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**The East Asian Crisis: Macroeconomic Developments and Policy Lessons**

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**Abstract**

This paper reviews macroeconomic developments during the first year of the crisis in east Asia and draws some preliminary policy lessons. The crisis is rooted in the interaction of large capital inflows and weak private and public sector governance. At the same time, macroeconomic adjustment in these countries has resulted in some surprising outcomes, including severe economic contractions, low inflation, and rapid external adjustment. The lessons for crisis resolution include the importance of tight monetary policy early on for exchange rate stabilization, flexible fiscal policy, and comprehensive structural reform. Crises are avoided by prudent macroeconomic policies, diligent bank supervision, transparent data dissemination, strong governance, and forward-looking policymaking, even in good times.

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Contents	Page
Summary .....	4
I. Introduction .....	5
II. Origins of the Crisis .....	9
A. Victims of Their Own Economic Success? .....	9
B. External Shocks .....	15
III. Onset and Spread of the Crisis .....	17
A. The Baht is Floated .....	17
B. The Crisis Spreads .....	18
C. Major Macroeconomic Developments to Date .....	18
D. Policy Responses .....	18
IV. Policy Responses and Macroeconomic Developments .....	20
A. Policy Responses .....	20
B. Major Macroeconomic Developments to Date .....	22
V. Lessons for Crisis Resolution .....	31
A. Monetary Policy .....	32
B. Financial Sector Reforms .....	35
C. Fiscal Policy .....	36
D. Structural Reforms .....	37
VI. Lessons for Avoiding Crises .....	37
A. Macroeconomic and Structural Policies .....	38
B. Burden-Sharing .....	38
C. The Role of Surveillance .....	38
Box 1: Asian Crisis Countries: Summary of Structural Reforms .....	21
Charts	
1. Asian Crisis Countries: Stock Market Indices, 1988–98 .....	11
2. Asian Crisis Countries: Private Sector Credit Growth and Leverage Ratios, 1991–97 .....	13
3. Asian Crisis Countries: Corporate Debt Equity Ratios, 1991, 1996 .....	14
4. Asian Crisis Countries: Movements in Yen-Dollar Exchange Rate and Exports ..	16
5. Asian Crisis Countries: Trade Competition .....	19
6. Asian Crisis Countries: Exchange Rates, 1997–98 .....	23

7. Asian Crisis Countries: Nominal and Real Interest Rates, 1997–98	26
8. Asian Crisis Countries: Revisions to 1998 Growth Forecasts	28
9. Asian Crisis Countries: Merchandise Trade Balances 1990–98	29
10. Asian Crisis Countries: Exports and Imports, 1990–98	30
11. Asian Crisis Countries: Real Exchange Rate and Interest Rates	33

#### Text Tables

1. Asian Crisis Countries: Exchange Rates and CPI Inflation, June 1997–May 1998	24
2. Asian Crisis Countries: Growth of Broad Money, 1996–98	25

#### Annexes

I. Asian Crisis Countries: Key Features of the Prudential and Regulatory Framework Before the Crisis	40
II. Asian Crisis Countries: Main Elements of Structural Reforms	45
III. Summaries of Economic Adjustment Programs in Crisis Countries	48
IV. Statistical Tables	
A. Asian Crisis Countries: Selected Economic and Financial Indicators	50
B. Asian Crisis Countries: Key Economic Indicators, 1990–99	51
C. Asian Crisis Countries: External Adjustment, 1996–98	52
D. Asian Crisis Countries: Key Program Indicators, 1996–98	53
References	54

## Summary

This paper reviews macroeconomic developments during the first year of the crisis in east Asia and draws some preliminary policy lessons. The crisis is rooted in the interaction of bank-intermediated capital inflows and weaknesses in private- and public-sector governance. Investment, while high, shifted recently to low-profit nontradable projects, in part, reflecting rigid exchange rate policies and incipient structural weaknesses. The crisis was triggered by external shocks, especially exchange rate shifts and terms of trade declines, but was then spread throughout the region by the shared vulnerability to the external shocks, trade and capital linkages, and investor herding behavior.

The paper contains a description of the key features of Fund programs and their rapid evolution during the past year. Macroeconomic adjustment has resulted in some surprising outcomes. The unexpectedly severe contractions of GDP reflect a collapse in domestic demand, owing to the wealth shock associated with plummeting asset prices and exchange rates. Inflation has been muted, despite the sharp depreciations. External adjustment, driven by import compression, has taken place remarkably fast. The restructuring of the corporate and financial sectors, however, is only just beginning.

Some lessons for crisis resolution can be drawn at this early stage. Tight monetary policy is needed early on, but interest rates can be reduced once the exchange rate stabilizes. Fiscal policy should be flexible to strengthen the social safety net and accommodate the costs of financial sector restructuring, subject to financing constraints. Bank and corporate reforms are needed to restore viability while at the same time improve incentives for profit maximization.

The experience to date also offers lessons for crisis prevention. Prudent macroeconomic policies and an outward orientation are essential. Proper bank supervision and data transparency are imperative. Strong governance is needed to ensure the free play of market forces. Capital account liberalization requires a healthy domestic financial sector and external debt must be managed prudently. Finally, crises are prevented by pragmatic policymaking that recognizes and addresses problems early, even when the going is good.

## I. INTRODUCTION

Most of East Asia has been in the grips of an unprecedented crisis of confidence and resultant financial turmoil since mid-1997. While much has already been written about the causes of the crisis, and policy lessons therefrom, a full post-mortem and a more fully informed assessment of the policy lessons can only be made after the dust settles. That said, there are, at least in a few of the countries most affected, encouraging signs of stability, and it appears that the stage is being set for recovery.<sup>2</sup> Some preliminary conclusions and lessons can therefore be drawn on the basis of the experience to date in the affected Asian countries as well as that of similar crises in other emerging market economies.

The paper is organized as follows: Section II discusses the origins of the crisis and Section III outlines the onset and spread of the crisis. Section IV presents key features of macroeconomic developments in all the affected countries since the start of the crisis, and outlines policy responses to date. Section V discusses policy lessons focussed on restoring confidence and laying the foundations for early recovery, and Section VI presents policy lessons that are focussed on reducing vulnerability to future shocks.

### Origins, Onset and Spread of the Crisis

- **Origins:** The paper views the crisis as stemming in large part from the interaction of large capital flows—attracted by the region’s impressive record of growth and macroeconomic stability—and weaknesses in corporate, banking and public sector governance. The surge in inflows financed investment booms, particularly in real estate and, in many cases, in government-directed projects of questionable value. Signs—that with hindsight appear ominous—suggesting that the boom was nearing an end were beginning to appear in 1996.
- **Onset:** Adverse external developments in 1996 and weak initial policy responses in the first half of 1997 were the triggers that set off the crisis. The paper discusses the impact of the wide swings of the yen/dollar exchange rate since the early 1990s on the export performance of the crisis countries; in particular, the sharp strengthening of the dollar in 1995–96 generated losses in competitiveness with adverse effects on net exports and growth. Other adverse developments include terms-of-trade shocks, such as the decline in world semi-conductor prices—a key export of many of the crisis countries, and a hike in world oil prices in 1996 (adverse for oil-importing countries).
- **Spread:** The paper outlines three channels through which the crisis may have spread across borders: (1) *common causes*, such as movements in the yen-dollar rate and other

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<sup>2</sup>For the purposes of this paper, the crisis countries are defined to include Indonesia, Korea, Malaysia, the Philippines and Thailand, that is, those whose currencies and financial markets came under the most severe pressure in the aftermath of the floating of the Thai baht.

terms-of-trade shocks noted above; (2) *spillover effects* through trade and financial linkages (the paper uses detailed data on exports of the Asian countries to present some new evidence on possible spillovers through trade linkages); and (3) *contagion* effects, as a crisis in one country led creditors to reassess fundamentals in other countries; in particular, it is likely that the crisis in Thailand served as a “wake-up call” and forced market recognition of similar financial and institutional weaknesses in the crisis countries.

### **Policy Responses and Macroeconomic Developments**

After their initial policy responses to the crisis generally proved ineffective, four of the five countries turned to the Fund for support. The paper contains an extensive description of the **key features of Fund programs and their rapid evolution** over the past year.

- **Structural reforms** in all the programs were far-reaching. These reforms focussed on strengthening the financial sector, and improving the efficiency of financial intermediation, improving the functioning of markets including by breaking the links between business, banks and government, enhancing transparency with regard to the disclosure of key economic, financial and corporate sector information, and strengthening the social safety net.
- **Monetary policy** was initially aimed at the priority task of stabilizing the foreign exchange markets, including through increases in interest rates. More recently, in countries where it appears that some measure of stability has been restored in financial markets (e.g., Korea and Thailand) there has been a cautious reduction in interest rates.
- **Fiscal policy** has adapted to take into account the impact of the slowdown on revenue collections, strengthening the social safety net, and facilitating financial sector restructuring.

The paper describes the **evolution of major macroeconomic variables** since the onset of the crisis.

- **Exchange rates and inflation:** The crisis has led to dramatic depreciations of nominal exchange rates. Inflation, albeit higher than before the crisis, has been below expectations; consequently, real exchange rates have depreciated by about 20–30 percent (Indonesia is an obvious exception). Most observers agree that exchange rates have fallen below the levels required to achieve adequate current account adjustment.
- **Interest rates, money and credit:** No clear pattern can be discerned with respect to the behavior of real interest rates. Although there have been large increases in nominal interest rates in some countries, only Korea and Thailand stand out as having maintained real interest rates at a significantly higher level than before the crisis for an uninterrupted period of several months. However, most countries have experienced sharp slowdowns in money and credit growth of varying intensity and duration during the adjustment process thus far.

- **Output:** Economic activity has slowed more sharply than envisaged in all affected countries; the pace of adjustment in the private sector has caught most observers by surprise.
- **External adjustment:** The turnaround in the current account has been significant, mainly due to import compression. Export value growth has slowed as an increase in export volumes has so far not been sufficient to offset declines in dollar export prices.

## **Policy Lessons**

### *Crisis Resolution*

- **Tight monetary policy is necessary to reduce initial speculative pressures and contribute to exchange rate stability, with interest rates used flexibly to support the exchange rate and to curb inflationary pressures.** An increase in interest rates is an appropriate response to an increase in the risk premium demanded by investors. Nonetheless, policy makers face a trade-off between the use of monetary policy to establish a nominal anchor and thereby fight inflation and increase confidence in the economy, and the potentially harmful effects of a prolonged period of higher interest rates on the health of the corporate and financial sectors. That said, other measures such as expeditious financial sector restructuring are the surest way to restart the intermediation process. Once some measure of stability returns to currency markets, a cautious and gradual reduction in interest rates is appropriate.
- **A comprehensive financial sector restructuring strategy is needed to return the banking system to financial viability while changing bank and firm behavior to avoid future poor lending practices.** Achieving both these objectives is particularly difficult given the risk that providing support to banks during the crisis may tend to create “moral hazard,” that is, the risk that banks will count on future assistance and hence face less incentive to avoid bad loans. However, a well-conceived financial sector in which management and owners bear costs has been shown to succeed. Credit growth may be squeezed during the adjustment process as banks strengthen balance sheets, the value of collateral drops, risk increases, and demand slows. But fundamental financial sector reform is indispensable to restoring confidence in the short-term and growth over the medium term.
- **Fiscal policy needs to strike a balance between several different objectives**—the need to protect social expenditures and expand the social safety net, accommodate financial sector restructuring costs and relieve the burden of current account adjustment on the private sector, while taking into account the impact of the economic slowdown on revenues. The resulting fiscal deficit needs, however, to be kept to an amount that can be financed without recourse to inflationary financing.

- **Most of the affected countries imposed capital controls in response to the financial market pressures. If retained beyond the short-term, however, the costs of such controls are likely to outweigh the benefits.**

- **Policies adopted during the crisis need to be flexible and adapt quickly to changing circumstances.** For example, the fiscal policy responses were adapted rapidly to changing circumstances after the onset of the crisis. The initial fiscal targets gave priority to the bringing about the necessary current account adjustment while recognizing the need to make room for financial sector restructuring costs. However, as the depth of the economic slowdown and the resultant current account adjustment became increasingly clear, policies were adapted to allow for greater social sector spending and to accommodate a cyclical fall in revenues.

### *Crisis Prevention*

- **Maintenance of strong economic fundamentals through prudent macroeconomic policy, realistic exchange rates, fiscal discipline and an outward orientation.** These remain the clearest prerequisites for stability and sustained long-term growth.

- **A strong financial sector, adhering to international best practices on prudential regulations and guidelines,** as well as building strong supervisory capability so that financial system maintains solvency strength and has enough reserves to withstand a future loss of confidence.

- **Disclosure of key data and information on an accurate and timely basis.** Transparency provides markets with accurate information to make informed decisions at each step, minimizes pure contagion effects based on imperfect information, and exerts a strong disciplinary effect on policy makers and other economic agents.

- **Strong governance in the corporate sector and in public policy-making** to ensure the free play of market forces and to break the close links between corporations, governments and the financial sector.

- **Proper sequencing of capital account liberalization sequencing coupled with prudent management of external debt.** In particular, an important prerequisite is implementing reforms aimed at establishing a healthy banking and financial system.

- **And finally, a pragmatic and forward-looking approach to policy making** in which problems are addressed early and action taken preemptively, even when the going appears to be good.

## II. ORIGINS OF THE CRISIS

### A. Victims of their Own Economic Success?

A common feature of many of these countries was their impressive record of outward-oriented growth, high saving and investment, low inflation and strong fiscal positions (Table A, Annex IV). Indeed, most were hailed as economic miracles because they had transformed themselves, in a little over two decades, from predominantly agriculture and commodity-based economies to economic powerhouses experiencing sustained export-oriented and investment-led growth, largely financed by increased public and private sector saving in an environment of overall macroeconomic stability. Korea, whose per capita income in 1995 was \$11,000, joined the OECD in 1996. The rapid growth rates reflected not only the accumulation of capital but also high rates of productivity growth—the latter often cited as testimony to the efficiency of investment, the success of structural reforms, the increase in human capital, education levels and declines in poverty.<sup>3</sup>

How then did these countries fall prey to such severe financial pressures?

***• An important part of the explanation lies in the massive capital inflows since the start of the 1990s encouraged in part by stable exchange rates, and latterly short-term external borrowing, intermediated primarily through the banking system, which set the stage for a classic boom-bust cycle.***

These rapidly growing emerging market economies were the location of choice for the growing volume of global capital flows. Prompted in part by low returns in industrial countries, between 1990 and 1996 the share of capital inflows to GDP in these economies averaged about 10 percent, compared to 4 percent in the late 1980s.

As for macroeconomic management of the capital inflows, the most common approach was a sharp tightening of fiscal policy, together with rapid growth in domestic credit and only a modest appreciation of the nominal exchange rate. In particular, while the focus on exchange rate stability served Thailand and the other affected countries well for several years, and helped to generate the investment and export boom of the early 1990s, signs of exchange rate misalignment began to emerge after 1995. Through mid-1997, the Thai baht, for example, had appreciated, in real effective terms, by 15 percent. Exchange rate policy was not altered despite an export slowdown (discussed further below).

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<sup>3</sup>Empirically, the role of factor accumulation versus productivity growth is unclear. Researchers such as Young (1993) and Krugman (1994) argue that Asian growth was largely due to capital accumulation, while others find evidence of substantial productivity growth.

While initially the lion's share of the inflows went to finance investment in export-intensive manufacturing and efficient import competing activities, more recently, a growing proportion was directed at nontraded and protected sectors (such as petrochemicals in Thailand, infrastructure and real estate projects, consumer credit and stock purchases in Malaysia and Thailand). By the mid-1990s, the economies began to show classic signs of overheating and unsustainable current account deficits. The combination of rising real effective exchange rates and a large current account deficit heightened the risk of a crisis.

