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**Managing Risks and Opportunities of Financial
Liberalization and Integration: A Macro-Micro
Analysis (Integrative Report)**

Ponciano S. Intal, Jr.



The *PASCN Discussion Paper Series* constitutes studies that are preliminary and subject to further revisions and review. They are being circulated in a limited number of copies only for purposes of soliciting comments and suggestions for further refinements.

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Angelo King Institute for Economic and Business Studies

March 2002

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Abstract

The paper examines an overview of the research project “Impacts, Risks and Opportunities of Financial Liberalization and Integration: a Macro-Micro Analysis” focused on four interrelated aspects of the structural and institutional foundations to effective risk management and exploitation of opportunities in an open economy; and draw lessons and insights on (a.) the macroeconomic management in an open economy, (b.) the liberalization of the banking industry, (c.) the human resource implications of financial liberalization and integration, and (d.) the behaviour of APEC member economies towards the Financial Services Agreement (FSA) under GATS.

Executive Summary

The objective of this paper is to give an overview of the research on “Impacts, Risks and Opportunities of Financial Liberalization and Integration: a Macro-Micro Analysis”. This project focused on four interrelated aspects of the structural and institutional foundations by which effective risk management and exploitation of opportunities in an open economy can be handled; and draw lessons and insights on (a.) the macroeconomic management in an open economy, (b.) the liberalization of the banking industry, (c.) the human resource implications of financial liberalization and integration, and (d.) the behaviour of APEC member economies towards the Financial Services Agreement (FSA) under GATS.

The 1980s and the 1990s have seen the growing financial liberalization and integration of the countries in the Asia Pacific region among themselves and with the rest of the world. This reflects the complementarities among trade, direct investment and finance in the dynamics of outward oriented growth in East Asia that underpins the so-called East Asian miracle. However, the recent East Asian crisis shows forcefully that economic openness and financial integration has its risks as much as opportunities. The challenge for policy makers is strengthen structural and institutional foundations of effective risk management while at the same time harvesting the opportunities made available. The introduction of risks to the vulnerabilities of trade and the likes have led plenty to believe hat more than anything else, the decision to liberalize is a huge one to take.

The discussion focuses on the financial opening and internationalisation of the financial services of a country. It is pointed out here that the presumed benefits from financial opening and integration necessitate domestic financial deregulation, especially with respect to interest rates and bank branching. It is argued that such internationalisation of financial services potentially increases the pressures for improved regulation and supervision, better disclosure rules and general improvements in the legal and regulatory framework for the provision of financial services and improved screening of projects and monitoring of firms. It also improves the credibility of rules as the country enters into international agreements. Overall, the opening up and internationalisation of financial services of an economy would increase pressure for, and contributes toward, an improved financial infrastructure in the country.

However, the recent East Asian financial crisis and other financial crises in developing countries as well as developed countries point out starkly that financial liberalization and integration entails risks, both macroeconomic and microeconomic risks. The macroeconomic risks and challenges relate to managing surges in capital flows. In virtually all the cases of currency and financial crises in the past two decades were preceded by surges in capital inflows. The so-called incompatible (or impossible) trinity best highlight the macroeconomic challenges.

The microeconomic risks, linked especially to banks, relate to the additional risks attendant to cross-border transactions, especially exchange rate risk, interest rate risk, and credit risks. There are also concerns that the opening of the financial sector to

foreign banks would mean foreign banks would “cherry pick” and target the most lucrative segment of the domestic market, thereby forcing local banks to move towards servicing the riskier customers. Thus, other things being equal, the domestic banks would become more vulnerable to negative shocks in the economy (Pontines, 2001). The above- mentioned concerns, like the expected benefits, would have to be ultimately empirically validated.

Perhaps the most important risk from financial liberalization and integration is in the interplay of the macroeconomic and microeconomic factors. Specifically, the macroeconomic vulnerability of an economy to large reversals of capital flows is heightened by financial sector fragility and inadequacies in that economy. The financial market is inherently imperfect exacerbated by problems of asymmetric information. Especially in a developing country case where family type corporations are the norm (e.g., East Asia), the disciplining power of the market on corporate governance of borrower firms is weak. Then, banks and the security market face tremendous challenges in being outside monitors. From the point of view of prudential regulation, what is of primordial concern is that banks may take excessive risks, partly because of loss in the charter value of banks resulting from financial deregulation and liberalization and partly because of expectations of bailout of banks.

Essentially what the liberalization of the banking industry indicates is that the opening up of the economy to foreign bank presence led to the repositioning of financial institutions. Specifically, the foreign banks emphasized the wholesale banking business especially on international operation where the foreign banks have competitive advantage. Thus, the competition in the wholesale banking sector is between the foreign banks and the big local banks. Specifically, the findings in the literature suggest that for number of Asian countries, there is a negative correlation between net margins and overhead with the openness of the banking sector. That is, the countries with more open financial sectors tend to have lower overhead and net margins; those closed to foreign banks have higher margins. Thus, the finding suggests that financial opening encourages contestability and forces banks to be more efficient.

Key Lessons

NATIONAL LEVEL

The paper brings out that the management of the risks and opportunities of financial liberalization and integration involves the following:

- **Sound macroeconomic policies.** This involves generally tight fiscal policy and prudent monetary policy. It also means internal consistency of monetary and exchange rate policies. Where a fixed exchange rate regime is viewed to be very important, then it is necessary that monetary policy must be subordinated to the demands of a fixed exchange rate regime. However, where some monetary independence is deemed important for both growth and macroeconomic objectives, then it is preferable to have a more flexible exchange rate regime. A flexible exchange rate allows for the development of risk management instruments by the

market. It will also force market participants to take cognisance of the exchange rate risk in cross border financial transactions.

- **“Get the composition of capital inflows right”**. The various kinds of capital flows have different vulnerability to sudden flow reversals, with a few that are more autonomous and permanent while others are more volatile. There is merit in pushing more of FDI, long term loans and portfolio equity investments. Be wary of short-term bank lending, short-term money market instruments like commercial papers in the international market, and hedge funds. As the East Asian crisis has clearly brought out, liberal entry and exit of short term capital flows require strong prudential regulation and supervision to prevent moral hazard problems. It also requires deep domestic financial markets that can withstand sudden shifts in investor sentiments.
- **Sound external debt management system**. This is related to “getting the composition of capital flows right” discussed above. This is because for most developing countries bank financing would likely remain the most important source of external finance in addition to internally generated funds. The East Asian crisis is to a large extent an external debt problem because much of the short term capital inflows into the affected countries consisted of short term bank loans. Thus, the need for deliberate limitation on short term debt, close look at the maturity profile of debt, diversification in the sources of finance across currencies and investors, comfortable level of international reserves and contingency loan window, and the development of a domestic treasury market for domestic institutional investors.
- **Strong prudential standards in regulation and supervision, internal control systems and market discipline whether under flexible or fixed exchange regimes**. The special nature of finance where asymmetric information is endemic and where there is mismatch in the maturity structure of sources of funds (mainly short term deposits) and uses of funds (short to medium term loans) necessitates strong banking regulation and supervision. An important consideration here is the recognition that cross-border financial transactions carry specific risks inherent in the transactions, such as foreign exchanger risk, basis risk, repricing risk, transfer risk and risk in derivative transactions. That is, the prudential regulations seek to manage these specific risks through for example the establishment of appropriate prudential limits and the incorporation of such risks in loan classification, provisioning, capital adequacy, disclosure and reporting requirements for banking institutions (Johnston and Otker-Robe, 1999). Measures to strengthen prudential regulations include stricter definitions of NPL, raising loan-loss provisions, raising capital adequacy ratios, limiting bank exposure to the property sector, and strengthening lending guidelines (Adhikari and Oh, 2000).
- **Capital controls cannot be a substitute for sound macroeconomic policies and stronger prudential regulation, supervision, monitoring and disclosure**. Nonetheless, capital controls can be an important prudential tool to manage surges in capital flows when sterilization efforts prove inadequate. As such, capital controls

should be viewed and crafted not as separate from but in tandem with the rest of macroeconomic and structural reforms. Even Chile used, not only tight monetary and fiscal policies as well as capital control measures, but also some appreciation of the peso in order to manage the surge in capital inflows in the early 1990s. It is also important to be pragmatic in the use of capital control measures. Chile reduced to zero the unremunerated reserve requirement against capital inflows when the East Asian crisis occurred when the capital flow issue turned from an inflow problem into an outflow problem. Malaysia discontinued the barriers to capital inflows in 1994 when the capital control measures were no longer warranted.

Chile used capital control measures primarily for prudential purposes while Malaysia used capital control measures primarily for macroeconomic management purposes. Thus, Chile required the use of international credit ratings for its local firms borrowing abroad not only to limit aggregate foreign borrowing but also to limit it to local firms that have the capability to manage the cross-border risks well. Similarly, Chile used the unremunerated reserve requirement primarily as a way of biasing the flow of capital inflows toward longer-term investments, thereby reducing Chile's vulnerability to volatile short-term capital.

Nonetheless, Johnston and Otker-Robe (1999) pointed out that as countries develop their regulatory frameworks and implementation capacities, there would be less reliance on capital controls but greater reliance would be put on international best practice prudential measures.

- **Improving institutional capacity in terms of human skills, refined risk management tools and greater internal communication within banks and regulators is critical.** Financial liberalization and integration also brings out the importance of human resource development. Especially important with respect to assessment of credit, market and liquidity risks arising from international transactions. It can be argued that weak regulatory environment and poor skills in both the private sector and the public regulatory agencies breed a weak credit culture and the foundation for an eventual financial crisis. The importance of human resource development includes training of current bank personnel to the new demands of risk management in a financially integrated world. It also has implications on the design of curricula in finance related courses in higher education institutions in the country.

Calderon, Villanueva and Tullao (2001) examined the various course and training offerings in the country that are finance-related. They also interviewed leaders in the industry on the industry's human resource requirements. A number of observations are worth mentioning. First, there are too many college graduates but too few with the requisite skills for the finance industry. Second, the skills most needed by the industry especially for entry-level positions involve primarily oral and written communication skills and analytic skills rather than specialized skills. Third, the preference of the industry for CPA and accounting graduates rather than finance graduates reflect the role of the licensure examinations as a screening device for

general intellectual ability of applicants. Fourth, the preference of the industry for graduates with strong communication and analytic abilities implies that specialist training is done on the job, which is the current approach. Fifth, the “second class” standing of finance undergraduates can be a reflection of the general weakness of the finance curricula. Sixth, underpinning the weaknesses of the finance curricula is the lack of faculty with the requisite academic qualifications at the graduate level or even with part-time faculty with enough industry experience. As a result, with the exception of an extremely few institutions, virtually most of the colleges and universities are producing graduates that are largely incapable of doing risk analysis and management, which is the essence of finance.

Calderon, Villanueva and Tullao recommend improvements in the undergraduate curricula by including topics that are essential in a world of deregulated and open financial markets such as risk management, international finance, mergers and acquisitions, hedge and mutual funds, and others. They also recommend strengthening qualifications of the faculty as well as expanding and deepening the use of computer-based finance software programs for understanding the various finance services and tools of analysis. The authors also recommend continuous improvement in the training and development programs given the dynamic nature of global finance.

- **Deepening and widening financial markets.** Although not well discussed in this paper, it is clear that deepening the domestic financial system is the foundation of a sound management of risks and opportunities of financial liberalization and integration. This is because a robust growth in banking, the various foreign exchange markets (spot, forward, futures, options), and securities and bond markets would allow firms to have the various hedging instruments necessary to manage the various risks involved in a more liberalized and internationally integrated financial system. The deepening of the financial system necessitates flexibility of interest rates and exchange rates as well as the development of appropriate market infrastructure such as payments and settlement systems, codes of conduct and technical infrastructure (Johnston and Otker-Robe, 1999). A deepened domestic financial system requires, and at the same time contributes to, the improvement in corporate governance of the domestic firms.

The results for the Philippines are not conclusive with respect to the bank spread or interest rate spread. Nonetheless, there are indications of some improvement in the operational efficiencies of the banks and redirection of some banks toward other market niches. Moreover, there are also indications that the entry of additional foreign banks has led to increased competition and contestability in the wholesale banking sector in the country (Manzano and Neri, 2001; Hapitan, 2011; Unite and Sullivan, 2001).

REGIONAL LEVEL

The policy implications of financial liberalization and integration at the **regional level** involve primarily those that have economies of scale and externalities. They include:

- **Harmonization of prudential regulations and practices towards best international practice.** This is to prevent regulatory arbitrage. This means regional efforts at meeting the Basel Core Principles for Effective Banking Supervision for example. It also means continuing comparative examination of the comparative “costs” of banking regulations among the countries in the region.
- **Regional surveillance mechanism and stronger regional macroeconomic consultation.** This is because much of contagion is regional in scope, not global (Rajan, 2000). The growing economic interdependence among the APEC members, especially among East Asian economies, calls for regional mechanisms to help prevent the recurrence of currency and banking crises that engulfed the region during 1997-1999. Regional surveillance includes regular regional monitoring and research efforts on the region’s financial sectors, macroeconomic policies and capital flows. It includes the institutionalization of an early warning system among the member economies in the region. The regional surveillance mechanism and macroeconomic consultation have been emphasized in APEC meetings.
- **Human resource development.** Shortage of skills in the financial sector is region-wide. Regional exchange of experiences and expertise is useful. This is being done to some extent under the IMF and World Bank training programs mainly based in Singapore. Nonetheless, more can be undertaken. Regional associations of academic institutions like the ASEAN Universities Network can contribute in strengthening the academic programs related to finance.
- **The last regional concern is related to the issue of further opening up of the financial sector,** perhaps on a regional level as a start. This is related to the issue of the Financial Services Agreement (FSA) under GATS. Pontines (2001) showed the varying levels of openness of the APEC member economies in banking (both lending and deposits), insurance (both life and nonlife) and securities. He also showed the large gap between commitments to the FSA under GATS, on the one hand, and actual practice on the other hand in some cases among the APEC member economies. APEC member economies made only few commitments in cross-border trade as a relevant mode of supply in financial services. In the light of the East Asian crisis where capital mobility with weak supervision and regulation of the financial sector can lead to payments problems, complete liberalization in cross border trade of financial services may not be warranted especially for developing APEC member economies. What may more important is the issue of liberalization in commercial presence as mode of trade in financial services. The APEC member economies committed primarily to increasing the participation of foreign providers on existing local financial institutions rather than opening new ones (Pontines, 2001). Indeed, Sauve (1999) notes that Asia’s commitments in banking are on the

whole less meaningful in terms of commercial presence in domestic markets than the commitments of Latin America in the FSA.

