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Until the 1990s, East Asia's economic growth was the economic marvel of the world in the post-World War II period. Japan, a low-income country prior to the war, had emerged from it in dire economic straits, but postwar reconstruction was completed by the mid-1950s and economic growth accelerated sharply in the late 1950s. By the mid-1960s, Japan's "economic miracle" had transformed it into an industrial country whose economy and productivity bore no resemblance to that of the late 1940s, as signified by its joining the OECD in 1964.

In the immediate post-war period, the rest of East Asia was even poorer than Japan. Korea was partitioned in 1946. What became South Korea² endured the partition, and experienced hyperinflation in the late 1940s and war on its territory in the early 1950s. In the aftermath of the war, Korea had one of the lowest per capita incomes in Asia, the highest density

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² Formally, the south became the Republic of Korea and the north the People's Republic of Korea. Since North Korea is not discussed at all in this paper, I shall refer to South Korea as Korea.

of population on the land of any country in the world, and population characteristics (life expectancy, literacy, infant mortality) found only in very low-income countries.³ Although reconstruction usually enables an above-average rate of economic growth for at least a few years, Korea's postwar economic growth rate remained below 5 percent (with per capita income growth at less than 3 percent).

Taiwan experienced a large immigration in the aftermath of the Chinese civil war, and was also very poor, although significantly better off in terms of per capita incomes and other measures of well-being than Korea. The two city states, Hong Kong and Singapore, were likewise poor. Southeast Asian countries had higher per capita incomes than their East Asian neighbors, but were also "underdeveloped countries", the term used at the time, by any measure.

But starting in the mid-1950s in Taiwan, in the early 1960s in Korea and the city-states, and in the 1970s in Thailand, Malaysia and Indonesia, economic growth accelerated rapidly.⁴ By the late 1980s, Japan's economic prowess as a high-income industrial country was recognized globally. The

Korea's per capita income is estimated to have been below that of many African countries at the time. Maddison (2003) estimates South Korean per capita income in 1960 to have been \$1105 in 1990 international purchasing power parity dollars. For comparison, his estimates are \$1523 for Congo, \$1246 for the Cote d'Ivoire, and \$1378 for Ghana.

⁴ Of course, rapid economic growth also started in the People's Republic of China in the early 1980s, although that experience is not covered here.

four “Asian tigers” (Hong Kong, Singapore, South Korea, Taiwan), as they came to be called, had sustained unheard of rapid growth rates even higher than Japan’s and become industrial countries. The Southeast Asian countries were also growing rapidly, although not quite at the pace of Japan and the “tigers”. Many observers believed that all these economies were immune to the difficulties faced by countries in the rest of the world, as they weathered almost without notice the 1973 oil price shock, the second oil shock, the “debt crisis” of the early 1980s, and other challenges that affected almost all other economies negatively.⁵

But in the 1990s, when it was believed that the success of these economies was entrenched, things changed dramatically. In 1990, Japan entered into a period of stagnation more than a decade long, often referred to as the “Great Stagnation” (Hutchison, Ito and Westermann, 2006). In the late 1990s, Thailand, Malaysia, Indonesia, and South Korea all experienced severe crises, and a number of the other successful Asian economies were severely challenged. In many ways, the Japanese stagnation and the Asian financial crises were as surprising to the world in the 1990s as the financial crisis in the United States has been over the past two years.

⁵ Japan’s rapid economic growth had slowed sharply after the first oil price increase in the early 1970s. However, the ‘tigers’ all continued rapid growth. Their success in so doing, relative to the difficulties faced by other developing countries, was a major factor in convincing the policy community of the wisdom of an outward orientation in trade.

It is the purpose of this paper to examine the factors contributing to the difficulties in these economies in the 1990s and to analyze the policies that were adopted in addressing them. Focus is on Japan and South Korea as their experiences largely capture the lessons to be learned. When experience from other countries is relevant, or significantly different from that of Japan and South Korea, that will be noted.

A first set of lessons focuses on the rapid growth leading up to crisis and the importance of a well-functioning financial system for growth. A second set of lessons is relevant mainly for developing countries and emerging markets, and is addressed next. The third set, primarily from Japan and Korea, concerns the financial sector. Finally, crisis and postcrisis management issues are addressed.

A significant difference that sets Japan, on the one hand, and the other crisis countries, on the other, apart has to do with their economies' exposure to foreign-exchange risk. In the Japanese case, Japan was incurring current account surpluses and held ample foreign exchange reserves; the difficulties were, in that sense, purely "domestic". For the other "crisis" countries, mismatches in the foreign-currency composition of assets and liabilities in the financial system were major immediate triggers of the crises, although

they led to problems in the financial sector that were much the same as those of Japan.

Lessons for Emerging Markets and Developing Countries

The Asian crisis countries other than Japan all faced problems in their banking systems, but to a considerable extent, the origins of the emerging markets' banking systems' problems differed. In many regards, as already mentioned, the Korean experience typifies the lessons from the East Asian emerging markets that went into crisis. Some, such as Taiwan, Singapore, and Hong Kong, were severely threatened, but managed to avoid a full-blown crisis either through the use of (a high initial level) reserves or through other interventions.⁶ From these experiences in the 1990s, there is widespread consensus on several lessons, although most are relevant primarily for emerging markets and of limited relevance for the major industrial countries. However, they do apply to a significant degree to the economies of Eastern Europe in the current setting.⁷

Lessons include: the wisdom of choosing an exchange rate regime consistent with the use of other policy instruments, which in most cases is a

⁶ They also had positive or at worst small negative current account surpluses, which was partly reflected in the high reserve levels.

⁷ Most of those economies have maintained fairly fixed, if not rigid, exchange rates, relatively low levels of foreign exchange reserves, sizeable short-term capital inflows, and fragile banking systems. In many of them, households had taken out mortgages in foreign currency, rendering them highly vulnerable to any exchange rate change and increasing political resistance for necessary changes.

flexible rate regime⁸; the need to avoid mismatches between banking assets and liabilities that can result because banking assets are denominated in domestic currency while liabilities are denominated in foreign currency; and the desirability of a ratio at least above one between government holdings of foreign exchange reserves and short-term liabilities.

