Coping with the crisis:
An analysis of the Korean economy in the
1997 Asian Crisis
Introduction

Korea experienced a financial crisis in the late 1997 and narrowly avoided the coldest winter ever in its history of economic growth during the last three and a half decades. Today, merely a few years after the financial crunch, Korea is back on the track of rapid growth, low inflation, and a sustained improvement in the standard of living. This paper will look back at how Korea coped with the Asian financial crisis. It will first review the development and analyze the causes leading to the crisis. The paper will then propose suitable policies to deal with the crisis in hindsight as well as evaluate the IMF recommended policy initiatives taken right after the crisis. Finally, limitations are discussed for the policy initiatives we recommended.

Development Of The Crisis

Downturn of business cycle and widening of current account deficits

Hints of a financial crisis started to appear when the economy began to slow down in 1996. From about the nine percent level in 1994~95, the real GDP growth rate slipped to 7.1 percent in 1996, before falling to 6.2 percent in the first half of 1997 (Table 1). Although these figures might seem to indicate a soft-landing, the truth was otherwise. The growth from 1996 onwards resulted from an increase in inventories as firms failed to adjust their production in line with the reduced demand. The consequence was a profit squeeze for the corporate sector; the ROE of manufacturing firms in 1996 fell dramatically to 2.0 percent as against 11.0 percent the year before, and deteriorated further to register -4.2 percent in 1997 (Table 2).

In the meantime, despite the slowdown in the economy, the current account deficit widened from US$ 8.5 billion in 1995 to US$ 23 billion in 1996. For the first half of 1997 alone, it stood at US$ 9.9 billion. The ratio of the current account deficit to GDP rose to 4.7 percent in 1996 from below 2 percent in the two preceding years (Table 1). This widening current account deficit was brought about by the deceleration of export growth due to the fall in the demand and the prices of Korea’s major export items, especially memory chips1, coupled with a rapid expansion of imports, most notably of capital goods and consumer goods. The deficit was financed mainly by inflows of foreign capital, which caused a sharp increase in external debt.

Depletion of international reserves and application to the IMF

In November 1997, the roll-over ratio of short-term external borrowings by domestic financial institutions fell rapidly2, and it became almost impossible to find new sources of foreign loans. Demand for foreign currency to repay foreign debts increased markedly in the Seoul foreign exchange market but there were few sellers of foreign currency. Although the daily band of exchange

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1 Memory chips account for more than 20% of Korea’s exports.
2 The roll-over ratio of the seven largest commercial banks fell to 58.8 percent in November 1997 from 86.5 percent in October.
fluctuations was widened from ±2.25% to ±10% on November 16\(^3\), the foreign exchange market was paralyzed repeatedly because of the still narrow trading band. The Korean won fell to its daily floor against the US dollar as soon as the market opened, and trading had to be suspended.

Consequently, the Bank of Korea had to supply foreign exchange to companies and financial institutions that faced default on their foreign currency obligations within the limits of real demand. However, Korea soon found itself on the brink of national insolvency as the country’s usable foreign exchange reserves became severely depleted (Table 3). On November 21, the Korean government turned to the IMF to request bailout loans. On December 3, 1997, Korea and the IMF signed an agreement for a financial aid package totaling US$ 58.3 billion subject to a broad range of conditionalities including macroeconomic stabilization such as monetary contractions and structural reform such as opening up the banking system to foreign competition.

**Causes of the crisis**

**Structural flaws concealed behind growth**

For years, rapid growth in the Korean export-oriented economy prompted foreign investors to turn a blind eye to the market’s structural flaws such as the lack of transparency in the government, the inadequate supervision of the banking system and the absence of independence of the central bank. Large amounts of capital flowed into the economy as Korea’s capital market opened up in the past few decades and foreign investors sought to diversify their portfolio. In the mid-1990s, as demand for Korea’s exports waned and imports of consumption goods rose, Korea’s current account deteriorated. Nonetheless, it did not unnerve the investors as they financed the widening current account deficit with more capital inflows. However, in the fall of 1997, the burst of the real estate bubble in Thailand led to the speculative attacks on its currency resulting in the Thai Baht going into a spiral descent in value. Subsequently, by contagion, foreign investors turned their attention to the other emerging markets in the region, including Korea. All of a sudden, foreign investors began to appraise the Korean economy with a critical eye, and acknowledged the structural flaws in the market and its recent unsatisfactory macroeconomic statistics.