Finally, it is apparent that in the light of the lessons from East Asia, Chile and other countries (e.g., Mexico), the deepening of the FSA in the future round of negotiations under the WTO is not enough in addressing the risks and opportunities of financial liberalization and integration. The focus of FSA is primarily the liberalization of entry of foreigners into a country's financial sector. What are also needed are concerted international or regional efforts at strengthening the institutional capacities of developing country authorities in monitoring, analyzing, regulating and supervising financial markets and institutions. What are also useful are international or regional mechanisms that expand risk management instruments (e.g., futures, swaps, options) available to developing country firms at reasonable cost. In short, the negotiations under GATS-FSA need to be done in tandem with international technical and economic cooperation program to strengthen the capacity of developing countries to manage the risks and opportunities of financial liberalization and integration. This is akin to an APEC approach to the usual WTO negotiations.

INTEGRATIVE REPORT

Managing Risks and Opportunities of Financial Liberalization and Integration: A Macro-Micro Analysis¹

Ponciano S. Intal, Jr.²

I. INTRODUCTION

The 1980s and the 1990s have seen the growing financial liberalization and integration of the countries in the Asia Pacific region among themselves and with the rest of the world. This is a correlate of the expanding trade relations of the Asia Pacific countries among themselves and the rest of the world during the past two decades. This reflects the complementarities among trade, direct investment and finance in the dynamics of outward oriented growth in East Asia that underpins the so-called East Asian miracle. However, the recent East Asian crisis shows forcefully that economic openness and financial integration has its risks as much as opportunities. The challenge for policy makers is to manage the risks at the same time that the opportunities are exploited. This would mean improving macroeconomic policy regime as well as strengthening the structural and institutional foundations of effective risk management. At the same time such foundations also help expand the opportunities for the country to exploit.

The research project “Impacts, Risks and Opportunities of Financial Liberalization and Integration: a Macro-Micro Analysis” focused on four interrelated aspects of the structural and institutional foundations to effective risk management and exploitation of opportunities in an open economy. The first relates to macroeconomic management in an open economy, drawing from the analytical perspectives on financial liberalization and integration as well as the varieties of experience in the world especially those from Chile, East Asia and the European Union. At the heart of the macroeconomic challenges of financial liberalization and integration is the so-called “impossible trinity” (or “incompatible trinity”) of monetary independence, capital mobility and fixed exchange rates. Sooner or later the incompatibility of the three eventually leads to currency crises as the recent East Asian crisis attests. Understanding the analytic perspectives and the various experiences can provide lessons and insights on the policy challenges on the Philippines of financial liberalization and integration.

¹ The paper was undertaken with the financial support of the Philippine APEC Study Center Network (PASCN) through the Philippine Institute for Development Studies and the Angelo King Institute for Economic and Business Studies.

² Professor of Economics, Department of Economics and Executive Director, Angelo King Institute for Economic and Business Studies, De La Salle University. The author would like to acknowledge the able research assistance of Mr. Jitendra S. Mojica.

The second aspect deals with the liberalization of entry of foreign banks in the country. An important means of managing the shocks from increased international financial linkages is the deepening and increased efficiency of the domestic financial system. The entry of foreign banks is meant to contribute to the deepening and improved efficiency of the local banking industry. Three of the papers in the project examined the impact of the entry of foreign banks on the industry-wide bank spread as well as on the operational performances and strategies of domestic commercial banks. The papers can help us determine whether the entry of foreign banks contributed to improved efficiency of the banking industry, increased resilience of the industry to external shocks, and possible expansion of the country's opportunity set especially through technology transfer and possibly also through improved financial market and information linkages.

The third aspect is on the human resource implications of financial liberalization and integration. Specifically, one paper in the project looked into the curricular offerings and training programs of educational institutions and other HRD organizations in the country. Is the country's human capital ready for the demands of improved risk management and for the expanded opportunities arising from stronger financial linkages internationally?

The last aspect examined in the project is on the Financial Services Agreement (FSA) under GATS, specifically the comparison between commitments and practice of APEC member economies to the FSA. The future negotiations in the GATS provide a mechanism that can complement the unilateral liberalization efforts in the country, primarily through the opening up of financial service sectors in the APEC economies to potential Philippine exporters and service providers.

The integrative paper consists of four sections. Section One discusses the benefits and risks of financial liberalization and integration. Section Two examines macroeconomic management of financial liberalization and integration. Section Three looks into the microeconomics of financial liberalization and integration. The last section, Section Four, spells out policy implications toward managing the risks and opportunities of financial liberalization and integration.

II. BENEFITS AND RISKS OF FINANCIAL LIBERALIZATION AND INTEGRATION

Benefits. Financial liberalization, in one sense, is a sine qua non of financial integration. Financial liberalization can be interpreted in three component senses. The first one is domestic deregulation, best exemplified by the deregulation of domestic interest rates. The second and third senses relate to the opening up of the financial sector to the rest of the world; i.e., internationalisation of financial services. The second one is the opening up of a country to international capital movements, which is the essence of financial integration. The third sense is the opening of the financial sector to foreign equity participation. The last two are meant to increase competition and/or

contestability of the domestic financial markets. The focus of the paper is on the financial opening and internationalisation of the financial services of a country. Nonetheless, it needs to be pointed out that the presumed benefits from financial opening and integration necessitate domestic financial deregulation, especially with respect to interest rates and bank branching.

The arguments for financial liberalization and integration stem from presumed benefits to the economy; they include (see Fischer and Riesen, 1993; Claessens and Glaessner, 1997):

- Reduction in the cost of financial intermediation (increase in operational efficiency of the financial institutions);
- Improvement in the range of financial services and products adaptable to the changing tastes and requirements of consumers and industries (dynamic efficiency); and
- The increased potential for savings to be allocated to the highest yielding investments for the economy (improvement in allocative efficiency).
- Better access to foreign capital; and
- Better domestic financial infrastructure

The allocative efficiency effect of financial deregulation (i.e., reduction in price and quantity restrictions from portfolio structures of financial institutions) is further enhanced with the opening up of the economy to the international capital market. Specifically, the expanded opportunities for borrowing or lending domestically and internationally allows for improved intertemporal distribution in the consumption and saving mix and in meeting the varied demands and liquidity preferences of domestic savers and investors. Improved allocative efficiency involves deregulation of the financial sector in tandem with the internationalisation of financial services.

The internationalisation of financial services potentially increases the pressures for improved regulation and supervision, better disclosure rules and general improvements in the legal and regulatory framework for the provision of financial services and improved screening of projects and monitoring of firms. It also improves the credibility of rules as the country enters into international agreements. It is also argued that foreign financial institutions encourage adoption of best practices and transfer of skills to the domestic financial institutions, strengthen the capability of the financial institutions to measure and manage risk, reduce the overall risk and vulnerability of the financial sector because foreign institutions have more diversified portfolios and have their parent companies to run to (Pontines, 2001, p.15). . Overall, the opening up and internationalisation of financial services of an economy would increase pressure for, and contributes toward, an improved financial infrastructure in the country. (See Claessens and Glaessner, 1997.) Indeed, improved prudential regulatory environment is needed in order to maximize the benefits from, and at the same time minimize the risks from, financial opening and integration.

The net effect is the stimulation of economic growth. First, positive real interest rates encourage savings. Second, access to the international capital market eases up on the domestic saving constraint; i.e., domestic investment can be larger than domestic saving. Finally, an efficient (and prudently managed) financial system facilitates the allocation of financial resources to the best yielding investment projects.

With the liberalization of capital movements, increased competitive environment facing the financial institutions and the growth in the economy, there would be financial market deepening with more and higher quality financial products for liquidity and risk management of consumers and industries.

Risks. However, the recent East Asian financial crisis and other financial crises in developing countries as well as developed countries point out starkly that financial liberalization and integration entails risks, both macroeconomic and microeconomic risks. The macroeconomic risks and challenges relate to managing surges in capital flows. In virtually all the cases of currency and financial crises in the past two decades were preceded by surges in capital inflows. The macroeconomic challenges are best highlighted by the so-called incompatible (or impossible) trinity. That is, in the long run it is not possible to have equilibrium in the context of (perfect) capital mobility, fixed exchange rates and an independent monetary policy; i.e., domestic interest rate (of a domestic asset) higher than foreign interest rate (of a comparable foreign asset) adjusted for minor transactions costs). The basic policy challenge then is "... how to design macroeconomic policy coherent with increasing integration---(such as) how to prevent overheating (and) limit vulnerability to large reversals of capital flows." (Lopez-Mejia, 1999, p.4).

The microeconomic risks, linked especially to banks, relate to the additional risks attendant to cross-border transactions, especially exchange rate risk, interest rate risk, and credit risks.³ There are also concerns that the opening of the financial sector to

³ Johnston and Otker-Robe (1999) list down the additional risks that banks face with cross-border transactions as follows:

- credit risk** (i.e., failure of a counter party to perform according to a contractual obligation)
 - Transfer risk—"when the currency of obligation becomes unavailable to the borrower"
 - Settlement risk—"risk in the settlement of foreign exchange operations that arise due to time zone differences"
 - Country risk—"risk associated with the economic, social and political environment of the borrower's country"
- Market risk** i.e., risk of losses in banks's on-and off-balance sheet positions arising from movements in market prices that change the market value of an asset or a commitment.
 - Foreign exchange risk
 - Interest rate risk—when there is a mismatch between the bank's interest sensitive assets and liabilities
 - Risk in derivatives transactions—as banks increasingly use derivatives as means of taking or hedging risks.

foreign banks would mean foreign banks would “cherry pick” and target the most lucrative segment of the domestic market, thereby forcing local banks to move towards servicing the riskier customers. Thus, other things being equal, the domestic banks would become more vulnerable to negative shocks in the economy (Pontines, 2001). The above- mentioned concerns, like the expected benefits, would have to be ultimately empirically validated.

Perhaps the most important risk from financial liberalization and integration is in the interplay of the macroeconomic and microeconomic factors. Specifically, the macroeconomic vulnerability of an economy to large reversals of capital flows is heightened by financial sector fragility and inadequacies in that economy. The financial market is inherently imperfect exacerbated by problems of asymmetric information. Moreover, in developing countries where family type corporations are the norm (e.g., East Asia), the disciplining power of the market on corporate governance of borrower firms is weak. Then, banks and the security market face tremendous challenges in being outside monitors. Moreover, inadequate regulation and supervision of financial institutions would encourage financial institutions to finance riskier and low-profitability projects, in many cases of corporations in which the banks are members of a business group. In addition, a lending boom can lead to asset price bubbles, which, in view of the general practice of using real estate as collateral for loans, ultimately undermines the stability of banks and the financial sector. From the point of view of prudential regulation, what is of primordial concern is that banks may take excessive risks, partly because of loss in the charter value of banks resulting from financial deregulation and liberalization and partly because of expectations of bailout of banks.

The recent East Asian financial crisis highlights the interaction between the macroeconomic environment and microeconomic behaviour. Thus, for example, the relative stability of the exchange rate has encouraged greater domestic demand for foreign borrowing in view of the higher interest rate domestically vis-à-vis abroad. At the same time the increased access of domestic firms and banks to the international capital market encouraged significant loan exposure in sectors prone to asset bubbles, especially the real estate sector. In the process, the economy becomes vulnerable to macroeconomic risks like terms of trade reversals and exchange rate pressures.

In view of the interaction of the macroeconomic environment and microeconomic behaviour, it is apparent that preventing the recurrence of an East Asian financial crisis necessitates improvement in macroeconomic management and the prudential regulatory environment. It also implies the need to strengthen the institutional capacity to manage the macroeconomic and microeconomic risks of financial liberalization and integration.

Johnston and Otker-Robe’s list are primarily the risks that lender-banks take on in cross border transactions. For the borrower banks (and firms) especially in the developing countries, what may the most important are foreign exchange risks and interest rate risks.

II. MACROECONOMIC MANAGEMENT OF FINANCIAL LIBERALIZATION AND INTEGRATION

Capital flows in the APEC region. Intal, Pontines and Mojica (2001) present data and previous studies that indicate the growing international financial integration of APEC member economies during the late 1980s and the 1990s. The financial liberalization stemmed from the easing of barriers to capital flows and opening of capital accounts of most of the APEC member economies during the past two decades. The opening up of the capital accounts occurred in tandem with the surge in capital flows into the so-called emerging markets, primarily the East Asian, Latin American and East European developing countries. Lopez-Mejia (1999) shows that six of the top eight largest recipients of net private capital flows among the developing countries during 1990-1997 are APEC member economies (i.e., China, Mexico, Thailand, Indonesia, Korea, and Malaysia). Chile is also a major recipient since the latter 1980s while the Philippines also experienced a surge in capital inflows especially by the mid-1990s. East Asia led all developing areas as destination of private capital flows. The region's share to the total capital flows to developing countries increased substantially from 12 % during the early 1980s to 43 % during the 1990s (Alba, et.al., 1998, p.3).

