribute to global growth. It also contributes to widening global imbalances and inevitably intensifying international trade conflicts.

To reduce the excessive precautionary motive for accumulating large reserves, countries whose currencies are international reserves have to bear more responsibility in providing global liquidity, in particular, for trade finance, at least in cases where the origins of shocks start from the center. That is why Korea promoted the agenda of strengthening GFSNs in the G-20 Summit in 2010. At first, Korea wanted to institutionalize the bilateral swap arrangements with the Federal Reserve. Even though they were verified to be very effective during the 2008 crisis, bilateral swap arrangements have limitations as credible and secure sources of foreign currency liquidity due to their temporary, ad hoc, and political nature. Indeed, most major central banks were resistant to this idea, pointing out that bilateral swaps can cause serious moral hazard problems. As a politically feasible second best option, the G-20 focused on the IMF's new ex ante crisis-prevention lending

toolkit by establishing the multicountry FCL and the Precautionary Credit Line. However, in the future, in order to effectively reduce excess reserve accumulation by emerging economies, the role of central banks with reserve currencies should be reexamined, and their collaboration with the IMF's new lending facilities and the regional financial arrangements such as the Multilateral Chiang Mai Initiative Mechanism should be further explored.

4.3 Banking versus capital market development

Since the 2008 crisis was triggered by financial excesses in capital markets in advanced countries, capital market development, including investment banking, derivatives, and securitization, suddenly became bad words. The Washington consensus and free capitalism came under attack even in advanced economies. There were loud calls for stronger financial regulation, a return to basic banking, and an aversion to complex instruments in the capital market.

But these were inconsistent with the message that Asian countries heard after the 1997 crisis. Back then, policy prescriptions emphasized capital market development, deregulation, privatization, etc. One of the frequently suggested underlying causes of the 1997 crisis was the double mismatch problem – currency mismatch and maturity mismatch between assets and liabilities in the bank balance sheets. As Korea and most of the other Asian countries had bank-dominated financial systems, the maturity mismatch was inevitable since banks made long-term loans and funded them by issuing short-term deposits. The 1997 experience highlighted that the social costs of such a system were unnecessarily large, and the necessity of developing capital markets became an important policy task. It is better to have a bicycle rather than a monocycle for a financial system. In addition to the banking system, a well-functioning capital market is necessary for longer maturity options and wider risk sharing by the market.

Since the 1997 crisis, Asian countries have attempted to reduce their dependence on banks and to develop capital markets, particularly local currency bond markets. This is demonstrated by the Asian bond market initiatives of the ASEAN+3. Indeed, although Asian financial markets are currently still bank dominated, capital markets and non-bank financial institutions have grown significantly, thanks to governments' efforts to introduce legal and financial infrastructures for capital market development and to large savings and pension funds in the region. For instance, the asset size of non-bank financial institutions rose from 30.1% of GDP in 1997 to 94.3% in 2010. Stock market capitalization also increased from 91.0% to 246.6% of GDP, and total bonds outstanding grew from 20.7% to 57.1% of GDP during the same period. Though still relatively small compared to advanced economies, the market has achieved significant growth since 1997.

After the crisis in 2008, Asian policymakers were at a loss. Should Asia continue to develop its capital market or should its small local banking system be regarded as a virtue to keep? But this may not be the right lesson for Asia to take away from the global financial crisis: if we do not learn how to fly, there will be no plane crashes.

In efforts to avoid the middle income trap, Asia's industrial structure will need to become more complex, requiring more risky projects. If Asia does not develop capital

markets, banks will inevitably be responsible for supplying funds to high value-added industries such as information technology, biotechnology, and green growth industries, which intrinsically carry higher risks and greater uncertainties. Governments will be hard-pressed to provide guarantees, in effect transferring the risks to the public sector. Capital market development in the region will diversify risk concentration in banking sectors, promote efficient risk allocation, and thus can support future economic growth, even though it intrinsically carries more risks.

In fact, efforts in the last decade to develop the capital market in Korea contributed a lot to its recovery from the crisis in 2008. In 1997, the capital in Korea's financial market was mostly safety-seeking bank capital. As a result, the outbreak of the Asian financial crisis led to a rapid withdrawal of existing liquidity. But in 2008, non-bank financial institutions such as pension funds, variable insurance companies, and private equity funds served as props against a sudden decline in the capital markets, despite a massive foreign capital flight, thereby making the stock markets more resilient. Also, as explained in the previous section, the introduction of the Bank Recapitalization Fund was possible because Korea's capital markets have grown significantly since 1997.

So, should Asia revert to a bank-dominated system? At this point, there is no consensus yet, but Asia needs to find its own answer. What is the right level of capital market development and how should regulation be enhanced to avoid the mistakes that advanced economies committed, which eventually led to the global crisis of 2008? Probably, the lesson that we have to learn from the global crisis is that we need "better" financial regulation, not just "more and stricter" regulation. If we blindly raise the level of regulation on Asia's banks which mainly focus on commercial banking activities, the Asian financial market might become safer, but also it will lose a lot of growth opportunities.