Turning first to the exchange rate issue, there is an almost-universal consensus that, in the absence of a willingness and ability to adjust domestic monetary and fiscal policies to the dictates of the balance of payments under a fixed exchange rate regime, a floating exchange rate regime serves as a preferred buffer for individual countries.⁹

Ito (2007) believes that the maintenance pre-crisis of fixed exchange rates was a crucial mistake: “For emerging market countries...the danger of a de facto dollar peg was again confirmed. The de facto dollar peg may result in an overvalued real exchange rate if the domestic inflation rate is higher...than the U.S. rate. The de facto dollar peg encouraged borrowers

⁸ Hong Kong has operated a currency board throughout the past several decades. The regime was successfully defended during the Asian financial crisis.

⁹ In the current crisis, countries such as Australia, India, South Korea and Chile that have let their exchange rates adjust appear to have fared better than those that have kept their exchange rates within narrow bounds. The obvious exception is China, although that country has a relatively closed capital account and its currency was widely believed to have been undervalued.

and lenders to engage in financial transactions that underestimated exchange rate risk.” (P. 26)¹⁰

Prior to the 1997 crises, Thailand and Malaysia had supported almost entirely fixed exchange rates for several decades, while Indonesia and Korea had permitted only limited managed floating. In consequence, earlier adjustments which might have removed some of the pressure from those countries in 1997 were not made, and the swings in exchange rates which accompanied the onsets of the crisis (when countries could no longer defend their rates) were commensurately larger and resulted in much larger shocks to the domestic economy. The price of a dollar almost doubled in Korea, for example. But the biggest change was in Indonesia, where the pre-crisis exchange rate was Rs.2380 per U.S. dollar at the end of 1996 and peaked during the crisis at over Rs. 17,000 per U.S. dollar, falling back to Rs. 9,000-10,000 by 2000-01.

In analyzing the Asian financial crises, IMF researchers have concluded that when a flexible exchange rate facilitated the needed external adjustment in the 1990s, the response to policy changes was accompanied by larger output gains than under fixed exchange rates. (Ghosh, Christofides, et

¹⁰ The “again” reference is to the Mexican crisis of 1994. Ito’s analysis pinpoints the maintenance of a quasi-fixed exchange rate as a major contributor to that crisis as well.

al. 2005, Pp. 107ff).¹¹ But there are other reasons why a flexible exchange rate is probably preferable. When exchange rates are fixed (or heavily managed), expectations form that the exchange rate will stay within a relatively small range, and the temptation not to hedge foreign-currency borrowing is strong. Insofar as uncovered dollar liabilities in the banking system (or of banks' borrowers) are larger under fixed exchange rates, the shock to the system when the exchange rate is forced to change is larger.¹²

The danger of mismatches between currency denominations of assets and liabilities is clear. The difficulty, as perceived by many policy makers in emerging markets, has been that foreign loans have been available largely, if not exclusively, in foreign currency. The result has been that changes in the exchange rate have resulted in increased liabilities of the banking system (and the banks' borrowers) with little change in bank assets, since they are mostly denominated in local currency.¹³

A strong lesson from Asia in the late 1990s is the importance of insuring that banks' assets and liabilities are either in the same currency or

¹¹ See also Edwards (2003).

¹² This advantage is somewhat diminished when the domestic banking system has become significantly dollarized.

¹³ An extreme case was Argentina after the 2001 crisis. The authorities "pesified" the banks' liabilities (i.e. deposits, which had been denominated in pesos when the exchange rate to the U.S. dollar was one-to-one) at the rate of 3 pesos per U.S. dollar, while the assets were left at the 1 peso=U.S. \$1.

appropriately hedged.¹⁴ Another advantage of a floating exchange rate regime is that borrowers and lenders are more aware of the possibility of exchange rate fluctuations than they are under fixed exchange rate regimes.

The final macroeconomic lesson, important for emerging markets and low-income countries but less relevant for industrial countries, is the desirability of maintaining sufficient foreign exchange reserves to be able to cover short-term foreign exchange liabilities.¹⁵ Speculation against a currency is considerably less likely when speculators can observe that foreign exchange cover may be adequate to withstand an attack.¹⁶

Lessons from Growth

Prior to considering the lessons of relevance to industrial countries from the Asian crises, it is useful to sketch some of the characteristics of the growth experience of those countries, especially as they relate to the financial sector. This is important because it is sometimes thought that

¹⁴ Even with such hedging, the problem is not entirely solved. If banks' loan portfolios are heavily weighted towards firms whose costs have a large component of imports while their revenues are mostly from the home market, those firms can be negatively affected by exchange rate depreciation. Obtaining data on the sensitivity of individual firms' revenues to exchange rate fluctuations is extremely difficult.

Recently, in some Eastern European countries, the same problem has arisen with respect to mortgages. Households borrowed from foreign banks because of lower interest rates, and have encountered major increases in liabilities when exchange rates have depreciated.

¹⁵ Ito (2007, p. 34) also makes this point. Some of the transition economies seem not to have paid heed to this lesson.

¹⁶ Having foreign exchange reserves greater than short-term liabilities is not a guarantee, however. Sharp changes in prospects, whether originating from global shocks or from shifts to highly expansionary fiscal and monetary policy, can induce speculators to attack. But the magnitude of the impact of the projected shock or fiscal expansion has to be considerably larger if foreign exchange reserves are adequate. Some have argued that the Asian countries have overlearned this lesson from the crisis. As seen from the warnings of those concerned about a decision by foreigners to sell U.S. treasuries in large amounts, even large dollar holdings will not necessarily ward off an attack.

financial crises prove that the financial sector does not contribute to economic growth. But nothing could be further from the truth. Financial development is an essential concomitant of economic growth. While the crises were painful, they took place when they did because of failures of the financial and real components of the growing economies to develop synchronously.

