Asia is Learning the Wrong Lessons from Its 1997-98 Financial Crisis: The Rising Risks of a New and Different Type of Financial Crisis in Asia

by

Nouriel Roubini

New York University
nroubini@stern.nyu.edu

and

Roubini Global Economics
www.rgemonitor.com

May 2007
First draft

This year – 2007 – is the tenth anniversary of the Asian financial crisis that started in 1997 with the spring pressures and eventually July collapse of the Thai baht. The crisis soon spread to Indonesia, Malaysia and by October 1997 hit South Korea. All but Malaysia were forced to rely on painful IMF austerity programs to control the liquidity runs that accelerated the financial severity of the crisis. While other countries in the region did not experience as severe a crisis as in the four economies above significant currency and financial pressures also hit Hong Kong, Taiwan, Singapore, China and the Philippines leading to a sharp economic slowdown even in the countries not directly enveloped in a significant crisis. This is why the crisis of 1997-1998 is referred to as the Asian Financial Crisis.

While market and economies were in free fall in 1997-98 (with severe economic recession in the crisis countries in 1998) the economic and financial outlook looks very different today: the economies in the region are booming with growth last year averaging 8% and financial markets are bubbly with rising currencies, rising stock markets and record low sovereign spread. What a difference relative to the crisis mood of 1997-98.

But is it all rosy and safe in Asia or are there new financial risks and vulnerabilities? The region is currently exuberant about its economic recovery after the crisis and its current economic and financial buoyancy, as the current celebrations at the 40th anniversary of the Asian Development Bank attest. But there are reasons to worry about the future as Asia seems to have understood wells some of the lessons of the 1997-98 crisis while at the same time having also learned some of the wrong lessons from that crisis. Indeed, the currency and financial policies in Asia today are risking planting the seeds of a new and different financial crisis in the region in the medium term.

On the surface financial and economic conditions in Asia are excellent and look the opposite of those in 1997-98. But below the surface some trouble is brewing and significant financial imbalances are building up. Let us consider first the apparent differences between today and 1997 and consider next the new financial vulnerabilities of the region. Let's consider five factors that, at least on the surface, look very different today relative to 1997.

First, in 1997 most of the countries in the region – especially those that experience a crisis – were running large current account deficits, they had

regimes of semi-fixed exchange rates, their currencies were overvalued and they were experiencing negative terms of trade shocks (such as the fall in semi-conductor prices in 1996 that worsened the Korean trade deficit). Fixed rates led to overvalued currencies (as the Asian followed the US dollar in its upward trend since mid-1995) and overvalued currencies led to loss of competitiveness and rising current account deficits that eventually became unsustainable. Once the financial vulnerabilities of the region emerged because of global shocks (worsening terms of trade, stronger US dollar, concerns about a global slowdown) the sudden stop of capital inflows led to currency crises and a sudden lack of financing of those large current account deficits. The crises ensued. Today, on the surface the conditions look just like the opposite: most of the countries in the region run current account surpluses, they have abandoned fixed exchange rates and have moved to floats or managed floats, their currencies are somewhat undervalued, certainly not overvalued and terms of trade have been improving (high commodity prices for commodity exporters and high prices for the intermediate and final goods produced by the manufacturing exporters).

Second, in 1997 there were severe balance sheet vulnerabilities that eventually triggered the crisis: maturity mismatches leading to rollover/liquidity risk; currency mismatched leading to severe balance sheet effects of depreciations; capital structure mismatches with excessive reliance on debt relative to equity leading to lack of risk sharing and rigid external debt payment structures. Indeed, in 1997 short-term foreign currency debt was very high; forex reserves were extremely low especially after futile attempts to defend overvalued pegs; and the financing of current account deficits was mostly – Malaysia being one exception - in the form of debt rather than equity (FDI and portfolio inflows in equity markets) in part because of policy restrictions to inward FDI as in the case of Korea. Today, it looks like the opposite: short term foreign currency debt has been sharply reduced; foreign exchange reserves are massive, providing a huge war chest against speculative attacks and being - if anything – a multiple of what is necessary based on prudent adequacy ratio; and FDI has been liberalized in Korea and the region so that massive amounts of FDI and portfolio inflows in equity markets are flowing into the region.

Third, in 1997 real capital investment was excessive (with investment rates very high as a share of GDP and hovering around 35% of GDP) and with low returns. Indeed, then firms in the region were trying to maximize size rather than the return to their capital leading to too much investment

(“conspicuous size-maximizing investment”). Indeed, total factor productivity (TFP) growth was low if not negative as Paul Krugman popularized the results of academic studies on TFP in his famous “Myth of the Asian Miracle” article. Government related policy distortions (implicit or explicit government bailout guarantees) increased moral hazard and led to excessive capital accumulation financed with short term debt and foreign currency debt. Distortions and vulnerabilities in the corporate and financial systems were widespread with connected and directed lending being serious problems and corporate governance being weak and leading to excessive borrowing and excessive capital spending. Such high and low return investment rates were behind the large and growing current account deficits that eventually became unsustainable once the sudden stop of capital inflows occurred in mid 1997. Today, on the surface all looks different: investment rates have sharply fallen by about 10% of GDP (with China and Vietnam being an exception). While GDP growth rates are now lower than in 1997 they are only modestly so (about 2% below the roaring growth rates before the crisis), Thus, the return to investment is much higher (low incremental capital output ratios or high marginal returns to capital). Some of the reduction in potential and actual growth rates is structural: by achieving middle income (or even advanced economy in the case of Korea and the other NICs) status the income convergence from low per capita income has been vastly achieved; thus, potential growth must be lower than in earlier stages of economic development. Also, today corporate and financial sectors are much improved and banking and corporate restructuring and reforms – as well as much better corporate governance – have sharply reduced the financial vulnerabilities of the corporate, financial and banking system.

