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ANALYSIS

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TEN YEARS AFTER THE ASIAN CRISIS: IS THE IMF READY FOR 'NEXT TIME'?

EXECUTIVE SUMMARY

There were numerous factors contributing to the Asian crisis, but volatile capital flows and fragile financial sectors were central. There seems little likelihood of a repeat of the capital reversals of 1997-8 any time soon, because East Asia is running current account surpluses and exporting capital. But this conjuncture is neither sensible nor sustainable. When net capital once again flows from the mature countries to the emerging countries of East Asia, the core vulnerabilities of the crisis period will re-emerge: volatile international capital flows interacting with fragile financial markets.

How ready is the Fund to meet the risks that these vulnerabilities pose? There is too much faith that floating exchange rates have removed vulnerabilities. If there is another 'sudden stop' capital reversal, the Fund has insufficient resources to act as international lender of last resort, and has not been given the institutionalised procedures to organise creditor standstills and debt restructuring. To make matters worse, the Fund lost credibility in the region during the crisis, which means that countries will be reluctant and slow to call on its assistance.

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TEN YEARS AFTER THE ASIAN CRISIS: IS THE IMF READY FOR 'NEXT TIME'?**I. Introduction**

Ten years after the Asian crisis unfolded, much has changed in Asia. With the present conjuncture, there seems little likelihood of a repeat of the capital reversals of 1997-8. But this conjuncture is neither sustainable nor sensible: leaving China to one side as a special case, these countries should be investing much more, importing capital, running current account deficits and allowing their exchange rates to appreciate. When this happens, they will grow faster, which they need to do to make up for the lost years after the crisis. With the return to normalcy, the core vulnerabilities of the crisis period will re-emerge: volatile international capital flows and fragile financial markets.

There is a variety of opinion of how the Fund performed in 1997-8, but there is little doubt that it was more successful in some places (e.g. South Korea) than in others (Indonesia). It is not the objective here to rehearse the old arguments, but rather to be more forward-looking: to see whether the Fund's current approach (as influenced by the experience in Asia and elsewhere) seems suited to the sorts of problems which might be encountered.

First we will try to identify potential vulnerabilities. Then we examine the Fund's current policy position in regard to these vulnerabilities. In the third section we will see whether these vulnerabilities are present now, or are likely to return. In the fourth (concluding) section we offer some judgments on how ready the Fund might be for a return to a world of volatile capital flows.

II. Vulnerabilities

Does the decade-old crisis offer insights on current vulnerabilities? There has been no shortage of explanations offered for the crisis, including crony capitalism, corruption, lack of free-market orthodoxy (having an exchange rate which was neither a firm fix nor a completely free float), absence of democracy, governance deficiencies, moral hazard, and lack of transparency. Most of these explanations seem unsatisfying, if only because these circumstances had existed during three decades of extraordinary growth. Defenders of the efficient-markets faith have been inventive in explaining why, if the problems were long-standing and intrinsic, they remained quiescent for so long and emerged so suddenly. Others, perhaps with more sense of the long history of manias and panics (see, for example, Kindleberger (1996)) are readier to accept that market participants, having only an imperfect view of the future, experience episodes of euphoria and pessimism. These changes of view are correlated and so have a big effect on financial markets, especially when these markets lack breadth, depth and resilience.

Even big shifts in sentiment usually have some substantive issue at their base. The key economic problems in 1997 might be identified as:

- Excessive foreign capital inflows in the five years or so before the crisis (either ignorant of or ignoring the problems which later were held to be serious flaws), which fed a local investment and asset boom and created the potential for volatile outflows.

TEN YEARS AFTER THE ASIAN CRISIS: IS THE IMF READY FOR 'NEXT TIME'?

- This was combined with weak and fragile banking systems and unbalanced corporate balance sheets, with serious currency mismatches¹.

Volatile foreign capital flows

In economics, it is often assumed that the current account is the driver of the balance of payments. But in the case of East Asia in the five years leading up to the crisis, the driver was the capital account. Asia had become the flavour of the month in international financial circles, and every portfolio manager wanted to have some exposure to this economic miracle. This was not irrational or poor judgment. These countries had uniformly recorded quite steady growth of 6-8 percent annually (twice the growth of developed countries), and were offering high rates of return on capital. Equity markets may have been embryonic and with untested governance, but they offered an entrée to this action.

Domestically, borrowers in these emerging countries faced interest rates of 20 percent (a typical borrowing rate in Indonesia before the crisis), so were ready to offer lenders an attractive rate. This was exacerbated by the abnormally low interest rates in Japan, which encouraged the 'yen carry trade' – borrowing in yen to invest in other currencies such as baht or rupiah. While the financial institutions were often untested and inexperienced, some of them (notably the Bangkok International Finance Facility) were specifically tailored to encourage these flows². All these factors combined to produce a 'weight of money' to invest in these countries. The outcome, for Thailand, was five years in which capital inflow averaged 10

percent of GDP annually, and peaked at nearly 13 percent just before the crisis.

The central analytical issue here is the intrinsic vulnerability of capital flows and their sensitivity to exchange rate movements. Capital-flight sensitivity depends on market confidence that the exchange rate is somewhere near its equilibrium value, and that if it is displaced by a shock, it will have a strong tendency to return – so-called mean reversion. This seems a valid, if rough, rule of thumb for the mature economies. For the emerging countries, however, (in 1997 and today) the anchoring seems much less secure and well-defined. These economies are not in equilibrium, in any sense that an economist can model: relationships are uncertain and coefficients are changing over time. The countries of East Asia are transforming their productive structures to fit the globalised world, undergoing rapid and substantial structural change, which will change the equilibrium exchange rate over time vis-à-vis the mature economies. This might be seen in terms of the Balassa/Samuelson Hypothesis (that fast economic growth is accompanied by an appreciation of the real exchange rate because of differential productivity growth between the tradable and the non-tradable sectors (see Ito et al (1997)). In addition to the Balassa/Samuelson issues (which are about changing relative prices), there are more complex aspects of structural change. These were demonstrated in Japan in the 1960s when the exchange rate could be held at 360 yen per dollar for many years in the face of Japan's productivity revolution, but when floating came in 1971, the currency appreciated by 40 percent in the next five years. Most of the countries of East Asia are currently operating

TEN YEARS AFTER THE ASIAN CRISIS: IS THE IMF READY FOR 'NEXT TIME'?

well inside the technological frontier, with capital/labour ratios a tiny fraction of those in mature economies. As capital is gradually built up and technology is transferred, they move towards the frontier, and during this extended process there are high returns to capital. For foreigners, these potential large profits are a magnet in their search for yield. But they are surrounded by uncertainty and a changing environment. Little wonder that there are waves of euphoria and pessimism, which are translated into big fluctuations in what the market regards as a 'correct' exchange rate. With this environment in mind, investors will be flighty: when the exchange rate starts to move, they will look to close off their exposure, because their forecasts of the exchange rate are based on extrapolation of the most recent movements rather than mean reversion.

