Capital Control as a Safeguard in the Capital Account Crisis

Chon Pyo Lee*

Many emerging market economies suffered from financial crisis mainly caused by capital account imbalances. Main recommendations for preventing crises were to keep the house clean, maintain transparency and good governance, and sound management of macroeconomic policies. It is observed that in the area of finance there is no safeguard measure, whereas in the area of trade there are a few; while the current account imbalances have less severe effects than the capital account imbalances. Thereupon, it is suggested that at least a safeguard measure can be introduced in the area of finance, and capital control is suggested as an emergency safeguard.

Keywords: Capital control, Capital account crisis, Safeguard, Current account crisis, Tobin tax

JEL Classification: F3, G1, O1

I. Introduction

The purpose of this paper is to consider the capital control as a measure of safeguard against the capital account crisis. It is motivated by the following observations. Firstly, capital account imbalances are more important than current account imbalances in the sense that they are more frequent in occurring and larger in size in crisis countries, at least recent years. Secondly, the nature of the two imbalances is of different nature as stated by Bhagwati below. Indeed, the potential adverse effects from the capital account crisis are worse than those from current account crisis. Thirdly, despite the difference in potential adverse effects between the two.

*Professor, School of Economics, Seoul National University, Seoul 151-742, Korea, (Tel) +82-2-880-6391, (E-mail) chonpyo@snu.ac.kr. [Seoul Journal of Economics 2004, Vol. 17, No. 1]

there is an asymmetry in safeguard measures provided. Accordingly, this paper indicates the necessity of having safeguard measures against the capital account crisis, and then proposes the capital control as for the safeguard in capital account difficulties.

Many emerging economies suffered from financial crisis recently; Mexico and Argentina in 1995, Thailand, Indonesia and Malaysia in 1997, Korea, the Philipine and Russia in 1998, Brazil in 1999, Turkey and Argentina in 2001. Moreover the main cause of the financial crises is considered to be capital account imbalances rather than current account imbalances. This concern led G. Ortiz to indicate that the recent economic crises from Mexico 1994-5 to Argentina 2001-2 were mainly capital account crisis (as opposed to current account crises), where there were too much refinancing problems of either private or public debts, with the concerns on the magnitude, maturity, and currency composition of the debts.1 Volatile capital movements, usually beyond the controllability of emerging economies and often associated with hot money and speculative attack and contagion, are seen the prime cause of trouble rather than the internal weakness and mismanagement of policies of crisis-hit economies. In a broader sense, of course, the latter can be said a root cause of speculative attacks, because these economies and not all others were targets of the attacks.

In the area of trade such safeguard measures as anti-dumping and countervailing duty are available against the so-called unfair trade. In addition, when there is a surge of imports with injurious effects to one or a few domestic industries, safeguard action is warranted against the surge. In contrast, in the area of capital movement there are no legitimate safeguard measures, even if capital inflow surges and/or drastic capital outflows tremendously disturb not merely a few industries but the whole economy in the form of financial crisis. This is indeed the absurd fact of present day life of global community.

This fact is really astonishing when we recall the observation by Bhagwati Trade in goods and services is a different animal from capital flows, It is not subject to herd behavior, panics, crashes, destabilizing speculation, which we all studied going back to Aliber and Triffen, self-justifying outflow of capital currency speculation and so on....So there is an asymmetry, and the question is how do

¹Ortiz (2002).

we try and retain the advantages of capital flows, which I think any sensible economist will say that any time you segment a market—there is a presumption of what we call dead-weight economic laws." These asymmetries would suggest that safeguard measures in the area of capital flow could with strong justification be developed in parallel to those in the area of trade. It can further be said the safeguard provision or so in the area of capital movements is now very urgent.

In contrast to the notice of urgency, so as to prevent a financial crisis *ex ante* and to best manage financial crisis whenever it occurs *ex post*. house cleaning of emerging economies has been most emphasized in usual discussions. Adoption of any capital control as a self-help measure has been criticized on the ground that it inhibited the efficient allocation of capital over the globe (and thereupon it is harmful even to the emerging economies), and that its effective implementation is not feasible on various accounts.

Recently the real feature of capital flows of last two decades (the period when capital movements have been regarded most freer than their previous decades after Gold Standard Era) have been studied, and it disclosed that the prime nature of capital movement is the portfolio diversification financing moving around developed economies instead of development financing to developing economies.3 This disclosure is considered as a reconfirmation of Feldstein-Horioka thesis, which doubted any real capital flows filling the gap between savings and investments of any economy. Furthermore, the reconfirmation made emerging economies be much more doubtful about the real benefits from the alleged efficient capital allocation through absolutely free capital movements. At the same time it led guard against the thesis about the real merits international capital movements in reallocating capital efficiently and in-discriminatorily on a global scale.

The merits of free capital movements may be a logical possibility, but in this stern environment of limited development financing (North-South flows) and active portfolio diversification financing (North-North flows) by global savers, and hence of very limited opportunities of inviting foreign capital by emerging economies, the possibility may have very little chance to be realized even if

²IMF Economic Forum (1998).

³Obstfeld and Taylor (2002).

emerging economies tried to invite foreign capital even taking the risk associated with speculative attacks. Seen in other way, the real cost of not having any safeguard measures on any occasion in spite of the dreadful cost incurred in the form of financial crisis should not be lightly neglected. In this regard, it turns out very regretful to recall that the peripheral emerging economies suffered so significant crisis from the smaller portion of the current international capital flows mainly related with diversification, because even the smaller portion of it could be very large relative to the size of financial flows, flowing in and out of emerging economies, specifically in some unfortunate times.

In the face of the magnitude and intensity of suffering from the financial crises by many emerging economies, abstract assertion on the merits of unconditional free capital movement does not mean much. The merits of it must be reexamined against the potential costs it accompanies with from the viewpoint of emerging economies. Some safeguard measures with strict condition for their employment might better be worked out, especially when the provisions thus far available to counter financial crisis are considered inadequate.

