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Viewpoints

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Guillermo E. Perry
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SUMMARY

This paper defines "financial vulnerability" as a high probability of a successful speculative attack against a country's currency. In Asia, financial vulnerability was associated with a set of vulnerability symptoms. For example, "traditional" external sector vulnerabilities (appreciating real effective exchange rates, slowdowns in the rate of growth of export revenues, and high or widening current account deficits) signaled the market that a currency adjustment was forthcoming. An accumulation of short-term foreign debt in excess of international reserves invited the herd-like behavior of creditors who closed their credit lines to Asian debtors. At the same time financial authorities were perceived as unable to either implement timely devaluations (due to high unhedged foreign currency exposures in the financial and/or corporate sectors), or to defend the currency with interest-rate hikes (due to high levels of indebtedness of corporations and over-extension of credit by banks, after prolonged credit and asset-price booms).

We believe that the root cause of these "symptoms" of vulnerability was a perverse incentive structure, arising from moral hazards in domestic finance, lack of transparency in corporate governance and financial transactions, lax prudential regulation and supervision, and rigid exchange-rate regimes. This incentive structure does not always lead to excessive risk-taking by the private sector, but it did during a time of rising international capital flows in the context of ill-sequenced financial and capital account liberalization. We compare and contrast indicators of these symptoms and their root causes in Asia and Latin America during 1994–97. We reach the conclusion that financial vulnerability was greater and more generalized in the crisis-Asian economies than in Latin America.

In the second part of the paper we use the concept of financial vulnerability to help explain how the financial crises in Asia affected Latin American economies. Initially spillover effects of the Asian crises on Latin America affected only a few countries and in a modest way. In late-October, financial effects of the Asian crises spread to most countries, but they were severe only in the case of Brazil, whose authorities reacted promptly to successfully prevent contagion. The financial spillovers receded after November. Nevertheless capital flows to Latin America remain affected, and will be probably smaller and more costly in 1998 than in 1997. Furthermore, "real" effects through direct and indirect trade links are still developing. So far the strongest in several countries is a traditional terms-of-trade deterioration. We also point out that policy responses to moderate the effects of the Asian crises on current account balances and exchange rates, such as fiscal measures and increased interest rates, are contributing to a growth slowdown in the region.

The main lesson from the Asian crises is that the quality of institutions that govern private behavior, in the financial and real sectors, is essential for avoiding financial vulnerability in a world of volatile capital flows. Old lessons from earlier Latin crises, such as the importance of prudent macroeconomic and debt management, were also reinforced by the Asian experiences of 1997.

CONTENTS

INTRODUCTION

THERE IS ALREADY A LARGE and growing literature about the financial crises affecting several former star economic performers in Asia. Some analyses have focused on the mismanagement of the structure of foreign debt (currency composition and length of maturity), and on the mismanagement of macroeconomic policies, especially exchange rates (Dornbusch 1998). Others have focused on weaknesses (mainly of an institutional character) ingrained in the domestic financial and banking sectors of these economies (see IMF 1997b, World Bank 1998, Krugman 1998).

This paper attempts to reconcile these alternative explanations of the crises in a simple framework, where we distinguish between the causes and the symptoms of "financial vulnerability." We define financial vulnerability as a high likelihood of a *successful* speculative attack against a country's currency. In the first part of the paper, our contention is that financial vulnerability in Asia was mainly associated with a combination of symptoms, including credit booms and asset-price bubbles, excessive accumulation of short-term debt (especially private debt), high unhedged foreign currency exposures, and high or widening current account deficits. The Asian authorities therefore faced difficulties in permitting timely currency depreciations (because both the financial system and corporations had high, unhedged foreign currency exposures) and in defending the exchange rate with an interest rate hike (because banks' loan portfolios were in poor condition and corporations were highly leveraged). This situation provided a "one-sided" bet for currency speculators, who realized that the authorities would not be able to raise interest rates sufficiently to defend the value of their currencies. In some countries, macroeconomic imbalances contributed to financial vulnerability, but they did not play in general such a central a role as in previous crises in other latitudes, as in Latin America in 1982–83 and Mexico in 1994.

