

**Macroeconomic adjustments and  
the real economy in Korea and Malaysia  
since 1997**

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**MACROECONOMIC ADJUSTMENTS AND THE REAL ECONOMY  
IN KOREA AND MALAYSIA SINCE 1997**

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## Abstract

*This paper reviews the post-crisis macroeconomic adjustment and the impact of policy responses on the real economy in the Republic of Korea and Malaysia. While both countries suffered under the Asian financial crisis, and initially both applied restrictive policies, subsequently their policy responses were quite different in several respects. Korea sought liquidity assistance from the IMF, which obliged it to implement a structural adjustment program, while Malaysia was able to recover policy independence in the process of crisis resolution. Korea and Malaysia adopted policies diametrically contrasting policies on capital flows in response to the crisis. Korea drastically liberalized its capital account (however, keeping some restrictions on capital outflows by residents) with a floating exchange rate regime (although with a huge accumulation of reserves during recovery), while Malaysia imposed stringent capital controls and returned to a fixed (but devalued) exchange rate. However, both countries, to face recession in 1998, made a swift change toward an expansionary macroeconomic policy stance, based on a vigorous expansive fiscal policy. This contributed to an economic recovery notably faster than in other EEs. The positive role of counter-cyclical macroeconomic policies in post-crisis recovery raises the question of whether the initially tight monetary and fiscal policy was kept for too long and, therefore, deepened the crisis in Korea and Malaysia. The experience of these two economies, and their management of the aftermath of the crisis appears to be extremely relevant for LACs.*

## INTRODUCTION

The financial crisis that broke out in Thailand in July 1997 and then spread to other parts of East Asia brought about a deep recession, causing a sharp decline in living standards, rising unemployment, industrial breakdown, and social dislocation in the region (Park and Wang, 2002). In 1997-98, five East Asian countries –Indonesia, Korea, Malaysia, the Philippines, and Thailand– experienced sharp currency and banking crises. Although a few other East Asian countries were affected to a limited extent, the Asian financial crisis was region-wide.<sup>1</sup>

Korea and Malaysia have managed impressive recoveries at remarkable speed, as compared to other emerging economies. These economies started to bottom out in the second half of 1998 and then showed a remarkable turnaround in 1999. While the real GDP growth rates of Korea and Malaysia were –6.7% and –7.4% in 1998, they rebounded to 10.7% and 6.1%, respectively, in 1999.

This paper aims to review the post-crisis macroeconomic adjustment and the impact of policy responses on the real economy in Korea and Malaysia. While both countries suffered under the Asian financial crisis, their policy responses were quite different. Korea sought liquidity assistance from the IMF, which obliged it to comply with the IMF's structural adjustment program, while Malaysia was able to maintain policy independence in the process of crisis resolution. Korea and Malaysia adopted policies at opposite extremes in terms of capital market opening in response to the crisis. For example, Korea drastically liberalized its capital account with a free floating exchange rate regime, while Malaysia implemented more stringent capital controls with a return to a fixed exchange rate regime. Despite the different policy stances in terms of capital account and exchange rate regime, the swift change toward an expansionary macroeconomic policy stance helped the two economies recover quickly. The positive role of counter-cyclical macroeconomic policies in the post-crisis recovery raises the question of whether the initial tightening of monetary and fiscal policy was kept high for too long and as a consequence deepened the crisis in both Korea and Malaysia.<sup>2</sup>

This case study highlights the dynamics of the macroeconomic adjustments that came with responses such as monetary, fiscal, and exchange rate policies and the effects of those policies on variables such as capital formation and output, of the real economy. This comparative analysis will provide policy implications to the question of what policy responses will be most effective in dealing with future crises.

Section 1 focuses on post-crisis macroeconomic adjustments in Korea and Malaysia. Section 2 reviews policy responses for crisis resolution in Korea and Malaysia. Section 3

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<sup>1</sup> The Singapore and the New Taiwan dollar experienced a relatively small depreciation. During the crisis, no significant devaluation took place in China, which remained relatively insulated from world financial markets.

<sup>2</sup> As an initial response to the crisis, Malaysia followed the orthodox IMF policy prescriptions without the IMF involvement –namely, tightened fiscal and monetary policies, introduced measures to redress the balance of payment weakness, and floated the exchange rate.

assesses the adjustment process in Korea and Malaysia and compares both cases. Section 4 concludes with some remarks on policy implications.

## 1. Post-crisis macroeconomic adjustments in Korea and Malaysia

### a) Korea

#### i. *What caused the crisis?*

The crisis in Korea was certainly unexpected, perhaps more so than in most other crisis-hit East Asian countries. As late as June 1997, the World Economic Forum had classified Korea as the fifth most secure place to invest in the world (Agosin, 2001). At the onset of the financial crisis, the macroeconomic fundamentals of Korea appeared to be sound. However, the Korean miracle was suddenly unraveled. Actually, Korea was vulnerable to a financial crisis because of its large exposure to short-term external liabilities (Radelet and Sachs, 1998; Rodrik and Velasco, 2000).

Korea's external debt increased dramatically over the three-year period of 1994-96. The major portion of the increase in external debt involved the financial sector. For instance, foreign currency liabilities of Korean Banks nearly tripled in that period, to US\$ 104 billion. Two sources contributed to the increase in the financial sector's external debt: one was debt securities that were issued abroad, while the other was external borrowing by the domestic financial institutions. Out of the total increase in external debt during the three years, the financial sector accounts for about 70%. The remaining 30% reflects growth in the external debt of the corporate sector.

In fact, short-term foreign currency liabilities of the domestic financial institutions were much larger than reflected in capital inflows. As part of the liberalization measures (which cannot be captured explicitly in terms of capital account liberalization), banks were allowed to open and expand operations of overseas branches. By exploiting the foreign capital channeled through overseas branches, banks actively engaged in foreign currency denominated business. About half of the foreign currency operations of the banking sector was handled by overseas branches and, therefore, their transactions were not reflected in domestic monetary indicators (see table 1). Moreover, the management of foreign currency liquidity risks at the individual bank level was not adequate enough to forestall the liquidity crisis, either.

**Table 1**  
**Short-term foreign currency liabilities of the financial sector in Korea**  
(US\$, billion)

|   | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 |
|---|------|------|------|------|------|------|
| Short-term external debt                    | 11.3 | 11.4 | 19.4 | 29.7 | 39.2 | 27.4 |
| Short-term liabilities of overseas branches | 18.5 | 21.1 | 28.0 | 33.4 | 39.0 | 20.3 |
| Total                                       | 29.8 | 32.5 | 47.4 | 63.1 | 78.2 | 47.7 |
| Foreign reserves                            | 17.1 | 20.2 | 25.6 | 32.7 | 33.2 | 20.4 |

Source: Bank of Korea.



A huge part of excessive short-term external liabilities can be explained by asymmetric regulations on short-term borrowing vis-à-vis long-term borrowing. The government boosted incentives for short-term debts by making it mandatory to provide detailed information and obtain permission from the regulatory authorities in the case of long-term borrowing, whereas short-term borrowing was regarded as trade related financing and therefore not strictly regulated under the Foreign Exchange Management Law. Thus, banks and firms had been operating on a long-term basis with short-term foreign borrowings, leading to a significant discrepancy in the maturity structure (Kim *et al.*, 2001).

Furthermore, the maturity mismatch was more serious for merchant banks.<sup>3</sup> For example, the liquidity ratio in foreign currency for merchant banks was only three to six percent for all the period up to the financial crisis. Thirty merchant banks became heavily engaged in offshore operations by borrowing cheap short-term Japanese funds from Hong Kong to finance mostly long-term investment projects. With 80% short-term debts put into 70% long-term assets, the maturity mismatch blew up when Korea's credibility plummeted. Pressured to obtain foreign currency to repay their debts, merchant banks ultimately ended up buying foreign currency on the spot market with won-denominated call loans from commercial banks. Furthermore, those merchant banks were not properly supervised. Neither unified accounting standards nor standards for classifying non-performing loans existed, and supervision had been perfunctory at best. This lax supervision allowed merchant banks to enjoy freedom without any discipline. When Korea embarked on the IMF structural adjustment program, merchant banks were the first to go through restructuring because their voluminous short-term external debts and imprudent investments were inconsistent with the customary practices of the world financial market.<sup>4</sup>

## *ii. Overall macroeconomic and sectoral performance*

The impact of the financial crisis on the real economy became apparent in the first quarter of 1998 as GDP contracted by 4.6% on a year-on-year basis. Throughout 1998, the deterioration of macroeconomic conditions far exceeded the expectations of both Korean policy makers and IMF economists. For example, the second IMF agreement forecast that real GDP would fall by 1% or less in 1998, but it actually shrank 6.7%.

Despite a relatively impressive growth rate for exports (13.3% in domestic currency value) in 1998,<sup>5</sup> private consumption, investment, and imports dramatically declined (see table 2). Non-tradable sectors, such as construction, were hit harder than the manufacturing sector, which is more trade-oriented. As output contracted, unemployment quickly increased from 2.1% in October 1997 to 8.7% in February 1999. The real wages of workers in the manufacturing sector fell by 11% in 1998.

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<sup>3</sup> Most merchant banks in Korea started as investment banks after the Decree of August 3, 1972, to provide legitimate channels to utilize black market funds. They were modeled after the British merchant banks but were also permitted to engage in the financing of medium- and long-term equipment investment. Later in 1994 and 1996, the 24 existing investment banks were allowed to become merchant banks, joining the six existing ones. Several merchant banks, owned by chaebols, served as important vehicles for raising the funds required for the chaebols' voluminous investments; these affiliate banks failed to conduct adequate loan assessments of their parent companies.

<sup>4</sup> The Korean government suspended the operations of the 14 unhealthiest merchant banks in December 1997.

<sup>5</sup> In dollar terms, however, even exports recorded negative growth.

After a sharp contraction, the Korean economy started to bottom out in the first quarter of 1999. In 1999, real GDP growth recorded 10.7%, overshooting its pre-crisis average of 7%. Growth was led by buoyant private consumption, a rebound in equipment investment, and a slower pace of inventory de-stocking. Due to the strengthening of the economy, the unemployment rate sharply declined from the record level of 8.7% in February 1999 to 4.4% in November 1999, while inflation remained low, notwithstanding depreciation.

The sharp contraction and the rapid recovery of Korea's growth rate are broadly consistent with the V-shaped adjustment patterns observed in cross-country analyses. However, the magnitude of initial contraction and the speed of recovery in Korea are in sharp contrast with the stylized pattern. The margin between a 6.7% decline in 1998 and a 10.7% recovery of GDP in 1999 is far greater than predicted by the cross-country evidence. Malaysia also experienced a huge jump in GDP growth from a 7.4% decline in 1998 to a 6.1% recovery in 1999.

One fundamental question relates to whether the output reduction after the Asian crisis was a temporary deviation downward from the trend level, which was eventually reversed as output reverted to trend, or alternatively, whether the level of output tended to shift down permanently. Cerra and Saxena (2003) find that the recovery phase is predominantly characterized by a return to the normal growth rate of an expansion. Thus, the level of output is permanently lower than its initial trend path. A permanent loss is associated with a downward shift of potential output, whereas a temporary loss is associated with a deterioration of the output gap.

Important structural factors driving the speedy adjustment in Korea were flexibility and openness (Park, 2001). With a relatively large trade sector oriented towards exports, Korea was able to benefit from a substantial depreciation of the real exchange rate and fall in real wages. The labor market adjustments were less rigid than had been assumed. As a consequence, a more dramatic adjustment took place in the manufacturing sector. The manufacturing sector recorded a large decline of 7.4% in 1998, but quickly rebounded to record a growth of 21.0% in 1999. On the other hand, the construction sector, a typical non-tradable, suffered a continuous recession in 1999.