This paper purports to propose the capital control as for a safeguard measure against the financial crisis primarily caused by volatile capital flows, examining the control alongside with other measures thus far discussed in the literature. In section II the Asian financial crisis is considered with the attention on the remedial proposals suggested related with it. In section III the report for G7 Koeln meeting on the new international financial architecture and the other report by the Financial Stability Forum are recast with the attention on the responses to the request for stable external financial environment to emerging economies. In section IV the safety measures in domestic finance are recalled to disclose the deficiencies of recommendation of the G7 and Financial Stability Forum report. Other limitations of the measures currently discussed are further examined in section V and various self-help measures are touched upon in section VI. Capital control as a self-help measure is examined in section VII. Excessive (or overshooting) internal adjustment and external financing have been recommended to be the main weapons against the financial crises when the option of capital control is to be precluded. In section VIII internal adjustment of excessive degree is considered to show that it can involve a danger of impairing financial soundness, by examining the Korean case that has employed huge public fund for the adjustment purpose. It aims to reveal another need for capital control by indirectly disclosing an inherent difficulty in the excessive (or overshooting) adjustment, against the background of limited feasibility of external resources from the source of portfolio diversification financing associated with Feldstein-Horioka feature. Final remarks are made in section VIII.

II. Asian Financial Crisis: Causes and Remedies Suggested

Concerning the causes of Asian financial crisis various views have been presented. Internal weaknesses of the economy attacked by financial disruptions were pinpointed, together with unfavorable external influences, which lay beyond the controllability of the affected economies.

It is surprising that the most frequently talked about internal factors in relation with the LDC debt crisis in the 1980s, so called fundamentals, were not mentioned in relation with the Asian crisis. This may be so, because Asian economies had neither serious budget deficits, nor excessive monetary expansion nor too much consumption, the usual menu associated with the weak fundamentals.

The traditional factors included in the IMF standard belttightening package were at large not looked relevant for Asian economies. On the contrary, there were considerable investments, implying economic growth than crisis. Accordingly, peculiar features of Asian capitalism were brought out as for the internal causes of Asian difficulties in replacement of the usually mentioned weak fundamentals up to that time. Indication of crony capitalism was at its apex. Others pinpointed were: lack of transparency in far distance from the global standard, incredible and nontransparent corporate governance, unjustifiable system of internal trading involving transfer pricing, cross investments and cross guarantee among sister companies belonging to a conglomerate, and others. It was noticed that they hindered objective business calculations. It was observed consequent to them that lots of morally hazardous behavior was attempted without due check, and strange subsidies and hard-to-explain loans were often materialized.

The above is about the factors related with the real side of the

economy. Inadequate elements in the financial area beside them were also noted to have aggravated the situation; insufficient and inappropriate regulation of the financial institutions without recognizing the necessity of prudential supervision was noted to be the prime weakness. Nontransparent corporate governance in the financial institutions of the financial sector was indicated to result in the failure of constraining excessive investments on the one hand and unprofitable investments on the other.

As for the external factors, volatile short-term capital flows, notably hot money, sometimes influenced by self-fulfilling expectation, were regarded to be a notorious headache, whereas they often assumed the shape of herd behavior. It was also noted that the small developing economies without much influence on the stability of international financial system could not get help from global caretakers, even if they fell in serious trouble sometimes caused by external unfortunate happenings.

Various undesirable effects of external elements used to be magnified when the inflexible financial system did not adjust much to changing international financial market. The adverse impact of poorly performing financial sector to the various activities in the real sector became really significant, as the relative scale of financial side got bigger than that of real side. This point can much better be understood when the absolute size of the real side of the small developing economy were to be compared with the huge magnitude of international capital flows, even if the capital flows relevant to small economy tended to be only a small part of the whole international capital flows. Some capital flows can often be a big elephant in a small pond. Moreover, the fact that the capital flows sometimes showed extreme volatility would have to be taken into account in considering their adverse effects to the small economies.

⁴BIS reported in its 66th annual report of 1996 that the cross-border transactions in bonds and equities among G7 countries rose from 35% of their GDP in 1985 to 140% in 1995. There seem no figures showing the magnitude of financial transactions relative to the size of real sector of small developing economies. But it looks likely that the trend of growing asymmetry that exist between the growth rates of the financial sector and the real sector observed in G7 countries would also prevail in small developing economies. In these economies the growth of financial sector would include the transactions carried out by foreigners.

Exchange rate and interest rates often fluctuated to a hard-to-bearable extent as a consequence of volatile capital movements with little regard to the real performance of the small developing economies. Thereupon, the balance sheet recalculated rather frequently in terms of the fluctuating foreign exchange rates and other related prices dependant on them also suffered corresponding distortions. So called balance sheet issues are seen inevitable, being central in explaining the build-up, onset, and propagation of crises. They were understood to involve such characteristics as: they might be caused by financial panics than by economic fundamentals, they might involve moral hazard problem associated with the support packages by international financial institutions, and the imbalance in monetary, fiscal and private sector savings—investment balance might not be sufficient enough to contain the virulence of the crises that followed.

More importantly they are related with investors' sentiment sometimes dominated by self-fulfilling expectation and herding behavior. Accordingly, small liquidity problem could induce a bank run (where many rush to the banks to cash their deposits) and thereafter currency run (where the rushes involve withdrawal of foreign exchange and thereupon large depreciation of the currency or big hike in country risk premium together with depletion of reserves). In some unfortunate cases the initial liquidity shortage could turn out to be solvency problem as assets denominated in local currency are considerably depreciated whereas the liabilities denominated in foreign currency are surprisingly appreciated. Further misfortune can be observed when the initial liquidity shortage was originated by contagions from other crisis economies.

Diagnosis on the causes of recent financial crises sketched above taking Asian crisis at its central case implied two kinds of measures for preventing another crisis: overcoming of internal weaknesses and securing of global infrastructure which can take care of difficulties owing to the external factors to the small economies.

For the former, many economies tried much since crisis. They reformed several practices to obtain the transparency in both business sector and financial sector. Accounting system was modified to accommodate the global standard to insure transparency.⁵ For example, Korean financial firms were enforced to maintain the BIS ratio over 8%. Their major non-financial firms

were also ordered to reduce the leverage ratio under 200% on any circumstances. These orders were considered as emergency measures and therefore were enforced without any regard to the differences in the line of business, age of firms and stages of business cycle firms belong to. The uniform enforcement resulted in various troubles to individual firms, but little excuse was allowed with respect to the emergency measures. In the area of corporate governance new elements including compulsory majority seat of outside directors for avoiding arbitrary decisions by insiders were enforced. Prudential supervision of financial institutions was emphasized, even if the materialization of it might need quite much time to get adjusted to the newly introduced reality in finance through learning and by doing.

Regarding the missing external elements that are regarded beyond small economies' control, however, they merely kept high hope at the restructuring of international financial infrastructure in an anticipation that it could correct the deficiencies of present-day international financial markets. They waited for the establishment of an ideal international financial architecture, containing even the elements of global lender of the last resort (LLR).

