

YET ANOTHER ANALYSIS OF THE ASIAN CRISIS (YAAAC): WHAT IS TO BE LEARNED?

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1 Introduction

The Asian economic crisis, which began with the devaluation of the Thai baht in July 1997, first devastated those economies that had previously been considered as the most successful in interacting with international markets. The “infection” of the other, mostly “weaker” (in relative terms), economies only came subsequent to its full-blown expansion in East Asia, through linkages in portfolios among international investors and through production and trade linkages among the Asian economies themselves.¹

The Asian economic crisis is a crisis of “success” among the globalizing developing economies. The Southeast Asian economies had been the fastest growing economies in the world from the late 1980s up to 1 July 1997. All of the affected Southeast Asian economies (except for the Philippines) had been designated “Asian miracle” economies in a famous study by the World Bank [1993].

The activity of diagnosing the causes of the crisis has proliferated--in multimedia format--just as the task of responding to the crisis by public bureaucracies became commercially and politically inescapable (with the important, perhaps dominant influence of international financial institutions). If public authorities are to respond productively, proper diagnosis is critical.

Careful papers on the “pathology” of the crisis are at least a year away. One can almost predict that these papers will involve econometrics on perhaps newly conceived economic models (with probably an unavoidable element of ‘post-hocery’ and revisionism). Even here, there is no guarantee that more elaborate studies will provide an unambiguous exculpation, even without drawing upon political economy considerations.

In the meantime, diagnoses have had to depend on the often-selective interpretation of preliminary data, relying heavily on tools of logic. This piece is yet another one in this vein. Its main approach is to review the various explanations of the crisis and argue in favor of an interpretation that is not original. Providing a hierarchy of explanations and relating different causes to one another are more practical aids to policy design than trying to disprove or prove the validity of any single explanation.

2 Menageries of Explanations

In considering the various explanations of the crisis, it is useful to be conscious of the key divide in standard economic interpretations of actual economic events. Explanations divide between those that (1) rely on policy mistakes and those that (2) emphasize imperfections in private markets, not properly contained by public policy. Imperfections and even intrinsic defects of political economy form a subset of (1). Perhaps because economics has no standard models of policy making, formal economic models often do not explicitly differentiate between the two explanations or between policy mistakes and this subset.

¹ Incidentally, these linkages are quite recent having been built up mostly in the decade before the crisis. Production/trading links among the Asian economies had been more intensive before World War II when Western colonization in the region made such links privately remunerative and secure [Montes and Lee 1996, p.1].

Explanations of the Asian crisis can be grouped into (1) socio-politico-legal issues (2) trade and real sector issues, and (3) macroeconomic, balance of payments, and financial issues. In each of these issues, there are elements external to the domestic economy and those that inherently domestic. Tools of economic analysis are more developed in analyzing domestic aspects.

3 Socio-Politico-Legal Issues: Asian Values

This set of issues, which Other social sciences would call the set of socio-politico-legal issues “structural” but economists would find this confusing. These issues have both domestic and external aspects.

3.1 Domestic version

As applied to domestic considerations, socio-politico-legal explanations have dominated the journalistic discussions of the crisis, perhaps because these are most readily understandable to the laity of economic analysis. The calls against “korupsi, kolusi and nepotismi” (KKN) in the midst of political changes and the political movements which the crisis has spawned in East Asia find resonance in this explanation. Unfortunately, this explanation also seems to be the redoubt in which the Washington consensus has sought refuge, where defects in accountability, transparency, and governance in the capital-importing (as opposed to the capital-exporting) economies eventually get “punished” by somehow anthropomorphic, singularly conscious, markets.

In contrast to the socio-politico-legal accounts of the Latin American debt crisis of the 1980s which relied on (the practically intrinsic) investment inefficiencies of public enterprises, the accounts of the East Asian crisis implicate the Asian governments’ coddling of private business groups. This implication converts East Asian government-business coordination from the virtue highlighted by the World Bank [1993] into a vice.

Siamwalla [1998] discusses how in 1994 Thai regulatory authorities failed to end the at-times criminal lending practices of the small Bangkok Bank of Commerce by obtaining a seat on the board because the regulatory representative simply got voted out of the board. When a run on the bank developed, \$7 billion in funds had to be injected. In Indonesia, the absence of procedures to deal with potential bank failures effectively meant that all banks operated under a full guarantee from Bank Indonesia [Montes and Abdusalamov 1998]. Given that almost all prominent bankers and business group heads were allies, if not relatives, of the President of Indonesia, it is not surprising that the two largest bank failures before 1997 were of banks owned by businessmen closely associated with the government.

In Korea, the practice of cross-guaranteeing loans within *chaebols* interacting with the absence of consolidated financial statements represented that society’s notion that the borrower’s reputation dominates all other loan criteria. This situation was workable (and relatively benign) when the development process was in its early days and when access to foreign funds was limited on the supply side.

In Japan, such practices as dismissing uncooperative accountants and colluding in providing credit apparently survived even as Japan became a major industrial economy. As the crisis unfolded, the deficiencies of untested or non-existent bankruptcy procedures came to be associated with the poor credit practices in Asia.

The socio-politico-legal explanation is certainly important and one that hypothetically promises permanent improvements in accounting standards and hopefully accountability, in transparency and hopefully freedom of speech and inquiry, and wider participation in decision-making and hopefully democratization. Even if one does not accept the underlying Anglo-Saxon ideal, Asian societies, with growing middle classes and increasing international interaction, had been moving to adopt the standards that the ideals imagined. The crisis has released domestic pressures that can accelerate this trend, as long as a backlash is avoided and the crisis does not soak up all the resources that are

needed to continue the trend.