**Table 2**  
**Korea: Selected economic indicators, 1996-2002**

| Indicators/year  | 1996  | 1997  | 1998  | 1999  | 2000  | 2001  | 2002  |
|--|-------|-------|-------|-------|-------|-------|-------|
| <b>Growth of GDP (%)</b>                                     | 6.8   | 5.0   | -6.7  | 10.9  | 9.3   | 3.0   | 6.3   |
| <b>Growth by final demand category (%)</b>                   |       |       |       |       |       |       |       |
| Consumption  | 7.2   | 3.2   | -10.1 | 9.4   | 6.7   | 3.7   | 6.2   |
| Private  | 7.1   | 3.5   | -11.7 | 11.0  | 7.9   | 4.7   | 6.8   |
| Government   | 8.2   | 1.5   | -0.4  | 1.3   | 0.1   | 1.3   | 2.9   |
| Gross fixed capital formation                                | 7.3   | -2.2  | -21.2 | 3.7   | 11.4  | -1.8  | 4.8   |
| <b>Growth by sector (%)</b>                                  |       |       |       |       |       |       |       |
| Agriculture, forestry and fishing                            | 3.3   | 4.6   | -6.6  | 5.4   | 2.0   | 1.9   | -4.1  |
| Industry   | 7.0   | 5.8   | -6.1  | 11.0  | 9.8   | 3.8   | 6.7   |
| Mining and quarrying   | -0.1  | -0.9  | -24.0 | 5.3   | 2.5   | 0.5   | 3.9   |
| Manufacturing  | 6.8   | 6.6   | -7.4  | 21.0  | 15.9  | 2.1   | 6.3   |
| Construction   | 6.9   | 1.4   | -8.6  | -9.1  | -3.1  | 5.6   | 3.2   |
| Services   | 7.5   | 6.5   | -4.7  | 10.0  | 8.7   | 5.0   | 8.6   |
| Unemployment rate  | 2.0   | 2.6   | 6.8   | 6.3   | 4.1   | 3.7   | 3.1   |
| <b>Inflation rate (%)</b>                                    |       |       |       |       |       |       |       |
| Consumer price   | 4.9   | 4.4   | 7.5   | 0.8   | 2.3   | 4.1   | 2.8   |
| Producer price   | 3.2   | 3.9   | 12.2  | -2.1  | 2.0   | 1.9   | 1.6   |
| <b>Fiscal performance (central government) <sup>av</sup></b> |       |       |       |       |       |       |       |
| Government expenditure as % of GDP                           | 10.2  | 10.1  | 11.0  | 10.4  | 10.1  | 10.4  | 10.6  |
| Budget surplus(central government) as % of GDP               | 0.3   | -1.5  | -4.2  | -2.7  | 1.3   | 1.3   | 4.1   |
| Total public debt as % of GDP                                | 8.8   | 11.1  | 16.1  | 18.6  | 19.5  | 20.8  | -     |
| <b>Money and credit (end of period)</b>                      |       |       |       |       |       |       |       |
| M3 growth (%)  | 16.7  | 13.9  | 12.5  | 8.0   | 7.1   | 11.6  | 13.6  |
| Annual average bank lending rate (%)                         | 11.21 | 11.83 | 15.18 | 9.40  | 8.55  | 7.71  | 6.70  |
| Overnight rate   | 12.36 | 13.24 | 14.98 | 5.01  | 5.16  | 4.69  | 4.21  |
| Non-performing loans as % of total loans <sup>bv</sup>       | 4.1   | 6.0   | 7.4   | 8.3   | 6.6   | 2.9   | 2.3   |
| KOSPI index  | 833.4 | 654.5 | 406.1 | 806.8 | 734.2 | 572.8 | 757.0 |
| <b>External transactions</b>                                 |       |       |       |       |       |       |       |
| Merchandise exports (US\$, FOB billion)                      | 130.0 | 138.6 | 132.1 | 145.2 | 175.9 | 151.3 | 162.6 |
| Merchandise imports (US\$, FOB billion)                      | 144.9 | 141.8 | 90.5  | 116.8 | 159.1 | 137.8 | 148.4 |
| Current account balance (US\$, billion)                      | -23.0 | -8.2  | 40.4  | 24.5  | 12.2  | 8.2   | 6.1   |
| Current account balance as % of GDP                          | -4.4  | -1.7  | 12.7  | 6.0   | 2.7   | 1.9   | 1.3   |
| Capital account balance (US\$, billion)                      | -0.6  | -0.6  | 0.2   | -0.4  | -0.6  | -0.7  | -1.1  |
| Capital account balance as % of GDP                          | -0.1  | -0.1  | 0.5   | -0.1  | -0.1  | -0.2  | -0.2  |
| Direct investment (US\$, billion)                            | -2.3  | -1.6  | 0.7   | 5.1   | 4.3   | 1.1   | -0.7  |
| Portfolio investment (US\$, billion)                         | 15.1  | 14.4  | -1.2  | 9.2   | 12.2  | 6.7   | -0.1  |
| Other investment (US\$, billion)                             | 11.1  | -21.9 | -7.2  | -1.1  | -3.6  | -4.6  | 2.7   |
| Foreign reserves (US\$, billion)                             | 34.0  | 20.4  | 52.0  | 74.0  | 96.1  | 102.8 | 121.3 |
| Total external debt as % GDP                                 | 31.4  | 33.4  | 46.8  | 33.8  | 28.5  | 27.5  | 27.5  |
| Short-term foreign debt as % of total debt                   | 57.1  | 39.9  | 20.6  | 28.6  | 36.4  | 33.3  | 38.0  |
| Short-term foreign debt as % of foreign reserves             | 274.2 | 312.5 | 59.1  | 53.0  | 42.7  | 48.5  | 41.0  |

Source: The Bank of Korea, *Monthly Bulletin*; Ministry of Finance and Economy, *Financial Statistics Bulletin*; Financial Supervisory Commission, IMF, *International Financial Statistics*.

<sup>av</sup> End of period.

<sup>bv</sup> Non-performing loans of domestic commercial banks.

### *iii. Exchange rate*

Thailand's sudden decision to float the baht in July 1997 subjected all regional currencies to extremely high depreciation pressure. However, the Korean won remained relatively stable until it began to slide in October 1997. Following futile attempts of currency defense, the Korean government widened its won trading band from 2.25% to 10% on November, and finally abolished its band, allowing the won to float on December. With a free floating regime in place, the sudden collapse of investor confidence and concomitant capital outflows caused the nominal exchange rate to overshoot during the crisis.

Large support packages by the IMF did make some contribution to restoring the confidence of foreign investors. The funding helped to reduce the short-term liquidity constraints of the economy and provided financial resources to contain the exchange rate depreciation. The Korean government expected that its agreement with the IMF, reached on December 3, 1997, would stop the outflow of foreign capital. However, foreign banks withdrew their short-term credit at an accelerated pace, thereby worsening Korea's foreign reserve position (see table 2). In response to this unfavorable development, the Korean government asked the major creditor countries, including the U.S. and Japan, to use moral suasion to influence their creditors to refrain from retrieving their short-term credit, and cooperate in reaching an agreement to lengthen the maturity of the short-term foreign currency loans. Only when foreign creditors were convinced that they would be repaid with handsome returns, were the debt-extension agreements signed and finalized on March, 1998.<sup>6</sup> Thereafter, at least some foreign credit facilities including trade credit was restored and the exchange rate came to stabilize at around 1,300-1,400 won per US dollar.

### *iv. Equity market*

After hitting its highest level (1,138 points) on November 8, 1994, the Korean stock price index (KOSPI) had already started sliding before the crisis broke out. This was one of the earliest signs of trouble, although policy makers were inclined to believe that the declining stock prices were mainly due to cyclical factors rather than weak fundamentals. During 1996, stock prices (in domestic currency terms) fell by more than 20% in Korea. Several of the largest chaebols posted losses in 1996 and 6 of the top 30 chaebols went bankrupt in 1997 before the crisis. The crisis aggravated the situation and severely undermined investor confidence in the stock market. As a result, the stock price index fell to 376 points by the end of December 1997.

Having hit the bottom, the KOSPI quickly recovered at the beginning of 1998, with the aid of purchases by foreign investors. However, after peaking at 574 points on March, 1998, the KOSPI once again began to slide downward. Following the sudden weakening of the Japanese yen, the KOSPI plunged below 300 points on June. Again, foreign investors left the Korean market, and more bankruptcies were predicted while corporate and financial restructuring proceeded. Stock prices and exchange rates moved in a predictable direction during the early crisis period (October 1997-December 1997). As the crisis set in, exchange rates sharply depreciated and stock prices plunged. However, stock prices fell again in March 1998 and

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<sup>6</sup> The Korean government was able to issue US\$4 billion in global bonds, in the international capital market, immediately following the debt-extension agreement.

remained stagnant until the end of September, while the won-dollar exchange rate stabilized remarkably. During the post-crisis period, starting in October 1998, foreign portfolio investment boosted stock prices in 1999, but stock prices sharply dropped in mid-2000 and 2001 (over 50% in index). With respect to exchange rates, continued foreign portfolio investment also contributed to the stability of the exchange rate, but exchange rate appreciation was limited because of evident intervention of the BOK.<sup>7</sup>

v. *Current account balance*

The current account deficit averaged less than 1% of GDP in 1992-95 and the external position was considered sustainable. In real effective terms, the exchange rate had been around the equilibrium level until 1994, but was somewhat overvalued on the eve of the 1997 currency crisis.<sup>8</sup>

A remarkable feature of Korea's economic performance following the crisis has been the large turnaround in the current account balance. It improved from deficit to surplus after one year, changing from -4.4% of GDP in 1996 (US\$23 billion) to 12.7% in 1998 (US\$40 billion). The current account balance was the only component that made a positive contribution to GDP in 1998. Imports of goods and services were severely compressed due to the sharp depreciation of the Korean won and the sharp contraction of output and consumption. Exports of goods and services, however, rose in volume terms by more than 13%, helped by improved external competitiveness and the government's export drive.<sup>9</sup>

External demand, particularly in Asia, remained weak in 1998 and hampered the response of Korean exports to the real depreciation. Reflecting the disparity in economic conditions between regions, exports to China, Japan, and Southeast Asia in 1998 fell by 17% in value terms, while exports to the U.S. and the EU rose by 6.5%. The strong U.S. economy was a significant source of growth for Korean exports in 1998, in particular for both light and heavy industrial products. Much of the decline in exports of industrial products to Japan (mainly in electronics and metal goods) was redirected to the U.S. and to a lesser extent the EU.

vi. *Capital flows*

The capital account adjustment was also very sharp. Immediately following the onset of the crisis, the capital account switched from a surplus to a deficit as a result of the large outflow

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<sup>7</sup> The Korean government has taken drastic measures to liberalize capital markets as well as adopting an officially flexible exchange rate system since the crisis set in. Thus, it would be natural to conjecture that if the Korean government truly has a hands-off policy in the foreign exchange market, there must be some close interaction between stock prices and exchange rates. However, Park *et al.* (2001) find that empirical results do not support that conjecture during the post-crisis period. This puzzling evidence indirectly hints that the Korean government might heavily intervene in the foreign exchange market against volatile foreign portfolio investment flows. This was strongly supported by the huge accumulation of reserves by the BOK.

<sup>8</sup> Our calculation based on trade-weight, consumer prices index, and January 1993 as the basis year shows that the real effective exchange rate appreciated by around 5% in Korea between January 1993 and July 1997.

<sup>9</sup> To help meet the urgent need for foreign exchange, a national drive to export second-hand goods and recycled gold jewelry was initiated in early 1998. Financial institutions collected gold products, refined and exported them, and then sold the foreign exchange proceeds to the Bank of Korea. The drive enjoyed widespread national support, and is estimated to have contributed about US\$4.2 billion to total exports in 1998.

of portfolio investment and curtailment of short-term bank loans. The capital account showed deficits of up to US\$64 billion in 1998. After the crisis, the financing role of the capital account for any current account imbalances decreased (Kim et al., 2001).

Starting in the first quarter of 1999, the capital account registered a surplus led by strong inflows of portfolio and foreign direct investment, a decline in overseas investment by Korean companies, and a slight pickup in short-term trade financing related to the economic recovery. In particular, FDI picked up sharply in 1998 as companies began to rely increasingly on foreign capital to finance their corporate restructuring efforts. During the pre-crisis period including 1997, net FDI recorded a deficit. But, there was an impressive turnaround in the net balance of FDI as a component of the capital account. This was due to the increased mergers and acquisitions of Korean firms by foreign firms –supported by the government policies aimed at selling ailing domestic firms to foreigners.<sup>10</sup>

With regard to portfolio investment, private equity flows picked up markedly in the first half of 1999 after international credit rating agencies raised Korea's sovereign rating to investment grade. International spreads also came down to near pre-crisis levels in mid-1999 after a period of extreme volatility. With this development, Korean companies could raise capital from the international financial markets by issuing global depository receipts (GDRs).

*vii. Foreign reserves and external debt*

After having fallen to a low of US\$3.9 billion on December 18, 1997, foreign reserves increased steadily, reaching US\$48.5 billion by the end of 1998. The increasing trend continued in 1999-2000: foreign reserves stood at US\$96.2 billion by year-end 2000. During the early period of crisis resolution, the front-loaded disbursements from the ADB, IMF and World Bank, successful maturity-extension agreement in March 1998, and successful issuance of US\$4 billion of global bonds in April 1998 contributed to the sizable reserve accumulation. Nonetheless, the most important increase in foreign reserves closely corresponded to the current account surplus, absorbed by sterilized interventions of the Bank of Korea.

Consequently, Korea's external debt position did significantly improve. The ratio of short-term debt to foreign reserves decreased from 714.6% in 1997, to 63.3% in 1998 and to 53.0% in 1999, implying that short-term debt could be covered by official foreign reserves. Total external liabilities during 1999 decreased by US\$11.6 billion from the previous year, while the total external assets increased by US\$16.9 billion. This handsome improvement transformed Korea's external position; Korea went from being a net debtor in 1998 to being a net creditor in 1999. In terms of debt maturity, the ratio of short-term debt to the total stood at below 0.3 in 1999. With the strengthening of reserve and external asset/liability positions, Korea accelerated its repayments to the IMF to fully settle its loans ahead of schedule.

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<sup>10</sup> To induce FDI, all institutional restraints on mergers and acquisitions of domestic firms by foreign investors were completely abolished on May, 1998.

### *viii. Financial market*

Prior to the crisis, there was some concern over the persistent expansion of domestic credit to the private sector at double-digit rates. Domestic credit increased from 57.4% of nominal GDP in 1994 to almost 70% in 1997. It is possible that the credit supply has grown as usual while profitability of the real sector was declining for reasons such as delayed adjustments of non-performing companies. In the pre-crisis period, there was easier access to bank credit for firms associated with chaebols, while non-chaebol firms' access to bank credit was more influenced by market considerations (Borensztein and Lee, 2000). The relatively small chaebols (those ranked 11th to 30th) were significantly under-performing even during the 1994-96 boom period. When the terms-of-trade shock arrived in April 1996, the situation of the highly leveraged corporate sector, apparently, was aggravated and the number of defaults increased significantly far ahead of the crisis. As large chaebols went bankrupt, the financial sector began to bear a substantial burden.

Following the decline in the Hong Kong stock market in late October 1997, and the downgrade of Korea's sovereign risk, financial markets in Korea came under increasingly severe pressure. As in the other Asian crisis countries, with reserves essentially depleted, the choice was made to raise interest rates to restore market confidence and stabilize the exchange market. By December 24, the Bank of Korea had dramatically raised short-term interest rates, which had fluctuated at around 12% prior to the crisis, to over 30% in order to engineer a rapid stabilization of the exchange rate. However, there were a number of malignant side effects accompanying the high interest rate policy along with financial sector restructuring.