Take, for example, the current case of China. Its exchange rate is no longer absolutely fixed, but is very tightly managed so that it appreciates only slowly. If it was freely floated now, there is little doubt that it would appreciate significantly: Goldstein (2005) puts the equilibrium exchange rate 20-30 percent above the current level. But how should this equilibrium rate be calculated? There is no historical experience in China of a floating exchange rate which might supply some relevant data. In addition, China is receiving substantial capital inflow in response to the perceived profit opportunities there, which will persist for some decades. This implies that it should be well above the appreciation envisaged by Goldstein, to help in the 'transfer problem'³. As well, with the economy running hot, interest rates should be much higher than they are at present, for short-term cyclical reasons, and this would put further upward

pressure on the exchange rate. On top of this, there are capital controls (on both inflows and outflows) which will be progressively removed over time, which might affect the exchange rate in either direction.

In short, it is all so uncertain that perceptions of the appropriate current exchange rate can be easily diverted, and by a long way and for a long time. For foreign investors, their knowledge of these countries was often quite superficial (their motivation was diversification, and this was a relatively small investment for them), so the arrival of new information – perhaps just a rumour) might be enough to trigger a fundamental change in view. Capital is flighty because the exchange rate is unanchored, and the exchange rate is unanchored because capital is flighty.

Has any of this changed since the Asian crisis? For the foreseeable future:

- Emerging financial markets will be small relative to international portfolio flows
- There will be thin information, poorly understood by foreign investors, and the markets will be subject to whims and fashions
- The 'natural rate' of interest (at which domestic markets are in equilibrium) will be higher than in the mature countries because of the intrinsically higher profit opportunities as these countries move to the technological frontier. Balassa-Samuelson effects will reinforce this.
- Yen-carry is still an important motivation for capital flows
- The resulting capital inflows will put upward pressure on the exchange rate (which some will see as 'over-valuation'),

TEN YEARS AFTER THE ASIAN CRISIS: IS THE IMF READY FOR 'NEXT TIME'?

making it vulnerable to subsequent downward pressure when sentiment reverses

- Higher interest rates are an ineffective response to this exchange rate weakness, as the prospect of a depreciation in the near future can only be offset by an unacceptably high interest rate
- Knowing this, foreign capital will be flighty.

In short, policy should be ready for excessive capital inflow and subsequent sudden reversals.

Influential analysts (e.g. Stan Fischer, IMF First Deputy Managing Director and a key figure during the crisis) have seen the central issue as fixed exchange rates (rather than intrinsic in the nature of international capital flows to emerging markets), with the remedy to be found in free-floating exchange rates⁴. This view is widely shared: in this view, flexible exchange rates, combined with the removal of any government guarantees (with the moral hazard that goes with this) will encourage borrowers to hedge their currency exposure (see Goldstein and Turner (2004)) and, by strong implication, all will be well.

For those who see fixed rates as the chief villain, the key point is that this regime discouraged borrowers from hedging their foreign exchange exposure, as fixed rates gave an exchange rate 'guarantee' to borrowers. This not only ignores the reality that many borrowers *did* face shifting exchange rates⁵, but as well, this view misunderstands the macro-level characteristics of hedging. An individual borrower exposed to foreign currency risk can easily arrange with a bank for a hedge. While the risk can be shifted to another resident or to a foreigner, it cannot be removed. If there is a capital inflow, someone (either resident or

foreigner) has a currency mismatch. The risk could only be extinguished by buying the currency of their exposure, which effectively reverses the capital flow. So if there is capital flow, there is unhedged exposure on the part of a resident or a foreigner and if the cumulated flows have been large, the mismatch will be large^{6 7}.

If there is a loss of confidence in the currency and "sudden stop" or reversal of capital, there will be three responses:

- The exchange rate will fall. If foreigners are holding the currency exposure, they will sell the currency to close off their position. If confidence has been lost, it might fall a long way before a buyer is found ready to take on their exposure.
- A fall in the exchange rate administers a balance sheet loss to the party holding the exposure. If hedging has shifted this to foreigners, this will leave domestic borrowers isolated from this element of the 1997-8 damage.
- At a macro level, the borrowing country has to adjust to the new diminished availability of foreign funding. Part of this adjustment will come with the fall in the exchange rate ('switching'). But given the sudden withdrawal and the need for speedy adjustment (the identities between current and capital account have to hold continuously, in the absence of intervention), the adjustment will probably also require a sharp fall in demand. So the falls in income seen in the early stages of the crisis were the *necessary* response to match the current account with the available funding in the capital account, and would be needed whether the currency exposure is held by a resident or a foreigner.

TEN YEARS AFTER THE ASIAN CRISIS: IS THE IMF READY FOR 'NEXT TIME'?

Thailand in late 2006 exhibited some of the symptoms of this ongoing problem. Even though capital is at present 'flowing uphill' from the emerging markets to the mature economies and Thailand's interest rates are significantly lower than the longer-term 'natural' rate, Thailand was experiencing a combination of capital inflow and strong trade performance which together put substantial upward pressure on the baht, which appreciated 16 percent in the year prior to the recent capital measures, despite heavy intervention. While this pressure has now been dampened by the unhelpful damage to sentiment through clumsy attempts at restraining capital inflows, the problem remains for India, Vietnam and Korea.

To summarise this section, the intrinsic volatility of capital flows remains, and while floating exchange rates may offer some protection and hedging with foreigners may shift some of the pain, there are still good grounds for 'fear of floating', at least as the panacea for volatile capital flows.

Fragile financial sectors

The weaknesses of the financial sector in Indonesia were well-known before the crisis (see Enoch et al (2001) and Montgomery (1997)), but it was accepted that it would take time and major effort (not least on legal, governance and bankruptcy issues) to fix the problems. The Fund's programs of ROSCs⁸ and FSAPs⁹ has strengthened regulations and encouraged transparency. Today, while there is little doubt that much progress has been made (see Turner (2007)), many of the intrinsic problems remain¹⁰:

- Shortage of commercial information. Credit bureaux are embryonic and credit ratings still under development
- As the majority of substantial firms were *de facto* insolvent during the crisis, unresolved insolvency issues hang over many commercial borrowers
- Resolution of property rights are poorly defined in the event that the lender needs to seize the collateral security
- Corporate governance practices and regulation still have a long way to go
- The operational independence of the regulators is uncertain
- State-owned enterprises and other powerful borrowers may still be able to apply pressure to obtain loans and may resist proper credit practices.
- State-owned banks, with their inherently flawed governance, are still nearly half of the Indonesian banking sector. Ten years after the crisis, their non-performing loans are 16 percent.