- ***“Nothing succeeds like success”—high growth resulted in underestimation of risks.***

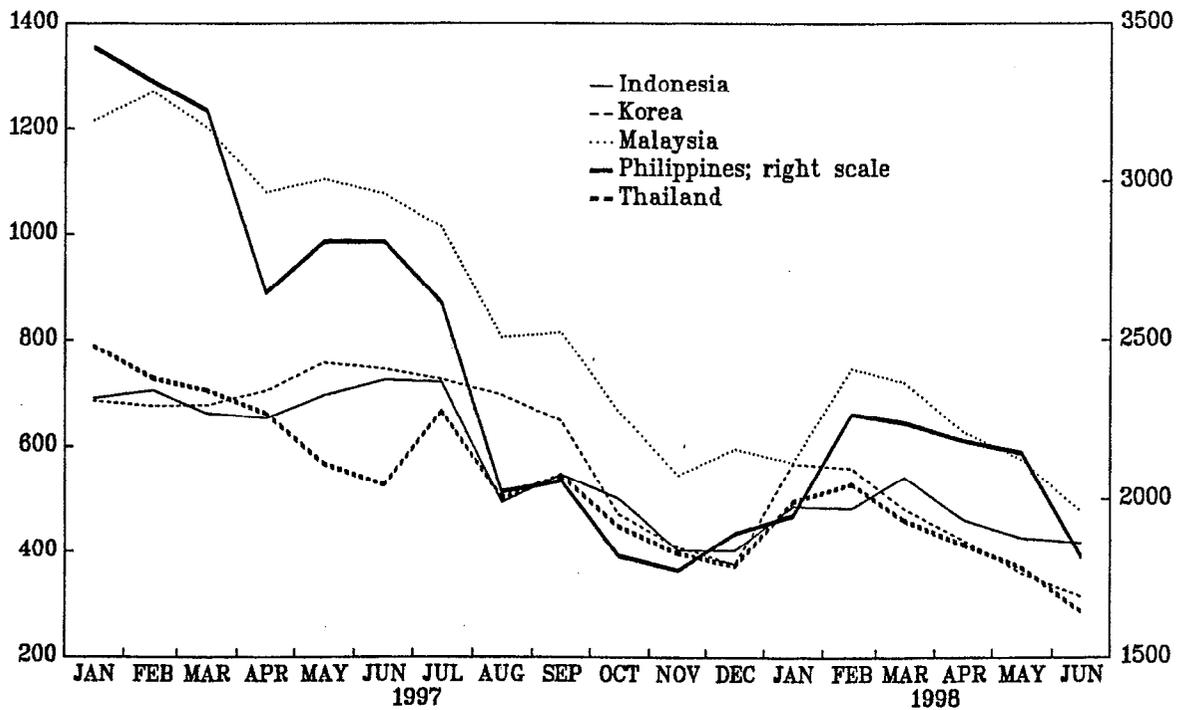
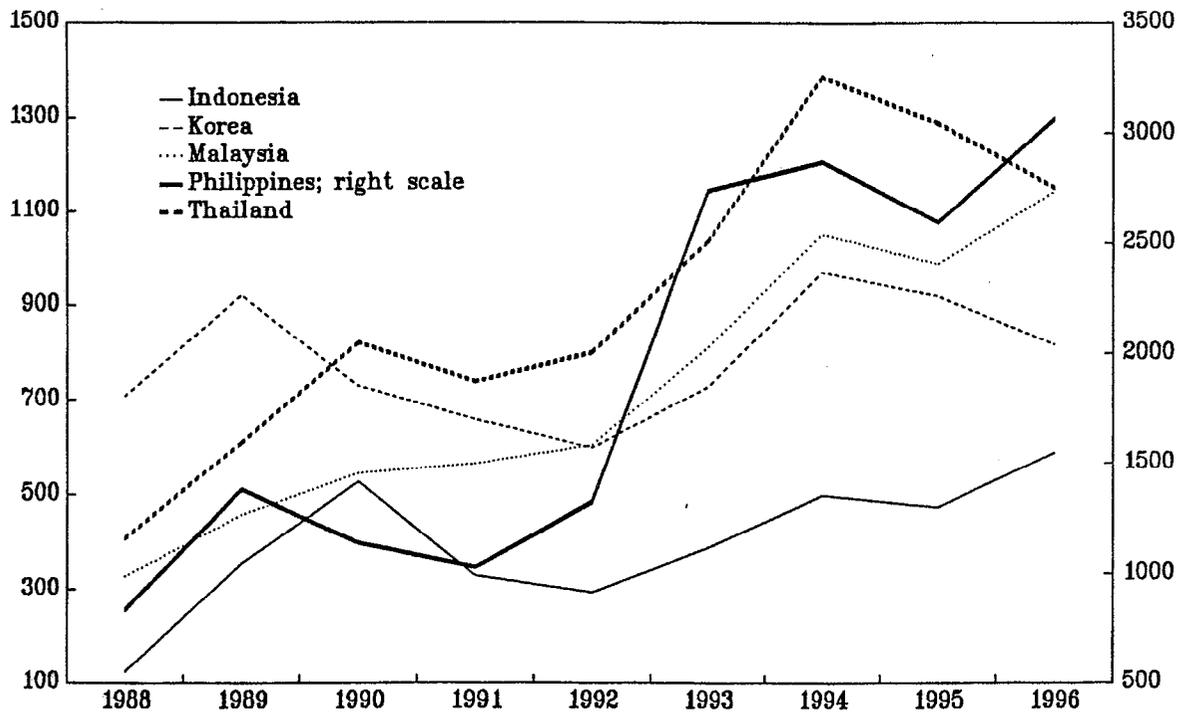
Several years of rapid growth masked underlying problems or led observers to take an unrealistic view of fluctuations in economic activity in these countries and to underestimate the severity of underlying imbalances. “Fundamentals” like saving and investment rates and the fiscal position continued to indicate strength, despite a widening current account. The apparent signs of success masked emerging problems associated with the long period of state intervention, administrative guidance and directed lending, which gradually eroded the countries' resilience to shocks. In particular, the lack of transparency in financial and corporate dealings, weaknesses in corporate and public sector governance, the extent of relationship banking, and the lack of timely disclosure of key information hindered the operations of markets and prevented early and effective policy responses.

- ***Structural weaknesses began to emerge, particularly in the financial sector.***

The relatively small domestic bond and long-term capital markets in these countries implied a dominant role for the banking system as the main intermediary for the high level of saving and placed considerable pressure on the financial intermediation process. The capital inflows and the growing volume of borrowing, which were generally channeled through banking sectors, exacerbated these pressures. Banks were not fully equipped to manage the risks associated with the resultant asset price volatility, and this contributed to setting the stage for a boom-bust cycle, with a sharp acceleration in stock and other asset prices followed by equally sharp declines (Chart 1 shows the boom-bust cycle in stock markets.)

Although there was significant variation in the strength of financial supervisory and regulatory frameworks and institutions, reforms in this area generally failed to keep pace with the considerable changes taking place with global capital flows and were not, in general, in line with internationally accepted best practices. (Annex I provides a detailed description of the prudential and regulatory framework in place before the crisis.)

ASIAN CRISIS COUNTRIES  
STOCK MARKET INDICES, 1988-98  
(Period average)



Source: IFC, Emerging Markets Database.

Furthermore, the perception of widespread implicit or explicit government guarantees of the banking systems liabilities fueled rapid credit growth (Chart 2) and risky lending.<sup>4</sup> Debt-equity ratios increased very sharply between 1991 and 1996, as shown in Chart 3.

Finally, in some countries, the chosen sequence of capital account liberalization prior to the crisis appears to have contributed to an increase in short-term external borrowing and to a bias in favor of flows through the domestic banking system. For example, in Korea the process of liberalizing capital flows favored external borrowing and lending by banks over direct access by corporations to international capital markets. Likewise, the establishment of the Bangkok International Banking Facility (BIBF) in 1992 was intended to improve the access of domestic institutions to international capital markets, and resulted in increasing amounts of short-term flows being channeled through the banking system.

As long as asset prices were rising, bank's balance sheets looked strong and more credit was extended on the basis of rising asset values. However, as in all classic boom-bust cycles, falling asset prices exposed the vulnerabilities of the financial system. In Korea, for example, unofficial estimates place banks' nonperforming loans at the end of 1996 at 70 percent of banks' equity. Also, in 1997, several chaebols moved into bankruptcy and nonperforming loans rose to 20 percent of total outstanding loans.<sup>5</sup> Likewise, in Indonesia, nonperforming loans accounted for almost 14 percent of total loans at state banks by mid-1997. At the same time, however, in other countries, notably Malaysia and the Philippines, conventional indicators of asset quality such as nonperforming loans and capitalization levels did not foreshadow weaknesses in the banking system, and indeed indicated growing strength.<sup>6</sup>

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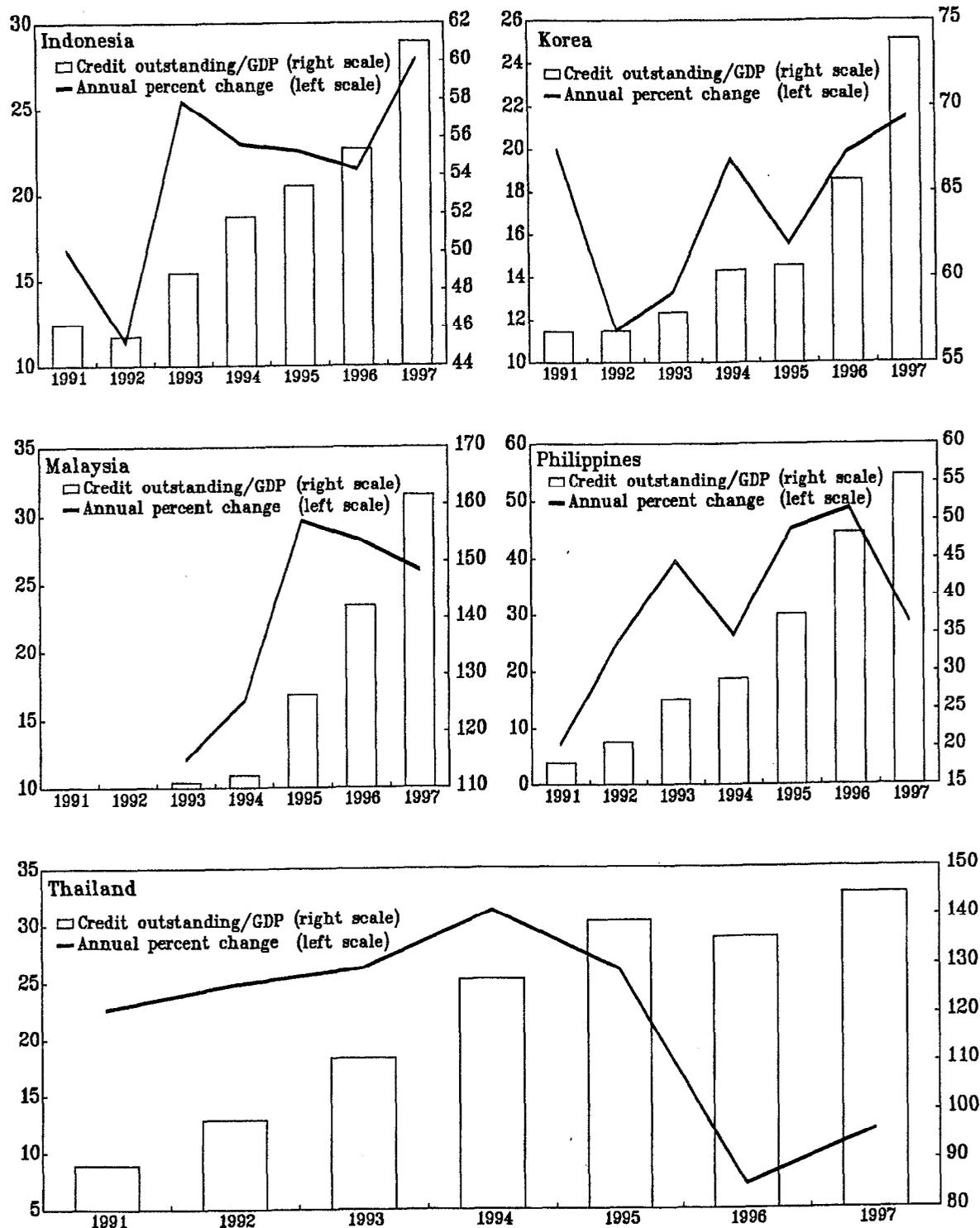
<sup>4</sup>This is the core of Krugman's (1998) thesis that the implicit government guarantee of banks' liabilities in the crisis countries created a moral hazard problem by fueling excessively risky investment and over-investment at the economy-wide level. In doing so, these guarantees created a banking system that was very vulnerable to asset price declines.

<sup>5</sup>Official estimates of nonperforming loans are much lower (about 6 percent at end-1997).

<sup>6</sup>This is largely because these tend to be lagging indicators of true asset quality and tend to underestimate the extent of problems, especially in periods of high growth, and when loan classification standards and safeguards against such practices as "evergreening" are weak.

ASIAN CRISIS COUNTRIES

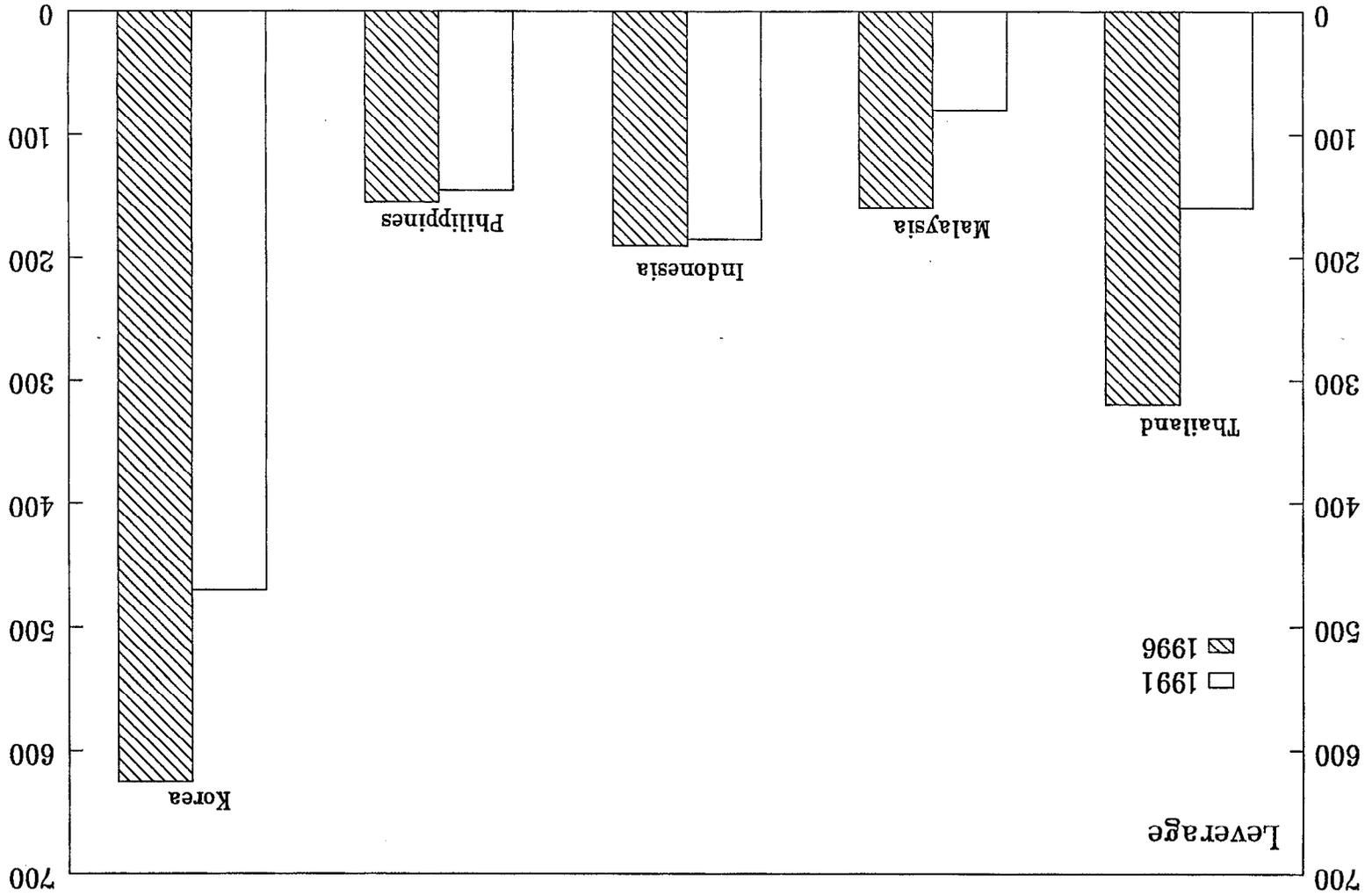
PRIVATE SECTOR CREDIT GROWTH AND LEVERAGE RATIOS, 1991-97



Sources: Data provided by the authorities; and Fund staff calculations.

CHART 3

ASIAN CRISIS COUNTRIES  
CORPORATE DEBT EQUITY RATIOS, 1991, 1996



Source: World Bank, 1998.

## B. External Shocks

Although domestic problems lay at the root of the crisis, several adverse external shocks may have exacerbated these problems. These include terms-of-trade shocks, such as the decline in world semi-conductor prices—a key export of many of the crisis countries, and a hike in world oil prices in 1996 (adverse for oil-importing countries). These countries may also have faced increasing export competition from China, and possibly from Mexico in some industries following the passage of NAFTA.<sup>7</sup>

Another development that is believed to have considerable significance in the affected countries is the wide swing of the yen/dollar exchange rate since the early 1990s. The weakening of the U.S. dollar against the yen in the 1994 and early 1995 resulted in an improvement in their competitiveness measured by trade-weighted exchange rates. Conversely, the sharp strengthening of the dollar generated substantial losses in competitiveness with adverse effects on net exports and growth.

