Chapter 4 Expansion of the Asian Currency Crisis and Real Economy Deterioration

1. The Asian Currency and Economic Crisis: Factors and Characteristics

The Asian currency and economic crisis deepened over two stages, namely the currency crisis arising in 1997 and the ensuing contagion, which in 1998 then developed into an economic crisis. The background and causes of this crisis have provoked hot debate. A major reason is why although major currency crises of the past (Central and South America in the early 1980s, some of the EMS countries and Mexico in the 1990s) have displayed virtually the same characteristics, namely excessive consumption, fiscal deficits, current account deficits, rising inflation and other macroeconomic imbalances, the crisis-struck East Asian countries have displayed high savings ratios, sound government finances, low inflation rates and other evidence of macroeconomic soundness. Considerable credence has also been given to the argument that the real problem was massive international inflows and outflows of short-term capital.

(Emergence of the Currency Crisis)

To clarify which of the various elements generally described as fundamentals were related to the emergence of the currency crisis, a Frankel and Rose model* was used to produce a Probit analysis of approximately 100 major currency crises which have occurred to date. The results were thought-provoking, revealing that where significant factors in currency crises of the 1980s were traditional economic fundamentals such as current account deficit and currency over-valuation, new factors related to capital movement emerged in currency crises of the 1990s, such as short-term debt, foreign currency reserves and disparities between domestic and foreign interest levels.

We also examined whether these various factors were observed around the time of the currency crisis in East Asia. The result was that 1990s-type factors—short-term debt ratios, foreign currency reserves and disparities between domestic and foreign interest levels—were apparent in all countries, while some countries also displayed 1980s-type

factors such as direct investment ratios (the Philippines, Thailand and the Republic of Korea), currency overvaluation (the Philippines and the Republic of Korea) and current account deficit (Thailand). The Asian currency crisis therefore bears an overall resemblance to the average currency crisis of the 1990s (Tables 4-1, 4-2).

Table 4-1 Comparison of Factors Causing Average Curency Crises and the Asian Currency Crisis

Factor	1980s type Currency crisis	1990s type Currency crisis	Asian Currency Crisis	△ countries
Current account	●		△	Thailand
Direct investment	●		△	Thailand, Republic of Korea, Philippines
Short-term debt		●	○	
Foreign currency reserves		●	○	
Currency over-valuation	●		△	Republic of Korea, Philippines
Domestic/foreign interest gap		●	○	

Notes: 1. ● indicates that this was a meaningful indicator as a cause of currency crisis based on probit analysis.
2. For the Asian currency crisis, if the relevant indicator the year before the crisis was becoming worse than the average standard in a period of stability in one of the significant periods (1980s or 1990s), then this indicator was considered a cause of currency crisis. If this factor was observed in all five countries, it was indicated with a ○,if observed in some countries, a △.

Sources: IMF, *International Financial Statistics;* World Bank, *World Development Indicators* and *Global Development Finance.*

Table 4-2 Comparison of Size of Public and Private External Debt Between Average Currency Crises and the Asian Currency Crisis

Unit: %

	Public external debt/GDP	Private external debt/GDP	Private debt ratio
Average currency crises	41.9	3.4	7.5
Malaysia	15.8	13.1	45.3
Thailand	9.2	19.5	68.0
Indonesia	26.5	16.2	37.9
Philippines	33.2	6.0	15.3
Republic of Korea	5.6	4.9	46.5