4.4 Financial regulation from emerging market perspectives

The global financial crisis underlined the weaknesses of the global financial market and has led to calls for enhanced financial market regulation. However, Asia has generally been a bystander, rather than an active participant, in the discussions on global financial regulatory reform to design new standards for financial regulation. Partly because its financial institutions were less affected by the global crisis and its capital markets were less developed, the current discussions on most of the topical global issues such as regulating systemically important financial institutions (SIFI) and raising capital adequacies do not seem currently relevant for them.

However, Asia must decide to more actively engage in the discussions for two reasons. First, what is decided today will affect the region in the next decade or so. Second, even at this stage, there are many important unique aspects that have a larger impact on Asia, but may not be properly discussed by advanced economies. One example is how to regulate the foreign exchange liabilities of the branches of foreign banks in Asia. This is related to the cross-border resolution mechanism of SIFIs. Another example is the accounting issue due to exchange rate volatility. The use of historical value versus market value accounting is one of the hot issues in redesigning international accounting standards, but the current focus in international discussions is more on stock price volatility. In Asia, however,

volatility due to exchange rate changes can be more devastating in some countries. The region's experience during the 1997 crisis and Korea's experience during the recent global crisis are other key examples of why Asian policymakers have to pay attention to this issue.

5. Conclusion

This paper describes how the Korean economy was affected by the global financial crisis and how the government responded to the crisis. The paper also highlights many differences in the Korean situation in 1997 and 2008, and the consequent implications on crisis management in terms of macroeconomic policies, financial policies, and corporate restructuring. Based on the Korean experiences during the two crises, the paper raised several policy issues that might have regional implications for Asia. We argue that the role of central banks with reserve currencies should be reexamined and that regional financial safety nets such as the CMIM should be strengthened. We also believe that Asia needs to continue its capital market development plans such as the Asian Bond Markets Initiative in order to upgrade its financial markets, despite the recent global trend toward stronger financial regulation on capital markets after the subprime crisis. We suggest that Asia should actively participate in global discussions on financial regulations, incorporate regional perspectives in global rule-setting, and emphasize the balanced approach between stability and growth of financial markets and industries, considering the still underdeveloped stage of Asian financial markets.

During the 1997 crisis, Asia was devastated and had to comply with Western policy prescriptions, even though it was not in total agreement with their recommendations. In the recent global crisis, Asia was relatively immune. Indeed, the region led the global recovery with its strong growth and quick turnaround. As such, Asia is now in a better position to question the traditional wisdom imposed on them by advanced economies in the past. In fact, advanced economies themselves did not use the old prescriptions signed off to Asia in 1997.

The positive side to this is that Asia can contribute to global knowledge from its own experience during the two crises. However, Asia has not developed an Asian consensus yet. This paper suggests some areas where Asia needs to develop its own stance, whether it is consistent with old wisdom or not, in many issues such as crisis management, reserve accumulation, capital market development, and proper financial regulation. In 1997, Asia adopted voluntarily and involuntarily the Western textbook. After 2008, it recognized the problems of that prescription. But we still do not know which part is right and which part we have to abandon as we have never written our own textbook. Perhaps now is the right time to do so.

Notes

1 See Lee and Rhee (2007) for the lessons from the 1997 crisis in Korea.
2 In the literature on contagion, countries are linked through two different channels of transmission: trade and finance. In the first phase, the finance channel was more important in the

transmission of shocks to the Korean economy. The second phase, in contrast, highlighted the critical role of international trade in the propagation of adverse shocks. Gerlach and Smets (1995) and Glick and Rose (1999) stress the international trade channel, while Kaminsky and Reinhart (2000) and Van Rijckeghem and Weder (2001) emphasize the importance of the international finance channel.

3 In the fourth quarter of 2008, the total external debt slightly decreased, but GDP declined more, resulting in an increase in external debt-to-GDP ratio.

4 The external debt-to-GDP ratio was 210% in the first quarter of 1998.

5 The orders received by Korean shipbuilding companies amounted to $61.7 billion in 2006 and $97.5 billion in 2007. The growth rates of the orders received were 97.3% and 58.0% in 2006 and 2007, respectively.

6 While CDs are included in deposits under the US banks' accounting system, they are separately accounted for by Korean banks.

7 Baba and Shim (2011) point out that Bank of Korea loans funded by the swap lines with the Federal Reserve were more effective than swaps using its own foreign reserves. This suggests that a country's own foreign reserves and inter-central bank swap arrangements are far from perfect substitutes.

8 In fact, there exists a clear negative relationship between the share of durables in exports and the growth rate of exports during the last quarter of 2008 through the first quarter of 2009. See Lee (2010) and Kawai and Takagi (2009).

9 In the first quarter of 2009, the year-on-year growth rates of exports were −40.6% for Japan and −19.7% for China.

10 Using new data on 44 countries spanning about 200 years, Reinhart and Rogoff (2010) find that the relationship between government debt and real GDP growth is weak for debt/GDP ratios below a threshold of 90% of GDP. Above 90%, median growth rates fall by 1%, and average growth falls considerably more.

11 The nationwide banks accounted for 90% of deposits and loans in the domestic banking sector.

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