When the missing external elements were left to be missing as illustrated below and the deficient internal factors were not secured even with various serious efforts, however, the economies in trouble cannot but adopt unilateral self-help measures, mostly of a temporary nature, without even excluding capital control in emergency situation, unless there was exceptional IMF consultation.⁶

⁵Transparency is not an operational measure; it may be at best obtained when internal check and control system functions properly with the help of all in the company including CEO and CFO, and when CEO is under adequate supervision of the board consisting of outside directors. However, this kind of institution building cannot be secured in a short period of time. In the same vein, accounting standards are in dispute especially after Enron incidence, leading to a suspicion of any definite global standards of accounting. In other words, there look some inherent limitations to pursue non-disputable global standards concerning either transparency or accounting standards.

⁶It is considered that international investment is much affected by transparency. However, transparency is not easily amenable object any country can do much for its improvement, at least in the short run. As for an example, it is measured based on the subjective judgments by many who are either participants to luxurious World Economic Forum or staffs of banks, firms, equity analysts chosen by a US consulting company, whereas

This need tends to be overlooked when insufficient care was given to the unfortunate situation of emerging economies, though.

III. Remedies against Adverse External Effects: The Report for G7 on the New International Financial Architecture and the Report by the Financial Stability Forum

In order to get rid of their internal weaknesses in response to the former necessity and to accommodate the global standard. many emerging economies looked worked hard. At the same time they had a high hope to have better financial environment, especially that would contain speculative capital flows both by preventing them and by providing reactionary mechanism by international institutions when the prevention does not work out. However, they faced the reality that their high expectation on the new international financial architecture was not properly and timely answered. They had to listen to the reasons why the formation of international central bank was unrealistic in present-day circumstances, for example, and why capital movements should not be controlled even in emergency situations.

The report of G7 ministers to the Koeln economic summit appears the best example in this regard. Nominally it has suggested the ways for strengthening the international financial architecture, after having identified current de facto international architecture. The contents of the report are:

- 1) strengthening financial regulation in industrial countries
- 2) strengthening macroeconomic policies and financial system in emerging markets
- 3) improving crisis prevention and management, and involving private sector
- 4) promoting social policies to protect the poor and most vulnerable

their familiarity with the realities of the economies they are evaluating the transparency and their sympathy with them may not have been affirmed. Their judgment can very largely influenced by news of corruption of the economies concerned than others. It can be said that there is some gap between the norm of transparency and actual application of it in relation with investment behavior (Gelos and Wei 2002).

Its overall strategy was to identify and put in place the policies to help markets work properly and to provide the individual-country with the public goods necessary for achieving the objective. For the purpose it required authorities to prepare for the enhanced transparency and disclosure, improved regulation and supervision of financial institutions and markets, and adequate policies to protect the most vulnerable. It also required that private creditors and investors to bear responsibility for the risks they took, and be involved appropriately in crisis prevention and crisis management. For that goal it wanted the internationally agreed codes and standards for policy makers to serve both as an incentive for better governance and as yardstick to measure country risk.

It expected further roles of IMF in facilitating an orderly approach to liberalization. On debt management it advised to minimize exposure to liquidity risk, to remove biases that encouraged short-term borrowing. It recommended relying on long-term maturity and if possible on domestic-currency-denominated debt than short-term maturity and foreign-currency-denominated debt in borrowing, to maintain a debt profile, that would enhance protection against temporary market disruptions.

Concerning the external environment to emerging economies, however, the maximum it expressed was to attribute high credit to the IMF contingent credit line (CCL), that would play an important but limited role in promoting international financial stability by protecting countries with reasonable debt structure from contagion, and by inducing sound macro-economic policies with an appropriate consultation with private creditors. As a way of making private sector be involved it stressed the communication between debtors and creditors, and encouraged them to develop innovative financial arrangements, including private market-based contingent credit line and roll-over options in debt instruments. It urged facilitation of creditor coordination and discouraging of disruptive legal actions.

Only in exceptional cases when it might not be possible for a country to avoid the accumulation of arrears, it granted the IMF lending into arrears, with the condition that the country had sought a cooperative solution to its payment difficulties with its creditors. Again, only in exceptional cases, it was consented, that

⁷Eichengreen (1999).

countries might impose capital and exchange control as part of payments suspensions or standstills, in conjunction with IMF support for their policies and programs. The control was justified as it provided time for an orderly debt restructuring.

In sum, it touched many points. However, in essence, the conservative position represented by the report and the interpretation related with it emphasized mainly reforming and/or strengthening of current practices of individual economies, but paid insufficient attention to others including the establishment of institutions like global LLR and the worldwide measures pertaining to the rules and regulations for capital movements. The position seems originated from the recognition that this world is consisting in sovereign nations without any super-national institution to govern all citizens of the globe, without any institution matching the national government in a nation. Anyhow, this aspect would be the critical shortfall of the report.

It had hoped the work of the Financial Stability Forum in devising ways to deal with the issues of highly leveraged institutions, off-shore centers and short-term capital flows. It supported the endeavors at the Basel Committee, International Organization of Securities Commissions (IOSCO), and International Association of Insurance Supervisors (IAIS) in setting principles for supervision. It also urged that governments should narrow the scope of their guarantees of private obligations so as to make sure that creditors did not lend to private entities with the expectation that they would be protected from adverse outcomes. Concerning capital flows it relied on IMF to continue its work on the appropriate pace and sequencing of capital account liberalization.

The Financial Stability Forum released its final report in April 2001. It designated 12 standards as deserving priority implementation. These were concerned with macro policy and transparency (with corresponding standards for monetary and fiscal policy transparency, data dissemination, and data compilation), institutional and market infrastructure (with standards for insolvency, corporate governance, accounting, auditing, payments and settlement, market integrity, and market functioning), and financial regulation and supervision (with standards for banking supervision, securities regulation, insurance regulation, and financial conglomerate supervision).

Interestingly enough in demanding the improvement in financial

regulation and macroeconomic policy it did not clearly differentiated between creditors and debtors on the one hand and developed countries and developing countries on the other. Or it might be said it paid its main attention to debtors and developing economies, setting aside the fact that improvements in creditors and developed economies would yield larger payoff in reducing the possibility of crisis on this globe.