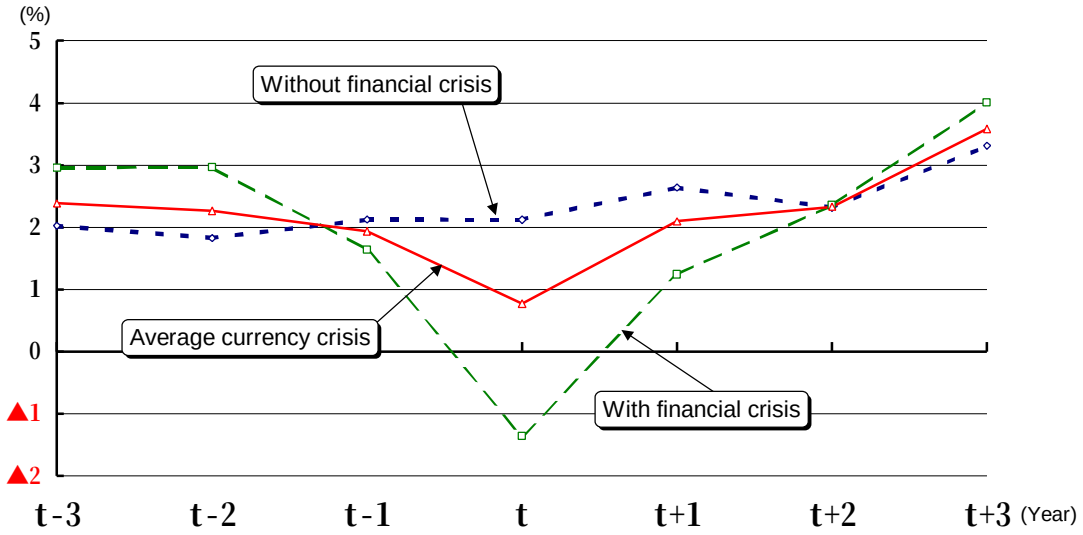
Notes: Figures for the ASEAN 4 are from 1996; figures for ROK are from 1993.
Figures for average currency crisis are taken from the period from 1971-1996.
Source: World Bank, *Global Development Finance* .

Further, while the scale of current account deficit at the time of the currency crisis was not particularly high compared to the average for past currency crises (with the exception of Thailand), sustained fiscal surpluses and the limited degree of public sector dependence on external debt would suggest that one of the characteristics of the Asian currency crisis has been a level of private sector dependence on external debt markedly high even compared to past currency crises.

(Simultaneous Financial Crisis Emergence and Expansion into Economic Crisis)

The widespread attention paid by the Japanese business world to the Asian currency and economic crisis was due to the way in which it developed into a financial and economic crisis of a severity far greater than originally imagined. Looking at past instances, currency crises are not always accompanied by financial crises. However, in average cases of the simultaneous occurrence of financial crisis, real GDP growth rate trends over seven years around the crisis reveal a heavy slump when the crisis emerges, indicating that where currency crises are accompanied by financial crises, a slowdown in the real economy (economic crisis) is likely to eventuate (Figure 4-1). In this sense, past cases would suggest that the development of the Asian currency crisis, which spurred a massive credit crunch, into a serious economic crisis is not at all unusual.

Figure 4-1 Real GDP Growth Rate During Average Currency Crisis With or Without Financial Crisis



Note: "t" denotes the year the currency crisis occurs.
Source: IMF, *International Financial Statistics* ; World Bank, *World Development Indicators* .

Next, we examined why the economic crisis was so severe, and why Asian economies did not recover the following year as has been the case on average for past currency crises accompanied by financial crises. The more progress made with resolution of the credit crunch and non-performing loan problems spurred by the economic crisis, the greater the likelihood should have been of an autonomous recovery. However, what differentiated the Asian countries was the massive scale of private debt, which tends to involve

complex rights relations; heavy corporate sector dependence on banks; and a great lack in terms of financial management and information disclosure.

From among currency crises accompanied by financial crises, those involving substantial private external debt (at least 10 percent of GDP) and or heavy bank dependence (M2 at least 40 percent of GDP) produced the following results (Figures 4-2, 4-3, 4-4):
(a) In the case of currency crises accompanied by financial crises and involving high private external debt, trends in the real GDP growth rate and export increase rate over the seven years around the crisis indicate that economic growth rates plunge further at the outbreak of the crisis than in average cases, with two years required to move back into positive growth. The export increase rate is also lower than in average cases.

(b) In the case of currency crises accompanied by financial crises and involving heavy bank dependence, examinations of the same trends as in (a) indicate a similar steep plunge in the economic growth rate, requiring three years to move back into positive growth, and two years in the case of the export increase rate.

Past examples therefore suggest that where currency crises are accompanied by financial crises and involve high private external debt or heavy bank dependence, factors such as the severance of capital supply to the industrial sector and the slump in not only domestic demand but also the export increase, combine to induce a steep economic nose-dive on the outbreak of a currency crisis, generally requiring some years to recover.