The contraction in bank loans was extremely severe as a combined result of both monetary conditions and structural changes in the financial sector. Borensztein and Lee (2000) explain several factors, which affected the changes in the pattern of credit allocation after the crisis broke out. First, financial institutions became more reluctant to extend loans to enterprises because of the new financial sector regulations (enhanced financial standards) and high credit risks. In particular, some banks did not meet capital adequacy ratios and could not raise equity capital in times of financial difficulties. Thus, they started to curtail credit to firms by a larger magnitude. Second, the higher level of interest rates further weakened the state of borrowers' balance sheets. In particular, highly leveraged corporate firms were more vulnerable to the interest rate hikes. The level of non-performing loans rose from 13% of GDP in December 1997 to 22% by June 1998.<sup>11</sup> Third, the fiscal deficit increased from a small surplus in 1997 to a deficit of over 4% of GDP. Consequently, the traditional "crowding-out" effect reduced credit available to the private sector as the government had to tap domestic financial markets to a large extent. Fourth, as foreign credit lines dried out, banks had to repay their short-term foreign debts by curtailing domestic credit.

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<sup>11</sup> In July 1998, there was a major revision of loan classification standards and provision requirements, which classified loans in arrears of three months or more as substandard or below, and loans in arrears of one to three months as precautionary loans. Asset quality classification standards were further implemented in 1999 by adopting the forward-looking criteria (FLC), which includes expected future performance into account as a criterion. Before July 1998, non-performing loans include loans in arrears of six months or more.

Once the immediate task of stabilizing the exchange rate market was accomplished in early 1998, the stance of monetary policy was cautiously eased. Since small and medium-sized enterprises (SMEs) were hit harder by the effects of the credit squeeze compared to larger firms, the Korean government took a number of steps to ease the financing constraint for SMEs.<sup>12</sup>

b) Malaysia

i. *What caused the crisis?*

In mid-1997, like the other affected economies, Malaysia did not expect to encounter a severe crisis although the economy was considered “overheated” due to the high growth registered during the 1990s. On 17 June 1997, Mr. Michael Camdessus, then Managing Director of the IMF, drew attention to the soundness of the Malaysian economy: “Malaysia is a good example of a country where the authorities are well aware of the challenges of managing the pressures that result from high growth and of maintaining a sound financial system, amid substantial capital flows and a booming stock market.”

Inflows of short-term capital (mainly portfolio investment) started to become significant in 1993, amounting to US\$9.5 billion (14% of GDP), exceeding the inflow of FDI (US\$5.1 billion). That inflow went mainly to the stock market, which resulted in the super bull run of the Kuala Lumpur Stock Exchange. The capital inflow was also important in offsetting the current account deficit: at its peak in 1995, the current account deficit was 10.4% of GDP. By 1997, the current account deficit was still significant at 5.4% of GDP, although this did not directly put a downward pressure on the ringgit exchange rate. Rising services account shortfalls and higher capital goods imports were the reasons for the persistent deficits. The large inflow of portfolio investment had created a window of vulnerability for the Malaysian economy in the event of a sharp, quick and large outflow. The stock of portfolio capital had increased from US\$4.6 billion in 1990 to US\$36 billion in 1997, which meant that a large and uncontrolled withdrawal would do serious damage to the economy and to the ringgit.

Another vulnerable point for Malaysia was the seemingly stable ringgit exchange rate. The large weight of the US dollar in the currency basket (estimated at about 70%) had indirectly created a de facto pegged exchange rate regime for the ringgit. Even with the large capital inflow in the second half of the 1990s, the ringgit was traded within a very narrow band at around RM2.5 for one US dollar. This exchange rate stability had given the impression that there was no risk associated with the flows of funds and subsequently attracted large short-term capital into Malaysia without the fear of possible exchange rate losses.

With sufficient international reserves to meet foreign exchange demand, there was little concern that Malaysia would confront an economic crisis when the baht was floated in July

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<sup>12</sup> SMEs are defined as enterprises employing less than 300 workers in the manufacturing sector and 20 workers in the service sector. In order to ease financial difficulties of the SMEs, the Bank of Korea raised the ceiling on total loans from KRW 3.6 trillion (in November 1997) to KRW 5.6 trillion (in February 1998). Further, the Bank of Korea overhauled the 90-day maturity clause on commercial bills, which qualify for discount (effective beginning May 1998). In addition, the government gave an extension of maturity of loans, which are made out to SMEs.



1997.<sup>13</sup> In 1997, Malaysia's international reserves of US\$28 billion were sufficient to cover the short-term debt of US\$14 billion in 1997 (table 3). However, from another perspective, this level of reserves was insufficient to meet the demands of liquid capital, which was composed of a combination of short-term foreign debts and portfolio capital. Hence, the loss of market confidence in the regional economies that resulted with the floating of the baht, in particular about the sufficiency of the international reserves, triggered a massive outflow of capital from the Malaysian stock market. The outflow of private short-term capital reached US\$4 billion in 1997 and became even larger in 1998 at US\$5.3 billion.

**Table 3**  
**Malaysia: End-of-year stock of volatile capital and foreign exchange reserves, 1990-97**

|   | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 <sup>c/</sup> |
|---|------|------|------|------|------|------|------|--------------------|
| Mobile capital <sup>a/</sup> , US\$ billion | 6.3  | 6.5  | 12.4 | 23.9 | 27.7 | 31.9 | 38.9 | 50.1               |
| Composition of mobile capital (%)           | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 100                |
| Short-term debt <sup>b/</sup> (%)           | 26   | 40   | 41   | 28   | 20   | 20   | 26   | 28                 |
| Banking sector (%)                          | 26   | 40   | 41   | 28   | 14   | 14   | 18   | 22                 |
| Non-bank private (%)                        | 0    | 0    | 0    | 0    | 6    | 6    | 8    | 6                  |
| Portfolio investment (%)                    | 74   | 60   | 59   | 72   | 80   | 80   | 74   | 72                 |
| Foreign exchange reserves, US\$ billion     | 10   | 11   | 19   | 30   | 26   | 26   | 28   | 28                 |
| Reserve/mobile capital ratio (%)            | 158  | 171  | 149  | 124  | 94   | 80   | 72   | 56                 |

Source: Athukorala (2001).

<sup>a/</sup> Short-term debt plus portfolio investment.

<sup>b/</sup> Debt with a maturity of one year and less.

<sup>c/</sup> First half of the year.

This outflow caused steep ringgit depreciation. Equally serious were the effects of ringgit depreciation on the banking sector. The Malaysian banking sector had been relatively strong compared to the banking sectors in other countries in the region –in the mid-1990s, the average capital adequacy ratios for all banks in Malaysia remained above 10% (Athukorala, 2001) and the level of non-performing loans was 3.7% in 1996. Despite this strong position, the rapid credit growth had created areas of weakness because of the concentration of loans in selected non-tradable sectors, in particular, to the property sector and for share purchases. This credit growth had a significant link to the share market boom as shares were used as collateral for these loans. Thus, when the value of the shares decreased as the stock market collapsed, many of these loans turned non-performing. When faced with the prospects of a more fragile financial position, many banks began withdrawing loan facilities or demanding more collateral. As a result, businesses faced a credit crunch and higher cost of funds, which culminated in the contraction of the economy.

## *ii. Overall macroeconomic and sectoral performance*

Although the Asian crisis began in the middle of 1997, its impact on the Malaysian economy was only felt in late 1997. GDP grew at a commendable rate of 7.3% in 1997 but the

<sup>13</sup> Due to the prudential measures exercised by the Bank Negara Malaysia, there was no massive build-up of short-term foreign borrowings. Malaysian companies are required to have a natural foreign exchange hedge before they are allowed to borrow overseas. Normally, the natural hedge means that the companies would have foreign currency income to service the loans.

economic contraction was very deep at -7.4% in 1998 (table 4). This severe contraction was due to a combination of several factors: the deflationary force of the regional economic slowdown, massive capital outflows, public sector expenditure reduction and a tight monetary policy.

This economic contraction was brought about by a severe collapse in private investment (-57.8%) and consumption (-10.8%). The public sector also experienced a similar decline but at a lesser rate –for example, public investment fell by 10% and consumption by 7.8%. The reduction in private sector investment was caused by a lack of liquidity in the banking system due to the introduction of a tighter monetary policy in late 1997. Prior to the crisis, credit grew on average about 28% annually between 1994 and 1996 and the Bank Negara Malaysia (the Malaysian central bank) introduced a credit plan to curb the excessive lending especially to the non-productive sector such as real estate and loans to buy shares. In addition to a credit growth target of 25% by year-end 1997 and 15% by year-end 1998, the plan also disallowed credit for "unproductive" sectors. Higher interest rates added further pressure to the funding costs of companies and had caused an immediate slowdown of business activities.

The Malaysian economy began to recover in the second quarter of 1999. This recovery came sooner than expected, with GDP registering a strong expansion of 6.1% in 1999 and 8.3% in 2000. The revival of domestic consumption, particularly from the public sector, contributed significantly to the recovery process. Aggregate consumption expanded by 6.7% in 1998 and 10.5% in 1999. Public consumption led this expansion with an increase of 16.3% in 1999.

Although the public sector pumped up its investment expenditure (11.7%) in 1998, the total domestic investment still declined (-5.9%) due to the 18.5% contraction of private sector investment. In 2000, there was a significant improvement in domestic investment, which grew by 25.7%, led by the private sector, which expanded its investment by 32.1%. However, private investment retreated once again (-20.6%) under an adverse external environment in 2001. In contrast, public sector investment maintained an active role in leading the recovery with an increase of 11.7% in 1999 and an even higher jump of 19.9% in 2000. In view of the global economic slowdown in 2001, public investment was expanded 15.5% to ensure that the Malaysian economy did not enter into a recession again.

It was not surprising that the construction sector suffered the most during the crisis: the sector had over-invested during the period of high growth (1987 to 1997), which resulted in a massive excess capacity. This sector's GDP shrank by 24% in 1998. The manufacturing sector also recorded a large decline of 13.4%. On the other hand, the agriculture sector experienced a relatively mild contraction (-4.5%) while the services sector declined by -0.4%.

The manufacturing sector was the engine of recovery in 1999 and 2000. Malaysia benefited from the global recovery of demand for semiconductors, which had resulted in double-digit growth for the manufacturing sector – 11.7% in 1999 and 19.1% in 2000. The construction sector only managed to grow marginally in 2000 (1%) after a dismal performance (-4.4%) in 1999.

**Table 4**  
**Malaysia: Selected economic indicators, 1996-2002**

| Indicators/Year  | 1996 | 1997 | 1998  | 1999  | 2000  | 2001  | 2002 |
|--|------|------|-------|-------|-------|-------|------|
| <b>Growth of GDP (%)</b>                                     | 10.0 | 7.3  | -7.4  | 6.1   | 8.3   | 0.4   | 4.2  |
| <b>Growth by final demand category (%)</b>                   |      |      |       |       |       |       |      |
| Consumption (59.3)   | 4.9  | 4.9  | -10.3 | 6.7   | 10.5  | 5.8   | 8.8  |
| Private (45.6)   | 6.9  | 4.3  | -10.8 | 3.1   | 12.5  | 2.8   | 4.2  |
| Public (13.7)  | 0.7  | 7.6  | -7.8  | 16.3  | 3.0   | 17.6  | 13.8 |
| Gross domestic fixed investment (46.8)                       | 9.7  | 8.4  | -44.9 | -5.9  | 25.7  | -2.8  | 0.3  |
| Private (34.2)   | 13.3 | 8.4  | -57.8 | -18.5 | 32.1  | -20.6 | -6.1 |
| Public (12.6)  | 1.1  | 8.6  | -10.0 | 11.7  | 19.9  | 15.5  | 4.6  |
| <b>Growth by sector (%)</b>                                  |      |      |       |       |       |       |      |
| Agriculture, forestry and fishing (9.8)                      | 4.5  | 0.7  | -2.8  | 0.5   | 2.0   | 1.8   | 0.3  |
| Industry (41.5)  | 11.0 | 10.5 | -6.5  | 5.4   | 14.21 | -4.17 | 4.0  |
| Mining and quarrying (7.7)                                   | 2.9  | 1.9  | -0.4  | 6.9   | 1.9   | 1.6   | 4.5  |
| Manufacturing (29.1)   | 18.2 | 10.1 | -13.4 | 11.7  | 19.1  | -6.2  | 4.1  |
| Construction (4.4)   | 16.2 | 10.6 | -24.0 | -4.4  | 1.0   | 2.3   | 2.3  |
| Services (48.7)  | 8.9  | 9.9  | -0.4  | 4.5   | 5.7   | 5.7   | 4.5  |
| <b>Growth of manufacturing production(%)</b>                 | 12.2 | 12.4 | -10.2 | 12.9  | 25.0  | -6.6  | 4.5  |
| Export-oriented (weight: 0.72)                               | 11.0 | 13.2 | -5.1  | 13.5  | 25.8  | -10.4 | 5.1  |
| Domestic-oriented (weight: 0.28)                             | 15.6 | 10.4 | -23.5 | 11.1  | 22.1  | 5.9   | 3.5  |
| Imports of investments goods (growth of value)               | -6.5 | 17.1 | -17.4 | -9.9  | 38.6  | -0.9  | 10.6 |
| MIER manufacturing capacity utilization index                | 81.2 | 83.2 | 59.5  | 80.7  | 84.2  | 78.8  | 83.5 |
| Unemployment rate  | 2.5  | 2.6  | 3.2   | 3.4   | 3.1   | 3.6   | 3.2  |
| <b>Inflation rate (%)</b>                                    |      |      |       |       |       |       |      |
| Consumer price   | 3.5  | 2.7  | 5.3   | 2.8   | 1.6   | 1.4   | 1.8  |
| Producer price   | 2.3  | 2.7  | 10.7  | -3.5  | 3.1   | -5.0  | 4.4  |
| Local goods  | 2.8  | 2.5  | 11.2  | -3.9  | 3.6   | -6.1  | 5.7  |
| Imported goods   | 0.1  | 2.8  | 9.2   | -0.6  | 1.1   | -6.3  | -0.7 |
| <b>Fiscal performance (central government) <sup>al</sup></b> |      |      |       |       |       |       |      |
| Government expenditure as % of GDP                           | 23.0 | 23.3 | 19.9  | 19.6  | 24.7  | 29.6  | 21.5 |
| Gross development expenditure as % of total expenditure      | 25.1 | 24.0 | 31.9  | 38.5  | 33.1  | 35.6  | 46.9 |
| Budget surplus (central government) as % of GDP              | 0.7  | 2.4  | -1.8  | -3.2  | -5.8  | -5.5  | -5.6 |
| Total public debt as % of GDP                                | 35.3 | 31.9 | 36.2  | 35.9  | 36.7  | 43.6  | 45.6 |
| Foreign as % of total public debt (%)                        | 11.7 | 14.4 | 14.5  | 16.6  | 15.0  | 16.7  | 21.9 |
| <b>Money and credit (end of period)</b>                      |      |      |       |       |       |       |      |
| M3 growth (%)  | 21.2 | 18.5 | 2.8   | 8.2   | 5.0   | 2.9   | 6.7  |
| Annual average bank lending rate (%)                         | 10.1 | 10.6 | 12.3  | 8.5   | 7.5   | 6.7   | 6.4  |
| Outstanding loans of banking system (ringgit, billion)       | 325  | 586  | 482   | 672   | 454   | 471   | 490  |
| Loans extended by the banking system (growth, %)             | 26.7 | 26.5 | 1.3   | 0.6   | 15.3  | 3.6   | 4.2  |
| Manufacturing  | 14.8 | 18.5 | 2.0   | 1.3   | 3.5   | 0.2   | -1.9 |
| Property   | 26.8 | 34.0 | 6.9   | -6.6  | 6.0   | 7.7   | 6.2  |
| Non-performing loans as % of total bank loans <sup>bl</sup>  |      |      |       |       |       |       |      |
| 3-month classification                                       | 3.7  | 4.1  | 13.6  | 11.0  | 9.7   | 11.5  | 10.2 |
| 6-month classification                                       | -    | -    | 8.1   | 6.4   | 6.3   | 8.1   | 7.5  |
| <b>Share market performance</b>                              |      |      |       |       |       |       |      |
| KLSE composite index   | 1238 | 594  | 586   | 812   | 679.6 | 696   | 646  |
| Market capitalization (ringgit, billion)                     | 807  | 376  | 375   | 553   | 444   | 465   | 482  |