The surge in capital flows is shown starkly in **Table 1.a and 1.b**. The tables present only the ending years of the decade-long surge in capital flows especially to the ASEAN-4 countries. Notice the more than doubling of private flows in two years time right before the East Asian crisis, caused primarily by the near-tripling of flows from commercial banks and non-bank private creditors, much of this of short term nature. The flows were far larger than the requirements for financing the doubling of the current account deficit during the 1994-1996 period. The large magnitude of increases in capital flows in so short a time, with such flows increasingly borrowings of increasingly short term maturity, raises the issue of the "absorptive capacity" of the concerned countries on the one hand, and the possibility of "herd behaviour" of international lending institutions, on the other hand. Indeed, in a comparison of the disposition of private capital inflows of 20 developing countries (excluding China) during their inflow episodes, the capital inflows ended up in most of the countries as mainly increases in international reserves, with the attendant increased pressures on the domestic monetary, interest rate and inflation regimes in the recipient countries (Lopez-Mejia, 1999, p.26). The Southeast Asian countries have been particularly interventionists in that sense, with reserve accumulation as a ratio of total private capital inflow ranging from about 50 percent for Malaysia to nearly 80 percent for Indonesia and the Philippines (Ibid.). Equally important, such huge capital inflows that are increasingly dominated by short term loans have proven to be the harbinger of eventual payments crises.

Table 2 presents foreign direct investment inflows and outflows on a BOP basis during 1990-1999. The table indicates that APEC has been a net investment destination during much of the period, especially in the latter 1990s. There have been shifts in the destination of FDI between developed and developing countries. Much of the FDI flows

went to developed countries during the 1980s. The surge in FDI flows into the developing world occurred during the early and mid 1990s, especially to developing Asia. The East Asian crisis has led to a redirection of FDIs back to developed countries in the late 1990s, centred primarily in North America (the United States). Behind the surge in FDI flows to developing APEC was the sharp rise in net investments in China and to a lesser extent Mexico as well as the steady rise in the level of net investments in Chile and Malaysia during the period, on the one hand. Note that the level of net outward investments from Japan and the United States stagnated or declined during the latter 1990s as compared to the early 1990s.

Much of the surge in capital flows during the period came from within the APEC region itself. The surge in capital flows is not only in net terms but also in gross flows, with significant inflows and outflows in a number of countries. (This is best exemplified by the US which is both a major source of capital outflows as well as being in fact the world's largest net recipient of capital inflows during the latter 1990s.) A key reason for this is that the region hosts one of the world's largest savers, that is, Japan. The growing financial integration within the region is a correlate of the deepening trade relations among the APEC countries. This reflects the complementarities among trade, direct investment and finance in the dynamics of outward oriented growth especially in East Asia that underpins the so-called East Asian Miracle. Yoshitomi (1999) noted that the stock of Japanese foreign direct investment is a significant explanatory variable promoting "...natural economic integration in Asia" (p.29). The recent East Asian crisis does not only highlight the risks of open capital accounts and financial integration but also, somewhat perversely, validates the growing economic integration in the East Asian region.

The growth in intra-East Asian investment flows became more pronounced since the mid-1980s after the Plaza Accord led to the appreciation of the Japanese yen initially and later on of the Korean won and the Taiwanese NT dollar in the latter 1980s. Japanese foreign direct investments was geared primarily to the United States and Europe during the late 1970s and early 1980s in order to counteract rising protectionism in those regions (Chen, 1994). The appreciation of the yen and the rising cost of labour and land in Japan forced the Japanese firms to develop export bases in other East Asian countries, including Korea, Taiwan, the Southeast Asian countries and China. The liberalization in China, initially centred on the special economic zones in coastal China, paved the way for the massive transfer of manufacturing facilities from Hong Kong to the nearby Guandong province. Taiwan and South Korea also expanded outward foreign direct investments since 1987, primarily to the United States, Southeast Asia and China. The investments in the United States appeared primarily aimed at securing access to the US market and at acquiring technology; the investments to Southeast Asia and China involved shifting labour intensive manufactures to reduce labour cost (Chen, 1994).

Kawai and Takagi (2001) estimated the FDI flows to East Asia during 1990-1998. For the ASEAN countries, 55.5 percent of total FDI inflows during the period came from Japan, US, Asian NIEs, and ASEAN countries themselves. For China, the

share of other East Asian countries is even higher: 62.4 percent alone for Korea, Hong Kong and Taiwan and an additional 19.6 percent from Japan, US and the ASEAN countries. Japan and the US are the major foreign investors in Taiwan, accounting for 40 percent of the total FDI inflows; the ASEAN, Hong Kong and Korea contributed an additional 12.3 percent. Interestingly, the US and Europe dominated FDI inflows into Korea with each of them accounting for one third of the total; Japan, ASEAN countries, Hong Kong and Taiwan accounted for an additional one fourth of the total inflows into Korea. Thus, at least for much of developing East Asia, the FDI flows were largely among APEC member economies although Korea is somewhat of an exception in the sense that Europe is a major source of FDI flows. (The FDI flows for the developed economy members of APEC differ significantly from those for the developing APEC member economies. For the former, best exemplified by the US, there is tremendous two-way investment flow among them and Europe.)

The growing foreign direct investment flows within the region is consistent with the trade intensity in the Asia Pacific region. Estimates of trade intensity are available for 1980 and 1990 (see **Table 3**). The estimates indicate that the direction of trade of APEC economies is biased towards the APEC region, as indicated by a value of more than unity in most cases. There are a few cases of intense trade relationships, as for example the NAFTA countries, the Malaysia-Singapore-Indonesia linkage (with Singapore serving as transshipment point), and the ANZCERTA countries of Australia and New Zealand. In virtually all of the APEC countries, the trade intensity measure for the European Community is less than unity. It may be noted though that there is no one-to-one relationship between the intensity of trade and intensity of foreign direct investment. This is because a major reason for the flow of foreign direct investments into developing APEC countries (especially Southeast Asia and China) is the use of the latter as export bases not only for the home country of the foreign investor but perhaps more importantly as export bases for third markets, both within and outside the APEC region.

The flow of portfolio capital within the APEC region is also indicative of the growing financial integration in the region. Indeed, more than foreign direct investment, there has been a sharp rise in portfolio equity and debt flows to the region. **Table 4** indicates that there has been a sharp rise in the gross flows, both inflows and outflows, in the APEC region. The IMF Balance of Payments data leaves much to be desired; nonetheless, the data indicate that the APEC region is a net recipient of portfolio equity and debt flows from the rest of the world. Indeed, even the US is a major net recipient of portfolio flows, primarily in debt securities. It was Japan that was the only major net portfolio investor for much of the 1990s among the APEC member economies. Analysis of bilateral flows of portfolio capital among the APEC economies cannot be undertaken because of data constraints, except for Malaysia. Nonetheless, a significant share of portfolio flows in the APEC region comes from the region itself. At the same time, Malaysia's data bring out clearly the role of Hong Kong and Singapore as the two major intermediaries in portfolio investments in the emerging economies in the region.

The flows of portfolio funds have been influenced also by the interest rate regime especially in the United States. Specifically, the lower interest rates in the US contributed to the increased flow of funds to the emerging markets in developing APEC in the early 1990s. Similarly, the rise in the US interest rates in the latter 1990s contributed to the retreat of portfolio funds from East Asian emerging markets during the period. Dasgupta and Ratha (1999) showed in their regression results that global liquidity factors—as indicated by the “world interest rate” proxied by the US dollar LIBOR 3-month—are indeed a major influence on capital flows to emerging developing economy markets (many of which are APEC member economies). The sensitivity of portfolio funds to interest rate movements in the US is indicative of the (deepening) financial relations within the APEC region and the increased financial openness of the APEC member economies to the rest of the world.

In summary, the large and growing capital inflows and outflows in the APEC region are indicative of the growing financial openness of the APEC economies and the growing linkages of domestic financial markets in the region with the international and regional financial markets.

Financial integration in the APEC region. The surge in capital flows into and within the APEC region can be expected to contribute towards financial integration in the region. Studies do suggest that financial markets in the region are not yet fully integrated and that there are substantial inter-country differences in how the national financial markets are integrated with the rest of the world. Nonetheless, there are indications that indeed the APEC member economies are increasingly financially integrated among themselves and with the rest of the world.

One measure of financial integration popularised by Feldstein and Horioka is the use of saving and investment correlations through the so-called Feldstein-Horioka type regressions. Underpinning this measure is the neoclassical framework that in a closed economy domestic investment is determined by domestic saving while an open economy loosens that binding constraint. Thus, according to this framework the most open economies can be expected to have low, if not zero, correlation between investment and saving.

A number of APEC member economies were included in the Feldstein-Horioka tests conducted by Montiel (1994) using data for 1970-1990. The regression results indicate that Singapore had high degree of financial integration while Chile, Malaysia and Mexico had intermediate financial openness but not “necessarily strong financial integration” (Montiel, 1994, p.33). Indonesia, Korea and Thailand followed in terms of financial integration. The Philippines was at the opposite end of Singapore, with strong financial autarky.

Given that the surge in capital flows to developing APEC member economies was at its highest during the 1990-1997 period, Intal, Pontines and Mojica (2001) estimated Feldstein-Horioka type regressions for Indonesia, Malaysia, Korea, the Philippines and Thailand for the 1980s and the 1990s. The regression results indicate

that while Korea, Indonesia, the Philippines and Thailand were relatively financially closed in the 1980s, they became more open financially in the 1990s. The regression results also indicate that Malaysia was relatively open financially even during the 1980s.

In summary, the Feldstein-Horioka regressions indicate varying degrees of financial integration among the APEC developing member economies during the 1970s and the 1980s. Indeed, the Philippines was estimated to be most financially closed among the APEC member economies in the Montiel sample (China and Vietnam were not included in the sample). Nonetheless, there are indications that the APEC member economies, including the Philippines, became more open during the 1990s.

The more common, and theoretically more appealing and stringent, measure of financial integration is the test of interest parity. The interest parity condition is satisfied when the return from a domestic financial asset is equal to the return from a comparable financial asset (in terms of default, liquidity and maturity characteristics) in a foreign country plus the expected exchange rate depreciation of the domestic currency (or the forward cover under covered interest parity). The estimates of covered interest rate differentials by Chinn and Dooley (1995) show low and declining mean differentials for Canada, Japan, Hong Kong and less so, Australia and New Zealand during 1982-1994. This means very high and deepening financial integration of these countries with the rest of the world. The differentials for Singapore and especially Malaysia were higher, suggesting less financial integration. Similar estimates of uncovered interest differentials for 1982-1988 were done by Fischer and Riesen (1993) for Hong Kong, Japan, Malaysia, Singapore and Thailand. Like in Chinn and Dooley, Fischer and Riesen found low differentials for Hong Kong and Japan, suggesting that indeed the two nations are very well integrated with the world financial markets. The mean differentials for Singapore, Malaysia and Thailand were somewhat higher, suggesting less financial integration of these countries in the 1980s.

For countries without forward exchange markets, it is uncovered interest parity that is used to examine the extent of financial integration with the rest of the world. Montiel (1994) tested uncovered interest parity by examining the differential between the domestic interest rate and the foreign interest rate adjusted for exchange rate change. Specifically, he posited that uncovered interest parity implies that the interest differential above has a mean value of zero and that the deviations from the mean value are serially uncorrelated. Using monthly data for the period 1985-1990, Montiel's analysis indicate that Chile, Korea and Singapore appear to meet uncovered interest parity but not Malaysia, Mexico, the Philippines and Thailand. It appears then that Chile and Singapore have high financial integration with the rest of the world.

The findings from covered and uncovered interest parity generally complement the Feldstein-Horioka regression results, with the apparent exception of Singapore and Malaysia. Note that the countries included in the Feldstein-Horioka regressions are only the developing countries. Nonetheless, it is generally expected that the developed countries with open capital accounts and little if any barriers to capital movements can

be expected to have low mean interest differentials. The relatively high interest differentials for Singapore and Malaysia seem to be inconsistent with the Feldstein-Horioka regression results, which suggest high (Singapore) or intermediate (Malaysia) financial integration. Nonetheless, it may be pointed out that the use of covered interest parity begs the question on financial integration because forward exchange markets are well developed only in cases where there are minimal capital and exchange controls and low political risks. Thus, considering that there are functioning forward exchange markets in Singapore and Malaysia suggest that they are relatively more open than the other APEC developing member countries. The result of the uncovered interest parity corroborates the high financial integration of Singapore.

In summary, financial openness and integration varied among the APEC countries during the 1970s and 1980s but nonetheless the indications are that financial openness and integration deepened during the 1990s. The developed APEC member economies with low mean interest differentials in the 1980s such as Canada and Japan became more completely financially integrated in the 1990s as the mean interest differentials declined further. The countries with relatively greater capital controls in the 1980s have deregulated and opened up their capital accounts further in the 1990s thereby contributing to their increasing financial integration with the rest of the world. The 1980s and 1990s have also seen the increasing co-movement of the domestic deposit and lending to the money market rates. As de Brouwer (1995) noted, this stemmed from financial deregulation and increased competition in the banking sectors of the Asia Pacific during the past two decades. The increasing co-movement of domestic deposit and lending rates as well as among money market rates in the region (as reflected in the reduction in the mean interest rate differential) mean that there is greater and deeper financial integration in the Asia Pacific region.

Surge in capital flows and macroeconomic vulnerability: the impossible (or incompatible) trinity. Financial integration, and with it capital mobility, has significant implications on macroeconomic policy and management. The basic analytics of macroeconomic policy in a small open economy brings out that monetary policy does not have a lasting impact on output and employment in the long run when there is perfect capital mobility and fixed exchange rate. That is, the pursuit of an independent monetary policy (i.e., setting a domestic interest rate significantly different from the foreign anchor country's interest rate adjusted for transactions cost and exchange rate risks) for a small open economy with a fixed exchange rate and faced with perfect capital mobility is not sustainable over the long run. Otherwise, as the recent East Asian crisis suggests, there would be a payments or currency crisis. This is the essence of the so-called incompatible or impossible trinity.

Internal policy consistency—and therefore sustainability—involves breaking one of the following three conditions; i.e., perfect capital mobility, independent monetary policy and exchange rate stability (fixed exchange rate). Thus, the sustainable policy options are the following:

- Maintaining monetary independence in the face of perfect capital mobility necessitates a flexible exchange rate regime;
- The pursuit of exchange rate stability in the face of perfect capital mobility demands that domestic monetary policy (of a small open economy) be subsumed under the monetary policy of the anchor country; or
- Putting barriers to capital flows (i.e., imperfect capital mobility) allows for some monetary independence at the same that there is exchange rate stability.

