The East Asian Currency Crisis and Recovery

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Indexes of East Asian Exchange Rates: Local Currency per US$ (January 2, 1997=100)
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Local Currency per US$ (January 2, 1997=100)
Fundamental Macroeconomic Causes of the East Asian Currency Crisis

- Savings-investment imbalance—also reflected as current account imbalance
- Dependence on short-term foreign capital (portfolio investment—both equity and debt instruments—and loans) by private investors
  - Equity is better than debt
  - Direct investment is better than portfolio investment
  - Insolvency caused by the revaluation of foreign-currency denominated debts and the rise in the rate of interest
  - Domino effects of insolvency and bankruptcy
  - Problems magnified by high leverage (or high debt to equity ratio)
- Inadequacy of foreign exchange reserves (working capital of a country) for supporting imports, debt service, and (potential) net short-term capital outflows
- Real exchange rate appreciation (loss of competitiveness) due to a domestic rate of inflation higher than the U.S. rate of inflation
Composition of Foreign Investment: Thailand (Quarterly Data)
Composition of External Debt
Thailand

Stock of External Debt: Thailand

Billion U.S.

Long-term
Short-term

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External Debt and Foreign Exchange Reserves
Thailand

Thailand's External Debt vs. Foreign Exchange Reserves

- Total external debt
- Foreign exchange reserves

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Composition of Foreign Investment: South Korea (Quarterly Data)

Composition of Foreign Investment: Republic of Korea

- Foreign Portfolio Investment
- Foreign Direct Investment

Million US$
Composition of External Debt
South Korea

Stock of External Debt: Korea

Billion U.S.

Long-term  Short-term


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External Debt and Foreign Exchange Reserves
South Korea

Korea's External Debt vs. Foreign Exchange Reserves

- Total external debt
- Foreign exchange reserves

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Fundamental Microeconomic Causes: Borrowing Too Much, Short-Term and in Wrong Currency

- Maturity mismatch--borrowing short and investing (lending) long
- Currency mismatch--revenue and cost (liability) in different currencies
  - Vulnerability magnified by high debt to equity ratio
  - Insolvency caused directly or indirectly by declines in the exchange rates
  - Oversold currencies create unnecessary bankruptcies and discourage re-capitalization and re-structuring
- Moral hazard on the parts of both lenders and borrowers
  - Past bailouts (Latin American loans, Mexican loans) of developed country lenders encourage moral hazard on the part of lenders
  - Implicit guarantee of banks and enterprises “too big to fail” by governments encourage moral hazard on the part of borrowers
- “Herd mentality”--too much money chasing too few good projects leading to mis-pricing by developed country investors and lenders (it is better to make the same mistake as everyone else)
Excessive Leverage Should be Discouraged/Prevented

- Excessive leverage of enterprises magnifies the effects of a sharp devaluation and the resulting rise in the rate of interest
- Excessive leverage encourages moral hazard (recklessness) on the part of the borrowers
- The domino effect of excessive leverage on the financial system
- Excessive leverage also enables the hedge funds to engage in predatory speculation on a large scale
Leading Indicators of Recovery

- Stabilization of the exchange rates (with the exception of the Indonesian Rupiah)
  - Capital controls have been instituted in Malaysia
  - Hedge funds are no longer active
- Decline in the rate of interest
- Rise in the stock market
- Improvement in the balance of payments
- Rise in the official foreign exchange reserves
- Real GDP stops shrinking and begins growing again
- Leveling of the unemployment rate
- Narrowing of yield spread on U.S. dollar-denominated sovereign debt relative to U.S. Treasury securities
- Upgrading of credit ratings by rating agencies such as Moody’s, Standard & Poor and Fitch IBCA
The Interest Rates Have Declined

Short-Term Rates of Interest, Selected East Asian Countries
(percent p.a.)

[Graph showing short-term interest rates for various East Asian countries from 1/1/97 to 8/12/00, with each country represented by a different color and line style.]
The Interest Rates Have Declined

Short-Term Rates of Interest, Selected East Asian Countries
(percent p.a.)

[Graph showing short-term rates of interest for various East Asian countries, with specific dates and values.]
The Stock Markets Have Rebounded from Their Troughs (Local Currency, 1/2/97=100)
Thailand

Relationship between Exchange Rate, Stock Market Index and Interest Rate, Thailand

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South Korea

Relationship between Exchange Rate, Stock Market Index and Interest Rate, South Korea

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Is the Recovery Real?