|  |      |      |       |      |      |       |      |
|--|------|------|-------|------|------|-------|------|
| <b>External transactions</b>                     |      |      |       |      |      |       |      |
| Merchandise exports (growth, %)                  | 6.0  | 0.3  | -6.9  | 15.7 | 17.0 | -10.6 | 6.0  |
| Merchandise imports (growth, %)                  | 1.0  | 0.2  | -25.9 | 12.5 | 26.2 | -10.3 | 8.3  |
| Current balance account as % of GDP              | -4.8 | -5.3 | 13.0  | 15.9 | 9.3  | 8.3   | 7.6  |
| Foreign reserves (US\$, billion)                 | 27.0 | 20.8 | 25.6  | 30.9 | 29.9 | 30.8  | 34.6 |
| Total external debt as % GDP                     | 38.7 | 43.9 | 42.6  | 42.1 | 46.1 | 50.7  | 51.7 |
| Short-term foreign debt as % of total debt       | 25.7 | 25.2 | 19.9  | 14.3 | 11.1 | 13.7  | 17.2 |
| Short-term foreign debt as % of foreign reserves | 36.9 | 53.7 | 33.2  | 19.1 | 17.7 | 19.9  | 24.5 |
| External debt service ratio                      | 6.6  | 5.5  | 6.7   | 5.9  | 5.3  | 5.9   | 6.2  |

<sup>a/</sup> The sectoral share in expenditure and in GDP in 1996 is given in brackets.

<sup>b/</sup> Based on manufacturing production index (1993 = 100).

- Data not available.

- MIER: Malaysian Institute of Economic Research.

### *iii. Exchange rate*

At the onset of the crisis, when regional currencies were under pressure to devalue, Malaysia tried to defend the ringgit but found this strategy unsustainable and costly. On July 14, the ringgit was floated and it depreciated sharply during the second half of 1997 –the ringgit exchange rate slipped from RM2.50 per US dollar to its lowest level of RM4.88 on January 7, 1998. After showing some signs of stability during February and March 1998, the ringgit, unlike the currencies of the other crisis-hit economies, continued to deteriorate with a wide range of volatility in the following months until it was fixed at RM3.80 per US dollar on September 1998. The sharp depreciation and volatility of the ringgit could be attributed to the large capital outflow and strong market reaction to Malaysia's vocal stand on currency speculation.

### *iv. Equity market*

The equity market, not surprisingly, was among the worst hit sectors in the crisis as the Kuala Lumpur Stock Market lost 80% of its market valuation, between February 1997 and September 1998, when selective capital controls were imposed. In terms of price/earnings ratio, the Kuala Lumpur Stock Exchange Composite Index (KLSE) dropped from 22.6 in June 1997 to 11.8 twelve months later.

The stock market slide was much earlier than the ringgit depreciation, beginning in February 1997. The credit plan issued by Bank Negara Malaysia (BNM), which was concerned about the overheating economy and large credit expansion to the property sector, had caused investors to sell their banking and property shares. By late April, the KLSE had dropped by 10%. In August 1997, the BNM imposed a RM2 million limit on non-trade ringgit swaps to reduce currency speculation. As a result, investors liquidated their holdings in the stock market and repatriated these proceeds. To stop the free fall of its market, on August 1997, the KLSE made an unprecedented move, classifying the 100 stocks of the KLSE as designated stock, which meant that investors had to have the scripts in their central depository account before they could be traded. The KLSE plummeted an additional 10% before the ruling was lifted on September 1997.

The government also instituted other measures to shore up the stock market; for example, it allowed companies to buy back their shares to overcome steep share price deterioration. Concerns about the unsettled trading losses of stockbroking houses also fuelled negative speculations and pushed the market downwards.

The Malaysian stock market was also characterized by the existence of an active offshore securities market in Singapore, known as central limit order book international (CLOB). This over-the-counter market was created when the Malaysian government announced its plans to delist Malaysian companies from the Singapore Stock Exchange in 1990. These CLOB shares were about 3% of the total KLSE capitalization, as of September 1998, and trade was carried out in Singapore dollars through Singapore brokers.

Although the market stabilized in the first four months of 1998, the stock market slide recommenced after May and reached its bottom of 262 points (an 80% drop) on September 1998, when the selective capital control was introduced. The stock market rebounded strongly in 1999 –the KLCI rose to a high of 991 points on February 2000, but has declined since then.

v. *Current account balance*

During the initial phase of the crisis, exports decreased as the troubled East Asian economies (50% of Malaysia's export market) massively cut their demand for imports. In 1998, merchandise exports decreased by 6.9% (in US dollar terms) but actual export ringgit revenues increased because of the steep currency depreciation. When the ringgit was pegged (at RM3.80 for one US dollar), other regional currencies appreciated, increasing Malaysia's relative price competitiveness. This price competitiveness allowed Malaysian exporters to take advantage of the robust US export demand. In nominal ringgit terms, total exports grew by 30%, with palm oil registering the highest increase of 64%, followed by manufactured goods (32%) and crude petroleum (6%). The large ringgit export revenue was an important contributor to higher domestic liquidity.

Malaysia's large merchandise balance of US\$18 billion in 1998 was achieved not only from large export proceeds but also from the collapse of imports. Capital and intermediate goods dominate the Malaysian import structure, with the latter for inputs for exports. In contrast, consumer goods only constitute about 10% of total imports. Thus, when investment activities and export volume dampened, the demand for imports also declined -merchandise imports decreased by 26%.

Due to the strong performance of the merchandise account balance, the balance on goods and services reversed from the deficit trend that had prevailed during the 1990-97 period (on average about 5% of GDP) into a surplus of US\$12 billion in 1998. As a result, the perennial current account deficits were transformed into a surplus of 13% of GDP in 1998.

The trade balance registered an unprecedented surplus of US\$19 billion in 1999. This surplus came from the 15.7% merchandise export growth in 1999. Although imports also rebounded strongly (12.5% in 1999), a trade account surplus helped significantly to improve the current account position; the current account surplus reached a record level of 15.9% of GDP in 1999 and remained at a healthy 9.3% in 2000. Both exports and imports suffered substantial

reductions of about 10% in 2001, but the current account surplus continued to record 8.3% of GDP.

*vi. Capital flows*

Capital inflows were important in financing the current account deficit as well as in generating new investments. Prior to 1993, capital inflows into Malaysia mainly took the form of FDI but thereafter short-term capital, primarily portfolio flows, also became significant. The large portfolio inflow in 1993 followed the regional pattern of capital inflows into local stock markets.

After the Asian crisis, there was a reduction in the FDI inflow into Malaysia –the amount of approved FDI declined from US\$9 billion in 1996 to US\$2.7 billion in 1998. In 1999 and 2000, the FDI inflow recovered to nearly US\$4 billion, but again dramatically declined in 2001 (to US\$0.6 billion). The slowing down of FDI inflow is due to both internal and external factors. The crisis has resulted in production over-capacity, thus discouraging new investments into the region. In addition, China tends to attract most of the FDI inflow in the region. Unlike other crisis-hit economies, Malaysia has been cautious in promoting foreign purchases of distressed assets from the crisis through mergers and acquisitions, and this has inhibited the opening of another channel of larger FDI inflows.

Not unexpectedly, the short-term capital account showed a substantial net outflow of US\$5.7 billion in 1998 due to the decline in net external liabilities of the commercial banks and the liquidation of portfolio investments by foreign investors. The lower net external liabilities by commercial banks were in response to the stagnation in domestic demand and the unwinding of trade-related hedging activities. In fact the outflow had begun in 1997 (US\$4.6 billion) and it became larger in 1999 (US\$9.9 billion). To some extent, this reflected the reluctance of many foreign investors to return to the Malaysian market, because of concerns about the re-imposition of regulations on capital flows. In addition, investors were also uncertain about policy directions, especially on the issue of the exchange rate peg.

*vii. Foreign reserves and external debt*

The strong performance of the external sector contributed to the improvement in the international reserves position. In August 1998, Malaysia had reserves of US\$20 billion, which increased to US\$31 billion at year-end 1999, equipping the country to finance five months of imports. However, the level of international reserves did not change much in 2000 and 2001, even though Malaysia continued to record trade surpluses. This is partly explained by pre-payments of external debts and portfolio outflows.

Malaysia's total external debt increased from 44% of GDP in 1997 to 51% in 2001. This increase is attributed to higher long-term debt from both the public and private sectors. Public sector external debt is financed mostly through sales of sovereign bonds. In contrast, the share of short-term foreign debt in total debt burden has been substantially reduced from 25% in 1997 to 14% in 2001. The international reserves were more than adequate to cover the short-term foreign debt –the ratio of short-term foreign debt to international reserves was on average below 20% during the 1999-2001 period.

viii. *Financial market*

The crisis placed a strain on the banking system. The high interest rate and collapse of the stock market increased the non-performing loans (NPLs) of financial institutions to a level considered seriously threatening. As Malaysia had a very high ratio of domestic debt to GDP (152%), the interest rate hike quickly turned many loans into NPLs. Prior to the crisis in 1997, the level of NPLs at financial institutions was 4%, but by August 1998, this figure had jumped to 15.8%. The higher cost of financing and tighter liquidity discouraged private investment. The cost of funds for investment increased substantially when the base lending rate rose from 10.3% in June 1997 to 12.3% in July 1998: in some cases, the effective interest rate reached a high of 20%.

## 2. Policy responses for crisis resolution

Concerning macroeconomic policies, the swift change in policy stance from tightening to easing supported the quick recovery of the crisis-hit economies. In Korea, although fiscal and monetary policies differed in the points at which the policy stance changed (fiscal stimulus first, monetary easing more cautiously), the policy target under the IMF program shifted from stabilization of the foreign exchange market to economic recovery around April 1998. In Malaysia, although independent macroeconomic policies could be adopted from the beginning of the crisis, counter-cyclical policy measures only became fully effective from August 1998 due to internal politics.

The positive role of counter-cyclical macroeconomic policies in the post-crisis recovery raises the question of whether the initial tightening of monetary and fiscal policy was kept high for too long, in effect deepening the crisis. In the case of Korea, the IMF initially prescribed a tight monetary policy together with fiscal austerity. But, Malaysia also initially adopted the orthodox approach without IMF involvement. There is also the question of whether the tight monetary and fiscal policy with or without the IMF involvement was inevitable in the early resolution of the crisis. Radelet and Sachs (1998) asserted that the austerity measures were unnecessary because the Asian crisis countries were suffering from a liquidity problem. They implied that the traditional IMF policy prescriptions may have done more harm than good as they drove many highly leveraged but viable firms out of business, thereby deepening the downturn of the economy. Feldstein (1998) further criticized the IMF for moving beyond its traditional macroeconomic adjustment role by including a large number of structural elements.<sup>14</sup> The contribution of initial IMF austerity programs and the presence of structural elements in the IMF programs still remain controversial. However, it is generally agreed that the swift change toward a more expansionary macroeconomic policy stance helped these economies to recover quickly.

### a) Policy responses in Korea

#### i. *Early resolution*

The macroeconomic policy goals at the outset of the IMF program for Korea had been to stabilize the foreign exchange market and build up foreign reserves through contractionary aggregate demand policies. In particular, the high interest rate policy prescribed by the IMF for Korea and other Asian program countries has generated immense public and academic debates. Proponents argued that i) higher interest rates tend to slow capital outflows by raising the nominal return to investors from assets denominated in the domestic currency, ii) higher interest rates make speculation more expensive by raising the cost of going short on the currency, iii) tight monetary policy reduces expectations of future inflation and therefore of future currency depreciation, and iv) monetary tightening –by lowering expectations of currency depreciation–

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<sup>14</sup> In the East Asian crisis countries that received IMF assistance, short-run policy goals were not necessarily consistent with medium-run structural reform objectives. A wide array of reform packages would entail medium- or long-run development goals, which cannot be easily achieved in a short span of time. If pursued aggressively without due consideration of implementation difficulties and adjustment costs, even if desirable, structural reforms could delay economic recovery or would end up being perfunctory gestures (Park and Wang, 2002).



reduces default risk for those with unhedged foreign currency debt exposure (IMF, 2000). By contrast, critics contended that although it may have been necessary to increase interest rates initially, they were kept high for too long, plunging the economy into a vicious cycle of declining output, increasing bankruptcies, and further weakening of the financial sector –all of which served to weaken rather than shore-up investor confidence (Furman and Stiglitz, 1998). A number of studies have tried to assess empirically whether high interest rates have been useful in supporting the exchange rate. In general, the empirical evidence is inconclusive.