Given the long run direction towards greater capital mobility as economies become more open and integrated with one another, it is apparent that it is the first two options that are the most viable in the long run. That is, countries would have to move over time towards a truly flexible exchange rate regime or towards a hard peg with no monetary independence (i.e., under monetary union, currency board or dollarization). Indeed, more and more developing countries have chosen to move away from soft dirty pegs towards either greater exchange rate flexibility or a hard peg (e.g., dollarization, currency board) in recent years in the aftermath of the East Asian crisis.

Nonetheless, the third option remains an important one, primarily in the transition, for developing countries where the financial systems remain underdeveloped and the prudential environment, including the institutional capacity of the monetary authorities to monitor and supervise, leaves much to be desired. The relative success by Chile and Malaysia in the use of capital control measures has provided some impetus for the use of such measures for macroeconomic management.

Capital flows and macroeconomic vulnerability: experiences from Southern cone and East Asian countries. A number of currency and financial crises since the mid-1970s have brought out the incompatible or impossible trinity in stark terms. Perhaps, the starkest was the experience of the Southern cone countries (especially Chile and Argentina) during the late 1970s and early 1980s. Very high real interest rates and/or government exchange rate guarantees led to sharp capital inflows, in large part in the form of aggressive foreign borrowing by domestic firms. At the same time, imprudent macroeconomic policies, especially large fiscal deficits (especially in Argentina) together with the capital inflows fanned inflationary pressures in these countries with indexed wages. As a result, there occurred substantial real currency appreciation and (for Chile, together with terms of trade deterioration) large current account deficits. There ensued capital flight as the sustainability of the exchange rate under the so-called *tablita* system became increasingly in doubt. Chile and Argentina both went into a currency crisis in 1982.

The most recent currency crisis that had significant impact on the international policy arena and on the international economics literature was the East Asian currency and financial crisis. The East Asian crisis highlights the macroeconomic challenges of surges in capital inflows much more than the experience of the Southern cone countries. This is because the affected East Asian countries followed much more prudent

macroeconomic policies than the Southern cone countries. Nevertheless, the East Asian crisis also highlights the impossible (or incompatible) trinity albeit in a more nuanced way. For behind the apparently robust macroeconomic figures was an increasingly fragile financial sector in the affected countries in the face of the surge in capital flows but which eventually boiled over through massive and abrupt reversal in the capital flows.

The macroeconomic vulnerability from surges in capital inflows stems in part from the nature of the capital flows and in part from the policy responses to such inflows and the impact of such policies on the macroeconomic variables. It is generally agreed that foreign direct investment inflows do not impart as much macroeconomic vulnerability as short-term capital inflows. As the East Asian crisis countries, but most especially Thailand and Korea, show, a significant source of macroeconomic vulnerability is the preponderance of short-term capital in the country's total capital inflows that were used for long-term investments increasingly in real estate and construction as well as in margin loans for stock purchases. Thailand, the trigger country of the East Asian crisis, had short term debt accounting for more than two fifths of its total external debt and that the total short term external debt was larger than the country's international reserves. Korea, at the tail end of the currency crises in the region, also fell victim to the currency attacks because of the preponderance of short-term financing for long term, low profit factories. As an aftermath of the East Asian crisis, the ratio of short-term debt to the gross international reserves of a country has become an important indicator used in analyses of macroeconomic vulnerability to external shocks and speculative currency attacks.

At the heart of the macroeconomic vulnerability arising from the surge in capital inflows, however, lies in the impacts of such inflows on the economy. This is dependent in part on the policy responses to such inflows. Under a free float, a surge in capital inflows has virtually no monetary effect. Under a fixed exchange rate regime with no sterilization, the capital inflow results in increased international reserves and domestic money supply thereby raising inflationary pressures. In intermediate regimes with imperfect capital mobility---the usual case in emerging economies--- a country defends its exchange rate and pursues a monetary target. In this case, reserve accumulation is a policy choice such that the more aggressive the accumulation, the higher (lower) the pressures on inflation (nominal exchange rate) (Lopez-Mejia, 1999). The extent of sterilization affects the monetary impact of the capital inflows. The greater the extent of the sterilization, the lower is the monetary and inflationary effects of capital inflows. However, the domestic interest rate stays higher than the international interest rate longer thereby encouraging capital inflows further.

Table 5, drawn from Lopez-Mejia (1999) and Rajan (2000), presents some indicators of the macroeconomic impacts of the surge in capital inflows in selected developing countries. The table indicates that a number of developing countries appear to have succeeded in tempering the adverse macroeconomic impacts of the surge in capital inflows in the late 1980s and early 1990s. The table shows that the GDP growth rate of the recipient countries increased significantly during the capital inflow period, the inflation rate barely increased and in fact declined in a number of cases, and the

investment rate increased and the current account deficit widened. The table also suggests that sterilization efforts were on the whole successful in the sense that the countries were able to limit the impact of the capital inflows on domestic money and inflation.

A closer review, as exemplified by the case of Thailand, brings out nonetheless that the surge in capital inflows eventually reared its ugly head and brought macroeconomic vulnerability to Thailand. Specifically, the induced overheating of the Thai economy led to asset inflation (which is not captured well in standard price indices) and sharp rise in labour costs with the concomitant real exchange rate appreciation. The latter contributed to the loss in the international competitiveness of the Thai labour-intensive exports. This, together with the slowdown in the world electronics trade, led to the decline in Thailand's export volume and value in 1996.

A more important factor was the eventual macroeconomic impact of the bursting of the asset price bubble in 1994 and the continued softness of the real estate market during the next two years. The result was that a number of finance companies, which had heavy exposures in the Thai real estate market, folded up despite attempts by the Thai authorities to provide some short term lifeline as best exemplified by the case of Thai One. Thai banks were also adversely affected because the banks were major investors of finance companies. As a result, there was a sharp slowdown in the rate of growth of private sector credit in 1995 and 1996. The Thai government's efforts to prop up the financial system especially in 1996 led to the sharp rise in the contingent liabilities of the Thai government. Consequently, the expected fiscal burden in the future increased sharply. (See Rajan, 2000 and Gochoco-Bautista, Oh and Rhee, 1999.) The deterioration of the current account situation, the failure of a number of finance companies and the sharp rise in the contingent liabilities fed the speculative attacks on the Thai baht in late 1996 and early 1997. The near depletion of the country's usable international reserves in an effort of the Thai government to support the baht in the face of the speculative attacks eventually forced the Thai government to float the baht in early July 1997, thereby triggering the East Asian financial crisis.

Macroeconomic vulnerabilities, themselves also significantly shaped by the surge in capital inflows, led other East Asian countries to succumb to speculative currency attacks after the flotation of the Thai baht. As **Table 6** indicates, the Philippine peso experienced the largest real currency appreciation among the Southeast Asian currencies in the early 1990s. At the same time, the Philippines had the worst export growth performance in the late 1980s up to 1993 among the Southeast Asian countries; it continued to have slower export growth rates than Thailand and Malaysia up to 1995. Thus, the Philippine trade performance is vulnerable to the sharp drop in export price competitiveness arising from the sharp devaluation of the Thai baht. Hence, the speculative attack on the Philippine peso came almost right after the flotation of the Thai baht.

Similarly, Indonesia was vulnerable to speculative attack against the rupiah. By mid 1990s, Indonesia had a very high external debt service to export ratio (see **Table 6**),

which was almost comparable to the Philippine case before the Philippine payments crisis in the early 1980s. At the same time, Indonesia's export performance faltered in the mid-1990s, in part because of the appreciation of the real effective exchange rate by 18 percent during 1990-1996 (Nasution, 1996, Table 1). Thus, the Thai baht devaluation posed a challenge to Indonesia's non-oil exports thereby worsening further the country's external debt service burden. This is especially so because the capital inflows into Indonesia shifted towards short-term capital flows since the early 1990s (Nasution, 1999, p.3).

The macroeconomic variables for Malaysia indicate a relatively more robust macroeconomy than the other affected Southeast Asian countries (see **Table 6**). Its external debt structure, external debt service burden, extent of real currency appreciation and trade performance were better than the other countries. Although affected by the East Asian crisis, Malaysia was able to handle the crisis better than Indonesia or Thailand. Like Chile, Malaysia was more willing than its Southeast Asian neighbours to undertake less orthodox capital control measures in order to manage capital flows. For the most part Malaysia appeared to have succeeded. The issue of capital controls and the experiences of Chile and Malaysia are discussed further in the next section.

The macroeconomic vulnerability of South Korea also stemmed from the largely unbridled foreign borrowing of Korean firms in the 1990s as a result of the liberalization of Korea's capital account and the improvement in Korea's credit standing after its admission into the OECD. While the foreign borrowing was largely for investment purposes, the macroeconomic vulnerability stems from over-investment such that the returns from the investment were lower than the cost of capital (Corsetti, Pesenti and Roubini, 1999). Because they were highly leveraged and the rate of profitability extremely low, Korean chaebols became vulnerable—as well as the Korean economy given the tremendous importance of the chaebols to the whole export economy---to external terms of trade shocks and from the shocks from the US dollar/Japanese yen exchange rate. In 1996, both negative shocks occurred, thereby contributing to the failures of a few Korean large firms (e.g., Hanbo Steel). The growing corporate problems and the currency turmoil in Southeast Asia made foreign banks more skittish about lending to foreign firms and Korean merchant banks. With significant deterioration in the country's terms of trade, large decline in export growth, high share of short-term debt to total debt, and short term debt larger than the country's international reserves, South Korea eventually had to float and devalue the Korean won and worked out an IMF program in exchange for a large multi-country loan support and external debt restructuring.

The examples discussed above indicate that the surge in capital inflows pose considerable macroeconomic challenges. Surges in capital inflows tax the “absorptive capacity” of recipient economies. With relatively undeveloped financial markets and inadequate institutional capacity to monitor, regulate and supervise the financial sector, developing countries become more vulnerable to the macroeconomic risks from the surge in capital inflows; e.g., asset price bubble, resource misallocation and real

currency appreciation. Not surprisingly, it has been the emerging developing economies, which had mostly succumbed to various payments and currency crises after their periods of surges in capital inflows.

The limits of monetary and fiscal policies. In most of the emerging developing economies that experienced surge in capital inflows in the late 1980s and the 1990s, the macroeconomic policy response has been to dampen the impact of the capital inflows on the money supply and aggregate demand. The macroeconomic policy measures consisted primarily of sterilization through open market operations, increase in bank reserve requirements, and fiscal contraction to generate fiscal surpluses or at least reduce fiscal deficits (see **Table 7**).

There are limitations to the use of these macroeconomic policy measures however. Sterilization through the sale of high cost Central Bank bills or Treasury bills in exchange for low interest earning international reserves impose cost to the central bank or the Treasury. Moreover, aggressive sterilization of capital inflows raise domestic interest rates, which encourage greater inflows of capital especially short term portfolio capital. Leung's (1998) estimates of offset coefficients for Thailand and South Korea are particularly high at about -0.7 while those for Indonesia and the Philippines are between -0.4 to -0.5 . (The offset coefficient measures the extent by which a domestic monetary policy is offset by capital flows.) Thus, it is not surprising that the emerging economies relied primarily on sterilization through open market operations only briefly, although a few countries including the Philippines used sterilization (through open market operations as a measure for partial sterilization of capital inflows) during the 1990s (Lopez-Mejia, 1999).

Monetary tightening through generalized increase in the bank reserve requirement and fiscal contraction were also resorted to by many developing countries in response to the surge in capital inflows (see **Table 7**). Both measures are to some extent preferable to open market operations because they do not entail quasi-fiscal costs to the government. Nonetheless, an increase in the reserve requirement increases the cost of financial intermediation, thereby raising the domestic lending rate and inducing domestic firms to borrow abroad. Fiscal contraction does not impose distortions on the financial system, and thus preferable to both open market operations and increasing bank reserve requirement as a means of preventing the overheating of the domestic economy from the surge in capital inflows. Indeed, fiscal conservatism is increasingly being emphasized as an important complement to financial integration and capital mobility because it lends greater credibility to the macroeconomic environment of a country (Lopez-Mejia, 1999).

However, there are limits to the use of fiscal contraction as a counter cyclical measure against surges in capital inflows. A significant rise in the tax effort and/or significant reduction in government expenditures in order to generate fiscal surpluses involve political costs. This is especially the case in developing countries with poor tax administration and inequitable tax burden. In addition, the benefits of financial integration and capital flows tend to benefit the better off social classes This means a

corresponding increase in political pressure to use the fiscal system as a redistributive device in the sense that the government would need to increase expenditures (in infrastructure, education, public housing) geared especially to the poor regions and social classes. In short, unless there is an unexpected revenue windfall, fiscal contraction cannot be expected to be used sustainably as the key counter cyclical measure to the surge in capital inflows. As the Southeast Asian experience suggests, the fiscal surpluses of the Southeast Asian countries in the early 1990s were not enough to prevent the overheating of the economies and the occurrence of the eventual currency and financial crisis.

Thailand, the origin of the East Asian crisis, shows the limits of sterilization policy and the difficulties of managing surges in capital inflows. Thailand was aggressive in using fiscal policy in managing capital inflows. Thailand shifted from a central government fiscal deficit of about 4 percent of GDP prior to the surge in capital inflows into a fiscal surplus averaging about 3 percent of GDP during 1988-1994 (Schadler, 1994, p.364; Park and Song, 1997, p.103). The government tightened fiscal policy in order to reduce the inflationary pressures arising from the surge in capital flows. In addition, Thailand had to resort to frequent open-market operations primarily through repurchase of government and state enterprise bonds and through the issuance of central bank securities in order to control excess liquidity and reduce the volatility of domestic interest rate. Thailand wanted to dampen the inflationary pressure from the capital inflows at the same time that it prevented a significant nominal appreciation of the baht in order to maintain Thailand's export competitiveness.