As we attempt to distinguish the symptoms of financial vulnerability in Asia from its primary causes, we find that in most of the Asian countries, and very especially in Korea, partial and ill-sequenced financial liberalization in the late eighties and early nineties (a period of rapidly growing international capital flows) exposed and magnified the effects of an existing perverse incentive structure for the financial and corporate sectors. As a result of the Asian experience, institutional issues (namely, rules and their enforcement mechanisms) related to moral hazards, corporate governance, bankruptcy laws, prudential regulation and supervision, affecting both the financial and the corporate sectors, have been thrown squarely under the spotlight. Previous studies had shown that good institutions were essential for promoting financial development and economic growth.[1] The Asian crises now reveal that sound institutions governing the private sector are also critical for maintaining macroeconomic stability, thus adding a sense of urgency to reforming corporate and financial institutional frameworks around the globe.

Some of the Asian experiences, especially the case of Thailand, also reinforce lessons from previous crises. In particular, we were reminded of the crucial importance of prudent debt (and macroeconomic) management, of avoiding prolonged credit booms, of preventing pronounced real exchange-rate appreciations, and of maintaining some flexibility in exchange-rate management.[2]

In the second part of the paper we emphasize that once a crisis erupts in one country, there are multiple channels of spillover effects and contagion across countries, which may or may not be associated with financial vulnerability in the "contaminated" countries. That is, some countries that may not have been financially vulnerable at the time can suffer spillover effects from foreign financial crises, and they may even become financially vulnerable and suffer a financial crisis after they are affected by contagion. We differentiate contagion from spillover effects according to the severity of the consequences for the "contaminated" country; contagion leads to financial vulnerability and an eventual crisis, while spillover effects do not necessarily result in crisis. We look at these issues mainly from the perspective of Latin American countries, explaining why they have been in general terms resilient to contagion during the Asian crises.

We also distinguish financial channels of spillovers and contagion from real-side effects; the former operate through the capital account, while the latter operate through trade links. Financial spillover effects on Latin American countries were very modest initially, but they increased after the attack on the Hong Kong dollar (around October 22) and receded since mid-November, while real effects through direct and indirect trade links are still developing. We also discuss how and why some Latin American countries have suffered mainly through trade links, but others experienced more or less severe financial spillovers.

The rest of the paper is organized as follows: Section II provides an analytical framework of the roots of financial vulnerability in Asia. Section III provides some suggestive evidence supporting some of the propositions presented in the previous section, comparing crisis with non-crisis-Asian countries. Section IV distinguishes among several channels of spillover effects and contagion across countries. Section V discusses the effects that the Asian crises have had on Latin American countries, and section VI concludes by pointing out the new lessons that can be learned from the Asian experiences, while reminding us of the lessons of previous crises in Latin America.

PART I:
SYMPTOMS AND ROOT CAUSES OF FINANCIAL VULNERABILITY

II AN INTERPRETATION OF THE ASIAN CRISES

WE DEFINE *FINANCIAL VULNERABILITY* as a high likelihood that an economy will suffer a successful speculative attack against its currency. Our interpretation of the financial crises affecting Thailand, Indonesia, Malaysia, the Philippines, and Korea, focuses on four factors that contributed to the emergence of financial vulnerability in these economies.

First, there was *a traditional external sector vulnerability*. Some, though not all, crisis-Asian economies had experienced real exchange-rate appreciations, which were accompanied by slowdowns in export revenues and high or widening current account deficits. Combined with the need to roll-over a large stock of short-term debt (which was high relative to reserves, as mentioned below), the high and widening current account deficits contributed to these economies' high gross borrowing requirements, thus making them highly susceptible to reversals in capital flows. In addition, the slowdown in the rate of growth of export revenues signaled that this external vulnerability would tend to increase in the near future.