**Plunge of the Korean Won and capital flight**

When two of Korea’s conglomerates (specifically, KIA Motor and Hanbo Steel) declared bankruptcy in 1997, confidence in the Korea economy faltered and foreign investors began withdrawing their capital. As discussed above, rollovers of short-term loans are denied and new sources of loans dried up. As companies and financial institutions scrambled to convert Won holdings to foreign currency to repay the loans, the Korean Won depreciated. To make matters worse, the foreign exchange market in Korea had in place a system restricting the daily exchange rate fluctuation to a limited range. Despite the good intention of minimizing exchange rate fluctuations, the restrictive

\(^3\) More will be discussed about this band of exchange fluctuations in the next section.
fluctuation band produced the opposite effect: as the market repeatedly shut down shortly after it opened when the Korean Won plummeted beyond the permitted range, panic spread and expectation of further depreciation heightened (Figure 1). In the frenzy to sell the Korean Won, massive scale of capital flight ensued.

**Trouble in the real sector**

Although ceteris paribus, capital flight reduces the money supply, causes the interest rate to skyrocket and the home currency to appreciate, the Korean Won continued to depreciate amid the economic crisis as panic in the financial market depreciates the currency further through increases in the expectation of depreciation (Figure 2). The hike in the interest rate (Figure 3) and the depreciation of the Korean Won made loans, particularly those denominated in foreign currency, extremely costly. At the same time, inflation rate crept up as imports of raw materials such as oil raised the cost of production. On the other hand, worldwide demand for Korea’s exports remained depressed and exports failed to expand substantially despite the nominal depreciation of the Korean Won\(^4\). Consequently, many companies in Korea went under and the country’s output plunged while unemployment rose (Table 4).

Meanwhile, desperate for foreign currency to service their loans, companies and financial institutions still standing turned to the government for help. As political and economical pressures mounted, the central bank stepped in to rescue companies and financial institutions from defaulting on their foreign currency loans. However, as the bank provided aids to the industries indiscriminately, incompetent companies and financial institutions found themselves an extension to the inevitable fate of bankruptcy. This in turn prolonged the financial crunch as the economy struggled along carrying both competent as well as inefficient companies on its back. On the other hand, the central bank found its foreign reserve rapidly depleted and was soon on the brink of national insolvency. Subsequently, it had to turn to the IMF for bailouts.

**Problems Of The IMF Policy And Our Policy Recommendation**

As shown above, an expansion in the current account deficit since 1996 caused by the deceleration of exports created a trend toward the depreciation of the Korean won; expectations about future depreciation spread around the market. Under the circumstances, an increase in unpaid foreign debt accelerated won depreciation. Finally in late 1997, the Korean financial system found itself paralyzed by the Asian financial crisis. The effect of these incidents can be explained by using the AA-DD diagram, which shows that an inward shift in the DD curve through the decreasing current account caused the exchange rate to depreciate (Figure 4). In addition, the graph states that the expectation of a won depreciation shifted the AA curve upward, resulting in additional depreciation of the Korean Won.

\(^4\) Detailed analysis on the real exchange rate is presented in the section on policy recommendation.
To stabilize the exchange rate and restore the credibility toward its financial system, the Korean government, advised by the IMF and other international institutions, implemented a tight monetary policy, sharply contracting its money supply. As a consequence, the foreign exchange and financial markets pulled through the crisis as the exchange rate and the market interest rate gradually stabilized. At the same time, however, the downward shift in the AA curve caused by the monetary contraction to achieve the pre-crisis level of exchange rate brought serious stagnation to the real sector, extremely reducing a growth in GDP and raising the unemployment rate (Figure 5). Therefore, we cannot justify the IMF policy since the stability in the financial sector was achieved at the sacrifice of the real economy.