What was the impact of the yen-dollar exchange rate on export growth in each of the affected countries? Historically, a depreciation of the yen—relative to the U.S. dollar—has been associated with slowdowns in real export growth in the Asian crisis countries. The figures in the upper panel of Chart 4 show the correlation coefficients between the yen depreciation and real export growth over the period 1985 to 1996 for each of crisis countries. As shown, the yen depreciation had a particularly adverse impact on export growth in Korea, Thailand and Indonesia, and a less pronounced effect in the Philippines and Malaysia.<sup>8</sup>

This correlation arises because, until mid-1997, the currencies of the Asian crisis countries had been—in essence—pegged to the dollar. The weight of the U.S. dollar in the currency baskets of these countries was roughly five times the weight that may have been appropriate based on the volume of their trade with the United States. Consequently, their competitiveness was directly tied to swings of the dollar/yen rate. As shown in the bottom panel of Chart 4, the period 1991 to 1995 was marked by a pronounced appreciation of the

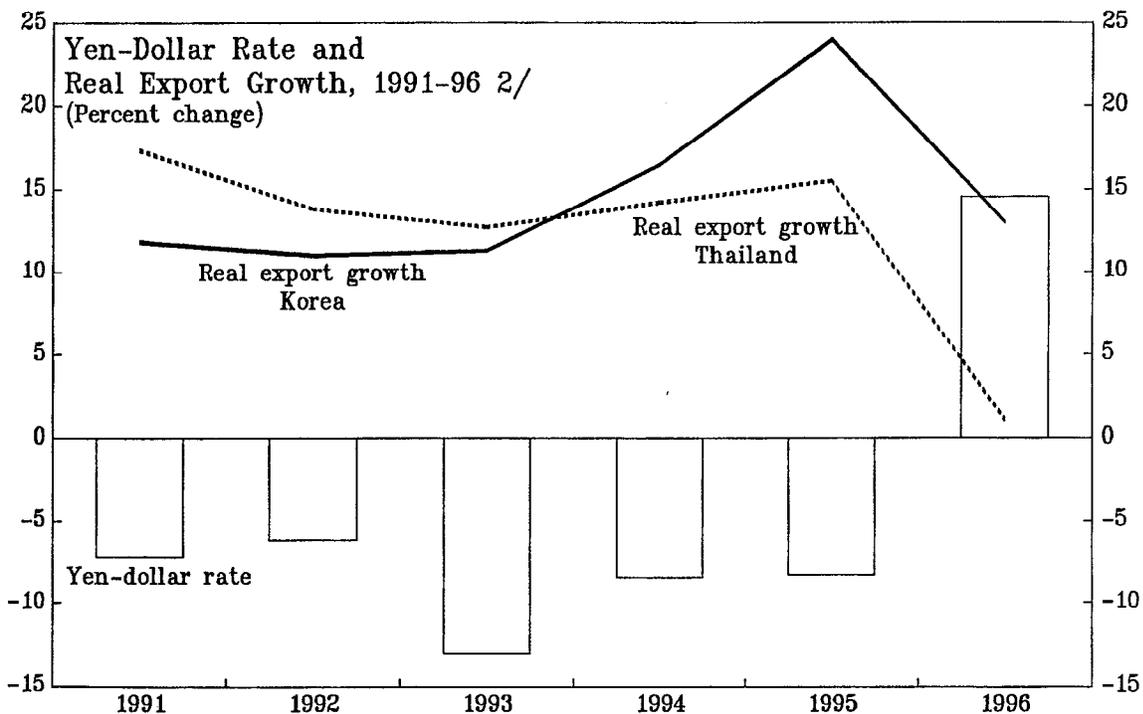
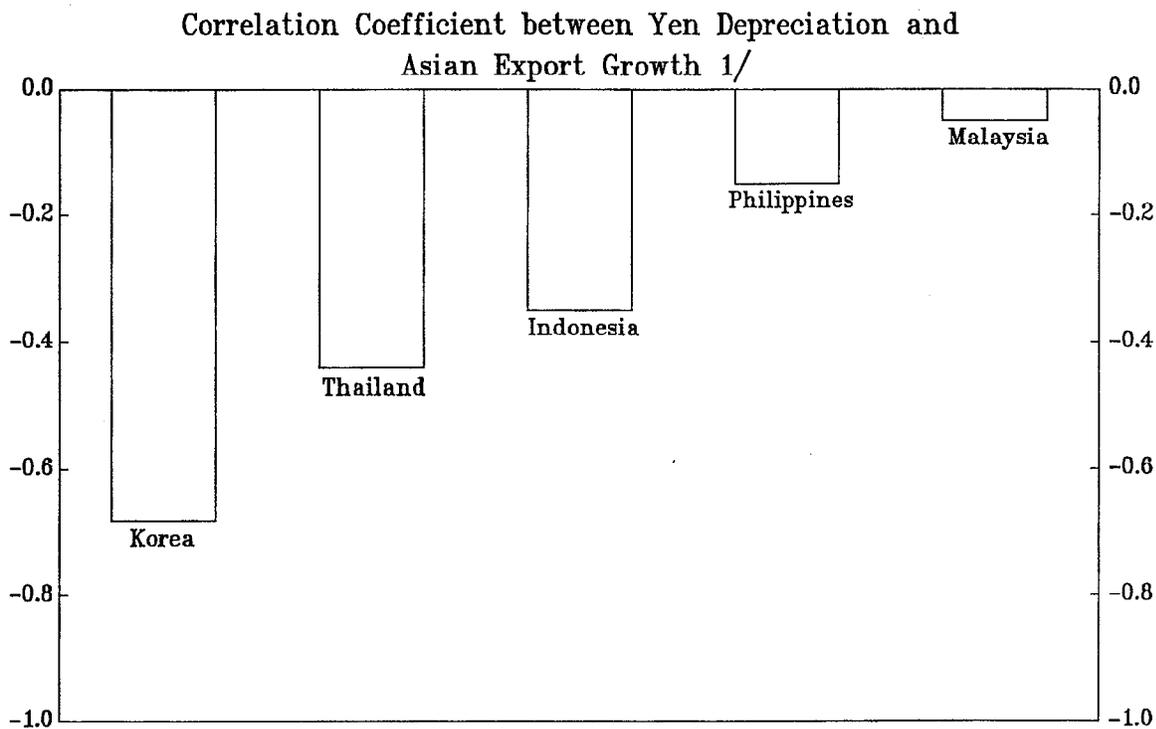
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<sup>7</sup>Ahmed and Loungani (1998) present evidence on the importance of terms-of-trade movements and changes in oil prices for output fluctuations in Asian economies. Fernald, Edison and Loungani (1998) and Noland, Liu, Robinson, and Wang (1998) study the trade linkages between China on the one hand, and Asian crisis countries on the other; both studies conclude that while there is trade competition between the two, it is unlikely the renminbi “devaluation” of 1994 played an important role in triggering the current Asian crisis. The suggestion that competition from Mexico may have been a significant adverse external shock is made by, among others, Sachs, and Radelet (1998).

<sup>8</sup>The correlations are qualitatively similar over a longer period 1973 to 1996, and are robust to the inclusion of other variables in the export equations such as foreign demand growth.

CHART 4

ASIAN CRISIS COUNTRIES  
MOVEMENTS IN YEN-DOLLAR EXCHANGE RATE AND EXPORTS



Sources: Data provided by the authorities; and Fund staff calculations.

1/ A depreciation of the yen reduces export growth in other Asian countries. Correlations are based on data from 1985 to 1996.

2/ Bars indicate percent change in yen-dollar rate (minus implies appreciation of yen).

yen relative to the U.S. dollar, and an export boom in these countries, particularly during 1994–95. In contrast, the depreciation of the yen in 1996 worked in the direction of dampening export growth in many of the crisis countries.

### **III. ONSET AND SPREAD OF THE CRISIS<sup>9</sup>**

#### **A. The Baht is Floated**

Following periodic episodes of speculative attack in 1996, the Thai baht came under strong pressure in early 1997. The main immediate concerns were the sustainability of the exchange rate peg in the face of the large current account deficit, the sharp fall in exports brought on, in part, by the dollar's rise against the yen, rising short-term external debt, and collapsing stock and property prices. While these were all clearly warning signals of problems ahead (and the subject of discussions between the Fund and the Thai authorities during this period), the authorities' were lulled into a false sense of security by their generally successful track-record of growth led by strong exports and so delayed the appropriate policy response. In particular, the pegged exchange rate led to loss in competitiveness and to vulnerability to speculative attack. This was compounded by strong resistance by the Thai authorities to the pressure on the baht, accumulation of heavy (and under-reported) short-term external liabilities and forward foreign exchange liabilities, and subsequent significant reserve losses.

The Thai authorities' initial response was to intervene heavily in spot and forward markets. Subsequent responses included administrative exchange and capital controls to curb speculation and segment the off-shore and on-shore markets. But, by early July 1997, when it became apparent that the pressures on the baht were too strong, and the policy responses had not succeeded in stemming the capital outflows, the peg was finally abandoned.

By then, there were growing concerns about other countries in the region with a de facto pegged rate (Philippines and Malaysia), large current account deficits (Malaysia), similarly exposed to overly inflated asset markets (Malaysia and Indonesia), and weak banking systems (Indonesia). Ripple effects were also felt in other countries in Asia—Singapore, Taiwan Province of China, Korea, and Hong Kong SAR—where concerns emerged about the adverse effects on competitiveness of the currency depreciations of the Asian crisis countries and, to some extent, about their financial systems.

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<sup>9</sup>See Berg (1998) and IMF (1997) for a detailed discussion of the onset and spread of the crisis.

## B. The Crisis Spreads

Among the many surprising features of the Asian crisis was the speed and the extent to which the crisis spread from Thailand to other countries in the region. Though the reasons for the spread of the crisis remain unclear, one can distinguish three sets of reasons why crises tend to be clustered and discuss informally their relative importance in the Asian case.<sup>10</sup>

- ***Common causes or “monsoonal” effects:*** The crises may stem from a common set of causes, such as increases in world interest rates or adverse movements in the terms-of-trade. As discussed above, common causes such as movements in the yen/dollar rate were partly responsible for the export slowdown in many Asian economies in the pre-crisis period.
- ***Spillover effects:*** A crisis in one country may affect macroeconomic fundamentals in other countries through trade or capital market linkages. This is likely to be an important source of contagion in the affected Asian crisis. To the extent that Asian countries tend to compete in the same markets, a devaluation of one currency has an adverse effect on the international competitiveness of other countries, putting downward pressure on their currencies as well.

Not only do these countries tend to export to the same destinations, but they also tend to export similar products. This is illustrated in the top panel of Chart 5, using data for the exports of these countries to the United States.<sup>11</sup> It is evident from the chart that for almost all crisis countries, the bulk of exports to the United States are accounted for by two product clusters: (1) semiconductors and capital goods industries (many of them related to semiconductors), and (2) apparel, footwear and household goods. Furthermore, as shown in the bottom panel of the chart, export competition among the countries may have intensified over the last few years as all crisis countries moved in the direction of increasing their shares of the first product cluster, while reducing their shares of the second.

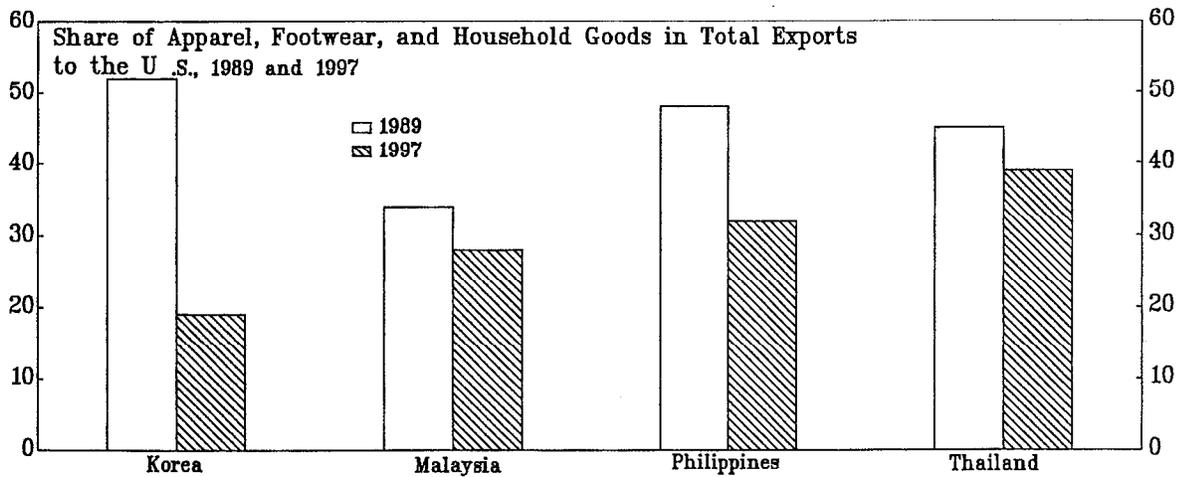
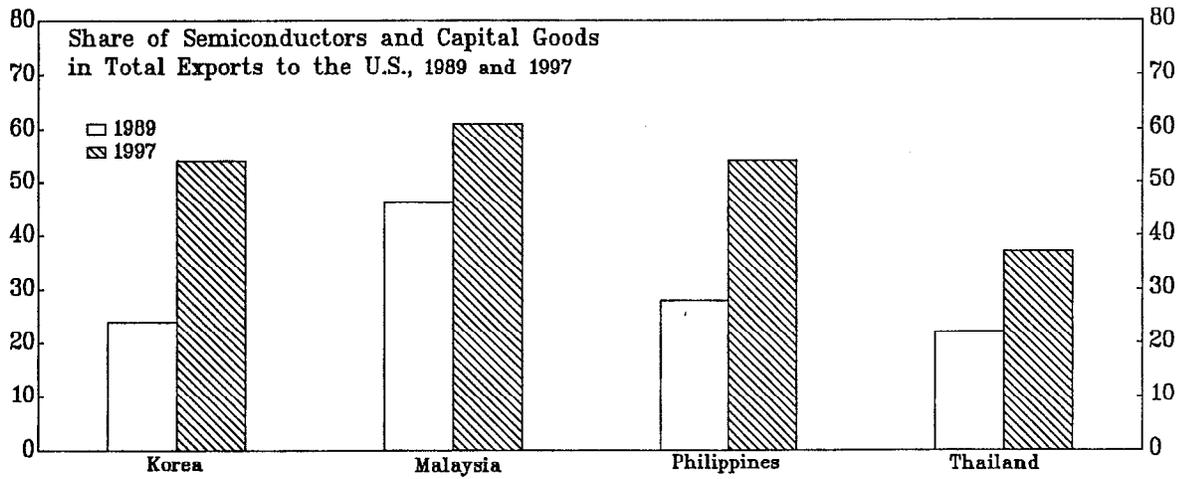
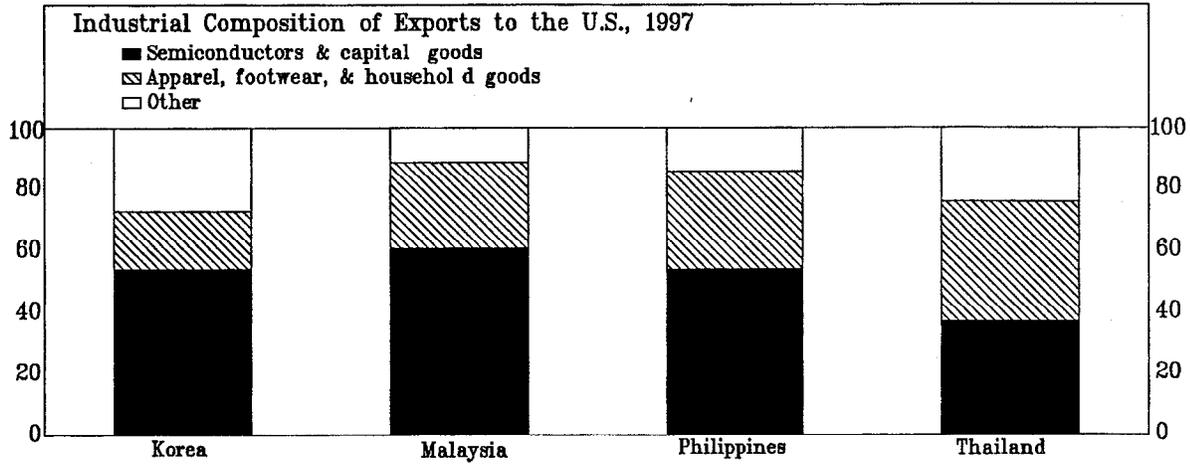
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<sup>10</sup>The framework for this discussion is drawn from IMF (1998) and Masson (1998).

<sup>11</sup>The United States is used in this illustration because of the availability of fairly disaggregated data on Asian exports. Although the United States accounts for roughly 20 percent of total exports of the affected countries, it is one of the main markets in which they compete closely on the product side. See Fernald, Edison and Loungani (1998), who also document the export competition among the Asian crisis countries in Japan and in major European markets.

CHART 5

ASIAN CRISIS COUNTRIES  
TRADE COMPETITION



Sources: Data provided by the authorities; and Fund staff calculations.

● **(Pure) contagion effects:** A crisis in one country may lead creditors to reassess fundamentals in other countries and may lead to the realization by investors that they had poor understandings of the working of these economies.<sup>12</sup> It is difficult to distinguish empirically this form of contagion from other forms. But work by some researchers testing capital market linkages suggests that there are strong contagion effects across stock markets.<sup>13</sup> These results indicate that there could be significant herding behavior in global financial markets and are suggestive of the important role that greater transparency and information disclosure can have to permit a finer distinction between emerging markets.

#### IV. POLICY RESPONSES AND MACROECONOMIC DEVELOPMENTS

##### A. Policy Responses

The early responses to the crisis included intervention in foreign exchange markets to defend the rate coupled with short-lived hikes in interest rates, followed by the adoption of floating exchange rates. Most countries also tightened capital and exchange controls, particularly on forward or derivative transactions and their financing.<sup>14</sup> However, these responses failed to restore investor confidence, and further capital outflows, sharp depreciations of the exchange rate and falls in the stock market took place.

It was in this environment of severely damaged investor confidence, a significantly weaker outlook for capital inflows, and weakened financial and corporate sectors that four of the five countries turned to the Fund for support.<sup>15</sup> The Fund's adjustment programs were aimed at restoring confidence in the crisis countries and were tailored to addressing the specific circumstances of each country. Two common features of the programs were the focus on structural reforms and the flexibility exercised in adapting and strengthening them to reflect evolving circumstances. As summarized in Box 1 (and spelled out in Annex III), the programs envisaged far-reaching structural reforms focussed on:

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<sup>12</sup>Goldstein (1997) refers to this as the "wake-up call" effect.

<sup>13</sup>See Ghosh and Phillips (1998) and Baig and Goldfajn (1998).

<sup>14</sup>Most of these measures were removed within a short period of time in Thailand.

<sup>15</sup>The programs with Thailand, Indonesia and Korea were approved in August, November and December 1997, respectively. The Philippines already had a Fund-supported program in place before the crisis; the program period was extended and financial support under the program was augmented in July 1997. In March 1998, a new precautionary stand-by arrangement was approved for the Philippines. Malaysia does not have a Fund-supported program but the Fund has been in close touch with the authorities as they have formulated their own comprehensive policy response to the crisis.

### **Box 1. Asian Crisis Countries: Summary of Structural Reforms**

The Fund-supported programs and policy advice to the affected countries have placed particular emphasis on broad-ranging structural reforms of the financial and corporate sectors, competition and governance policies and the trade system.