But does this set of factors offer a sharp enough analytical knife for understanding the Asian crisis? If there was anything specific to Asia in regard to poor credit practices, it would be that the original crisis countries with the exception of the Philippines all had savings rates at or above 30 percent of GDP and minimal indications of capital flight. From a logical point of view, and if one believed in the postulated declining marginal efficiency of investment, stories about corruption and disreputable credit practices would be of great journalistic interest but would be unnecessary to predict the eventual collapse of an overextended credit system. Growth in the East Asian economies could have remained the highest among developing countries without the additional foreign resources financial liberalization might have brought Kwan [1997] and the problem might have been, instead, that not enough of Asia's own savings took flight before the crisis.

The same pattern of boom-to-bust-to-crisis (with similar stories of shady practices, poor regulatory capability, unfortunate bailouts of early cases, inadequate accounting and reporting practices, and exploitation of the deregulation process by large business groupings such as *grupos economicos* in Chile, *conglomerasi* in Indonesia) had occurred in the Southern Cone countries (Chile, Argentina, Uruguay) of Latin America in 1981-82 [Ramos 1986] and in three Scandinavian countries (Norway, Sweden, Finland) in 1990-92 [Montes 1998]. For these cases and for the Asian case, one can argue that the weaknesses existed before the particular problem that precipitated the actual crisis which was the boom in credit expansion fed by external finance. Under this hypothesis, the fault of Asian policymakers and their Bretton Woods partners would lie in their not having learned the lessons of the earlier episodes.

However, the recycling of recriminations, theoretically safe as it is and apparently costless to creditor countries, has an insidious impact on policy design and the conduct of international relations. It tends to encourage a more casual approach to the issue of changing governments as a response to the crisis. It places great emphasis on what economists like to call "structural reforms" that are more difficult to complete in a time of macroeconomic, not to mention social, distress when demands on bureaucratic capacity are great, if only from the number of foreign expert teams visiting the capital [Feldstein 1998]. It discourages the early infusion of liquidity and the temporary imposition of debt moratoriums or capital controls (on the grounds that these policies will deflate the pressure for reform); liquidity infusions have depended on how well countries meet their promises of reform.

Consider that at the present juncture Indonesia is carrying out a 6-month crash program to install bankruptcy procedures as part of its structural reform program.² In most other societies, bankruptcy procedures have evolved through practice and precedent because they require both balancing the interests of debtors and creditors and the infusion of society's interests in protecting production, employment and physical capital. In Indonesia, the structural reform program has required the rapid installation of new bankruptcy laws and regulations (involving a certain amount of haphazard copying of foreign procedures which has apparently resulted in a procedure that unduly favors creditors). The completion of training of 12 judges and the start-up of training of the requisite number of lawyers and accountants is part of this program.

Because the rupiah exchange rate has made ninety percent of enterprises listed on the stock exchange and almost all banks technically bankrupt, the scale of bankruptcy practice in Indonesia promises to be extensive. In each case, individual creditors and debtors must decide if they want to participate in the hothouse creation of Indonesian bankruptcy traditions based on their self-interest, the currency composition of their personal and corporate portfolios, and on their projections of what the rupiah-dollar exchange rate will be. If Indonesia succeeds in meeting its reform promises to activate these practices in the midst of wide-ranging political and social pressure, it risks having

² Indonesia did have Dutch-style bankruptcy laws in place before the crisis, but they had never been tested.

excess bankruptcy capacity after the crisis. Instead, if liquidity had been injected early enough or if other direct measures to stabilize the rupiah had been put in place, the scale of bankruptcies would not be as high and Indonesia would face this possibility of post-crisis over capacity in bankruptcy procedures.³ But such a policy approach is not proper under a socio-politico-legal explanation of the crisis.

Unlike political scientists, economists have legitimate reasons to worry about casualness in the matter of changing of governments, in widespread bankruptcies, or in the implementation of austerity programs. Economic non-linearities (political and economic events that drastically change economic structures, incentives, and government capacity) and asymmetries (dissimilarities between a company going bankrupt and a new firm starting up to replace it) can postpone economic recovery unnecessarily [Stiglitz 1998].

The other beguiling aspect of the socio-politico-legal explanation is that it draws an iron curtain over other policies that might have been appropriate to avoid the Asian crisis and to prevent similar crises in the future. It tends to excuse the recklessness of external creditors while creating suspicion of capital controls as devices to hide poor domestic lending practices.

3.2 External version

One external version of the socio-politico-legal explanation sees the crisis as a “natural” event in the progressive process of globalization. I mention this view only for completeness and will not develop it here because it has not produced sufficiently interesting policy implications so far. The literature and discussion promises to be vast and lengthy, just as the Asian economic crisis is deep and extensive. Two rather nuanced discussions are in Wade [1998] and Wade [forthcoming], given that the author has previously studied how some individual countries can escape the iron laws of relative development, based on a rigid hierarchical model of world production.

On a less overarching note, there are legal and regulatory defects in the international financial system that might have provoked the 1990s version of over lending by investors in the industrial economies to emerging economies. Regulatory regimes in industrial economies have limited jurisdiction over risk positions overseas. In calculating banks’ capital adequacy ratio, the Bank for International Settlements (BIS) applies only a 20 percent weight to lending for less than one year to non-OECD countries, while stipulating 100-percent weight for longer term loans. This constitutes a subsidy on the external side for short-term lending to emerging markets [Griffith-Jones 1998].

Deficiencies like this abound and they need to be considered in order to reduce unintended volatility in international capital flows. Such reforms might have reduced the pressure of the inflows into Asia during the period of investment euphoria and alleviated the extent of intervention that was required on the part of receiving countries to productively absorb these flows.

