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Crisis and Recovery: What We Have Learned from the South Korean Experience?*

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This paper analyzes the process of recovery from the 1997 financial crisis in South Korea, and draws some lessons from it. The fast restoration of financial stability due to early closure of non-viable financial institutions and quick resolution of non-performing loans was critical for the speedy recovery of the South Korean economy. The swift adjustment in fiscal and monetary policies in addition to the large depreciation of real exchange rates also supported the fast recovery. Corporate and government bond markets played an important role in the financial restructuring and macroeconomic adjustment process. Structural reforms helped to alleviate the weaknesses in the corporate sector, particularly in *chaebol* groups. However, the fast recovery also generated unwelcome side-effects. Because of aggressive fiscal expansion through government-guaranteed bonds and public credit guarantee programs, sovereign liabilities increased greatly and transparency of the official fiscal stance deteriorated. Thanks to structural reform, corporate and financial sectors began to recognize the importance of micro risk management, but increased risk aversion contributed to the slowdown of corporate investment and, therefore, reduced long-run growth perspective in South Korea. How to revive long-term growth rates remains an important question in South Korea despite fast recovery from the crisis.

Key words bond markets, corporate and financial restructuring, financial crisis, macroeconomic policies, South Korea, structural reform

1. Introduction

The sudden financial crisis was a devastating shock to the South Korean economy. The real gross domestic product (GDP) growth rate plunged to –6.7% in 1998 from the pre-crisis average of 7–8%. The sharp contraction in GDP was largely caused by the collapse in investment. The investment ratio dropped dramatically by more than 11 percentage points of GDP, from over 36% in the pre-crisis period to 25% of GDP in 1998.

The initial deep contraction of investment and output in the 1997 South Korean crisis is in general attributed to the severe liquidity crisis caused by investors' panic and weak balance sheet problems in the corporate and financial sector (Radelet & Sachs, 1998; Park & Lee, 2002). As in all emerging market financial crises, the South Korean crisis is also

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characterized by massive capital inflow and then sudden outflow by panicked foreign creditors holding short-term claims.[1] Prior to the crisis, the South Korean economy itself had some severe institutional weaknesses that made the economy unusually fragile to the sudden capital outflows (Corsetti *et al.*, 1999). The balance sheets of financial institutions were very vulnerable to the withdrawal of foreign credit. South Korean banks suffered from double mismatch problems – currency mismatch and maturity mismatch. The high leverage and excessive investment of South Korean firms, especially *chaebol*-affiliated firms, are also noted as causing some of the structural problems that made the economy extremely vulnerable to financial panic.

The recovery process from the crisis in South Korea has been no less drastic than its initial free-fall. South Korea managed an impressive recovery starting in 1999, only a year after the onset of the crisis. The GDP growth rates were 9.5% in 1999 and 8.5% in 2000. The V-shaped recovery in real GDP growth in South Korea follows the stylized pattern observed from the previous crisis episodes (Lee & Rhee, 2002; De Gregorio & Lee, 2004) as well as from the adjustment patterns in the other Asian crisis-hit economies (see Ito, 2007, figure 1). The speedy recovery of the South Korean economy can be attributed to the early resolution of creditors panic. Large support packages from the International Monetary Fund (IMF) made some contribution. The first IMF program, signed on December 3, 1997, and the second IMF program, signed on December 24, 1997, helped reduce the short-term liquidity constraints in the economy and provided resources to stem speculative runs on international reserves.[2]

The quick improvement in the South Korean economy was also supported by the swift adjustment of macroeconomic policies. After the onset of the crisis, tight stabilization policies supported by the IMF were implemented, but starting in mid-1998, South Korea quickly changed its monetary and fiscal policy stance toward expansion. In addition to macroeconomic policies, structural reform programs also had significant effects on the recovery path. Immediately following the crisis, the South Korean government began to tackle non-performing loans (NPL) of financial sectors, as well as excess capacity, and over-leveraging problems of South Korean *chaebols* (conglomerates), which contributed to resolving early stage financial and corporate distress.

The purpose of this paper is to assess the role of macroeconomic polices and structural reforms in the recovery process of the South Korean economy and draw appropriate lessons.[3] Compared to the other crisis-hit Asian economies, South Korea managed to recover relatively quickly from the crisis (see Ito, 2007, figures 1 and 2). With the external environments given, the government-led financial restructuring programs and macroeconomic adjustment policies played an important role in the fast recovery of the South Korean economy. However, the fast recovery also generated unwelcome side-effects. Because of aggressive fiscal expansion through government-guaranteed bonds and public credit guarantee programs, sovereign liabilities increased greatly and the transparency of official fiscal stance deteriorated. Thanks to structural reform, corporate and financial sectors began to recognize the importance of micro risk management, but their risk aversion contributed to the slowdown of corporate investment and thereby reduced long-run growth perspective in South Korea.

The paper is organized as follows. Section 2 focuses on the role of macroeconomic policies, such as fiscal and monetary policies, in the speedy adjustment of the South Korean economy to the crisis. Section 3 analyzes the role of financial markets in mobilizing financial resources to the real sectors during the recovery process. We also analyze the role of financial and corporate reforms. Each section discusses the lessons from the South Korean experience. Section 4 concludes the paper.

2. The Role of Macroeconomic Policies in the Recovery Process

2.1 Fiscal policy

The section examines the role of fiscal policy in South Korea's financial crisis and recovery.