Surprisingly, these discussions on international financial architecture by the above two reports did not give due regard to the mechanism of cooperation among a few economies directly or indirectly interconnected each other in financial crisis. They explicitly recognized the absence of a global financial regulator with enforcement power in the current globe of sovereign nations. They considered that the only way to supply the public good of financial supervision of global nature was to mobilize national incentives to upgrade their individual supervision, regulation and practices, and standards. Individual economies' efforts along this line were seen as the focal points for peer pressure, conditionality and market discipline that at the same time provided the incentives to carry out the required task. Very logical, it may be said, in the current situation of sovereigns. However, this outcome viewed as the maximum for the security of international financial system revealed indeed a serious deficiency as for the global architecture investigated to prevent the financial crisis. It could never be regarded an honest response to the hope of having crisis-preventing international financial institutions. It could not guarantee the prevention of another financial crisis, not to mention the management of the difficulties after crisis.

So as to make this point a little clear in the next section we would recall the safety features of individual nation's financial system with an attention on the cooperative scheme among a subset of its constituents in the domestic financial architecture in their endeavor to preserve the safety of the whole system. We will thereafter compare the safety feature pointed out from it with what were contained in the report for Koeln G7 and the Financial Stability Forum in order to get a cue for supplementing the global safety arrangement for preventing crisis.

IV. The Safety Net of Domestic Finance Compared with the Report for G7 and the Discussion of the Financial Stability Forum

In domestic finance there is 3-stair ladder of safety net. At the bottom of the ladder, individual firms are encouraged to operate prudently with due risk prevention measures. They are urged to employ internal check and balance system and external audit apparatus. If the firms concerned were financial firms they are, in addition, subject to monitoring and regulation by supervisory authorities.

Above the bottom stair of individual efforts exists the voluntary cooperative mechanism among participants of the market. Guarding against the possibility of liquidity shortages any of them can experience, they used to formulate a pool and let those in need of liquidity to use the pooled resources. Inter-bank market offers the best example.

In the top stair exists the LLR. When the suspicions of bank clients are very significant and therefore even the pooling mechanism of inter-bank market is proved to be insufficient to avoid the possibility of bank run, the LLR is activated. Unlimited resources based on printing power of the central bank are mobilized for the sake of the individual banks under suspicion of liquidity shortage, and thereupon the bank runs are avoided. Considering the fact that the liquidity outside the banking system can not but be returned back to the banking system sooner or later, we note, the functioning of the LLR turns out very safe and effective.

In making the above observation on the safety net in domestic banking and then comparing it with that of the international financial system envisioned in the G7 report, we can immediately notice that the middle stair of the cooperative scheme of a few participants is missing, not to mention the top stair of LLR in the latter. This is the same even in the discussion of the Financial Stability Forum. The G7 report urged individual efforts to obtain transparency and other global standards very much. But strangely enough, G7 report and many other discussions have been silent on the avenue of the voluntary cooperation among subset of international community. They did not pay serious attention to the

possibility of cooperative scheme, resembling inter-bank market, in the global dimension, overlooking the middle stair of the safety net in the domestic financial system.

The G7 report is also negativistic on the formulation of new global institutions. Many other leading opinions are similar, not being optimistic about either strengthening de facto LLR presumably associated with current IMF or institutionalizing a new LLR for global community. Often it was mentioned that the current IMF was too small in resource endowment to assume the normal role of de facto international LLR. However, it was at the same time sensed that G7 was not prepared to put up the kind of resources needed to preclude any serious problem in international finance. For example, it may remain incapable at handling a broad-based attack on developing country debt problem and international bank runs associated with it.

The Financial Stability Forum remained in silence too, in under-responding to the hope for global safety net including both the middle ladder and top ladder.

This is in good contrast with the position of the UNCTAD. UNCTAD recognized the self-evident benefits of the method of establishing codes and standards to help strengthen domestic financial systems of debtor countries just like G7 report, but noted that of itself it entailed neither a fundamental change in policies and practices of source countries nor improvements in the transparency and regulation of currently unregulated cross-border financial operations. It brought under spotlight the importance of standard-abiding by source countries of present-day international finance in parallel to that of recipient countries.⁸

Unlike G7 report, however, the UNCTAD report touched upon the regional arrangements as a means to provide collective defense mechanisms against systemic failures and instability, observing that regional currencies were increasingly seen as viable alternatives to dollarization. It weakly responded to the need of having the middle ladder in the global financial architecture.

Moreover, it recognized the claim that would make the IMF an

⁸It further noted that there was a danger that the incentives and sanctions linked to standard-setting would become features of IMF surveillance and conditionality, compliance with which would place a further heavy burden on the administrative capacities of many countries despite the emphasis of their voluntary adoption (UNCTAD 2001).

international lender of last resort and let any country able to meet a series of ex ante conditions for solvency, implicitly echoing the radical proposal that the IMF should provide international liquidity not only to countries facing current-account difficulties but also to those facing capital-account crises. It responded to the need of having the top ladder of global safety net.

V. Other Limitations in the Measures Currently Proposed in International Financial Architecture

Most ideas, of more than marginal nature about the new international financial architecture and tossed by academics in sympathy with emerging crisis economies, faced negativistic responses. Several reasons have been employed in the negativistic view for each of those proposed ideas, but the critical factor above all would be simply that quick transformation of current international financial architecture are not strongly favored by major economies of the present world on the ground that they are not likely to be materialized in a near future in this globe of sovereign nations.

At the backside of the negativistic response the much powerful potential contribution of source countries and creditors in alleviating and preventing financial crisis has not been received due attention (this is very different from what it was in handling the debt crisis of 1980s), and even the accident of LTCM in 1998 was ignored irrelevant to be a factor for renovating the international financial architecture.

Accordingly, in this safety-feature-insufficient global financial environment, the most an individual economy can pursue are: to clean its house with respect to the issues of transparency, corporate governance, prudential regulatory system, and sound management of macroeconomic policies. If there occurs a crisis even with the effort of house cleaning, it should further strengthen the stabilization policies thus far taken and then ask external financial assistance from IMF and others. It is advised that the extent of strengthening and magnitude of financial package would better be larger erring on the excessive side than insufficient side. Worsening of crisis dynamics due to less than sufficient adjustment package and external financial resources was taken much more

seriously than the foregone cost involved in excessive erring (or overshooting).