In the midst of the crisis, the absence of orderly workout procedures on external debt and the inability (perhaps, hesitancy) of the IMF to lend in arrears are particularly glaring deficiencies. If these had been in place, they might have reduced the depth and the spread of the crisis by alleviating the liquidity reversal.

4 Trade and Real Sector Issues: Competitiveness

Here the explanations divide between the impact of (1) loss of competitiveness and (2) over capacity in production as a consequence of over investment.

4.1 Loss of competitiveness

Currency overvaluation is a real sector explanation, most easily understood using considerations of

³ As the U.S. Treasury threatened to do in the case of Brazil as of 3 October 1998.

international trade. According to this view, the Southeast Asian economies had lost their export competitiveness, especially with respect to China but also against new entrants in world markets such as India and Vietnam. This argument depends most heavily on currency appreciation, since inflation rates (excluding asset prices) had been modest before the crisis. (To the surprise of many they continue to be modest after the extreme devaluations.) The explanation is beguiling because the most visible evidence of the crisis is the collapse of currency values, so the market must be pronouncing something true. The most visible evidence of the crisis, the collapse of currency values, suggests that the market supports this explanation.

In terms of policy response, this explanation argues against interventions that might prematurely stabilize nominal exchange rates (which is tantamount to stabilizing real exchange rates given the inflation experience of most East Asian countries since the crisis). It would have justified the offhanded refusal of the United States and the IMF to even consider the September 1997 Asian proposal of a \$100 billion fund to be mainly applied to stabilize regional exchange rates. This position might accept high interest rates as a temporary measure to stabilize exchange rates but not temporary capital controls (which might not prove temporary and could support a protectionist regime).⁴ The advantage of the latter as opposed to the former is that it can support a reflationary program that would alleviate the loss of confidence and avoid permanent damage in the real and export sectors. According to this view, real exchange rates have to fall in order to restore export competitiveness.

I argue that “loss of competitiveness” is not an important explanation for the East Asian crisis [Montes 1998]. I argue that (1) overvaluation was not large and (2) that the trends in trade did not suggest a drastic decline in competitiveness. Below, in the section on macroeconomics, I argue that the real sector (through the loss of competitiveness) was not the route through which the strong peg of the regions’ currencies to the U.S. dollar (in conjunction with the sharp depreciation of the yen) led to the crisis. It was the financial sector. Through this route, the strong dollar peg, coupled with the weakening yen and the interest differential (which was particularly acute with regard to yen interest rates), revitalized capital inflows into the crisis countries even after banking failures and evidence of overexposure to property development had become conspicuous.

Econometric evidence from Chinn [1998] confirms the small and ambiguous role of overvaluation. There are a few paradoxes in this model-based determination of the equilibrium exchange rate, such as that before the crisis the Singapore dollar was overvalued by 45 per cent against the estimated equilibrium rate and the Philippine peso undervalued. The monetary model used to determine equilibrium benchmarks has limited mileage and one can easily point to specific policy-based explanations for the econometric paradoxes.

The loss-of-competitiveness explanation mentions the export slump of 1996. Singapore’s export growth was 25 in 1994, 22 per cent in 1995, and only 7 per cent in 1996. Malaysian exports grew by 23 and 26 per cent in 1994 and 1995 and by only 4 per cent in 1996. As a result of competition for its labor-intensive exports together with the electronics slump Thai exports had a zero growth rate in 1996 down from 22 and 25 per cent in 1994 and 1995 [Montes 1998a].

There are a few weaknesses in this explanation. First, it is generally agreed that the 1996 slump was strongly based on the electronics sector. In this sector, Southeast Asian economies are already a step ahead of other new competitors. This approach does not really explain why Singapore and Malaysia were immediately drawn into the currency attacks in 1997. Before the crisis, there was a general belief that the Malaysian ringgit was undervalued and Malaysia could afford to let its currency appreciate faster.

Secondly, a sharp recovery in electronics exports was evident by 1997. Thailand would have been

⁴ A suspicion that might be understandable on the part of economic laymen regarding East Asia but should otherwise not be important to knowledgeable observers.

more vulnerable because its exports were not as technologically weighted as those of Malaysia and Singapore. But Thai exports were recovering in 1997 and a competitiveness explanation cannot really explain why the prices of Thai equities began trending down as early as 1995 and continued to decline in 1997.

The competitiveness explanation also points to China's devaluation of the renminbi in 1994, which seemed like a 50-percent devaluation based on the official rates. However, this exchange adjustment is more properly interpreted as a unification of official and market exchange rates, in which 60-80 percent of China's exports had already been transacted at market rates. Under this view, the effective size of China's 1994 devaluation was on the order of 7-10 percent, much smaller than the 30-50 percent devaluation of Southeast Asian currencies.⁵ China had been devaluing the renminbi before 1994, but the trends in Southeast Asian exports, including a consideration of trends in the trade structure, suggest that these previous devaluations were being absorbed reasonably well.

The real exchange rate appreciation in the Asian economies in the 1990s during the era of capital inflows is also mentioned as a competitiveness factor. Reference is continually made to the strong peg of the Asian economies to the dollar, even after the dollar appreciated globally from mid-1996.⁶ A number of estimates of real appreciation attest to its relatively modest extent in East Asia. Table 1, from Corsetti, Pesenti and Roubini [1998], suggests a maximum of 17 percent real appreciation and for Thailand, the estimate is only 8 percent. None of these appreciations is comparable in magnitude to the depreciations that have occurred since the crisis. The extent of real appreciation in Mexico, on the other hand, has been estimated as large as 30 percent by 1994 [Edwards 1998]. Diel and Schweickert [1997], who otherwise devote a lot of discussion to the perils of pegged exchange rates, indicate the same modest real exchange appreciation for Thailand, Indonesia, and Malaysia in Figure 5. Real exchange rates estimated by Bond [1998] in a paper presented before the crisis show the same pattern.