Re-evaluation of fiscal position before and after the crisis

Many believe that South Korea maintained a conservative fiscal stance prior to the crisis and a fiscal imbalance could not have been a cause of the financial crisis (Furman & Stiglitz, 1998; Radelet & Sachs, 1998). But some argue that the official budget deficits in South Korea do not correctly reflect the fiscal stance as there were large hidden contingent liabilities not captured in the official budget figures. Despite the officially reported conservative fiscal stance, large contingent liabilities could have contributed to self-fulfilling speculative attacks and helped to aggravate the financial crisis (Cho & Rhee, 1995; Burnside *et al.*, 2001; Corsetti & Mackowiak, 2005).

To address these questions, we reconstructed the consolidated budget deficits in South Korea by incorporating the quasi-fiscal activities of 55 public funds and 32 public enterprises, using their micro balance sheet data from 1972 to 2003. For detailed calculation, refer to Lee *et al.* (2006).

Figure 1 shows the reconstructed consolidated budget balance in South Korea that includes the public enterprises and public funds neglected in official budget figures. The solid line represents the ratio of the official consolidated budget deficit to GDP. The ratio of the reconstructed consolidated budget deficit to GDP when only public enterprises are included is shown by the thin dotted line. The thick dotted line shows the ratio of the reconstructed figures when both public enterprises and public funds are included.

Figure 1 shows many interesting features. First, we find that newly estimated budget deficits are significantly higher than the official figures throughout the sample period. This finding casts doubt on the view that the South Korean government had maintained a very sound fiscal position before the crisis and, therefore, a weak fiscal position cannot have been a cause of the financial crisis in South Korea.

We also note, however, that the discrepancy between the official consolidated budget deficits and the newly estimated figures is distinct only throughout the 1970s and early 1980s. During the late 1980s and the 1990s, there is no significant difference. Even in the 1970s and early 1980s, the difference is mainly due to the social overhead capital expenditures of public enterprises, not hidden contingent liabilities. It is true that the official budget deficits have not correctly reflected the true fiscal stance as they do not include the quasifiscal activities of public funds and public enterprises. Nevertheless, the magnitude

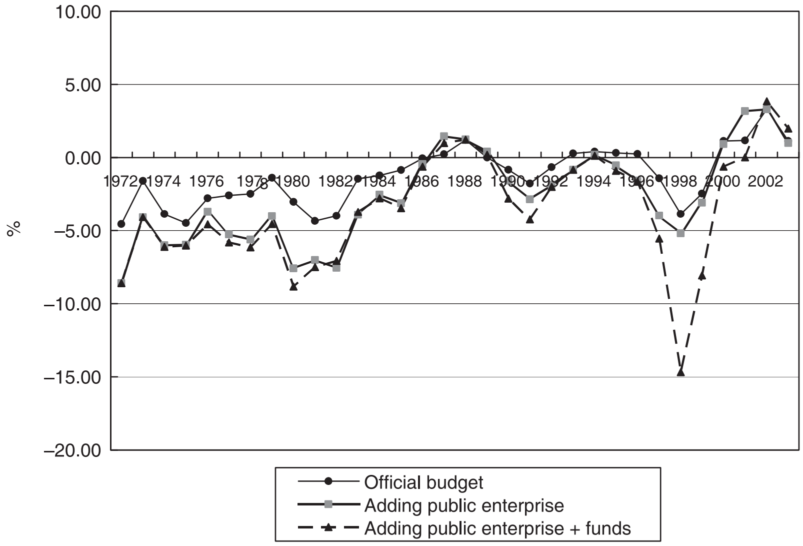

Figure 1 Official and reconstructed consolidated budget balance in South Korea.

of the corrected fiscal deficit is not large enough to suggest that fiscal profligacy and hidden contingent liabilities were the main cause of the 1997 crisis in South Korea.

Interestingly, however, the discrepancy between the two measures dramatically increased after the crisis. The increase is largely due the issuance of a massive volume of government-guaranteed bonds by the Korea Deposit Insurance Corporation (KDIC) and the Korea Asset Management Corporation (KAMCO) to finance the public funds for financial restructuring after the crisis. This issuance of government-guaranteed bonds is not included in official budget deficit figures. In addition, to support financially distressed small- and medium-sized enterprises (SME), there was a significant increase in government loan guarantees during the crisis.

Countercyclical fiscal policy in South Korea

Before the crisis, fiscal policy was not used as a stabilization tool in South Korea in any significant way. The South Korean government emphasized fiscal discipline rather than the countercyclical stabilization role of fiscal policy. However, after the 1997 crisis, there was a remarkable shift in the perception of the role of fiscal policy. The credit crunch and financial market meltdown in the immediate aftermath of the crisis rendered monetary policy extremely ineffective. The fact that exchange rate stability became one of the major policy targets also served to limit the flexibility of monetary policy. It was clearly inevitable that fiscal policy should play a greater countercyclical role in stabilizing the economy.

In this respect, there is a widespread misunderstanding about the characteristics of the countercyclical fiscal aspects of the IMF program. As is widely known, the IMF stabilization program that was implemented in South Korea immediately after the crisis in 1997 called for tight fiscal policy. The initial IMF program announced in December 1997 prescribed a balanced budget or small budgetary surplus on the expectation that economic growth in 1998 would be around 3%. Criticisms were soon voiced against the tight fiscal policy to the effect that the IMF was applying a one-size-fits-all prescription to the crisis-hit countries in Asia without due consideration of their differences: the IMF did not distinguish between the Asian financial crisis and the financial crises in Latin America. The latter were mainly a result of large, unsustainable government deficits (Radelet & Sachs, 1998).

The fiscal policy in the IMF program may not have been adequately expansionary to counter the economic downturn, but one cannot claim that the IMF fiscal program was contractionary, even though it initially prescribed a balanced or small surplus budget. The misunderstanding is mainly due to the fact that the official consolidated budget figures do not include the quasifiscal activities of public finds. As explained, for financial restructuring, the KDIC and KAMCO issued huge volumes of government-guaranteed bonds immediately after the crisis. These public funds were used for financial restructuring such as deposit insurance claims as well as equity participation and NPL purchases from ailing financial institutions.