Fourth, in 1997 there was a lack or drought of liquidity as liquidity/rollover runs and low forex reserves led to severe liquidity crunches; such illiquidity of sovereigns, corporations, banks and financial intermediaries led to near-insolvency of many of these agents, a default risk that was at times triggered by illiquidity rather than true economic and financial insolvency. Such illiquidity forced countries to impose capital controls on outflows (Malaysia, Thailand) and/or more draconian suspension (followed by coercive restructuring) of debt payments to insolvent/illiquid corporates and financial institutions (Thailand, Indonesia, Korea). And it led these countries to rely on painful and austere IMF programs to deal with the massive liquidity runs and crunches. The runs followed by near insolvency, credit crunches and IMF imposed fiscal and monetary tightening led to falling economies (with severe recessions in 1998) in the midst of free falling currencies, falling

equity markets, falling housing values and sharply rising sovereign and non-sovereign bond and credit spreads. Today, it all looks like the opposite. Instead of a liquidity crunch we have if anything a slosh of excess liquidity as partially sterilized forex intervention and reserve accumulation is leading to easy monetary and credit conditions. Also, the excess of savings in Asia (with investment rates being much lower than savings rates) is keeping long term nominal and real interest rates low adding to the easy financial conditions in the global economy. Given the inflows of FDI and financial capital (some of it "hot money") countries in the region are now starting to think about controls on capital inflows, not outflows (see the recent case of Thailand and the recent Chang Mai debates on how to control excessive capital inflows). And given that now forex reserves are so large and self-insurance massive not only these economies would not need the IMF if downward financial pressures were to return; rather the IMF is obsolete in the region and the recent step to multilateralize the pooling of forex reserve (by now $80 billion of swap arrangements) and enhance regional surveillance in the context of the Chang Mai Initiative is creating the seeds of an Asian Monetary Fund, an idea that Japan proposed during the Asian crisis but that was then crushed by the US opposition to it. Thus, today instead of falling economies and collapsing financial markets we have sharply growing economies, rising currencies, sharply rising stock markets, housing values and other asset prices, and very low sovereign and corporate spreads. What a difference a decade has made!

Fifth, in 1997-98 China, India and Japan were in trouble (while the other two BRICs, Brazil and Russia had their own severe financial crisis in 199 and 1999). China experienced its own version of a hard landing by 1998 when the Asian crisis led to a sharp economic slowdown to a low growth rate of 4% (4% being a hard landing for an economy like China). After letting its currency depreciate in 1995 and experiencing a surge in inflation the investment bubble of the early 1990s went into a bust and the Chinese economy sharply slowed down by 1998; it took repeated pleading by the US to convince China not to let its currency devalue during the Asian crisis and thus play a good citizen role and avoid further currency turmoil in Asia in the midst of the crisis. Japan was then in the midst of its economic and financial crisis: a chronic decade long near recession, a semi-bankrupt financial and corporate system in bad need of restructuring, and serious price deflation, a very weak yen and massive yen carry trades. India was then barely recovering from its own financial crisis and emergency IMF rescue program of the early 1990s and, while it was not seriously affected by the

East Asian financial crisis, it was only starting to implement its macro and structural reforms that led to a sharp increase in economic growth only in the current decade. Today, it all looks like the opposite: it is the decade of the BRICs and/or Chindia. China is booming and, if anything, suffering of overheating; India is rising and has emerged as a regional economic power that could one day rival China; Russia and Brazil have recovered from their own crises, are now growing fast and accumulating a massive amount of foreign reserves. And even Japan is on the mend with corporate and financial restructuring now mostly achieved, the economic growth recovering, and deflation possibly defeated. The one and only similarity to 1998 appears to be the resurgence of the weak yen and of the yen carry trades, an issue we will discuss in detail below.

So, leaving aside the yen carry trade, the world of 2007 in Asia looks on the surface as the opposite of the world of 1997: then economic and financial crises, severe financial vulnerabilities and free falling markets; now booming economies and financial markets, reform and resolution of financial vulnerabilities and buoyant asset markets bordering on the bubbly.

So, given the five structural differences between 1997 and 2007 is all clear for Asia? Are there no risks and vulnerabilities? I will now argue that Asia learned some of the lessons of its 1997-98 financial crisis well addressing many of its own sources of vulnerabilities; but it has also learned some wrong lessons from that crisis and – in trying to address that crisis – planted the seeds of new and different financial vulnerabilities that could lead to a different crisis in the medium term, or even in the short term if global shocks such a US hard landing take place. Paradoxically, part of the policy responses to the 1997-98 crisis were mistaken and created excessive liquidity and asset bubbles that will come to haunt the region once external shocks take place.

So, what are the problems with the current Asian economic, currency and financial model? The answer is, in brief, the effective return to fixed exchange rates in spite of the rhetoric of a move to floating rates. In other terms the problem of Asia today is its membership of the Bretton Woods 2 (BW2) and the economic distortions, and financial and asset bubbles that this BW2 regime generates. Let me elaborate. After the 1997-98 Asia only formally moved to a regime of flexible exchange rates. Effectively, instead, most countries in the region tried to avoid the appreciation of their currencies that had collapsed during the crisis, were thus severely

undervalued and were thus subject to appreciating pressures once their economies and external balances recovered. Some of the attempt to prevent currency appreciation after 1999 was justified: these countries had gotten in trouble because of large and eventually unsustainable current account deficit and low stock of liquid foreign exchange reserves. So, once the external balances moved from a large deficit to a large surplus (given the collapse of imports during the 1998 recession and the sharp real depreciations during the crisis) the desire to accumulate forex reserves was fully justified as a form of self-insurance against future liquidity runs; these countries did indeed need a war chest of reserves as a buffer against potential future currency turmoil. Also, since currencies had been overvalued before the crisis and investment rates were excessive, the move from external deficits to external surpluses was – for a while – justified. And keeping currencies undervalued for a while to build up forex reserves was also fine. There was thus a change in the Asian growth model, from an capital importing one with large current account deficits and reliance on domestic demand (investment and consumption) to an capital exporting one with export-led growth based on undervalued currencies, external surpluses and reliance on net exports and investment directed towards the production of tradables. That new model of growth was first and foremost chosen by China. And following the Chinese bandwagon most of the East Asian countries joined this BW2 model of fixed rates and undervalued currencies leading to export-led growth with current account surpluses and reserve accumulation attempting to prevent nominal and real appreciation.