All but the most primitive economies must have a financial sector. Even at very early stages of development, when 70-80 percent of economic activity is still in agriculture and other subsistence activities, the absence of a well-functioning financial sector suppresses economic activity somewhat (as most non-farm activities are family-owned and family-financed) but is not a major deterrent to more rapid growth because activities of a size and a character to require finance are such a small part of the overall economy.

But with economic growth, the costs of financial “repression” (to use McKinnon’s apt term) rise. Indeed, if a relatively efficient low-cost banking system does not develop, possibilities for growth are limited. But when there are only a few “nontraditional” nonagricultural activities – often textiles and clothing, footwear, and the like – a banking system of even relatively small size can enable a small nontraditional sector to function and grow, and it can

be reasonably evident (as it was in Korea in the 1960s) which activities (unskilled labor-intensive exports in Korea's case) should be financed.

But to move beyond the constraints of family finance requires the ability of promising enterprises to finance investments in addition to those that can be undertaken with plowed-back profits (and mechanisms for assuring owners of low-return or loss-making enterprises that they can invest in businesses other than their own with reasonable confidence that they will be fairly dealt with).

The history of economic growth of the West is one in which new financial innovations came about to meet the increasingly complex financing needs of the growing modern sector.¹⁷ Since new activities must be financed and inherently involve uncertainty, the financial sector plays a crucial role for economic growth in appropriately assessing risk-return trade-offs and channeling funds to those investments that are most promising. It is no coincidence that the World Bank has repeatedly found that countries with deeper and better functioning financial markets are countries with higher per capita incomes.¹⁸ Interestingly, in rich countries credit to the private sector averages 71 percent of GDP, while in low income countries it averages 47

¹⁷ See Rosenberg and Birdzell (1986) for an economic history focusing in significant measure on the interactions between technological advances in the real sector of the economy and financial innovation.

¹⁸ See World Bank (2004), Chapter 6 and references therein.

percent and in the very poorest 13 percent. Other measures of financial depth show similar patterns.

That lesson is highly relevant to understanding the Asian experience in the 1990s. The Korean experience illustrates. Korea had had a very underdeveloped financial system in the 1950s. Although some policy reforms starting in 1958, the commitment to an outer oriented strategy and wholesale reform really began in the early 1960s. Economic growth accelerated sharply, and growth momentum was sustained for the next three and a half decades, as many reforms in the fiscal system, in government regulations, in the trade regime, and elsewhere were undertaken.

However, there was little effort to develop the financial system. Instead, the government mandated credit allocation with credit rationing (directed credit). Exporters were entitled to a specified amount of credit at a subsidized interest rate per dollar of exports¹⁹, and other activities deemed socially desirable were also eligible for subsidized credits. Other entities either managed on self-finance or went to the (thriving) curb market where interest rates were much higher.

¹⁹ Exporters were also entitled, in the early days of the outer orientation of the Korean economy, to other privileges including the ability to import needed inputs duty-free (with minimum delays) and tax credits. These entitlements were extended equally to all who exported per dollar of exports (except for inputs for which duty-free treatment was based on an estimate of use of imports per unit of exports). They were thus export incentives, but the incentive was essentially uniform across all exporting activities. See Krueger (1979 pp. 87ff.) for a full description

While there were undoubtedly inefficiencies in credit allocation, two considerations suggest that these were limited. First, Korea had entered the 1960s with exports equal to approximately 3 percent of GDP and imports 13 percent. Foreign exchange was rationed and there was a significant black market premium despite high tariff levels and import licensing. To allocate most new resources to exportable industries undoubtedly made sense, and the fact that borrowers had to export successfully in return for their credit meant that there was something of a market test to sort out potential borrowers. Second, given Korea's very high growth rates in the 1960s, it is difficult to argue that improved credit allocation could have made the growth rate very much higher.

Partly because of credit rationing, and partly for other reasons, much of the initial growth in Korea was concentrated in the chaebol – the industrial houses that grew very rapidly in response to the incentives offered by the government. The chaebol naturally established or acquired their own merchant banks (and some small commercial banks), and lent to the various companies within their specific groups. The larger commercial banks also bought chaebol debt.

Over time, the hugely profitable opportunities for expansion for the chaebol diminished, but they were still large and visible and subject to

special regulations. They had been prohibited from laying off any workers, and had thus expanded into new activities as productivity rose (or, in the case of some very labor-intensive industries, exports were no longer profitable). Over time, as each chaebol ventured into more and more new lines of activity, managerial challenges undoubtedly became increasingly difficult and the requirement that they retain all workers more onerous. At much the same time in the mid-1980s, the government was attempting to liberalize the financial system. The banks lent (or rolled over loans) to their less profitable businesses to keep them afloat as profitability fell. For the chaebol, mechanisms for increasing profitability such as reducing the workforce were unavailable to them.

One question might be why Korea ran into difficulties in 1997. But another, more fundamental, question is how the authorities managed macroeconomic and financial policies so well that there were more than 30 years of growth before the first crisis. The first oil price increase, in 1973-74, hit South Korea particularly hard because of the total dependence on imported oil.²⁰ But the authorities adjusted policies, passing on the oil price increases and raising taxes, so that growth quickly resumed.

²⁰ A rough estimate would be that the 1973-74 oil price increase resulted in a deterioration in Korea's terms of trade equivalent to 15 percent of GDP (and there had been increases in food and other commodity prices in 1972 and 1973 which also constituted a negative shock).

During the early 1970s, the Government had also decided to embark on a heavy and chemicals industry (HCI) program, believing that Korea's rapid economic growth warranted that decision. In fact, the HCI drive resulted in sharp changes in the economy, tripling the compensation of engineers, leading to the first decline in exports (in an export-growth-led economy) since 1960, and generating inflationary pressure. But before the harm could extend too far (and before the second oil price increase, which would probably have been disastrous had policies not been altered), the mistake was recognized, and the HCI drive was greatly curtailed, if not abandoned. The second oil price increase and the worldwide recession that followed it also posed a challenge for Korean economic growth, but, as in earlier instances, the authorities were able to adjust so that Korean growth in fact accelerated.