#### **Financial and Corporate Sector Reforms**

- ¶ Closure of insolvent financial institutions, with their assets transferred to a resolution or restructuring agency (**Korea, Indonesia and Thailand**); together with recapitalization and mergers of others (**all countries**). The reform programs in **Malaysia** and **Thailand** place particular importance on the finance company sector.
- ¶ Announcement of limited use of public funds for bank restructuring; and actual funds used made explicit in the budget (**all countries**).
- ¶ Measures to significantly strengthen prudential regulations, including loan classification and provisioning requirements, capital adequacy standards (**all countries**).
- ¶ Measures to strengthen disclosure, accounting and auditing standards, and the legal and supervisory frameworks (**all countries**).
- ¶ Liberalization of foreign investment in ownership/management of banks (**Korea, Indonesia and Thailand**).
- ¶ The introduction of more stringent conditions for official liquidity support (**Indonesia, Malaysia and Thailand**).
- ¶ Strengthen prudential regulations on loan exposure (**all countries**).
- ¶ Introduce funded deposit insurance scheme (planned in **Indonesia and Thailand**; under consideration in **Malaysia**; already in place in **Korea** and the **Philippines**).
- ¶ Restructure domestic and external corporate debt (**Indonesia, Korea, Thailand**) and close down nonviable firms (**Korea**).

#### **Competition and Governance Policies**

- ¶ Liberalize restrictive marketing arrangements for a variety of key commodities (**Indonesia**).
- ¶ Establish competitive procedures for privatization of government assets and for procurement (**Indonesia**; planned in **Malaysia and Thailand**).
- ¶ Announcement of bans on/limits to the use of public funds to bail-out private corporations (**Indonesia, Korea, Malaysia and Thailand**).
- ¶ Introduce/strengthen bankruptcy laws and exit policies (**Indonesia, Korea, and Thailand**).
- ¶ Accelerate privatization and closure of non-viable public enterprises (**Indonesia**).
- ¶ Strengthen corporate disclosure standards (**Korea**).
- ¶ Liberalization of foreign investment in ownership/management in sectors other than the financial sector (**Korea, Indonesia, Malaysia and Thailand**).

#### **Trade Reforms**

- ¶ Reduce import tariffs and export taxes (**Indonesia**).
- ¶ Ease quantitative import and/or export restrictions (**Indonesia and Korea**).

#### **Social Sector Policies**

- ¶ Labor-intensive public works programs (**Indonesia, Thailand**), and expansion of unemployment insurance system (**Korea**).
- ¶ Protect low-income groups from the rise in the prices of food and other essentials (**Indonesia, Malaysia, the Philippines, Thailand**).
- ¶ Provision of higher spending for health and education (**Indonesia**), and reallocation of budgetary expenditures to health programs for the poor (**Thailand**).
- ¶ Expansion of scholarship and loan programs to minimize number of student dropouts (**Thailand, Malaysia**).
- ¶ Subsidized credit for small and medium-size enterprises (**Indonesia, Malaysia**).

- strengthening the financial sector, and improving the efficiency of financial intermediation;<sup>16</sup>
- improving the functioning of markets including by breaking the links between business, banks and government;
- enhancing transparency with regard to the disclosure of key economic, financial and corporate sector information; and,
- tightening the social safety net.

Turning next to macroeconomic policies, *monetary policy* was initially aimed at the priority task of stabilizing the foreign exchange markets (Annex III). For this, the programs envisaged a tightening of monetary policy, including through increases in interest rates, to make it more attractive to hold the local currency, to make it more expensive for speculators to gain access to the local currency and to curb the inflationary pressures that were bound to arise from the nominal exchange rate depreciation. More recently, in some countries where it appears that some measure of stability has been restored in financial markets (e.g., Korea and Thailand) there has been a cautious reduction in interest rates.

*Fiscal policy* was initially aimed at tightening the public sector's financial position, on the grounds that the current account adjustment necessitated by the capital inflows should not unnecessarily burden the private sector, and that financial sector restructuring costs must be offset. However, as it became clear that the economic slowdown was likely to be longer and deeper, fiscal policy was adapted to take into account the impact of the slowdown on revenue collections, strengthening the social safety net, and facilitating financial sector restructuring. Further, as the extent of weakness in the external sector has become clear, fiscal policy has been further adapted to include additional stimulus with the aim of restarting the growth process (see Annex III).

## B. Major Macroeconomic Developments to Date<sup>17</sup>

### *Nominal and Real Exchange Rates*

- **Sharp exchange rate depreciations.** The crisis has given rise to dramatic depreciations of the nominal exchange rate (Chart 6). Although it is especially difficult in the present rapidly changing circumstances to pin down the equilibrium rate, most observers agree that exchange rates have fallen below the levels required to achieve adequate current account adjustment.

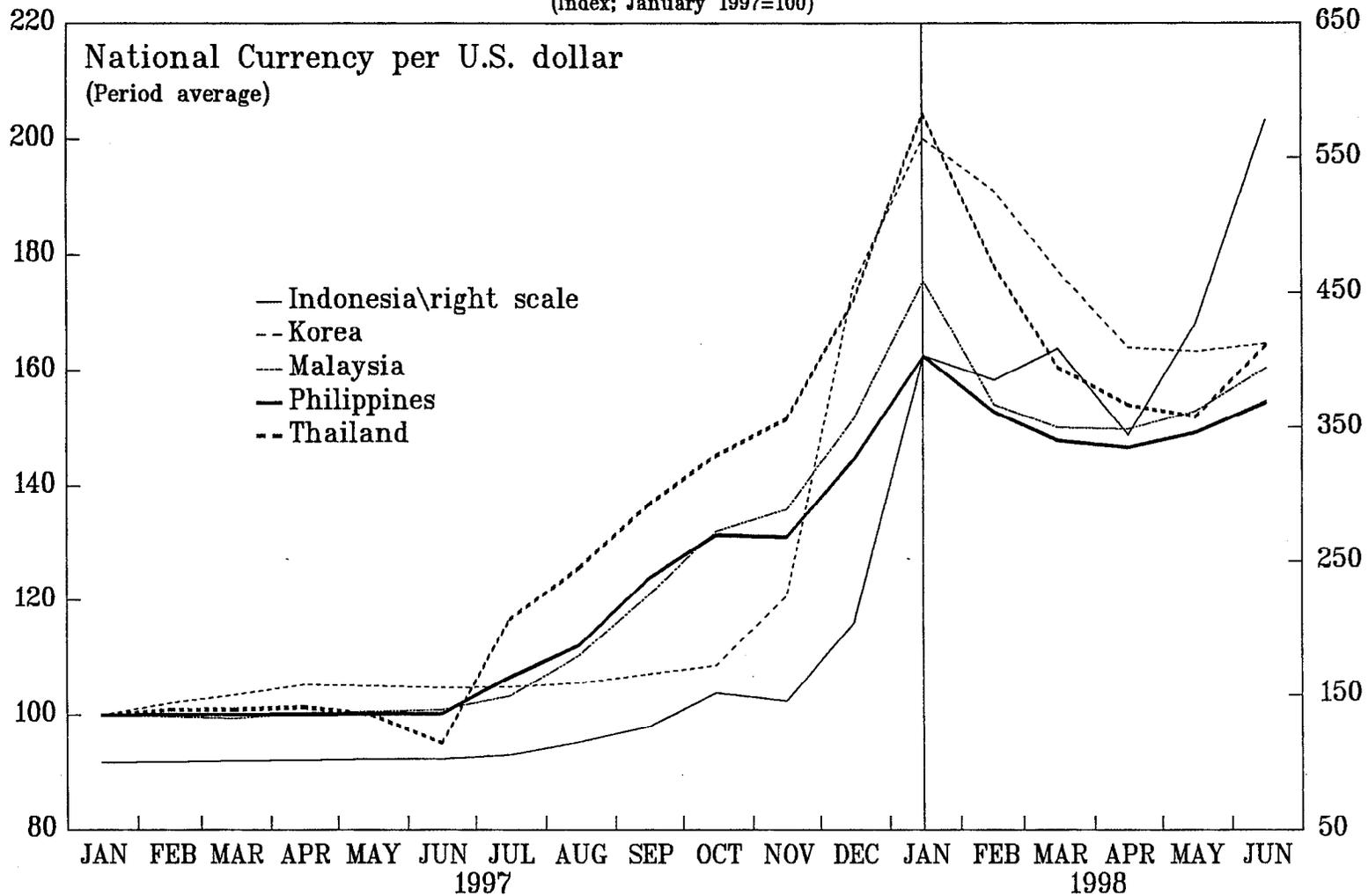
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<sup>16</sup>It should be noted that, especially in the aftermath of the Mexico crisis, the Fund had emphasized the need for stronger and more transparent regulatory frameworks and more effective bank supervision, sound financial systems, improved information disclosure and strengthened governance as conditions for the achievement of sustainable growth.

<sup>17</sup>Detailed information can be found in the tables in Annex IV.

CHART 6

ASIAN CRISIS COUNTRIES  
EXCHANGE RATES, 1997-98  
(Index; January 1997=100)



Source: Financial Market Developments database.

The sharp movement of the exchange rate has greatly complicated macroeconomic policy choices by raising the cost of repaying foreign debt, weakening the financial and corporate sectors—weaknesses that themselves could affect the equilibrium exchange rate.

• ***Inflation, albeit higher than before the crisis, has been below expectations.*** Remarkably, CPI inflation since June 1997 has been in the 5–12 percent range, with the exception of Indonesia. Mexico, by way of comparison, experienced a 40 percent surge in inflation during the first ten months of its crisis in 1995 (Table 1). The low degree of passthrough from exchange rate depreciation to inflation has been attributed to the reluctance of importers to pass on price increases due to low domestic demand. Other explanations for low passthrough in east Asia today include wage and price flexibility, and a more pronounced decline in demand than expected. As a consequence, real exchange rates have depreciated by about 20–30 percent since the onset of the crisis, with the exception of Indonesia whose exchange rate has fallen by much more (Table 1).

Table 1. Asian Crisis Countries: Exchange Rates and CPI Inflation, June 1997–May 98

	Indonesia	Korea	Malaysia	Philippines	Thailand	Mexico 1/
Inflation, seasonally adjusted, annualized	54.5	9.8	6.4	8.4	11.5	50.5
Change in U.S. dollar exchange rate, June 1997–May 1998	-7.42	-35.6	-33.9	-33.0	-33.4	-48.5
Exchange rate passthrough 2/ Import share in the CPI	32.6 30	20.3 18	17.9 20	28.3 16	27.4 30	56.3 ...
Real effective exchange rate, Percent change since June 1997	-57.1	-30.9	-29.0	-25.3	-28.5	...
Real effective exchange rate, Percent change since January 1998	13.6	13.4	12.1	10.5	19.8	...

Source: Data provided by country authorities; and staff estimates

1/ November 1994 to September 1995

2/ Ratio of the log first difference of the CPI to the log first difference of the nominal effective exchange rate.

***Real interest rates, money and credit***

● ***No clear pattern can be discerned with respect to the behavior of real interest rates.*** (Goldfajn and Baig (1998)).<sup>18</sup> As shown in Chart 7, despite large increases in nominal interest rates in some countries, only Korea and Thailand stand out as having maintained real interest rates at a significantly higher level than before the crisis for an uninterrupted period of several months; only in April and May did interest rates start to return to pre-crisis levels. Interest rates in other countries exhibit a stop-go pattern and importantly, in these cases, real interest rates are, at present, not noticeably different from the levels that prevailed in early 1997.

● ***Most countries have experienced sharp slowdowns in money and credit growth of varying intensity and duration*** during the adjustment process thus far (Table 2). In part, these reductions in monetary growth reflect the declines in demand and in part, they reflect more cautious lending behavior of the part of banks as they attempt to strengthen their balance sheets in the face of dropping collateral values, more stringent loan classification guidelines and provisioning requirements, improved credit risk assessment techniques and the generally more risky environment.

Table 2. Asian Crisis Countries: Growth of Broad Money, 1996–98  
(Annualized three-month rates of change, unless otherwise indicated)

	December 1996 1/	January 1997	December 1997	January 1998	Most recent month 2/
Indonesia 3/	30	38	27	206	156
Korea	16	17	15	14	10
Malaysia	21	27	20	16	-1
Philippines	16	36	10	26	-3
Thailand	13	15	0	21	-1

Source: Data provided by country authorities; and staff estimates.

1/ Twelve-month percent change.

2/ March 1998 for Indonesia, the Philippines, and Thailand and April 1998 for Korea and Malaysia.

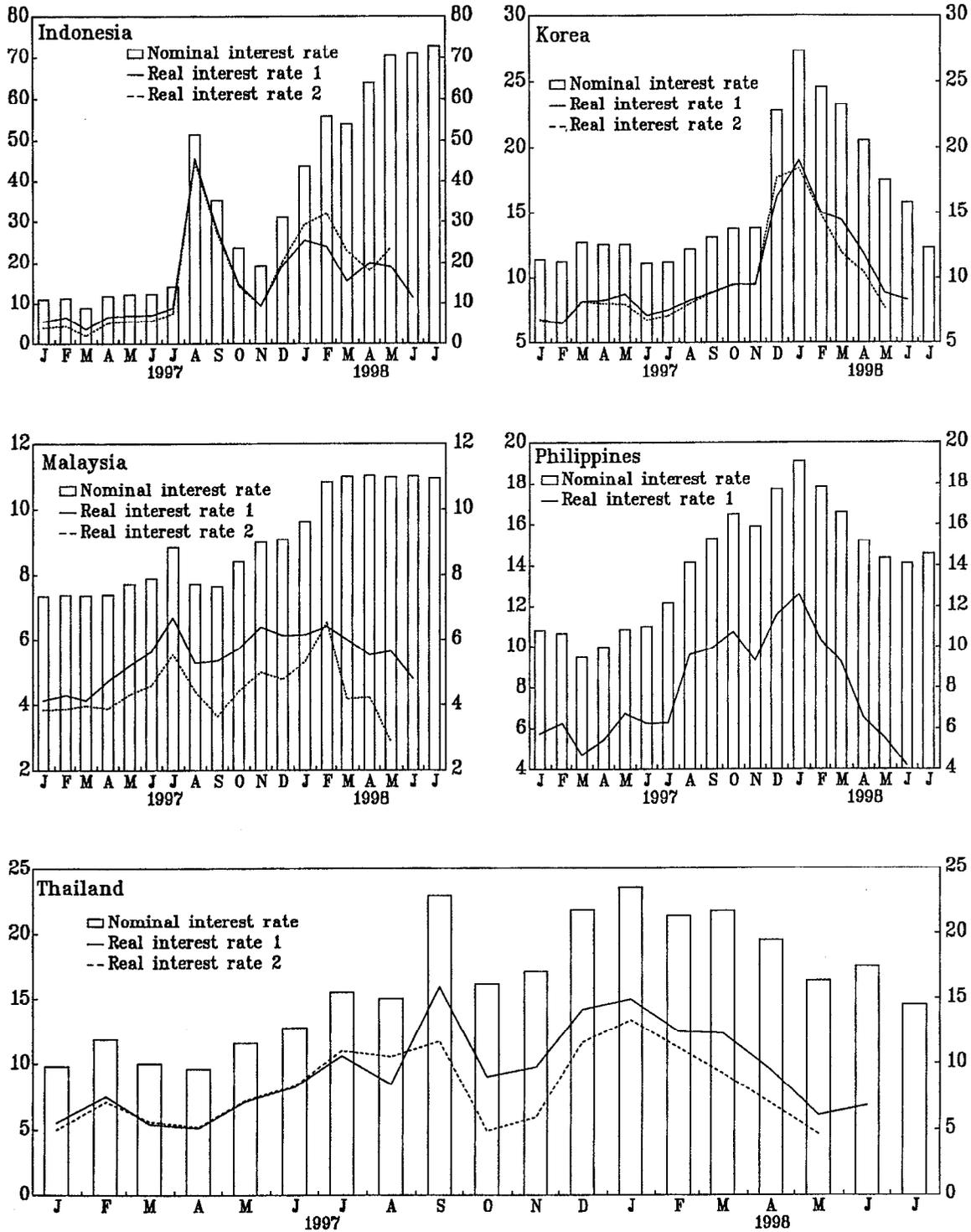
3/ The increase in broad money growth in Indonesia reflects valuation effects of foreign currency denominated deposits.

<sup>18</sup>Real interest rates are, of course, very difficult to measure. For the purposes of this discussion, survey data on expected inflation and the widely reported 12-month inflation rates are used as two measures of inflationary expectation.

CHART 7

ASIAN CRISIS COUNTRIES

NOMINAL AND REAL INTEREST RATES, 1997-98 1/, 2/



Sources: Data provided by the authorities; and Fund staff estimates.

1/ Interest rates used are the JIBOR for Indonesia, the overnight interbank rate for Korea, the 3-month KLIBOR for Malaysia, the 91-day T-bill rate for the Philippines, and the 1-month repurchase rate for Thailand.

2/ Real interest rate 1 is calculated using the year-on-year inflation rate in the current month as a measure of expected inflation. Real interest rate 2 is calculated using survey data for expected inflation taken from Asia-Pacific Consensus forecasts.

### ***Output growth***

● ***Economic activity has slowed more sharply than envisaged in all affected countries.*** In particular, the pace of adjustment in the private sector has caught most observers by surprise. Chart 8 presents the evolution of forecasts for real GDP growth through the crisis. Since the forecasts are revised in light of new evidence on activity; the rapid downward revisions of growth forecasts for 1998 is indicative of the sharper-than-expected decline in the pace of activity since the onset of the crisis. The sharp adjustment reflects, in part, the considerable decline in wealth implied by the fall in stock prices and the depreciation of the domestic currencies and the sharply negative shock to investor and consumer confidence. Also, as discussed above, the investment boom prior to the crisis resulted in a significant amount of investment in low- or negative-return activities. A large fraction of the capital stock has now been revealed to be unprofitable and needs to be written down. Moreover, a large adjustment will be needed to reallocate both capital and labor from low- to high-return sectors. These adjustments are likely to entail a significant short-run decline in output.