The exchange rate system is a very important factor of financial system deserving an independent attention. Concerning the exchange rate system, however, discussions around G7 are rather content with the observation that the hard peg system (currency board system and dollarization, for example) and free float become a component of new architecture being a real progress rationalizing international financial system. They are satisfied with the trend that more countries are taking either of the two corner systems away from intermediate arrangements of adjustable-peg nature. They have overlooked the difficulties of the hard peg system owing to the lost status of monetary policy by the economy through relegating its policy to the outside monetary authority to which its currency is hard pegged. Also they are least careful at recognizing the preconditions for independent floaters. consisting of independent central bank, well-regulated financial system, efficient fiscal institution, and stable political system, supported by diversified trade and financial linkages. In other words, they did not sympathize the hardship Argentina faced with her de facto dollarization through currency board system and therefore having given up the monetary discretion by abiding rigid fixing when her economy experienced a structural shift vis a vis dollar against the situation where the exchange rates among major currencies changed considerably, irrespective of the fixing in dollarization. They did also overlook the hard hidden efforts in the free floaters to stabilize the exchange rate by means of monetary policy of forward-looking-inflation-targeting type and fiscal policy of the same nature, in addition to the foregone cost of large foreign reserves.

This position favoring corner solutions is very different from that of French and Japan expressed in the discussion paper for ASEM meeting of 2001. Their position claimed that the lessons learned from the 1997-8 crises suggested that neither corner solutions nor intermediate regimes, when not backed by adequate policies, were the best solution for emerging market and transition economies. It considered that there was no guarantee that currency board arrangements escape from the same drawbacks as pegged regimes.

Indeed, free-floating strategies have their own costs of possible excessive volatility and free riding risks. Hence, if myopic and

not-system-sustaining herd behavior cannot guarantee the efficient allocation of resources, the inclination to the perfect capital mobility as a way of resolving the so-called trilemma (showing the inconsistency of independent monetary policy, fixed exchange rates and free movement of capital) is not warranted. Presumably, having experienced disruptive misallocation of resources under floating, many emerging economies might have discovered that managed exchange rate strategies in the guise of de facto adjustable peg could be the better one for them than the two corner solutions, especially for those without well functioning capital market and various infrastructure developed over long period of time for the support of well-functioning capital market. This implies at the same time that the choice of free flexible exchange rate system by emerging economies is not necessarily inevitable, implicitly explaining why so many emerging economies have de facto adjustable peg even after recent financial crises and after having heard of the advice that the two choices left to them were either free flexible exchange rates or currency board.

VI. Self-Help Measures

As far as those ideas for improving global financial architecture cannot be materialized, they turn out very hallow. Thereupon, all the discussions on the new international financial architecture become insignificant and even uninteresting. If this is the case, the only way for a small developing economy to take is to secure various self-help measures, even if the measures would have very limited effect.⁹

A few means have been suggested as self-help measures. As emphasized several times above, first of all small developing countries are advised to maintain a transparent system. In this way, it is reasoned, these countries are thought to be able to secure confidence from foreign investors. With the same kind of reasoning, these economies are recommended to have adequate risk management system to rule out excessive risk taking associated

⁹Besides the unilateral measures by debtor countries others for creditors of source countries would be very helpful. Imposition of some regulatory and disclosure restrictions would be a good example to be applied in source economies in alleviating disruptive capital flows.

with moral hazard behavior. More concretely, they are urged not to accumulate excessive short-term foreign debts. One step further, they are advised to set up a legal and bankruptcy system that is very similar to investors' corresponding ones. To put it critically, countries wanting to utilize external capital are asked to develop institutions very friendly to foreign investors.

Accumulation of lots of foreign exchange reserves is considered to be a good way to increase foreigners' confidence. Economy with ample reserves is usually regarded to be able to repay more easily than otherwise the short-term debts, which are so often the seed of difficulties in many crisis occasions.

Sometimes an active invitation for the presence of foreign banks is advised, as foreign banks are considered to have their own reputation independent of the difficulties of the economy they are doing business in. Even with the loss of confidence of local institutions during the financial crisis, foreign banks could remain free from the contamination and thus be able to supply financial services normally. Accordingly, in order to secure continuous financial services, small economies are advised to invite foreign banks.¹⁰

Another policy recommended for small developing country to follow would be to discriminate among the modes of capital movements. It may further prefer direct investments by the foreigners themselves to the portfolio investments, because in the foreign direct investment foreigners assume a larger responsibility when things turn out bad. It may prefer equity financing to debt financing among portfolio financing, because the former involves larger burden sharing by foreigners.

The above advises are related with measures that can be taken exclusively by the individual decision of the country. The adoption of them would never incur any frictions with others. They may also be really helpful in some cases and in some occasions. However, they are not all useful in all times.

Moreover, they imply some cost to comply. Securing of transparent and foreigner-friendly system is not easy to the society with alternative tradition to western ones. Besides, it is noticed that even totally transparent societies sometimes experienced bank runs and country runs, whereas not much transparent economy showed

¹⁰This point was stressed by Meltzer (1999).

good performances.¹¹ In the extreme, too much transparency can even exacerbate the instability in the crisis situation helping speculators coordinate on the timing of a run.

Huge external reserves are nice collateral to foreign creditors. But, more than adequate reserves imply hidden costs. It is not reasonable to ignore the opportunity costs foregone in the foreign reserves judged to be too much.

Foreign banks can supply various services of advanced quality without interruptions even in hard times. But they may safely seek profits totally based on their commercial incentives irrespective of the needs of the society, in which they reside. They may behave completely independently of the inherent demand for public-good-character of financing of the society in their delivering of services, under-bearing their due share in supplying public goods, and thereupon betraying the expectation of the society they live in. 12

Discrimination at the mode of capital movement looks desirable. But it cannot easily be implemented. In the way of insisting the discrimination, capital-need economies may kick foreign investors off.

The above examination on the benefits and costs of making foreign investor- friendly environment dictates that it is necessary to have the institutions of global standard type, but never too extreme ones negating the local tradition and culture.

Next to the measures that can be taken individually free from conflict with others in the globe come the subtle means that require consent of partners of the financial deals. Collateralized credit facility sketched in Feldstein (1999) or lending with covenant hinted in Wyplosz (1998) would be the proper examples for this partner-cooperation requiring measures.

The former one is to create a facility explicitly with the provision of collateral for the protection of the providers of credit. The facility enables continuation of credit supply even in abnormal situation

¹¹In an address to the Chicago Council on Foreign Relations, Joseph Stiglitz said that Nordic countries all being very transparent experienced financial crisis in early 1990s, while Germany never being very transparent had experienced no crisis.

¹²In this regard notice the story of Mexican banks that do not lend and at the same time put their main focus on cross-selling. Also keep in mind that currently foreign ownership of Mexican banks is noted to be 85%. Economist, October 12th-18th, 2002.

through permitting drawing of credit on short notice by the borrower based on the condition specified in the contract of the facility. The most common collateral is trade receivable. The net effect of the facility is allowing of an option to borrow by the creditor to the debtor. Accordingly, it requires explicit consent of the creditor before the date the option is to be exercised, and thus can be characterized as cooperation requiring.