However, as a result, domestic interest rates were persistently higher than those in the developed countries, thereby encouraging further capital inflows. It may be noted that the bulk of capital flows into Thailand during the surge period consisted of short-term borrowing of commercial banks and non-resident baht account deposits (Park and Song, 1997, p.92). The short term nature of much of Thailand's capital inflows during the capital surge period led to the level of short term debt being much higher than the level of international reserves, and to the increased vulnerability of Thailand to negative foreign investment sentiment. Thailand resorted to other measures in order to dampen the inflationary effects of the capital inflow, e.g., easing up on capital outflows. Nonetheless, the Thai economy overheated as reflected in the high current account deficit and the real estate bubble. When the bubble burst and the export sector stagnated from the downturn in the international electronics market and the rise in domestic labour cost by 1996, foreign sentiment turned progressively negative and pressures on the baht increased. By mid-1997, Thailand had to resort to a large currency devaluation after some months of an eventually losing battle of propping up the baht.

The possibilities of capital controls, floating exchange rates, and currency unions. In view of the inadequacies of monetary and fiscal policy tools, a number of developing countries used other balance of payments measures to help contain manage the surge in capital inflows. These measures include reduction of official borrowing, acceleration or prepayment of loans, liberalization of trade and liberalization of capital outflows. These measures, nonetheless, have also limitations. For many developing

countries, a drastic decline in official borrowing for some time carries significant opportunity costs because official development assistance carries low interest rates and much longer maturity than commercial funds. Such development assistance funds are especially important for funding infrastructure and social development projects, which most developing countries are in great need of. Similarly, liberalization of trade effectively means reduction in tariff and nontariff barriers.

However, a substantial trade liberalization at the same time that there are pressures for currency appreciation can have significant adverse impact on a country's tradable goods sector, especially manufacturing as was the case in the Philippines during the 1990s. Thus, liberalization of trade as a tool for managing surges in capital inflows has only limited effectiveness. Indeed, liberalization of trade may end up encouraging greater capital inflows, although likely more of foreign direct investments, which potentially can contribute to the further overheating of an economy. This perverse effect of inducing further capital inflows, instead of helping manage the surge in capital flows, is also a possibility for the deregulation of capital outflows. This is because this reflects greater capital market liberalization; as such, the greater freedom to bring out capital serves as an inducement to come into a country to seize opportunities for profitable investments however short term.

In **Table 7**, notice that many of the emerging economies imposed capital control measures while a few also undertook some exchange rate flexibility, essentially of currency appreciation. It is interesting to note, nonetheless, that among the emerging countries which had relatively high financial integration with the rest of the world (i.e., the Southeast Asian and Latin American countries and Korea), only two countries stand out as having utilized both capital controls *and* currency appreciation in addition to the array of other macroeconomic and balance of payments policy tools. These two countries are Chile and Colombia. Apart from Chile (and Colombia), Malaysia has also become known for its use of capital controls especially in the light of its response to the East Asian crisis. Nonetheless, whereas Malaysia used capital control as a temporary measure to address surges in capital inflows (in the early 1990s) or outflows (as an aftermath of the East Asian crisis in 1998-1999), Chile used it as an integral part of its macroeconomic strategy for nearly a decade. Given its relative success during the 1990s despite the Mexican crisis and the East Asian crisis, Chile has become the "poster country" for the use of capital control measures for macroeconomic management as well as for the merits of tempering international capital mobility for the benefit of a country.

One key lesson from the experiences of emerging economies is that in a world of growing capital mobility a rigid adherence to a fixed exchange rate and monetary independence is a recipe for an eventual economic crisis. This brings three alternative options for the macroeconomic policy stance; namely:

- (1) adherence to a truly freely floating exchange rate regime, with capital mobility;

- (2) adoption of de-facto or de-jure currency union where the domestic currency is pegged to an anchor country and the domestic monetary policy is dependent on the monetary policy of the anchor country (“currency board or monetary union), or the domestic currency is replaced by the currency of the anchor country (“dollarization”); or
- (3) imposition of barriers to capital inflows and/or outflows as part of a country’s macroeconomic policy

The standard presumption is that a truly freely floating or flexible exchange rate regime allows a country to set its interest rate on the basis of its overall macroeconomic and development strategy despite capital mobility. Moreover, it is viewed that a flexible exchange rate “insulates” an economy better from external shocks than a fixed exchange rate regime. Finally, a flexible exchange rate regime, where there is little or no intervention by the government, may encourage the development of risk-management financial instruments like futures or options.

However, it is increasingly acknowledged that there are problems related to flexible exchange rate regimes especially in developing countries. Perhaps the most important is that in a world of internationally mobile capital the exchange rate can change even without any relationship with changes in the current domestic interest rates. This is because the current exchange rate is also affected by expectations of the future domestic and foreign interest rates. Where the financial market is still thin and relatively undeveloped, the exchange rate can end up being very volatile which can be a disincentive to investments and to economic growth. Moreover, there may be problems of exchange rate overshooting, which in economies with thin markets would result in large swings in the exchange rate with the attendant negative effect on the economy. Moreover, the presumption that a flexible exchange rate better insulates an economy from external shocks is tenuous when the external shock is financial such as an increase or decrease in the foreign interest rate(s). Again the volatility in the exchange rate may hurt the economy. On the same vein, stabilizing the exchange rate in the face of such foreign interest rate shock may end up in a volatile domestic interest rate, which also has negative impacts on the economy. Finally, it is also sometimes advanced that a flexible exchange rate regime especially in a developing country does not provide as much pressure toward greater macroeconomic discipline as a fixed exchange rate regime.

It must be emphasized however that the pros and cons of a flexible exchange rate regime for developing countries discussed above are in the end theoretical. This is because developing countries have historically been under (adjustable) pegs or heavily managed dirty floats rather than really flexible exchange rate regimes. Nonetheless, it bears noting that Chile, despite its capital control measures, also allowed the peso to appreciate during the surge in capital inflows. Chile, which values the ability to impose higher domestic interests in order to dampen inflationary pressures (given that wages are indexed), pragmatically used both capital control measures and some flexibility in the exchange rate (an exchange rate appreciation)---the two measures that allow for

some independence of domestic monetary policy. That is, a significant and persistent surge in capital inflows may need to be accommodated, not only sterilized, through an appreciation of the domestic currency. By not “leaning against the wind” with respect to the exchange rate, Chile was able to manage better the economic effects of the surge in capital inflows.

At the end of the spectrum from a flexible exchange rate regime is the adoption of a hard peg through dollarization, currency board, currency union or a monetary union. In all these cases, domestic monetary policy follows that of the anchor country or, as in the case of the euro zone, follow the rules and dictates of a supranational monetary authority. The idea of a hard peg or optimal currency area has become popular in recent years. It is viewed for example that dollarization provides the needed macroeconomic discipline and credibility for inflation-prone countries (usually referring to Latin American countries). Fixed exchange rates among the currency union members or the use of the currency of the anchor country could reduce transactions costs among firms and other economic agents, thereby encouraging further trade, investment and economic integration among the currency (and monetary) union members. Finally, it is increasingly argued that the loss of monetary independence may not be that significant anyway if the domestic economy is strongly tied to an anchor country and therefore its business cycle moves alongside that of the anchor country.

Nonetheless, dollarization (the use of US dollars as legal tender in a country outside US), despite its increasing popularity in the academic circles (see e.g., Alesina and Barro, 2000) is generally regarded as the option of the desperate, of countries that seem to have lost their capability to manage their macroeconomy (some Central American country like Ecuador or El Salvador), or the option of the very small, almost appendage economies (e.g., Liechtenstein, Luxembourg, a number of Caribbean countries). The success stories of currency boards are also far and between; the contrasting performances of Hong Kong and Argentina bring out the demands of currency boards. Specifically, open economies under a currency board must have flexible labour, goods and asset markets, well regulated and managed financial sectors, and conservative fiscal policy in order to successfully ride out external shocks. Hong Kong has those. In some respects, the Philippines during the colonial period under the American regime--- under a currency board--- also fits the bill in terms of a conservative fiscal policy, flexible markets, and trade relations tightly linked with the United States. Argentina and most developing countries at present, including the Philippines, do not have them all.

The success of currency areas depends on the full coordination of macroeconomic policies of the member economies in the currency area. The 1992 crisis of the European Monetary System exemplifies the problems when members in the “currency zone” follow inconsistent macroeconomic policies, where the high interest regime of the anchor country (Germany) was inconsistent with the macroeconomic needs of other EMS members like Italy. The contagion that started in Italy moved to Spain and the United Kingdom. It took heavy intervention by the French and German central banks to stave off the speculative attacks on the French franc. As a result, the

European Union imposed strict rules for membership in the euro zone, which effectively reduced substantially the independence of the member economies in monetary policy (now determined primarily by the supranational European Central Bank) and even in fiscal policy.

For many of the larger developing countries, it is not clear if the conditions for a successful currency union are present. Alesina and Barro (2000) listed some characteristics of countries that are best candidates for currency unions. The characteristics include large actual or potential volume of trade with the anchor country, business cycle that co-vary substantially with that of the anchor country and the relative prices that are stable with respect to the anchor country. For example, the East Asian developing countries tend to have diversified direction of trade especially among Japan, the United States and the European Union. Considering that the US dollar, yen and the euro fluctuate against each other, it would be difficult to choose a common currency for the East Asia region. It would also be difficult to decide on a currency basket because each country would have different optimal weights given their different trade patterns. Finally, an East Asian “snake” would be difficult to implement, as was the case for the European snake in the 1970s. (See Lamberte, Milo and Pontines, 2001 for a contrary view.)

The third option, in addition to a flexible exchange rate regime and a hard peg, is the imposition of capital control measures to help manage surges in capital inflows. The experiences of Malaysia and Chile are worth considering here. Malaysia’s capital control measures in the early 1990s included (Ariyoshi, et.al., 1999):

- (a) the prohibition of residents to sell short term Malaysian money market instruments to non-residents,
- (b) the prohibition of commercial banks to engage in non-trade related bid-side swap or forward transactions with non-residents and thereby reduce speculative activities of offshore agents,
- (c) limits on banks’ external liability positions with non-residents excluding trade-related and FDI flows, and
- (d) a non-interest-bearing deposit requirement for banks against ringgit funds of foreign banking institutions.

In addition, Malaysia imposed prudential reserve and liquidity requirements to foreign currency deposits, foreign currency borrowing from foreign banking institutions, and interbank borrowing (Park and Song, 1997). Malaysia imposed direct and market-based capital control measures to help contain the flow of capital especially so-called speculative short term capital. The short term capital inflows consisted mainly of external borrowing by commercial banks and placements of ringgit deposits by foreigners with Malaysian banks (Ariyoshi, et.al., 1999). Malaysia resorted to capital controls because of the growing cost of monetary sterilization. Moreover, the monetary sterilization led to high domestic interest rates than abroad, thereby encouraging further capital inflows that speculate on possible ringgit appreciation. Malaysia curtailed

monetary sterilization when it imposed direct and market-based capital control measures.

Malaysia again imposed selective capital controls, this time on capital outflows, in 1998-1999 in the aftermath of the East Asian crisis. Malaysia resorted to the capital controls in conjunction with its shift in macroeconomic policy stance from a tight monetary and fiscal regime during latter 1997 to early 1998 towards an expansionary macroeconomic policy regime since mid 1999. Since the policy called for lower domestic interest rate while money market rates in Singapore were much higher, Malaysia had to impose controls on capital outflows especially because much of such outflows were in ringgit. In effect, the money markets of primarily Kuala Lumpur and Singapore needed to be delinked at that time in order for Malaysian monetary policy to be effective. (See Piei and Tan, 1999 and Athukorala, 2000.)

Malaysia's controls on capital outflows in 1998-1999 were as follows (Piei and Tan, 1999):

- controls on ringgit-denominated transactions among nonresidents via nonresident external accounts;
- controls on outflows of short-term capital with the requirement that such inflows needed to remain for one year within the country. This regulation was modified into a graduated exit levy with the rate depending on the nature and duration of the inflow;
- prohibition of import and export of ringgit
- imposition of a government approval for any Malaysian investment abroad

Malaysia's capital controls did not include current account transactions, foreign direct investment inflows and outflows, and repatriation of interest, dividends, fees, commissions and rental income from portfolio investments and other ringgit assets.

Chile's major regulations on capital movements are as follows (Le Fort and Budnevich, 1997, pp.44-46):

- Direct investment inflows: *minimum stay of one year for the principal*
- Portfolio investment through American Depository Receipts (ADRs):
minimum credit ratings by three internationally recognized rating agencies (i.e., BBB or better for nonfinancial companies, BBB+ or better for financial companies); minimum amount condition; unremunerated reserve requirement (URR)
- Other portfolio capital flows: *unremunerated reserve requirement (URR) to be kept with the Central Bank in dollars*
- Loans and bonds: *unremunerated reserve requirement (URR); minimum credit-rating and minimum amount requirements*
- Deposits and credit lines: *unremunerated reserve requirement (URR)*

Chile's capital control measures are meant primarily to raise the cost of foreign borrowing and tax short term capital inflows, ensure credit worthiness of Chilean firms and banks borrowing abroad, and bias the composition of capital inflows toward foreign direct investment. With the exception of the credit rating requirement, Chile's major price-based capital control measure (i.e., URR) is similar to Malaysia's. The major difference between Chile and Malaysia is that the imposition of the reserve requirement was temporary in Malaysia and decade-long in Chile.

The evolution of the implementation of the unremunerated reserve requirement in Chile shows that the coverage of the URR was expanded over time in order to cover loopholes. Chile's experience is typical: market participants find ways of circumventing the regulations, which make such restrictions increasingly ineffective unless the loopholes are plugged. Chile reduced the URR rate to zero in the aftermath of the crisis, as the pressures from capital inflows eased up and reversed to pressures for capital outflows (Ariyoshi, et.al., 2000).