- For most of the East Asian economies, the bottom has been reached (0% rate of growth) in 2Q/1999
- The recovery is most tentative in Indonesia, with its political problems
- In quantity terms, exports have been growing very rapidly
- Foreign exchange reserves have been largely replenished
- Inflation caused by the devaluation has largely subsided
- The stock markets have rebounded
- The recovery has been much stronger than expected because of synchronization across the East Asian economies
The Rates of Growth of Real GDP Have Turned Significantly Positive
Rates of Growth of Exports in US$ Terms Have Turned Positive
Rates of Growth of Imports in US$ Terms Have Also Turned Significantly Positive
The Current Account Balances Have Turned Positive

The Current Account Surplus (Deficit) as a Percent of GDP

- China
- Hong Kong
- Indonesia
- Korea, Rep. of
- Malaysia
- Philippines
- Singapore
- Taiwan
- Thailand
- Mexico
- India
The Rates of Inflation (Consumer Price Indexes) Have Subsided

Rate of Change of the Consumer Price Index (Year-over-Year)

- CHINA
- INDONESIA
- JAPAN
- KOREA
- MALAYSIA
- PHILIPPINES
- SINGAPORE
- TAIWAN
- THAILAND
- INDIA

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Rates of Inflation (Consumer Price Index)--without Indonesia

![Graph showing rates of inflation for various countries from 1990Q1 to 2000Q1. The graph includes lines for China, Hong Kong, Japan, Korea, Malaysia, Philippines, Singapore, Taiwan, and Thailand. The y-axis represents the rate of change in the Consumer Price Index (Year-over-Year) as a percent per annum, ranging from -10 to 30. The x-axis represents time from 1990Q1 to 2000Q1. Each country is represented by a different line color and style, allowing for comparison of inflation trends over time.]
How Robust is the Recovery?
The External Environment Has Stabilized (1)

- Since 3Q/1998, there have not been any speculative attacks on the Thai Baht or other East Asian currencies.
- The hedge funds had a “credit crunch” due to losses, net redemption and curtailment of available credit lines in the aftermath of the collapse of the Russian ruble and the “Long-Term Capital Management” crisis.
- The U.S. economy has been exceptionally strong but an asset-price bubble appears to be in the making and the economy may be heading towards a slowdown.
- The recovery of the Japanese economy is not imminent and likely to take some time; however, since it has been in recession since 1990, the East Asian recovery does not depend on an economic recovery in Japan. Moreover, the Yen has recovered from its low of almost 150 Yen/US$ to stabilize around 105 Yen/US$.
The External Environment Has Stabilized (2)

- The Chinese economy grew 7.8% in 1998, 7.1% in 1999, and 8.2% in the first half of 2000. Chinese exports have resumed its growth. The Renminbi should not need to be devalued.
How Robust is the Recovery?
Aggregate Demand Stimulation (1)

- The recovery is supported by the growth in public investment and in exports
- Private consumption demand has gradually revived because of lower rates of interest and stabilization of the unemployment rates
- Domestic fiscal stimulus necessary because of weak domestic investment demand--International Monetary Fund conditions notwithstanding (IMF position on deficit financing by the affected East Asian countries has changed), e.g., South Korea, Thailand
- Turning around expectations and providing incentives are the keys to stimulating private consumption and new private investment
- The real devaluation in the East Asian currencies presents new opportunities for profitable investments once they are stabilized
Aggregate Demand Stimulation (2)

- Recapitalizing the domestic banks so that new loans to new projects are possible
  - Bailing out of old failed projects should be avoided
  - Recapitalization by the government should require capital contribution and risk-sharing by new or existing shareholders to avoid moral hazard
  - The political economy--who will bear the costs--may prove to be the most difficult problem
- Maintaining domestic political and social stability
How Robust is the Recovery?
Synchronization of Upturns

- Over the last decade, the proportions of East Asian exports to other East Asian economies have been increasing rapidly.
- By the late 1990s, approximately 50% of the exports of the East Asian economies are destined for other East Asian economies.
- While the simultaneous downturns in the East Asian economies exacerbated the problems of one another, the simultaneous upturns have allowed the recovery to be extraordinarily rapid, with the rising import demands of each economy feeding into rising export demands of its trading partners.
Is Another Crisis Likely?

- Based on the early warning economic indicators, the East Asian economies are unlikely to have another crisis in the foreseeable future
  - The savings rates have remained high while the savings-investment gaps--also reflected as the current account gaps--have largely disappeared
  - The dependence on short-term foreign capital (portfolio investment--both equity and debt instruments--and loans) has been significantly reduced
    - Foreign investment now consists mostly of direct rather than portfolio investment
  - Both total and short-term external debts have declined
  - Foreign exchange reserves (working capital of a country) for supporting imports, debt service, and (potential) net short-term capital outflows have risen both absolutely and as a percentage of annual imports
  - Real exchange rates have depreciated significantly from their peaks in most of the affected economies
Was “Crony Capitalism” or the Primitive Financial System the Culprit?

- The real mistake was to borrow too much short-term and in the wrong currency
- Even a perfectly efficient enterprise cannot withstand the increase in debt servicing required due to the massive exchange rate devaluation
- Japan, despite its massive devaluation between 1995 and mid-1998, has been able to muddle through because its firms have little net foreign debt
- Hong Kong, Singapore and Taiwan have also escaped relatively unscathed because they did not and do not have significant net foreign debt, especially short-term debt, relative to their foreign exchange reserves
- China has not been significantly affected because it retains capital control and its foreign debt is mostly medium to long-term
Was “Crony Capitalism” or the Primitive Financial System the Culprit?

