Short summary of the paper

"What Caused the Asian Currency and Financial Crisis?"

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Causes of the Asian Crisis

Fundamentals or Financial Panic?

Krugman (1998), Corsetti, Pesenti and Roubini (1998)

versus

Sachs and Radelet (1998)

Note: the two views are not incompatible

The "usual suspects" indicators of crisis (low growth, high budget deficits, high inflation, low savings rates, low investment rates) are not observed in Asia

The "Fundamentals" Hypothesis:

1. **Significant real appreciation of currencies and exchange rate misalignment**

2. **Large and growing trade current account deficits**

3. **A vicious circle of "competitive devaluations"**

4. **Contagion was not primarily the result of irrational panic but rather the result of fundamental factors**

5. **Excessive investment in risky and low-profitability projects**

6. **Overborrowing and overlending in the financial sector because of the moral hazard effects of implicit and/or explicit government bail-out guarantees**

7. **Current account deficits financed with the accumulation of foreign debt in the form of short-term foreign-currency denominated and unhedged liabilities**

8. **Excessive lending by international investors in 1990s and sharp reversal of the capital flows in 1997**

Details of the "Fundamentals" Hypothesis:

1. Significant real appreciation and currency misalignment

Real appreciation related to:

a) Fixed peg to the U.S. dollar; important after 1995

b) Large capital inflows leading to nominal appreciations

c) Change in the relative price of non-traded goods

d) Positive inflation differentials in spite of pegged parities (role of price/wage inertia in this)

2. Large and growing trade current account deficits

Such large deficits are explained by:

a) Real appreciation and competitiveness loss

b) Investment boom and S-I gap

c) Weakness of growth in Japan in the 1990s slows exports

d) Strength of the U.S. dollar since 1995

e) Devaluation in China in 1994

f) Shocks to the terms of trade of Asian countries (semi-conductors, steel, et cetera)

3. A vicious circle of "competitive devaluations" explains part of the contagion

The first wave of depreciations in the summer of 1997 modified the `effective' real exchange rate and worsened cost-competitiveness in all the countries in the region that had initially maintained their nominal exchange rate fixed.

As one after the other, the currencies of countries that were competing in the same world markets came under attack and depreciated sharply, the equilibrium fundamental value of the other currencies that had not depreciated yet started to deteriorate.

4. Contagion may not be the result of irrational panic but the result of:

a) trade spillovers and competitive devaluations

b) common domestic and external shock hitting many economies at the same time

c) financial, investment and real links that transmit the real shocks of one country to the asset values (stocks, exchange rate) of other countries

5. **Excessive investment in risky and low-profitability projects**

Such overinvestment was facilitated by several factors:

a) the exchange rate policy that kept borrowing costs low

b) political pressures to increase capital accumulation to maximize the rate of economic growth

c) the moral hazard problem faced by domestic financial institutions that led them to overborrow and overlend to domestic firms

d) the low interest rates in Japan that led to large capital inflows to the higher yielding Asian countries.

Symptoms of overinvestment and/or highly risky investment:

1. High investment rates in non-traded sectors (especially property and real estate)

2. Excessive investment in traded goods sectors (especially in Korea)

3. Speculative purchases of existing assets in fixed supply such as land, real estate and the outstanding stock of equity leading to an asset bubble

Evidence on overinvestment and/or highly risky investment:

1. Fall in the efficiency of investment as measured by the incremental capital output ratio (ICOR)

2. High rate of non-performing loans before the crisis (above 15% in Thailand, Indonesia, Korea and Malaysia).

3. In Korea, by mid 1997, 8 of the 30 largest conglomerates were de facto and/or de jure bankrupt

4. In 1996, 20 of the largest 30 conglomerates show a rate of return on invested capital (ROIC) below the cost of capital

5. Very high leverage ratios in the corporate sector (over 300% on average in Korea)

6. Behavior of stock prices and asset values (property/real estate)

In 1997, the asset bubble started to burst, the stock markets started to drop and the emergence of wide losses and/or outright defaults in the corporate sectors signaled the low profitability of past investment projects.

Then, the firms, banks and investors that had heavily relied on external borrowing were left with a large stock of

a) short-term
b) foreign currency-denominated
c) unhedged

foreign debt that could not be easily repaid.

The exchange rate crisis that ensued exacerbated the problem, as the currency depreciation dramatically increased the real burden of the debt that was denominated in foreign currencies and led to further financial crisis for banks and firms

6. Overborrowing and overlending in the financial sector because of the moral hazard effects of implicit and/or explicit government bail-out guarantees

Very weak and fragile banking and financial systems:

a) Domestic banks perceived their operations as `insured' against adverse contingencies by government implicit or explicit promises of bailout as well as by a public commitment to keep the exchange rate fixed against the dollar

b) Risk capital was limited in the financial sector exacerbating the moral hazard problem deriving from the insurance

c) Lack of prudential regulation and supervision of financial institutions

d) Bank capital requirements were low or not met in practice

e) Lack of transparency of public and private financial institutions; inadequacy of bankruptcy law and procedure

f) Domestic and external liberalization of capital markets created distorted incentives given (a)-(e)

g) Financial and industrial policy was then strictly interwoven with a widespread network of personal and political favoritism in the business sector ("Crony Capitalism")

h) Possibility of an IMF 'bailout' increased the moral hazard problem at the international level

The above elements led to overborrowing and overlending to excessive and highly risky investments

