1 Introduction

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Korea's rapid growth since the early 1960s has indeed been a wonder. Over three decades until the mid-1990s, annual real income growth in Korea averaged over 8 percent. If a country grows by 8 percent each year, its national income will double every decade; if that growth trend continues for thirty years, national income will record a stunning tenfold increase. The small city-state economies of Hong Kong SAR and Singapore also enjoyed rapid growth comparable to Korea's over the same period. But it was a much bigger accomplishment for a country of almost 50 million people to sustain such high growth for more than three decades.

In stark contrast to this remarkable achievement, the honor student of economic growth was down on its luck in the late 1990s when it suddenly faced a financial crisis and its economy crashed. In 1997, consecutive bankruptcies of several large chaebol (Korean industrial conglomerates), coupled with financial crises or foreign exchange instability in Thailand and other East Asian countries, weakened investor confidence in Korea. As a result, foreign banks refused to roll over credit lines to Korean financial institutions and foreign investors pulled out of Korea *en masse*. By mid-December 1997, Korea's foreign exchange reserves were almost depleted. Korea, like a number of other economically vulnerable crisis-hit countries, had no choice but to ask for a rescue package from the International Monetary Fund. The crisis led to a sharp contraction of economic activity in 1998—a *negative* 6.7 percent growth, the worst in modern Korean history. Many Koreans considered the 1997 crisis to be the most critical national crisis since the Korean War in the early 1950s, and the worst national disgrace since the 1910 Japanese Annexation.

How can this sharp contrast between high growth and economic debacle be explained? What caused Korea's three decades of high growth to come to

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an abrupt halt? Was the crisis a short-term liquidity shock that would be quickly overcome in the context of an otherwise strong economy, or did it reveal more fundamental underlying problems built up during the thirty-year period of rapid economic growth?

Regardless of the causes, Korea was on the brink of bankruptcy in November 1997. On December 3 of that year, Korea and the IMF signed a three-year Stand-By Arrangement. The arrangement included financing for a total of US$58 billion from the IMF, the World Bank, the Asian Development Bank, and a group of countries—the largest rescue package in the history of the IMF.

The financing was not provided unconditionally. The condition was that Korea had to agree with the IMF about macroeconomic as well as financial and corporate restructuring policies during the three years of the program. The Fund recommended to the Korean government a short-term macroeconomic policy focused on high interest rates to restore the plummeting confidence of overseas investors during the early months of the crisis. A concerted effort to persuade foreign creditors to roll over short-term debt was also launched in late December 1997, followed by a more comprehensive rescheduling of maturing debt. The Fund also recommended that the government implement various policies to restructure and reform the heavily indebted corporate sector dominated by the chaebol and the financial sector saddled with non-performing loans.

Were the policies agreed with the IMF and pursued during the crisis appropriate? For example, did the high interest rate policy induce a fast economic recovery by stabilizing the foreign exchange market, or did it deepen the crisis and delay economic recovery? Was it really necessary to restructure the financial and corporate sectors, which, after all, had contributed importantly to thirty years of rapid growth? Indeed, was not there the risk that potentially misguided changes to the fundamental structure of the economy in reaction to a transitory shock would damage Korea's long-run growth potential? Or was it necessary to exorcise long-standing weaknesses masked by rapid economic growth?

There are many questions about the nature of the Korean crisis and the effectiveness of the policies adopted to resolve the crisis. In the early stage of the crisis, IMF recommendations to Korea and other crisis-hit Asian countries sparked heated debates, both in Korea and abroad. The disparity between arguments in favor of and against the IMF's policy recommendations was as sharp as the contrast between the high-growth period and the crisis. During the crisis and the early post-crisis period, it was difficult to judge which side—the critics or supporters of the IMF program—was correct, since the full effects of the policies adopted during the program were not yet apparent. A considered

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evaluation of the effectiveness and appropriateness of the IMF's policy recommendations during the crisis would require the passage of a certain amount of time.

In May 2001, three and one-half years after the outbreak of the crisis, the Korea Institute for International Economic Policy and the IMF organized a conference on the Korean crisis and recovery. The objective of the conference was to distill lessons based on an analysis of the crisis and recovery, and the effects of the policies implemented under the IMF-supported program. At the time of the conference, considerable data on the effects of the policies under the program were available, enabling serious study and analysis. In addition, as the IMF program came to an end in December 2000, the conference was able to review all policies implemented during the three years of the program. It was recognized, of course, that the papers presented at the conference would not provide unambiguous answers to all, or indeed even to most, of the key questions about the nature of the Korean crisis and the policies recommended by the IMF and implemented by the Korean government during the program.