Malaysia succeeded overall in its use of capital control measures. Malaysia's imposition of the capital control measures in 1994 was meant to be for a short time to address the sharp rise in what was perceived to be destabilizing capital flows. The immediate market response to the capital control measures was a ringgit depreciation and the cooling off of the Kuala Lumpur Stock Exchange. Thus, the capital control measures succeeded in easing the pressures for appreciation of the ringgit and in cooling off the fast rising stock prices. With the successful stabilization of the Malaysian economy during the year as the interest differential between domestic and foreign interest rate decreased and the inflationary pressures eased, the capital control measures were lifted within the year (1994). Malaysia's controls on capital outflows in 1998-1999 also largely succeeded because they contributed to the implementation of the expansionary macroeconomic policy in 1998-1999. Malaysia's economic recovery from the East Asian crisis in 1999 was substantially faster and the Kuala Lumpur Stock Exchange was more robust compared with the other adversely affected Southeast Asian countries.

Malaysia's experience with the use of capital controls against speculative capital flows is instructive. While Malaysia did not escape the contagion from the baht devaluation and the East Asian crisis, Malaysia proved more resilient than Indonesia or Thailand. When the standard sterilization measures proved expensive and ineffective in curtailing short capital inflows, Malaysia imposed capital controls. Its success meant that short term debt is a low share of total external debt in Malaysia as compared to Thailand and Indonesia. Moreover, the preponderance of FDI in its capital inflows underscores the underlying soundness of Malaysia's economic fundamentals. Thus, Malaysia's economy was less vulnerable to capital flow reversals. Moreover, its successful experience in utilizing capital controls as a tool of short term macroeconomic management in 1994 explains why Malaysia relied on capital measures again in 1997-1998 to stem capital outflows. As in 1994, Malaysia also succeeded in its use of capital control measures in 1997-1998.

There have been a number of studies evaluating the impact of the Chilean experience with capital controls. The evaluations are generally mixed. The results of the studies indicate that the capital controls allowed for a higher domestic real interest rate, which suggests that the capital flow barriers provided some monetary independence for Chile. The evidence seems to indicate that the controls affected the composition of the flow of capital towards longer- term flows. This is important because East Asia's vulnerability to currency speculation by 1997 stems in part from the high proportion of short- term capital inflows (primarily debt). Indeed it is likely that Chile's requirements before local firms could borrow abroad may have helped dampen short term borrowing from abroad. The studies remain unsettled with respect to the impact of the capital control measures on the volume of capital flows and on the real exchange rate (Nadal-De Simone and Sorsa, 1999). Nonetheless, it is worth noting that the real currency appreciation arising from the capital inflows during the 1990s occurred over a longer period than during the late 1970s that culminated in the 1982 currency crisis. Thus, the Chilean economy had more than time to adjust more smoothly to the real currency appreciation. In contrast, the sharp real appreciation in the late 1970s was disruptive resulting in substantial loss in export and import competitiveness, and thereby in large current account deficits that eventually led to the currency crisis.

The Chilean and Malaysian experiences seem to indicate that capital control measures can be useful tools in managing capital flows, although they cannot be a panacea. Nonetheless, it is worth noting that there are some structural conditions that may have helped to make the capital control measures relatively successful in these two countries. Both have stronger structural foundations: Both are strongly export oriented, with low tariff barriers. Both have comparatively better performing and better -trained central banks. Chile, and to a less extent Malaysia, have relatively stronger prudential regulations than most developing countries. And Chile allowed the peso to appreciate to some extent in response to the surge in capital inflows. In short, it is likely that the basis for the success in the use of capital control *measures as a tool for macroeconomic management* in these two countries is that the two countries have comparatively stronger structural and institutional foundations with less distorted economies to start with. Moreover, both countries were pragmatic in their use of capital control measures, reducing or eliminating them as the conditions warranted.

In summary, the discussion above indicates that there are pros and cons for each of the options for managing surges in capital inflows. That is, there is no ideal solution that is applicable to all. Each country would have to assess its own needs, strengths and weaknesses in designing the appropriate macroeconomic strategy for itself. Still, it appears that at least in the meantime that developing countries are still building up their financial systems, the package of macroeconomic policy measures to manage surges in capital flows would include not only the standard monetary, fiscal policy and trade policy measures but also flexibility in the exchange rate and the pragmatic use of capital control measures. For after all, the base of the currency crises is the problem of "too much too fast" for (short-term) capital flows. And both the currency appreciation and (implicit or explicit) barriers to capital inflows help temper the flows to more

manageable levels over a more manageable period of time. Nonetheless, as implied in the cases of Chile and Malaysia, the success in the use of the package of macroeconomic policies hinges also on the strong economic fundamentals of export orientation and low distortion and prudent fiscal and monetary policies. In addition, both countries (but especially Chile) rank very well among developing countries in terms of the institutional capacity on their Central Banks and in terms of prudential regulations and (less so, for Malaysia) bank supervision. The issue of prudential regulations and bank supervision is discussed further in the section on the microeconomics of financial liberalization and integration.

Differentiating capital flows, orderly liberalization and crisis prevention

One important difference between the case of Chile and Malaysia on the one hand and Korea, Indonesia and Thailand on the other hand is that the former vigorously restricted short-term capital inflows while in the latter short term capital inflows were either allowed freely or were even encouraged. In the light of the recent currency crises including the East Asian crisis, it is increasingly acknowledged that there is a need to differentiate various kinds of capital flows. The various capital flows have different probabilities for sudden large reversals of flows (i.e. from inflow to outflow) and therefore the government may need to sequence the liberalization of the capital account accordingly. For example, Reisen (2000) that the most volatile capital should be liberalized last and only after a strongly enforced regulatory framework is in place while the least volatile or most autonomous and permanent should be liberalized the first. The most autonomous and permanent flows are long term bank loans (which are mainly syndicated euro loans) and foreign direct investment; these are followed by portfolio investments made by pension funds and insurance companies because they follow a buy-and-hold strategy rather than a trading strategy in the emerging markets. The most cyclical and volatile flows are short-term lending and borrowing facilities (e.g., euro commercial paper), leveraged asset positions such as hedge funds, and borrowing through corporate or government bonds (Reisen, 2000, pp. 84-85)⁴.

Apart from the historical experiences on currency crises where the short-term borrowing problem was an important determining factor for the crises, Reisen (2000) points out that a policy bias against short term bank lending corrects an international regulatory distortion inherent in the 1988 Basel Accord, which is biased in favour of short term loans. Specifically, the current risk weighting for short term bank credit up to one year to a non-OECD bank carries a low 20 percent weighting while long-term loans of over one year maturity to the same non-OECD bank have 100 percent risk weight. Similarly, risk weights for loans to banks (at 20 percent) are much lower than loans to the private sector (at 100 percent). A lower risk weight implies lower borrowing cost. Thus, the current risk weighting system followed in international finance as agreed upon in the 1988 Basel Accord encourages cross-border interbank short-term lending as well as lending to hedge funds. As the East Asian crisis shows, both short-term bank lending and hedge funds are particularly volatile capital flows. (Hedge funds invest with borrowed funds at multiple of own funds. They are volatile because abrupt portfolio

⁴ This section draws heavily on Reisen (2000).

changes are made when banks make ‘margin calls’—call in the credits when the price of the collateral drops below a specified level.) (See Reisen, 2000.)

At base, the policy issue on the sequencing of liberalization concerns the productive use of capital inflows and effective macroeconomic management. Viewed from this perspective, capital controls on long term capital inflows and trade-related inflows need to be liberalized immediately because they are central to the development process and overall economic efficiency. Fiscal consolidation is an important prerequisite to capital account liberalization in order to prevent the use of capital inflows to finance unsustainable fiscal deficits and to prevent capital outflows from forcing up domestic interest rates that exacerbates the fiscal deficit problem. Thus, it is recommended that controls on long- term and short-term capital outflows only after there is sound fiscal position, bad debts problems are resolved and domestic interest rates deregulated. Prerequisites for relaxation of entry of foreign banks into the domestic financial sector are the liberalization of the financial system and the resolution of the weaknesses of the domestic banks. Finally, liberalization of short- term capital inflows needs to wait until there is sufficient competition in the banking sector and there is a sound system of banking regulation and supervision.

Based on the above-mentioned schema of liberalization of the capital account items, it is worth noting that Chile and Malaysia seem to be much more in accord to it as compared with Indonesia, Korea, Thailand or even the Philippines. Thus, for example, Chile and Malaysia, together with Thailand and the Philippines have promoted FDI while Korea has not. Equally important, both Chile and Malaysia have more liberal policies on FDI, in terms of foreign equity restrictions, than the Philippines or Thailand. Similarly, despite the fact that Chile and, to a less extent, Malaysia have instituted tougher prudential regulations and have stronger institutional capacities in their Central Banks than Indonesia, Korea and even Thailand, both countries have been much more wary of short term capital flows and, in the case of Chile, short term external borrowing.

The discussion above on the merit of differentiating various forms of capital inflows and a more sequential liberalization process for the capital flows leads to a number of policy prescriptions aimed at reducing vulnerability to volatile capital flows, improving the quality of inflows, and thereby reduce the probability of crises in the future. Specifically, Reisen (2000) highlights the importance of

- (1) floating exchange rate instead of the adjustable peg. The floating rate is preferable to small open economies with good inflation record, shaky financial system and no natural anchor currency;
- (2) comprehensive external debt management system that limits liquidity, currency and rollover risks. This calls for deliberate limitation on short term borrowing, sound maturity profile of amortization payments, diversification of finance across currencies and types of investors, and comfortable liquidity position in terms of international reserves or contingency loans

with private foreign banks or international financial institutions (e.g., IMF, WB, ADB)

- (3) policies that penalize early withdrawal of capital inflows. Chile's unremunerated reserve requirement on all capital inflows except FDI is an example. Most mutual funds pension funds and life insurers impose penalties for early withdrawal of investors; hence, they are preferable to hedge funds for example. Chile's reserve requirement is best seen not as a distortion but as a prudential policy in the light of the regulatory distortions inherent in the 1988 Basel Accord, the risks that leveraged flows pose toward asset bubbles and the increased vulnerability of a country to capital flow reversals when the ratio of short term debt to international reserves reaches unity; and
- (4) "capacity-building" sequence of liberalizing capital inflows. "Financial opening has the best chance to achieve its ultimate objective, to raise efficiency and growth without compromising stability, when combining a sequential (capital account) opening process with building the prerequisite institutions" (p.100). Thus, the first priority in the liberalization process is the liberalization of FDI and trade-related finance because they are necessary for growth with little negative effect on macroeconomic management and financial sector stability. Also, the process of building and strengthening the infrastructure for sound domestic financial system--- accounting, auditing, disclosure, regulation and supervision--- needs to be undertaken in earnest because they take time to build; these can be enhanced through the entry of financial market expertise. The liberalization of portfolio equity and long-term bond investments can then be pursued together with the fostering of the infrastructure for domestic stock, corporate debt and mortgage instruments which will deepen the domestic money markets and thereby allow government authorities to smoothen shocks to domestic liquidity. Finally, with deepened domestic financial markets and tough prudential regulations and supervision, controls on short-term borrowing can be dismantled.

IV. THE MICROECONOMICS OF FINANCIAL LIBERALIZATION AND INTEGRATION

Financial Liberalization, Contestability and Financial Sector Efficiency.

Financial liberalization and integration has two important considerations; i.e., competitiveness and efficiency on the one hand and financial stability on the other hand. Financial liberalization, and with it the implied increased contestability of the financial sector, is expected to increase the pressure for improved operational efficiency of the financial institutions. It also means greater ability of the financial institutions to meet the demands of households and firms especially as financial deepening continues with the growth of the economy.

The standard operating ratios in banks pose problems comparability internationally given differences in equity capitalization of different banks, differences in mix of high margin and low margin businesses and differences in accounting practices across countries (Fischer and Reisen, 1993, p. 94). Despite the problems of international comparability, a comparison of net interest margins and operating costs in a number of APEC countries (**Table 8**) suggests that cross-country differences in interest margins reflect differences in banking efficiency rather than for different risks (Dickie and Bond, 1999). Note from **Table 8** that Japan and the Asian NIEs seem to have the lowest operating costs and net interest margins, suggesting that they seem to be the most efficient. The high net interest margins for Chile, Mexico and possibly the Philippines may reflect the high inflation rates in those countries. The much higher operating costs ratio in the Philippines than the other Southeast Asian countries is particularly striking.

Empirical evidence on the impact of financial liberalization on the efficiency of the financial sector is mixed and hampered by data problems. Nonetheless, empirical studies on the intermediation margins may be suggestive of the impact of financial liberalization on the cost of financial intermediation. In Malaysia, one study indicates that the intermediation margin increased after financial liberalization because of the oligopolistic banking structure and the rise in the overhead cost of banks arising from rapid branch expansion and the continuation of selective credit programs. (See Fischer and Reisen, 1993, p. 94.) In the case of Indonesia, the study indicates a reduction in the intermediation margin, in part because of the increased competitive pressure from the increased presence of foreign banks. The experience of Spain during the 1980s indicates that the opening up of the economy to foreign bank presence led to the repositioning of financial institutions. Specifically, the foreign banks emphasized the wholesale banking business especially on international operations where the foreign banks have competitive advantage. Thus, the competition in the wholesale banking sector is between the foreign banks and the big local banks. (Ibid.)