### ***External adjustment***

● ***The turnaround in the current account has been significant, mainly due to import compression.*** The rapid capital outflows have forced a sharp turnaround in the current account balance from deficits to sizeable surpluses. As shown in Chart 9, the combined trade balance of the crisis countries has shifted from a deficit of US\$40 billion in 1996 to a surplus equivalent to US\$74 billion on an annualized basis in the first five months of 1998.<sup>19</sup>

● ***In all cases, these shifts in the trade balance have arisen primarily from compression in imports reflecting, in part, the sharp slowdown in domestic demand.*** Overall, for the five countries, import values in dollar terms have declined by over 30 percent in the first five months of 1998 (compared with the corresponding period of the previous year), with individual declines ranging from 8 percent in the Philippines, 20–30 percent in Malaysia and Indonesia, and 40–50 percent in Thailand and Korea<sup>20</sup> (Chart 10).

● ***Export value growth has slowed as an increase in export volumes was not sufficient to offset declines in export prices in dollar terms.*** Malaysia and Thailand have recorded declining export values. Export value growth is showing signs of picking up in Korea, and

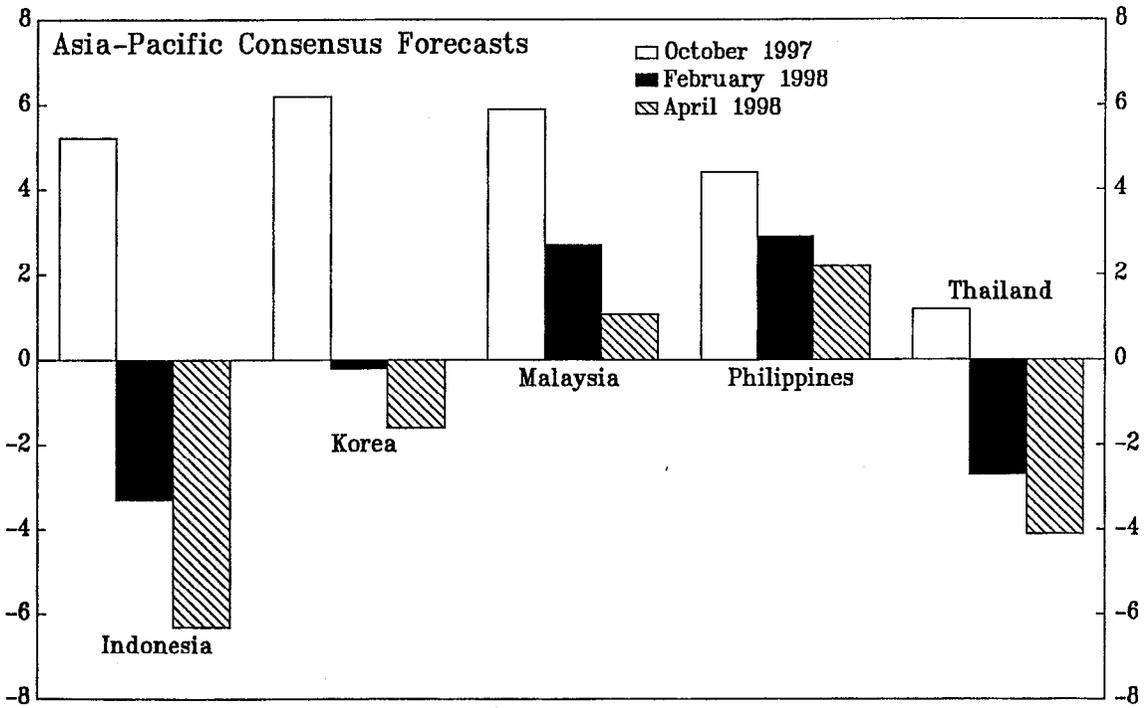
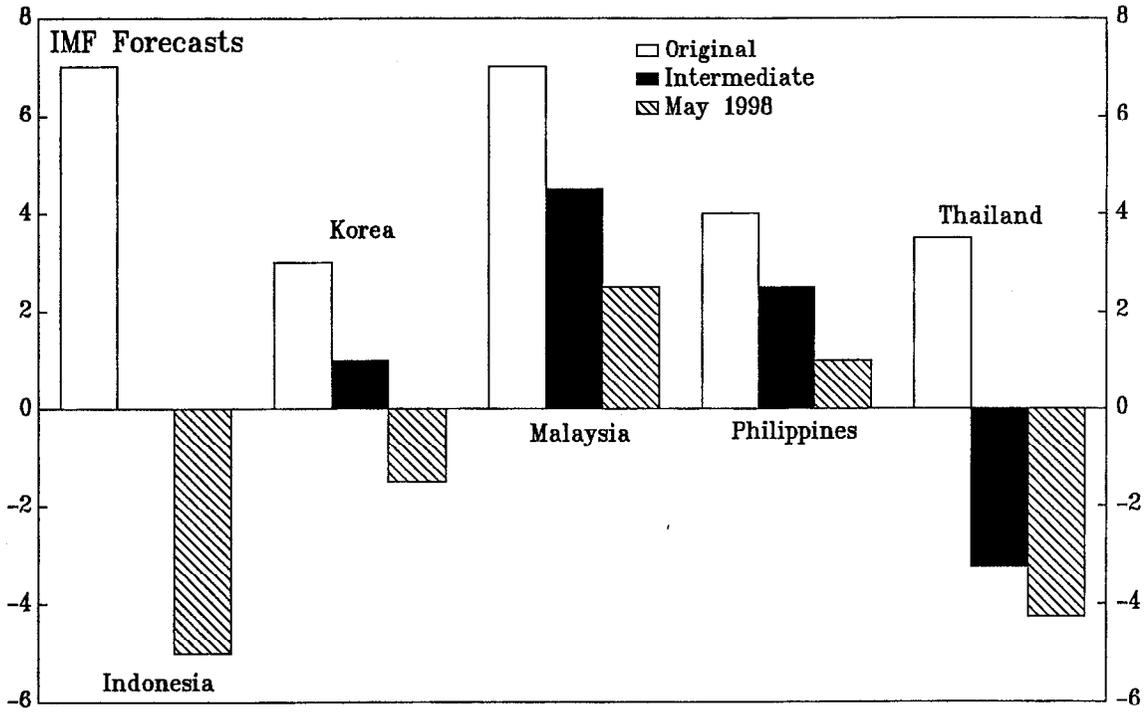
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<sup>19</sup>Data for 1998 have been provided by country authorities on a preliminary basis and run through May for all countries, except Indonesia where data are only available through the first quarter. Also, data for Indonesia refer to non-oil and gas trade.

<sup>20</sup>The decline in imports is projected to moderate in the second half of 1998, so that the staff's projections for the full year in 1998—to be presented in the forthcoming WEO—will be somewhat lower than the annualized outturn from the first few months of the year.

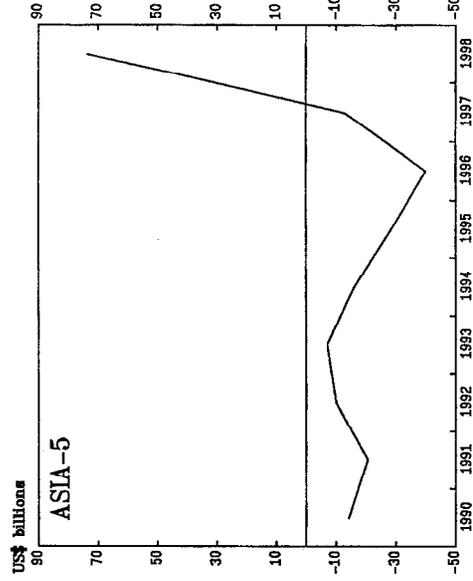
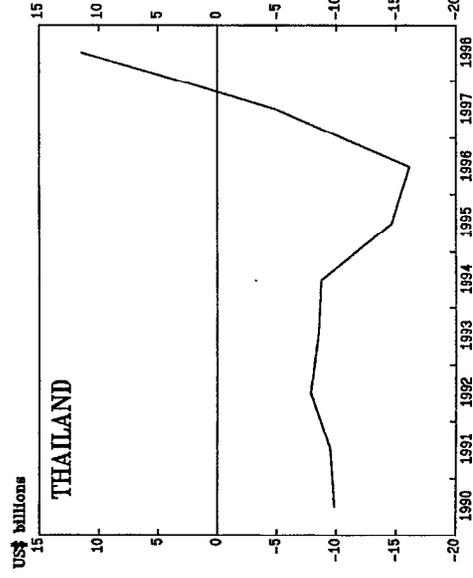
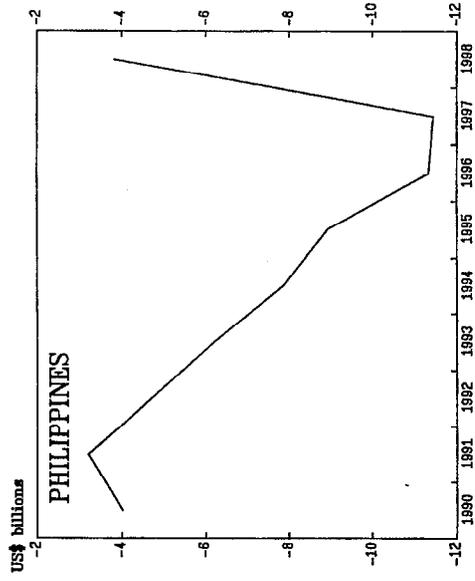
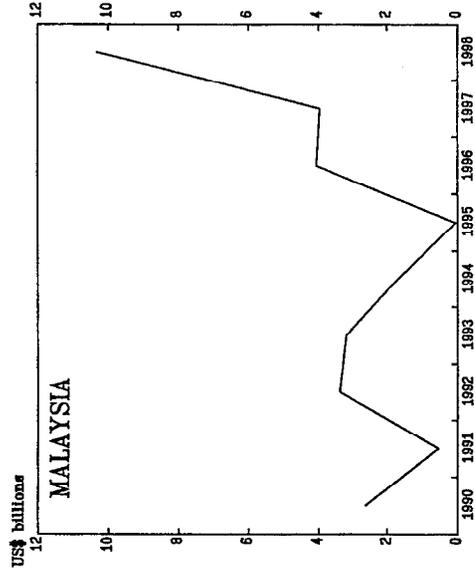
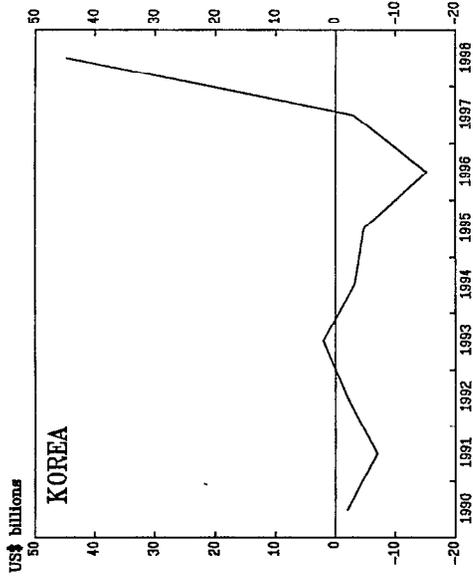
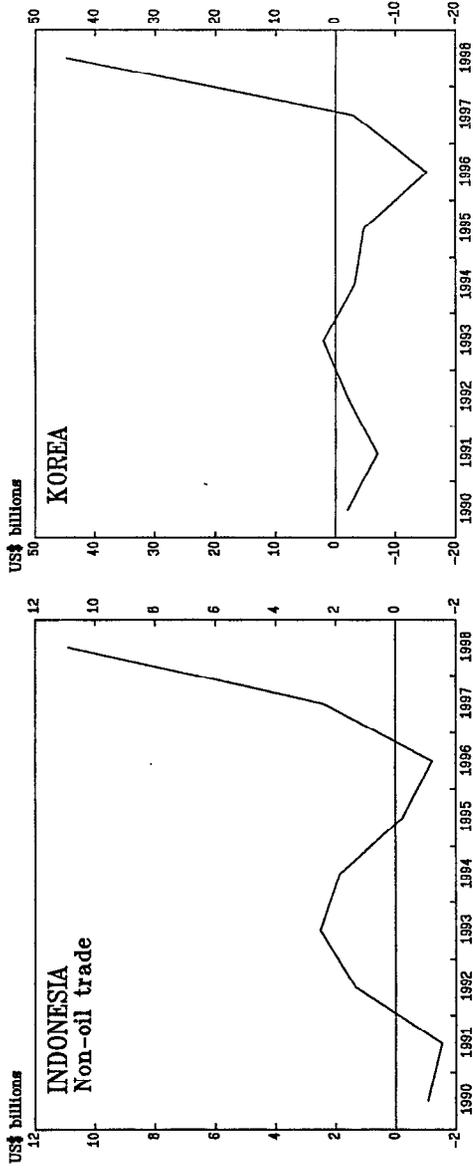
CHART 8

ASIAN CRISIS COUNTRIES  
REVISIONS TO 1998 GROWTH FORECASTS



Sources: Asia-Pacific Consensus Forecasts, various issues; and Fund staff estimates.

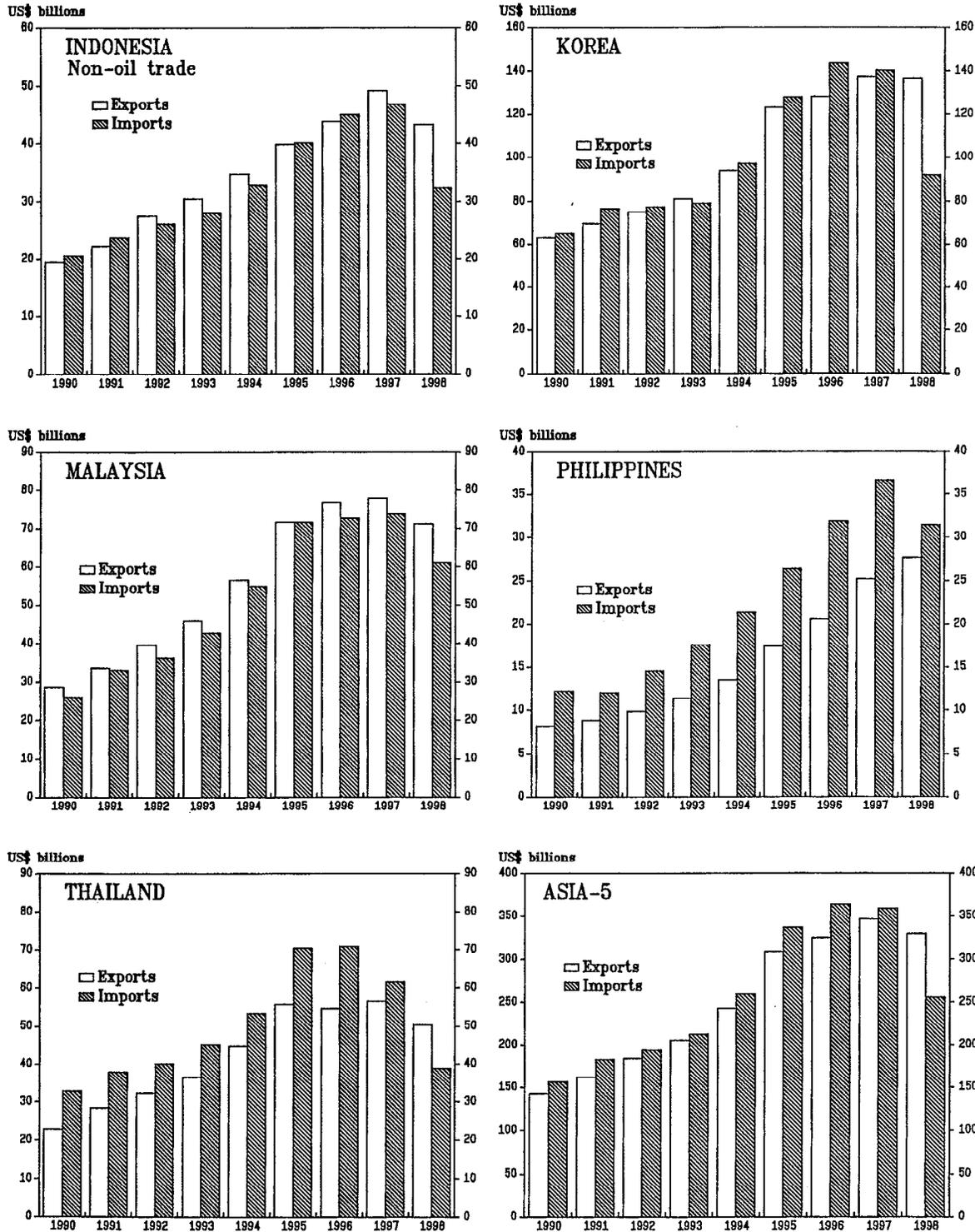
ASIAN CRISIS COUNTRIES  
MERCHANDISE TRADE BALANCES, 1990-98 1/



Sources: WEO database; country authorities and WEA for 1998 data; and staff estimates.  
1/ Data for 1998 reflect annualized actual trade data for January through May for all countries except Indonesia, where data are only available for the first quarter of 1998.