Further, from a microeconomic perspective, East Asian countries also lack adequate “soft” systemic infrastructure—there is little corporate governance, for example, while bankruptcy laws are undeveloped, financial accounting infrastructure weak and capital markets immature (particularly small-scale government bond markets). Without swift and committed implementation of economic structural reform and financial system reform, it could take much longer to recover from the crisis.

Figure 4-2 Value of Business Capital Procurement as a Portion of GDP in ASEAN 4 and NIEs

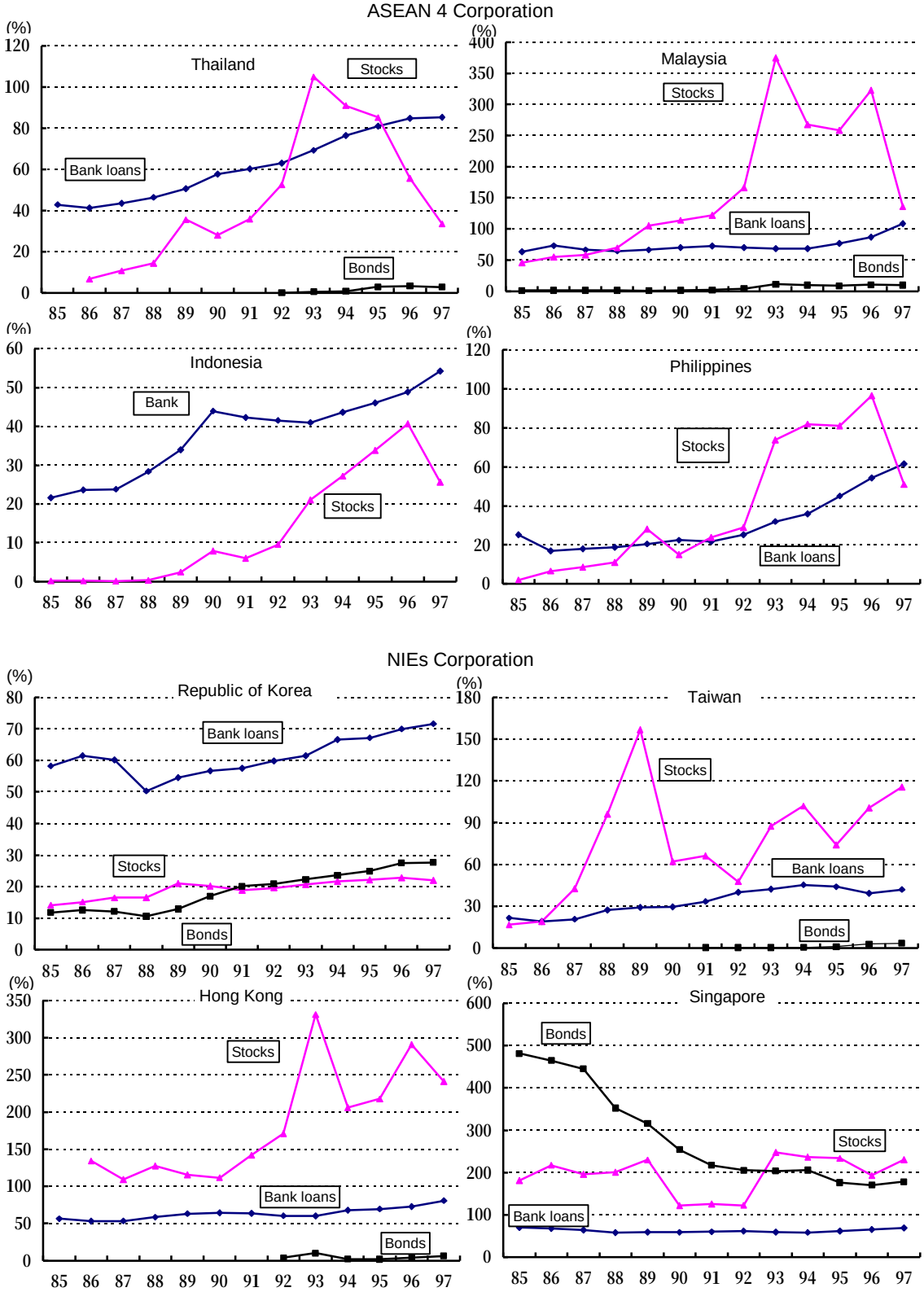
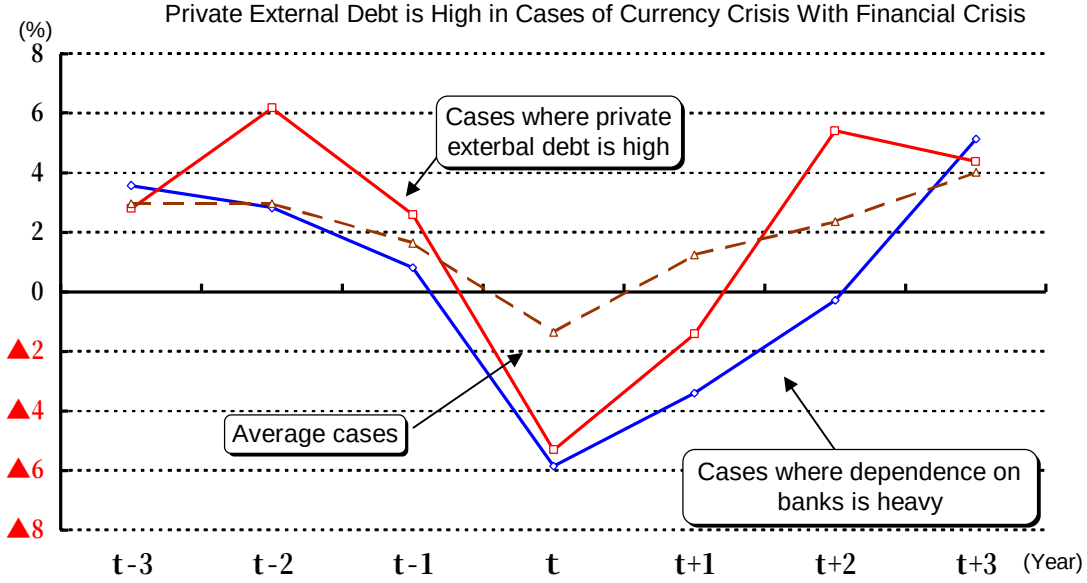
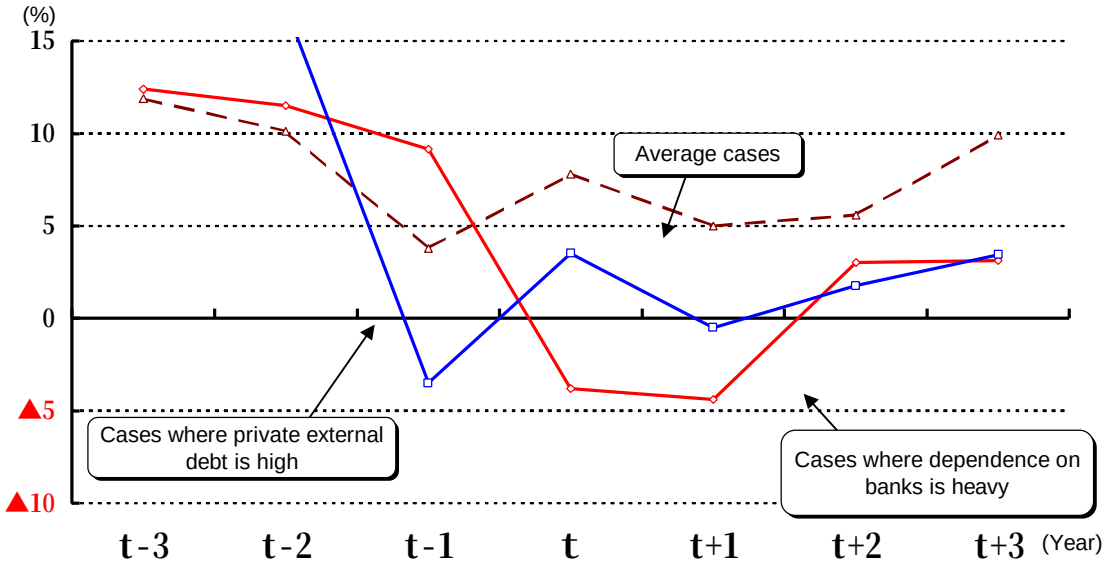