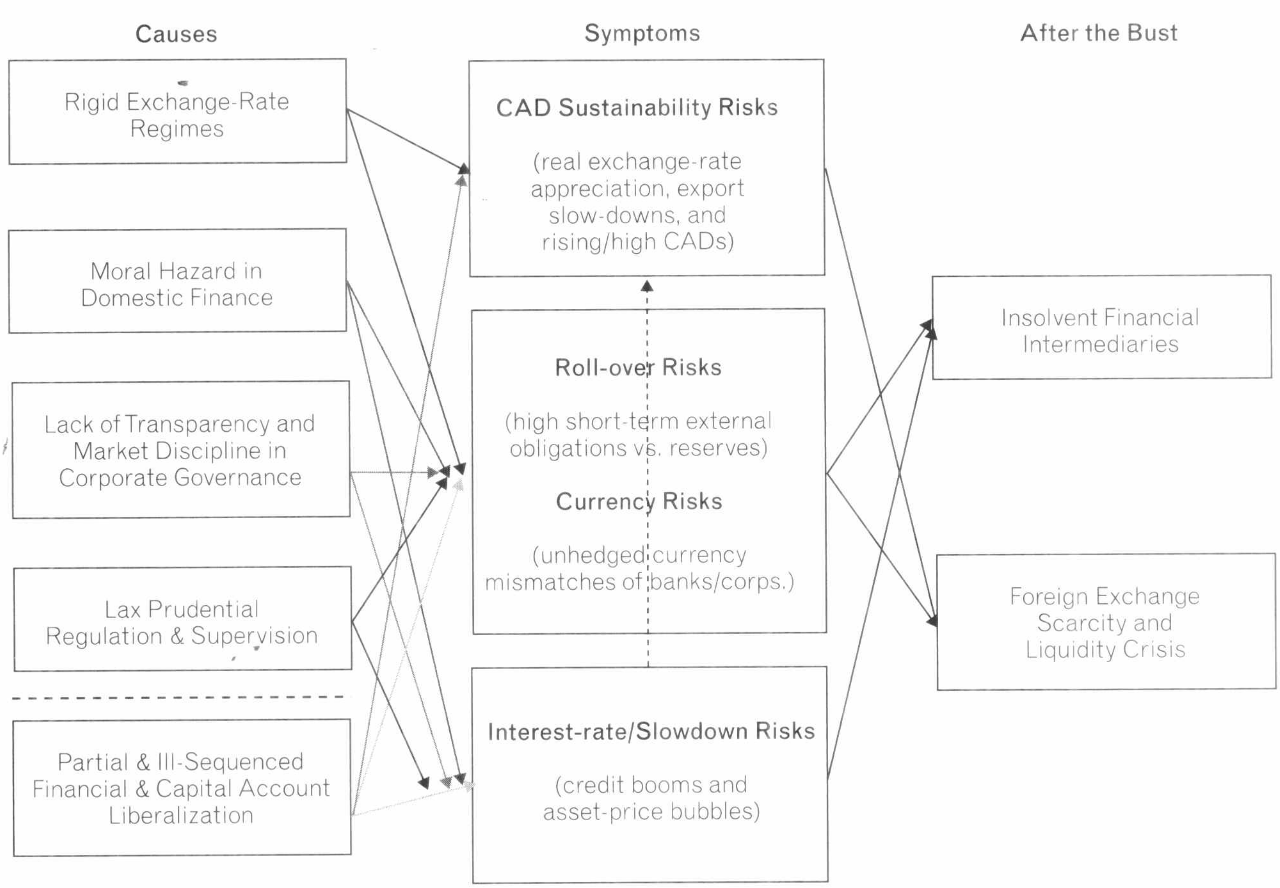
Second, there was a *"roll-over" risk or vulnerability* in most countries that were struck by crises. High short-term external financial liabilities (plus maturing long-term debt) relative to foreign currency reserves made these Asian economies prone to an all-out speculative attack. Such a situation, where short-term obligations exceed the level of reserves, invites "herd-like" behavior by foreign lenders, who realize that if some lenders do not roll-over a country's obligations, those who do may be left with non-performing loans.

Third, there were high *currency-mismatch risks*. High, unhedged foreign currency exposures (or mismatches) by banks and corporations reduced the ability of the authorities to devalue the currencies in a timely fashion, without straining their private sector's capacity to pay back debt denominated in foreign currencies. In turn, when the perceived likelihood of a devaluation increased, firms and banks rushed to buy foreign currency (or to hedge their exposures), thus increasing sharply the demand for foreign currency. When the depreciations finally took place, economic agents who still had high foreign currency obligations took a hard hit, thus contributing significantly to the severity of the crises.