Claessens and Glaessner (1997) compared net margins and overhead expenses in banking services and share of foreign banks in a number of Asian countries. Their finding indicates a negative correlation between net margins and overhead with the openness of the banking sector. That is, the countries with more open financial sectors tend to have lower overhead and net margins; those closed to foreign banks have higher margins. Thus, the finding suggests that financial opening encourages contestability and forces banks to be more efficient. Similarly, Claessens and Glaessner report that an earlier study done by Claessens, Demirguc-Kunt and Huizinga found that an increase in the share of foreign banks results in lower profitability and overhead expenses for domestic banks. Assuming that the profit rate of domestic banks included monopoly rents, then the contestability arising from the entry of foreign banks reduced the rate of profit and forced local banks to become more efficient. Claessens and Glaessner also noted the studies of Terrel and Arriazu on 14 developed countries and Argentina respectively. The two studies show that the increased participation of foreign banks in

the domestic financial sector tends to lead to lower operating cost of banks, and at least for the 14 developed countries, also lower gross-interest margins and lower before-tax profits. In the securities industry, the settlement and operational efficiency improve with the openness of the securities industry in East Asia, except for the Philippines, which according to Claessens and Glaessner has the most inefficient trading system in the region. Similarly, Claessens and Glaessner found that the more open insurance markets in the region tend to have high payback ratio; i.e., high efficiency, with the exception of Singapore which is relatively open but not as efficient (Claessens and Glaessner, 1997).

The experience of European countries with the 1992 Single Market Programme also corroborates the efficiency-inducing effect of financial liberalization and integration. Specifically, the increased openness and competition in the EU's financial markets led to the greater influence of external market forces on banking strategies in the EU, improvement in the retail loan and mortgage pricing in some countries, widened the range of financial services and channels of delivery to consumers, and realization of economies of scale and economies of scope. In Greece, Ireland and Spain, the entry of foreign banks eventually reduced margins, improved services to consumers in quality and breadth, and increased efficiency with the reduction in staff costs. (See Claessens and Glaessner, 1997.)

The impact of financial liberalization and entry of more foreign banks in the Philippines in the mid 1990s was examined in three of the papers under the current PASCN project on financial liberalization and integration. Manzano and Neri (2001) looked into the impact of foreign bank entry on bank spreads from a macroeconomic perspective. Unite and Sullivan (2001) examined the effect of foreign entry and ownership structure on a number of individual bank-based indicators of bank performance. Hapitan (2001) surveyed a few domestic banks on their responses to the entry of foreign banks in the Philippines.

Manzano and Neri (2001) examined the bank spread for the whole commercial banking industry before and after the entry of the new foreign banks in the mid 1990s. They found that the spreads did not narrow despite the entry of foreign banks. One possible reason for this is that the liberalization was not enough and the reduction in the concentration of the commercial banking industry not substantial enough such that the implicit monopoly could not be reduced significantly despite the entry of foreign banks. Manzano and Neri examined the spread puzzle from a macroeconomic angle. Instead. Specifically, the authors present the view that the continuation of the bank spread despite the entry of foreign banks was caused by the macroeconomic policy of the government. Before the East Asian crisis, the Philippine government sterilized capital inflows resulting in comparatively high interest rate at the same time that banks could source low cost foreign funds (in terms of deposits or loans) with little exchange rate risk. Thus, banks' spreads remained high before the East Asian crisis. Similarly, the Philippine government maintained a high interest rate regime during the height of the East Asian crisis in 1997 and 1998 in order to prevent capital outflows. As a result, banks lending rates remained high. It was only in 1999 when foreign funds started to return to East Asia and the danger of capital outflows eased that the Philippine

government allowed domestic interest rates to go down to single digit levels. The change in the macroeconomic policy stance of the government also saw the reduction in the bank spread of the commercial banks. Although only indicative, the eventual reduction in the bank spread suggests that the foreign bank entry liberalization increased competitiveness in the banking sector. The macroeconomic policy regime that relied on high interest rates initially to sterilize capital inflows and later on to prevent capital outflows merely masked the competitiveness impact of the foreign bank entry liberalization.

Unite and Sullivan (2001) examined the impact of foreign bank entry liberalization from a more microeconomic, bank-level perspective using bank operating performance measures like accounting profits, operating expenses and non-interest income from a sample of 16 domestic commercial banks publicly traded in the Philippine Stock Exchange. Unite and Sullivan's findings complement and modify the Manzano-Neri findings. Thus, Unite and Sullivan found that interest rate spreads narrow with the entry of foreign banks but only in banks which have high level of group ownership. Unite and Sullivan found the group-affiliated banks to have higher interest spreads, which they surmised is caused by the ability of the banks to extract wealth from group member firms.

Unite and Sullivan also found that profit did not decline with the entry of foreign banks. There are possibly two compelling reasons for this. First, as Manzano and Neri highlighted, was the macroeconomic policy stance which resulted in high domestic interest rates; Unite and Sullivan indirectly refer to this in terms of the positive relationship between rate of profit and reserve requirements. And the second, the competition from foreign banks encouraged domestic banks to improve their efficiencies, although less so for the group-affiliated banks as well as the larger banks. The weak impact of foreign banks entry on the efficiency of group affiliated banks may not be surprising if indeed the group-affiliated banks could extract wealth or rents from their group members. It is also likely that the larger banks did not register significant improvements in their efficiencies in the face of the entry of foreign banks because the banks were on an expansion binge in terms of branching during the period. The aggressive branch expansions can be considered as one of their responses to the liberalization of the financial sector, including the entry of foreign banks.

The results of the interviews and questionnaires of Hapitan (2001) elaborate further on the perceptions and responses of domestic banks to the entry of foreign banks. Although the sample size is very small, Hapitan's survey indicates that the entry of foreign banks increased the competitiveness of the banking sector but primarily in wholesale banking. This is probably not surprising since the new foreign banks did indeed focus primarily in wholesale banking, especially in foreign exchange, investment banking and lending. The entry of the foreign banks accelerated many of the steps that the domestic banks had been doing in response to the general liberalization and expected increased competition—from both the domestic and the new foreign banks—in the financial sector resulting from the financial liberalization. These steps included investments in new technology (greater computerization and expansion of ATMs),

introduction of new financial products, manpower development and advertising and promotion activities. A few of the banks also moved to other markets or niches and reviewed their pricing to match competition (Hapitan, 2001). The survey results also indicated that the survey respondents (who are bank officials) did not feel that the foreign banks increased the variety of financial services (at least on top of what the domestic banks were undertaking anyway) and new “foreign” technologies and processes. The survey respondents felt that “...most of the product development (either in terms of new products and services) being made in (the) market are indigenous and is mostly made to compete with the local banks”.

The lack of technology and knowledge transfer in the Philippine case seems at odds with one major reason for liberalizing entry of foreign financial institutions into the country. Although the survey did not probe, it is likely that the new banks’ strategy to rely primarily on poaching local bank officials from local banks to man their new branches/subsidiaries reflect to some extent the acknowledged Philippine managerial resource in banking and finance many of whom have had stints in international banks at home and abroad. In short, many of the Filipino managers of the domestic banks have been cognizant of the innovations in the world financial system.

In summary, the results for the Philippines are not conclusive with respect to the bank spread or interest rate spread. Nonetheless, there are indications of some improvement in the operational efficiencies of the banks and redirection of some banks toward other market niches. Moreover, there are also indications that the entry of additional foreign banks has led to increased competition and contestability in the wholesale banking sector in the country (Manzano and Neri, 2001 Hapitan, 2911, Unite and Sullivan, 2001).

Macroeconomic Conditions, Prudential Regulations and Financial Stability.

The recent East Asian financial crisis highlighted the critical role of the interplay of the prudential environment and macroeconomic conditions in determining the stability of the financial sector. Weak prudential regulations or inadequate implementation of such prudential regulations, implicit guarantee on deposits, and high domestic interest rates in tandem with relatively fixed exchange rates had led to lending booms and increase in short term debt and foreign exchange exposures of banks and the corporate sectors. The lending boom led to riskier loan portfolios especially in the real estate and securities markets, which in the case of East Asian economies were particularly susceptible to asset bubbles. The macroeconomic environment encouraged short-term and unhedged foreign borrowing at the same time that the loans to domestic firms in local currencies were longer term. The sharp rise in capital flows stretched local bank’s risk assessment capacity. The overborrowing of East Asia stemmed also from the “herd behaviour” of foreign lenders as reflected in inadequate pricing of risks and lack of full evaluation of borrowers. (See World Bank, 2000, pp.38-41.)

Weak prudential regulation, either in design or enforcement, encourages banks to exploit the existence of moral hazard. Moral hazard in the banking system arises from the presence of costless and full deposit insurance, either implicit or explicit, and

asymmetric information. The expectation of bailouts by the government encourages excessive risk taking and therefore leads to the allocation of credit towards the riskier sectors. The increased risk taking of banks is also fostered by the loss of charter value of banks arising from bank liberalization as well as by interlocking ownership of banks and enterprises. (See Fischer and Reisen, 1993, pp.102-104.)

The East Asian crisis has highlighted the importance of prudential regulations of the financial sector in staving off future currency crises. This is because it is generally agreed that the financial sector was at the heart of the recent East Asian crisis. Weak supervision of banks on the one hand and the macroeconomic incentive for banks (and non-bank financial institutions) to increasingly rely on foreign funds for domestic relending and/or investments (because of the stability of the currency and the lower interest rate abroad than at home) on the other hand encouraged banks and non-bank financial institutions to undertake riskier and unhedged loans and investments domestically. An ADB study (1999, Vol.1) presents indicators on the institutional framework of banking by mid-1997 in the affected East Asian countries (see **Table 9**). **Table 9** shows that Thailand, the country that triggered the East Asian crisis was judged weak in bank regulation and supervision while the other affected countries (Indonesia, Malaysia, Korea and the Philippines) had weak to fair bank supervision.⁵

The weak bank supervision, low borrowing costs, and the euphoria of historically high growth rates in the affected East Asian countries led to excessive investments in risky and low-profitability projects. There were high investments in the nontradeable sector, especially the property market that fed into a property bubble. **Table 10** shows that Thailand, Malaysia and Indonesia merited a “high” rating in terms of the property sector risks because of the large proportion of property loans as well as the large proportion of loans collateralized by real property. In the case of South Korea, particularly and even to some extent, Thailand, there was excessive investments in the traded goods sector with one important source of vulnerability, that is, borrowing short and investing long term. Corsetti, Pesenti and Roubini (1998) present indications of over investment in Korea before the crisis. According to them, 20 of the largest 30 conglomerates in Korea had rates of return on invested capital in 1996 which was below the cost of capital; 8 out of the 30 largest conglomerates in Korea were *de facto* and/or *de jure* bankrupt by mid-1997, and the leverage ratio of Korea’s corporate sector was very high at more than 300 percent.

Corsetti, Pesenti and Roubini (1998) also noted that there was a high rate of non-performing loans before the crisis at more than 15 percent in Thailand, Indonesia, Korea and Malaysia. Indeed, the three authors highlighted as the indicator of financial fragility the case of rising non-performing loans accompanying a lending boom (1999). According to them, the growing financial fragility in tandem with the growing current account imbalance as well as foreign reserves inadequacy eventually led to the East Asian crisis. An indication of current account imbalance is a large current account deficit in tandem with real currency appreciation. Indicators of foreign reserves adequacy are the ratio of foreign debt service burden to foreign reserves and the ratio of

⁵ This paragraph and the succeeding two paragraphs were taken from Intal, Pontines and Mojica (2001).

money supply to foreign reserves. (See Corsetti, Pesenti and Roubini, 1999.) In short, the East Asian crisis is interplay of financial fragility and macroeconomic imbalances.

It is the interplay of weak prudential regulatory environment and macroeconomic shocks or macroeconomic instability that is the hallmark of countries undergoing financial liberalization that experienced financial crises. Thus, the challenge in the management of risks of financial liberalization and integration does not rest solely on the improvement of the macroeconomic policy environment but also on the improvement of the prudential regulatory environment. The East Asian crisis has especially highlighted the importance of strengthening prudential regulation and supervision in the management of the risks of financial liberalization and integration.

Towards Strengthened Prudential Environment and Improved Risk Management. There are three pillars to a strengthened prudential standards; namely, prudential regulation and supervision, internal practices and controls, and market discipline. Prudential regulations attempt to limit risk exposures of financial institutions relative to their risk taking and management capability. Prudential regulations need to give especial importance to banks because of their large role in the provision of credit and intermediation of international capital flows, their central role in the payments system, the systemic implications of their high leverage and the mismatch in the liquidity of their assets and liabilities (Ariyoshi, et.al., 1999, p.22).

As a result of the East Asian crisis, East Asian countries have strengthened prudential regulations. Regulations concerning loan classification, provisioning and income recognition have been brought closer to international best practices. The period overdue for interest suspension was shortened and tightened in the affected countries (**Table 11**). Loan –loss provisioning requirements were also tightened (**Table 12**). Minimum capital-asset ratios have also been raised. Thus, for example, Indonesia raised the capital adequacy ratio from 4 percent to 12 percent by 2001; Malaysia from 8 percent to 10 percent (World Bank, 1998, Table 3.2).

Other prudential regulations are also being improved. They include limits on foreign exchange exposures; liquidity management rules in Indonesia, Korea and Malaysia; connected lending regulations in Indonesia and Korea; single borrower and group exposure limits in Korea and Malaysia; and cross guarantees in chaebols in Korea. Imprudent banking practices like government directed credit are also being phased out. (See IMF, 2000, pp.43-44.)

Table 13 presents a comparison of the major banking regulations in the five countries mainly affected by the East Asian crisis.

Prudential supervision has also been strengthened in the affected countries. Central Banks have been given greater supervisory authority or independence. The countries have upgraded their supervisory capacity and strengthened the powers of supervisors. Countries rely more on on-site examinations. Supervisors could now demand corrective actions like additional loan-loss provisioning and other corrective

measures when problems are detected. Countries are also phasing out supervisory discretion waiving compliance with regulations on a case –to-case basis. (See IMF, 2000, p.43.)

Market discipline on the conduct of banks demands meaningful, timely and accurate information. Well-informed market participants complements banks' incentives for prudent behaviour and effective supervision and regulation. Greater transparency helps prevent herd behaviour of market participants and thus promote greater financial stability (IMF, 1999, pp.98-99). Toward this end, East Asian countries have taken measures to improve disclosure and transparency. For example, the Philippines now requires banks listed in the stock exchange to disclose key indicators on their soundness to the public on a quarterly basis. Korea is now promoting consolidated financial reporting and disclosure by corporate groups (chaebols). Banks in Korea and Indonesia are now required to report their financial statements to the public more frequently. The quality of data has also improved in the affected countries because of the new loan classification, provisioning and income recognition rules. (See IMF, 2000, p. 44.)