Over the thirty years prior to the 1990s, many fundamental policy adjustments had been made. The rapid-growth era started with (uniform) export incentives for exporters, consisting of access to credit (which, as already seen, was provided at below-market interest rates), tax credits, and other privileges. Over the next ten years, these "incentives" were gradually phased out, while simultaneously import protection was reduced, as the exchange rate depreciated and replaced both incentives and tariffs. Likewise,

fiscal reforms were undertaken, the nominal interest rate was raised (although it remained below market clearing levels) so that the real interest rate was at least not negative, and tariffs on imports were reduced and the trade regime liberalized.²¹ The authorities successfully addressed these and many of the other bottlenecks that would otherwise have put downward pressure on the growth rate over time.

Korean policy makers had identified and corrected many potential bottlenecks and crisis points over the thirty year period of rapid growth. Some of the challenges came from the world economy; but many were needed to address the archaic policies that had done little damage to a stagnant economy but which were incompatible with Korea's increasingly complex modern economy. However, the domestic financial system was not sufficiently altered to keep pace with the changing economy. Suppression of bank interest rates in the early 1990s as growth seemed to be slowing, which in turn induced the banks to lend offshore at higher interest rates, and other measures, retarded the development of the financial system.

For present purposes, the important points are two. First, the financial system, and government policies toward it, must adapt and be able to handle

²¹ Exporters were from an early stage permitted to import goods they used in the production process. A first step on the import side was to move from a positive list (of permitted imports) to a negative list (of those prohibited). The exchange rate was also gradually unified as tariffs were reduced and export incentives reduced while the real exchange rate depreciated. Later, tariffs were further reduced and the exchange rate fully unified.

the increasing demands put upon it as economic growth progresses.²² The same (flawed) financial system which had been able to support rapid growth in the 1960s and early 1970s could no longer do so as the economy had modernized and become increasingly complex.

Second, even if a financial crisis is a cost of rapid economic growth, most observers would conclude that it was a cost worth paying, judging by the differences in growth rates between the rapidly growing countries and the others. If one thinks of the financial crises in the now-industrial countries in the nineteenth and early twentieth centuries, it is more likely we should regard Korean policy choices during the decades of rapid growth (during which Korea grew more in a decade than Britain did in the entire 19th century) as having been appropriate. Failure to let the financial system develop more was the first major (and insufficiently addressed) policy issue that led to crisis. To be sure, lessons have been learned so that in future, policy makers in countries undergoing rapid growth will have learned and be enabled to reduce the severity, if not prevent, crises.

But proposals for altered and intensified regulation of the financial system must be evaluated not only in terms of the likelihood that they will

²² The same can be said of any number of other policy arenas: the foreign trade regimes that many countries (including Korea) adopted during their early years of growth would have, if unaltered, certainly retarded and perhaps even prevented a continuation of that growth. To be sure, in many countries, these regimes were sustained until it became evident that they were inconsistent with sustaining growth. Turkey (see Krueger and Turan 1992) in the late 1970s is one example, but there are many more.

prevent, or at least reduce, the incidence and/or severity of, financial crises but also in terms of the likely effects of those regulations on the financial system's capacity to support future economic growth.

The Japanese story is also one where successful growth preceded the stagnation of the 1990s but it differs in that a financial crisis was triggered by domestic events without any foreign currency mismatches or related foreign exchange crisis. In Japan's case, rapid economic growth had resulted in a bubble in the real estate market. The "main bank" system meant that banks lent to other companies within the same keiretsu (but to other companies outside the group as well), so connected lending was a problem. In addition, the banks held equity, real estate, and commercial loans. When the bubble burst, bank equity was greatly reduced, as real estate prices and equity prices fell. Simultaneously, many of their borrowers had borrowed to finance equity and real estate investments, and nonperforming loans began increasing rapidly. In Japan's case, however, there was a current account surplus and a relatively freely floating exchange rate. The result was a decade of stagnation, with an unresolved financial crisis throughout the decade despite repeated efforts to stimulate the economy. I return to the lessons from that below.

A fundamental lesson from the Asian experience in the decades after 1960 is the power of economic growth. Some countries set their economic policies for rapid economic growth, while others were far more cautious. Even if financial crises were an inevitable cost of economic growth²³, the Asian experience suggests that rapid growth is worth it. Graph 1 charts Indian and Korean per capita incomes after 1960, when their per capita incomes were fairly similar. The most dramatic feature of the chart is the much more rapid rate of growth of Korea than of India until the 1990s. But what is hardly noticeable is the crisis and the drop in South Korea's income in the 1990s. India, of course, had no financial crisis in 1997 (although there had been a balance-of-payments crisis in 1991).

Events Leading to Crisis in Korea

As already seen, despite their many reforms in other sectors of the economy, the Korean authorities did little to modernize the financial system once they had taken measures to assure a positive real interest rate. The lending to the chaebol, and the use of the banks' lending rate as an instrument of growth policy, continued. Failure to develop a more flexible

²³ Tornell, Ranciere and Westernmann (2003) have provided extensive evidence that over the period through the 1990s those countries that had financial crises in fact grew more rapidly than those that did not. Their explanation is that more rapid credit expansion is a concomitant of more rapid economic growth; more rapid credit expansion means that more risk, and more high-return activities, are financed. Hence, the overall growth rate is higher.

financial system commensurate with the growing economy's needs was a major factor in contributing to the 1997-98 crisis.²⁴

Despite that failure, Korea liberalized short-term capital transactions as one of the measures needed to join the OECD in the early 1990s. It is often asserted that it was premature external liberalization that caused the crisis. In fact, the falling ROA and ROEs of the banks suggest that the causes were deeper than capital account liberalization, although the presence of significant offshore deposits and buildup of short term foreign debt certainly contributed to the severity of the crisis (see Kim 2006 for a full description). It is clear that the sequence of capital account liberalization was a mistake and exacerbated the 1997 crisis: long term capital flows should surely have been liberalized sooner.