Table 1: Real Exchange Rates

	1990	1991	1992	1993	1994	1995	1996
Korea	97.10	91.50	87.80	85.20	84.70	87.80	86.80
Indonesia	97.40	99.60	100.80	103.80	101.00	100.50	105.10
Malaysia	97.00	96.90	109.70	111.00	107.10	107.00	111.80
Philippines	92.30	103.10	107.10	97.40	111.60	109.50	116.00
Singapore	101.20	105.70	106.00	108.60	111.90	112.70	117.90
Thailand	102.20	99.00	99.70	101.90	98.30	101.70	107.60
Hong Kong	99.70	103.90	108.50	115.90	114.50	116.10	125.50

Notes: End-of-year. Base is 1990 average. Higher values mean appreciation.

Source: Table 11 of Corsetti, Pesenti, and Roubini.

In all of these estimates, the Philippine peso appreciates the most (except possibly for Singapore depending on the weights used), while Korea shows a real depreciation. Capital inflows as a proportion of GDP were smallest in the Philippines and Korea during the period. Korea is a genuine victim of the crisis, despite its success in resisting exchange rate appreciation, mostly due to its capital controls. The Philippines is an unwitting victim of the crisis [Montes 1998c], despite an apparent eagerness to participate as indicated by its exchange appreciation before the crisis.

⁵ This implies that if the problem is export competitiveness, the pressure on China to devalue now is that much greater, since the Asian currencies have fallen by over 30 percent. However, it does not explain why these currencies have fallen so low.

⁶ Unlike in Latin America or in Russia, in Asia the exchange rate was not used as an anchor to fight inflation. The exception is Singapore where exchange appreciation is the main instrument for controlling inflation. The strong peg analysis applied very well to the "tablita" era in Argentina, Chile, and Uruguay and is a harder sell with respect to the Asian economies.

For completeness' sake, we should mention the almost "heroic" (because of the extent of sterilization involved) and not-completely-successful efforts before the crisis by almost all of the Asian economies (except Singapore) to maintain real exchange rates to protect the export sector [see Montes 1998]. Because of the results of earlier studies (e.g., Chinn and Frankel [1994]) on international capital market integration among the Asian economies, the extent of integration implicit in the widespread contagion after the crisis started was unanticipated. There are no detailed studies on the nature of capital integration after 1992. However, the Asian economies' almost consistently successful use of sterilization and other policies to prevent faster currency appreciation is indirect evidence that they had sufficient monetary independence from 1992 to 1996, during the euphoric episode of capital inflows.

The resulting devaluations and the domestic slowdowns coupled with difficulties in obtaining trade credits for imports have sharply boosted current account surpluses in the region. While the devaluations have improved the competitiveness of Southeast Asian economies, it cannot be argued in the converse that these adjustments were necessary to restore competitiveness. Attaining super-competitiveness on the order provided by the crisis opens a Pandora's box of trade disputes with the West. Super-competitive exchange rates also exacerbate solvency problems for domestic financial sectors.

Nevertheless, the exchange rate arrangements had been inflicting unbearable strain on the real sectors of the economies in the years before the crisis. Asian public authorities exhibited increasing antipathy to currency arrangements in the period of great instability between the yen and dollar, a situation that continues to prevail. The available evidence suggests a certain degree of Asian success in maintaining stability and preventing excessive real appreciation. Dissatisfaction came from the impact of exchange volatility on trade arrangements. In a paper presented at an APEC meeting in 1995, Kondo Takehiko [1996] proposed the creation of an APEC currency unit (which he called C.C.U. for "Common Currency Unit") to serve as a (more stable) *numeraire* for international trade. The new unit would include the U.S. dollar, the yen, and even the Chinese renminbi.

It is illustrative (1) that Kondo was an official of Japan's external trade organization, JETRO (the acronym actually derives from the English), and (2) that he took great pains to ensure that the U.S. dollar would be part of the basket. He displayed no intention to establish a yen zone just so that the proposal would not provoke U.S. resistance [Kondo 1996, p. 213].

Before the crisis, pegging to the dollar, with some adjustments, made sense from a real-sector point of view. Except for Korea, which was striving mightily to keep its currency weak against the dollar, the Asian currencies were apparently pegging strongly to the dollar. The currency attack was an attack on the strong peg to the dollar.

Was the chosen exchange rate mechanism inherently flawed? Before the crisis, Indonesia successfully operated a crawling peg, based on the inflation differential with the U.S. dollar [Montes and Abdusalamov 1998]. With the sharp appreciation of the U.S. dollar against major currencies that began in mid-1996, the Thais faced the following choices: (1) continue to peg to the dollar and be unstable against the yen, (2) to peg to the yen and be unstable against the dollar, or (3) to be unstable against all currencies [Volcker 1998]. Malaysia and Singapore permitted gentle nominal appreciations of their currencies against the dollar to reflect part of the strong investment interest (thereby easing the impact on money supply and sterilization responses) and to create price pressure for the technological upgrading of domestic activities.

In the crisis, of course, the currency values of East Asian economies have fallen against other currencies and have exhibited less volatility against each other than against the U.S. dollar and other currencies.

Unless the fundamentals between the major industrial countries do actually have large swings, one can say the following: Improving stability among the major currencies improves the welfare of

private current account actors in developing economies. It can also reduce the extent of capital account intervention by public actors in capital-importing countries required in order to stabilize exchange rates and attain current account objectives.

Pegging to a more evenly weighted currency basket, of course, is tantamount to pegging more strongly other currencies (and less strongly to the U.S. dollar).