Much attention has been given since the crisis to financial safety nets. These comprise prudential supervision, lender-of-last-resort (LoLR), depositor insurance and 'financial deepening'. Let's look at each of these.

(a) Prudential supervision.

There is no doubt that this has improved. The issue is not, however, the degree of improvement (after all, it improved in the five years before the crisis, from a very low base), but whether it will be sufficient to prevent a systemic or wide-spread financial crisis. This is not an easy judgment. Much of the improvement has been in terms of liquidity management and reporting: box-ticking and

TEN YEARS AFTER THE ASIAN CRISIS: IS THE IMF READY FOR 'NEXT TIME'?

form-filling. The central issue for banks is to ensure that loans are repaid, and this requires good credit management, no connected lending, no special relationships between state banks and state enterprises, quick recognition of problem loans, strong legal systems and well-functioning bankruptcy procedures to gain good title to collateral. None of these elements seems strong in Indonesia and perhaps not in Thailand either.

(b) Lender of Last Resort.

The LoLR (BLBI) in Indonesia was, by common agreement, a disaster. But its deficiencies have not been properly analysed, to see in detail how to handle the next time. The reaction has been to put in a comprehensive layering of checks-and-balances surrounding use of the LoLR, in particular requiring that it be approved by a group of officials representing the central banks, the Ministry of Finance and the Deposit Insurance agency. The latter has carriage of bank resolution (although the central bank has all the data and prudential experience). The precedent of imposing long jail sentences on the three BI officials who signed off on the initial BLBI seems almost certain to result in a great reluctance for any future LoLR sign-offs. The Bagehot dictum ('lend freely') simply isn't feasible in Indonesia now. The response to the inadequacies of LoLR in the crisis has been to effectively eliminate LoLR from the armoury of policy instruments (or, at best, introduce fatally-extended delays in application).

(c) Deposit insurance.

Much hope has been put in the creation of deposit insurance agencies. These are seen in

terms of adding to the stability of the banking system, but it is hard to see how they can serve this role, as all cases implemented or under contemplation in East Asia have, as a central characteristic, limits on coverage – only relatively small deposits are covered. Configured this way, deposit insurance can serve two useful functions. First, assist in the smooth resolution of individual bank failures, especially small banks. Second, it may help to limit the degree of government support, by defining the extent of assistance (insurance) beforehand. But it cannot address the problem of systemic runs on banks. Non-insured depositors are small in number but large in amount: these depositors are better informed, so will 'run' more quickly (especially as they know they are not insured) and their deposits comprise the majority of bank funds, so their 'run' will ensure systemic bank illiquidity.

(d) Financial deepening.

What about the non-bank financial sector? Former Fed Chairman Greenspan urged its development as a 'spare tyre', with the implication that it might provide finance in the event of the banking system getting into trouble, in the same way that the bond market stepped in to provide finance after the Continental Bank illiquidity. While the case for developing the bond and equity markets seems powerful (and this was already underway before the crisis), it has to be accepted that this is a very long-term task, which not only requires market and legal infrastructure, but commercial information which is not available at present nor in the immediate future¹¹.

When the bond and equity markets are each substantially bigger than the bank credit

TEN YEARS AFTER THE ASIAN CRISIS: IS THE IMF READY FOR 'NEXT TIME'?

market (as is the case in the USA), it makes sense to see them as alternatives to the banks as providers of funding for business. But in Indonesia the corporate bond market is minuscule and there have been few new equity issues since the crisis. What seems lacking in the discussion of financial deepening is a sharper sense of priorities, magnitudes and sequencing. All the crisis countries came out of the crisis with large volumes of government bonds, which could have provided the basis for a market with breadth depth and resilience, providing a well-defined yield curve, getting institutions and the public accustomed to dealing in and holding bonds, and forming the basis for vigorous derivative markets such as repos, which could form the basis of central bank open market operations. This has not happened so far.

While the glamour may be in the sophisticated instruments in financial markets, the heavy lifting will be done by the banks, and the most pressing issue is to get them into the hands of private owners, preferably foreign ones.

III. The Fund's current position

In the Fund's own analysis of the crisis, there is not much recognition of any deficiencies in its own part, and a tendency to 'blame the victim'. Michel Camdessus, returning to Jakarta in 2006 for the first time since the famous crossed-arms signing with then-president Soeharto in January 1998, is reported to have said that, as Indonesia was now going well, this showed that the Fund's prescription had been right all along. More recently, Anne Krueger (2006), Deputy Managing Director, noted: 'The Fund was heavily involved in the resolution of

these crises. Financial support was often needed more urgently, and on a larger scale, than had been the case in earlier episodes where Fund support was needed. Yet in spite of the difficulties, it is clear that with hindsight the adjustment programs put in place with Fund support were far more successful than most observers believed possible at the time.' For some of us, the sequence was precisely the opposite: we started with the belief that the Fund would succeed and over time came to the realisation that it did not.

Clearly there were serious policy and implementation deficiencies both before and during the crisis on the part of the crisis countries themselves. Moreover, as sovereign countries, they were and are responsible for their policies. Much of this territory has been traversed before, so here the aim is to focus, not on what the Fund did and said in 1997-98, but what it might do and say today if something analogous arose again. Past performance is not a guide to the future, but it is often all we have. This process is, inevitably, hypothetical, and Fund officials have a variety of views (and their views are often accompanied by a disclaimer that they don't represent the Fund's position).

Recently, some Fund staff *do* seem to accept that volatile capital flows plus fragile financial systems were at the heart of the crisis. In appraising the crisis after ten years, Burton and Zanello (2007) say:

'Its hallmark was the sudden reversal of investor sentiment and abrupt withdrawal of international capital. Doubts about the soundness of financial institutions and corporates spread quickly across national

TEN YEARS AFTER THE ASIAN CRISIS: IS THE IMF READY FOR 'NEXT TIME'?

borders, creating a vicious circle of capital outflows, plummeting exchange rates, and crippling balance-sheet effects in the crisis-struck countries.'