The second one is concerned with relieving debtors from weight of debt payment at least temporarily in a crisis situation. It intends to incorporate covenant that allows stopping the clock of debt payment while maintaining market access. For this purpose it tries to change the current practice of lending contract, by incorporating clauses that could even take care of any possible outcome from speculative crises. Embedding the covenant into the contract would never be easy; therefore, it involves a cooperation that can be secured in complicated ways.

Lastly, in addition to the friction-free measures that can be taken by individual countries and the cooperation requiring measures just mentioned, the other instruments whose adoption might not please all on the globe should be considered. Even if their employment may not be able to command international consensus, some of them would have to be made available to crisis-hit economies for overcoming hardships of financial crisis.

VII. An Alternative Self-Help Measure: Capital Control¹³

Without adequate means to get over temporary liquidity shortage, from the developing country point of view, capital controls appear to be an attractive device to weather the hard times of financial turmoil with symptoms of unstable and volatile capital flows. Capital control may be preferable to the experiences of either very fluctuating exchange rates or interest rates; the fluctuating exchange rates would render hardship to the whole real sector of the economy through so-called balance sheet effect, whereas the volatile interest rates dwarf the investment efforts. Hence, as an

¹³Additionally, establishment of global institutions such as international bankruptcy court, international deposit insurance company, and *de facto* LLR could be examined more deeply with the possibility of increasing their role and jurisdiction.

alternative to passive acceptance of fluctuating exchange rates and interest rates, capital control that deals with the volatile capital directly may have the least harmful effects to the economy as a whole.

Indeed, capital control would have only marginal effect mainly to those engaged directly and indirectly in international capital transactions. On the other side of the same coin, the relatively stable exchange rates and interest rates, obtained as a sort of byproduct of capital control, would not cause big reshuffling of balance sheets and thereupon enable many companies to continue their usual businesses. Along this line Krugman argued that emergency control of capital outflows might be the least bad choice for a country whose currency and debt is under severe attack from domestic and foreign speculators.

Concerned with the adoption of capital control, it may be recalled that even in the G7 there were at least discussions on the control of capital movements. In 1995 at the G7 summit meeting held in Canada the host country Canada proposed the discussion of Tobin tax as an agenda. French president Francois Mitterrand at the summit meeting of UN Social Development held a little before the G7 summit meeting of 1995 argued that short-term capital flows could be taxed at the rate of 0.5% of their volume and that the revenues from it would be used for the debt reduction of poor countries and for other social development purposes. Recently there have sporadically appeared the opinions for controlling capital movements in the OECD circles even if the majority view looked negativistic to the capital control. The majority regarded that the capital control would at most have marginal effect mainly to those engaged directly and indirectly in international capital transactions. 14

The potential gain from the international capital flows between two economies with different capital endowments and associated alternative marginal capital productivity schedules in a static

¹⁴As will be seen there are biases in international financial system against the small economies. The biases originate from the fact that US and Europe supply key currencies and other advanced countries enjoy convertible currency status while most developing countries are not. They imply another reason why developing economies favor the capital control more than advanced economies, as the developing economies would find it more difficult to adopt the global standards than advanced economies do due to the disadvantages from the biases.

framework is well known. It can easily be shown that each can gain the difference between the common interest rate of the contract for capital movement and their respective marginal productivities of capital materialized after the capital movement. Hence, the prime objection to the capital control was that it would stifle the international investments beneficial to both parties. It was argued that the record of capital control by any economy could scare off investors from her, obviating a possibility of optimal resource allocation on a global scale. Control was also criticized, because it might induce corruption of the officials around the control apparatus.

However, the distribution of the gain from it is not certain unless the interest rate intermediating the capital flows is determined in the middle of marginal products of capital of the two economies. In real world the interest rate is not determined as it is in the timeless static model. In dynamic situation the interest rates are fluctuating even before the completion of production from the borrowed capital. Concerning projects with long gestation period the interest payments to borrowed capital could exceed the value of marginal products from it, implying losses from international borrowing. The distribution of gains from international capital flows could turn out very differently from what was expected in the static model. Worries about maturity mismatch point out ample possibility of counter-examples of adverse distribution of gain from international capital movements.

In addition, the recent re-confirmation of Feldstein-Horioka thesis taught us to guard against the asserted merits of international capital movements in allocating capital more efficiently and indiscriminatorily on a global scale. Indeed, in the stern environment of portfolio diversification finance with its inherent limits the opportunities of inviting capital by emerging economies would have marginal contribution, the real cost incurred in the form of financial crisis caused by negligence of speculative capital flows would be dreadful. In other word, the prime cause against capital control based on the naïve, optimistic understanding on the merits of capital movements appears rather small in its substance, whereas the potential cost from financial crisis in a dynamic environment of uncertainties is significant.

As a simple solution to the speculative attack, putting some sand in the wheel after the notion of Tobin tax had long been examined. As a realization of it Chile implemented a control scheme. In this scheme those who were going to bring external capital into the country had to bear some burden, whereas the degree of burden depended inversely on the length of time the capital stay in the country. It was expected that this type of control would discourage short-term flows, thereby mitigating the maturity mismatch. Moreover, as the schedule for the burden was predetermined, it was noted to be free from the arbitrariness in executing control and therefore from the criticism of nontransparency.

Another objection to the Tobin tax is that it cannot be effectively implemented with the possible evasion of it unless all nations on the globe participate at its execution with clear and objective rules. It has also been criticized as it might involve quite much of bureaucratic rigidities and corruptions. To overcome these short-comings a tax on foreign-exchange payments can be introduced in order to overcome such alleged limitation of the Tobin tax as the easy evasion, latent bureaucratic corruption, and complexity and obscurity in implementation. This kind of general tax on transactions pre-specified would surely result in smaller volume of movements in payment, anyhow. At the same time it will also create uncertainties, which proponents of free flexible exchange rate system advocate as a measure in countering speculative capital flows.

The above two tax schemes if instituted must be the constantly functioning device to mitigate too volatile capital movements, and especially to discourage the short-term capital flows. These schemes would also decrease the foregone interest cost indirectly. The tax rates can be adjusted corresponding to the varying degree of volatility as circumstances are changing, while the tax rates would determine the degree of mitigation in capital flows. The adoption of these taxes would easily invite subtle opposition and some backlash, in view of negative comprehension by many of them. Hence, the final outcome of their adoption may not necessarily be successful one in obtaining the mitigation of fluctuation of capital flows and thus in preempting financial crisis.