In order to make this feasible, the Japanese yen has to internationalize even more. Providing sufficient liquidity to markets trading in yen-denominated assets requires completion of Japan's financial liberalization efforts. Liquidity in these markets is critical if central banks and private companies are to manage their exchange risk using the yen as an alternative currency.

It is also important that individual economies regain some capacity to manage their capital accounts, particularly in reducing the vulnerability of their financial sector to short-term capital movements. One alternative would be to have 3 or 4 grades of open capital accounts. Economies with the highest rating would be designated as those with the greatest capacity to absorb private capital, including capital from the prickliest investors; economies with the lowest rating should not be permitted to accept more volatile capital inflows. The presumption is that economies with the highest rating could receive more capital inflows at lower spreads. Economies would be allowed to graduate to the next higher grade only when they had put in place sufficient capacity in prudential supervision and macroeconomic management.

The incompatibility of incentives makes it difficult to rely exclusively on guarantees and fees to implement this grading scheme. Giving more liberal systems more generous guarantees is an intervention with the wrong sign. Controls have to be used and a list has to be devised which would tell all fund managers which types of controls are appropriate for which grade of open-ness and which therefore should not be construed as a defense of disappearing international reserves.

In principle, one might like to support illiberal controls when

- (1) they are justified by the requirements of prudential regulation⁷ and
- (2) they support macroeconomic stability.

These are very broad objectives. An even broader objective is when

- (3) they prevent the undermining of long-term variables, such as domestic savings rates, deemed important for long-term development [Reisen 1997].

There is some justification for making agreements about international "standards."

4.2 Over capacity in Production

The view that traces the Asian crisis to production over capacity converts the Asian virtue of under consumption into a vice. In this view, the crisis is the kind that Marx first observed during the Victorian era and interpreted as endemic to capitalist systems [Howell 1998]. Capitalists invest too much in production facilities. Overproduction has to be sold at prices that do not cover production costs; only the destruction of capital during a crisis can restore profitability.

Studies are now underway to document Asia's over capacity in the electronics, steel, and automobile industries. These studies will assign the blame to the Korean, Malaysian, and Indonesian governments for industrial policies that subsidized over investment in these industries and ignored

⁷ McKinnon and Pill [1998, p. 25] state the case for capital controls thus: "If the authorities are unsure of their ability to monitor the quality, quantity, and currency denomination of bank assets and liabilities, direct and indirect measures to restrain inflows of foreign financial capital (especially foreign currency-denominated flows) may be necessary to control moral hazard in the banking system from deposit insurance or other *ex post* bail out provisions."

duplication and over capacity. They are also expected to heap blame on incompletely market-disciplined domestic financial markets which provided financing for these ventures, even though more market-oriented financial sectors in industrial economies have made similar mistakes.

In an analysis that is not so focused on policy mistakes, Kaplinksy [1998] documents a pattern of over concentration of investment in Asian industries with low barriers to entry, which forces them to pursue weak real exchange rate policies to maintain their competitiveness. The Asian currency collapses can therefore be seen as a correction waiting to happen.

By justifying the depth and the extended recovery of the economic crisis, these interpretations offer some consolation and sympathy to the authorities and citizenry of East Asia. They suggest appropriately that government support for certain export or modern sectors should be undertaken with greater care or not undertaken at all. This hypothesis might help track the sectoral distribution of industrial dislocation. However, the breakdown in the financial sector and its inability to finance export-oriented and modern sectors also explain the sectoral pattern of collapse since the crisis began just as well as the fact that these sectors had received the greatest amount of credit accommodation before the crisis. One consolation is that a good proportion of the investments that have now soured were production-oriented and ultimately aimed beyond domestic markets, given East Asia's earned confidence in external trade. The slowdown in East Asia itself explains much of these projects' *ex post* inefficiency.

The elevated growth rates in the East Asian economies during the early 1990s, just like the extended growth boom in the United States, would not have been permanently sustainable. East Asian officials and private investors in the region did not pay sufficient attention to the need for a slowdown policy, even though authorities did focus on reducing the total volume of external capital that threatened to inundate domestic capital markets [Montes 1998].

Nevertheless, infrastructure deficiencies and the potential for catch-up of a growing middle class had provided the basis for the investment. During the late 1980s in East Asia quite a few conferences and papers focused on the theme of the coming capital shortage worldwide, and particularly in developing Asia. According to these prognostications, Asia needed enormous amounts of capital for investment and infrastructure and this demand could not be met from the usual official sources. Numerous calls were made for Asian economies to develop their domestic capital markets and to link them with ones in the industrial economies. This had been the impetus for the subsequent opening of the capital account.

5 Macroeconomics and Finance Issues: A Minsky Crisis

Before the Asian economic crisis, economists used two canonical models, called unremarkably, "first generation" and "second generation" models, to explain single-country balance-of-payments crises. The Asian economic crisis does not fit neatly into either model.

5.1 First and second generation explanations

In first generation models, currency attacks are justified by chronic flow deficits. In Krugman's [1979] account, seeing a pattern of external deficits, speculators short-sell the domestic currency forward, thereby attacking a finite level of international reserves, and profit from the eventual currency devaluation when the reserves run out. For this model to have applied to the Asian crisis countries, it would have to be the case that the flow deficits provided predictive indications about "weak fundamentals." before July 1997

During the period of capital inflow, the Southeast Asian economies had seen continued improvement in their fiscal position. Savings rates had not deteriorated and had increased in some economies. One could argue based on long-term and cyclical considerations [Reisen 1997] that current account deficits even on the order of Thailand's 8 percent were sustainable. Indonesia, which has now experienced the deepest crisis, had a current account deficit of 4 percent in the year before the crisis.

Radelet and Sachs [1998] also present compelling evidence that the standard “fundamentals” in the Asian crisis countries were not deteriorating before the crisis. Reisen [1998] makes the same argument.