There were a number of features that distinguished the conference from other conferences on currency or financial crises. First, most of the papers presented in the conference focused on a single country. Second, a wide spectrum of authors contributed papers, ranging from economists who were critical of IMF policies to staff of the IMF and the World Bank and Korean government officials who participated in the design, development, and implementation of economic policies. The organizers of the conference intended to invite diverse views and methodologies that would allow a balanced perspective on policies recommended by the IMF. Third, one-half of the papers were written by Korean economists from the crisis-hit country and one-half by foreign economists, and similarly for the discussants. This arrangement was intended to enhance synergy between studies by foreign experts with a comparative advantage of looking at the Korean crisis from a global perspective, and those by Korean economists with a comparative advantage in understanding the Korean economy, institutions, political economy, culture, data, and so on.

Thirteen papers on the Korean crisis and policy issues were presented at the two day conference. The first session was an overview of the Korean crisis and recovery and an overall assessment of the policies implemented during the IMF program. To begin, an "umbrella" paper by Ajai Chopra, Kenneth Kang, Meral Karasulu, Hong Liang, Henry Ma, and Anthony Richards—members of the IMF's Asia and Pacific Department then working on Korea—reviews the origins of the crisis and the macroeconomic stabilization and structural reform policies of the IMF-supported program (Chapter 2). Based on their review of the crisis and policies, they suggest that the primary factors causing

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the 1997 crisis were structural weaknesses—notably a weak financial sector with limited ability to assess risk and an over-leveraged corporate sector with insufficient attention to profitability—that left the Korean economy vulnerable to external shocks. Regarding monetary policy, the authors conclude that the initial policy of high interest rates, quickly supplemented by the coordinated debt rollover, helped stabilize the exchange rate and financial markets. On financial sector reforms, the authors underline achievements, such as closures of nonviable financial institutions and reforms of prudential regulations and supervision, but stress the need for the government to privatize its stake in a number of large banks. Corporate sector reforms also made progress in terms of financial disclosure and corporate governance, but Korea's corporate sector remains highly leveraged and continues to suffer from low profitability, indicating the need for more operational reforms. Based on this review, the authors draw lessons from the Korean experience, focusing on crisis prevention and management and also the sequencing of structural reforms.

The second paper, reflecting a Korean scholar's view of the overall IMF program, was presented by Yoon Je Cho (Chapter 3). While agreeing that the Korean crisis mainly reflected deep-rooted structural problems, he raises several concerns about the program. First, he conjectures that the high interest rate policy recommended by the IMF during the early stage of the crisis may have deepened the financial crisis rather than stabilized the exchange rate. A second problem was that the financial restructuring focused primarily on the banks without also improving regulatory oversight of the investment trust companies (ITCs). The rapid expansion of the ITCs contributed to the quick recovery in 1999, but delayed corporate restructuring and deepened financial sector problems. Cho also notes that money growth in a crisis-hit country may be affected more strongly by the regulatory actions of the supervisory authorities than by the policies of the monetary authorities, since the strengthening of regulatory rules may limit money creation by financial intermediaries. Finally, he emphasizes that too ambitious a reform program, such as the rapid introduction of global standards into the banking system, may not be digestible by the political economy of the country, and hence may backfire.

Starting with the second session, the papers looked into specific issues related to the Korean crisis and policies during the IMF-supported program. The first was the high interest rate policy recommended by the IMF during the early months of the crisis, one of the most hotly debated issues in the Korean program. Advocates argued that the high interest rate policy would help stabilize exchange rates by restoring confidence and fostering needed corporate restructuring, while critics, including Cho, argued that the policy is more likely to destabilize the exchange rate by raising corporate bankruptcies.