Gosh's position (2006), too, has a fair overlap with the discussion here:

'...these countries remain susceptible to shifts in market sentiment. ...Most capital account crises appear to have been caused by foreign currency and maturity mismatches on private or public sector balance sheets coupled with a specific trigger—domestic or external.' (Gosh (2006)).

Lipschitz (2006) analyses the forces driving capital inflows in the same way as we have here:

'EMEs are characterized by lower capital:labour ratios than advanced countries and improving total factor productivity. Sizable capital inflows are likely to be an essential part of the income convergence process. The marginal product of capital is a positive function of total factor productivity and a negative function of the capital:labour ratio.

Given relatively low capital:labour ratios, there are likely to be high returns and thus large inflows as total factor productivity levels converge with better institutions and economic governance...[This vulnerability can be avoided]...where:

- Unhedged domestic corporations are financed only through domestic-currency bonds and equity.

- Only robust, naturally hedged corporations (i.e., exporters) borrow in forex.
- Consumers borrow in domestic currency paper with large own-equity requirements.
- The government borrows very little and only in domestic currency.
- And banks do maturity transformation with prudent asset-liability management; all forex loans are to hedged corporations.
- This would leave no balance-sheet vulnerabilities. But in the real world some countries cannot borrow in domestic currency or long term; therefore use of foreign capital necessarily entails some forex exposure and maturity mismatch.'

But very little of these sorts of concerns are found in Fischer's Robbins Lectures (Fischer (2003)), his major analysis of the crises¹². Nor is this found in the more recent analysis of Fund Deputy Managing Director Anne Krueger (2006):

'At first it was assumed in some quarters that these crises reflected capricious shifts in investor sentiment; that national economies were now subject to the whims of speculators. ...

But it became clear that painful though these crises were, they had their origins in underlying weaknesses in the economies affected—weaknesses to which investors had reacted. In some cases, governments had accumulated debts that were unsustainable. In others, rapid private sector credit growth had led to a sharp deterioration in the quality of lending with a

TEN YEARS AFTER THE ASIAN CRISIS: IS THE IMF READY FOR 'NEXT TIME'?

rise in the number of bad loans with adverse implications for potential economic growth.'

If vulnerabilities re-emerge, despite more flexible exchange rates, what policies are available?

- Market-based measures to restrain excessive inflows, along the lines of the Chilean deposit requirement on short-term inflows.
- Readiness to raise interest rates dramatically.
- Readiness to 'lend freely' (by analogy with a bank run).
- Related to this, for the government to take over the currency exposure.
- In the event of a serious reversal, to restrict capital outflows through 'stand-still' arrangements for bank-to-bank loans, and enforced 'bail-in' of private sector creditors.

How do the Fund's current policies and attitudes match this list?

(a) Short-term inflow controls

The Fund has come to a begrudging acceptance that some controls on inflows may, in some circumstances, be justified. There remains, however, a rather disparaging tone. Just as 'real men don't eat quiche', real countries don't resort to capital controls, even market-based limits on inflows. Note the tone in Stan Fischer's (2006) endorsement: 'Evidence from the Chilean experience suggests that controls were for some time successful in allowing some monetary policy independence, and also in shifting the composition of capital inflows towards the long end. Empirical evidence suggests that the Chilean controls lost their effectiveness after 1998. They have recently

been removed.' If such short-term capital controls *are* a legitimate instrument of policy, we need the IMF to provide a more fulsome endorsement than this: an unambiguous statement that these measures are not only acceptable, but desirable policymaking in some specific circumstances. That, in itself, would make the measures more effective because the market would spend less time in the sort of counter-productive criticism seen in Thailand late last year.

(b) Higher interest rates

There was always an analytical ambiguity about the Fund's advocacy of an interest rate defence. If the analytical framework was that of portfolio balance, then the interest rates had to be high enough to balance the expectation of *short-term* depreciation. If there was a 50:50 chance of a two percent depreciation over the next day (which was not unusual in Indonesia during the crisis), then the annualised rate of interest needed to balance this was more than a thousand percent. This level was not, in fact, contemplated during the crisis (although in Sweden in 1992, 500 percent was used in the initial defence). So what *was* the analytical framework? How high was 'high enough'? Other than urging that interest rates needed to be higher while the exchange rate was weak, this is not clear. What we know is that this type of defence has not worked often in the past and is very unlikely to work if there are concurrent problems in the financial sector (See Goldfarjn and Gupta (1999)).

(c) 'Lend Freely'

The requirements here are that there are sufficient funds (enough to convince the market that there is no need for capital to flee), and

TEN YEARS AFTER THE ASIAN CRISIS: IS THE IMF READY FOR 'NEXT TIME'?

that they are made available quickly. The model is Mexico in 1994: \$50 billion was made available quickly from the Fund and other sources. Because it was seen by the market as clearly ample to do the job, much less was actually needed (\$20 billion). In the Fund commentary during the Asian crisis four years later, parallels with Mexico were *not* drawn and the amounts available for Thailand and Indonesia were much smaller. It's hard to know whether the Fund would have been more successful in these two countries if more money had been available. It could be that the Fund made the right diagnosis in Asia in 1997, but that there were simply not enough funds available to 'lend freely'¹³.

For the East Asian countries, there are three reasons for concern about the Fund's LoLR role. The first is whether there would be adequate funds to convince foreign capital to stand fast: the required sum might be very large, given that there might well be region-wide contagion. The capital account reversals in Indonesia and Thailand were in the order of 15 percent of GDP, so funding just these two countries would take \$60 billion. A 10 percent reversal in China would amount to more than \$200 billion. Since 1998, the Fund has shown the capacity to provide greatly increased funding e.g. in Turkey. Brazil was offered \$30 billion of IMF money in 2002, but even these sums seem insufficient for the general problem. These inter-country comparisons raise a second issue. Both Turkey and Brazil have 'champions' to push their cases. Asia's champions (Japan? China?) have no track record of being able to deliver: would Asia once again be 'short-changed'? What about supplementary bilateral funds on an ad hoc basis, as occurred successfully with Thailand but unsuccessfully

with Indonesian and Korea? The one unanimous lesson drawn from the Asian crisis is that second-line defences don't work¹⁴. The third issue is the speed of disbursement. In 1997 the available funds were not only inadequate: as well, they were 'tranche'd' – i.e. made available over time. The rationale here is a throw-back to the 1980s Latin American crises, where the Fund wanted to make sure that the corrective policies (in those case, macro policies) were being applied. This caution is understandable, but if the problem is analogous to a bank run, then all the money has to be available up front, ready to be disbursed, to convince the market that it isn't needed.