Second generation models were invented in response to the 1992 crisis of the European Exchange Rate Mechanism (ERM) which erupted in a situation of strong fundamentals but still succeeded in forcing the UK and Italy out of the exchange rate arrangement. These models justify a currency attack not from fundamental weaknesses but from predictions that government policy must become more expansionary in the future in order to satisfy demands for lower unemployment and faster growth. These models are interesting for the recent Asian experience because they identify multiple equilibria and the possibility that economies can be pushed into a disastrous equilibrium because of changes in policy and/or market sentiment [Montes 1998]. Second generation models also provide an analytical description of self-fulfilling behavior on the part of market participants that could be quite out of line with observed fundamentals.

The European situation before the ERM crisis does not apply to the pre-crisis Asian situation. Asian growth rates were high before the crisis. And it is difficult to imagine that Asian governments, most of which were operating in a situation of over employment, were expected to take a more expansionary stance that might have justified currency attack (except in the case of the Philippines).

The precursor of the crisis was a lending boom in the Asian countries, in the midst of financial and capital account liberalization. As has been repeated countless times, this boom, fed most strongly by increases in short-term borrowings in the years immediately before the crisis, posed the key vulnerability of the Asian economies to the currency attacks.

Table 2: Liabilities to BIS Banks as of June 1997

	Total Liability	Short-term Liability	Short-term/ Total	Total Liability/ GDP	Short-term/ Reserves
	US\$ bil.	US\$ bil.	%	%	%
ASEAN					
Indonesia	58.7	34.7	59.1	26.5	162.9
Malaysia	28.8	16.3	56.6	29.3	60.9
Philippines	14.1	8.3	58.9	16.2	72.6
Thailand	69.4	45.6	65.7	38.1	141.1
Other Asia					
China	57.9	30.1	52.0	7.1	23.4
Korea	103.4	70.2	67.9	21.3	210.6
Taiwan	25.2	22.0	87.3	9.2	24.3
Latin America					
Argentina	44.4	23.9	53.8	15.8	130.3
Brazil	71.1	44.2	62.2	9.6	77.2
Chile	17.6	7.6	43.2		
Colombia	17.0	6.7	39.4		
Mexico	62.1	28.2	45.4	18.5	118.7
Venezuela	12.1	3.6	29.8		

Source: Ito [1998, Table 1].

The trigger of the Asian crisis lay in the sudden reversal of short-term capital. Table 2, which only shows external liabilities to foreign banks by country and does not include other external liabilities such as bonds floated by domestic corporations and equity purchased by foreigners, indicates that the relative prevalence of short-term capital imports is a strong predictor of crisis. Thailand, Korea, and Indonesia have among the highest proportion of short-term to long-term debt and these three countries have clearly the highest ratios of short-term debt to international reserves. If the import of

foreign financial capital must consist mostly of short-term loans which can trigger a currency attack, then not only does importing financial capital reduce efficiency but also it increases vulnerability to currency attack.

This lesson had already been strongly suggested by the Mexican crisis of 1994 [Calvo and Mendoza 1996] but it went unheeded both by governments and private investors to Southeast Asia.

The Bangkok International Banking Facility (BIBF) was basically financed from short-term dollar deposits, ninety-five per cent of which was lent on in domestic currency [Montes 1998]. Korean capital account controls had long been motivated by the need to control direct foreign investment and minimize the extent to which foreigners could obtain control of Korean enterprises. When Korea acceded to the OECD, it began, not by opening up the capital account for direct foreign investment and for long-term investment, but by liberalizing the ability of Korean banks to borrow from abroad on a short-term basis. This provided the proximate cause to the large run-up in short-term debt of Korean commercial banks in the year before the Thai crisis.

The lending boom was fed by interest rate differentials that did not narrow in spite of the strong currency pegs. Given that (a) inflation rates in the Southeast Asian countries had been low [Montes 1998], (b) government deficits were low and declining [Montes 1998], and (c) sovereign premia were declining right up to the day the crisis began, the strict currency pegs should have led domestic interest rates to converge with international rates (a reduction in differentials) if markets were working properly. However, instead of declining, interest differentials remained significant.

The explanation for non-converging interest differentials had already been theorized in the aftermath of the Southern Cone banking calamities of 1981-82, when countries had used strong dollar pegs as inflation anchors (something that the Asians did not attempt). Remember the infamous *tabilita* of scheduled nominal crawling from those bygone days? The main culprits were identified to be domestic market imperfections and oligopolistic structures. For example, large domestic conglomerates had preferential access to lower interest rate loans from abroad while other domestic enterprises were rationed through high interest domestic loans. Such favored groups existed in Asia, as clear from the later accusations about crony capitalism. The difference is that in Asia these groups were not obtaining financing the state rather than from private investors abroad. The impact of the maintained interest differential is a borrowing-from-abroad cum a domestic lending boom.

Such structural imbalances cannot be expected to disappear overnight. The Thai (and actually also the Indonesian) approach to structural impediments had been to permit nationals relatively free entry to the industry. But this approach had its own problems, since free entry also fed the boom [Montes 1998]. Taxing (or otherwise limiting) external borrowing, such as through a reserve requirement, and maintaining capital controls over entry and lending beyond prudential limits, appear to be a better approach.

5.2 Generalized run on domestic currency assets

The argument can be made that the “fundamentals” of the Asian countries that were first afflicted by the crisis did not warrant the currency attack to which they were subjected. But for the fact that Thailand ran out of reserves in July 1997 perhaps the economies of Russia and some key Latin American economies should have experienced currency attacks ahead of, instead of subsequent to Asia. A related argument would be that the “fundamentals” even among the afflicted Asian economies were sufficiently varied not to have justified the general currency collapse that began in September 1997.