As the chaebol expanded into ever more lines of activity, their profitability fell and loans were “evergreened”.²⁵ The rate of return on bank assets and equity began falling in the early 1990s. No longer could an economy as developed as the Korean had then become grow with such a constrained financial system.²⁶ In an effort to sustain growth, the Korean

²⁵ There is considerable evidence in both Japan and Korea that a major reason for the retardation of growth was the reduced credit available to support expansion of small and medium enterprises, as banks could not free their resources from the large but nonperforming borrowers.

²⁶ It might be argued that the converse was also true: high rates of growth had been sufficient so that the financial system had been able to survive the problems that showed up once growth had slowed down. For

government mandated a sharp drop in interest rates, but nonetheless the return on assets continued falling and evergreening (lending so that borrowers could meet their debt service obligations) was increased. Indeed, by 1997 the return on bank assets had turned negative.²⁷

To finance themselves, the banks (and others more generally) increased borrowing domestically and placing the proceeds offshore, especially in countries such as Thailand and Indonesia where they hoped to earn a higher return. This was easy because of the liberalization of short term capital flows, already noted.

After the early 1960s, the exchange rate had no longer been fixed, but there was a managed float. By the early 1990s, there was strong market pressure for exchange rate depreciation. However, the authorities resisted, permitting a series of relatively small depreciations, but preventing a market outcome. During that period the U.S. dollar was depreciating against the yen, and the depreciation of the won relative to the dollar was much smaller, so that the won appreciated relative to the yen. That reduced export profitability (both directly and because many Japanese and Korean exports were competitive and this gave the Japanese an advantage). It is generally

present purposes, it matters little whether slowing growth led to financial difficulties that were already there, or whether financial repression led to slowing growth.

²⁷ See Krueger and Yoo (2002) for a full analysis.

agreed that the effort to manage the won's float intensified the Korean crisis (Kim 2006, P. 7).

Without recounting all the gruesome details, the downward pressure on the growth rate was not reversed²⁸ and the authorities responded by encouraging credit expansion and foreign borrowing (mostly short term). To add to the problems, the government of President Kim Dae Jung had changed Finance Ministers and Ministers of Economy frequently, the fifth change in his five-year term coming in March 1997 (despite the fact that a new government was to be formed in 1998 after elections in December 1997). The lack of continuity contributed to unease in Korea. Foreign debt was increasing rapidly (rising from 13 percent of GDP in 1990 to 32 percent in 1996), and short term debt rose from 45 percent of the total to 64 percent of the total over the same period.²⁹

As already mentioned, the rate of return on bank assets turned negative, and failures of chaebol further contributed to a sense of panic. Hanbo Steel had been bankrupt on January 23, 1997, while Sammi Group went bankrupt in March. Spreads between Korean bonds and U.S. treasuries

²⁸ The Korean growth rate was, however, more than respectable by contemporary standards, with a growth rate between 7 and 9 percent in the 3 years preceding the crisis, and inflation less than 5 percent. The current account deficit and foreign debt (especially short-term), however, were increasing. By 1996, the current account deficit was 4.4 percent of GDP. It fell in 1997 (presumably as financing was not available), and turned strongly positive in 1998. Foreign debt had risen from 20 percent of GDP in 1990 to 33 percent in 1997 and 47 percent of GDP in 1998. See Halm and Mishkin, 1999, Tables 1 and 2.

²⁹ Yoo and Moon (1999), P. 266.

were rising, from 49 basis points in January to 67 basis points in March, to 87 basis points in July, to 220 basis points by the end of October (as Moody's downgraded the credit rating of the Industrial Bank of Korea), and 559 basis points on December 12, 1997 (having risen from 253 basis points on December 4th, the date on which an IMF US\$55 billion program was announced).

By the fall of 1997, many of the offshore accounts held by banks had lost value, if not become worthless, while foreigners and Koreans alike were trying to get their funds out of Korea and the crisis became full-blown.³⁰

By the beginning of December, gross reserves were fast reaching zero, and the Korean authorities approached the IMF (after a period during which all three presidential candidates said they would never do so).³¹ Korean chaebol had become significantly overleveraged, with many having debt to equity ratios well above five. That many banks had borrowed in foreign

³⁰ The crisis could probably have been prevented as late as the summer of 1997 had appropriate policy actions been taken at that time. Kim Kiwhan believes that if Parliament had passed a financial legislative package that went before it on November 16, 1997, even then the full-blown crisis might have been averted (Kim, 2006, P. 21).

³¹ The triggering event for acceptance of the IMF program in December 2007 immediately prior to the election was that reserves were literally exhausted. After months during which all 3 presidential candidates insisted that they would not accept support from the IMF, gross reserves fell to zero by December 3, and the Korean government would have been forced to default had not IMF support been forthcoming. It is often forgotten that the IMF team had virtually no time in which to devise a program, as they had not been able to meet with their Korean counterparts until very shortly before the crisis.

currency and lent in Korean won made matters worse.³² When the won was finally allowed to depreciate, more borrowers were unable to service their debts and rescuing the banks became a major part of the reform package needed to stabilize the economy and improve growth prospects.

Once in crisis, however, the South Korean authorities acted forcefully. Accepting an IMF program, NPLs were rapidly transferred to asset management companies, and chaebol deleveraged. Interconnected lending was prohibited, and financial regulation reformed.