As said above the initial forex intervention was justified by the need to accumulate reserves and avoid the risk of new liquidity runs. So it was fully justified: during the Asian crisis the ratio of short term foreign currency debt to forex reserves was well above one and closer to three or four in many economies; thus the risk of self-fulfilling liquidity runs was severe. But by 2007 the reserve accumulation had become well above what was justified by prudent reserve adequacy ratios. In Korea in 1997 the ratio of short term debt was close to a risky 500%; by 2007 that ratio was not only well below 100% (the threshold for the risk of liquidity runs) but closer to 20%. With reserves in many countries now four or five times the amount of short term foreign currency debt (the opposite of 1997) reserve adequacy ratios are massively above any prudential criterion. For example if one had to use the Guidotti-Greenspan criterion of reserves being above short-term foreign currency debt, most countries in East Asia satisfy this criterion by an order of four or five times that prudential ratio.

So, what happened after 1998 was that the initial accumulation of forex reserves that was justified by the self-insurance needs gave way – especially after 2002 – to an accumulation of reserves solely explained by mercantilist objectives, i.e. the desire to keep currency values undervalued and pursue export-led growth, i.e. a growing membership of most of Asia into the new BW2 regime of effective fixed rates and weak currencies.

One may then ask: what is wrong with that BW2 growth model if it has led to high growth in China and East Asia and strong and well performing financial and asset markets? The answer is clear.

First, this new economic and financial model is leading to excessive monetary and credit growth, asset bubbles in stock markets, housing markets and other financial markets that will eventually lead to a build up of financial vulnerabilities – like the capital inflows and bubbles the preceded the Asian crisis of 1997 in a region of semi-fixed exchange rates – that could trigger a financial crisis different from that of 1997-98 but that could be potentially as severe.

Second, reliance on an economic growth model based on rising growth of net external demand and domestic investment aimed at rising capacity for such exports; low reliance on domestic demand and production for domestic markets, especially private consumption and production of necessary non-tradable public and private services. This model of growth with excessive reliance on net exports and production of capacity for exports is dangerous for several reasons: it makes Asia – that used to rely in the 1990s on capital flows from the rest of the world for its growth – now reliant on US and global demand from outside Asia for its growth; given the current risks of a US hard landing or even a serious US growth slowdown this is a dangerous and vulnerable model of growth. Moreover, reliance on an ever increasing level of next exports (both absolute and as a share of GDP) increases the risks of a protectionist backlash in the US and Europe. Thus, this export-led only growth model is unsustainable and a more balanced growth pattern with greater reliance on domestic demand is essential to ensure long run growth stability.

Let me elaborate on why the wholesale acceptance – with a few exceptions – of BW2 and of its related export-led growth model is dangerous for China, East Asia and the whole of the Asian continent. Notice also that many other

economies outside of East Asia are following this BW2 regimes of fixed exchange rate, aggressive attempt to prevent appreciation via reserve accumulation and export-led growth. These include countries as far as India, Russia, Argentina, the GCC countries and other Middle East countries that are oil exporters and, until recently, even Brazil and other parts of Latin America. So the problems and financial vulnerabilities that we will outline below are relevant not just for East Asia but also for a broader group of emerging market economies around the world.

Paradoxically, the five factors discussed above - that apparently differentiate current conditions from those in 1997 - are partly not as different today from yesterday as some things have not changed compared to the conditions at the eve of the 1997 crisis and during the crisis period. Here are ten points and observation on how Asia has not learned the true lessons of the 1997-98 crisis and how its policies are creating the basis of a future financial crisis in the region.

First, notice that BW2, fixed rates, easy monetary condition and low interest rates, asset bubbles and excessive reliance on export-led growth are all interconnected. Weak currencies, aggressive forex intervention to prevent appreciation in spite of current account surpluses and capital inflows lead to distorted relative prices – an undervalued real exchange rate – that punishes domestic private consumption and production of productive non-tradable services and rewards exports, investment for exportables, and investment in not-directly productive real estate and housing.

Second, the move to flexible exchange rate after the 1997-98 crisis was only temporary and soon these economies returned to effectively fixed or semi-fixed exchange rates in the new BW2 regime. Before the crisis the currency levels were somewhat overvalued; today they are grossly undervalued. Moreover, the attempt to prevent the necessary nominal and real appreciation of currencies - that are both undervalued and under appreciation pressure because of current account surpluses and net private capital inflows in the form of FDI, capital inflows in equity and bond market and hot money short term inflows – is leading to a massive and unprecedented increase in forex reserves in all of Asia. By now the stock of forex reserves of the Asian economies is about $2.5 trillion ($2.28 trillion at the end of 2006) from its level of $250 billion in 1997, a tenfold 1000% increase in a decade. The growth of reserves in Asia was $251 billion in 2005 and a whopping $418 billion in 2007 based on recent ADB data. And the growth of reserves has

been accelerating in 2007. China used to accumulate reserves at a rate of an already huge $20 billion per month in 2006. In Q1 of 2007 that reserve accumulation has doubled to a per month rate of $40 billion. As the current account surplus increases, FDI rises, capital inflows in the equity market grow because of highly publicized IPOs of banks and other firms, and hot money inflows increase because of expectations of an appreciating RMB the need to accumulate reserve at a much faster rate is the necessary outcome. The Chinese central bank, that had already a serious problem in trying to sterilize reserves at a rate of $20 billion a month, is now facing a nightmare trying to handle and sterilize reserves at a monthly rate of $40 billion in Q1 of 2007.