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Chae-Shick Chung and Se-Jik Kim's paper empirically evaluates the effectiveness of the high interest rate policy in stabilizing the won/dollar exchange rate during the Korean crisis (Chapter 4). Using daily data for the exchange rate and Korean and U.S. interest rates during 1995-98, they estimate the underlying nonlinear dynamics of the exchange rate. Based on a nonlinear impulse response function analysis within the estimated model, they find that high interest rates induce depreciation for several days, followed by a substantial appreciation for an extended period of more than three months. In contrast, a low interest rate policy would not have a substantial impact on the exchange rate for very long, indicating an asymmetry in the exchange rate response to an interest rate shock. From the impulse function analysis, they also find that a reduction of interest rates to the pre-crisis level would not induce another serious depreciation. Their findings suggest that the interest rate policy recommended by the IMF, which was characterized by a sharp increase in interest rates at the onset of the crisis followed by a cutback after several months, contributed to the stabilization of the exchange rate.

A second issue addressed in this session was the role of the Korean chaebol. The corporate system based on chaebol has often been cast as a key culprit in the Korean financial crisis. But the specifics of how and to what extent the chaebol contributed to the financial crisis have received little attention.

The paper by Anne Krueger and Jungho Yoo addresses the role of the chaebol in the Korean crisis (Chapter 5). They find that the corporate sector's profitability fell to very low levels in the 1990s. Despite this deterioration, banks continued to "evergreen," or roll over, the chaebol's outstanding debt. When favorable circumstances did not materialize, the needed increase in evergreening by the banks was larger than their balance sheets could tolerate. The authors argue that the chaebol's low profitability, high leverage, and economic dominance meant that the Korean crisis was a disaster waiting to happen. Given the magnitude of leveraging of the chaebol prior to the crisis, the increase in the interest rate, not the foreign exchange crisis itself, probably triggered the financial crisis. The authors conclude, however, that failure to raise the interest rate would have resulted in larger capital outflows and perpetuated the foreign exchange crisis.

Session 3 addressed the issue of corporate sector reforms that are often considered, together with financial sector reform, as key structural reform policies of the IMF-supported program in Korea. Given the Korean corporate sector's endemic low profitability and heavy debt burden, as emphasized by Krueger and Yoo, the government has taken various measures to encourage corporate sector restructuring to overcome the crisis and lay the foundation for a sustained recovery in the real economy.

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William Mako, a World Bank specialist who participated in the Korean program, derives lessons from Korea's recent experience in corporate restructuring in his paper (Chapter 6). He sets out a framework for corporate restructuring in a systemic crisis that emphasizes the importance of operational restructuring through discontinuation or sales of less profitable or loss-making non-core businesses, layoffs of excessive labor, and other cost-reduction measures to reduce corporate debt from unsustainable levels. Mako then documents a recurring pattern of corporate problems and restructuring in Korea during 1997-2000. Based on the experience of Korean firms, including those put into workout programs, he ascribes the recurrence of corporate problems to the failure to move beyond temporary financial stabilization measures—such as term extensions, rate reductions, and debt-equity conversions—and make substantial progress on operational restructuring of distressed corporations. He underlines that relatively few large corporations have emerged from court-supervised reorganization or been sold or liquidated since 1997. The slow operational restructuring is attributed partly to the reluctance of under-provisioned creditors to take additional losses on the sale of over-valued assets at realistic prices.

This session also addressed the government's policy of financial restructuring, which focused on the restructuring of banks with little attention paid, at least initially, to the investment trust companies. The bank-focused restructuring policy helped reduce banks' exposure to large corporates but allowed weak chaebol such as the Daewoo group to issue large amounts of corporate bonds through the ITCs, which were not closely supervised. Although the issuance of these bonds helped avoid a credit crunch in the late 1990s, the proceeds were used largely for further business expansion rather than restructuring. As a result, the corporate bond market faced another credit crunch in 2001 when the bonds matured.

The paper by Gyutaeg Oh and Changyong Rhee evaluates the downside of the bank-focused financial restructuring policy by measuring the amount of defaulted corporate bonds (Chapter 7). They find that issuers defaulted on 22 percent of the total value of corporate bonds issued from December 1997 to December 1999, and that 78 percent of the defaulted bonds were from the Daewoo group. This suggests that the bank-focused financial restructuring had large negative side effects, and that short-run liquidity problems could have recurred if there had not been significant corporate restructuring. The authors also find that the total amount of corporate debt remained virtually unchanged as a result of the bank-focused restructuring policy and the associated replacement of bank loans by corporate bonds, not by equities, suggesting that the corporate sector would remain vulnerable to adverse shocks. Finally,

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the authors criticize the 2001 government program under which the Korea Development Bank bought corporate bonds issued by chaebol companies that had difficulty rolling over their debt.