In South Korea's case, real GDP fell by 6.7 percent for the full year 1998, but began recovering in the middle of the year. In 1999, real GDP growth was about 10 percent, so that economic activity had reattained its pre-crisis level. Growth continued in subsequent years. Hence, while the crisis was costly, the willingness of the government to address problems in the financial sector (and the chaebol) promptly enabled a sharp recovery and resumption of growth.³³

Lessons for the Financial Sector from Japan (and Korea)

As already indicated, by the 1980s, Japan had long since joined the group of advanced industrial countries, after three decades of economic

³² The interest rates in some Southeast Asian countries were below those in Korea, so banks were borrowing in Thailand, Indonesia, and other countries to lend in Korean won at a higher interest rate. When the crises came in Southeast Asia, and currencies were devalued, the banks lost heavily.

³³ In Ito's view, Korea's crisis was one of liquidity only, whereas other Asian crises were solvency crises. See Ito (2007), P.38.

success and rapid growth.³⁴ During that decade, real estate and other asset prices had risen rapidly. At one point in the late 1980s, the market-based value of Japan's real estate was reported to be greater than that of all American real estate! Price-earnings ratios in the stock market had been rising almost continuously during the period of rapid growth. Capital account liberalization in the first half of the 1980s, which had been expected to lead to capital outflows, in fact was followed by capital inflows so that the yen appreciated, obscuring some of what might have been inflationary pressure on goods prices in addition to the bubble.

By the early 1990s, however, real estate and other asset prices started plummeting. Economic activity slowed, and bank assets, which included real estate and equity as well as other loans, fell. Throughout the 1990s, efforts to stimulate the economy were undertaken. Economic policy in Japan in the 1990s seems to have been predicated on the assumption that a resumption of economic growth would take place and that in itself would enable debtors to resume servicing their debts to the banks. Neither resumed economic growth nor a sufficient reduction in NPLs happened.³⁵

³⁴ Japan had joined the OECD in 1964.

³⁵ Much bank lending was connected within the same keiretsu. The extent of evergreening was almost surely underestimated. See Hoshi (2001).

There were repeated stimulus packages, and some stimulus was clearly necessary.³⁶ But in large part, the government's policy toward the banks (where there was clearly inadequate equity) was one of forbearance, except in the cases of clearly insolvent institutions. Until 1997, this period was characterized primarily by stagnation and relative monetary ease, although 1996 saw growth of over 5 percent following a large fiscal stimulus package in 1994. But despite several (relatively small) programs to help the banks, nonperforming loans on the banks' books continued to increase.³⁷

After November 1997, Japan entered into a crisis phase for the following sixteen months. Credit became tight. Recapitalization of the banks, with 8.7 trillion yen (about 1 percent of total bank assets at the time), was undertaken in 1998, but that seems to have been far below the amounts needed for adequate recapitalization. The banks were again recapitalized in March 1999 and credit flows resumed, but many of those flows were directed toward enterprises that were themselves in difficulty, often at the direction of the government.

³⁶ In 1997, economic activity was rising, and the government imposed (increased?) the value added (consumption?) tax. That was quickly followed by another downturn in economic activity.

³⁷ Until 1998, public reporting of nonperforming loans was undertaken only by large banks, and the definitions of nonperforming loans were very loose, with only those loans to failed enterprises or on which there had been no payments for more than 6 months were recorded. There were also other changes that enabled banks to show more favorable balance sheets up to that time, including permitting banks to record assets at either cost or market value. After 1998, reporting became standard, and the criteria for NPLs were tightened. See Hoshi and Kashyap (2009) for an account.

Hoshi and Kashyap (2009, P. 29) estimate that between 1992 and 2005, the Japanese banks wrote off about 96 trillion yen of loans, or about 19 percent of GDP, and that efforts to fund the banks fell far short of needed magnitudes. While there was some recovery early in 2000, and the Japanese government's position was that the 1999 measures would jump-start the economy, stagnation once again set in and NPLs began increasing again, with capital erosion following. Hoshi and Kashyap (2009) show that whereas NPLs resulting from the 1980s bubble were mostly removed from the banks' books by 2000, difficulties in small and medium enterprises (SMEs) starting at that same time resulted in rising NPLs once again. In the boom of the late 1980s, lending to these SMEs had accelerated, and as deflation and stagnation continued, more and more SMEs were unable to service their debts, thus giving rise to a new spate of NPLs.

The Financial Services Agency (FSA) was established in 1998, and two large banks were resolved in that year. That was an important milestone in the restructuring of the banks. But it was not until 2003 that the new FSA seems to have been able to insist upon the banks' write-offs of NPLs and recapitalization. Thereafter, the NPL problem diminished, and by 1995 it is estimated that credit flows had resumed. The evergreening of loans by the

banks kept loss-making companies alive, but simultaneously reduced the supply of credit for new firms. (Caballero, Hoshi and Kashyap, 2008

Hoshi and Kashyap (2009, P. 21) conclude that

“The main cost of allowing the banks to operate with a capital shortage was not a prolonged credit crunch. Rather the undercapitalization limited the banks’ willingness to recognize losses and they took extraordinary steps to cover up their condition and in doing so retarded growth in Japan.”

For present purposes of understanding lessons, probably the most important features of ultimately successful policies were the establishment of asset management corporations (which took toxic assets off the balance sheets of the banks), and the nationalization and restructuring of large failed banks.³⁸

A major lesson from the contrast in the Korean and Japanese experiences comes from the speed and determination with which the authorities addressed issues in the financial sector. In the Korean case, a “bad bank”, the Korean Asset Management Corporation, was created to assume the toxic assets in the banking system, chaebol were required to deleverage and separate their banking activities from their production

³⁸ Among other problems, the banks had recorded “deferred tax assets” as part of their capital base. These “assets” were the tax deductions the banks might (if profitable) use in the future once they became profitable again, because they had recorded losses. These were sizeable and of course were not fungible, and were usable only against profits, which the banks did not have.

activities. By contrast, in Japan, until 2003 the authorities' measures were largely of the "too little, too late" variety.³⁹

Some observers have noted that a significant contrast between the rapid Korean action and the tardy Japanese response was the result of the perceived source of the difficulties. Whereas the Korean authorities were virtually forced by their foreign obligations to react speedily, the fact that the Japanese difficulties were seen as almost entirely domestic made a decisive and rapid response far more difficult.