Ignoring the large volume of government-guaranteed bonds issued would seriously distort the true fiscal position of the IMF program. Government-guaranteed bonds issued by KAMCO and KDIC in 1998 totaled 39 trillion won, which amounted to 55% of the total government budget in 1998. If these government-guaranteed liabilities are included in the measurement of the official budget deficits, the ratio of the budget deficit to GDP in 1998 increased from 4 to 15%. The increase in the government-guaranteed bond issuance together with the tight monetary policy inevitably caused interest rates to rise. To lessen the pressure on interest rates and to secure long-term fiscal sustainability, the government and IMF agreed to pay the interest on these newly issued bonds from the government's general account. This is the reason the IMF initially prescribed a balanced or small surplus budget. In summary, the fact that the massive injection of government-guaranteed debt was not included in the measurement of the official budget shows that the IMF program in South Korea actually allowed considerable fiscal expansion, unlike IMF programs in Latin American countries.

Whether the proactive countercyclical fiscal policy in South Korea after the crisis has been effective is debatable. The positive view posits that consumption and investment expanded considerably as a result of the large injection of public money for structural adjustment. Theoretically also, the fiscal multiplier right after the crisis may have been larger than the conventional multiplier because the majority of fiscal expenditures during this period were injected into ailing banks and non-bank financial institutions. For this reason, government expenditures right after the crisis may have had two multiplier effects; one through the traditional effective aggregate demand channel and the other through relaxation of the credit crunch, which led to a larger monetary multiplier.[4]

Although the expansionary fiscal policy after the crisis successfully stimulated the economy and facilitated the development of the financial markets, it also generated unwelcome side-effects. First, sovereign liabilities increased sharply. As is readily apparent in Figure 2, the ratio of sovereign liabilities to GDP increased from less than 6% before the crisis to 32% in 2004. The outstanding volume of treasury bonds accounted for 23% of

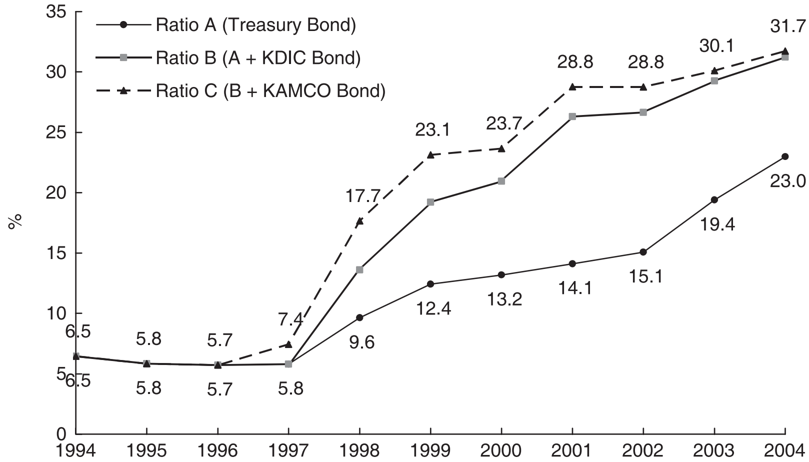

Figure 2 Ratio of public liabilities to gross domestic product in South Korea. KAMCO, Korea Asset Management Corporation; KDIC, Korea Deposit Insurance Corporation.

GDP. Government-guaranteed bonds issued by KAMCO and the KDIC accounted for the bulk of the remaining sovereign liabilities. It is true that the sovereign liability to GDP ratio in South Korea is still below the average ratio of OECD countries, but South Korea can no longer be considered a country with a particularly low debt-to-GDP ratio. Second, the sharp increase in the volume of government-guaranteed bonds and contingent liabilities undermined fiscal transparency. In particular, after the collapse of the Daewoo Group in 1999, the government relied heavily on credit guarantee programs such as Primary-Collateral Bond Obligations (P-CBO) schemes, to deal with the credit crunch at the SME. However, a large proportion of the beneficiaries under the credit guarantee programs went bankrupt later, ultimately saddling the government with an even greater fiscal burden.

Lessons from fiscal policies

Several lesions can be learned from the experience of fiscal policy in South Korea after the financial crisis.

First, sound fiscal stance in South Korea prior to the crisis was one of the critical elements contributing to the fast recovery from the crisis. The South Korean government had to rely heavily on fiscal resources in the process of financial market restructuring and building social safety nets. This massive injection of public funds was possible because the South Korean government had maintained fiscal discipline prior to the crisis.

Second, the aggressive fiscal policy during the recovery process raised questions about the credibility, transparency, and efficiency of many public credit guarantee programs. During the early stage of economic development, the government-led SME credit support programs were very effective in selecting and efficiently channeling funds to the most important investment projects. However, as South Korea became more developed, these government-led projects and programs naturally lost much of their effectiveness. Now that the domestic capital market has developed in tandem with the private sector, the recovery experience reminded the South Korean government of the importance of learning how to use the private capital market and induce private participation in risk-sharing to improve the efficiency of fiscal policy.

Third, the South Korean experience shows that countercyclical fiscal policy can be quite effective when combined with financial restructuring. The fiscal multiplier right after the crisis may have been larger than the conventional multiplier because the majority of the fiscal expenditures during this period were injected into ailing banks and non-bank financial institutions. For this reason, the government expenditures right after the crisis may have had two multiplier effects; the first through the traditional effective aggregate demand channel and the second through relaxation of the credit crunch, resulting in a larger monetary multiplier.