Third, the ability of these economies to sterilize their forex reserve accumulation is severely limited. In China only between two thirds and three quarters of reserve accumulation is sterilized. In other countries in the region sterilization rates are also well below unity. Sterilization cannot be full for both practical and conceptual reasons: practically, money markets are not very well developed in many of these economies; so there are technical constraints to sterilization; banks are increasingly balking in China and other economies to hold low yielding sterilization bonds when lending rates are much higher; thus, administrative actions such as higher reserve requirements or moral suasion have to be used by monetary authorities to induce the banks' acquisition of such sterilization bonds. This imposes further burden, taxes and distortions on the banking system. Finally, if sterilization was full and successful, nominal interest rates would not be reduced and instead stay higher than equilibrium, thus inducing further inflows of capital. Thus, successful sterilization would be self-defeating as only partial sterilization – by reducing domestic interest rates - would reduce the incentives of investors to move capital into these economies.

Fourth, partially sterilized intervention is leading to lower than equilibrium interest rates, massive growth in the monetary based and massive growth of bank lending and credit growth. China has been attempting to control credit growth and the ensuing investment and asset bubbles that it generates via administrative controls on credit and real investment. But such controls are increasingly ineffective and source of further distortions in the allocation of savings to investment. Excessively low policy rates and short term interest rates and the accompanying credit bubbles are now becoming pervasive throughout Asia, especially the effective members of BW2.

Fifth, these monetary and credit growth and easy financial conditions are leading to inflationary pressures in these economies. Since the real exchange rate is undervalued relative to its much appreciated equilibrium level there are only two ways via which the actual real exchange rate can appreciate towards the stronger equilibrium one: either a nominal exchange rate appreciation or via domestic inflation. Since in most countries – with Korea, Thailand and Indonesia being partial exception – the nominal appreciation is prevented the real appreciation is often occurring via an increase in domestic inflation. Somehow puzzling such rise in inflation has not been observed yet in China. The reasons are various: a very flexible labor market with an excess supply of cheap labor from rural areas; bumper crops keeping agricultural and food prices low, high manufacturing productivity growth reducing unit labor costs, price controls on oil, energy and controlled public services, mis-measurement of housing inflation as increasing rent or rental cost of home ownership is not properly measured. But in other economies where labor markets are not as flexible and/or where energy subsidies have been phased out inflation is rising: both in BW2 economies in East Asia and among effective members of BW2 outside that region (specifically in India, Russia, Argentina, GCC countries and other Middle East countries, etc.).

Sixth, these monetary and credit growth and easy financial conditions are leading to asset price inflation, especially in countries like China where goods inflation is limited, but more generally among most BW2 economies. These asset bubbles take various forms.

In China easy money and credit first led to a real investment boom in housing and in tradable sectors. At the same time China experienced a housing price bubble as home prices rose rapidly. With an economy growing at a real rate of 10-11% and nominally at a rate of about 13% having nominal lending rates of about 6% is ridiculously low and implying very low real cost of borrowing for firms trying to invest. No surprise that the investment rate in China is now close to 50% with the returns to these investment being likely to be low and falling given the amount of overinvestment and duplication of capital spending project given the provincial level competition to attract investment and increase growth. Once the central government attempted to crack down on excessive capital accumulation of real capital, the excess liquidity and credit in the financial system led to outright asset bubbles, first in housing and then in the stock market.

In other BW2 economies, real investment has not surged as the fallout of the Asian financial crisis (falling rates of investment that had low returns) kept investment low as a share of GDP. Instead we have observed credit and asset bubbles.

Credit bubbles were behind the consumer credit card bubble and bust into a crisis in Korea. Credit bubbles have led to housing boom and near bubbles in many East Asian economies (as well as in India, Russia, the Middle East and parts of Latin America). Sharply rising home prices are observed in China, Hong Kong SAR, Taiwan POC, Thailand even if in some of them the recovery in home prices had occurred after sharp falls in the real price of homes during the Asian crisis.

Home price increases are much lower than the increase in equity prices. In the 1999-2006 period he average annual real (i.e. inflation adjusted) percentage increase in equity prices has been 14% in India, 10% in Korea, 7 to 10% in Singapore, Thailand, Malaysia, Hong Kong SAR, Taiwan POC. In China where stock prices where underperforming until 2006 the rise in stock prices has been spectacular in the last 12 months, more than doubling in one year. Given controls on corporate and housing investment the excess liquidity and credit is now going into the stock market characterized by a dangerous bubble. It is true that the recovery of stock market in most of East Asia after 1999 represented a recovery from the sharp falls during the 1997-98. But the rate of increase in stock prices has accelerated in 2005-2007 in ways that appear not fully related to economic fundamentals.

Rather, easy credit has led to a massive surge in leveraged investments in stock markets in many of these economies. In China alone it is estimated that retail stock market investors – most clueless about the financial risks that they face – are now estimated to be over 100 million; day-trading of the type observed during the US dot.com bubble in the late 1990s are now common throughout Asia. Similar housing and stock market bubbles – and at times temporary busts – have been observed in India, Russia, Mid-East oil exporters, Argentina and other BW2 member countries. Of course, some of the increases in equity prices and in other asset prices are related to the much improved economic fundamentals. But there are now increasing signals of asset price overheating and bubble conditions, as recent episodes of stock market turmoil in China, India, and the Middle East suggest.

Seventh, the fiscal and financial costs of forex accumulation and partial sterilization are increasing. In China where deposit rates and rates on sterilization bonds are artificially kept low the fiscal costs of accumulation of low yielding reserves are shoved into the financial system that is forced to accumulate sterilization bonds yielding 2% or slightly more when lending rates are at least 6% or more; also to controls monetary growth required reserve ratios have been repeatedly increased all the way to 11% most recently. Between sterilization bonds and required reserves about 20% of assets of Chinese banks are held in low yielding (about 2% average) assets. This is a severe cost for a still financially repressed financial system. In other countries where short term and policy rates are higher or high (Turkey, Brazil, India, Iceland, etc.) the negative carry on low yielding reserve accumulation financed by higher yielding sterilization bonds are serious.