In order to avoid financial crisis for sure some emergency measures equivalent to the safeguards in trade, probably of temporary nature, would be necessary; and the emergency measures

¹⁵Schmidt (2000).

can be introduced either together with the permanent tax schemes or without them. Since the permanent tax schemes would moderate the inflows to some degree, the emergency measure would more often than not be directed toward unexpected outflows, 16 In principle, sufficient explanation for the rationality of the specific scheme employed should be advanced before the enactment of the safeguard scheme to solicit conciliation. For example, it can be put on the table beforehand that emergency action of capital flows control could be employed when volatile variations in exchange rates and interest rates are suspected to have been resulted by self-fulfilling pessimism and/or herding, and thereupon have brought out so called balance sheet difficulties and/or symptoms of bank runs, whereas further strengthening of internal adjustment policies is almost infeasible and sufficiently increased emergency external assistance from outside are unavailable. The period of duration of the control must also be specified at the time of adopting emergency measure, even though it can be extended if the speculative forces are still in place and the danger of bank-runs are not gone.

The emergency measure should be directed to obtain a temporary standstill, but it should not be abused. Therefore, bilateral or preferably multilateral panels should be organized to investigate impartially the justification of the emergency control. Penalties can be imposed if the action of control cannot be rationalized or the claim for control is adjudicated to be frivolous and intended only for harassment. It must be explained that the adoption of the control possibility imply long-run benefit originating from obviating transitory losses associated with the turbulences normally expected without the control plan, and the benefits may outweigh the costs of control. The emergency capital control measures can at this juncture be considered as a safeguard device to avoid financial market injuries if not the injuries of the whole economy, corresponding to the safeguards in trade.

Adoption of the emergency capital control can be either discretionary or some signal-based. In order to make implementation procedure easier signal-based one might be better. In contrast.

¹⁶B. Eichengreen advocated utilization of taxes to better align private and social costs associated with capital transactions for final goal of maintaining capital account convertibility (IMF Economic Forum 1998).

when the notion of constructive ambiguity is recalled, the activation of emergency measure should not be made determined by any rigid rule. Hence, the information from some useful signals would best be utilized, whereas the very activation can be left being discretionary.

As the abnormal variations in capital account are usually observed through extreme variations in exchange rates and/cr interest rates at the time of panic or similar sensitive situation, the price indicators in both markets should be keenly observed and could better be utilized. Recalling the prevalent practice by many in sticking to a de facto adjustable peg even under the officially declared system of flexible exchange rates, as for the best candidate along this line we may relate the mobilization of emergency capital control with the exchange rate system with band.

Principally it could be designed such that the foreign exchange rates are determined by the supply of and demand for foreign exchanges within a pre-announced wider band. The central point and width of the band could then be changed in implementation corresponding to altering external circumstances. In an abnormal situation where excessive capital flows distort the usual supply and demand to result in extreme swings of rates beyond the end points of the band if the excessive capital was left unchecked, a sort of predetermined curfew to the short-term capital movements can be discretionary activated to contain the excessive part of capital flows. The curfew would be called upon to activate the pre-determined scheme of capital control; outflow control mechanism at the upper end of the band to constrain excessive depreciation, and inflow control mechanism at the lower end of the band to constrain excessive appreciation.

Indeed, in this way the wider band system of exchange rate determination is modified to incorporate both the free movement of exchange rates in normal times and the temporary capital control mechanism in abnormal times. In other words, when short run speculative capital was to yield extreme exchange variations in the short run the pre-announced mechanism of capital control is to be triggered at the two extreme ends of the band.

With this mechanism foreign exchange rates will still be market determined, but the abnormal alterations is made to trigger safeguard, and consequent to it extremely volatile variations owing to short-term speculative capital movements could be avoided, and the balance sheet effect due to the excessive fluctuations of exchange rates could also be restrained. Thereupon, the fluctuations with it would be limited than the case without it, and the valuation of assets in the balance sheet of banks and companies would therefore involve less risk than the case without it.

Liberated from the trouble originating from the speculative international capital flows, each economy could then pursue its growth process based on market principle. Every investor is made to have international deals based on fundamentals rather than to run with the herd.

VIII. Internal Excessive Adjustment Re-Considered

When the internal adjustment of the crisis economy and external assistance to it from the international institutions were discussed, erring on the excessive side was denoted desirable. Moreover, if the external rescue resources with reasonable conditionality turns out limited in size and usage, much more excessive internal adjustment appears imperative to compensate the limited role of external assistance. In a sense Korea ventured along this line by injecting tremendous public funds for her structural reform when she emphasized invitation of foreign capital so much and ended in vain. With the utilization of the public funds, however, she happened to have new problems (illustrated below) originating from it. The new problem arisen indicates another shortcoming of the package consisting of internal adjustment and external assistance financing. The outcome showed indirectly a desirability of capital control.

Two sources of internal resources to be utilized for adjustment are private money and public money. Injection of public money is much easier than mobilization of private money. Hence, mobilization of internal private resources tends to be underutilized due to the difficulty whereas the former would conveniently be chosen. But on many occasions this approach cannot evade the criticism that it unjustifiably preferred too easy solution.¹⁷

¹⁷Almost 3 years after the injection of public funds Korean restructuring policy stance had been changed to utilize debt-equity swap to the firms regarded viable based on various criteria. This implies a change in policy direction favoring injection of private money in differentiation with the public funds to the selected viable firms.

Public funds or payment-deferred public money have been thus extensively utilized in the structural reform after crisis in Korea. Thanks to the fiscal soundness inherited from pre-crisis era. Korean government was able to mobilize sizable public resources to shore up the capital adequacy position of major financial institutions. The injection of public funds was carried out in a front-loaded manner to quickly restore confidence in the market by raising most banks' capital adequacy ratios well above 10%. This further allowed a room for the government to make adjustments to its high interest rate policy to mitigate credit crunch.

The job of using public funds was to purchase and dispose the impaired assets from financial institutions, and to create a system of deposit insurance based on the limited guarantees for depositors with premium linked to the prudential soundness of each insured institution. In other word, the public funds have been used to re-capitalize financial firms and to pay to the depositors of banks on banks' behalf. However, after injection of the public funds, there appeared the further need of re-capitalization fund to financial firms whose non-performing loans had been increased due to either bankruptcy of their borrowers or deterioration of the loan quality regarded normal previously.