Fourth, there was a *vulnerability of banks and corporations to interest-rate hikes and economic slowdowns.* An aspect that probably played a crucial role in exacerbating the severity of the crises, was that banks, other financial intermediaries, and corporations were highly vulnerable to both a slowdown in activity and to an interest-rate hike, due to characteristically high levels of accumulated debt by corporations, and poor quality of the loan portfolios of banks. This excessive use of leverage by corporations and the poor health of the banks were products of prolonged credit booms—accompanied by asset-price bubbles—that had taken place in previous years. Hence the monetary authorities' ability to respond to a speculative attack against their currencies with interest-rate increases was restricted by the high level of indebtedness and the banking weaknesses. When interest rates finally increased, and the economic slowdown ensued, asset prices collapsed, and there were generalized bankruptcies in the real and financial sectors.

These four vulnerability symptoms appeared in different degrees and forms across the crisis-Asian countries. Below we present suggestive evidence about the existence of these vulnerabil-

Figure 1. Causes, Symptoms, and Effects of Financial Vulnerability



ities in these economies, which are compared to other Asian economies that were not severely affected by financial crises, and to major Latin American economies.

However, these factors are more aptly defined as "symptoms" than as the root causes of financial vulnerability; we must explain how they came about. The key question, thus, is what were the underlying causes of the emergence of these symptoms. We present an explanation in Figure 1, that integrates several elements of the alternative explanations of the crises:

1. *Rigid exchange-rate regimes* that *in practice* tightly linked domestic currencies to the US dollar, created an environment in which economic agents perceived that the risks of devaluation were extremely low. Domestic economic agents, both banks and corporations, had an incentive to borrow from foreigners in foreign currency at interest rates that were lower than domestic interest rates, without covering themselves against exchange-rate risks. On the other side of the transaction stood foreign lenders that based their decisions on the presumption that governments would rescue troubled banks and corporations in times of distress. Given the precedent of the Mexican bailout of 1995, this domestic moral hazard may have been exacerbated by an expectation that governments, in turn, would be rescued by international financial institutions.

   In addition, the *use of the US dollar as the anchor currency* led to a progressive real, effective appreciation of these Asian currencies, because the dollar was appreciating vis-à-vis other "hard" currencies, including the Japanese Yen. Consequently, some of these countries experienced slowdowns in their dollar export revenues, and widening current account deficits in the years leading up to the crises. Competitiveness problems were intensified by the depreciation of the Chinese currency on January 5, 1994, and the subsequent devaluation of the Mexican Peso on December 22, 1994. These pressures were then reflected in the deterioration of the current account balances for all the crisis-Asian countries (Indonesia, Korea, Malaysia, the Philippines, and Thailand) during 1994–1995—see Table A1. From this point of view, Asian vulnerabilities began to emerge a few years before 1997.[3] Since items 2–4 (below) produced fragile banking and corporate systems, which reduced the capacity of governments to raise interest rates, the rigid exchange-rate systems in effect increased the likelihood of speculative attacks against the Asian currencies by providing a "one-sided bet" for speculators.

2. There were *moral hazards in domestic finance*, arising from implicit or explicit deposit insurance schemes, and from the general perception that the "government stood behind" banks and large corporations, which, according to this view, would not be allowed to go bankrupt. This perception led bankers and investors to over invest in real estate, stocks and other financial assets, without paying sufficient attention to the risks associated with such investments. As a result, credit to the private sector rose rapidly (especially after financial liberalization was undertaken) accompanied by the rise of asset prices. These booms were followed by the closure of financial institutions that revealed that not all financial intermediaries were going to be rescued, which lead to a sell-off of assets and asset-price busts, leaving some insolvent financial intermediaries behind (Krugman 1998).

3. There was a *lack of transparency* in financial dealings, combined with *corporate governance structures* based on family-control of conglomerates, with weak minority shareholders rights. These conglomerates did not maintain consolidated balance sheets, but relied on intra-conglomerate guarantees to secure access to credit for their firms, which were also favored by government policies, and were not disciplined by market forces. The media has referred to these systems as "crony capitalism."[4] This situation contributed to

the booms (and subsequent busts) of credit and asset prices by obscuring the financial situation of the private sector, thus covering up highly leveraged and unprofitable business transactions.

4. In addition, these economies suffered from *lax prudential regulation and supervision* of its banking and corporate systems, which facilitated financial transactions and investments (induced by the perverse incentive structure described above) that were not properly assessed in terms of their potential risks. This situation was aggravated by the fact that some Asian banking systems suffered from a lack of reliable information about the soundness of bank loan portfolios; for example, Table A2 shows that none of the crisis-Asian countries required banks to seek credit ratings (as of March 1997). That is, there were not only strong moral hazards, but also weak market and regulatory/supervisory discipline.