- The financial systems collapsed in the affected countries because of the currency crisis--whatever weaknesses they might have had were not the direct causes of the crisis.
The Major Uncertainties

- The movements of the Yen-Dollar and Yuan-Dollar exchange rates
- The rates of growth of the U.S. and Japanese economies
- The U.S. rate of interest (one instrument, two targets--the prices of goods and the prices of assets)
- The possibility of a bursting of the U.S. asset prices bubble (Could the reliance on an accommodative easing by the Federal Reserve Board after such an event create its own moral hazard?)
- The return of the hedge funds (are bubbles building in the East Asian stock markets again?)
Real Output per Labor Hour

Real Output per Labor Hour (1980 US$)

- China
- Hong Kong
- Indonesia
- S. Korea
- Malaysia
- Philippines
- Singapore
- Taiwan
- Thailand
- Japan
- Non-Asian G5

- (1) No technical progress in the East Asian NIEs but significant technical progress in the IEs
- (2) East Asian economic growth input-driven, with tangible capital accumulation as the most important source of economic growth (the latter applying also to Japan)
  - Working harder as opposed to working smarter
- (3) Technical progress is the most important source of economic growth for the IEs, with the exception of Japan
  - NOTE THE UNIQUE POSITION OF JAPAN!
- (4) Technical progress is purely tangible capital-augmenting and hence complementary to tangible capital
The Sources of Economic Growth--Developing Economies in East Asia

- Different types of measured inputs play different roles at different stages of economic growth
- Tangible capital accumulation is the most important source of growth in the early stage of economic development
- But simply accumulating tangible capital is not enough--it must also be efficiently allocated
- Efficient tangible capital accumulation is the major accomplishment of the East Asian NIEs in the postwar period
  - Market-directed allocation of new investment, aided by export orientation, promotes efficiency
  - Private enterprises have the incentives for prompt self-correction
- Intangible capital accumulation becomes important only after a certain level of tangible capital per worker is achieved
The Sources of Economic Growth--Industrialized Countries

- The most important source of economic growth for industrialized countries is technical progress, accounting for more than half of the growth of output.
- Tangible capital is the next important source of economic growth, accounting for almost a third.
- Technical progress reflects the effects of intangible capital--R&D capital, knowledge capital, goodwill, etc.
- The United States is a leader in human capital and R&D capital.
Human Capital

Average Human Capital (Years of Schooling per Working-Age Person)

- China
- Hong Kong
- Indonesia
- S. Korea
- Malaysia
- Philippines
- Singapore
- Taiwan
- Thailand
- Non-Asian G5
- Japan

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Capital Intensity

Tangible Capital Stock per Labor Hour (1980 U.S.$)

- China
- Hong Kong
- Indonesia
- S. Korea
- Malaysia
- Philippines
- Singapore
- Taiwan
- Thailand
- Japan
- Non-Asian G5

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Human Capital per Unit Labor

Human Capital per Labor Hour (Years of Schooling)

- China
- Hong Kong
- Indonesia
- S. Korea
- Malaysia
- Philippines
- Singapore
- Taiwan
- Thailand
- Non-Asian G5
- Japan

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Figure 4.3 R&D Capital Stock per Labor Hour

- USA
- FRA
- GER
- UK
- JPN
- KOR
- SIN
- TWN

1980 US Dollars


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Is East Asian Economic Growth Sustainable?

- Past economic growth neither a miracle nor a mere bubble
  - Economic growth experience replicated in different East Asian economies
  - Sustained economic growth over decades
  - Recent crisis due to many factors, of which “irrational exuberance”
  - Economic fundamentals remain sound--high savings rates, investment in human capital, and more recently in R&D capital, entrepreneurship, market orientation

- Past economic growth input-driven rather than technical progress-driven--it is attributable to growth in inputs, particularly the efficient and rapid accumulation of tangible capital

- Considerable room for continuation of rapid tangible inputs-driven economic growth--tangible capital per unit labor still lags significantly behind the developed economies

- Intangible capital per unit labor, e.g., R&D capital, lags even further behind, offering additional opportunities for investment
Is East Asian Economic Growth Sustainable?

- The attractiveness of investment in intangible capital depends on the protection of intellectual property rights, which in turn depends on whether a country is a producer of intellectual property.
- Intangible capital is different from tangible capital in three important aspects:
  - Intangible capital is freely mobile across countries.
  - Intangible capital is simultaneously deployable in different locations without diminution of its effectiveness (increasing returns in the utilization of intangible capital).
  - Intangible capital enhances the productivity of existing tangible capital whereas additional tangible capital diminishes the productivity of existing tangible capital.
Prospects for Future Economic Growth Remain Good

- The experience of developed economies, especially that of Japan, suggests that investment in R&D capital and other forms of intangible capital has high returns.
- Because of its complementarity with tangible capital, investment in intangible capital can retard the decline in the marginal productivity of tangible capital.
- There is evidence of positive technical progress in the more recent period.
- Simultaneous expansions increase aggregate demands in all East Asian developing economies because of their significant intra-regional trade.