2.2 Monetary policy

To deal with the crisis itself – stopping bank runs, protecting the payment system, and stemming capital outflows – the IMF prescribed tight monetary policy.

The overnight call rate rose from 12.5 to 21% on December 5, 1997, and reached 32% on December 26, 1997. This initial tight monetary policy was aimed at preventing large currency depreciation from initiating depreciation-inflation spirals. Theoretically, the increase in interest rates was expected to bring back foreign capital inflows. However, in reality, it failed to restore foreign investors' confidence in the midst of the crisis, but was effective in preventing sharp increase in demand for foreign currency by domestic firms and individuals and as such, partially contributed to restoring exchange rate stability. The severe recession induced by the tight monetary policy was also a main factor in reducing imports and rapidly improving current account balances. Without a significant current account surplus, restocking foreign reserves and restoring foreign investors' confidence would not have been possible.

Whether the initial tightening of monetary policy was too harsh, and consequently deepened the crisis, is debatable. The contractionary monetary policy was criticized as having been unnecessary because the economy was suffering from a liquidity problem. It is implied that the monetary tightening caused many highly leveraged but viable firms to encounter difficulties in obtaining credit to finance investment and production, thereby deepening the economic downturn. This is a widely prevailing "credit crunch" view.

Although the high interest rates were cited as evidence of a tight monetary stance in early 1998, it is not clear how tight the monetary policy stance was at that time.[5] Interest rates alone may not provide an adequate measure of the tightness of monetary conditions. Devaluation expectations must have pushed up the won interest rates. Higher interest rates also reflected an increase in perceived default risks. The behavior of monetary aggregates in 1998 depicted a mixed picture. In particular, broad money (M3) grew in 1998 at roughly the same rate as in previous years. In contrast, real domestic credit slowed down during the crisis. But it is not clear how significantly domestic credit conditions tightened. During the crisis period, both credit supply and demand decreased simultaneously. As pointed out by Borensztein and Lee (2002), weaknesses in financial institutions and corporate borrowers explain much of the credit contraction during the crisis. Banks needed to increase capital ratios in line with Basel standards, and those institutions unable to increase equity had to decrease credit to their customers. Banks were also obligated to be more selective in choosing borrowers under the new financial sector regulations and environment. The corporate sector as well understood that, under the new conditions, it had to reduce their high leverage rates.

Regardless of whether money and credit supply was a constraining factor for the South Korean economy after the crisis, the monetary policy stance changed quickly toward expansion after mid-1998. The overnight rate started to decline rapidly after reaching a peak, and by July 1998 it was back at pre-crisis levels. Once the depreciation of the currency subdued and stability returned to the foreign exchange market, the monetary authority was able to adjust gradually the interest rates downward and expand money supply. The swift change to expansionary monetary policy stance supported a quicker recovery of the South Korean economy from the crisis, compared to the other crisis-hit Asian economies. Data show that the supply of real credit increased very rapidly since the fourth quarter of 1998 in South Korea, while it remained sluggish in the other crisis-hit Asian economies (Cho & Rhee, 1999; Park & Lee, 2002). In South Korea, the investment ratio recovered most quickly from 25 to 29.1% in 1999. In contrast, in other Asian economies, investment further contracted in 1999.

Lessons from monetary and exchange rate policy

First, to restore the confidence of international investors and stem capital outflows by both foreign and domestic investors, it seems hard to deny that a period of high interest rates was unavoidable. However, the contractionary monetary policy also amplified the pains from the credit crunch that accompanies structural reform. Therefore, the initial monetary contraction needs to be temporary only until the exchange market becomes stabilized.

Second, relaxed monetary policy during the recovery process was effective since structural reforms were simultaneously pursued. The South Korean experience emphasized that expansionary macroeconomic policy alone cannot have a large impact if structural problems remain unsolved. The reform progress reduced sovereign risk premium and inflation expectation by offsetting the initial worries that the government would monetize bailing out costs for troubled financial institutions. Because the origin of the crisis has to do little with macroeconomic imbalances, macroeconomic policy alone cannot solve the problems. Eventually the recovery must depend on the structural reform that tackles the roots of the problems that caused the crisis in the first place.

3. The Role of Financial Market Development and Structural Reforms

In adjustment to the crisis, capital markets, especially government and corporate bond markets, played an important role in mobilizing financial resources to the real sector. The fiscal and monetary policies have also had significant effects on the flow of funds in financial markets. South Korea has also made substantial progress in addressing structural weaknesses in financial and corporate sectors. This section analyzes the development of financial markets and the progress of financial and corporate reforms in the South Korean economy, and their implications to the recovery process.

3.1 The role of financial markets

Development of bond markets

Before the crisis, bond markets in South Korea remained underdeveloped and did not play a significant role in the financial system. Because of its history of fiscal conservatism, the government issued only a small amount of South Korean treasury bonds (KTB) and these bonds were insufficient to support active secondary trading. As a result, unlike in other developed countries, the government bond market virtually did not exist in South Korea prior to the crisis and corporate bonds played a dominant role; 3-year maturity corporate bonds were the benchmark securities.

Despite its large nominal size, the corporate bond market was also inactive prior to the crisis. Corporate bonds were essentially disguised bank loans rather than capital market instruments. South Korean banks routinely guaranteed corporate bonds and held them to the maturity. Bond investment by banks was an alternative method to extend loans to a specific company when banks could not extend loans to the company due to loan exposure regulation. By investing in bonds, banks could escape regulation, which limited loan exposure per firm, as bond holding was classified as portfolio investment, not loans. These situations changed drastically with the crisis in both government and corporate bond markets.