One way to view the Asian crisis, then, is to think of it as a generalized run on domestic currency assets. Together, the imperfect information about weaknesses in the financial system [Montes 1998, p. 52] and the certain information about the maturity and currency transformation in the financial system (along with the level of international reserves held by authorities) indicated that there would not be sufficient funds to cover short-term obligations. The features of a bank run, modeled in

equilibrium terms by Diamond and Dybvig [1983], would thus apply. (Chang and Velasco [1998] apply this model to various combinations of currency and depositor guarantee arrangements.)

If myopia and structural imperfections in international markets are important enough, it would be fruitful to look directly at changes in an economy's vulnerability to currency attack. One approach that might prove more effective in understanding the Asian crises is to try to explain the external borrowing boom that follows a financial liberalization effort. The crisis is attributable to the increasing vulnerability of the banking system that exposes the country to the risk of a currency attack [Montes 1998].

Dooley [1998] works out a model based on insurance considerations, starting from the presumption that governments of emerging economies stand behind the viability of their domestic banking system. Resident banks, households, and firms sell "insured liabilities" to nonresidents. They are backed by the international reserves controlled by the monetary authorities. When the amount of these liabilities begins to exceed net international reserves, then a currency attack must ensue as the existing insurance claim owners try to cash in before the insurance fund runs out.

The analytical fitness of this model lies in the three conditions that Dooley suggests are necessary to be able to generate this process. First, governments must have net international reserves with which to back up the insurance offer. Dooley attempts to interpret the rise of "emerging" markets as dependent upon the appearance of net reserves that would provide the implicit insurance. Some key factors for the appearance of such reserves are the reduction in international interest rates and the debt write-offs from the Brady Bonds of the late 1980s that reduced the net international liabilities of certain countries.

The second condition is a credible commitment by the government to meet the insurance contract by exhausting these reserves. This means that the government will not default or devalue before the currency reserves are exhausted. The third factor is that private investors must be able to complete transactions that can produce insured losses.

The model can explain both a lending boom (sparked by the appearance of insured assets) and a subsequent currency attack. It can explain the onset of a currency attack even when so-called fundamentals do not change. The extent of the sudden reversal of capital flows to the Asian region is shown in Table 3.

Table 3: Shifts in Private Capital Flows by Country

	US\$ billions					% Share of GDP
	1994	1995	1996	1997	1998*	1997
China	-8.3	-13.5	-17.8	-25.3	-38.0	-3.4
Hong Kong	15.3	25.2	11.0	32.2	12.9	20.9
Taiwan	3.5	-6.5	-12.0	-9.5	-0.2	-13.3
Korea	11.6	17.5	27.2	-13.0	-28.5	-2.8
Singapore	-6.1	-8.5	-7.2	-15.5	-28.5	-2.8
Malaysia	-1.7	1.3	2.8	-14.0	-6.4	-14.2
Thailand	12.0	19.3	15.1	-10.8	-8.9	-5.9
Philippines	2.7	-0.1	7.8	0.3	1.0	0.4
Indonesia	2.1	4.8	4.9	-6.7	-8.7	-3.0
Japan	-84.0	-31.9	-10.9	-53.4	-57.0	-1.2
China & HK	7.0	11.7	-6.8	7.0	-25.1	0.8
Asia excl. China	39.4	52.9	48.8	-36.9	-34.2	-2.7
Asia Total	31.2	39.4	31.0	-62.2	-87.9	-2.9

Note: *Annual estimate extrapolated from actual data for January to April.

Source: Howell [1998, Figure 13].

The model leans rather heavily on the implicit guarantee explanation for the crisis. One can raise logical objections to the implicit guarantee story. If it is true that foreign investors had been increasing their exposure to emerging Asian economies because they were guaranteed to be rescued, then why did panic ensue when the crisis began? If the answer is that foreign investors were not sure whether there would be enough resources to rescue them, then these investors were myopic. Hence, myopia and comfort in incomplete information offer a more basic explanation than the guarantees for the behavior of foreign investors during the euphoria before the crisis.

One can also question the applicability of the model. For example, is the existence of exploitable reserves really a necessary condition for the start of an episode of capital inflow? Here, I question the manner in which the model determines the timing of the reversal of capital inflows. The reversal of capital inflows is the point at which net reserves are exhausted. The point at which the attack commences therefore depends on the perception that net reserves match the government's contingent liabilities.

The ratio of external debt to international reserves for Thailand suggests that the attack occurred well after net reserves were exhausted. Were private investors perhaps counting on some measure of "gross reserves," counting on either participating in a Ponzi scheme in which later investors would pay off the claims of earlier ones, or dipping into the resources of a future rescue package?

One credible view of the Thai experience emphasizes the possibility that a change in the implicit insurance provided by the authorities might have allowed the currency attack that began in May 1997 to succeed. According to this explanation many Asian governments changed their stance with regard to contingent liabilities in ensuring the viability of the domestic financial system.⁸

In the first half of 1997, after successfully fending off currency attacks in November 1996 and February 1997, the Thai authorities began more publicly and directly to address the required adjustments in the domestic financial system. The weaknesses in the financial system had been a key motivation for delaying the currency depreciation in 1996, which would have caused widespread bankruptcies. In March 1997, Thai authorities publicly asked finance companies--which had been at the leading edge of systemic instability--to increase their capitalization, with a firm pledge that those that did not meet the requirements would have to close. This step could be interpreted as weakening the implicit guarantee of the foreign exchange liabilities of domestic finance companies and it might have provoked the more determined currency attack that happened beginning in May 1997.