During the early period of crisis resolution, several other measures were also simultaneously implemented to stabilize the exchange market. Tight macroeconomic policies were only one component of many. Thus, it is extremely difficult to single out the impact of stringent macroeconomic policies on the exchange market. Additional policy measures included (i) the IMF's financial support; (ii) maturity extension agreement with foreign creditors on restructuring short-term debt; (iii) accelerating capital account liberalization; and (iv) global bond issuance. This multi-pronged approach successfully restored external stability and allowed foreign reserves to be rebuilt.

*ii. Macroeconomic policy responses to the crisis*

- From fiscal austerity to fiscal stimulus

Prior to the crisis, fiscal policy in Korea had been based on a culture of fiscal prudence, with the financial position of the consolidated central government remaining in balance since 1993. In fact, it has long been common practice in Korea not to undertake spending commitments until the revenues that finance them have been received. During the 1990s, the government consistently reduced its sovereign indebtedness, with the central government debt falling to a low of 9% of GDP by 1996 (IMF, 2000, p. 56). In most of the 1980s and 1990s, the fiscal stance did not move in a counter-cyclical way (Jun, 2002).

When the crisis broke out, the initial IMF program presupposed that the policy of fiscal conservatism should be continued. The original 1998 budget, passed on November 1997 before the crisis became full blown, was based on a forecasted real GDP growth rate of 6% and targeted a budget surplus of 0.25% of GDP. By early December 1997, however, growth estimates had been downgraded to 3%. Under this revised macroeconomic outlook, the overall balance was expected to worsen to a deficit of around 0.5% of GDP. The objectives of the IMF's required fiscal balance were to support the monetary contraction in enhancing confidence in the exchange rate and to provide the funds necessary to rehabilitate the financial system.

By the end of December 1997, the effects of the crisis were becoming more severe, prompting a reconsideration of the initial fiscal policy response. Then, the program was revised to focus on allowing automatic stabilizers to operate and tolerating a short-term deficit. However, greater fiscal stimulus was programmed later. The supplementary budget was implemented in March 1998, putting greater emphasis on increasing safety net spending, but this policy stance was still deemed too tight given the worsening economic outlook. In the face of a vicious spiral of economic recession and corporate insolvency, counter-cyclical fiscal policy actions were strongly called for. Accordingly, the fiscal policy stance was changed toward expansion. Upon

consultation with the IMF, the target for consolidated budget deficits was adjusted upward from the initial 0.8% of GDP (February 1998) to 1.75% (May 1998) and 4% (July 1998). In September 1998, the secondary supplementary budget was implemented with expanded budget deficit target of 5% of GDP. However, the actual deficit for the year turned out to be 4.2% of GDP because tax proceeds began to recover.

The expansionary fiscal policy continued in 1999 in order to stimulate the economy, support economic restructuring and increase spending for the social safety net. The budget deficit target was set at 4% of GDP in 1999, and 70% of the resources for public investment projects were front loaded in the first half of the year. The deficit in 1999 was much smaller than the forecast because the economic recovery was stronger than expected. As the economy grew by a remarkable 10.7%, the fiscal deficit shrank to 2.7% of GDP. Because of the strong economic recovery, Korea reached again a fiscal surplus in 2000.

Korea's history of fiscal soundness is what allowed for these expansionary policy measures. Korea's public debt as a percentage of GDP stood at only 11% in 1997. A figure far lower than the average of the OECD countries of about 70% (OECD, 2001). After the crisis, public debt as a percentage of GDP jumped to 16% in 1998 and 19% in 1999.

- From tightening to easing monetary policy

Once the task of stabilizing the foreign exchange market was accomplished in early 1998, the stance of the monetary policy was progressively eased. In the second quarterly agreement (May 2, 1998), the IMF agreed to relax the pressures that were adversely affecting the domestic credit crunch by lowering the high interest rates and resolving financial difficulties. However, continued caution was warranted in view of the unsettled global financial markets. By June 1998, interest rates had been brought down to below the pre-crisis level. The relaxation of the monetary policy continued in 1999. The short-term interest rate was further lowered to support a recovery in economic activity, with the overnight call rate falling below 5% in April 1999. The sustained low interest rate boosted stock prices, thereby facilitating economic restructuring and the reduction of debt-to-equity ratios through new equity offerings.

- Exchange rate policy and capital market liberalization

After Korea allowed the won to float on December 1997, the IMF requested that the Bank of Korea refrain from intervening in the foreign exchange market, except in the event of dramatic exchange rate fluctuations.

With the floating exchange rate system in place, the Korean government also substantially accelerated its ongoing capital account liberalization plan. Under the IMF program, the Korean government agreed to undertake bold liberalization measures; in fact, the Korean government can be credited for much of the initiative behind the reforms. All of the capital markets, including the short-term money markets, were liberalized. But most importantly, the real estate market, which had been off limits and considered non-negotiable, was completely opened to foreigners in the second quarterly agreement with the IMF (May 2, 1998).

Nevertheless, a number of regulations on capital outflows of residents still remain for the purpose of preventing capital flight. For example,

- Institutional investors are permitted to hold deposits abroad for asset diversification purposes without a quantitative ceiling. But general corporations and individuals are permitted to hold deposits abroad of up to \$5 million and \$50,000 a year, respectively;
- The monthly allowance for residents staying abroad for over 30 days is \$10,000. For those staying abroad over one year, a remittance of \$50,000 (including basic travel allowances) is allowed;
- Residents traveling abroad may, in general, purchase foreign exchange up to the equivalent of \$10,000 a trip as their basic travel allowance;
- The basic monthly allowance for students under 20 years old is \$3,000; for students with a dependent family, an additional allowance of \$500 for a spouse and each child is allowed. Residents are allowed to remit up to \$5,000 a transaction to their parents and children living abroad for living expenses and to their relatives abroad for wedding gifts or funeral donations, with no restrictions on the number of remittances;
- Residents may make payments abroad by credit card for expenditures relating to travel and tourism; for amounts exceeding \$5,000 a month, the foreign exchange authorities must verify the authenticity of the payments;
- Loans by residents to nonresidents have to be approved by the Ministry of Finance and Economy;
- For gifts, endowments, inheritance, and legacies, payments that exceed \$5,000 have to be approved by the Governor of the Bank of Korea;
- Overseas direct investment in the leasing and sale of real estate, construction, and the operation of golf courses are prohibited. No approvals or notifications are required for acquisition of overseas real estate by foreign exchange banks, government authorities, and residents if given as gifts or through inheritance from nonresidents. However, a notification to the BOK is required for the acquisition of real estate necessary for approved business activities costing up to \$10 million. For real estate necessary for approved business activities exceeding \$10 million, permission from the BOK is required.

Under a free floating system with free mobility of capital flows, the Korean won/dollar exchange rates might be expected to be excessively volatile. However, the Korean won has exhibited an impressive degree of stability since the latter half of 1998. As the Korean won steadily appreciated in 1998-99, the Korean government continued to accumulate foreign reserves by intervening in the foreign exchange market.

### *iii. Structural reform measures*

Structural reforms and restructuring measures have been actively carried out on two fronts: the financial sector and the corporate sector.

- Financial sector

The 1997-98 financial crisis demonstrated how Korea's financial sector had failed to keep pace with both the development of the real economy and Korea's integration into the world financial markets. Restructuring of the financial sector has been central to the structural reform program in Korea. As a first step before starting swift and prudent financial reforms, the government established an institutional and legal framework to coordinate and monitor the reform process. The IMF also advised the Korean government to implement a plan for the closure of nonviable financial institutions, which showed no possibility of being revamped, and the rigorous restructuring of others for rehabilitation.

Good progress has been made in consolidating the financial system and strengthening prudential regulations and supervision. During financial restructuring, public funds have been provided to ailing financial institutions. By 1999, the Korean government had mobilized fiscal resources of 64 trillion won, out of which 44 trillion won was used to recapitalize financial institutions, and the remaining 20 trillion won was injected to support the disposal of non-performing loans (NPLs). The Korea Asset Management Company (KAMCO) is in charge of purchasing and recovering NPLs, while the Korea Deposit Insurance Company (KDIC) pays off deposits and recapitalizes financial institutions.

When the second stage of the financial restructuring program was launched in September 2000, the initial plan to spend a total of 64 trillion won was regarded as wholly inadequate. Consequently, the government injected more public funds, amounting to 156 trillion won in total by May 2002 (equivalent to nearly 30% of GDP in 2001). To raise the money, KAMCO and the KDIC issued a total of 104 trillion won in restructuring bonds. The government guarantees the repayment of these bonds and pays the interest accruing on them from the budget. An additional 20 trillion won was raised through other means, and the government recycled some recovered funds for additional uses.<sup>15</sup> A quarter of the total funds was spent for the purchase of NPLs, 39% for recapitalization, 27% for repayment of deposits and other liabilities, and 10% for the purchase of assets and subordinated debt (Jun, 2002).

Although a great deal has been accomplished in restructuring and strengthening the financial sector in Korea, much more remains to be done. The IMF program did not consider the institutional and other constraints that could limit the effectiveness of financial sector reform measures. When the crisis broke out, the bank-oriented financial system was often blamed for the crisis. The IMF program, therefore, included a capital market development plan, in which capital markets complement and substitute for the banking system as a source of corporate financing. Although this plan is a reform objective, it can only be a long-term priority because the bank-dominated system cannot be replaced by a market-oriented system overnight (Park, 2001, p. 37). Rapid dismantling of the existing system (even flawed system) could create an institutional void.

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<sup>15</sup> These include contributions from the public capital management fund, government property management special account, Bank of Korea account, and loans from the ADB and IBRD.

- Corporate sector

The high level of corporate debt and weak corporate governance in Korea resulted in the debt-financed expansion by business conglomerates, raising Korea's vulnerability to the financial crisis. In the wake of the crisis, the Korean government made corporate restructuring a priority of its reform agenda. In the corporate sector, relevant laws and institutions have been reorganized to enable a market-based corporate restructuring. However, the changes to the legal and regulatory framework would have little immediate effect on improving companies' capital structure and profitability. The Korean government actively intervened in pushing forward corporate debt restructuring.

The government decided to classify corporations into three tiers that mirrored the structure of the Korean economy. At the top was the small cluster of powerful conglomerates, the so-called Top Five, that controlled a vast share of the country's productive and financial resources; next, a large group of medium-sized chaebols (ranked 6 to 64); and finally, SMEs. The government pushed the Top Five to submit voluntary restructuring plans. The main banks were to review these plans and work with the chaebols to prepare final plans by December 1998. The government also announced its proposal to use mergers and swaps among the Top Five to consolidate overlapping subsidiaries in key manufacturing industries (aircraft, autos, petrochemicals, power generation, rolling stock, semiconductors and ship engines). For the second tier chaebols, the government established an out-of-court workout scheme. The scheme was modeled along the Bank of England's London Approach.<sup>16</sup> The government set up several schemes to help SMEs obtain working capital and trade credit.

Market-led operational restructuring in times of a systemic crisis is extremely difficult. In the case of Korea, nearly all of the corporations suffered from liquidity problems. Reducing the debt-to-equity ratio is deemed desirable, but it is unclear why the Korean government under the IMF program aimed for such a drastic reduction in the corporate debt in such a short span of time.

The adoption of the London Rules for corporate restructuring was to some extent understandable in the absence of the market for bankruptcies and well-functioning court-based bankruptcy laws and institutions. In out-of court workout, the government was supposed to play the role of mediator, facilitating an orderly debt resolution, and banks were supposed to act as creditors, managing the workout of corporate debt; in most cases, however, the government dictated the process (Park, 2001).

When a bank was recapitalized through the injection of public funds, the government invariably controlled its management. The government-appointed bank managers were unwilling to change the status quo. They also had little incentive to collect overdue loans or to engage in

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<sup>16</sup> The London approach to corporate workout (out-of-court workout) differs from a court-supervised rehabilitation or receivership. The approach was taken because unlike the top-5 chaebols, most of the medium-size companies lacked access to bank credit or the capital markets and needed debt workouts or new loans to have any chance of meaningful restructuring. Preferential treatment was given in order to encourage banks to participate in the corporate restructuring process and to extend new loans to workout companies. However, it subsequently became clear that the lax provisioning requirement was a disincentive for banks to recognize true losses in debt workout cases and led to superficial corporate restructuring with debt rescheduling and long grace period. See Chopra *et al.* (2002) for more details.

workouts of weak but potentially viable corporate borrowers. The restructured banks have avoided corporate workouts as much as possible, so as not to increase their holdings of NPLs or to lower their profits. This moral hazard problem has therefore delayed corporate restructuring and resulted in a deterioration of bank asset quality (Park, 2001).

b) Policy responses in Malaysia<sup>17</sup>

i. *Early responses*

As with other affected countries in the region, Malaysia followed the orthodox approach to such a crisis, namely tightened fiscal and monetary policies, introduced measures to redress the balance of payment weakness, and floated the exchange rate. This approach was adopted because the economy was thought to be overheated, thus the main objective was to reduce excess demand. The government had proposed a 3% surplus for the 1998 budget on October 1997. The budgetary measures introduced included a 2% reduction in government expenditure, deferment of mega projects, and cutbacks on the government purchase of foreign goods.

On December 1997, an additional package of policy measures to further re-enforce the stabilization was announced. These measures were aimed at strengthening economic stability and instilling confidence in the financial system as the regional instability proved to be more protracted than was earlier anticipated. The package included a further 18% reduction in government expenditure, strict approval requirements for new investments and deferment of implementation of non-strategic and non-essential projects.