Lessons from the Japanese experience are several. A first, and perhaps the most important, one is that an undercapitalized banking system can retard, if not entirely stifle, an incipient recovery even when fiscal policy is expansionary. Permitting evergreening of lending is a disastrous policy. Second, efforts by banks (and acquiescence by the government) to hide their difficulties not only delay recovery but create uncertainty about the financial system as a whole.⁴⁰ Third, unless measures to restore healthy banks are sufficiently large, they do not significantly contribute to the resolution of the problem. In the Japanese case, the NPLs written off by the banks are estimated to have equaled 19 percent of GDP, while the largest amount

³⁹ It is unclear how much equity banks really had. Hoshi and Mishkin have shown that much of the reported capital should not have been treated as equity. Moreover, had banks recognized nonperforming loans and charged them against assets, reported equity would have been considerably smaller.

⁴⁰ Hoshi and Kashyap (2009) report that in 2002, when the banks reported increased equity, six independent financial analysts all reported that the same banks had negative equity.

allocated to support the banks was about 3 percent of GDP. Fourth and finally, when banks continue to roll over NPLs, they are starving the potential new entrants (especially small and medium enterprises) of credit, and hence reducing growth.

The “lost decade” of the 1990s in Japan was marked by successive stimuli and financial interventions. But most of these were too little, too late.⁴¹ Taken alone, the Japanese experience would not conclusively suggest a lesson. But across the other crisis Asian economies, strong actions taken initially were associated with a more rapid and stronger recovery, and almost certainly smaller losses.

The South Korean response was the strongest, and the trough was reached by mid-2008. The reduction in leverage, the removal of toxic assets, and other measures recounted above were sufficient so that recovery started within six months and was strong.

For each of the other Asian countries, the response was slower and weaker, and the upturn was later and less rapid. Indonesia, with the weakest

⁴¹ Hoshi and Kashyap (2009) point out that, although Japanese politicians felt politically constrained as to the amounts they could spend to attempt to restore the banking system, the actual amounts voted in by Parliament amounted cumulatively to 3 percent of GDP. This compares with the 60 percent of GDP increase in Japanese government indebtedness that resulted from repeated fiscal stimulus efforts. It therefore seems reasonable to conclude that larger expenditures in the early years of the banking difficulties might have led to lower overall expenditures.

and slowest response in large part because of political upheaval, took the longest time for recovery to resume.

There is a general lesson that immediate credible strong action (with regard to removal of toxic assets, recapitalization of banks and deleveraging of firms, and to fiscal stimulus) is economic, both in the sense that government expenditures and losses in the financial system would be smaller, and in that the length and the severity of the downturn is more limited, while the upturn not only comes sooner but is stronger.

The Korean experience reinforces the Japanese lessons. Although the crisis was triggered by difficulties within the banks that were intensified by the exchange rate regime, the crisis was financial once the exchange rate had been allowed to depreciate and float. It was already seen that the underlying problem had been a failure of the financial system to develop commensurately with the needs of an increasingly complex modern economy. This was connected to the problems of the chaebol. They had been heroes of Korea's hugely successful growth experience, but had accepted government restrictions and had had their own banks each financing much of the needs of the individual groups.

The spillover from the exchange regime to the financial situation is evident from the evolution of the economy as detailed earlier. First, in the

runup to the crisis, short-term foreign debt was about seven times Korean foreign exchange reserves. The authorities attempted to defend the currency initially (after the Thai crisis was under way) but simply were unable to continue doing so.

The exchange rate was depreciating rapidly, and the authorities tightened the money supply, including a sharp rise in the interest rate. While this stabilized the currency, it made the plight of the banks, already hit by a mismatch between their loans (denominated in won) and their liabilities (denominated in foreign exchange), still worse. The chaebol were highly leveraged, averaging about 400 percent debt relative to equity, so rising interest rates (when there had already been a buildup of nonperforming loans) made their situations worse and increased the banks' NPLs.⁴²

During the runup to, and in, the crisis, a factor that apparently intensified difficulties in many of the Asian economies, and certainly in South Korea, is that market participants quickly learned that earlier information they had received had been inaccurate. (Cho, 2009, p.19). Cho points out that, even in 2008 when the Koreans held high reserves, "The past record of credibility of the Korean government's statistics on the amount of

⁴² The authorities also instituted blanket deposit insurance for a period of 3 years. It was withdrawn at the end of 2000. This seems to have been essential to stop runs on banks after some merchant banks had been closed early in the crisis, leading depositors in other banks to wonder how long their banks would remain open.

total foreign debt and usable foreign reserve did not help in gaining full credibility for the government guarantee.” (P. 19)

Lessons for Post-Crisis Policy

Perhaps the most important conclusion that can be drawn from crises in many countries is that delays in recognizing and confronting the difficulties in the financial sector are costly. Denial by officials may be understandable, but when the measures taken are timid relative to the magnitude of the problem, or when they are undertaken after significant delays, the costs of the cleanup mount.⁴³

Both the credibility of the authorities and the transparency of both the situation and the measures taken are also crucial. If it is widely believed that the authorities do not fully recognize the difficulties, or that they are taking only half-hearted measures to change the situation, policies are unlikely to succeed.⁴⁴

Moreover, in almost all crisis situations, the crisis happens because of underlying weaknesses in the economic policy framework and economic

⁴³ Korea’s reforms were far-reaching and undertaken rapidly. Reforms included the reduction of trade barriers and promotion of FDI inflows; improved corporate governance measures especially in the chaebol; recapitalizing the financial system and removing NPLs; creation of a new financial regulatory framework; privatization of many state-owned enterprises; and removal of some labor market regulations. See OECD, 2000, P. 29 ff.