There was frequent mention, in the early days of the crisis, that the Fund lending was 'catalytic' and that it would trigger a renewed inflow of private capital (or at least stop the outflow) (see quotes in Hoverguimian (2003), and her Table A showing the predicted outflows and the actuals). She concludes: 'Recent theoretical analysis suggests that this catalytic effect is fragile and will only work in limited circumstances. Empirical evidence bears this out: in most cases the expected turn-around in capital flows has failed to materialize. There is merit, therefore, in further consideration of alternative responses to capital account crises, including payments stand-stills and roll-overs.'

Following the crisis, there was an initiative that would have made available funds with the speed (although not necessarily volume) that is required: the Contingent Credit Line. The CCL would have made 'pre-approved' commitments to countries with sound policies. This proposal was met with a universal lack of enthusiasm: potential recipients saw the CCL endorsement

TEN YEARS AFTER THE ASIAN CRISIS: IS THE IMF READY FOR 'NEXT TIME'?

as a warning to potential lenders, while others saw technical problems: it would be very difficult to take away the 'seal of approval', once given, even if the country became less virtuous. The initiative was not helped by the wide-spread perception that this was a way of providing on-going support for certain favoured countries, notably Argentina.

(d) Government assumes currency exposure

This provides the potential for discouraging outflows and supporting the exchange rate without the use of actual foreign reserves, but it has a mixed record of success. In Mexico in 1994, as foreigners holding pesos bonds began to worry about their exposure, the government provided exchange rate indexation to encourage foreigners to remain invested (*Cetes* were replaced with *Tesobonos*). This worked only temporarily. In Indonesia in early 1998, there was discussion of exchange rate guarantees for private commercial debt, but the INDRA initiative did not get underway until almost a year after the crisis began, and the initiative soon fizzled out. These two unsuccessful examples contrast with Brazil in 1999 (Bevilaqua and Azevedo (2005)), where the government issued its domestic dollar-denominated debt, which then formed the basis of private sector hedging, easing the pressure on the exchange rate (but taking on the currency risk, which in the Brazilian case, turned out to be a good bet). There seems to have been very little analysis of this type of policy and it is not clear what the Fund's attitude is or would be.

(e) Controls on capital outflows: 'bailing in' the private sector

If there were not enough funds available to compensate for the fleeing capital and convince it to stand fast, then the only way to avoid a large fall in income was to restrict the capital outflow. When higher interest rates didn't do this, the next step should have been to discourage outflows through some coordinated, organised, probably compulsory, method. This was done successfully for Korean bank-to-bank debt at the end of 1997, and the Fund claims that similar informal arrangements were in place in Thailand¹⁵, although there is no evidence of this in the balance of payments data, and it was certainly not discussed as part of the multilateral support arrangements¹⁶. Similarly, the concerted attempts to restructure debt and encourage debt/equity swaps in Indonesia did not get underway until a year into the crisis.

Every country has domestic bankruptcy provisions to handle the *in extremis* case where creditors cannot repay and the only sensible thing to do is to organise a stand-still on repayments and have an orderly resolution. This does require an organised effort and an arbitrator, to ensure fairness and orderliness¹⁷. This organised process still doesn't seem to be available at the international level.

Where does the Fund stand now on this issue? Some key figures sound quite ambivalent. Fisher (2003), for example, discusses the possibility of 'private sector involvement' and adds: 'Nonetheless, great care needs to be taken in seeking to coordinate the creditors.' Even if some of the Fund staff has moved a long way in the direction of 'bailing in' the creditors, they have not been able to sell this view to its member countries. The relatively straightforward issue of sovereign debt

TEN YEARS AFTER THE ASIAN CRISIS: IS THE IMF READY FOR 'NEXT TIME'?

restructure was not agreed to by Fund members, despite the Fund staff's strenuous efforts (Krueger (2002)). It will be under the same pressure, next time, to keep creditors whole, which makes the cost of rescue hugely greater. Arguments about 'lending into arrears' are still unsettled, with the possibility that creditors will use the bargaining weapon of their arrears to hold up a Fund program. Arguments about moral hazard and technical debates about collective action clauses (it seems that collective action would have been possible all along) will once again muddy the waters and muddle the issues, which require quick and decisive resolution. We don't yet have this¹⁸. In short, the Fund recognises the need for a different approach, but has not yet been able to persuade its members.

IV. Lessons learned and not learned: 'Mission Accomplished'?

The immediate adjustment of the crisis countries involved a huge redeployment of demand and production, to shift current account deficits into surplus, in order to fund the outward flows on capital account. In Thailand, for example, the current account shifted from 8 percent deficit in 1996 to 13 percent surplus in 1998, a net expenditure movement of over 20 percent of GDP. Having made this painful redeployment, current accounts remained in surplus. In the case of Thailand and Indonesia, this reflects a level of GDP still well below the upward trend line established before the crisis (around one third lower for Indonesia, and a quarter lower for Thailand), and a significantly lower level of investment than in the lead-up to the crisis (or

even compared with the period before the pre-crisis boom).

This has left East Asia today in circumstances that are quite different from 1997. Their foreign exchange reserves and current account surpluses have removed their susceptibility to capital reversals¹⁹. With international capital 'flowing uphill' from the emerging economies to the mature economies, capital reversals are not an issue. Foreign debt, both public and private, has been dramatically reduced since the crisis. For the same reason, emerging countries are not accumulating currency mismatches. There is no investment boom: in fact the three IMF-assisted countries recorded investment growth of only 3-4 percent in 2006²⁰. Their currencies, if not floating freely, are more flexible. Moreover, the memories of 1997-8 are still fresh for policy-makers, private commercial borrowers, banks and foreign lenders. For its part, with its main potential 'customers' for loans (emerging economies) in good shape world-wide, the Fund is flush with funds in the unlikely event that there is any demand for emergency lending.

Thus there seems little risk of a repeat of the Asian crisis any time soon. Does this mean that we should all take quiet satisfaction in a job well done – 'mission accomplished'? We will argue here that the responses to the crisis have created problems of a different nature, and today's conjuncture, while not urgently critical, is neither sensible nor sustainable.

Perhaps the sharpest dichotomy between the Fund's prescription and the outcome has occurred with exchange rates. Certainly, all these countries have modified their soft fixes or slowly-moving pegs. Almost everywhere, there is short-term flexibility, and those who want to

TEN YEARS AFTER THE ASIAN CRISIS: IS THE IMF READY FOR 'NEXT TIME'?

measure 'floating' in terms of short term volatility (daily bumps in the rate) can find evidence that these countries are floating. But the true substance of floating embodies more than this: the rate should, over time, clear the foreign exchange market when the current and capital accounts are reflecting sustainable positions. This is, of course, not consistent with the rapidly accelerating reserve build-up in China. Nor is it consistent with the rise in reserves in Korea (see graph), Malaysia (with a current account surplus equal to 15 percent of GDP and reserves equal to 50 percent of GDP) or, on a smaller scale, Thailand with its 30 percent increase in reserves in 2006. Why has there been such a divergence between the central lesson the Fund draws from the crisis and exchange rate behaviour in practice since then?