5. Credit and asset-price booms, and currency exposures, were fed by *partial and ill-sequenced financial and capital account liberalization* programs that were implemented in several Asian countries during the late 1980s and early 1990s.[5] In several Asian countries, capital account liberalization took the form of easing restrictions on external borrowing by domestic banks and/or corporations, while at the same time restricting foreign entry and ownership (foreign direct investment, FDI) in the domestic banking sector. Appendix 1 contains an inventory of the controls prevailing in Asia and Latin America prior to crises of 1997, focusing on the policies that imposed restrictions on foreign ownership and direct investments in the financial-banking sectors, and on domestic credit operations in foreign currency. A quick read reveals that while some Latin countries (Brazil, Chile, Colombia) discouraged short-term capital inflows, some Asian countries, especially Indonesia, Malaysia, Thailand, and Korea discouraged FDI and long-term borrowing. This particular sequencing of financial and capital account liberalization adopted in these Asian countries seems to be a good recipe for problems, especially in the presence of moral hazard and weak prudential regulation and supervision.

The ill-sequenced liberalization of the capital account exposed and magnified the effects of the perverse incentive structure described in points 1 to 4 above. Such perverse incentives had been present for a long time, but had not led to financial crises of the magnitudes of 1997, although they must have created microeconomic inefficiencies and vulnerabilities. Partial financial liberalization happened precisely at the time that international capital flows were blooming. Thus, the ill-sequenced liberalization of the capital account facilitated the credit booms by opening a channel for cheap (short-term) external funds to finance domestic investment (directly or through the protected domestic financial system), which aggravated the tendency to accumulate unhedged foreign liabilities (by both banks and corporations), increased rapidly the accumulation of short-term external liabilities, and contributed to the process of currency appreciation as foreign funds flowed into these economies.

As mentioned, Figure 1 presents a schematic illustration of the dynamics of the aforementioned causes of financial vulnerability, its symptoms, and two characteristic maladies experienced by economies after the economic downturns. As reflected by the intersecting arrows, it may be difficult to assert unequivocally that one of the causes dominated in a given instance, as the symptoms of a gestating crisis may result from different combinations of these factors.

III SUGGESTIVE EVIDENCE OF THE SYMPTOMS OF FINANCIAL VULNERABILITY

REGARDING THE SYMPTOMS leading up to the crises, here we present some suggestive evidence showing the emergence of the symptoms described in Figure 1, for the crisis-Asian countries, compared to other Asian countries. Later, in section V, we assess the extent to which Latin American economies were financially vulnerable by 1997, in terms of the same performance indicators.

- **Real appreciation and its consequences**

Figure A1 shows that the real effective exchange rates (REERs) of Asian economies appreciated, especially between April 1995 and mid-1997.[6] Only Korea seems to have experienced a somewhat stable REER during this period. The Philippines experienced the greatest appreciation among Asian countries, but it also did not experience a slowdown in the growth rate of export revenues, and its current account deficit had remained stable at around 4.5 percent of its GDP since 1994. In contrast, as shown in Figure A2, Malaysia, Thailand, and Korea did experience notable slowdowns of export growth during the first quarter of 1996, a year that ended with a record current account deficit for Korea, and a comparatively high deficit in Thailand—see Table A1. Malaysia did not experience a deterioration of its current account deficit in 1996, which actually declined from 10 percent of its GDP in 1995 to 5 percent in 1996; nevertheless its current account deficit remained high for international standards.

- **Credit booms**

Figure A3 shows the evolution of bank credit to the private sector in real terms, during 1992–1997. By early-1997, the crisis economies (Indonesia, Korea, Malaysia, the Philippines, and Thailand) had experienced increases in bank credit to the private sector in amounts exceeding by 50 percent or more the level observed in late-1993. In contrast, the rise of credit in China, Hong Kong, and Taiwan was clearly more moderate than in the crisis-Asian economies.

- **Asset-price bubbles**

The Boom: Figure A4 shows the stock market price indexes in US dollars for the five crisis-Asian economies during the 1990s. Between