With the help of the public funds, banks were transformed to be a vehicle to be extensively used for the corporate sector reform. However, the injection of public funds involved new problems. First of all, it changed the former private banks into de facto public entities. When the external liabilities of banks were guaranteed in 1997 for maturity extension, quite much of 'socialization of private debts' was materialized. With the injection of public funds the trend towards nationalization of private enterprises was further strengthened. Many banks were in a sense nationalized, in spite of the urge for the market mechanism and private initiative.

The public money implied an increase in public expenditure to finance the interest payments to the debt certificate. That constituted a cause of inflation. Moreover, the debt certificates exchanged for the share of banks were nothing but the valuable asset for the banks to further utilize. Later they will surely issue new liabilities based on those certificates, as a sort of financial innovation. With this utilization of the certificates the inflationary potential would be amplified.

The debt certificates issued at the time of mobilizing resources

for the provision of public funds must be paid back upon arrival of their maturity; however, up until this time it is not clear when the money will be repaid, while the issuers were not able to procure resources for repayment. The final responsibility of payment inevitably lies at the government, which guaranteed the issuing of certificates. Thereupon tremendous increase of fiscal burden is an obvious outcome, predicting a very weakening budget position of central government. The prime factor of fundamentals, namely, fiscal soundness has in this way been seriously impaired. 18

Anyhow, besides moral hazard incidences arising in the process of injecting huge sum of fund to many impaired companies, these kinds of potential danger caused by using of public funds have been overlooked thus far. At the same time it also involved a danger of erring on the excessive side. In order to avoid the problems arising from too much use of public funds, much active utilization of private money has to be sought for. Private funds can be used as a more critical element of internal adjustment. At the same time it can also be recollected that with adequate capital control to mitigate the worsening of balance sheets due to volatile variations in foreign exchange rates and interest rates the total public funds required for internal excessive adjustment could have been much less, and thereupon the deterioration of budget picture would also be much milder. Capital control as a device of structural reform is indirectly affirmed.

IX. Final Remarks

Recently many emerging economies suffered from financial crisis mainly caused by capital account imbalances. Various discussions have been made thereafter in order to devise ways for preventing further crisis and better managing the crisis if it occurs. Main recommendation from them is to keep the house clean, maintaining

¹⁸The debt certificates standing for the accumulated debts for mobilizing public funds are target of serious worry, as they imply a danger that could make the government budget unsustainable, resembling Russian GKO debts. The size of public funds thus far injected for structural adjustment in Korea is estimated to be 24.6% of GDP of year 2000, whereas corresponding figure for other economies having experienced the financial crisis were noted to be; 10% for Brazil, 15% for Mexico, 5.6% for Spain, and 8% for Finland for their respective GDP of the years their public funds were used.

transparency, good governance and others in addition to sound management of fiscal and monetary policies. Moreover, the package of internal adjustment and external assistance for countering crisis is advised to err on the excessive side, implying excessive internal adjustment and external financial help are preferable to not only insufficient package but also right one.

It has been observed that in the area of finance there is no safeguard measure, in contrast to the safeguard together with anti-dumping and countervailing duties in the area of trade. Also it was recalled that the safeguard can be mobilized when one or a few industries experience injuries in trade, whereas in financial crisis whole economy tends to suffer from the capital account imbalances. Thereupon, it is noted some safeguard measure has to be instituted in the area of international finance, and as one of it capital control is suggested. Together with the Tobin tax, Chilean tax on capital inflows or foreign exchange payments tax that overcomes the deficiencies of Tobin tax, an emergency tax that can be utilized in association with free exchange rate system with band is proposed. Unlike the former type that can be institutionalized as permanent system, it is suggested, the emergency control is noticed to be a temporary one that can be mobilized when the need arises and the discretionary control can be exercised with the information from floating exchange rates.

By means of examining the Korean case of injecting public funds in her reform, judged to be excessive in its degree, it is conjectured that the erring on the excessive side could involve other undesirable effects such as inflationary potential and de facto nationalization of banks and companies. The conjecture is considered to be an indirect proof for the need of capital control as an emergency safeguard. We see the case for the control of capital flows, both permanent type and temporary type, appear very persuasive, remembering the safeguard measures in the area of trade.

(Received 2 February 2004; Revised 12 March 2004)

References

Economist. "A Survey of Global Finance." Jan. 30, 1999.

- Edwards, S. "Exchange Rate Regimes, Capital Flows and Crisis Prevention." A Paper for NBER, 2000.
- Eichengreen, B. Toward a New International Financial Architecture:

 A Practical Post-Asia Agenda. Washington: The Institute for International Economics, 1999.
- Feldstein, M. "Self-Protection for Emerging Market Economies." NBER Working Paper 6907, 1999.
- Frankel, J., and Nouriel, R. "The Role of Industrial Country Policies in Emerging Market Crisis." Mimeograph, NBER, 2000.
- Garten, J. "In This Economic Chaos, A Global Central Bank Can Help." *International Herald Tribune*, September 25, 1998.
- Gelos, R. G., and Wei, Shang-Jin. "Transparency and International Investor Behavior." NBER Working Paper 9260, 2002.
- Griffith-Jones, S. "Regulatory Challenges for Source Countries of Surge in Capital Flows." Mimeograph, 1998.
- IMF Economic Forum. Capital Account Liberalization: What Is the Best Stance? October 2, 1998.
- Kaufman, H. "Preventing the Next Global Financial Crisis." Washington Post. January 28, 1998, A17.
- Krugman, P. "Saving Asia: It's Time to Get Radical." *Fortune*. September 7, pp. 74-80, 1998.
- Meltzer, Allen H. "Asian Problems and the IMF." *The Cato Journal* Vol. 17, No. 3, 1999.
- Obstfeld, M., and Taylor, A. M. "Globalization and Capital Markets." NBER Working Paper No. w8846. March, 2002.
- Ortiz, G. "Recent Emerging Market Crisis." Per Jacobsson Lecture, Basel, Switzerland, 2002.
- Sachs, J. "Do We Need an International Lender of Last Resort?" Frank Graham Memorial Lecture, Princeton University, 1995.
- Schmidt, R. "Efficient Capital Controls." International Development Research Center, Government of Canada, 2000.
- UNCTAD. Trade and Development Report. 2001.
- Velasco, A., and Fellipe, L. "Exchange Rate Policy in Emerging Markets." Mimeograph, 2001.
- The Working Group on Transparency and Accountability, The Working Group On Strengthening Financial System, The Working Group on Financial Crises. Summary of Report on the International Financial Architecture. 1998.
- Wyplosz, C. "Globalized Financial Markets and Financial Crises." Mimeograph, 1998, 4.