And the eventual fiscal cost of accumulating dollar reserves when the long term nominal and real exchange rate will appreciate are massive. In the case of China such capital losses would be now equal to $200 billion (about 10% of GDP) if the RMB were to appreciate 20% and could rise to as high as $600 billion in three years: the more China prevents its RMB appreciation the larger will be the stock of reserves (over $2 trillion by 2009 given current rates of accumulation) and the larger the necessary and eventually unavoidable nominal and real appreciation (as high as 30% in a matter of three years). Thus, the eventual capital losses of remaining in the BW2 regime will be massive, both in absolute terms and as a share of GDP. Similar concerns about excessive reserve accumulation and capital losses are partly behind the tentative decision of Korea, Thailand and Indonesia to partly abandon BW2 and to allow their currencies to appreciate (more on this below).

Eighth, undervalued currencies and rising current account surpluses imply that Asia is excessively reliant on US growth and growth outside of Asia and too little on domestic demand. The situation is extreme for the case of China but common throughout East Asia. In China the current account surplus went from about $30 billion in 2002 to $230 billion in 2006, or from 2% of GDP to almost 9%. Net exports and a rising investment directed to increase the capacity to increase exports are the main drivers of economic growth. Consumption rates (as a share of GDP) are extremely low while savings and investment rates are excessively high (about 58% and 49% of GDP respectively currently).

Thus, while the US is the consumer of first and last resort with its spending well in excess of its income (leading to a massive current account deficits), China is the producer of first and last resort with its spending well below its income (leading to massive current account surpluses). More importantly, via the trade with China, most of East Asia depends on net exports and on the health of the US economy as much as China does.

There is currently a myth in Asia that the rising amount of intra-regional trade is making the region less dependent on US growth and growth outside the region. As a recent ADB report and a recent IMF's WEO study suggest this is a myth. Intra-regional trade in Asia and especially East Asia has mushroomed in the last six years. But this has made the regions even more dependent – both structurally and cyclically – on US and outside growth. These studies show that the change pattern of trade in Asia is making Asia more dependent on trade with the US and the rest of the world. It used to be the case that East Asian economies were directly producing final goods for the US and Europe.

But in the last six years the patterns of trade specialization has radically change: now East Asia produces intermediate goods and raw materials exported to China (rather than exporting goods directly to the US and Europe) that then uses these resources to assemble final good that are exported to the US and Europe. Thus, in spite of the massive increase in intra-regional trade the dependence of China and East Asia on external trade and exports to US, Europe and the rest of the world has significantly increased rather than decreased. The idea that this intra-regional trade has led to greater domestic growth and greater insulation of Asia's growth from demand developments in the rest of the world is utterly wrong. China and East Asia is more dependent on US growth and growth outside Asia than ever before, both structurally and cyclically.

At the same time that China and Asia is becoming more dependent on US and EU growth protectionist pressures are rising in the US and Europe as global imbalances are growing and Asia is actively resisting currency adjustment, starting with China. These protectionist threats are now seriously rising in the US Congress and even in the US executive power. Thus, risks of trade wars following the lack of currency adjustment are now rising.

Ninth, the currency and economic policies of China and East Asia have contributed – among many other factors – to unsustainable global current account imbalances whose rebalancing now risks becoming disorderly rather than orderly. Global imbalances have many causes and sources including – crucially – the low levels of US private and public savings. But China and Asia have had an important role in aggravating these unsustainable imbalances. In some sense it does not matter whether the excess of savings over investment (that is by definition equal to a current account surplus) in Asia is due to the BW2 regime of undervalued currencies; or it is due to the investment drought in East Asia after its 1997-98 crisis (China being an exception to this low investment regime); or it is due to Bernanke's view of a global savings glut that is especially serious in China and East Asia; or it is due to the structural factors (lack of a social security and safety net; lack of credit markets where consumers can borrow to spend more) that keep savings rates high and consumption rates low in China. In reality a combination of these factors have led to the excess of savings over investment (or current account surpluses) in Asia and kept global interest rates lower than otherwise thus, inducing – in addition to the US fiscal deficits – housing investment bubbles and a rise in private consumption and fall in private savings that is behind the US current account deficit.

Tenth, the excessively easy monetary and credit conditions caused by BW2 and partially sterilized forex intervention, as well as low global nominal and real interest rates generated by this Asian excess of savings over investment have created conditions that exacerbated the excess of spending over income in the US and have fed global assets bubbles in a variety of risky assets, be it equities, credit spread, sovereign emerging market spreads, worldwide housing bubbles, commodity price booms. Low long term interest rates (Greenspan's bond market conundrum) from excessive savings and low short interest rates given partially sterilized massive forex intervention together with the slosh of global liquidity that forex intervention, easy money in Japan and massive yen carry trade and excessive savings create excessive liquidity in the global economy that is behind the asset bubbles, credit boom, excessive leverage among private equity, hedge funds and other leveraged institutions that we are observing today. These excesses have led to an imbalance global economies where real (global current account imbalances and excessive global dependence on now fragile US growth) and financial imbalances (credit booms, risky leverage, and asset bubbles) are growing.

In summary, BW2 was always a disequilibrium for Asia and the global economy; but now from a stable disequilibrium is becoming an unstable one. Partially sterilized intervention is feeding risky credit and asset bubbles; undervalued currencies that are prevented from appreciating via massive and increased interventions are causing both goods and asset inflation and bubbles. Policies of export led growth and undervalued currencies are causing growing global imbalances that are becoming unsustainable and increasing the dependence of China and Asia on a fragile and now faltering US economic growth as the risk of a US hard landing is rising. They are leading to excessive liquidity, asset bubbles and disequilibria not just in the region but also globally. And they are increasing the risks of protectionism in the US and Europe. Thus, this economic growth model is unstable for China, for East Asia and for the world economy. A more balanced global economy requires greater domestic demand in China and Asia and smaller global imbalances.