⁴⁴ This seems to have been the case initially in Korea. Even after the IMF program was announced in early December, large capital outflows continued. It was not until the major private banks committed to rolling over their loans to Korean entities and pledged some new money that the downward pressure and massive outflows ceased. The magnitude of the new pledges was evidently sufficient to restore credibility, whereas the initial IMF package had been insufficient to do so in light of the magnitude of private debt.

structure. It is now generally recognized in Korea that the cleanup of the banking system, and the reduction in chaebol-linked bank lending, were essential.⁴⁵ But in the first weeks of December after the initial IMF program, capital outflows continued, as there were considerable doubts about the determination of the newly elected government to address the issues sufficiently. It is noteworthy that, despite considerable speculative pressure, the economies of Hong Kong, Taiwan, and Singapore survived without a crisis.⁴⁶ They all had stronger economic policies during the period, reflected in many ways including large foreign exchange reserves and relatively low short term debt and took strong measures as soon as pressures on their currencies and finances were evident.

It is also notable that growth can resume fairly quickly when strong measures are taken. Most forecasts of post-crisis growth in the Asian countries were unduly pessimistic (with the probable exception of Indonesia).⁴⁷ Once the situation was stabilized, growth rapidly resumed.

⁴⁵ The Korean authorities went far beyond the measures discussed here, as they took measures to improve corporate governance, regulation of the banks, the transparency of accounts, and addressed a number of other issues. These measures may or may not have been essential (although they were almost certainly beneficial to the economy) but they certainly reinforced the credibility of the government's commitment to strengthen and restore the financial system.

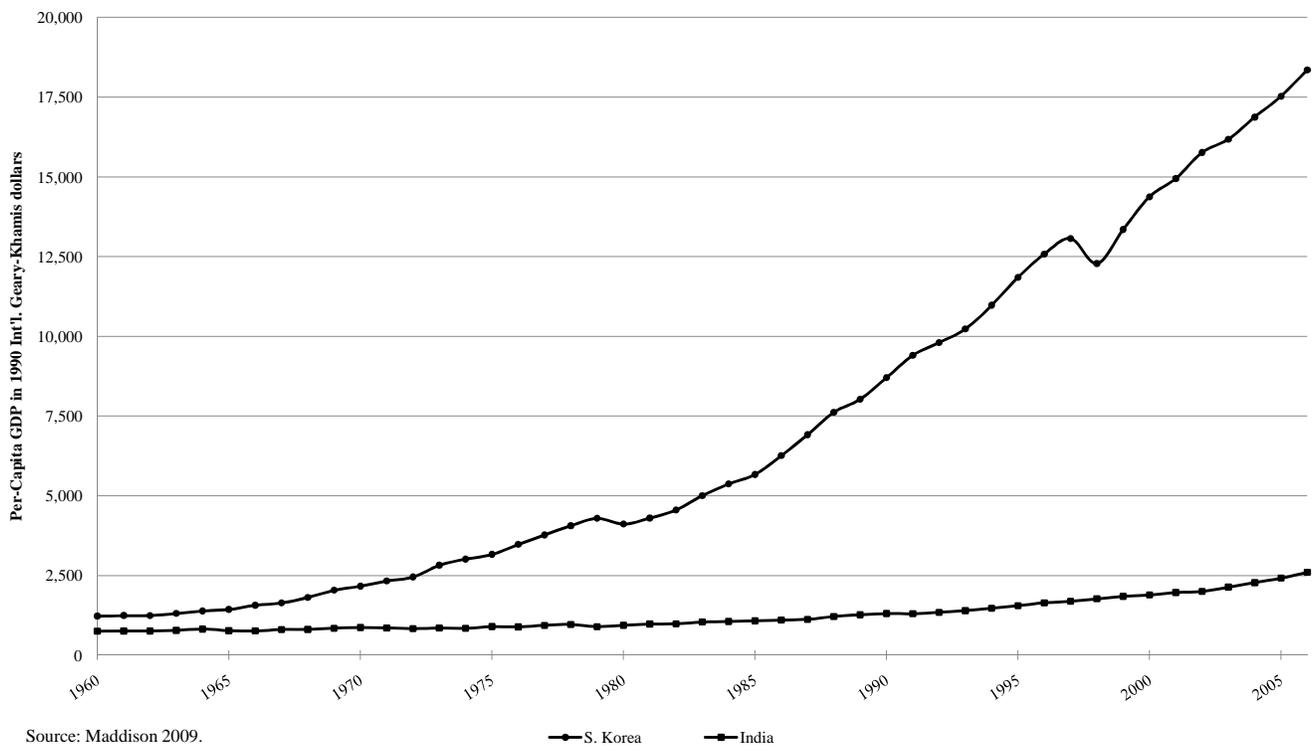
⁴⁶ These economies were all threatened, however, and the responses of the authorities were clearly crucial in preventing crisis. How one should classify the Philippines is questionable. For a considerable period of time, it appeared that the Philippines would confront a crisis. But policies were adjusted with the support of the IMF, and an outright crisis was avoided.

⁴⁷ The same much-better-than-expected recovery has taken place in other countries where the far-reaching cleanups have been undertaken. Turkey after 2001 and Russia after the 1998 crisis are prominent examples.

For emerging markets, further lessons derive from the necessity to maintain consistency between policies toward exchange rates and monetary and fiscal policies. Maintenance of adequate foreign exchange reserve levels, and guarding against significant mismatches in the currency denomination of assets and liabilities (of the financial system and of large borrowers) are also vital.

But perhaps the strongest lesson from all of the crisis situations is the urgent necessity of restoring the financial system by recapitalizing the banks, removing the NPL from bank portfolios, and enabling the resumption of the flow of credit.. Fiscal stimulus may be necessary and can provide a temporary boost (as it did in Japan in 1996), but if the financial system remains crippled, recovery is not sustainable. Growth can resume before credit starts expanding, but sustaining that growth requires a healthy financial system.

Graph 1: Indian and Korean per capita incomes, 1960-2006



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