The important issue of the impact of the crisis on the labor market was explored in Session 4. The economic crisis and the ensuing output decline resulted in hundreds of thousands of newly unemployed Koreans, with an attendant deterioration in living conditions.

The paper by Dae Il Kim investigates the pattern of changes in employment, wages, and inequality after the crisis (Chapter 8). He reports that unemployment rose by more than a million between October 1997 and July 1998, and decreased rapidly thereafter as the economy recovered. By October 2000, however, the number of jobless people was still 200,000 higher than in October 1997. The post-crisis rise in unemployment, he suggests, reflects the increase in labor market participation of middle-aged women who started job search to supplement household income, and job losers who kept searching for new jobs instead of exiting the labor market. In addition, Kim notes that the rise in the share of temporary and daily workers reflected both public work programs and private firms' efforts to cut labor costs by hiring non-regular workers. He also documents the decline in nominal wages during the crisis, reflecting increased wage flexibility. Finally, he finds widening income inequality during the crisis: the poorest 10 percent suffered a decline of more than 20 percent in total and labor income, while the richest 10 percent enjoyed a 10 percent increase in their total income and only a 2 percent decrease in their labor income.

Another issue addressed in this session was the role of weak corporate governance in the East Asian crises. As emphasized by Krueger and Yoo and others, the heavy debt burden of the corporate sector in Korea and other crisis-hit Asian countries was a key factor behind the severity of the 1997-98 financial crisis. The question then arises as to why so many corporations in East Asian countries chose to take on so much debt. An explanation that has recently started to receive much attention is that high debt levels may reflect weak corporate governance, especially weak protection of minority shareholders and creditors.

Eric Friedman, Simon Johnson, and Todd Mitton's paper evaluates the extent to which corporate governance in Korea and other East Asian countries affected their corporate debt levels before the crisis (Chapter 9). Using data related to corporate governance and corporate debt levels in 1996, they find evidence that Asian firms with weaker firm-level corporate governance or investor protection tend to be more indebted. This correlation is particularly strong in countries with weak country-level institutions for corporate gover-

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nance or legal protection for minority shareholders. The empirical results suggest that weak country- and firm-level corporate governance arrangements appear to have directly undermined investors' confidence at the start of the crisis. In light of these results, the authors emphasize that measures to strengthen the institutions of corporate governance should be at the top of the policy agenda.

Session 5 addressed important issues related to the effects of the crisis on the dynamic path of the Korean economy and the economies of other crisis-hit East Asian countries, including the nature of post-crisis recoveries and implications for long-term growth prospects. A variety of questions were addressed in the two papers: Are the recovery patterns in Asia similar to or different from other crises? Will the crisis-stricken Asian countries, including Korea, be able to return to their previous path of high growth?

Robert Barro's paper looked at the effects of the Asian financial crises on rates of economic growth and investment ratios in East Asia (Chapter 10). In the Asian crisis countries, economic growth rebounded in 1999-2000. In Korea, for example, real GDP bounced back from a 6.7 percent decline in 1998 to increase by 10.9 percent in 1999 and by 8.8 percent in 2000. But investment ratios did not significantly rebound, which might suggest that the crisis would have an adverse effect on long-term growth prospects. Based on cross-country growth regressions using panel data for 67 countries, Barro finds a negative effect of a currency crisis dummy variable on contemporaneous income growth and investment ratios. However, he finds no evidence of an adverse effect of currency crises on economic growth and investment in the five-year period following the crisis. If extrapolated to the crisis-hit Asian countries, he argues, this evidence suggests that their growth rates and investment ratios would return to those that would have prevailed without the currency crises.

The paper by Yung Chul Park and Jong-Wha Lee establishes a stylized pattern of post-crisis recoveries (Chapter 11). Based on 160 previous episodes of currency crises from 1970 to 1995, they find that a V-shaped recovery of real GDP growth following a crisis was not unique to the East Asian countries. Using cross-country regressions, they also show that the speedy recovery can be attributed to the depreciation of the real exchange rate, expansionary macroeconomic policies, and a favorable global environment. The authors find, however, that East Asia experienced a far sharper contraction and recovery, which they attribute to more severe liquidity crises and weaker corporate and bank balance sheets. They also find no evidence of a direct impact of the number of currency crises in the previous decades on the growth of per capita incomes.