There are other examples of a weakening of the financial sector guarantee in the crisis-stricken countries of East Asia. In response to the currency attacks after the Thai devaluation, Indonesian authorities tightened liquidity in the context of an already weak banking system and prior to a program of IMF support; under IMF programs, Thailand (in August 1997) and Korea (in January 1998) abruptly closed finance companies without a workout program or protection for depositors; Indonesia closed 16 commercial banks under similar circumstances immediately after the first IMF program came into effect in November 1997. Each of these actions might have induced a drastic drop in the demand for domestic currency-denominated assets.

In the case of Korea, it appears that the state's implicit insurance had actually been increased during the month of the crisis, with the assigning of the international reserves to foreign branches of Korean banks. When the investment withdrawals continued even with this guarantee, the currency crisis erupted.

It is difficult to differentiate between two explanations for the continued accommodation of short-term borrowing to Thailand. Dooley's [1998] model would say that Thailand still had enough net

⁸ Montes [1998] discusses the guarantees that are implicit in financial systems. Krugman's [1998] model of the Asian crisis also relies heavily on the operation of implicit guarantees.

reserves to service the increases in short-term debt. The alternative explanation would be myopia and herd behavior on the part of external investors [Montes 1998]. The information required to strike the ratio between short-term liabilities (from the BIS) and international reserves (from the national central banks) had been publicly available and should encouraged an earlier and gentler withdrawal of short-term financing. In contradiction, sovereign premia for the afflicted countries continued to fall in the months before the Thai devaluation.

In their interpretation of the Mexican crisis of 1994, Calvo and Mendoza [1996] suggest that with an open capital account, a country's external liabilities include only short-term external debt but also the component of domestic credit that can be quickly converted into foreign currency. Both short-term external debt and domestic credit lay claim on a country's international reserves.

The policy implication of this view is that providing liquidity very early and in massive amounts might have reduced the depth and spread of the Asian crisis. Under this view, the response to the Asian crisis should have followed the lines of the response to the 1994 Mexican crisis. In that crisis, the response was swift, large, and practically unconditional. The scale of funds ensured that Mexico's dollar-denominated debt that was due immediately (the Tesobonos) was wound down only four months after the crisis began [Montes 1998e]. The size of the package was beyond the IMF limits at the time, forcing the European directors of the Fund to abstain from voting for it. The reflow of funds was so significant that Mexico was able to repay the standby loan ahead of schedule and to delay until October 1998 a decision on absorbing the resulting non-performing loans of the financial system.

Table 4: Non-Performing Loans as a Share of Total Loans Outstanding

Korea	16%
Indonesia	17%
Malaysia	16%
Philippines	14%
Singapore	4%
Thailand	19%
Hong Kong	4%
China	14%
Taiwan	4%

Source: Table 24 Corsetti, Pesenti and Roubini [1998] of BIS; Jardine Fleming.

The contrast with the Asian experience (and the Brazilian rescue imminent in early October 1998) could not be starker. The Asian programs were not large and they were highly conditional. The festooning of conditionality in these programs provided symbols against which investment managers could measure the riskiness of their exposure to each economy and this frenzy became particularly noisy, and then incongruously tragic, for Indonesia.⁹ The United States and the IMF immediately vetoed a proposal for a \$100 billion exchange stabilization fund in September 1998. The uncontrolled currency collapses instigated second round increases in corporate bankruptcies and increases in non-performing loans in the financial systems. Tight liquidity and headlong closing of financial institutions in Thailand, Indonesia, and Korea compounded real sector disintegration and fed into the currency collapses.

The course of the crisis revealed a new febleness in single-country programs and suggested that perhaps not all the distress in the Asian economies can be traced to domestic factors or to policy

⁹ In interpreting IMF programs, private fund managers seemed to be suffering from the syndrome of being "more Catholic than the Pope" as explained in Montes [1998, p. xxviii].

mistakes. The swift intensification of the crisis highlighted again the harmful absence of debt workout procedures and standstill possibilities and the inability of the IMF to lend into arrears. These deficiencies that had already been identified and discussed during the 1980s debt crisis. The lack of a liquidity provider of last resort, or the inability of the Asian countries to overcome political objections to create such a provider for the region, was another revelation.

6 Conclusions: In Denial

For an analyst or a policymaker in the region during the crisis the ultimate insult was to be accused of being “in denial.” Those who affected to face the crisis squarely claimed that the so-called strong Asian fundamentals had been a mirage and that economic implosion, which was traceable to structural deficiencies in Asia, would not be susceptible to monetary intervention. The IMF approach, heedlessly knocking about the real sector, was said to be the best way to (1) restore confidence and (2) dismantle these structural deficiencies. The softest insinuation was made during the crisis that Asians must accept that Asia is not Latin America and Asia would not be granted lender-of-last-resort accommodation.

This paper has attempted to develop the proposition that there might be economic explanations which lead to a different diagnosis of the crisis and which suggest alternative policy responses and a different outcome. It argued that Asia’s social, legal, and political deficiencies in credit provision must be corrected. These deficiencies have consistently accompanied the collapse of credit systems in other cultures. This suggests that it is important to understand the lessons from crisis-terminated financial liberalization programs. It appears that these lessons have not been learned. Focusing on the legal-cultural basis of the Asian crisis merely postpones our understanding what goes wrong and what should be avoided during liberalization.

This paper also argued against the view that the Asian crisis was precipitated by a loss of international competitiveness on the part of the Asian crisis economies. It argued against a fatalistic view of exchange rate setting, especially for developing countries. It suggested that to maintain the ability to set exchange rates with real sector objectives in mind, countries might accept different levels of capital account convertibility.

Finally, the paper presented a run-on-liquidity explanation of the Asian crisis. Under this view, standard responses to balance of payments crisis, such as tight liquidity and demand contraction, can exacerbate the crisis by weakening the banking system and the performance of the real sector.

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