Reviewing the situation around 1997, we believe that the Korean government should have implemented a combination of monetary and fiscal policy (Figure 6). As Figure 6 shows, in order to achieve the initial point, $E_0$, the DD curve should have shifted to the right through an expansion in the domestic demand (through a fiscal expansion) with the simultaneous downward shift in the AA curve that the IMF policy recommended. Concerned about the potential rise in fiscal deficit, the IMF seems to have neglected the fiscal policy, an importance policy tool. Instead, it advised the Korean government to decreasing its fiscal expenditure.

If the depreciation of Korean won had weakened the real exchange rate, then its economy might need no fiscal expansion, because the depreciation of the real exchange rate would have stimulated exports and reduced imports, shifting back the DD curve to the initial place. The story was not true, however; in fact, due to a high inflation rates around 9%, the real exchange rate increased far less than the nominal exchange rate, preventing exports from increasing enough to recover the initial output level. Accordingly, fiscal policy would have been effective to stimulate the economy. On the other hand, it is also true that the government should pay attention to the level of fiscal deficit, which might trigger more serious crisis, i.e., the default of the government, such as those in Mexico and Brazil in the 1980s. However, data in Korea during this period state that the government and the IMF did not need to care about the risk; the government had no serious fiscal deficit (Table 5). Therefore, the IMF that recommended a reduction in the fiscal expenditure seems to have been fettered by the bad memory of past crisis and missed a key policy tool in dealing with Korea’s financial crisis.

Based on the analysis above, the Korean government should have increased its expenditure and stimulated the economy to prevent stagnation. Although, about a half year later, the government changed its policy and implemented an aggressive fiscal expansion, it was too late.

Limitations Of The Recommendation

It should not be overlooked that our recommended policy above is not perfect. The recommendations are based on the assumption that the economic crisis in Korea chiefly originated from macroeconomic deterioration. Nonetheless, data in the Korean economy show that just before the crisis, the key economic indicators of Korea had been stable though deteriorating gradually, and in
them could not be found any particular symptom of the abrupt downturn of economy. The sudden turn for the worse appeared to be caused by contagion from the economic crisis in the Southeast Asia, and the rapid expansion of the current account deficit, which resulted from the decrease of demand for the memory chip, the main export of Korea and the increase of imports. But, fundamentally, the crisis in Korea is more likely to arise from microeconomic insolvency, the domestic market’s structural flaws. The bankruptcy of the several conglomerates led to the great instability in money market and made foreign investors distrust the Korean economy, which is the trigger of the outflow of foreign currency and the rapid depreciation of the domestic currency against the foreign currency. Thus, the recommended policy mainly focusing on the macroeconomic factors without considering the microeconomic features of Korea cannot be a perfect solution to the crisis in Korea.

On the other hand, although fiscal expansion may be an important policy to tackle the external shock in Korea’s goods market, it generally takes much more time than monetary policy to influence the economy. Even if Korea implements the monetary contraction and fiscal expansion simultaneously we recommended, there is no counterplan to insulate the staggering economy from high interest rate, rising unemployment, and negative GDP growth caused by the monetary policy before fiscal policy can improve the economy. It may be one of the reasons why the IMF requested the Korean government to apply only monetary policy, with relatively quick impact on the economy, rather than fiscal policy, though we believe that such concerns fail to justify deferring fiscal expansion to half a year later. Moreover, we should not neglect the possible negative effects that can happen when applying monetary policy and fiscal policy simultaneously. For an instance, even if we assume knowledge of the magnitude of the multiplier effect of a fiscal expansion, the effect may be amplified when implemented simultaneously with a monetary policy. Consequently, government may over-expand its expenditures, resulting in an unsustainable high growth rate in the economy.