Regarding the financial aspects, a comprehensive set of measures were implemented such as reclassifying the non-performing loans (NPLs) in arrears from six to three months, greater financial disclosure by financial institutions and increasing general provisions to 1.5%. The reclassification of the NPLs was aimed at adhering to international financial practices and ensuring an earlier warning of the rising NPLs. The Bank Negara also raised the three-month intervention rate from 10% to 11%, increased the minimum risk-weighted capital adequacy ratio from 8% to 10% for finance companies and reduced the single customer limit from 30% to 25%. The level of provisions against uncollateralised loans was also raised to 20%. In addition, minimum capital for finance companies was increased from RM5 million to RM300 million and subsequently to RM600 million. The capital adequacy framework was also expanded to incorporate market risks. In view of the tight liquidity in the system, the statutory reserve requirement was reduced from 13.5% to 10%.

As a measure to strengthen the balance of payment position, a target was set to reduce the current account deficit from 5% to 3% of GDP in 1998 by limiting imports and increasing import duties. Stricter criteria were also introduced for new overseas investments to reduce the outflow of domestic capital.

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<sup>17</sup> See Jomo (2001) and Mahani (2002) for two comprehensive analyses.

## *ii. Counter-cyclical measures*

The implementation of the stabilization policy did not improve the economic situation. In fact, the economy continued to contract, capital outflow worsened and the ringgit exchange rate remained volatile and depreciated. Rejecting the IMF type prescription, Malaysia reversed its earlier response policies and adopted counter-cyclical measures to boost the domestic economy. This approach recommended the introduction of fiscal stimulus, relaxation of the monetary policy, and measures to ensure the stability of the banking system as well as selective capital controls. However, due to internal differences among the top political leadership on the question of crisis resolution, these measures only became fully effective in mid-1998.

### *- Fiscal stimulus programs*

With the reversal of fiscal policy stance in mid-1998, an additional development expenditure of US\$1.8 billion was allocated for agriculture, low and medium-cost housing, education, health, infrastructure, rural development and technology upgrading. The fiscal stimulus programs concentrated on infrastructure projects and an Infrastructure Development Fund (US\$1.6 billion) was established to finance essential projects. Social support was also given to the lower income group through direct transfers. These programs were aimed at keeping domestic activities going, particularly for small and medium scale contractors and industries that were very dependent on government projects.

The expansive policy fiscal turned the government fiscal position from a 2.4% surplus in 1997 to a deficit. In 1998, the fiscal deficit was 1.8% of GDP and it became larger subsequently to reach 5.8% in 2000 and 5.5% in 2001. These deficits were financed primarily from past savings, as the public debt level did not increase significantly during the 1998-2000 period (it hovered around 36% of GDP). However, the Malaysian government had to raise funds to continue with its fiscal expansion – in 2002 the ratio of public debt to GDP jumped to 46%. This was mainly financed from domestic sources.<sup>18</sup> The foreign share of the total public debt had increased marginally from 14.4% in 1997 to 16.7% in 2001.

### *- Easing the monetary stance*

An important early measure was to increase liquidity and reduce the cost of funds. In this regard, the statutory reserves requirement (SRR) was gradually reduced from 13.5% in February 1998 to 8% in July, 6% in September, and 4% in December 1998. With the reduction of the SRR, an additional US\$10 billion was injected into the banking system, which increased liquidity in the banking system, helping to overcome the tight liquidity problem caused by the introduction of the credit plan and cautious stance taken by banking institutions.

The initial response of increasing the interest rate had seriously affected the business community. In the first quarter of 1998, the effective lending rate was on average about 22%. Therefore, the immediate task was to reduce the cost of funds. The base lending rate (BLR) was reduced from a high of 12.3% in June 1998 to 6.8% in October 1999. Lending rates were

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<sup>18</sup> Since the early 1990s, the public sector had attained a surplus budget. Thus, there were some savings that could be used to finance the deficit. In addition, Malaysia had a high savings rate (35% of GDP) and a compulsory savings scheme where the government could access cheap financing.

consequently reduced from a high 24% in February 1998 to 7.9% in October 1999 and subsequently, in stages, to 6.4% in 2002. The lower borrowing costs and higher liquidity did not, however, produce high loan growth. Loan growth was only 1% in 1998 and 1999 as compared to 27% in 1997. The low loan growth was due to both demand and supply factors: business conditions were still so lethargic for reviving new investments. Moreover, bankers were more cautious in extending loans to businesses.

- Selective capital controls

A key policy response target was to stabilize the ringgit. In September 1998, Malaysia implemented selective capital controls consisting of two inter-related parts: stabilization of the ringgit (which was pegged to RM3.80/US\$1) and restrictions on the outflow of short-term capital, which was needed to ensure that the ringgit peg could be sustained. The measures implemented to support the peg and control capital flows were as follows:

- All settlement of exports and imports must be made in foreign currency;
- Travelers not allowed to import and export ringgit exceeding RM1,000 per person;
- Limit on export of foreign currency by resident travelers was raised to RM10,000;
- Residents are required to seek prior approval for remitting funds in excess of RM 10,000 for overseas investment purposes;
- Residents are permitted to obtain credit facilities in foreign currency up to the equivalent of RM5 million. Any amount exceeding the permitted limit requires prior approval;
- Residents are not allowed to obtain credit facilities in ringgit from non-residents without prior approval;
- Proceeds in ringgit received by non-residents from the sale of any securities must be retained in the external account and be converted into foreign currency after one year; and
- The ringgit is not legal tender outside Malaysia.

The capital control measures affect the transfer of funds among non-residents via non-resident external accounts, the import and export of ringgit by travelers (both residents and non-residents) and investments abroad by Malaysian residents. Similarly, non-residents are proscribed from raising credit domestically for the purchase of shares. Non-resident portfolio investors are required to hold their investments for a minimum of twelve months in Malaysia. However, capital controls do not impede current account transactions (trade transactions for goods and services), repatriation of interest, dividends, fees, commissions and rental income from portfolio investments and other forms of ringgit assets, and flows and outflows (including income and capital gains).

The selective capital controls were modified on February 1999 with the quantitative control (the requirement stipulating that proceeds from the sale of ringgit assets be kept in the country for one year) being replaced by a price-based regulation called an exit levy. The aim was to enable foreign short-term investors to estimate the cost of investment in Malaysia. This easing of capital control consisted of two parts:



For capital brought into Malaysia before February 1999, an exit levy was imposed on the principal at the following rates:

- ❑ 30% for a maturity period of 7 months
- ❑ 20% for a maturity period of 9 months
- ❑ 10% for a maturity period of 12 months
- ❑ No levy was charged on capital with a maturity period of more than 12 months.

For capital brought in after February 15, 1999, a levy was imposed on the profits made at the following rates:

- ❑ 30% for a maturity period of less than 12 months
- ❑ 10% for a maturity period of more than 12 months

Although these relaxations were introduced, controlling the flow of short-term capital was still the primary objective. A further relaxation was introduced in September 1999 on the exit levy - the two-tier system was reduced to a flat rate of 10% on profits repatriated. The exit levy was abolished on May 2001. Currently, the only remaining capital controls are the pegging of the ringgit and the limitations on the outflow of domestic capital.

Another measure that significantly affected portfolio investors was the requirement that all dealings in securities listed on the KLSE were to be affected only through the Kuala Lumpur Stock Exchange or through a stock exchange recognized by the Malaysian authority. Consequently, trading of the 112 Malaysian companies on the Central Limit Order Book (CLOB), the over-the-counter market of Malaysian securities in Singapore, was discontinued by the Singapore Stock Exchange in September 1998.

- Ensuring the stability of the banking sector

Besides reviving economic activities, the Malaysian policy measures also focused on restoring the stability of the banking sector. The core problem was the rising NPLs that had weakened the capital base of some banking institutions. As a result, these banking institutions were unable to perform their intermediary function, including extending loans for economic activities. Thus, in order to restore the stability of the banking sector and to restructure corporate debt, the Malaysian government established three institutions, namely an asset management company to remove the NPLs, a recapitalization agency to inject new capital into the troubled banking institutions, and a corporate debt restructuring committee.

An asset management company (Danaharta) was established in June 1998 to manage the NPLs of financial institutions. Its main objective was to remove the NPLs from the balance sheets of financial institutions at a fair market value and to maximize their recovery value. This would free the banks from the burden of debts that had prevented them from providing loans to their customers.

As the capital base of banks had been affected by the decline in share prices and NPLs, these banks needed to be recapitalized. For this purpose, a Special Purpose Vehicle (Danamodal) was set up in July 1998 to capitalize banks facing difficulties and especially to top-up their

capital, which was reduced when Danaharta took over the NPLs. The injection of capital was intended to enhance the resilience of the banks and to increase their capacity to grant new loans so to speed up the economic recovery process.

To complement the restructuring of the financial system by Danaharta and Danamodal, the Corporate Debt Restructuring Committee (CDRC) was set up in August 1998 to facilitate debt restructuring of viable companies, through voluntary solutions. The aims of the restructuring exercise were to minimize losses to creditors, shareholders and other stockholders, to avoid placing viable companies into liquidation or receivership, and to enable banking institutions to play a greater role in rehabilitating the corporate sector. The CDRC devised a market-approach debt-restructuring plan to enable creditors and debtors to solve their debts without resorting to legal procedures. It also brought together all interested parties to assist in the corporate debt restructuring. The CDRC ceased its operations on July 2002.

As of December 2001, Danaharta had successfully disposed of a total of US\$13 billion in NPLs. In the process of removing the NPLs, financial institutions had to share the losses -the average discount rate for NPLs was 55%. Danamodal injected US\$2 billion into 10 financial institutions, pre-empting any potential systemic risks to the financial sector. As a result, the capital adequacy ratio of the recapitalized financial institutions rose to 11.7% to become almost at par with the industry level (12.6%). Most of the recapitalized institutions have repaid Danamodal's capital injection. By mid-2001, CDRC had taken on 75 cases, representing RM47 billion in debts, and had resolved 33 of them, representing RM28 billion.

Malaysia has moved to another stage in its banking sector restructuring – the 58 financial institutions have now been merged into 10 banking groups. Each of the banking groups may offer a complete range of financial services such as merchant banking, fund management and stockbroking services.

#### - Liberalization of foreign direct investment

Realizing the contribution that foreign capital could make to the recovery of the economy, the Malaysian government liberalized selected sectors in which it was comfortable with foreign presence and in which it could maximize the gains from foreign capital injection. Thus, in the manufacturing sector, Malaysia relaxed its rules on equity ownership by allowing 100% foreign ownership for investments made before the end of December 2003. Previously, only companies that fully exported their products were allowed full foreign ownership.

Equity liberalization was also carried out in other areas. Meanwhile, the 30% pre-crisis limit on foreign ownership in the telecommunications, stockbroking and insurance industries was raised to 61%, 49%, and 51%, respectively, although the limit for the telecommunications industry is scheduled to be reduced to 49% after five years.

In addition, foreigners are now permitted to purchase all types of properties above RM250,000 for new projects or for projects that are 50% completed to reduce excess real estate supply. Previously, there were restrictions on foreigners buying landed properties.

- Corporate governance

To complement the recovery measures, Malaysia also strengthened its corporate governance regime. Although Malaysia had implemented measures for good corporate governance practice, the crisis highlighted some of the shortfalls of the existing regime. Additional measures were introduced in order to achieve improved transparency and disclosure standards, more accountability of company directors and protection of minority shareholders' rights, among other intermediate objectives.

### 3. Assessment of the adjustment processes in Korea and Malaysia

Both Korea and Malaysia experienced the crisis starting in 1997. The exchange rate in both countries severely depreciated and the GDP growth rate plunged in 1998. Then they showed a sharp V-shaped recovery. Despite this successful recovery, as explained in sections 1 and 2, the detailed measures they used to deal with the crisis were remarkably different. The main differences are summarized as follows. First, while Korea sought IMF assistance immediately after the crisis and adopted the macroeconomic structural adjustment therapies prescribed by it, Malaysia refused to rely on the IMF and paved its own path to recovery. Second, while Korea liberalized its capital market more extensively after the crisis, Malaysia imposed capital controls instead; however, both retained or imposed some restrictions on outflows by residents. Third, Korea's exchange rate became, at least officially, completely floating, but Malaysia's exchange rate was completely fixed, pegged to the U.S. dollar. Fourth, both countries used actively fiscal policy, moving from a surplus before the crisis toward a significant deficit. Korea made a faster move into a mild deficit in 1997 and to a large one, 4.2% of GDP, in 1998. Interestingly, with the resulting recovery of economic activity, the deficit was reduced to 2.7% in 1999, and the balance returned to a surplus in 2000. Malaysia moved much delayed into countercyclical fiscal policy in 1998 and subsequently has remained in deficit.

Among the differences, the most striking ones are those related to capital controls and the exchange rate regime. In particular, it is the capital controls that allowed Malaysia to maintain the fixed exchange rate and to start to reflate its economy right away. Hence, most researchers have focused on the role that capital controls played in Malaysia's recovery process.

Despite these differences, rebounds of both Korea and Malaysia were as drastic as their plunges. Park and Lee (2001) find that the impressive recoveries have been faster than earlier episodes of similar recoveries in other parts of the world.<sup>19</sup> While the growth rates in Korea and Malaysia sometimes diverge before 1997, they show a remarkably similar pattern from 1997 when the Asian crisis started. Both countries experienced the most severe recession in 1998, exactly one quarter apart: Korea's lowest growth rate was -8.1% in 1998 Q3 and Malaysia's was -11.2% in 1998 Q4. Thereafter, both countries rebounded quite rapidly so that the growth rates for the following three quarters were -5.9%, 5.8% and 11.2% for Korea and -1.0%, 4.8% and 9.1% for Malaysia.

The above findings indicate that, at least, the capital controls did not produce adverse results for Malaysia. However, a number of researchers discount the role of the capital controls in Malaysia's recovery on the ground that Korea managed to recover without imposing capital controls. Krugman (1999), one of the earliest proponents of capital controls (Krugman, 1998), asserts that the financial panic was coming to an end just about the time that Malaysia decided to impose the controls. Nonetheless, he also states that "it would now be foolish to rule out controls as a measure of last resort".