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The final session of the conference focused on the implications of the crisis for future crisis management and for reform of the international financial architecture. The 1997-98 crises in East Asia, following the Mexican crisis in 1995, raised serious concerns among scholars and policymakers about the stability of the current international monetary and financial system, and spurred debate about reforming various aspects of the international financial architecture. An important issue concerns the restructuring of foreign debts and private sector involvement in the process. In Korea, the restructuring of foreign debt in early 1998 was often considered to have been the key to regaining international investors' confidence and overcoming the liquidity crisis. The Korean experience of foreign debt restructuring and private sector involvement during the crisis provides interesting and useful practical lessons for countries that might face similar problems in future.

Woochan Kim and Yangho Byeon, who participated in the debt-restructuring process as a Korean government official, present a detailed account of the Korean restructuring of short-term foreign debts from the debtors' perspective in their paper (Chapter 12). Based on internal Korean government documents, they report the events, explain major decisions and the reasons they were taken, and describe detailed administrative aspects. They focus on how the government set the strategy to successfully induce foreign creditor banks to participate in the debt-maturity extension program and win favorable terms from the creditors. The authors ascribe the success of the Korean debt restructuring to various factors, including the adoption of a sequential approach instead of simultaneously making exchange and new cash offers, the government's guarantee of rolled-over debts combined with guarantee fees, the employment of outstanding veterans on emerging market debt restructuring, aggressive road shows, and the linking of the financial support package with international banks' voluntary maturity extension.

Involving the private sector in debt restructuring is only one of the many areas where proposals have been made to strengthen the international financial architecture. Some reforms have already been adopted, and others are being considered by the international community. Barry Eichengreen's paper evaluates the post-Asian-crisis progress in reforming the international financial architecture (Chapter 13). He praises the progress made in setting international standards, particularly in macroeconomic policy, transparency, financial market infrastructure, and financial regulation and supervision, which will enhance the stability of the international financial system. Regarding exchange rate systems, Eichengreen considers that the recent tendency for countries to vacate the middle ground between hard pegs and relatively free floats to be a step in the right direction. He also suggests that the reform initiatives taken

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so far address Asia's concerns incompletely at best, and a more satisfactory outcome requires more effective representation of Asian views in the multilateral institutions—for example, through reform in voting procedures.

Exchange rate regimes are at the center of the international financial architecture. During the 1997-98 Asian crisis, regimes of tightly managed nominal exchange rates and relatively closed capital markets collapsed. This has led economists and policymakers to focus on the question of the type of exchange rate regime that best maintains financial stability. A number of recent studies, including Eichengreen's, suggest that the choice for emerging market economies comes down to either free floats or hard pegs, leaving little room for intermediate regimes.

For Korea, however, Michael Dooley, Rudi Dornbusch, and Yung Chul Park propose adopting a managed float combined with certain rules governing intervention (Chapter 14). In particular, they make a set of proposals for Korean exchange rate and monetary policies. First, they propose sterilized intervention to limit day-to-day volatility of the Korean won against a well-defined basket of major foreign currencies. They propose, however, that the intervention not aim to attain a target level of the exchange rate, but rather a target level for the government's net foreign exchange reserves, with deviations of the actual reserves from the target level eliminated according to an announced rule. Together with such an exchange rate system, they propose that a flexible inflation-targeting rule be established so that interest rate policy can be used to stabilize output in the short run and inflation in the long run.

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Economic developments in Korea in the year since the conference have, in general, been broadly consistent with the conclusions of many of the papers presented at the conference. The rapidity of Korea's recovery from the crisis was highlighted on August 23, 2001 when Korea repaid the IMF in full.

It was apparent at the time of the conference that economic growth was slowing sharply following the high levels of growth in 1999 and 2000. The reduction in growth was exacerbated by a global economic slowdown in the second half of 2001, partly caused by the economic effects of the terrorist attack on the United States of September 11. The Korean economy, however, performed better than most in 2001, with economic growth of 3 percent. Most forecasters, including the IMF, progressively revised up their projections during the first half of 2002, and by mid-year the consensus forecast was for the Korean economy to expand by 6-7 percent in 2002, with relatively low inflation and a comfortable external position. During the past year, Korea's pro-

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gress in financial and corporate reform has been increasingly recognized by the international community, including by rating agencies, which have steadily upgraded Korea's sovereign debt ratings.

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