Final Thoughts

As the data suggest, Korea has a relatively healthy economy, despite a few structural flaws in the microeconomic aspect of the economy. While its macroeconomic data does not warrant a severe financial crisis, the 1997 crisis may actually be beneficial to the economy in the long run if it induces Korea to reform its financial sector and restructure its economy, thus developing an efficient market less vulnerable in future financial crisis. At the same time, the Korean crisis might serve as a good reminder to international financial institution including the IMF that policy options different from those used in the previous crises such as those in Latin America in the 1980s might be more appropriate for countries in relatively healthy economic and fiscal conditions.

For an example, the central bank of Korea operates independently from the government after the 1997 financial crisis.
Appendix

**<Table 1>** Key Economic Indicators before the crisis
(per cent, US$ billion)

<table>
<thead>
<tr>
<th></th>
<th>1980-85</th>
<th>86-91</th>
<th>92</th>
<th>93</th>
<th>94</th>
<th>95</th>
<th>96</th>
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<tbody>
<tr>
<td>GDP growth rate</td>
<td>6.3</td>
<td>9.9</td>
<td>5.1</td>
<td>5.8</td>
<td>8.6</td>
<td>8.9</td>
<td>7.1</td>
<td>5.5</td>
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<tr>
<td>Consumer price</td>
<td>10.9</td>
<td>6.1</td>
<td>6.3</td>
<td>4.8</td>
<td>6.2</td>
<td>4.5</td>
<td>4.9</td>
<td>4.5</td>
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<tr>
<td>Current account</td>
<td>-2.7</td>
<td>4.1</td>
<td>-3.9</td>
<td>1.0</td>
<td>-3.9</td>
<td>-8.5</td>
<td>-23.0</td>
<td>-8.6</td>
</tr>
<tr>
<td>Current account/GDP</td>
<td>-3.8</td>
<td>3.0</td>
<td>-1.3</td>
<td>0.3</td>
<td>-1.0</td>
<td>-1.9</td>
<td>-4.7</td>
<td>-1.9</td>
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<tr>
<td>External debt 1)</td>
<td>46.8</td>
<td>39.1</td>
<td>42.8</td>
<td>43.9</td>
<td>56.9</td>
<td>78.4</td>
<td>157.5</td>
<td>154.4</td>
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Note: 1) From 1996, figures are external liabilities.

**<Table 2>** Net Income to Stockholders’ Equity in Manufacturing
(percent)

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<tr>
<th></th>
<th>1990</th>
<th>91</th>
<th>92</th>
<th>93</th>
<th>94</th>
<th>95</th>
<th>96</th>
<th>97</th>
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<tr>
<td></td>
<td>5.53</td>
<td>5.53</td>
<td>4.33</td>
<td>4.22</td>
<td>7.56</td>
<td>11.03</td>
<td>2.02</td>
<td>-4.21</td>
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**<Table 3>** Foreign Exchange Reserves 1)
(US$ billion)

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<tr>
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<th></th>
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<tbody>
<tr>
<td>Foreign exchanger reserves</td>
<td>33.2</td>
<td>31.0</td>
<td>30.0</td>
<td>29.2</td>
<td>29.8</td>
<td>31.9</td>
<td>33.3</td>
<td>33.7</td>
<td>31.1</td>
<td>30.4</td>
<td>30.5</td>
<td>24.4</td>
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<tr>
<td>BOK’s deposits at overseas branches of domestic banks</td>
<td>3.8</td>
<td>3.8</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>16.9</td>
</tr>
<tr>
<td>Usable foreign exchange reserves</td>
<td>29.4</td>
<td>27.2</td>
<td>21.8</td>
<td>21.1</td>
<td>21.8</td>
<td>23.9</td>
<td>25.3</td>
<td>25.7</td>
<td>23.1</td>
<td>22.4</td>
<td>22.3</td>
<td>7.3</td>
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Note: 1) End of period.