After the financial crisis, issuances of KTB increased dramatically to help fund the cost of financial restructuring. To finance the cost of recapitalizing and restructuring the financial system, the government dramatically increased the size of KTB issuance from around 7 trillion won at the end of 1997 to 56 trillion won at the end of 2004. In addition, the government took steps to improve the market infrastructure and establish KTB as the benchmark bond. Institutional reforms played an important part in boosting the liquidity of the market and establishing the treasury bonds as the benchmark. Reforms included introducing a Dutch auction system to replace the compulsory underwriting in the primary market; primary dealer system; delivery versus payment (DVP) clearing and settlement; reopening and marked-to-market systems; and steps to develop the KTB futures market and the repurchase market for government bonds. As a result, within a relatively short period of time, the South Korean government bond market is now one of the most actively traded bond markets in Asia.[6]

Even though the government bond market developed steadily after the financial crisis in South Korea, corporate bond market development was a different story. When the crisis broke at the end of 1997, the South Korean banking system stopped lending in net terms (i.e. repayments were greater than new loans). However, almost immediately, a corporate bond market sprang to life, with firms able to obtain funding directly from households. In essence, the bond market acted as a "spare tire." The monthly average amount of corporate bonds issued was less than 3 trillion won prior to the crisis. However, this average increased to 7 trillion won in the second half of 1998. For all of 1998, the Bank of Korea reported net bond financing was 45.9 trillion won, about 9.5% of GDP, while there were net repayments to the financial intermediaries of 15.9 trillion won. This surge in bond issues was financed by household savings and the drawing down of bank deposits.

The flow of funds in this fashion, however, was highly concentrated. The Herfindahl index for gross loan flows was around 1 before the crisis. The Herfindahl index for gross bond flows was higher, and in 1998, was around 3. This suggests that the largest firms obtained disproportionately more funds from issuing bonds. Only after the government placed a limit on the amount of bonds that *chaebols* could issue on October 28, 1998, did the amount of corporate bonds issued start to decline.

By acting as a "spare tire," the corporate bond market played an important role in the fast recovery of the crisis in South Korea when the banking sector was hit hard. Unfortunately, however, this spare tire suffered from the inherent weakness in that it significantly reduced *chaebol* incentive to restructure. Some *chaebols*, especially Daewoo – the third largest *chaebol* at that time – kept pursuing expansionary strategies financed by bond issues. When the Daewoo Group collapsed in July 1999, the flow of funds from the banking sector to the capital market started a complete reverse, posing new challenges for the South Korean economy. As a large proportion of corporate bonds issued in 1998 became insolvent, the direction of financial flows after the collapse of the Daewoo Group turned exactly the opposite of what had happened before the Daewoo crisis. The flow of funds shifted from the corporate bond market to the banking sector, and even to postal savings institutions. The amount of corporate bonds issued was almost negligible after the Daewoo crisis, as investors became very sensitive to corporate credit risk. In summary, the corporate bond market in South Korea experienced roller-coaster movement. After a short period of booming, the corporate market became illiquid again and South Korea became a more bank-dependent economy.

Lessons

Several lessons can be learned from the South Korean experience. First, it suggests that the government and the corporate bond markets can develop rapidly even where all finance has previously run through the banking system. It also suggests that the switch to bond market finance acted as a "spare tire" and softened the blow from the banking crisis.

Second, the evidence suggests that while bond financing may add flexibility and be an important tool for the fast recovery of a crisis-hit and bank-dominated economy, such as South Korea, it may not necessarily be more efficient at allocating resources than the banking system. Only relatively large firms had access to direct financing via bond or equity markets. Funding from bonds was even more concentrated than bank lending before the crisis, despite the fact that the crisis was due in part to large firms over-expanding based on cheap credit.

Overall, there are two important functions of a financial market: to provide liquidity and to allocate credit efficiently. The South Korean environment demonstrates that bond markets can provide liquidity to relatively large firms in bank-dominated emerging economies, particularly during a banking crisis. However, capital markets have many prerequisites, such as reliable credit rating agencies, no "too big to fail" beliefs, and so on.

In their absence, capital markets in emerging economies may allocate credit poorly, leading to subsequent crises.

Third, for financial restructuring after the crisis, the South Korean experience shows that more emphasis should be placed on debt-for-equity swaps rather than debt-to-debt swaps in order to end the vicious circle of credit crunch problems. In the beginning of the financial crisis, when banks refused to extend loans, corporations had to pay back loans by issuing bonds with higher interest rates. As the maturities of the bonds issued fell due, they had to issue new corporate bonds to roll over the previous bonds. As a result of this debt-to-debt swap, the total amount of corporate debt remained virtually unchanged in South Korea. The large amount of corporate debt is the main reason for high financial costs and low interest coverage ratios in the South Korean corporate sector. Regardless of how much taxpayers' money is injected into financial restructuring, the chance of another financial crisis is high if the total amount of corporate debt is not reduced. Hence, financial restructuring policy should focus on inducing corporations to engage in debt-for-equity swaps instead of rolling over existing debts.

Fourth, liquid government bond market is a prerequisite for developing well-functioning capital markets, and the case in South Korea is an ideal example of government-led efforts to foster the growth of financial market infrastructures. It has several implications for Asian countries that have tried to develop local bond markets after the financial crisis. In particular, the South Korean case demonstrates the benefits of a latecomer in developing government bond markets. Instead of being satisfied with developing an over-the-account market, South Korea has decided to introduce an electronic trading system for the government bond market. Rather than following the path of other countries, the South Korean government has decided to adopt the most advanced trading system in the world from the very beginning. This policy turned out to be successful and the electronic trading system has not only improved the transparency of the market but also increased the liquidity of the South Korean government bond market.