Figure 4-3 Real GDP Growth Rate When Dependence on Banks is Heavy and When Private External Debt is High in Cases of Currency Crisis With Financial Crisis



Note: "t" denotes the year the currency crisis occurs.
"Cases where dependence on banks is heavy" means that M2/GDP is 40% or higher.
"Cases where private external debt is high" means that private external debt/GDP is 10% or higher.
Source: IMF, *International Financial Statistics* ; World Bank, *World Development Indicators* and *Global Development Finance* .

Figure 4-4 Export Growth Rate When Dependence on Banks is Heavy and When Private External Debt is High in Cases of Currency Crisis With Financial Crisis

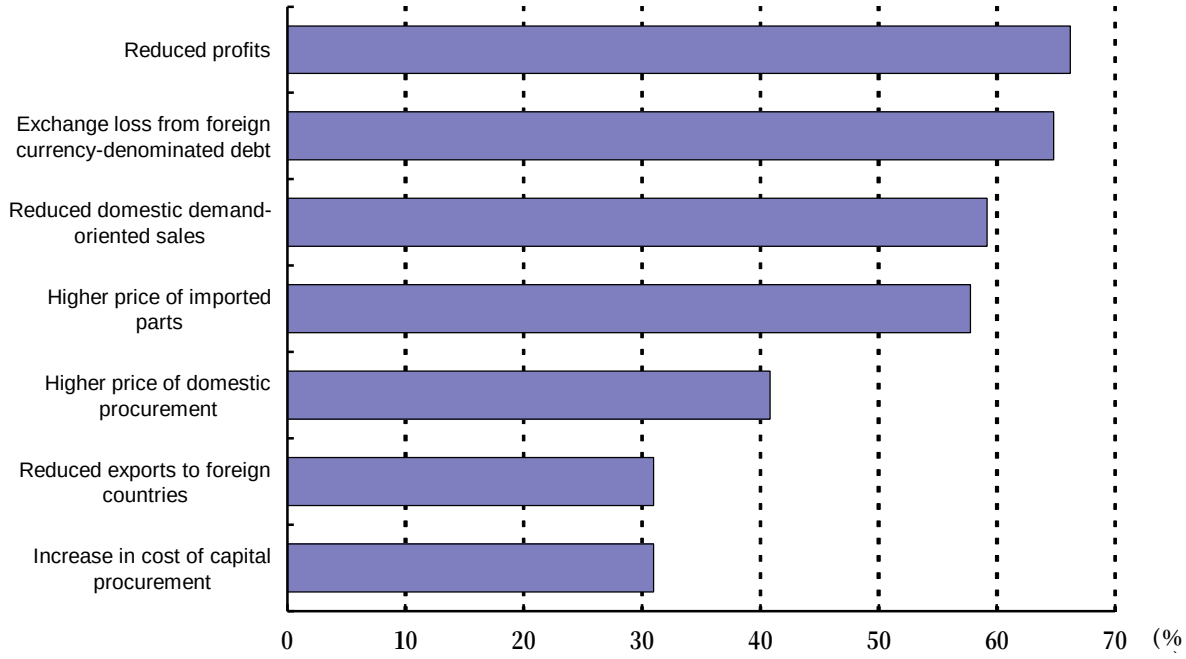


Note: "t" denotes the year the currency crisis occurs.
"Cases where dependence on banks is heavy" means that M2 /GDP is 40% or higher.
"Cases where private external debt is high" means that private external debt/GDP is 10% or higher.
Source: IMF, *International Financial Statistics* ; World Bank, *World Development Indicators* and *Global Development Finance* .

2. Response of Japanese Affiliates to the Asian Currency and Economic Crisis

The Asian currency and economic crisis has generally had a heavy impact on Japanese affiliates in a number of areas, including production, sales, finances and profit. Responses to a survey taken at the end of 1998 indicate that close to 70 percent of companies have been negatively affected by the Asian currency and economic crisis in the ASEAN 4 and the Republic of Korea, with this impact most frequently taking the form of reduced profits, exchange loss through foreign currency-denominated debt, reduced domestic demand-oriented sales and higher prices for imported parts (Figure 4-5).