On the other hand, there are also a number of studies showing that Malaysia's capital controls have been more successful than in other cases. Kaminsky and Schmukler (2000) and

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<sup>19</sup> All the data in this section have been obtained from the Asian Recovery Information Center (<http://aric.adb.org>).

Edison and Reinhart (1999) find that in Malaysia the capital controls did produce the intended results of greater interest rate and exchange rate stability and more policy autonomy.

Kaplan and Rodrik (2001) go even further, asserting that the capital controls allowed Malaysia a speedier recovery than would have been possible via the orthodox policies of the IMF. This assessment crucially depends on the different timing they impose on Malaysia's recovery process. Most other studies, explicitly or implicitly, assume that the crisis and recovery occurred simultaneously in Korea and Malaysia. However, Kaplan and Rodrik argue that Malaysia's situation at the time of its capital controls was much worse than Korea's. In fact, they claim that Malaysia's imposition of capital controls could be viewed as the equivalent of Korea's appeal to the IMF for assistance. The difference in timing is about three quarters. Because Malaysia's recovery process, which started with its introduction of capital controls, was superior to Korea's, which started three quarters earlier, Kaplan and Rodrik conclude that the capital controls were more effective, eradicating Malaysia's financial pressures so quickly that the country was able to recover at a faster rate than Korea.

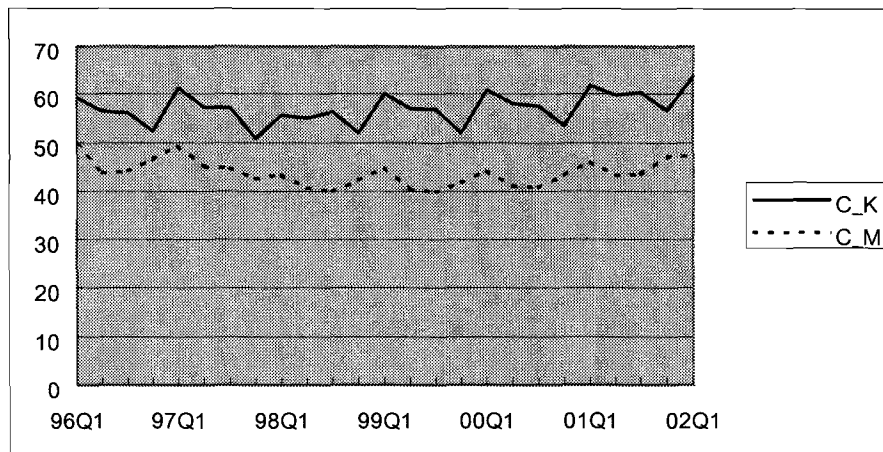
While Kaplan and Rodrik's research is quite interesting, juxtaposing Malaysia's recovery process three quarters later to Korea's is disputable. In fact, Korea's minimum GDP growth rate leads Malaysia's by just two quarters. Malaysia's recovery process of GDP lags behind Korea's by one quarter. Further, while Malaysia bounces back more quickly (from  $-11.2\%$  to  $-1.0\%$  vis-à-vis  $-8.1\%$  to  $-5.9\%$  in Korea), its peak growth rate is lower than Korea's. Hence, it is not evident which recovery process is unequivocally better.

If we examine the components of GDP in the recovery process, there are additional differences between Korea and Malaysia. Figure 1 shows changes in the share of private consumption and investment in GDP from 1996 Q1 to 2001 Q1. Panel A is the consumption share in GDP. As implicated by any standard theory of consumption smoothing, the consumption share shows remarkable stability in both countries. However, the consumption share is slightly lower in the crisis period.

Panel B in Figure 1 shows that investment was indeed most devastatingly affected by the crisis. In both countries the investment share drastically decreased during the recession and did not recover fully until 2001. An interesting point to note is that while Malaysia's investment share before the crisis was higher than Korea's, it becomes slightly lower after the crisis. We believe that this is closely related to the fact that Malaysia was heavily dependent on FDI in the formation of investment before the crisis, but FDI inflows did not fully recover after the crisis. We will return to this issue later in more detail.

**Figure 1**  
**Changes in GDP shares of expenditure components**

**A. Consumption**



**B. Investment**

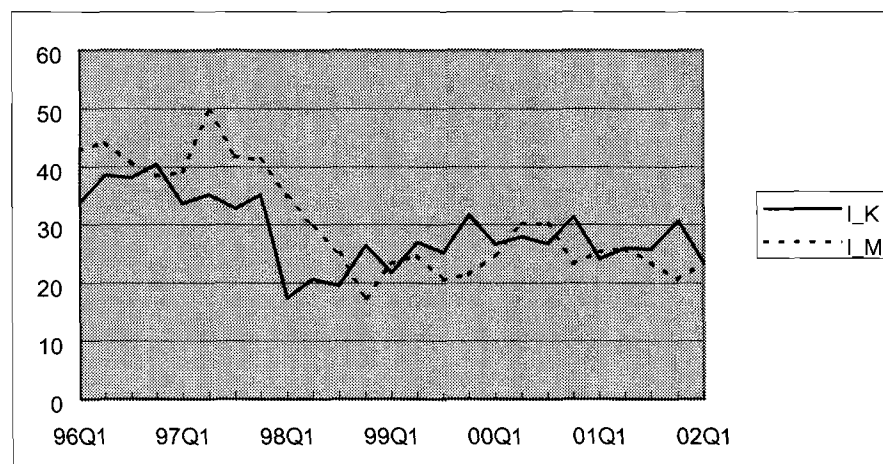
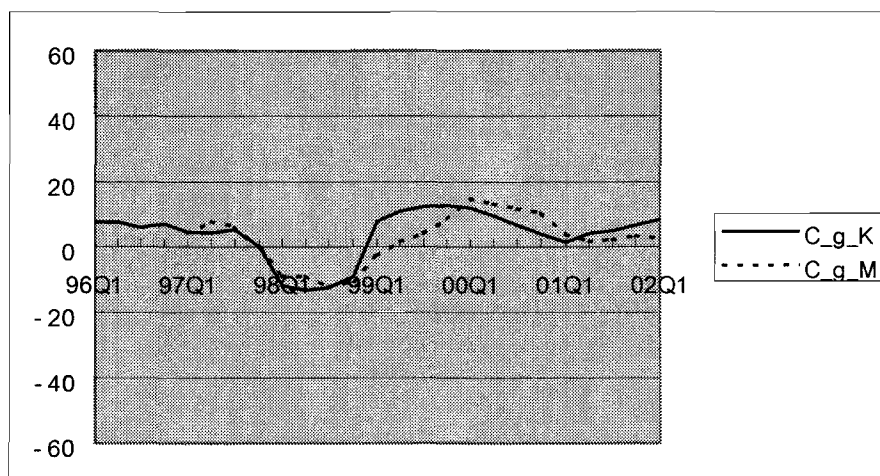


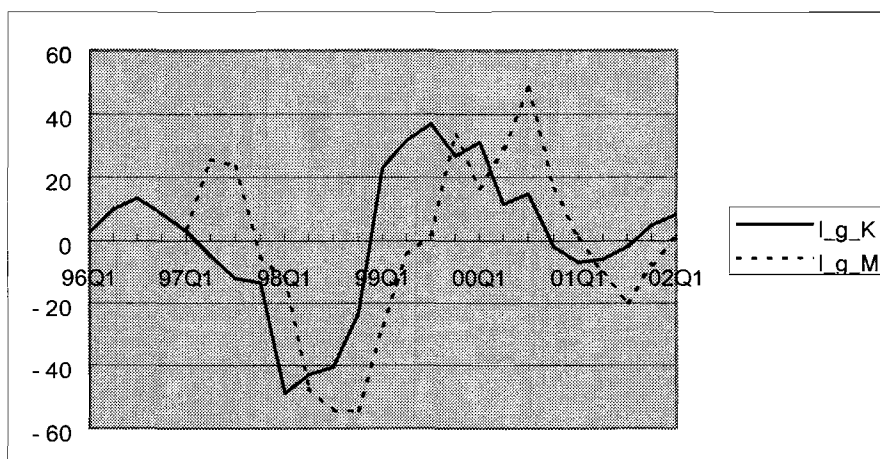
Figure 2 shows the growth rate of components of GDP for both countries from 1996 Q1 to 2002 Q1. Again we can confirm from Panels A (consumption) and B (investment) that the consumption growth rate fluctuates much less than the investment growth rate in both countries. Panels C and D show the growth rates of exports and imports. Interestingly the growth rate of imports fluctuates more than that of exports in both countries. Further, the fact that growth of imports at the beginning of the recovery remained negative in both countries, accompanied by a positive growth rate of exports, seems to have contributed to the recovery process.

**Figure 2**  
**Growth rates of expenditure components**

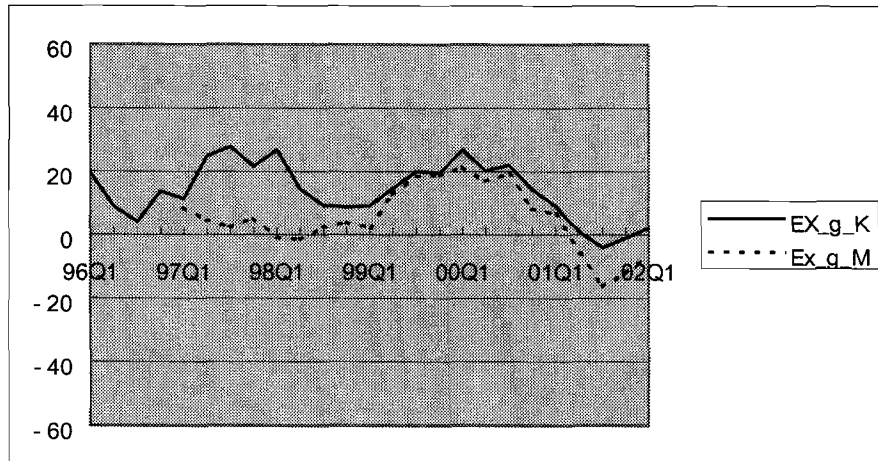
A. Consumption



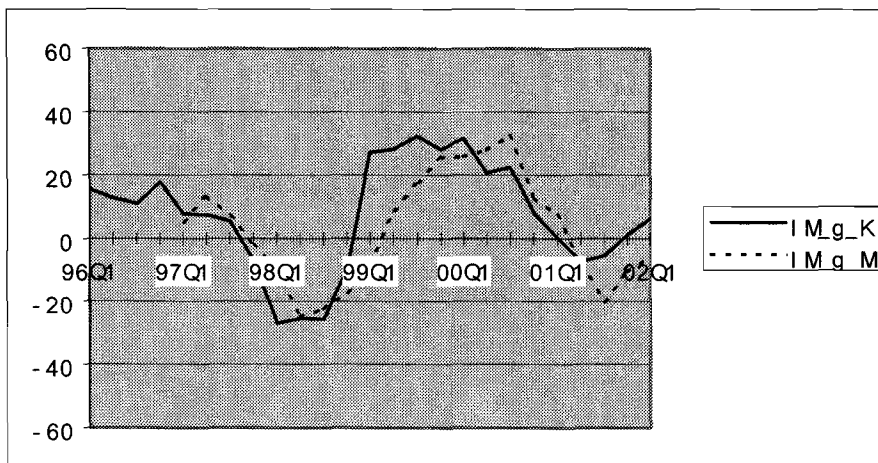
B. Investment



### C. Exports



### D. Imports



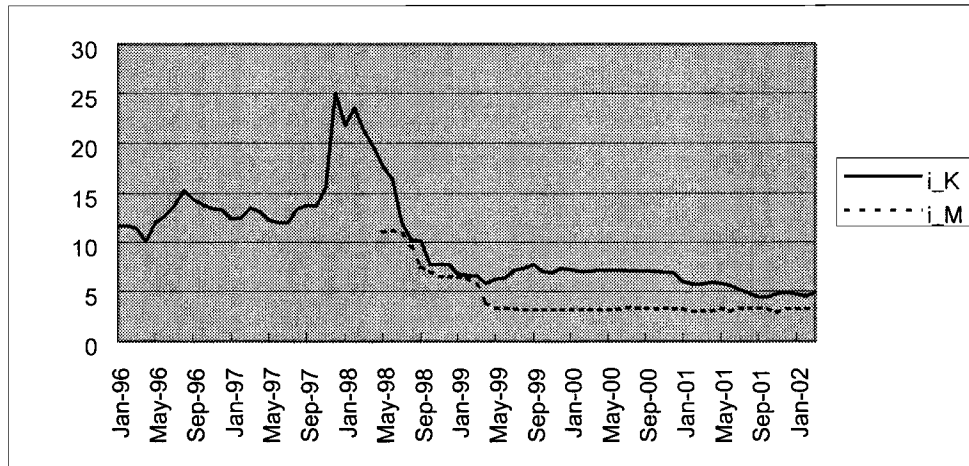
Note: Due to the lack of quarterly data, all the series start from 1997 Q1 for Malaysia.

Another important factor in the recovery process was monetary policy.<sup>20</sup> While Korea initially maintained a high interest rate as recommended by the IMF, its subsequent lowering of the interest rate seems to have helped the recovery process. Figure 3 shows monetary policy stances of both countries in terms of the three-month inter-bank lending rate. In Korea, the annualized lending rate jumped from 15.5% in November 1997 to 25% in December 1997 and then remained above 16% until June 1998. Then, it fell to 12% in July 1998; subsequently, to 10%, and substantially lower afterwards. In Malaysia, the lending rate decreased to 9.5% in August 1998, which is lower than the 12.3% average for the entire year 1998, but a more substantial decrease of the interest rate immediately followed the capital controls in September 1998 and remained lower than 7% afterwards.

<sup>20</sup> In general, however, Park and Lee (2001) find that monetary policy is less important than fiscal policy for post-crisis recovery in 95 episodes of crises during the period from 1970 to 1995.



**Figure 3**  
**Monetary variables (three month inter-bank lending rate)**



Note: The available quarterly interest rate series for Malaysia starts from 1998 Q2 for Malaysia.