3.2 Progress of corporate and financial restructuring

It is widely recognized that the financial crisis in South Korea in 1997 was largely the result of enormous accumulations of NPL at financial institutions. Therefore, the initial focus of recovery policy was naturally given to financial restructuring, in particular, of the banking sector. However, the corporate restructuring issue came to a head as it was soon recognized that financial restructuring alone could not revitalize the banking sector as long as underlying corporate sectors did not recover from the crisis. There can be no doubt that such banking and corporate sector restructuring vehicles were instrumental in South Korea's recovery from the crisis.

Financial restructuring

During the period immediately after the outbreak of the crisis, the financial sector restructuring focused on the closure of troubled financial institutions and the disposal of NPL from these institutions. Two supervisory authorities, the Financial Supervisory Commission (FSC) and Financial Supervisory Services (FSS), were newly established by integrating four existing supervisory authorities for banks, security houses, insurance companies, and other financial institutions, leaving policy making to the FSC. Together with the Ministry of Finance and Economy (MOFE), the FSC set the principles and developed the plans for the resolution of non-viable financial institutions in accordance with international standards and procedures.

A capital adequacy standard was the basis for identifying troubled financial institutions, and an evaluation committee reviewed the rehabilitation plans. If a rehabilitation plan was not approved, loan resolution was pursued. If the plan was accepted, the FSC provided support by disposing of NPL and by other means such as recapitalization. The FSC and MOFE also formulated policy schemes to facilitate the normalization of financial institutions. Major means to normalize troubled institutions include transfer of business units of nonviable financial institutions, purchase and assumption, mergers between non-viable banks, and mergers between sound banking and non-viable banks.

By June 2003, five banks had closed through purchase and assumption, and 10 banks had merged with other banks. In addition, 771 non-bank financial institutions were also closed, and 152 non-bank financial institutions had their licenses revoked; 150 merged, and 469 underwent restructuring through dissolution, business transfers, and sell-offs. In this process, the government had to inject a massive amount of public funds for deposit payments, recapitalization of banks, and purchases of NPL. The actual amount of public funds employed for financial restructuring totaled 160.5 trillion won. About 50% of public funds raised were injected into troubled financial institutions through the KDIC, to redeem insured deposits and for recapitalization. Another 25% was channeled through the KAMCO to purchase NPL.

This quick and government-financed financial restructuring inevitably weakened the government's budget position. But it surely contributed to the fast restoration of financial stability and sovereign credit rating of South Korea, and laid the foundation for rapid recovery from the crisis. Moreover, various improvements of financial infrastructures have been made in the last 10 years. For example, loan classification standards, provision requirements, and prompt corrective action procedures have been established. Lending practices and risk management systems have been improved significantly. Comprehensive disclosure standards for all types of financial institution have been introduced, and the deposit insurance system has been amended to prevent exposure to moral hazard on the part of depositors and financial institutions. The government has also made significant efforts to improve the corporate disclosure system, accounting standard, and credit evaluation system, and tried to bring its prudential regulations into conformity with international best practices. As a result, the soundness and efficiency of financial institutions in South Korea improved significantly after the crisis.

Corporate restructuring

After the crisis, the initial focus of recovery policy was given to financial sector restructuring. However, the corporate restructuring issue came to a head as it was soon recognized that financial restructuring alone could not revitalize the banking sector as long as underlying corporate sectors could not recover from the crisis. To break the vicious cycle of financial and corporate distress, a wide array of corporate restructuring vehicles were quickly introduced by the government to help distressed firms as well as to help liquidate NPL in financial sectors. As for the disposal of NPL, since domestic restructuring vehicles were still at an incipient stage of development, public institutions such as KAMCO and the foreign restructuring vehicles played leading roles in the restructuring process. From the outbreak of the crisis in 1997 to October 2005, KAMCO purchased 110 trillion won (face value) in NPL, of which 72.9 trillion won (face value) worth have been disposed. Among them, 95 trillion won of NPL were purchased and 45 trillion won of NPL were disposed before the end of 2000. This clearly demonstrates the importance of KAMCO in financial and corporate restructuring in the early stage after the crisis. In 2000 and afterwards, however, the amount of NPL purchased and disposed of by KAMCO declined as the restructuring of banks and large corporations continued to decline.

As the restructuring of banking sector and large corporations progressed to some degree, attention moved towards restructuring of the non-banking financial sector and SME. An array of restructuring vehicles was introduced for corporate restructuring, including the corporate restructuring corporations (CRC), corporate restructuring vehicles (CRV), and corporate restructuring funds (CRF), to help turn around ailing financial and corporate institutions. A CRF, which is a paper company in the form of mutual funds (corporate-type investment trust), was established with the objective of providing financial support for SME saddled with excessive burdens of short-term debt, mainly by investing in their securities. The CRC are the main vehicle that has closely adhered to its corporate restructuring function, and have indeed played a major role in the corporate recovery process. The purpose of a CRC is to acquire majority stakes in companies, reshuffle management, or push other restructuring measures as necessary to raise the company's value, before reselling. The CRC have doggedly pursued the restructuring of distressed firms in their role as securities companies (i.e. as non-financial institutions). Compared to the CRV and CRF, which have focused mainly on the resolving and disposing of NPL, rather than taking on other corporate restructuring tasks, the CRC arguably have been the main instrument in the restoration and restructuring of distressed firms.