And the contribution of China and Asia to this orderly global rebalancing requires several combined policies. First, China has to let its currency appreciate at a much faster rate; and if the RMB appreciates at a faster rate other Asian economies will allow their currencies also to appreciate at a faster rate as currently they are worried about unilateral appreciation and loss of competitiveness in case China does not move faster. Currency appreciation will increase imports, private consumption and lead to more investment and production in non-tradable services and less resources going into tradable exports. Thus, the lesson of the Asian crisis is that currencies should become more flexible, not less flexible.

Second, China and the rest of Asia has to stimulate domestic demand through a fiscal expansion and greater public investment in infrastructure that will help the recovery of private investment currently hampered by the lack of public investment infrastructures. Fiscal expansion would also allow China to counter any slowdown of demand pressures deriving from a faster currency appreciation. Such fiscal expansion and creation of a social security system and social safety net will also allow to creating the conditions that will lead to lower private saving and higher investment.

Third, greater financial liberalization and financial market liberalization and competition (including allowing foreign entry in domestic financial markets) will allow the development of a credit culture that will lead households to

consume and spend more and a better allocation of massive savings to the right investment projects.

To achieve all this a more flexible exchange rate regime and greater currency flexibility is necessary in Asia and throughout Asia. The policy dilemma that China and Asia faces today is the classic Triffin's inconsistent trinity: no country can have fixed exchange rates, an independent monetary and credit policy and capital mobility with no capital controls. In China, in spite of formal capital controls, capital mobility is widespread as such controls on inflows are very leaky. Thus, China by trying to keep an effective currency peg (as the rate of currency crawl is at a snail's pace) has completely lost control of monetary and credit policy as interest rates are forced to be much lower than they should be given the overheating of the economy. And the desperate attempts of the Chinese to control the overheating via administrative controls on credit are failing given that excessive liquidity moves from controlled to uncontrolled sectors (from a boom in capex investment to a boom in housing investment; from a bubble in housing prices to a bubble in stock prices). The only solution to regain monetary and credit policy independence is to allow greater exchange rate flexibility. Similarly throughout Asia and among other BW2 members – India, Russia, the Middle East, Argentina - the same inconsistent trinity problems are emerging causing credit booms, economic overheating, goods inflation and asset bubbles.

As in the case of the Asian crisis where overheating, massive capital inflows, fixed exchange rates, credit booms and asset bubbles in equities and housing eventually led to financial imbalances before 1997 and an eventual crisis in 1997-98, the seeds of the next financial crisis are being planted today in Asia and in the other parts of the unstable BW2 system. It is true that today – compared to 1997 some vulnerabilities are different: we have current surpluses, large stock of foreign reserves, low stocks of short term foreign currency debts. Thus, a financial crisis coming from the unraveling of BW2 would not take the form – as it did in 1997 – of an external debt crisis. But like in the 1995-97 period, attempts to follow the US dollar and maintain fixed rates are feeding capital inflows, monetary creation and asset bubbles. It is easily forgotten that what triggered the Asian crisis were global conditions: then a strong dollar, a weak yen and carry trade that eventually unraveled; concerns about a global slowdown after 1995 and negative terms of trade shocks. This time around, as long as the US economy growing at a good rate the stable disequilibrium of BW2 could be maintained. But the

trigger for its unraveling is likely to be, as in 1996-97, a change in global conditions external to Asia, specifically today the risk of a US hard landing as the housing recession is now spreading to the rest of the economy, creating a credit crunch and leading to a slowdown of private consumption.

As long as the US achieves a soft landing in 2007 the stable disequilibrium of BW2 can continue for a while longer. But a US hard landing (in the form of a growth recession or outright recession) will tip the BW2 disequilibrium from a stable one to an unstable one for many reasons.

First, a US hard landing would imply a sharp reduction of Chinese growth given the dependence of China on net exports and investment to produce exportables. Goldman Sachs estimates that a 1.5% reduction in US growth, say from 3.5% potential to 2% actual as in recent quarters, leads over time to a reduction in Chinese growth of 2%, say from 11% to 9%. But if the US experiences a hard landing in the form of a growth recession rather than a soft landing (i.e. a growth rate of 0.5% rather than 2% for a few quarters) the US growth slowdown – relative to a potential of 3.5% - is 3% rather than 1.5%. Then this 3% US slowdown would lead to a Chinese slowdown of 4%, not 2%, from 11% to 7%. And if the US were to experience a true hard landing in the form of an outright recession, say negative growth of 1% for a year, the US growth slowdown would be 4.5% (from 3.5% to -1%) that would translate in a growth slowdown in China of 6%, from 11% to 5%. 5% growth for China would be equivalent to a hard landing. And such growth slowdown in China would lead to a massive growth slowdown in East Asian and Asia overall given Asia's dependence on US growth via its trade in components, intermediate inputs and raw materials with China. Such US hard landing would also have – via its effect on China – sharp downward effects on commodities demand and prices leading to painful growth slowdown among emerging market energy and other commodity exporters in Asia, Latin America, Africa, and the Middle East. Even in the case of a US growth recession –rather than an outright recession – the slowdown in China, Asia and emerging markets would be serious given their direct and indirect dependence on US growth.