In general, there was concern that a sharp depreciation of the domestic currency would create inflation. However, for both Korea and Malaysia, the financial crisis led only to a small increase in inflation, which enabled both countries to adopt expansionary policies. Figure 4.A shows the inflation rates for both countries. During the crisis, the inflation rate was slightly over 7% in Korea and it was modest at around 5% in Malaysia. In particular, Malaysia's inflation rate has further stabilized recently. The main factor that prevented the inflation rate from jumping during the crisis was the drastic fall in domestic demand, particularly investment demand. Even during the recovery, both countries' strong manufacturing sectors with excess capacity were able to meet the higher demand without generating further inflation.

Panel B in Figure 4 shows the change in the unemployment rate in both countries. The unemployment rate in Malaysia was not particularly high even during the crisis, partly because the large group of immigrant workers in Malaysia at the time absorbed the severe impact of the economic recession, causing many of them to leave Malaysia for their home countries.

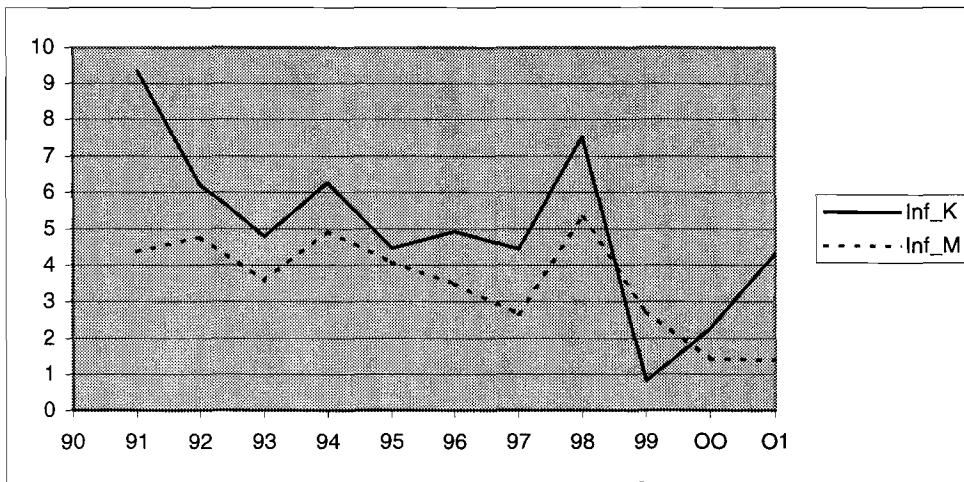
In Korea, the financial crisis took a heavy toll on the labor market, but the labor market showed significant flexibility in response to the crisis, both in terms of prices and quantity. Faced with the collapse in demand in the wake of the crisis, firms slashed both wages and employment. Nominal wages fell by an average of 2.5% in 1998, or by 9% in real terms. The decline in nominal wages was the first since 1970. Layoffs were concentrated in SMEs where the highest rate of bankruptcies was recorded, as well as in the financial sector. By contrast, with few exceptions, chaebols did not undertake large-scale layoffs, although many reduced their workforces through voluntary separation and early retirement packages.

Unemployment in Korea, which averaged about 2.5% during 1990-97, rose sharply following the crisis to peak at 8.7% in February 1999. The unemployment problem was moderated by a significant decline in the labor force participation rate, mainly as a result of the

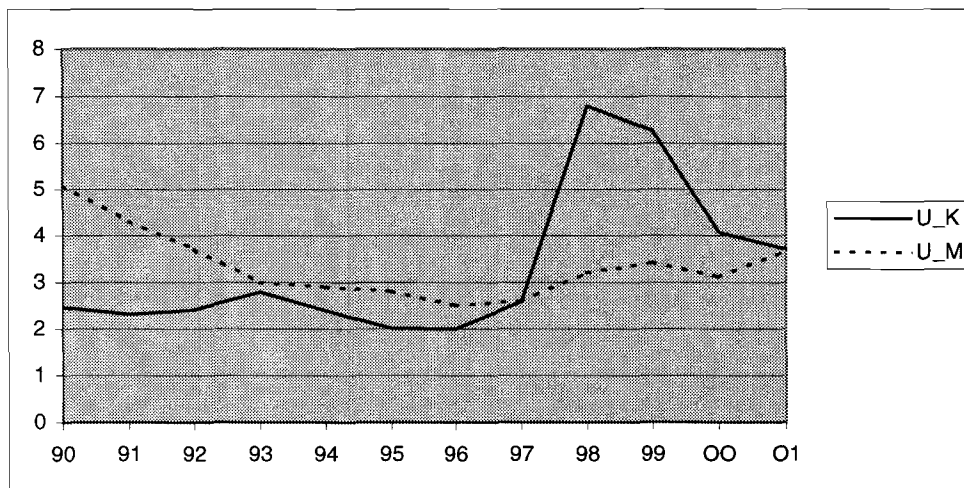
postponement of job search by younger workers and a substantial withdrawal from the labor force by discouraged female workers. As dramatic as the movement of GDP was the drop in the unemployment rate to almost the pre-crisis level in the year 2002 (3.1%; see table 4). The fact that the crisis was relatively short-lived, along with the existence of a newly and rapidly developed information technology sector, in particular in the small and medium-sized business sector, contributed to the rapid restoration of the unemployment rate.

**Figure 4**  
**Inflation and unemployment rates**

**A. Inflation rate**



**B. Unemployment rate**



So far we have found that, despite some differences in details, Malaysia was almost as successful as Korea in its economic recovery. While Malaysia chose to take the heterodox route by adopting capital controls, its recovery was remarkable. The capital controls on outflows seem to have been successful. Further, as emphasized by “second-generation” models of currency crises, even an economy with strong fundamentals can face credit panic and a run on reserves due to a loss of market confidence. In such cases, a temporary suspension of capital outflows can stop the run and eliminate the bad equilibrium. In the case of Malaysia, the existence of an active offshore securities and ringgit market provided an important and critical aspect of the usefulness of capital controls in managing a “second-generation” type of crisis. As shown by evidence of pressures on the exchange rate, the ringgit continued to face severe pressure from January 1998 up to the time when the selective capital controls were introduced. On the other hand, the currencies of the other crisis-hit economies had already stabilized by then.

For capital controls to be successful, it is crucial for the crisis country to be fundamentally strong. If the crisis is due to fundamental problems, then the second-generation models are not applicable and the crisis can end only when the fundamental problems are eliminated. Then, why did Korea, which was as fundamentally strong as Malaysia, not choose to follow the same route? We believe that, while capital controls were a tempting choice for Korea, Korea may have worried about the possible side effects. Furthermore, Korea was not free from the IMF’s advice under the IMF program.

As regards capital account liberalization, the Korean government opted for a “big bang” approach by substantially accelerating its ongoing liberalization plan. In reference to the IMF program, one can say that the IMF is a veiled agent of a Wall Street-Treasury complex that is expanding its domain of influence. Under the IMF program, the Korean government agreed to undertake bold liberalization measures. In fact, the government pursued a far more extensive capital market opening than what had been agreed upon with the IMF. The goal was simply to stabilize the exchange market by attracting more foreign capital. Korea was facing an increased demand for the liquidation of foreign currency claims. On the other hand, there was little risk of domestic capital flight, because of limits on the ability of domestic residents to take capital out of the country.

#### **4. Policy implications**

The macroeconomic adjustment processes in both Korea and Malaysia have generally been consistent with the stylized cross-country pattern of V-shaped recovery. However, the recovery has been far greater in Korea and Malaysia than in other crisis-hit countries. In this section we discuss the policy implications of the experiences of the two countries.

First, the standard solutions are not the only effective ways of dealing with a crisis. In deciding on the appropriate response measures, it is critical for policy makers to be fully cognizant of the real causes of the crisis and the initial domestic conditions and capacity. Under some circumstances, capital controls with an expansionary policy can be as effective as the standard solutions, at least in the short run. However, strong economic fundamentals are essential in enabling a country to choose different response measures. These fundamentals not only include all macroeconomic factors but industry-level factors as well. For example, manufacturing industries must also be efficient in order to take advantage of the recovery, the financial system must be well capitalized and supervised, and there must be sufficient domestic sources of funding. Under such circumstances, a country will be freer to choose the measures that best suit domestic conditions since it will not be dependent on external financing.

Second, the swift change toward an expansionary macroeconomic policy stance helped the two economies recover quickly. The positive role of counter-cyclical macroeconomic policies in the post-crisis recovery, including fiscal and monetary policies, raises the question of whether the initial monetary and fiscal tightening was kept high for too long, and as a consequence deepened the crisis in Korea. In Malaysia, the expansionary monetary policy was essentially possible due to the capital controls. A policy of a high interest rate to stabilize the exchange rate would have had serious implications in Malaysia because of the country's large domestic banking debt. Although Malaysia was less vulnerable to external shocks mainly due to a more stable pattern of capital movements (smaller share of short-term external debt), an expansionary monetary policy could not have been effectively implemented without the capital controls. Related to this, capital account liberalization should be properly sequenced and even some controls on foreign debt may be necessary.

Third, in both countries, a favorable external environment and more export-oriented economic structure helped the quick recoveries. As the crisis was induced by the private sector, the domestic private sector was not a likely candidate to lead the recovery. As a consequence, an expansionary fiscal policy played a leading role in the recovery of economic activity in both economies. Maintaining a current account surplus also helped to boost domestic demand and stabilize the exchange rate. Robust export growth propelled the strong recovery in the manufacturing sector. Since the manufacturing sector generated a large share of GDP in both countries, it became the engine of recovery. The resulting large trade surpluses also boosted international reserves, turning a negative current account balance into a positive one and injecting liquidity into the economy. This trade surplus was useful for reviving consumer demand and financing recovery measures, particularly during the early crisis period.



## REFERENCES

- Agosin, M.R. (2001), "Korea and Taiwan in the financial crisis", in R. Ffrench-Davis (ed.), *Financial Crises in Successful Emerging Economies*, ECLAC/Brookings Institution Press, Washington, D.C.
- Athukorala, P. (2001), *Crisis and Recovery in Malaysia: The Role of Capital Controls*, Edward Elgar Publishing, Cheltenham.
- Borensztein, E. and J. Lee (2000), "Financial crisis and credit crunch in Korea: Evidence from firm-level data", *IMF Working Paper* 00-25, International Monetary Fund.
- Cerra, V. and S. C. Saxena (2003), "Did output recover from the Asian crisis?", *IMF Working Paper* No. 03-48, International Monetary Fund.
- Chopra, A., K. Kang, M. Karasulu, H. Liang, H. Ma, and A. Richards (2002), "From crisis to recovery in Korea: Strategy, achievements, and lessons", in D.T. Coe and S. Kim (eds.), *Korean Crisis and Recovery*, International Monetary Fund and Korea Institute for International Economic Policy.
- Danaharta, *Annual Report*, Kuala Lumpur, various issues.
- Edison, H. and C. Reinhart (1999), "Stopping hot money", *Working Paper*, University of Maryland.
- Feldstein, M. (1998), "Refocusing the IMF", *Foreign Affairs* 77, pp. 20-33.
- Furman, J. and J. E. Stiglitz (1998), "Economic crises: Evidence and insights from East Asia", *Brookings Papers on Economic Activity* 2, pp. 1-136.
- International Monetary Fund (IMF) (2000), *Republic of Korea: Economic and Policy Development*, IMF Staff Country Report N° 00/11, February.
- Jomo, K. S. (2001) (ed.), *Malaysian Eclipse: Economic Crisis and Recovery*, Zed Books Ltd., London.
- Jun, J. (2002), "Fiscal policy during and after the crisis in Korea", paper presented at the International Conference on *The Korean Economy: Beyond the Crisis*, Seoul, October 4-5.
- Kaminsky, G. and S. Schmukler (2000), "Short-lived or long-lasting? A new look at the effects of capital controls", in S. Collins and D. Rodrik (eds.), *Brookings Trade Forum 2000*, The Brookings Institution, Washington D.C.
- Kaplan, E. and D. Rodrik (2001), "Did the Malaysian capital controls work?", *NBER Working Paper* No. 8142, Cambridge, Mass.

- Kim, S., S.H. Kim, and Y. Wang (2001), *Capital Account Liberalization and Macroeconomic Performance: The Case of Korea*, Policy Analysis 01-01, Korea Institute for International Economic Policy.
- Krugman, P. (1999), "Capital control freaks – How Malaysia got away with economic heresy," *Slate*, posted September 12.
- \_\_\_\_\_ (1998), "Saving Asia: It's time to get radical," *Fortune*, issue date September 7.
- Mahani, Z. A. (2002), *Rewriting the Rules: The Malaysian Crisis Management Model*, Prentice Hall, Kuala Lumpur.
- Malaysia, *Treasury Economic Report*, Ministry of Finance, Kuala Lumpur, various issues.
- OECD (2001), *OECD Economic Outlook*, No. 68, Organization for Economic Cooperation and Development, June, Paris.
- Park, Y. (2001), "The East Asian dilemma: Restructuring out or growing out?", *Essays in International Economics* N° 223, Department of Economics, Princeton University, Princeton, New Jersey.
- \_\_\_\_\_ and J. Lee (2001), "Recovery and sustainability in East Asia", *NBER Working Paper* 8373, Cambridge, MA.
- \_\_\_\_\_, C. Chung, and Y. Wang (2001), "Fear of floating: Korea's exchange rate policy after the crisis", *Journal of the Japanese and International Economies* 15, pp. 225-251.
- \_\_\_\_\_ and Y. Wang (2002), "What kind of international financial architecture for an integrated world economy?", *Asian Economic Papers* 1:1, pp. 91-128.
- Radelet, S. and J.D. Sachs (1998), "The East Asian financial crisis: Diagnosis, remedies, prospects", *Brookings Papers on Economic Activity* 1, pp. 1-74.
- Rodrik, D. and A. Velasco (2000), "Short-term capital flows", *Annual World Bank Conference on Development Economics 1999*, World Bank, Washington D.C.

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