Lessons from financial and corporate restructuring

First, early closure of troubled financial institutions and quick resolution of NPL consumed large amounts of public funds; yet, they were essential for fast restoration of financial stability and rapid recovery from the crisis in South Korea. However, it seems quick purchase of NPL from troubled financial institutions are more important than the quick disposal of NPL. In South Korea, the IMF requested disposal of at least 50% of NPL that KAMCO acquired through public funds within 3 years. The purpose of this restriction was understandable. IMF worried that KAMCO could help bail-outs of troubled financial institutions and wanted to secure repayment of its policy loans. To observe the restriction, however, KAMCO had to focus more on the expeditious disposal of NPL rather than maximizing the recovery ratio. As a result, there have been heated controversies over low selling prices of foreign capital since the crisis.

Second, it is important to develop domestic NPL markets prior to the crisis. There have been many critiques that the NPL resolution process in South Korea was excessively dominated by foreign capital. If we look at the winning bidders of KAMCO's activity such as auctions, establishment of joint asset management corporation, CRC, and asset backed securities (ABS) issuance, they are overwhelmingly dominated by larger foreign players. Reliance on large foreign players was inevitable in South Korea since the total amount of NPL was too large to be resolved by South Korean capital only. Undeniably, capital injection from foreign players contributed significantly to fast recovery from the crisis. In retrospect, however, foreign restructuring vehicles have tended to seek out quick capital gains through the disposal of NPL, instead of trying to rejuvenate ailing companies through restructuring.

One of the main reasons for low domestic participation is also the lack of "track record" and "financial knowledge" of domestic financial institutions in the NPL field, rather than the lack of supply of risky capital itself. To provide opportunities at least for domestic capitals to compete with foreign players, policy effort has to be given in building domestic NPL markets so that domestic players can accumulate track records and financial knowledge in advance.

Third, standardizing NPL information and legal systems was helpful for the efficient resolution of NPL. Immediately after the crisis, KAMCO did not harmonize record keeping and IT standards in handling NPL from many financial institutions. Each institution had its own IT standard and KAMCO had to manually reclassify all NPL from scratch to determine purchase prices and resolution methods. It significantly delayed the NPL purchase process and KAMCO was heavily criticized for not moving fast enough when public funds were ready to be deployed. Only recently, KAMCO developed its own NPL management system, and the South Korean experience shows the importance of standardizing the NPL information system prior to the crisis across financial institutions.

In addition, before the crisis, there was no legal system prepared for efficient NPL disposition such as the *ABS Law*, *Consolidated Bankruptcy Act*, and *Corporate Restructuring Promotion Act*, and so on. Most importantly, before the establishment of the Public Fund Oversight Committee, there was no independent governing body with a responsibility for execution and collection of public funds. In retrospect, establishing legal systems and a central supervisory committee for monitoring and decision-making of the use of public funds were major steps in efficient disposition of NPL.

Fourth, the restructuring vehicles introduced immediately after the onset of the financial crisis have largely focused on addressing the problems of distressed or non-viable firms. But in the financial and corporate restructuring progress, there is increasing recognition of the need for *ex ante* restructuring, well before a firm becomes non-viable. To make a corporation more competitive, the restructuring markets need to give greater consideration to mergers and acquisition with healthy firms. Furthermore, the increasing difficulties of injecting public funds indicate that policy should be geared toward encouraging private capital to participate in restructuring markets. On this purpose, the South Korean government recently approved a bill that allows the establishment of private equity funds.

3.3 *Chaebol* reforms

Large conglomerates (*chaebols*) had a dominating impact on the South Korean economy. In 1995, for instance, the valued added of the largest 30 groups (excluding the value added created by their financial affiliates) accounted for 16% of GNP and for 41% of value added in the manufacturing sector (Borensztein & Lee, 2005).

Chaebol is a conglomerate of many companies in diversified industries. *Chaebol* firms are governed by a parent company, which in turn is owned by one family. Thus, while the direct ownership of the controlling family in *chaebol* firms is typically very low, the controlling family effectively controls the entire *chaebol* group. Such weak corporate governance of *chaebol* firms is believed to have caused agency problems and promoted the so-called "empire-building" tendency in South Korea before the crisis.[7] At the same time, financial institutions believed that the government would protect the "too-big-to-fail" *chaebol* from bankruptcies, and financed many risky or unprofitable investments. Highly leveraged corporate firms were more vulnerable during financial crisis. *Chaebol*-affiliated firms had a higher debt–equity ratio prior to the crisis than non-*chaebol* firms. The median of the debt–equity ratio of *chaebol* firms was almost 400% in 1997.

While recognizing that over-diversification of business activities and duplicate investment in key sectors incurred the low profitability and high leverage of large conglomerates, the government urged the top five *chaebols* to focus on core businesses and exit non-viable businesses. In September 1998, the government and the top five *chaebol* leaders announced a framework for mergers and business swaps – referred to as "big deals." The "big deals" mergers were intended to help the economy by resolving two major problems in the corporate sectors (i.e. excess capacity and over-leveraging). However, the top *chaebols* agreed on the deals only reluctantly, and the swaps have not been particularly successful. The deals seem to be very hastily driven by government initiative without sufficient consideration of commercial factors.

There have also been various regulatory changes aimed at improvement in management transparency and corporate governance structure. They include the phased reduction of corporate leverage, elimination of cross-guarantees, consolidation of *chaebol* accounts, and improvement of the governance system. One of the most important and visible changes that occurred during the post-crisis period was the cut in the debt–equity ratio. After the crisis broke out, the South Korean government introduced a maximum debt–equity ratio of 200% for all firms, which was to be met by the end of 1999. Consequently, the debt–equity ratio of *chaebol* firms lowered substantially. Nevertheless, some argue that the reduction in the debt–equity ratio does not represent genuine improvement in capital structure because it was achieved mainly through increasing equity rather than reducing debt (see Haggard *et al*., 2003).