The countries of the region have built up foreign exchange reserves of \$2,000 billion, and they are rising at a rate of \$450 billion a year (the 2006 increase) or more. This is driven in part by the desire to insure against a repeat on 1997-8. But it goes further than this. With investment now much slower in all countries except China and Vietnam, one way of promoting growth is to encourage exports – not so much for narrow mercantilist reasons (although these may be present), but to absorb the growing labour force. A loss of international competitiveness vis-à-vis China would not only reduce export share, but would encourage more investment to shift there.

This outcome is far from optimal. Capital flowing uphill, from countries which would seem to have greater need than the mature economies such as the USA, seems counter-intuitive²¹. The rising reserves makes money

sterilisation difficult (China's reserves are equal to 50 percent of GDP, so to sterilise this, bonds of the same magnitude have to be issued (and the interest bill funded). To reduce the sterilisation burden China and Indonesia have resorted to imposing substantially higher reserve requirements on their banks, shifting the burden through an implicit tax which adds to intermediation margins and hinders the development of a strong financial sector. This excessive liquidity is encouraging banks to fund asset price inflation which is resulting in bubbles in at least two equity markets – China and Vietnam. Interest rates have been kept low for the wrong reasons – to discourage capital inflow, rather than being used as the instrument to contain inflation. The efforts to keep the exchange rate low and stable through intervention are just delaying the inevitable – appreciating real exchange rates are part of this phase of development, and if the nominal rate doesn't appreciate, sooner or later the real rate will, through faster inflation.

Exchange rates lie at the heart of these issues. In the face of strong and unanimous advice that they should adopt 'corner solutions' – either immutably fixed or free floating – Asian countries are using slowly-sliding pegs (China) or floating with very substantial intervention (as reflected by continuing increases in reserves in Korea, Thailand in 2006, and Indonesia), or Singapore's version of the 'BBC' – basket, band, crawl. Some have seen this as a return to Bretton Woods (Dooley *et al* (2003)), but the architects of Bretton Woods would have seen the need for adjustment in response to the 'fundamentals' of a current account surplus running at 10 percent of GDP and growing, as is the case in China. Delays in appreciation increase speculative capital inflows which aim

TEN YEARS AFTER THE ASIAN CRISIS: IS THE IMF READY FOR 'NEXT TIME'?

to profit from the eventual appreciation. To the extent that it merely delays the adjustment, the cost of adjustment will be greater. With China's reserves around 50 percent of GDP, a 20 percent appreciation would administer a capital loss to the central bank equal to 10 percent of GDP. Current efforts at diversification of foreign exchange holdings may achieve a better return, but do not remove the funding burden and the exchange rate loss when the rate appreciates. If interest rates are too low and credit growth too fast, this has to end badly, either in inflation or asset price bubbles, as seems to be the case in Chinese equities.

The Fund has, sensibly, not joined in the public international harangue demanding a large appreciation of the yuan, but nor has it been able to play much of a positive role behind the scenes. Part of the problem was that much of the Fund's general analytical message after the crisis was in terms of 'corner solutions' – countries either had to have immutable fixes or free floats, and there was no recognition of the 'fear of floating' (Calvo and Reinhart (2002)). 'The lively debates over exchange rate advice have taken place in other fora, in informal discussion, and in individual country cases.' (IEO 2007 page 33). Country-by-country, the Fund has accepted the full gamut of regimes (being equally satisfied with BBC in Singapore and a hard fix (often wrongly styled a currency board) in Hong Kong)²². But in general, we don't see much support for the BBC policies which Singapore has practised so effectively²³.

As a result the Fund has been largely side-lined in a debate where it might have played a useful role. None of the countries of East Asia has been attracted to the idea of a perfectly free float. Much analytical energy has gone into the

idea of a regional currency (led by the Asian Development Bank). The idea of a regional currency has at least one attraction – it addresses concerns that individual countries will lose competitiveness vis-à-vis China if they appreciate. But it flies in the face of the economic arguments (encapsulated in the idea of 'optimal currency areas') that countries with such diversity of structures, economic maturity and resource endowments as Japan and Indonesia cannot sensibly operate with a common currency. If regional currency does not hold the answer, what does? What should be The Fund's advice? The central elements might be:

- How to anchor the exchange rate against excessive overshoots in either direction
- How to maintain relative competitiveness, particularly vis-à-vis China

This might involve acceptance of some BBC-like system plus some regional co-ordination which involves China moving its rate more than it has done in recent years, with the other non-Japan Asian countries following suit. Could the IMF play this coordinating role? If its success in the wider debate (exemplified by the Multilateral Consultation on Global Imbalances) is any guide, not much can be achieved with the present institutional arrangements. The Fund's regular circus-like meetings are clearly not the place for such co-ordination, and while the process of small-group discussion is not yet complete, it looks pretty empty so far.

If the sub-optimality of the current conjuncture were to be corrected over time, with some currency appreciation, stronger domestic

TEN YEARS AFTER THE ASIAN CRISIS: IS THE IMF READY FOR 'NEXT TIME'?

investment (or consumption in China) replacing exports as a source of growth, current accounts will move into deficit and capital will once again 'flow downhill': the intrinsic attractiveness of these emerging countries, with high profitability as they move towards the technological frontier, will assert itself and the flows will be inward. When this happens, the issues discussed in this paper will once again be relevant.

V. Conclusion: the Fund's role

What might the Fund do to hasten this move to a more optimal configuration? When capital inflows return, will the Fund be able to minimise vulnerabilities to capital reversal? What will the Fund be able to do if there is another 'sudden stop'?

Perhaps the greatest hurdle for the Fund to overcome is that the last crisis did deep damage to the Fund's reputation in at least four of the countries of the region: Indonesia, Thailand, Korea and Malaysia. This is manifest in the vigour with which the Chiang Mai Initiative has been put in place. The Fund might do better to work with these regional initiatives rather than oppose them, as it did with the Asian Monetary Fund. It showed, too, in the early repayment of Fund loans, with an almost audible sigh of relief as the Fund's close oversight was removed. One result is that countries will be reluctant to call on the Fund's assistance, and delay will exacerbate any crisis.