Second, a US hard landing of either type would not only lead to a painful growth slowdown in Asia and around the world. It would also undermine the basis of the BW2 regime. That regime in which China and Asia provide cheap goods to the US and, at the same time, the financing of the US current account deficit (a system of "vendor financing") is stable only as long as

Chinese and Asian growth can continue via ever expanding net exports. The US hard landing undermines that key condition for vendor financing, a rise in US imports from China and Asia. Also, while US imports would fall in a US hard landing scenario the US current account deficit would not shrink as now net factor income payments in the US current account are negative and increasing (as the stock of foreign debt is rising and the interest payments on US liabilities rising). Thus, while until now a system of vendor financing was financing an increase in Asian exports to the US, a US hard landing would imply Asian to continue financing the increased US foreign debt and its factor income servicing rather than growing exports to the US. Thus, the willingness of Asia and other BW2 regime members to finance the US would be undermine at the time that downward pressures on the US dollar from the US hard landing lead to greater expected capital losses on holdings of dollar reserves and dollar assets.

Third, in a US hard landing protectionist pressures that are already high in a soft landing outlook would become severe with tensions on currency values turning into increasingly acrimonious trade conflicts and trade wars. In a US hard landing the US would want China to let the RMB to appreciate even more that it is pressing for it now; but in that lower growth environment where Chinese growth suffers even more, China would resist even more strongly further RMB appreciation. Thus, the outcome of this currency conflict would be a trade war between the US and China.

Fourth, a US hard landing would lead to the unraveling of the bubbly conditions in financial markets, of the credit booms and leveraged investments that that fed Asian and global asset bubbles. Risk aversion would sharply rise and investors' confidence would sharply fall. In the spring of 2006 an inflation scare in the US led to sharp market turmoil in G7 equity markets and in emerging markets' financial markets. In February and March 2007 a growth scare in the US following the subprime carnage led to another episode of financial turmoil in G7 and emerging markets. Now, if instead of growth "scare" we were to experience a real US growth "downfall" that takes the form of a hard landing (either a growth recession or an outright recession) the consequences for financial markets and real economies would be severe. Economies would sharply slow down, financial markets and risky assets would be shaken, global imbalances would not shrink as both US imports and exports would fall with the slowdown in global growth, dollar weakness and currency tensions would increase, and the risks of a protectionist trade war would increase.

Economic fragilities, boom and busts in housing, and policy weaknesses in the US are at the core of global economic imbalances that are leading to the risk of a US hard landing and a disorderly rebalancing of global imbalances. But it is also true that Asian currency and financial policies have fed such US imbalances creating a climate of global excess liquidity, low policy rates and easy monetary conditions (including easy money in Japan and massive yen carry trades), low global interest rates given the excess of savings over investment that have fed the US imbalances via an easy financing of the US fiscal deficits and the feeding of the US housing bubble, low private savings and consumption boom that is now under threat given the bust of the housing bubble.

In the meanwhile the Asian policies have both fed the US bubbles and imbalances and made Asian growth even more hostage to US economic growth. The entire Asian economic development for the last six years has been based on creating and feeding the US excesses that are now at risk of unraveling, a system of global imbalances that is now in danger of falling apart. In the short run Asia can do little to resolve this fragile disequilibrium. If the US hard landing occurs in 2007 the consequences for China and Asia would be painful even if easing of fiscal and monetary conditions would allow the region to partially absorb the US shock.

But even if this hard landing scenario is avoided and the US experiences a soft landing in which China and Asia will continue to growth a strong and sustained rates, it is in the medium term interest of China and Asia to phase itself out of this unstable BW2 and create conditions that allow greater dependence on domestic demand for growth rather than excessive reliance on net exports and being hostage to US growth. This change in the Asian growth model requires a more sophisticated understanding of the lessons of the crisis of 1997-98. It requires a true move to flexible exchange rate with resources relatively moving out of traded sectors into not-traded services, fiscal stimulus, greater public investment infrastructure spending, creation of social safety nets and greater financial sector liberalization, development and deepening that will allow households to spend more and smooth shocks to consumption from income and terms of trade volatility, and a better allocation of the vast amounts of Asian savings to greater real investments that will allow higher potential and actual growth and a more balanced type of growth that is a little less dependent on a volatile global economy.

The key to this rebalancing of Asian growth is a faster rate of appreciation of the RMB, greater currency flexibility in China and the ensuing generalized appreciation of Asian currencies relative to the US dollar once China allows a greater appreciation of the RMB. Until recently most Asian economies have been wary to allow their currencies to appreciate too much because of the persistent Chinese policy to maintain an effective RMB peg with a very small and slow rate of upward crawl.

Most Asian economies realized that maintaining an effective peg to the US dollar (or equivalently to the RMB) is costly: it leads to excessive forex reserve accumulation with its ensuing short run fiscal costs and long run large capital losses; it leads to excessive monetary growth – via partial sterilization - and credit booms that feed asset bubbles. Thus, there is increasing Asian economies' uneasiness with staying inside BW2. But as long as China keeps on pegging its currency most Asian economies can ill afford to get off the BW2 unstable train as the loss of competitiveness of their currencies relative to the RMB, relative to the other Asian currencies and relative to the G7 currencies would be serious and cause a loss of competitiveness and growth.

A few countries tried to get off the BW2 regime given the current and expected costs of staying in this regime and accumulating a dangerous stock of excessive forex reserves: these are Korea, Thailand and Indonesia that allowed a some significant appreciation of their currencies in the last few years. Some of this appreciation was necessary and not painful. These countries currencies had massively depreciated in real terms during the 1997-98 crisis well beyond the lower equilibrium real exchange rate. The ensuing real appreciation that was unavoidable after the end of the crisis and return to external surpluses required a nominal appreciation that was allowed to prevent the process of real appreciation to occur through higher inflation. But the process of nominal appreciation in these economies continued and became excessive after this nominal appreciation was allowed since capital inflows to the region kept on surging.