In addition, the new government regulations posed a credible threat to *chaebols* and made them decrease investment expenditures perhaps too hastily. In particular, *chaebol*-affiliated firms with a higher debt–equity ratio were forced to reduce investment more aggressively (Hong *et al*., 2006).

During the crisis and subsequent recovery process, South Korea has accomplished a great deal in alleviating the structural weaknesses of the corporate sector. There has been considerable progress in corporate debt and operational restructuring. It appears that in the post-crisis period, there is no more significant difference in terms of investment ratios between *chaebols* and non-*chaebols*. This indicates that over-investment by *chaebols* during the pre-crisis period, if existed, disappeared after the crisis. It is not clear, however, whether structural reforms of *chaebol* groups, particularly those with relatively poor governance structure, were fully successful. Although over the post-crisis period the volume of investment has declined substantially in *chaebol* groups, investment allocation may not necessarily become more inefficient.

Lessons

First, it is clear that *chaebol* restructuring was reasonably well executed in South Korea. No *chaebol* is "too-big-to-fail" anymore in South Korea. The successful improvement in management transparency and corporate governance structure must help to increase long-run profitability of *chaebols* and make the South Korean economy more resilient to external shocks. However, *chaebol* reforms should be intended to reinforce the market mechanism in the economy. Some government reform measures after the onset of the crisis were too hastily introduced without sufficient consideration of commercial factors, thereby resulting in unfavorable side-effects such as the undue decline in investment.

Second, the improvement in corporate governance and shareholder capitalism made the management of *chaebols* more transparent and is believed to have contributed to alleviate "Korean discount" in the South Korean stock market. In the last 20 years, the average rate of return from equity investment has been lower than that of corporate and government bonds even though its volatility was higher. In other words, risk premium in the Korean financial market had been negative. Lack of transparency in corporate governance and tunneling of profits from listed to non-listed companies were blamed as one of the reasons for this anomaly. However, the situation has changed significantly after the crisis. Owners of *chaebols* became sensitive in defending ownership from merger and acquisition threats and started to pay more attention to dividend payments and short-run changes in stock prices. These new movements contributed to the rapid growth of stock prices and the spread of shareholder capitalism after the crisis. However, on the other side of the coin, they are also making *chaebols* less enthusiastic about long-term investment and job creation. Until the South Korean business culture properly adapts to shareholder capitalism, the discrepancy between financial and real sector performances is expected to grow.

4. Conclusion

The quick turnaround of the South Korean economy was no less surprising than its sudden collapse after the financial crisis in 1997. The speedy recovery was supported by the fast restoration of financial stability due to early closure of non-viable financial institutions and quick resolution of NPL. The swift macroeconomic adjustment polices as well as the continuous structural reforms also helped strengthen the recovery process. Corporate and government bond markets also played an important role in expediting the macroeconomic adjustment process.

This paper analyzes these recovery processes of the South Korean economy from the 1997 financial crisis and summarizes some lessons from it. In particular, we emphasize that the fast recovery from the crisis was not without damage; it generated many unwelcome side-effects and new challenges to the South Korean economy. The aggressive fiscal expansion through government guaranteed bonds and public credit guarantee programs increased sovereign liabilities greatly, thereby deteriorating the transparency of official fiscal stance. The increase in perceived risk by corporate, financial and household sectors as well as the introduction of shareholder capitalism, which is new to the South Korean business culture, contributed to the slowdown of corporate investment, thereby reducing long-run growth perspective.

Despite the rebound of growth after the crisis, the average growth rates for the post-crisis period are much lower than the high growth rates of between 7% and 8% achieved in the decades before the crisis. From 2001 to 2005, the GDP growth averaged 4.5%. One of the main reasons for the drop of the GDP growth rates is the lower investment rates. Although real GDP growth rates in South Korea have rebounded quickly since 1999, the economy has not recovered to pre-crisis investment ratios. The investment ratio in 2004 remained at 30.2%, which is far lower than 36% level in the pre-crisis period. The permanent depression of investment ratios is also evident in the other crisis-hit Asian economies.

The lower investment rates might be attributed to the adjustment of excessive investment prior to the crisis. The existing excess capacity prior to the crisis must have held back new investment. Because the "catching-up" process is expected to slow down over time, the lower investment rates might indicate that the South Korean economy has adjusted to a new steady-state growth path (Lee, 2005). However, the lingering depression of corporate investment rates after the crisis appears to indicate that the investment rates have dropped below the optimal level.[8] How to revive long term investment as well as growth rates is an open question in South Korea, despite fast recovery from the crisis.

Notes

1 The amount of net private capital outflows in the last three months of 1997 was $US26.1 billion, which was equivalent to approximately 6% of the annual GDP in 1997. One reason that such a large amount of capital was able to leave so quickly was that a substantial portion had short-term maturity.

2 See Radelet and Sachs (1998) and Blustein (2001) for the detailed description.

3 This paper does not focus on what lessons can be learned from examining the sources of the South Korean crisis. There has been a substantial volume of literature that analyzes the pre- and post-crisis development of the South Korean economy. See, for example, the papers in the edited books by Coe and Kim (2002) and Chung and Eichengreen (2004).

4 Lee *et al.* (2006) empirically analyze the effectiveness of fiscal policy in South Korea after the financial crisis.

5 See Borensztein and Lee (2005) for further discussion.
6 Kang *et al*. (2005) discuss details of the development of South Korean government bond market.
7 Hong *et al*. (2006) show empirical evidence that before the 1997 crisis, *chaebol* firms, particularly ones with weak corporate governance structure, tended to invest relatively more that stand-alones.
8 The IMF (2005) estimates that the current levels of investment in the majority of East Asian economies are below their long-run steady-state levels.

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