**<Table 4>** Economic Trends during the Crisis
(percent)

<table>
<thead>
<tr>
<th></th>
<th>97.1Q</th>
<th>2Q</th>
<th>3Q</th>
<th>4Q</th>
<th>Jan.98</th>
<th>Feb.</th>
<th>Mar.</th>
<th>Apr.</th>
<th>May</th>
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<tr>
<td>Overnight call rate 1)</td>
<td>11.9</td>
<td>12.2</td>
<td>12.3</td>
<td>16.3</td>
<td>25.3</td>
<td>23.4</td>
<td>22.5</td>
<td>21.3</td>
<td>18.6</td>
</tr>
<tr>
<td>Industrial production 2)</td>
<td>5.4</td>
<td>7.7</td>
<td>8.8</td>
<td>5.5</td>
<td>-10.8</td>
<td>-1.7</td>
<td>-10.1</td>
<td>-10.8</td>
<td>..</td>
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<tr>
<td>Retail sales index 2)</td>
<td>6.4</td>
<td>6.5</td>
<td>5.6</td>
<td>0.3</td>
<td>-8.8</td>
<td>-10.8</td>
<td>-10.0</td>
<td>-12.7</td>
<td>..</td>
</tr>
<tr>
<td>Unemployment rate</td>
<td>3.1</td>
<td>2.5</td>
<td>2.2</td>
<td>2.6</td>
<td>4.5</td>
<td>5.9</td>
<td>6.5</td>
<td>6.7</td>
<td>..</td>
</tr>
<tr>
<td>Number of unemployed (thousand person 1)</td>
<td>646</td>
<td>550</td>
<td>470</td>
<td>561</td>
<td>934</td>
<td>1,235</td>
<td>1,378</td>
<td>1,434</td>
<td>..</td>
</tr>
<tr>
<td>Consumer prices 1)</td>
<td>4.7</td>
<td>4.0</td>
<td>4.0</td>
<td>5.1</td>
<td>8.3</td>
<td>9.5</td>
<td>9.0</td>
<td>8.8</td>
<td>8.2</td>
</tr>
<tr>
<td>Current account balance (billion dollar)</td>
<td>-7.3</td>
<td>-2.6</td>
<td>-2.0</td>
<td>3.3</td>
<td>3.1</td>
<td>3.9</td>
<td>3.7</td>
<td>3.8</td>
<td>..</td>
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Notes: 1) Period average.
2) Compared to the same period of the previous year.
<Table 5> Consolidated central government (percent of GDP)

<table>
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<tbody>
<tr>
<td>Revenues</td>
<td>18.2</td>
<td>19.3</td>
<td>20.2</td>
<td>20.7</td>
<td>21.9</td>
<td>22.2</td>
</tr>
<tr>
<td>Expenditure</td>
<td>18.9</td>
<td>19.0</td>
<td>19.7</td>
<td>20.3</td>
<td>21.7</td>
<td>22.2</td>
</tr>
<tr>
<td>Balance</td>
<td>-0.7</td>
<td>0.3</td>
<td>0.5</td>
<td>0.4</td>
<td>0.3</td>
<td>0.0</td>
</tr>
</tbody>
</table>

<Figure 1> Won/US$ Exchange Rate Movements (Closing value)

1962.0 (Dec. 23)
1810.0 (Jan. 9)
1709.0 (Feb. 19)
1473.0 (April 6)
1395.0 (Dec. 29)

<Figure 2> Capital flight

$S$, $i_0$, $i_1$, $i^* + [(S^e - S)/S]$, $i^* + [(S^e - S)/S]$, $M^d$, $M^*$, $M^e_0$, $M^e_1$.
<Figure 3> Market Interest Rate Movements

Yields on commercial paper (91 days)

Yields on corporate bond (3 years)

Call market rate (overnight)

<Figure 4> The effects of the crisis

S

DD₁

DD₀

S₁

E₁

CA ↓

S₀

E₀

AA₁

AA₀

0

Y

8
<Figure 5> The IMF policy

<Figure 6>: An optimal policy: Combination
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