The Fund can argue, with considerable justification, that the governments it had to work with (particularly in Indonesia) were divided, un-coordinated and often in disarray.

But this is the nature of Indonesia and the nature of crises. So the Fund can't excuse itself by blaming the victim: well-functioning countries rarely get into trouble, so the Fund has to get used to working with the sort of governments which get into trouble – those which are unable to implement perfect policies, and which make mistakes of analysis and implementation.

If it was hard last time round, it will be that much harder if there is a repeat. Governments in these countries are more democratic (which makes them weaker, less decisive, softer, flakier, perhaps less market-oriented), and so less able to respond with one voice and take hard decisions quickly. Pressures of nationalism and populism seem likely to be considerably greater 'next time'. Over-arching all this, globalisation and financial market integration continue their inexorable expansion.

TEN YEARS AFTER THE ASIAN CRISIS: IS THE IMF READY FOR 'NEXT TIME'?

NOTES

¹ This diagnosis might be contrasted with earlier crisis experience, particularly in Latin America during the first half of the 1980s, where the capital reversals were symptomatic of other serious domestic macro-imbalances. For Asia, good macro policies (balanced budgets, modest current account deficits and tolerably low inflation) were not enough. For a useful account of the crisis (although less critical of the IMF than this author), see IMF Independent Evaluation Office (2003).

² Although they may not have been intentionally designed to encourage small Thai firms to borrow in dollars, as they did.

³ Keynes wrote about this problem in 1929 in relation to German reparations (Keynes (1929))

⁴ 'Had exchange rates been flexible, the six crises we have discussed in these lectures would either not have happened, or would not have taken the form they did. That is why the shift to flexible rates among the emerging market countries is the most important change in the international financial architecture during the past decade. It will not prevent all external crises, for debt sustainability crises will still occur, but it should greatly reduce the frequency of crises.' Fischer (2001b)

'Fixing the exchange rate or protecting an exchange rate provides an invitation to the private sector to bet against the authorities if the capital account is open: in short, the impossible trinity. I believe that the move to flexible exchange rates has made more of a difference to the international financial system than any other change. That change takes away a major risk factor.' Fischer (2006)

⁵ If borrowers saw the fixed rate as a 'guarantee' by the government to always sell them foreign exchange at the current price, it would, indeed, have been a big encouragement to borrow at the lower rates available for foreign-currency loans. But it would

have also ignored the fact that Indonesia, for example, had devalued vis-à-vis the US dollar three times in the previous twenty years. It also doesn't fit the case where the borrowings were in non-US dollar currencies (half Indonesia's foreign borrowings were in yen – the 'yen-carry-trade' – which currency had moved over a range of 79-149/ \$US during the first half of the 1990s). So any borrower who thought they had a guarantee was ignoring the obvious reality.

⁶ Some might note the possibility of shifting the exposure onto a resident counterparty who has an oppose exposure through trade: a borrower shifts the exchange risk to an exporter. There may be limited opportunities to do this, but importers also want cover for their exchange exposure, so most of the natural risk-offset capacity has been used up – certainly there is no-where near enough to provide an offset for large capital inflows. As a rough approximation the trade flows cancel out the opportunity for using exports to cover foreign borrowing.

⁷ The first reaction to this pressure may (as in Mexico in 1994) be for the host government to offer to take over the currency exposure in order to prevent the capital flight, thus reverting to 'original sin'. This may be good policy-making (c.f. Brazil in 1999).

⁸ Report on Observation of Standards and Codes.

⁹ Financial Sector Assessment Program.

¹⁰ See Tables 1 and 2 in Appendix.

¹¹ When assessing the exacting requirements of an equity market, it might be worth noting that the largest insolvency coming out of the Indonesian crisis was a company (APP) registered in Singapore, with its advanced financial infrastructure, not Indonesia.

¹² 'To summarise on the origins of the crises: the Mexican, Thai, Russian, and Brazilian crises all looked more or less like conventional old-fashioned crises, in which an unsustainable current account

TEN YEARS AFTER THE ASIAN CRISIS: IS THE IMF READY FOR 'NEXT TIME'?

combined with a pegged exchange rate to lead to a crisis. However neither in Mexico nor in Thailand was there a serious fiscal problem. Financial sector weaknesses appeared especially important in Thailand, not least because its financial sector was much larger than that in the three non-Asian crisis countries. The crises in Indonesia and Korea looked different from the beginning, because both the current account and the fiscal deficits were small, and contagion seemed to play the dominant role. But the contagion hit economies with serious financial and corporate sector weaknesses, whose impact was magnified as market pressures increased.' (Fischer 2003)

¹³ When we tried to pursue this issue in drafting the IEO document (IEO (2003)), the message from the Fund was that shortage of funds had NOT been an issue in devising the response. On the other hand, Lane et al (1999 page 21) say 'Large as this official financing was, it would have been sufficient to support the programs in Indonesia and Korea only on the assumption that they would elicit a broad positive response in the part of private markets, specially in the initial phase of the programs.'

¹⁴ There were many reasons why this was the case, but the most binding was that the US contribution was not seen as 'real' money. Following Congress' displeasure that they had been by-passed in the Mexican exercise, the US was no longer able to draw on the Exchange Stabilization Fund, so their contribution was surrounded by the overlapping provisos: it would not be available if the situation proved to be serious, and it was not needed if it was not serious.

¹⁵ See Lane et al (1999), p 23.

¹⁶ At the first assistance meeting for Thailand in August 1997, Australia, as a potential provider of assistance, was looking for some assurance that its money would not simply be used to repay foreign creditors who had undertaken risky loans and were

now faced with the consequences of that risk: failure to repay. Our view was that the creditors were 'consenting adults' who should have to bear the consequences of the risks associated with their investments. Before the meeting, we asked the Chair of the conference, IMF Managing Director Sugisaki, what would be done to 'bail in' the private creditors. He said that nothing would be done. Furthermore, if we raised this issue, the conference would fail and he would publicly blame us for the failure. What can explain this extraordinary attitude, other than pressure on the Fund from creditors anxious that the Mexican precedent (where the creditors were 'made whole', without any 'haircut') would be followed?

¹⁷ Before insolvency regulations were fully developed, this sort of thing was done along the lines of J.P. Morgan's handling of the 1907 banking crisis –the parties were locked in his library and told that they would be allowed out when they had reached agreement. This might have been a model in some cases in East Asia.