Thus, these economies are facing a tough dilemma. A return to massive forex intervention is costly and feeds credit and asset bubbles. But allowing currencies to appreciate more leads to a significant loss of competitiveness. The outcome for Korea is particularly painful as the large appreciation of the won (over 25% relative to the Yen) is leading to a loss of competitiveness and slower growth (that is crawling down to about 4.5% recently). In

Thailand a similar massive appreciation of the baht occurred in 2005-2006. To avoid excessive appreciation that would hurt growth Thailand tried to impose capital controls on inflows at the end of 2006, controls that were botched and led to a sharp fall in the Thai equity market In Indonesia an appreciation took momentum and led to similar concerns about excessive appreciation. The dilemma faced by countries such as Korea, Thailand and Indonesia that are trying to jump off the BW2 train are painful: allow excessive appreciation and cause an excessive slowdown of growth; rejoin BW2 and keep on accumulating again reserves thus feeding credit and asset bubbles; trying to control inflows and appreciation through capital controls on inflows that may become counterproductive as are perceived as market unfriendly by domestic and foreign investors. Similar tradeoffs are faced by Brazil that, for a while joined BW2 and then, like Korea, got off this system in 2006.

At the same time other East Asian economies such as Hong Kong, Taiwan, Singapore, Malaysia – as well as members of BW2 as far as India, Russia, Middle East/GCC, Argentina – have decided so far to stick with BW2, in Asia because China is still shadowing the US dollar and these economies in East Asia think they can ill afford to allow a loss of competitiveness of their currencies relative to the RMB given their direct and indirect trade links with China. But this continued membership of BW2 is leading to a continuation of the imbalances and financial vulnerabilities generated by BW2.

These policy dilemmas and tensions will remain as long as China decides to remain the leading economy of this BW2 and maintains its effective peg to the US dollar (as the rate of upward crawl of the RMB is extremely small and slow). But these economic and financial imbalances and vulnerabilities generated by BW2 are serious and building over time increasing the risks of a new and different type of financial crisis in Asia once the unraveling of BW2 becomes disorderly rather than orderly.

Thus, even leaving aside the risks of protectionism in the US, it is of tantamount importance that China realizes that its exchange rate regime is creating economic and financial instability in its own economic and creating serious problems for its trading partners in Asia. Thus, China should realize that an orderly but rapid phase-out of BW2 is in its own national interest as it will allow – together with other complementary fiscal and financial policies – to achieve a Chinese economic soft landing, rebalance its

economic growth model in the direction of a more stable dependence on consumption and domestic demand. It will also allow Asia to develop a growth model where growth of intra-Asian trade makes the region less dependent – rather than more dependent – on the whims of uncertain US and EU growth and economic policies, including trade policies and their responses to the challenges of globalization.

In conclusion, Asia should now worry about not fighting the last war rather than getting prepared to deal with the next war or next financial stresses that will hit the region given its current financial and currency policies. Today in Asia – as reflected at the ADB annual meetings in May in Kyoto – most of the discussion was about how Asia should manage its current stock of over $2.5 trillion of foreign exchange reserves. The three issues that have been widely debated have been: how to pool reserves – as in the extended Chang Mai Initiative (CMI) – to defend Asia against speculative attacks; how to manage reserves to diversify them and obtain higher returns on them; and who should be managing the excess of these reserve in order to get higher return, the ADB, the IMF, private sector financial managers or the new local official investment authorities and funds themselves? Frankly these are second order problem compared to the first order problem that adding $450 billion of reserves a year – as in 2006 – to an existing pile of $2.5 trillion is a dangerous financial policy. The various variants of the Chang Mai initiative - including the latest proposal to multilateralize the $80 billion of currency swaps of the CMI – represent the attention on the wrong problem, i.e. fighting the last war. Indeed, today the East Asian countries have some many reserves at the individual country level – massive amounts of self-insurance – that almost none of them will need the CMI to prevent a speculative attack in a crisis. Reserve ratios are well above any adequacy level for almost all East Asian countries. And even in a crisis for the very few with little reserves China and/or Japan or Korea will likely to end up helping the country in distress on a bilateral basis. Thus, Asia is now fighting the last war worrying about the problems of the past.

Moreover, the issue of how to manage massive and excessive capital inflows is not something that can be managed at the CMI level. Each country can individual continue to accumulate even more reserves – or impose capital controls on inflows if it so desires – to deal with excessive hot money inflows.

And the issue of how to manage current forex reserves and who - in the public or private sector should help to manage them to get higher returns – is of secondary importance compared to the problem created by adding in 2007 to the existing pile of reserves another $450 billion as in 2006 or an even larger amount as reserve accumulation in Q1 of 2007 is already massively faster than in Q1 of 2006. This continued policy of preventing currency appreciation via massive and growing reserve accumulation is the most serious – and first order problem – that Asia should be dealing with today, not how to manage the existing stock of reserves or how defend itself against speculative attacks that required large current account deficits, large stocks of short term foreign currency debt and low forex reserves (all problems of the past, not of the present) for such attacks to take place.

This policy of semi-fixed exchange rates supported by massive forex reserve accumulation is creating massive financial imbalances – excessive monetary and credit growth, a variety of financial asset bubbles, an excessive dependence on net exports and on US economic growth, an imbalanced pattern of aggregate demand – that will eventually end in a a new and different type of financial crisis, a crisis that would occur sooner rather than later if the US experiences a growth hard landing.

Thus Asia appears to have learned only some of the lessons of its 1997-98 financial crisis (the need to have sound macro and financial policies). It has not learned the real lessons of the crisis, i.e. that fixed exchange rates and poorly managed financial markets eventually lead to a build-up of vulnerabilities that can cause financial crises. The return to effectively fixed exchange rate and massive forex reserves accumulation in a good part – but not all – of East Asia is thus a worrisome sign that the lessons of the past have not been appropriately learned. Current financial and currency policies in East Asia have the risks of planting the seeds of its next financial crisis, a crisis that will have features and characteristics that will be different from those of 1997-98. Such a crisis can be avoided but it will take East Asia accepting a true move to more flexible exchange rate regimes and a significant and rapid phase-out of the current reckless policy of accumulating forex reserves in ways that are excessive and financially dangerous for East Asia.