Strong role of the **'moral hazard'** incentives faced by financial institutions and other agents:

a) Banks' risk capital was usually small and owners of banks risked relatively little (by lending to excessively risky projects) if the banks went bankrupt

b) Several banks were public or controlled indirectly by the government that was directing credit to politically favored firms, sectors and investment projects

c) Depositors of the banks were offered implicit or explicit deposit insurance and therefore did not monitor the lending decisions of banks

d) The banks themselves were given implicit guarantees of a government bail-out if their financial conditions went sour because of excessive foreign borrowing

e) International banks lent vast sums of money to the domestic banks of the Asian countries because they believed that governments would bail-out the domestic banks if things went wrong and/or they would be bailed out by the IMF

The weakness, fragility and vulnerability of the financial and banking sector emerged in the 1990s as the combined consequence of:

1. Domestic financial liberalization

2. External capital account liberalization

3. Massive capital inflows driven by internationally low interest rates

4. Lack of prudential supervision and regulation of the financial system

Evidence on excessive lending from:
a) data on private sector lending growth
b) data on non-performing loans
c) other measures of lending boom and sectoral bias in lending

Current account deficits were financed with the accumulation of foreign debt in the form of short-term foreign-currency denominated and unhedged liabilities.

Explosion of the foreign liabilities of these countries in the 1990

Mismatch of the maturity: foreign liabilities were **short-term** while assets (domestic lending) were **longer-term**

Mismatch of the currency denomination: liabilities in foreign currency and lending to firms mostly in domestic currency

Lack of currency hedging of the foreign debt by banks & firms

Limited role of FDI in the financing of current account imbalances and reliance on debt creating flows

Among debt-creating flows, dominant role of bank borrowing relative to equity and long-term bonds

Relative underdevelopment of securities markets (bonds and stocks) in Asia explains the dominant role of banking intermediation of international capital inflows

Ratio of foreign exchange reserves to stock of short-term foreign liabilities was very low

Ratio of foreign exchange reserves to stock liquid assets (M1 or M2) was very low

Possibility of successful speculative attacks against currencies

7. **Excessive lending by international investors in 1990s and sharp reversal of the capital flows in 1997**.

Lack of monitoring by foreign financial institutions of the quality of their lending to Asian financial institutions and corporate firms can be explained by the following:

a) high economic growth in the region led to a sense of over-optimism and disregard of the economic risks

b) credit rating agencies failed to note the increasing worsening of fundamentals and gave to the countries in the region excessively high credit ratings

c) loans to the domestic financial institutions were perceived to be guaranteed by implicit and/or explicit government bail-out promises

d) the experience with Mexico in 1994-95 suggested that several countries were too large to be allowed to fail (specifically Indonesia, Korea and Thailand) and that an IMF/international 'bail-out' could not be ruled out if things went wrong

Was the reversal of flows in 1997 caused by "pure financial panic" and the realization of a "bad equilibrium" in a world of multiple equilibria? No.

1. Macroeconomic fundamentals were seriously weak in the crisis countries

2. The size and extent of the banking and corporate foreign debt problem and non-performing loans implied that the implicit government guarantees of a bailout were not credible anymore given the systemic nature of the problems.

3. The financial problems faced by firms and financial institutions were repeatedly discovered to be far worse than originally announced generating significant uncertainty about the depth and breadth of the financial problems faced by firms and banks

4. Significant political uncertainty led to serious policy uncertainty throughout the crisis.

5. Commitment to macroeconomic reform and structural adjustment initially was not very strong

6. Taiwan, Singapore, Hong Kong and China were less affected by the turmoil because of better macro fundamentals:

a) current account surpluses
b) low short-term foreign debt
c) no "crony capitalism" in Taiwan and HK
d) stronger banks and financial systems (exception of China)
e) more flexible exchange rate regimes in Taiwan and Singapore

Summary:

1. Fixed exchange rates regimes, capital inflows and moral hazard jointly led to real appreciation, an investment boom in wrong sectors, an asset price bubble, current account deficits and the accumulation of a large stock of short-term foreign liabilities.

2. Serious weaknesses and fragility of the financial system emerged in the 1990s the result of domestic financial liberalization, external capital account liberalization, massive capital inflows driven by internationally low interest rates and the lack of prudential supervision and regulation of the financial system

3. Given the lack of developed securities markets in the region, current account deficits were financed mostly through banking system intermediation: banks borrowed abroad in foreign currency, and their borrowings were mostly short-term. These large currency positions were typically unhedged, as firms and banks expected the fixed exchange rates to be maintained and/or to be bailed-out if things went wrong.

4. When indeed things went wrong and the shaky foundations of investment strategies in the region were revealed via widespread bankruptcies and financial crisis of banks and firms, a currency and financial crisis emerged. Firms and banks could not repay the very large amounts of currency-denominated foreign debt.

5. The exchange rate crisis made things worse as the currency depreciation increased the real burden of the foreign-currency denominated debt. The scramble of firms and financial institutions to cover their foreign currency liabilities once the currencies started to depreciate exacerbated the fall in the currencies.

6. The behavior of weak and not very credible governments that were not committed to structural reforms worsened the policy uncertainty, led to widespread capital outflows and worsened the currency depreciation

7. Rapid reversals of the capital inflows occurred as domestic and international investors sometimes panicked and dumped currencies, stocks and other regional assets