¹⁸ The Institute for International Finance, which lobbied hard on behalf of the foreign creditors during the crisis, has developed 'Principles for Stable Capital Flows and Fair Restructuring in Emerging Markets', covering transparent and timely flows of information, debtor/creditor dialogue and co-operation to avoid restructuring, 'good faith' actions, sanctity of contracts and fair treatment. These include the following reference to the IMF: 'In cases where program negotiations with the IMF are underway or a program is in place, debtors and creditors rely upon the IMF in its traditional role as guardian of the system to support the debtor's reasonable efforts to avoid default.'

¹⁹ Although it is worth noting that Calvo and Reinhart (2000) still see vulnerabilities to 'sudden stops' in countries with current account surpluses.

TEN YEARS AFTER THE ASIAN CRISIS: IS THE IMF READY FOR 'NEXT TIME'?

²⁰ There is some evidence that China and Vietnam may have attracted away the manufacturing opportunities that drove their growth in the 1980s.

²¹ For a possible explanation, see Prasad, Rajan and Subramanian (2006).

²² 'Assessments of countries' exchange rate regimes are a standard feature of Article IV reports, usually taking the form of a statement noting that the regime in place has served the country well. When advice was given over the evaluation period, it tended to be in the direction of more flexible exchange rates.' (IEO 2007 p 32)

²³ Here is Fischer's (2003) views on BBC: 'In these circumstances, the band is serving as a weak nominal anchor for the exchange rate, but it is not at all clear why such a system is preferable to an inflation targeting framework. Possibly the band could be thought of as a supplement to an inflation targeting framework, but it would need to be demonstrated what if any benefits that brings. Williamson himself believes that specifying a target exchange rate range may prevent markets heading off on an errant exchange rate path. Another possibility is that by committing weakly to some range of exchange rates, the authorities make it more likely that fiscal policy will be brought into play if the real exchange rate moves too far from equilibrium. Although I do not see how to make these intermediate regimes work for emerging market countries, it is clear that floating exchange rates do fluctuate a great deal, and that it would be useful if it were possible to reduce the range of fluctuations. In these circumstances, the band is serving as a weak nominal anchor for the exchange rate, but it is not at all clear why such a system is preferable to an inflation targeting framework. Possibly the band could be thought of as a supplement to an inflation targeting framework, but it would need to be demonstrated what if any benefits that brings. Williamson himself believes that specifying a target exchange rate range may prevent

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TEN YEARS AFTER THE ASIAN CRISIS: IS THE IMF READY FOR 'NEXT TIME'?

BIBLIOGRAPHY

- Bevilaqua, A. and R. Azevedo. Provision of FX hedge by the public sector: the Brazilian experience. *BIS Paper* 24 2005.
- Burton, D. and A. Zanello. Asia ten years after. *Finance and Development* June 2007.
- Calvo, G. and C. Reinhart. When capital flows come to a sudden stop: consequences and policy, in *Reforming the international monetary and financial system*, ed. by Peter B. Kenen and Alexander K. Swoboda. Washington, International Monetary Fund, 2000.
- Calvo, G. and C. Reinhart. Fear of floating. *Quarterly Journal of Economics* 117(2) 2002 pp 379-408.
- Dooley, M., D. Folkerts-Landau and P. Garber. An essay on the revived Bretton Woods System. *NBER Working Paper* no. 9971 2003.
- Enoch, C., B. Baldwin, O. Frecaut and A. Kovanen. *Indonesia: anatomy of a banking crisis*. IMF Working Paper 01/52 2001.
- Fischer, S. Exchange rate regimes: is the bipolar view correct? *Journal of Economic Literature* 15(2) 2001 pp 3-24.
- Fischer, S. *The international financial system: crises and reform*. The Robbins Lectures, London School of Economics, October 2001.
- Fischer, S. Globalisation and its challenges. *American Economic Review* 93 2003 pp 1-29.
- Goldfajn, I. and P. Gupta. *Does monetary policy stabilize the exchange rate following a currency crisis?* IMF Working Paper 99/42 1999.
- Goldstein, M. *Renminbi controversies*. Paper prepared for the Conference on Monetary Institutions and Economic Development, Cato Institute, November 2005.
- Goldstein, M and P. Turner. *Controlling currency mismatches in emerging economies*. Washington, Institute for International Economics, 2004.
- Guimaraes R. and O. Unteroberdoerster. *What's driving private investment in Malaysia?* IMF Working Paper WP06/100 2006.
- International Monetary Fund. Financial crises and growth: in *Article IV Consultations, Thailand, Selected Issues*. Washington, International Monetary Fund, 2006.
- IMF Independent Evaluation Office. *The IMF's approach to capital account liberalization*. Washington, International Monetary Fund, 2005.
- IMF Independent Evaluation Office. *An IEO evaluation of IMF exchange rate policy advice, 1999-2005*. Washington, International Monetary Fund, 2007.
- Ito, T., P. Isard and S. Symansky. Economic growth and the real exchange rate: an overview

TEN YEARS AFTER THE ASIAN CRISIS: IS THE IMF READY FOR 'NEXT TIME'?

of the Balassa/Samuelson hypothesis for Asia. *NBER Working Paper 5979* 1997.

Hovarguimian, C. The catalytic effect of IMF lending: a critical review. *Bank of England Financial Stability Review*, December 2003.

Kindleberger, C. *Manias, prices and crashes: a history of financial crises*. New York, John Wiley, 1996.

Krueger, A. *The new economic century: experience and opportunity in the reform process*. Address to the Fraser Institute Vancouver, 3 May 2006.

Krueger, A. *Sovereign debt restructuring mechanism, one year later*. Speech at the European Commission Brussels, 10 December 2002.

Krugman, P. *Crises: the price of globalisation?* Paper presented at the symposium Global Economic Integration: Opportunities and Challenges, Federal Reserve Bank of Kansas City, Jackson Hole, Wyoming, August 2000.

Lane, T., A. Ghosh, J. Hamann, S. Phillips, M. Schulze-Ghattas and T. Tsikata. *IMF-supported programs in Indonesia, Korea and Thailand*. IMF Occasional Paper 178 1999.

Lipschitz, L. *Notes on crisis prevention in emerging market economies*. Address at the Singapore IMF meeting, September 2006.

Montgomery, J. *The Indonesian financial system: its contribution to economic performance and key policy issues*. IMF Working Paper WP/97/45 1997.

Prasad, E., R. Rajan and A. Subramanian. *Patterns of international capital flows and their implications for economic development*. Paper presented at the Federal Reserve Bank of Kansas City Conference, August 2006.

Turner, P. Banking systems in Asia: ten years later. *Asian Economic Policy Review* 2 2007 pp 75–95.

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