Figure 4-5 Effect of Asian Currency and Economic Crises on the ASEAN 4 and Republic of Korea (multiple responses accepted)



Source: MITI Survey.

Even among those heavily affected Japanese affiliates, a closer examination reveals different degrees of impact according to the type of industry. Where all transportation machinery companies targeting domestic markets felt that they had been negatively affected, the same response was given by just over 50 percent of export-oriented electrical machinery companies, while around 40 percent conversely noted a positive impact. The main reason for this positive impact was the expansion of exports due to local currency depreciation. In terms of reasons behind any negative impact,

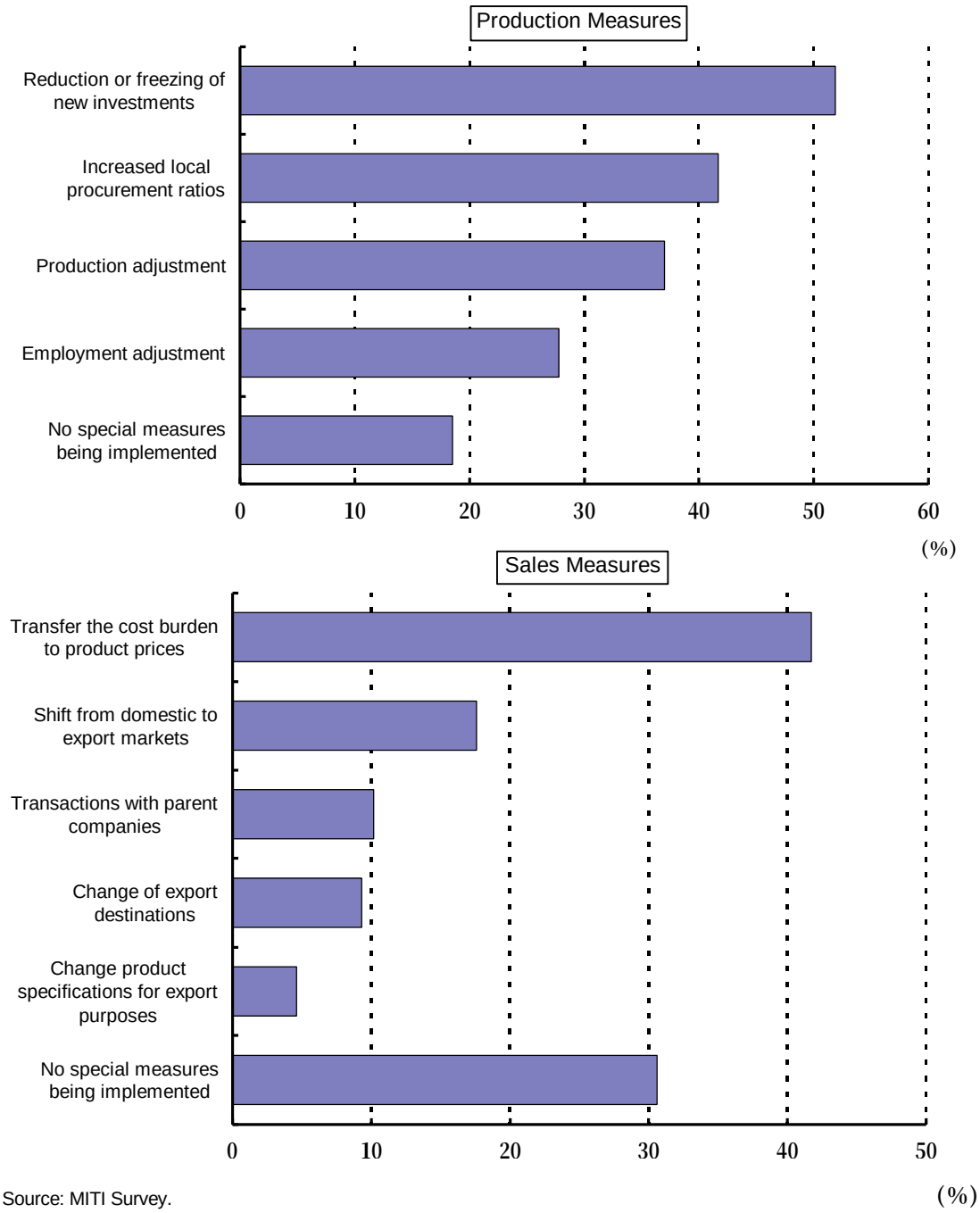
transportation machinery companies most frequently pointed to reduced sales on domestic markets due to the slowdown of the local economy (an 88 percent response rate), while in the case of electrical machinery, the most common response was reduced exports to offshore markets due to economic slowdowns in these markets (a 59 percent response rate).