CHART 10

ASIAN CRISIS COUNTRIES  
EXPORTS AND IMPORTS, 1990-98 1/



Sources: WEO database; country authorities and WEFA for 1998 data; and staff estimates.  
1/ Data for 1998 reflect annualized actual trade data for January through May for all countries except Indonesia, where data are only available for the first quarter of 1998.

remains quite strong in the Philippines (albeit lower than in 1997). Export prices appear to have declined significantly for all countries reflecting, in part, the decline in commodity prices (oil, lumber, etc.). However, significant data problems limit the reliability of the decomposition of export values into volumes and prices<sup>21</sup> (Chart 10).

### ***Corporate and Financial Sectors***

● ***Further weakening of the corporate sector.*** The soft underbelly of the corporate sector has been exposed by the slowdown in demand, exchange rate depreciations, and tight credit market conditions. Corporate debt-equity ratios, which as noted earlier were already high in several countries, have increased further as a result of the weakening of exchange rates and capitalization of interest payments. The viability of some firms is now under question at current exchange rates and domestic debt burdens.

● ***Further weakening of the financial sector.*** The severe loss in confidence, the exchange rate shock, the decline in the pace of activity and the increase in interest rates have also served to significantly weaken an already fragile financial sector. Nonperforming loans in most of the affected countries are expected to rise to  $\frac{1}{4}$ – $\frac{1}{3}$  of total portfolios. A shift in deposits from small and weak financial institutions to larger (often foreign) banks was a common phenomenon and all countries (except Korea and the Philippines which has a formal deposit insurance scheme) had to resort to some form of government guarantee of deposits. External short-term liabilities of banks also turned out to be much higher than envisaged (Indonesia, Korea and Thailand), and the need to roll over these liabilities was an additional complication.

## **V. LESSONS FOR CRISIS RESOLUTION**

The crisis is still unfolding and new disturbances cannot be ruled out.<sup>22</sup> Nevertheless, there are clear signs that several countries are beginning to emerge from the initial stages of the crisis. The experience so far provides policy lessons on how to stabilize in the face of a severe crisis of confidence and set the stage for recovery.

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<sup>21</sup> In many cases, actual volume and price data for 1998 are not available and had to be estimated. In addition, there appear, in some cases, to be large discrepancies in export volume growth as reported by exporting and importing countries.

<sup>22</sup> Since this paper was written, a new wave of turbulence—the so-called “second crisis” or “crisis within a crisis” arising mainly from weaknesses in Japan and weaker-than-expected growth performance in the original crisis countries—has gripped financial markets in Asia, leading to renewed pressure on the exchange rate and further declines in stock markets.

### A. Monetary Policy<sup>23</sup>

*Monetary policy needs to be sufficiently firm so as to prevent excessive depreciation of the exchange rate and curb inflationary pressures, while being mindful of the effect of very high interest rates on highly leveraged corporate and banking sectors. Once some measure of stability returns to currency markets, a cautious reduction in interest rates may be possible.*

Monetary policy in the Asian crisis countries has been fraught with challenges in part because delays in appropriate policy responses resulted in an acute loss of confidence, which, in turn—through its effects on the exchange and stock markets—has severely weakened the banking and corporate sectors.

When the crisis hit, interest rates had to be increased in response to the increase in the risk premium demanded by investors and to achieve some measure of exchange rate stability, in the face of a severe loss in confidence and consequent precipitous depreciation of the exchange rate. How do increases in interest rates stabilize the exchange rate? The conventional wisdom is that higher interest rates in the short term make speculation more expensive, increase the return to depositors and investors, and over the longer-term may strengthen the exchange rate by reducing absorption and improving the current account. The other policy option is to maintain interest rates unchanged and let the exchange rate float *freely* to its new equilibrium level. This latter option risks a prolonged period of overly depreciated rates and the attendant problems in corporate and financial sectors that are highly exposed to foreign exchange risk. Also, it risks an anchorless system, and further losses in credibility because of its inflationary implications.

Thus, proponents of tighter monetary policy have argued that it is necessary to stave off speculation and stabilize the currency. Although this could involve significant increases in interest rates in the short term, such increases need only be temporary and thus would not prove overly damaging to the health of the corporate and banking sectors. Moreover, any short-lived adverse effects would be offset by the positive impact of tight monetary policy on the exchange rate and, more generally, on market confidence.

What evidence exists to support this view? One way of tackling this question is to examine other crisis episodes. As shown in Chart 11, a key lesson of the "tequila crisis" in Latin America in 1994–95 is that timely and forceful tightening of interest rates along with other supporting policy measures appears necessary to fend off attacks on their currencies. Once confidence was restored and exchange rates stabilized, interest rates were able to be brought down to more normal levels. A notable feature is the sharp increase in real interest

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<sup>23</sup>This section draws on Goldfajn and Gupta (1998) and Goldfajn and Baig (1998).



rates in these episodes, much sharper, in general, than those seen thus far in the Asian crisis countries (as shown earlier in Chart 7).

The preceding offers evidence in favor of raising interest rates when faced with pressures on the currency. However, in the Asian countries where the degree of leverage (the ratio of external and domestic debt to GDP or debt-equity ratios) of the corporate sector is quite high, concern about the impact of high interest rates on corporate and banking sector balance sheets stood in the way of more forceful up-front action on interest rates and has complicated the attainment of exchange rate stability.

Opponents of tight monetary policy argue that high interest rates could actually *weaken* the exchange rate in these circumstances. The exchange rate depreciation has already placed considerable strain on those corporations with high external debt. The argument is that high interest rates could bankrupt highly leveraged corporations, trigger a downward economic spiral, and thus ultimately weaken the exchange rate. If market participants believe this to be the case, then an increase in interest rates would immediately be reflected in a further weakening of the exchange rate.

Little empirical evidence exists to support the view that increases in interest rates are associated with depreciations of the exchange rate in a crisis situation.<sup>24</sup> However, policy-makers do face a trade-off between the use of monetary policy to establish a nominal anchor and fight inflation, and the potentially adverse effects of higher interest rates on the performance of the corporate and banking sectors. The bottom line is that, in the presence of highly leveraged and weakened corporate and financial sectors, monetary policy alone cannot be expected to stabilize the exchange rate. The affected countries need to press forward forcefully with the reforms necessary to restructure and strengthen the banking system and restart the intermediation process. In addition, as discussed above, it may be necessary to accept that a sharp decline in output growth is inevitable in the face of the size of the negative wealth and demand shock that has hit these countries.

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<sup>24</sup>Ghosh and Phillips (1998) use daily data since mid-1997 and a simple equation—in which the change in the exchange rate in each country is regressed on the average exchange rate change in the four other affected Asian countries and on the change in the interest rate—to examine the correlation between movements in interest and exchange rates. The study finds that there is a link between raising (lowering) interest rates and a strengthening (weakening) of the exchange rate. The link is slightly stronger if the sample is restricted to periods during which interest rates were reduced. A major difficulty in such an exercise is, of course, the potential for significant downward bias in the coefficient on the interest rate because of the possibility that interest rates are changed in response to exchange market pressures.

## B. Financial Sector Reforms

*Financial sector restructuring needs to be given priority and made an integral part of the adjustment process. In particular, early and strong reforms of the financial sector are critical to restart the intermediation process and get credit flowing to viable firms.*

Recent studies of the experience with systemic bank restructuring suggests that there are a number of policies that have been shown to be successful both in developing and industrial countries.<sup>25</sup> First, early and thorough diagnosis of the causes and extent of the problems and prompt action in terms of outlining a resolution strategy—including, recapitalizing or closing insolvent banks, requiring shareholders to take losses, protecting small depositors including through government guarantees or a more formal deposit insurance scheme, strengthening prudential guidelines, the supervisory framework, including the legal infrastructure—proved to be essential ingredients of successful restructuring.

Second, a comprehensive approach, which addresses the stock and flow problems of weak institutions as well as the legal, regulatory and supervisory framework is critical to bolster confidence and ultimately restore the health of the system. Furthermore, the resolution process should be orderly, predictable and completely transparent. Third, operational restructuring—including the removal of previous bank management—is a necessary condition for banks to gain solvency strength and return to profitability. In addition, ensuring that the banks' shareholders and creditors took the hit proved to be essential to rebuild confidence in the resolution program.

Fourth, the studies found that firm exit policies are an integral part of best practices. Indeed, allowing nonviable/bankrupt institutions to continue to conduct business had a strongly adverse effect on the profitability of other institutions. The experience with the savings and loan crisis in the United States suggests that because nonviable institutions had no return-on-equity constraints, they underpriced their loans, overpriced their deposits and weakened otherwise viable institutions. Measures such as mergers of several weak institutions into a large weak institution only added to the ultimate cost of resolution.

Fifth, while the private sector must be fully involved in the process from the outset, the study finds that government financial support of illiquid and insolvent banks is unavoidable. Injections of public funds must be linked to strong restructuring plans, and such support must be made transparent and done in an orderly and even-handed manner to avoid the perception of bail-outs of favored institutions. Sixth, aggressive efforts must be made to collect on and ultimately dispose of problem loans. In this context, several studies have found that removing non-performing loans from the banks' balance sheets and transferring them to a separate loan recovery agency could be an effective way of addressing the stock problem,

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<sup>25</sup>See Dziobek and Pazarbasioglu (1997) and Drees and Pazarbasioglu (1998).

and indirectly, the flow problem because separating the nonperforming loans immediately improves banks' balance sheets and helps bank focus their attention on their core business. In addition, loan workout procedures, including foreclosures and asset sales are important to recover some of the costs of restructuring.

As for the operational logistics of restructuring, the study suggests that systemic bank restructuring should be coordinated and implemented by a designated lead agency. When the central bank plays this role, it tends to be drawn into financing bank restructuring in a manner exceeding its resources and conflicting with other interests. At the same time, however, the study finds that the central bank must stand ready to provide liquidity support during restructuring to viable banks. In particular, several countries have used measures such as a reduction in reserve requirements, short-term loans or extension of rediscounting facilities but experience shows that central banks should not be involved in longer term financing, as this could result in substantial quasi-fiscal contingent liabilities. In addition, the study found that continuous monitoring of the bank restructuring process is necessary, making it a resource-intensive process.

### **C. Fiscal Policy**

***Fiscal policy should be tailored to the circumstances of each country and needs to strike a balance between several different objectives.***

Given that in most cases, the measured financial position of the government was not the cause of the problem, with most countries running fiscal surpluses prior to the crisis, what should be the role of fiscal policy in the adjustment process? Fiscal policy needs to be balanced between the aims of strengthening the social safety net to safeguard the most vulnerable groups, while taking into account the cyclical slowdown in revenues, the potential increase in expenditures arising from financial sector restructuring, and the need to contribute to the current account adjustment necessitated by the weakened capital account so as not to unduly burden the private sector.

The form of financing of the fiscal deficit is also an important consideration in setting fiscal targets, since countries in crisis typically have limited access to borrowing and the alternative of financing the costs of the crisis by printing money could prove damaging to market credibility and could prolong the economic downturn.

Finally, policy-makers need to be mindful of the fact that the headline budget numbers may not be an accurate reflection of overall budgetary position insofar as there are large and important off-budget accounts and potentially large contingent liabilities arising from past quasi-fiscal activities that could come due with the economic downturn. Furthermore, the underlying or structural budget balance may not be as strong as the

measured position since the level of revenues was being buoyed by the rapid growth of output over several years.

#### **D. Structural Reforms**

***Other important structural reforms that are critical to rebuilding market confidence and the credibility of the government's commitment to reform need to be introduced expeditiously and a track record built up.***

There is, by now, a strong consensus that the current financial difficulties in the affected countries owe much to the close links between government, business and banks, the system of directed lending and other quasi-fiscal activities on the part of the government, and in particular, to the resource allocation distortions arising from these links. The chaebols in Korea, the politically well-connected monopolies in Indonesia, the influential privatized corporations in Malaysia are all examples of such links, which have generated what is referred to in the popular press, as "crony capitalism."

To address these problems, it has been recognized that structural reforms aimed at improving governance, both in public policy-making and in the corporate sector, are essential elements of any adjustment program. In particular, reforms need to introduce or strengthen regulations to improve transparency and accounting and disclosure standards for all players, not just in the financial sector but also in the corporate and public sectors. The restructuring of the debt of illiquid or insolvent corporations is essential for economic recovery. Corporate debt workout frameworks need to be articulated and implemented on a timely basis so viable firms gain reaccess to credit markets as soon as possible.<sup>26</sup> The specific workout approach adopted must be tailored to the economic, legal and political environment of each particular country. To facilitate debt restructuring, domestic capital markets need to be developed through legislative changes and capital account liberalization.

#### **IV. LESSONS FOR AVOIDING CRISES**

Turbulence in financial markets is not a new phenomenon and, in all probability, will continue to occur with the increasing globalization of financial markets and the resultant possibility of rapid spillovers of irrational optimism or irrational pessimism. Minimizing the possibility of the occurrence of severe turbulence is therefore a key challenge for policy-makers. How can this be done?

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<sup>26</sup>See Stone (1998).

## **A. Macroeconomic and Structural Policies**

### ***Strong fundamentals are fundamental***

In this regard, the first priority must be to minimize the potential for “boom-bust” cycles and crises of confidence. This can be done through the maintenance of prudent macroeconomic policy, outward orientation, low inflation, and other conditions widely accepted as prerequisites for sustainable medium-term growth. In addition, an appropriate mix of fiscal, monetary and income policies should be implemented so as not to provide opportunities for speculators to make “one-way bets” against the currency.

Sound structural policies are also fundamental. These must be aimed at increasing the solvency strength of the domestic financial system, raising prudential standards and supervision to the highest quality and improving the efficiency of the financial intermediation process. While there is no denying that capital account liberalization can have significant benefits for economic growth and welfare, the process of liberalization should be orderly and properly sequenced and linked carefully to the strengthening of the domestic financial system so that the preconditions of a sound and well-supervised financial sector and appropriate macroeconomic and exchange rate policies are met.

Finally, early attention should be given to putting in place good governance practices both for the corporate and public sectors, establishing a strong legal framework to oversee corporate behavior, ensuring that creditors and shareholders face strong incentives for responsible management, and strengthening competitive forces in the economy.

## **B. Burden-sharing**

Even with strong fundamentals and enhanced surveillance, crises will occur. To limit the scale of official lending in future crises, and to limit moral hazard, a more effective mechanism to involve the private sector in the resolution of financial crises is needed.

## **C. The Role of Surveillance**

### ***Set the stage for early detection of problems and preemptive corrective actions.***

Early detection of problems is a necessary condition for timely diagnosis and cure. And early detection depends on the availability of accurate and timely information. Collecting and disseminating such information on key economic variables thus serves two purposes. First, it permits policy-makers to detect imbalances early and take preemptive corrective actions and acts as an automatic disciplinary mechanism. Second, it allows investors to more sharply distinguish between countries and their relative strengths and weaknesses thus reducing the possibility of severe contagion across financial markets. The

Fund's SDDS initiative was envisaged as an important avenue through which transparency in data provision can be enhanced. In addition, the Fund has begun to examine wider concepts of external exposure than the conventional measure of short-term debt, including exposure through derivative transactions that are often off-balance sheet, exposure through subsidiaries and branches located offshore, as well as concepts such as readily usable reserves.

More generally, investors and policy-makers routinely monitor a large number of variables thought to convey relevant information about the health of the economy. The challenge is to select the variables that provide early warning signals of distress in currency markets and in the banking sector. Since the Mexico crisis in 1994, much research has gone into attempting to find early warning signals or macroeconomic and financial indicators that tend to have the greatest predictive power for financial crisis in emerging market economies.<sup>27</sup> A fledgling but rapidly growing literature has emerged on this issue and work in this area is still ongoing. Some indicators that have been found to have predictive power for financial crises including the ratio of short-term debt to total debt or to reserves; the rate of growth of domestic credit and the ratio of credit outstanding to GDP; widening current account deficits; volatility in equity prices; real effective exchange rate appreciation; the ratio of broad money to reserves; the share of foreign direct investment in total capital flows; a deterioration in the terms of trade, etc.

Of course, even if predictive indicators can be identified and tracked, it may not be possible to detect or correctly interpret warning signals for all future crises. Some "signals" fail to signal and others "signal" too often, that is, the risk of "false positives" is high. Acknowledging that not all future crisis can be prevented just by tracking early warning signals, it is fair to say that the usefulness of these signals is strongly predicated on the timely availability of accurate information to all relevant players.

Finally, against the background of increasing links between economies, both at a regional and a global level, surveillance of emerging market economies needs to pay more attention to policy interdependence and risks of contagion. Thus, multilateral and regional surveillance needs to be more fully integrated into individual country's policy decisions.

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<sup>27</sup>See for example Frankel and Rose (1995), Goldstein (1996), Kaminsky and Reinhart (1996), Kaminsky, Lizondo and Reinhart (1997), Radelet and Sachs (1998), and IMF (1998).