Many companies also gave exchange loss through foreign currency-denominated debt as a reason for the negative impact, with more than 80 percent of companies seeing this as due to the absence or inadequacy of exchange risk management measures on their own part. In terms of reasons behind the inadequacy of exchange risk management, close to 70 percent pointed to the pegging of the local currency to the dollar.

Looking at the responses by Japanese affiliates in the ASEAN 4 and the Republic of Korea in the face of these various crisis impacts, more than 80 percent have taken some action in regard to production, with the most common measures being the reduction or freezing of new investments, increased local procurement ratios, production adjustment and employment adjustment. The most common measure taken on the sales side was to transfer the cost burden to product prices, followed by a shift in focus from domestic to export markets and transactions with parent companies, although as many as 30 percent of companies have implemented no special measures (Figure 4-6).

In addition, as seen earlier in Figure 4-5, where many companies noted that the negative impact of the Asian currency and economic crisis has been in the form of exchange loss through foreign currency-denominated debt, a total of 76 percent of companies reported that their response in terms of company finance after the crisis has been to maintain, strengthen or introduce exchange risk management measures. Around 30 to 50 percent of companies described such concrete measures as local procurement ratio hikes, forward exchange contracts and the reduction of foreign currency-denominated assets and liabilities, with companies obviously working to improve their exchange risk hedging.

Figure 4-6 Production and Sales Measures Implemented in the ASEAN 4 and Republic of Korea in Response to the Asian Currency Crisis (multiple responses accepted)



Source: MITI Survey.

The Asian currency and economic crisis has greatly reduced returns from local affiliates operating in the ASEAN 4 and the NIEs. The reason why many of these local affiliates have chosen not to withdraw but to continue to operate locally despite depressed

economic conditions and lower profits, is because Japanese companies continue to regard Asia as an important investment target. In fact, some 60 percent of companies asserted that they would not review their Asian strategies, while close to 90 percent felt that the importance of the ASEAN 4 and the Republic of Korea was either increasing or holding at the same level. Moreover, 82 percent retain high hopes for the ASEAN 4 and the Republic of Korea as production bases and 32 percent as future markets.

3. Malaysian Introduction of Exchange and Capital Transaction Regulations and the Impact on Trade and Investment

At the time of the 1997 Asian currency crisis, the International Monetary Fund (IMF) presented Thailand, Indonesia and the Republic of Korea with certain policy prescriptions as conditionalities for emergency financing, the main planks of which were fiscal retrenchment, high interest policies, financial system reform and comprehensive structural reform. These prescriptions prioritized the prevention of a depreciation-inflation spiral and the restoration of market confidence, extremely important tasks for countries hit by the currency crisis, and significant progress was made toward these goals. However, the protracted implementation of tight macroeconomic policies, and particularly high interest policies, for the purpose of currency stabilization, resulted in credit-crunch-induced economic recession and non-performing loan problems (due to the greater burden of interest payments on local currency-denominated debt) on a scale far more severe than originally expected, pushing the affected economies into serious downturns.

Where Malaysia too had adopted IMF-style tight fiscal and monetary policies, in September 1998, the government announced a package of measures for the introduction of exchange and capital transaction regulations and a shift to fixed exchange rate system. Finding intolerable the way in which protracted high interest levels were weakening the real economy and exacerbating the non-performing loan problem, Malaysia chose to sacrifice the free capital flows in exchange for the monetary independence, with the measures it adopted attracting worldwide attention as criticism of IMF-style

prescriptions for the Asian currency and economic crisis and also causing a stir in international debate on the international financial system.