Indonesia

Korea

Malaysia

Philippines

Thailand

I. Accounting for Asset Quality				
<p>Loan classification:</p> <p>1. Current:</p> <p>a. Credit with installments other than house ownership credit:</p> <ul style="list-style-type: none"> <li>• No arrears in principal over 1 month, 3 months, and 6 months for credit with installment periods of less than 1 month, monthly/bimonthly/quarterly, and 4 months or more, respectively.</li> <li>• No arrears in interest over 1 month or 3 months for credit with installment periods of less than 1 month and 1 month or more, respectively.</li> </ul> <p>b. Credit with installments for house ownership:</p> <ul style="list-style-type: none"> <li>• No arrears in principal over 6 months.</li> </ul>	<p>Loan classification:</p> <p>1. Normal: no delays in debt service longer than 3 months.</p> <p>2. Precautionary: payments arrears of 3 to 6 months.</p> <p>3. Substandard: that part of loans in arrears for 6 months or more that is adequately covered by collateral.</p> <p>4. Doubtful: that part of loans in arrears for 6 months or more that is not covered by collateral but not yet loss.</p> <p>5. Loss: doubtful loans for which collection is not expected.</p>	<p>Nonperforming loans:</p> <p>Overdrafts in excess of approved limits, or of dormant accounts, for 6 months.</p> <ul style="list-style-type: none"> <li>• Term loans and revolving loans for which principal and interest payments are in arrears for 6 months.</li> <li>• Bankers' acceptances, trust receipts, and so on, that are not redeemed at maturity.</li> <li>• Rescheduled credits; if the loans was rescheduled before being classified as nonperforming then it is nonperforming if it is in arrears for a total of 6 months before and after rescheduling if the loan was rescheduled after becoming nonperforming it remains classified as nonperforming until all arrears are cleared.</li> </ul>	<p>Loan classification:</p> <p>1. Unclassified: currently performing, no expected payment difficulties.</p> <p>2. Loans especially mentioned: currently performing, but potential exists for payment problems.</p> <p>3. Substandard: loans under litigation; secured loans past due for 6 months but in the process of collection; unsecured loans past due for 90 days.</p> <p>4. Doubtful: substandard loans without at least 20 percent repayment of principal during the succeeding 12 months; past due loans secured by collateral of declining value.</p> <p>5. Loss: uncollectible or with worthless collateral; past due loans with no interest paid in 6 months; doubtful loans without at least 20 percent repayment of principal in the succeeding 12 months.</p>	<p>Required loan-loss reserves:</p> <p>Banks must allocate 0.5 percent of deposits, borrowings, and other funds outstanding at the end of the previous year to the Financial Institutions Development Fund; these funds may be augmented by Bank of Thailand reserves.</p>

Indonesia	Korea	Malaysia	Philippines	Thailand
<p>2. Substandard:</p> <p>Credit with installments other than house ownership credit:</p> <ul style="list-style-type: none"> <li>Principal arrears between 1 month and 2 months, 3 months and 6 months, and 6 months and 12 months for credit with installment periods of less than 1 month, monthly/bimonthly/quarterly, and 4 months or more, respectively.</li> <li>Interest arrears between 1 month and 3 months or between 3 months and 6 months for credit with installment periods of less than 1 month and 1 month or more, respectively.</li> </ul>	<p>Required loan-loss reserves:</p> <ul style="list-style-type: none"> <li>Banks must allocate 10 percent of net profits to capital reserves until the latter equal the bank's paid-up capital.</li> <li>Banks must make loan-loss provisions equal to the expected loss for all loans.</li> <li>If a loan is charged off against loan-loss reserves, it must immediately be offset by an equal transfer to loan-loss reserves from net profit.</li> </ul>	<p>Required loan-loss reserves:</p> <ul style="list-style-type: none"> <li>Bank must set aside reserves equal to 1 percent of total loans less interest in suspense and specific provisions.</li> </ul>	<p>Required loan-loss reserves:</p> <ul style="list-style-type: none"> <li>Unclassified: 0 percent</li> <li>Loans especially mentioned: 0 percent</li> <li>Substandard: 25 percent of unsecured portion</li> <li>Doubtful: 50 percent</li> <li>Loss: 100 percent</li> </ul> <p>Banks must have reserves equal to 10 percent of the book value of temporary investments in stocks and bonds.</p>	
<p>Credit with installments for house ownership:</p> <ul style="list-style-type: none"> <li>Arrears in amortization of more than 6 months but not more than 9 months.</li> </ul>			<p>Classification of other assets:</p> <ol style="list-style-type: none"> <li>Real estate: <ul style="list-style-type: none"> <li>Real estate is classified as a substandard if held for less than 5 years; for real estate held more than 5 years, the reserve requirements increases by 10 percent each year held so that property held 10 or more years carries a reserve requirement of 50 percent (similar rules apply to personal property acquired except that the cutoff holding period is 3 years.)</li> <li>The excess of book value over market value for real estate is classified as a loss asset.</li> </ul> </li> </ol>	

Indonesia	Korea	Malaysia	Philippines	Thailand
<p>3. Doubtful: meets the criteria for neither current nor substandard, but collectible and the collateral value exceeds 75 percent of the debt or uncollectible, but the collateral value exceeds 100 percent of the debt.</p>			<p>2. Accounts receivable:</p> <ul style="list-style-type: none"> <li>• Accounts receivable are substandard if 61-180 days old.</li> <li>• Accounts receivable are doubtful if 181-360 days old.</li> <li>• Accounts receivable are loss assets if more than 361 days old.</li> </ul>	
<p>4. Loss: does not meet the criteria for current, substandard, or doubtful; or meets the criteria for doubtful, but there has been no repayment or remedial action within 21 months of being classified as doubtful.</p>				
<p>Required loan-loss reserves:</p> <ul style="list-style-type: none"> <li>• Current: 0.5 percent</li> <li>• Substandard: 3 percent after deducting collateral (10 percent after December 1996).</li> <li>• Loss: 100 percent after deducting collateral.</li> </ul>				
<b>II. Capital Requirements</b>				
<p>Newly established private banks must have at least Rp 50 million in capital.</p>	<p>Nationwide commercial banks must have minimum capital of W 100 billion.</p>	<p>Commercial banks must have at least RM 20 million in capital.</p>	<p>Universal commercial banks must have capital of at least P 1.5 billion; regular commercial banks with foreign currency unit licenses must have capital of at least P 750 million.</p>	<p>Banks' capital should equal at least 20 percent of their contingent liabilities.</p>
<p>Newly established joint venture banks must have at least Rp 100 billion in capital.</p>	<p>Equity capital must equal or exceed 5 percent of outstanding liabilities from credit obligations or guarantees.</p>	<p>Domestic banks must satisfy an 8 percent ratio of capital to risk assets according to a modified Bank for International Settlements capital adequacy framework.</p>	<p>Commercial banks are required to maintain a ratio of net worth to risk assets of 10 percent (8 percent for universal banks).</p>	<p>Banks must maintain a ratio of capital to risk weighted assets of at least 7.5 percent of this, at least 5 percent must be tier 1 capital.</p>
<p>Banks must meet a minimum capital requirement of 8 percent of risk-weighted assets by December 1993.</p>	<p>Equity capital should exceed 7.25 percent of risk-weighted assets (8 percent by 1996).</p>			<p>Foreign banks must maintain a ratio of capital to risk-weighted assets of at least 6.5 percent.</p>

Indonesia	Korea	Malaysia	Philippines	Thailand
				Required minimum capital ratios increase to 8 percent for domestic banks (of which 5.5 percent must be tier I capital) and 6.75 percent for foreign banks at the end of 1994.
				Foreign bank branches must have assets of at least B 125 million in Thailand.
<b>III. Deposit Insurance</b>				
None	None	None	Philippine Deposit Insurance Corporation membership is compulsory for commercial banks.	None
			The maximum coverage is P 100,000 per depositor.	
<b>IV. Ownership Regulations</b>				
A corporation may own shares in a bank up to its own net worth	No individual may own more than 8 percent of the voting stock of a nationwide commercial bank (15 percent for local banks).	Individuals may not own more than 10 percent of the shares of any financial institution.	An individual may not own more than 20 percent of the equity of a bank	A bank must have at least 250 individual shareholders who together own no less than 50 percent of the shares issued.
Foreign ownership of traded shares of a domestic commercial bank may not exceed 49 percent.		Corporations may not own more than 20 percent of the shares of any financial institutions.	A corporation may not own more than 30 percent of the equity of a bank.	An individual shareholder may own no more than 0.5 percent of a bank's shares.
Foreign banks may have a maximum equity participation of up to 85 percent of paid-up capital.		A corporation that is 75 percent owned by one family faces the ownership restriction applied to individuals.	A group of corporations that are majority-owned by the same group of persons may not own more than 20 percent of the equity of a bank.	An individual investor, the investor's spouse and children, and partners in a business activity may not own more than 5 percent of a bank's shares.
		The transfer of more than 5 percent of bank shares requires the approval of the Ministry of Finance.	Corporations that are majority-owned by an individual or family may not own more than 20 percent of the equity of a bank.	Thai shareholders must own at least 75 percent of a bank's shares.

Asian Crisis Countries: Key Features of the Prudential and Regulatory Framework Before the Crisis

Indonesia	Korea	Malaysia	Philippines	Thailand
		Foreign equity ownership in a bank is limited to 30 percent of the total stock of any one bank.	Foreign equity participation in a bank is limited to 30 percent of the voting stock of any one bank; foreign equity holdings may reach 40 percent of the bank's equity provided the excess over 30 percent is invested in nonvoting stock. 1/	
			These regulations do not apply to the ownership structures that were in effect in 1989, when the regulations were implemented.	

Source: Khan and Reinhart (1995).

1/ When implemented in 1994, the new law on foreign bank entry allowed three modes of entry for foreign banks: (1) the establishment of up to 10 new banks with full banking authority; (2) ownership of up to 60 percent of a new subsidiary; and (3) acquisition of up to 60 percent of an existing bank.

## Asian Crisis Countries—Main Elements of Structural Reforms

<b>FINANCIAL SECTOR REFORMS</b> 7/2/97 - 5/5/98	Indonesia	Korea	Malaysia	Philippine s	Thailand
Insolvent financial institutions closed or suspended	I	I	N	I	I
Assets of weak/insolvent institutions transferred to resolution/restructuring agency	I	I	C	NA	I
Weak financial institutions merged or recapitalized	P	I	I	I	I
Potentially undercapitalized institutions required to submit plans for recapitalization/MOUs	I	I	I	C	I
More stringent conditions for official liquidity support	I	I	P	C	I
Increased private sector ownership of public banks	P	P	N	C	P
Use of public funds for bank restructuring limited/explicitly fiscalized	I	I	P	NA	P
Ease restrictions on foreign investment in/management of domestic banks	P	I	N	C	I
Strengthen supervisory framework	I	I	I	I	I
Strengthened legal framework for banking operations	I	P	C	I	I
Tighten capital adequacy requirements	I	I	P	I	I
Strengthen accounting/auditing requirements	I	P	I	I	P
Tighten bank disclosure requirements	I	P	I	I	P
Tighten loan classification and provisioning requirements	I	P	I	I	I
Strengthen prudential regulations on foreign exchange exposure		P	NA	I	P
Tighten guidelines on loan exposure	I	C	I	I	P
Ease non-prudential restrictions on bank lending	I		C	NA	NA
Introduce funded deposit insurance scheme	P	I*	C	I*	P

I = Implemented, in full or in part

P = Planned

C = Under Consideration

N=Not under consideration

NA=Not applicable

\* Introduced prior to 7/2/97.

## Asian Crisis Countries—Main Elements of Structural Reforms (concluded)

<b>COMPETITION AND GOVERNANCE POLICIES</b> 7/2/97 - 5/5/98	Indonesia	Korea	Malaysia	Philippines	Thailand
Ban/limit use of public funds to bail out private corporations	P	I	P	NA	P
Liberalize mergers and acquisitions procedures	C	P	C	NA	P
Ease foreign investment restrictions	I	I	I	I	P
Strengthen bankruptcy laws	P	I	C	C	I
Increase corporate disclosure requirements/accountability to shareholders		I	NA	C	P
Introduce/strengthen competition laws	P		C	C	C
Liberalize intra-provincial/state trade	I	NA	NA	NA	NA
Liberalize restrictive marketing arrangements	I	NA	N	NA	NA
Liberalize price controls	I		C	I*	C
Establish/strengthen competitive procedures for procurement/contracting	I		P	N	P
Establish/strengthen competitive procedures for privatization of government assets	I		C	C	P
Accelerate privatization of government assets	I	C	N	P	P
Prepare action plan for public enterprises	P		NA	NA	P
Close non-viable public enterprises	P		N	N	N
<b>TRADE POLICIES</b> 7/2/97 - 5/5/98					
Reduce/eliminate import tariffs	I		N	I	N
Reduce/eliminate export taxes	I		N	NA	N
Abolish/ease quantitative import restrictions	I	I	N	I*	N
Abolish/ease quantitative export restrictions	I		N	NA	N

I = Implemented, in full or in part  
 NA=Not applicable

P = Planned

C = Under Consideration

N=Not under consideration

Asian Crisis Countries: Loan Classification Guidelines, 1998

Country	Classification of non-performing loans		
	Categories	Provision	Compliance with best international practice 1/
Philippines	1. Unclassified 2. Especially mentioned 3. Substandard 4. Doubtful 5. Loss	2 2/ 5 3/ 25 3/ 50 100	Yes (3 months)
Thailand 4/	1. Pass 2. Special mention 3. Substandard 4. Doubtful 5. Loss	1 2 20 50 100	Yes (3 months)
Malaysia 5/	1. Unclassified 2. Substandard 3. Doubtful 4. Bad/Loss	1.5 20 50 100	Yes (3 month)
Indonesia	1. Current 2. Special mention 3. Substandard 4. Doubtful 5. Loss	1 5 15 50 100	Yes (3 months)
Korea	1. Substandard 2. Doubtful 3. Loss	20 75 100	Yes (3 months)

1/ As defined by the period in which loans are considered past due or non-performing (typically 90 days). For Philippines, effective May 1, 1998 on monthly installment loans.

2/ Or general provision. For Philippines, 1 percent by October 1, 1998 and 2 percent by October 1, 1999.

3/ By April 15, 1999. For substandard loans the provisions are irrespective of whether the loans are collateralized or uncollateralized.

4/ The new classification rules will be effective July 1, 1998, and provisioning rules, gradually over the period July 1998 to July 2000.

5/ Specific provisions for large loans (above RM 1 million) are made on a case-by-case basis as determined by the bank's examiner. All provisions are made against the uncollateralized part of the loan.

### Summaries of Economic Adjustment Programs in Asian Crisis Countries

#### Indonesia

- The initial program envisaged a broad-based program of financial sector restructuring; structural reforms including the liberalization of foreign trade and investment, dismantling of domestic monopolies, and expanding privatization; stabilizing the rupiah through tight monetary policy and a flexible exchange rate policy; fiscal measures—including cutting low priority expenditures, postponing infrastructure projects by the state enterprises, removing subsidies and adjusting administered prices of electricity and petroleum and removing VAT exemptions—equivalent to 1 percent of GDP in 1997/98 and 2 percent of GDP in 1998/99 to yield a public sector surplus of 1 percent of GDP in both years.
- Due to a perceived lack of political will to follow through with the program, the weakness in confidence continued and the program was revised and reinforced in January to include adjustments in the 1998/99 budget that would result in a public sector deficit of 1 percent of GDP to accommodate part of the impact of the economic slowdown; further bank and corporate sector restructuring including an external debt resolution framework, the establishment of a bank restructuring agency; and a government guarantee of bank deposits and credits; eliminating key monopolies and other restrictive marketing practices; and measures to alleviate the effects of the adjustment on the poor.
- Further policy slippages and reversals of policy commitments resulted in renewed pressure on the rupiah and inflation picked up sharply. The adjustment program was again modified in April 1998 to reflect the further deterioration in economic conditions with a targeted public sector deficit of almost 4 percent of GDP; negotiations for the resolution of external debt were accelerated; foreign ownership restrictions on banks were to be eliminated; a new bankruptcy law was to be issued; the authorities' credibility was to be enhanced through the establishment of a council to monitor progress with program implementation.
- The revised program, despite a promising start was driven off-track by the social disturbances and political change in May. A new program was negotiated in late June which gave the most urgent priority to repairing the distribution system and ensuring adequate supplies of food and other necessities to all parts of the country. The depreciation of the exchange rate, through its impact on the cost of subsidies and debt service, the further decline in oil prices and weakening of output all add substantially to the deficit. In addition, given the severity of the crisis and its disproportionate impact on the poor, there was an urgent need to strengthen the social safety net to alleviate the impact of higher unemployment and underemployment and the greater incidence of poverty. At the same time, there was a need to be mindful of the availability of financing. With these considerations in mind, the programmed deficit for 1998/99 was adjusted to be about 8½ percent of GDP. In addition, bank and corporate restructuring was accelerated.

#### Korea

- The initial program included the introduction of a clear and firm exit policy for financial institutions; suspension of insolvent banks; two commercial banks received capital injections from the government; and all commercial banks with inadequate capital were required to submit recapitalization plans; fiscal measures—including a widening of the tax base—equivalent to about 2 percent of GDP were to be introduced to make room for the costs of financial sector restructuring; the introducing of internationally accepted accounting, auditing and disclosure standards; trade and capital account liberalization measures; and the public dissemination of key economic and financial data.
- As a decline in roll-over rates for Korean short-term debt placed additional pressure on reserves and the won, the program was intensified and the timetable accelerated. The revised program called for a further monetary tightening and abolition of the daily exchange rate band; speeding up liberalization of capital and money markets; acceleration of a comprehensive restructuring plan for the financial sector, including the negotiations with foreign creditors.
- Amid signs of improving confidence, but weakening economic activity in early February, the program was modified to target fiscal deficit of 1 percent of GDP to allow the working of automatic stabilizers and to increase spending on the social safety net; liberalizing the corporate finance market; and strengthened measures to improve corporate transparency.
- Against a background of substantial progress in alleviating the external financial crisis and rebuilding usable reserves and restoring some measure of stability to financial markets, in May, the program was refocussed on accelerating structural reforms in the financial and corporate sectors, and allowing automatic fiscal stabilizers to operate. The fiscal deficit was increased to nearly 2 percent of GDP.

### Summaries of Economic Adjustment Programs in Crisis Countries (concluded)

#### Malaysia

- The initial adjustment program unveiled in October 1997, which included a significant tightening of fiscal policy with an increase in the federal government and consolidated public sector surpluses to 2.6 percent of GDP and 3.3 percent of GDP respectively to be achieved mainly through cuts in expenditures; the maintenance of a tight monetary policy stance including through the introduction of a “credit plan” for banks and a gradual increase in interest rates; postpone of several large quasi-public infrastructure projects; and tightening of loan classification and provisioning guidelines.
- In early December, in light of signs of sharper than anticipated economic slowdown and a more prolonged regional decline, the program was modified to include a further tightening of fiscal policy through additional expenditure cuts; a further gradual increase in interest rates; an accelerated program of mergers of finance companies assisted by the central bank; and a government guarantee of all bank deposits.
- In late March, the program was again modified to include a smaller fiscal surplus reflecting the working of automatic stabilizers on revenues and the need to protect social sector spending; a comprehensive financial sector restructuring and rehabilitation strategy; the maintenance of a tight monetary policy; structural measures to improve governance and transparency.
- In mid-July, in the face of a sharp contraction in growth in the first quarter of the year, the authorities announced a package of measures designed to forestall a severe recession. To that end, fiscal policy is to be eased, with a targeted federal government deficit of 3½ percent of GDP. At the same time, they have attempted to revive credit growth by lowering the statutory reserve requirement. The authorities also view the setting up of an Asset Management Corporation to take the bad loans off the banks’ books and a Special Purpose Vehicle to recapitalize banks as measures to ensure the revival of credit growth.

#### Philippines

- The initial program focused on the strengthening of the fiscal position through tax reform and oil price deregulation. The program for 1998-99 calls for the maintenance of a strong fiscal position with the consolidated public sector deficit being held at 1 percent of GDP in 1998 and move into balance in 1999; the maintenance of a tight monetary policy; and a comprehensive action plan of banking sector reform including raising bank capital, encouraging consolidation, tightening provisioning requirements and regulatory oversight, and longer-term capital market development; and measures to minimize the social impact of the current crisis.

#### Thailand

- The initial program featured financial sector restructuring focused on the closure of 56 finance companies and intervention in the weakest banks; fiscal measures—including an increase in the VAT rate—equivalent to 3 percent of GDP to correct the public sector deficit to a surplus of 1 percent of GDP in 1997/98; and several structural measures to reinforce the economy’s outward orientation including liberalization of foreign capital inflows.
- In light of the sharp economic slowdown and the adverse regional developments, the program was modified to include additional actions to prevent a deterioration in the fiscal position; establishment of a specific timetable for implementing financial sector restructuring; and acceleration of plans to help the most vulnerable groups in the economy.
- Again, early in 1998, the program was adapted to take into account the negative social impact of the larger-than-anticipated slowdown and to give clear priority to stabilizing the exchange rate including an adjustment in the fiscal target from a surplus of 1 percent of GDP to a deficit of 2 percent of GDP in response to the weaker economic activity and larger-than-anticipated improvement in the current account and to finance higher social spending; ensuring adequate availability of credit to productive sectors of the economy while maintaining a tight monetary stance; and accelerating financial system restructuring.
- The program was further revised in May 1998 with a focus on consolidating the recent exchange market stability, including the possibility of a cautious reduction in interest rates over the coming months if the signs of stability persist. In addition, the revised program targets a larger fiscal deficit of about 3 percent of GDP (excluding the cost of financial sector restructuring); acceleration of the process of consolidation of the finance companies and amendments of the bankruptcy law. Finally, foreign investment liberalization is to be facilitated through changes in the legal framework.

Table A. Asian Crisis Countries: Selected Economic and Financial Indicators

(Averages, in percent of GDP, unless otherwise indicated)

	Malaysia				Indonesia				Thailand				Philippines 1/				Korea			
	91-95	1996	1997	1998	91-95	1996	1997	1998	91-95	1996	1997	1998	91-95	1996	1997	1998	91-95	1996	1997	1998
			Est.	Proj.			Est.	Proj.			Est.	Proj.			Est.	Proj.			Est.	Proj.
<b>Growth, Investment and Saving</b>																				
GDP growth rate	8.7	8.6	7.8	-4.0	7.8	8.0	4.6	-12.1	8.6	5.5	-0.4	-6.5	2.2	5.7	5.1	1.0	7.5	7.1	5.5	-5.0
Investment	38.8	41.5	42.8	38.9	31.0	32.1	29.5	34.2	40.9	41.7	35.0	29.0	21.9	23.3	23.9	23.0	36.7	38.2	36.8	29.4
Private investment	25.3	30.9	30.9	28.6	23.1	26.4	24.0	...	32.8	31.5	23.5	17.6	16.8	18.9	19.1	18.4	31.6	32.7	31.2	25.0
Public investment	13.4	10.6	11.9	10.3	7.9	5.7	5.5	...	8.2	10.2	11.5	11.4	5.2	4.4	4.8	4.6	5.1	5.5	5.6	4.4
National saving	31.8	36.6	38.0	38.4	28.6	28.8	27.1	34.8	34.5	33.7	32.9	32.8	18.2	18.8	18.7	19.9	35.2	33.3	34.8	34.2
Private saving	15.3	20.7	21.0	21.8	20.9	21.9	20.7	28.4	22.6	20.6	22.2	23.0	15.0	15.0	15.3	16.5	26.4	25.0	26.1	25.6
Public saving	16.5	15.9	17.0	16.5	7.7	6.8	6.4	6.4	11.9	13.1	10.7	9.8	3.2	3.8	3.4	3.4	8.8	8.3	8.7	8.5
Tax revenue 2/	15.9	17.0	17.1	13.0	10.5	10.2	...	...	22.5	15.6	12.9	13.0	15.2	15.9	16.1	17.1	...	16.7	16.7	16.7
<b>Trade Orientation</b>																				
Exports of goods and nonfactor services	84.9	92.0	94.3	108.2	26.5	25.8	29.9	53.4	38.5	39.3	47.6	68.2	26.3	31.7	39.7	55.7	29.9	32.4	37.4	55.4
Manufactured exports	55.9	63.4	65.7	74.1	12.8	13.8	16.7	...	23.7	24.5	31.4	...	19.6	19.6	24.7	35.7	29.8	26.5	30.4	44.9
Export growth rate (in US dollars)	20.2	7.1	1.3	-3.8	11.3	9.2	7.3	...	18.5	-1.9	3.5	...	16.6	17.8	22.8	17.6	14.6	4.1	7.2	4.5
<b>Exchange Rate</b>																				
Real effective exchange rate (appreciation -) 3/	-7.6	-4.3	23.2	26.4 4/	-3.3	-5.3	39.5	62.4 4/	-4.2	-5.3	32.5	35.1 4/	-36.9	-5.9	17.2	-26.2 4/	-1.8	1.8	35.8	40.6 4/
<b>Balance of Payments</b>																				
Trade balance	2.9	4.1	4.0	8.1	2.2	0.6	2.2	9.4	-7.7	-8.9	-3.2	2.9	-8.7	-13.0	-13.2	-11.0	-0.9	-3.2	-0.6	8.2
Current account	-7.0	-4.9	-4.8	2.5	-2.4	-3.3	-1.8	2.5	-6.2	-7.9	-2.0	9.0	-3.6	-4.5	-5.2	-3.1	-1.5	-4.7	-1.9	10.2
Capital inflows (net) 5/	12.1	7.4	-1.2	0.5	4.0	5.2	0.2	...	9.7	9.1	-10.7	...	3.9	9.2	1.3	4.2	...	5.0	-5.0	11.7
FDI (percent of net total capital inflows)	59.2	43.6	-313.8	587.7	34.6	53.8	...	...	14.2	15.8	-17.7	...	49.8	16.7	104.7	36.5	...	...	...	...
<b>Reserve Cover</b>																				
Reserves (months of imports of goods and services)	5.6	4.6	3.5	3.8	6.2	6.9	4.7	...	5.2	5.1	4.1	...	2.6	2.8	1.7	1.9	...	2.0	0.6	3.8
Base money/Reserves (Net International Reserves)	0.6	0.9	1.0	1.0	0.5	0.6	0.8	...	0.4	0.5	0.7	...	1.1	0.9	1.1	1.1	...	1.1	0.5	...
<b>Debt</b>																				
External debt	38.7	39.4	43.6	48.5	55.4	49.1	76.3	...	42.6	48.9	59.3	...	58.8	48.1	56.9	81.3	...	33.1	34.1	60.9
External debt (percent of exports of goods and services)	44.2	41.5	44.1	42.8	191.5	194.0	155.5	...	42.6	49.9	62.6	...	170.2	105.9	103.4	109.0	...	102.4	91.1	109.9
Short-term debt (percent of reserves) 6/	24.1	36.6	47.2	38.5	50.0	47.5	102.8	...	93.8	97.1	112.3	...	106.1	69.0	133.7	...	...	340.0	751.0	90.0
Debt service ratio (percent of exports of goods and service)	8.4	8.7	6.3	5.3	32.4	36.8	31.1	...	10.9	11.4	15.4	...	29.5	15.5	11.1	11.4	...	7.5	8.8	12.6
<b>Financial Stability</b>																				
Inflation (percent change)	3.6	3.5	2.7	7.5	8.9	7.9	6.6	44.3	4.8	5.9	5.6	11.6	10.5	8.4	5.1	8.0	6.2	4.9	4.5	10.5
Private sector credit (percent change)	17.8	27.7	25.5	11.7	21.0	23.8	46.0	...	23.8	14.4	14.8	...	43.1	51.0	28.7	15.2	21.8	16.8	18.9	7.7
Central government balance	0.3	1.1	2.6	0.5	-0.2	1.2	0.8	...	2.8	2.4	-1.0	...	-1.6	-0.4	-0.9	-1.0	...	0.3	0.0	-1.7
Public debt	57.7	35.9	31.6	...	37.2	24.5	46.0	...	16.9	10.4	19.3	...	113.0	88.0	85.0	76.2	...	...	...	...

Sources: WEO and staff estimates.

1/ All ratios are in percent of GNP, unless otherwise indicated.

2/ Non-oil tax revenue.

3/ For 1991-95, December 1995 over January 1991. For 1996, December 1996 over December 1995. For 1997, December 1997 over December 1996.

4/ 12-month change to February 1998.

5/ Includes errors and omissions.

6/ Includes commercial banks' net foreign liabilities. For Philippines, percent of adjusted gross reserves.

Table B. Asian Crisis Countries: Key Economic Indicators, 1990-99 1/

	Average	1996	Estimate	Projection	
	1990-95		1997	1998	1999
Real GDP (percent change) - NGDP_R					
Korea	7.8	7.1	5.5	-5.0	0.0
Indonesia	8.0	8.0	4.6	-12.1	1.1
Malaysia	8.8	8.6	7.8	-4.0	0.5
Philippines	2.3	5.7	5.1	1.0	2.0
Thailand	9.0	5.5	-0.4	-6.5	0.5
<b>Total 2/</b>	<b>7.7</b>	<b>7.1</b>	<b>4.2</b>	<b>-7.3</b>	<b>0.7</b>
Real total domestic demand (percent change) - NTDD_R					
Korea	8.5	8.2	-2.8	-18.7	0.7
Indonesia	9.3	8.6	4.0	-15.3	2.7
Malaysia	11.6	5.3	8.3	-12.8	2.9
Philippines	3.6	7.0	6.6	-8.7	0.7
Thailand	10.1	6.2	-7.6	-16.8	1.1
<b>Total 2/</b>	<b>8.9</b>	<b>7.5</b>	<b>0.6</b>	<b>-15.6</b>	<b>1.8</b>
Real exports (percent change) - NX_R					
Korea	13.1	13.0	23.6	10.1	5.4
Indonesia	10.0	5.5	8.3	-2.2	7.3
Malaysia	15.7	7.2	7.8	-0.6	1.8
Philippines	8.2	20.3	17.6	15.2	14.1
Thailand	14.2	-1.8	6.6	7.5	4.3
<b>Total 2/</b>	<b>12.0</b>	<b>7.2</b>	<b>12.4</b>	<b>4.4</b>	<b>6.3</b>
Real imports (percent change) - NM_R					
Korea	14.8	14.8	3.8	-17.7	9.9
Indonesia	15.5	7.8	5.7	-13.9	13.0
Malaysia	19.3	4.2	8.2	-9.0	4.1
Philippines	9.9	21.1	14.4	-3.7	11.8
Thailand	15.4	-0.9	-10.0	-14.7	7.1
<b>Total 2/</b>	<b>15.1</b>	<b>8.5</b>	<b>3.0</b>	<b>-13.6</b>	<b>10.1</b>
Inflation (CPI) (percent change) - PCPI					
Korea	6.6	4.9	4.4	8.0	4.3
Indonesia	8.7	7.9	6.6	60.0	29.3
Malaysia	3.5	3.5	2.7	7.5	5.7
Philippines	10.9	8.4	6.0	9.5	7.4
Thailand	5.0	5.9	5.6	9.7	7.0

1/ All data are on a calendar year basis.

2/ Weighted by GDP valued at purchasing power parities (PPPs).

Table C. Asian Crisis Countries: External Adjustment, 1996-98

	1996	1997	1998						
			Dec.	Jan.	Feb.	Mar.	Apr.	May	June
Current account balance (in billions of U.S. dollars)									
Korea	-23.0	-8.2	3.5	3.1	3.9	3.7	3.9	4.3	...
Indonesia (quarterly)	-7.8	-5.1	-0.2	...	...	0.4	...	...	...
Malaysia (quarterly)	-4.9	-4.8	-4.0	...	...	...	...	...	...
Philippines (quarterly)	-5.5	-4.5	-1.4	...	...	-0.5	...	...	-0.3
Thailand	-14.4	-3.3	1.2	1.2	1.5	1.5	0.9	...	...
Trade balance (in billions of U.S. dollars)									
Korea	-20.6	-8.0	2.3	1.5	3.3	3.7	3.9	3.8	3.9
Indonesia (fob/fob)	5.9	10.1	1.7	1.5	2.4	2.3	...	...	...
Malaysia	-0.2	-1.4	0.2	0.6	0.7	1.0	1.0	1.0	...
Philippines	-12.8	-10.7	-0.6	-0.7	-0.4	-0.1	-0.2	...	...
Thailand	-16.1	-4.9	1.0	0.9	1.1	1.1	0.6	...	...
Export value (twelve-month percent change)									
Korea	3.7	5.0	1.7	-0.3	19.9	6.6	6.6	-2.6	-5.6
Indonesia 1/	5.8	12.2	26.6	-4.2	21.7	28.3	...	...	...
Malaysia	6.0	-0.7	-10.2	-23.6	9.3	3.2	-3.3	-13.8	...
Philippines	17.8	22.8	18.4	25.0	22.9	23.6	9.7	21.8	...
Thailand	-1.3	3.5	7.8	-7.9	3.2	-3.5	-2.0	...	...
Import value (twelve-month percent change)									
Korea	11.3	-3.8	-24.9	-39.8	-30.2	-35.9	-35.6	-37.5	-36.6
Indonesia 1/	8.1	13.1	-16.4	-41.6	-26.4	-24.6	...	...	...
Malaysia	1.0	0.8	-9.0	-32.8	0.0	-18.9	-28.3	-27.2	...
Philippines	25.8	7.6	2.7	0.0	-1.6	-11.0	-16.5	...	...
Thailand	1.8	-13.1	-27.9	-45.1	-36.1	-37.6	-39.1	...	...

1/ Monthly export data exclude non-oil and gas; monthly import data exclude oil and gas.

Table D. Asian Crisis Countries: Key Program Indicators, 1996-98

	1996	1997 <i>Original Program 1/</i>	1997 <i>Preliminary Actual</i>	1998 <i>Original Program 1/</i>	1998 <i>Revised Program 2/</i>
<b>Reserve Money (annual percentage change)</b>					
Indonesia	16.5	18.1	70.8	13.5	1.3
Korea	-12.2	-9.5	-12.5	9.0	13.9
Malaysia	35.2	...	28.4	11.6	...
Philippines 3/	14.2	11.8	16.1	...	13.0
Thailand	12.0	8.0	4.7	11.0	6.6 to 8.0
<b>Broad Money (annual percentage change)</b>					
Indonesia	26.7	17.5	9.4	11.4	14.2
Korea	16.7	15.4	13.9	9.0	12.5
Malaysia	23.7	...	17.7	12.0	...
Philippines	15.8	16.5	20.9	...	17.0
Thailand	12.7	...	3.1	...	9.0
<b>Credit to the private sector (annual percentage change)</b>					
Indonesia	26.3	26.8	19.4	17.0	12.9
Korea	18.8	18.9	18.9	10.2	7.8
Malaysia	27.7	...	25.3	11.7	...
Philippines	51.0	29.1	28.7	...	15.2
Thailand	...	...	...	...	...
<b>Interest rates (percent per annum) 4/</b>					
Indonesia	13.3	...	28.5	...	59.8
Korea	13.5	...	18.6	...	20.2
Malaysia	7.3	...	8.9	...	11.0
Philippines	11.7	...	17.7	...	14.5
Thailand	13.0	...	27.0	...	21.5
<b>Central government balance (percent of GDP)</b>					
Indonesia	1.2	0.8	-0.2	1.0	-8.0
Korea	0.3	...	-0.4	0.2	-1.7
Malaysia	1.1	...	2.6	0.5	...
Philippines 5/	-0.4	0.0	-0.9	...	-1.0
Thailand	2.4	-1.1	-1.0	1.0	-2.4
<b>Gross official reserves (in months of imports)</b>					
Indonesia	5.9	5.2	3.8	5.5	5.6
Korea 6/	2.0	0.8	0.6	2.4	3.3
Malaysia	4.6	...	3.5	3.8	...
Philippines	2.8	2.1	1.7	...	1.9
Thailand	6.6	4.2	5.3	4.4	6.2-6.7

Source: Data provided by country authorities; and staff estimates.

1/ Original program refers to the first program negotiated with the authorities after the onset of the crisis. For the Philippines, the program already in place last July was envisaged to run through end-1997.

2/ Revised program refers to the latest revision of program targets.

3/ Base money growth adjusted for changes in reserve requirements

4 Thirty-day interbank rates or nearest comparable rates. For 1998, data shown are for end-June.

5/ In percent of GNP

6/ Usable reserves

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