The “trilemma theory” of the international financial system refers to the basic limitation in international financial system design, whereby it is impossible to simultaneously achieve exchange rate stability, free capital flows and monetary independence (Table 4-3). From this perspective, the basic thinking behind IMF-style prescriptions is that monetary independence has to be sacrificed to maintain free capital flows and exchange rate stability; however, this approach produced massive side-effects in the form of accelerated economic downturn and increasingly severe non-performing loan problems. The regulatory measures introduced by Malaysia, on the other hand, can be said to have sacrificed free capital flows in favor of monetary independence (economic stimulation through low interest rate) and exchange rate stability (fixed exchange rate system).

Malaysia’s introduction of regulations on exchange and capital transactions has been poorly received from the outset by foreign investors and other financial and capital market players, but locally-based Japanese manufacturing companies are of a different view, seeing no particular ill effects after the initial confusion and turbulence settled, and conversely appreciating the favorable impact of currency stability. A survey of Japanese affiliates based in Malaysia revealed that only 19 percent of companies thought that the measures had damaged the business environment, while 56 percent saw no change and 25 percent felt that the business environment had improved. Virtually all companies judged the improvement to be due to the reduced exchange risk provided by the introduction of fixed exchange rate system. Moreover, where around 40 percent of these local affiliates planned to continue injecting new investment, this was only echoed by around 20 percent of parent companies in Japan, a sharp contrast.

The regulatory measures taken by Malaysia are no more than emergency measures designed to restrict capital transactions to prevent sudden capital outflows, at the same time regaining monetary independence. While these regulations are in place, Malaysia will still have to work to boost the economy through expansionary fiscal and monetary

policies and to carry through structural reforms (particularly in the financial sector) as soon as possible, launching the domestic economy on to a recovery path. Achieving these tasks in the shortest possible time will be important in restoring market confidence in Malaysian economic prospects and sustaining foreign investment-led development, and it will be interesting to observe both the government's next moves and developments in the Malaysian economic situation.

Table 4-3 International Financial Systems and the Trilemma Theory

The following table is formed when you adjust the characteristics of the financial systems built (and targeted) globally, nationally and regionally, from the viewpoint of what should be sacrificed and what should be maintained within the three factors which constitute the trilemma theory (exchange rate stability, free capital flows, monetary independence). The underlined sections are the areas to be sacrificed.
According to the trilemma theory, it is not possible to maintain all three factors simultaneously. However, it must be noted that often each factor is sacrificed a little at a time instead of rigidly sacrificing just one, and that monetary independence can be easily impacted by external effects, such as trends in business conditions abroad.

	Exchange rate stability	Free capital flows	Monetary independence
1) The Bretton Woods system (came into effect December 1945 by IMF agreement)	Fixed exchange rate system based around the US dollar (intervention currency) under the gold exchange standard	Approval by IMF agreement of regulations for capital transactions (Gradually international capital flows became active and caused devaluation pressure.)	Degree of monetary independence relatively high
2) Floating exchange rate system in effect since the Nixon Shock of August 1971 (mainly for developed countries)	Change to the floated exchange rate system (In exchange markets, sometimes volatility became high and overshooting happened.)	Since the 1980s, progress has been made in capital account liberalization. International capital flows became more active.	Degree of monetary independence relatively high
3) Thailand, Indonesia, Malaysia, etc., just prior to the Asian currency crisis	Exchange rate system virtually pegged to the US dollar (Due to this system, exchange rate became stable and capital inflow increased.)	Progress in capital account liberalization due to deregulation (The degree of progress was different in each country.)	Degree of monetary independence relatively low (Priority was given to the maintenance of pegged-to-dollar system.)
4) IMF policy prescriptions for the Asian currency crisis	Change to the floated exchange rate system (Stability in exchange rate was not given immediately by the IMF prescriptions.)	Maintenance of capital account liberalization (Rapid spillover of capital happened.)	No monetary independence (High-interest policy was taken in order to prevent currency depreciation.)
5) Regulated Malaysian exchange and capital transactions	Change to the fixed exchange rate system (Exchange rate against the US dollar was fixed.	Introduction of regulated exchange and capital transactions (in order to prevent rapid spillover of capital)	Regaining monetary independence free from high interest policy (Monetary policy was eased.)