At the international level, there are ongoing efforts to enhance bank transparency and market discipline. Thus, for example, the Basel Committee released a guidance note on enhancing bank transparency that provides recommendations in six broad categories of information; i.e., financial performance, financial positions (including capital), risk management practices, risk exposures, accounting policies, and management and corporate governance. Another group, the G-10 Committee on the Global Financial System Working Group on Enhanced Disclosure by Individual Institutions, is also working on a model template for public disclosure that include information on credit, market and liquidity risks. (See IMF, 1999, pp.99-100.)

There are also on-going discussions and initiatives at the international level to strengthen risk management and internal control systems. This is in response to the 1997-1998 world financial disturbances that revealed weaknesses in counterparty credit risk and market risk assessments. The weaknesses involved inadequacies in the key assumptions underpinning techniques of risk assessment and the insufficiency of what were seemingly adequate amounts of collateral and margins. These developments indicate the need for improving and adapting risk management tools and internal controls to global and interrelated markets, financial innovations, and potentially volatile market conditions. Some of the ongoing efforts include review of credit risk models, examination of operational risk events, and the use of tolerance limits at the level of the firm and trading desks covering market, credit, and operational risk as well as liquidity and legal risk. (See IMF, 1999, pp.93-94.)

The Report of the Task Force on Risk Assessment by the Institute of International Finance also contains recommendations for financial institutions. Among the recommendations are (IMF, 2000, p.98):

- comprehensive stress testing (done) regularly to assess the potential impact of extreme events on portfolios and risk profiles
- integration of country economic analysis with stress testing and scenario analysis
- establishment of a strong independent risk control unit
- development of models to improve the integration of market and credit risk

Nonetheless, the quality of risk management is not dependent on the quality of risk assessment models but also on experience and sound judgment. Thus, adequate communication between senior management, portfolio managers and line managers is important. Similarly, it is important to have more intensified information sharing among counterparties.

Finally, Ariyoshi, et.al. (1999) note that “...countries with weak supervisory agencies (tend to) also suffer from relatively weak skills in the private financial sector, and thus from serious shortcomings in the ability and incentives of financial institutions to adequately manage risk” (p.29) Symptoms of this are directed and connected credit and excessive credit concentration, compounded by weaknesses in the legal system and impediments to effective monitoring by counterparts and shareholders as well as to loan collection efforts. This propagates weak credit culture, a foundation for eventual financial crisis. (Ariyoshi, et.al., Ibid.) Thus, the importance of capacity building for the regulatory bodies, human resource development for the financial institutions, improvements in the legal infrastructure, phasing out of directed credit, and the general strengthening of a “credit culture”.

V. POLICY IMPLICATIONS TOWARDS IMPROVED MANAGEMENT OF RISKS AND OPPORTUNITIES OF FINANCIAL LIBERALIZATION AND INTEGRATION

The paper brings out that the management of the risks and opportunities of financial liberalization and integration involves the following:

- **Sound macroeconomic policies.** This involves generally tight fiscal policy and prudent monetary policy. It also means internal consistency of monetary and exchange rate policies. Where a fixed exchange rate regime is viewed to be very important, then it is necessary that monetary policy must be subordinated to the demands of a fixed exchange rate regime. However, where some monetary independence is deemed important for both growth and macroeconomic objectives, then it is preferable to have a more flexible exchange rate regime. For the most part, “getting the foreign exchange right” (Yoshitomi, 1999) would involve a flexible exchange rate. This is especially for countries that are relatively open with low inflation but with weak financial systems and have no natural anchor currency (Reisen, 2000). A flexible exchange rate allows for the

development of risk management instruments by the market. It will also force market participants to take cognisance of the exchange rate risk in cross border financial transactions.

- **“Get the composition of capital inflows right”.** Yoshitomi’s (1999) dictum is borne by the recent currency and banking crises, most importantly the East Asian crisis. The various kinds of capital flows have different vulnerability to sudden flow reversals, with a few that are more autonomous and permanent while others are more volatile. There is merit in pushing more of FDI, long term loans and portfolio equity investments. Be wary of short- term bank lending, short- term money market instruments like commercial papers in the international market, and hedge funds. As the East Asian crisis has clearly brought out, liberal entry and exit of short term capital flows require strong prudential regulation and supervision to prevent moral hazard problems. It also requires deep domestic financial markets that can withstand sudden shifts in investor sentiments. Reisen (2000) points out that the current international banking rules under the 1988 Basel Accord provides a regulatory distortion in favor of cross-country interbank short term loans and bank lending to hedge funds. Thus, policies like Chile’s unremunerated reserve requirement and penalties on early withdrawal provide the counterpoint to the bias for short term bank lending.
- **Sound external debt management system** This is related to “getting the composition of capital flows right” discussed above. This is because for most developing countries bank financing would likely remain the most important source of external finance in addition to internally generated funds. The East Asian crisis is to a large extent an external debt problem because much of the short term capital inflows into the affected countries consisted of short term bank loans. As Reisen (2000) points out, sound external debt management limits the liquidity, currency and rollover risks that a country faces. Thus, the need for deliberate limitation on short term debt, close look at the maturity profile of debt, diversification in the sources of finance across currencies and investors, comfortable level of international reserves and contingency loan window, and the development of a domestic treasury market for domestic institutional investors.
- **Strong prudential standards in regulation and supervision, internal control systems and market discipline whether under flexible or fixed exchange regimes.** The special nature of finance where asymmetric information is endemic and where there is mismatch in the maturity structure of sources of funds (mainly short term deposits) and uses of funds (short to medium term loans) necessitates strong banking regulation and supervision. An important consideration here is the recognition that cross-border financial transactions carry specific risks inherent in the transactions, such as foreign exchanger risk, basis risk, repricing risk, transfer risk and risk in derivative transactions. That is, the prudential regulations seek to manage these specific risks through for

example the establishment of appropriate prudential limits and the incorporation of such risks in loan classification, provisioning, capital adequacy, disclosure and reporting requirements for banking institutions (Johnston and Otker-Robe, 1999). Measures to strengthen prudential regulations include stricter definitions of NPL, raising loan-loss provisions, raising capital adequacy ratios, limiting bank exposure to the property sector, and strengthening lending guidelines (Adhikari and Oh, 2000).

Other recommended specific measures include the following (see Gochoco-Bautista, Oh and Rhee, 2000):

- Strengthen risk management and internal controls in banks
- Strengthen role of market discipline through greater disclosure and transparency requirements
- Upgrade prudential regulatory standards to international standards. This includes use of international accounting standards, apart from loan classification, provisioning and income recognition rules.
- Strengthen bank monitoring and supervision including legal responsibilities of bank officers and authority of supervisors

Johnston and Otker-Robe (1999) also point out the need for central banks to adopt a prudential approach to the management of foreign exchange liabilities and assets. Specifically, the central banks need to measure and monitor in a comprehensive their foreign currency exposures to include off-balance sheet activities like interventions in the forward exchange markets as well as derivative transactions like call and put options on foreign currency liabilities and assets. In addition, Johnston and Otker-Robe noted the growing practice of contingency planning by central banks for crisis situations through for example contingent lines of credit for a specified interest rate, which can be drawn down during a crisis.

The Basel Core Principles for Effective Banking Supervision, prepared by the Basel Committee on Banking Supervision, provide the basic reference for government authorities. Countries need to aim for adoption and implementation of the core principles. Malaysia, for example, has already adopted 22 of the Basel Core Principles and is working on adopting the remainder (Yaacob, 2000).

There is likely some cost on banks to stronger prudential regulations. For example, an increase in loan-loss provision reduces the potential returns of banks and, other things being equal could result to a higher intermediation cost on depositors and borrowers. At the same time, the stability of the financial system is important thereby reducing the systemic risks to depositors and borrowers. Thus, the balance between cost and risk reduction needs to be struck.

- **Capital controls cannot be a substitute for sound macroeconomic policies and stronger prudential regulation, supervision, monitoring and disclosure.** Nonetheless, capital controls can be an important prudential tool to manage surges in capital flows when sterilization efforts prove inadequate. As such, capital controls should be viewed and crafted not as separate from but in tandem with the rest of macroeconomic and structural reforms. Even Chile used, not only tight monetary and fiscal policies as well as capital control measures, but also some appreciation of the peso in order to manage the surge in capital inflows in the early 1990s. It is also important to be pragmatic in the use of capital control measures. Chile reduced to zero the unremunerated reserve requirement against capital inflows when the East Asian crisis occurred when the capital flow issue turned from an inflow problem into an outflow problem. Malaysia discontinued the barriers to capital inflows in 1994 when the capital control measures were no longer warranted.

Chile used capital control measures primarily for prudential purposes while Malaysia used capital control measures primarily for macroeconomic management purposes. Thus, Chile required the use of international credit ratings for its local firms borrowing abroad not only to limit aggregate foreign borrowing but also to limit it to local firms that have the capability to manage the cross-border risks well. Similarly, Chile used the unremunerated reserve requirement primarily as a way of biasing the flow of capital inflows toward longer-term investments, thereby reducing Chile's vulnerability to volatile short-term capital.

Nonetheless, Johnston and Otker-Robe (1999) pointed out that as countries develop their regulatory frameworks and implementation capacities, there would be less reliance on capital controls but greater reliance would be put on international best practice prudential measures. This is because capital control measures largely do not address the specific risks from cross-border capital flows, capital controls are prone to circumvention over time, and capital controls discourage the development of a deep and liquid financial market. (Robust and well-functioning spot and forward foreign exchange markets are important components of a deep and liquid financial system.) Thus, capital controls can best be viewed in terms of the transition, as developing countries develop and deepen their financial systems. Because capital controls can derail the development of the domestic financial system if such measures are not managed well, the imposition of capital controls needs to be temporary, market-sensitive, and well monitored.

- **Improving institutional capacity in terms of human skills, refined risk management tools and greater internal communication within banks and regulators is critical.** Financial liberalization and integration also brings out the importance of human resource development. Especially important with respect to assessment of credit, market and liquidity risks arising from international

transactions. It can be argued that weak regulatory environment and poor skills in both the private sector and the public regulatory agencies breed a weak credit culture and the foundation for an eventual financial crisis. The importance of human resource development includes training of current bank personnel to the new demands of risk management in a financially integrated world. It also has implications on the design of curricula in finance related courses in higher education institutions in the country.

Calderon, Villanueva and Tullao (2001) examined the various course and training offerings in the country that are finance-related. They also interviewed leaders in the industry on the industry's human resource requirements. A number of observations are worth mentioning. First, there are too many college graduates but too few with the requisite skills for the finance industry. Second, the skills most needed by the industry especially for entry-level positions involve primarily oral and written communication skills and analytic skills rather than specialized skills. Third, the preference of the industry for CPA and accounting graduates rather than finance graduates reflect the role of the licensure examinations as a screening device for general intellectual ability of applicants. (Because accountancy is the preferred course rather than finance, accountancy graduates especially those who passed the licensure examination have better intellectual and analytic ability than the average finance graduate.) Fourth, the preference of the industry for graduates with strong communication and analytic abilities implies that specialist training is done on the job, which is the current approach. Fifth, the "second class" standing of finance undergraduates can be a reflection of the general weakness of the finance curricula. Thus, for example, finance students have weak grounding in economics, statistical theory (not basic statistics), and mathematics. As a result, it is unlikely that the students can successfully grapple with the nuances of risks in ever-newer forms of financial instruments like various kinds of options, interest rate and exchange rate swaps, futures and forwards. Sixth, underpinning the weaknesses of the finance curricula is the lack of faculty with the requisite academic qualifications at the graduate level or even with part-time faculty with enough industry experience. As a result, with the exception of an extremely few institutions, virtually most of the colleges and universities are producing graduates that are largely incapable of doing risk analysis and management, which is the essence of finance.

Calderon, Villanueva and Tullao recommend improvements in the undergraduate curricula by including topics that are essential in a world of deregulated and open financial markets such as risk management, international finance, mergers and acquisitions, hedge and mutual funds, and others. They also recommend strengthening qualifications of the faculty as well as expanding and deepening the use of computer-based finance software programs for understanding the various finance services and tools of analysis. The authors also recommend continuous improvement in the training and development programs given the dynamic nature of global finance.

- **Deepening and widening financial markets.** Although not well discussed in this paper, it is clear that deepening the domestic financial system is the foundation of a sound management of the risks and opportunities of financial liberalization and integration. This is because a robust growth in banking, the various foreign exchange markets (spot, forward, futures, options), and securities and bond markets would allow firms to have the various hedging instruments necessary to manage the various risks involved in a more liberalized and internationally integrated financial system. The deepening of the financial system necessitates flexibility of interest rates and exchange rates as well as the development of appropriate market infrastructure such as payments and settlement systems, codes of conduct and technical infrastructure (Johnston and Otker-Robe, 1999). A deepened domestic financial system requires, and at the same time contributes to, the improvement in corporate governance of the domestic firms.

The policy implications of financial liberalization and integration at the **regional level** involve primarily those that have economies of scale and externalities. They include:

- **Harmonization of prudential regulations and practices towards best international practice.** This is to prevent regulatory arbitrage. This means regional efforts at meeting the Basel Core Principles for Effective Banking Supervision for example. It also means continuing comparative examination of the comparative “costs” of banking regulations among the countries in the region.
- **Regional surveillance mechanism and stronger regional macroeconomic consultation.** This is because much of contagion is regional in scope, not global (Rajan, 2000). The growing economic interdependence among the APEC members, especially among East Asian economies, calls for regional mechanisms to help prevent the recurrence of currency and banking crises that engulfed the region during 1997-1999. Regional surveillance includes regular regional monitoring and research efforts on the region’s financial sectors, macroeconomic policies and capital flows. It includes the institutionalization of an early warning system among the member economies in the region. The regional surveillance mechanism and macroeconomic consultation have been emphasized in APEC meetings.

The implementation can be accelerated in the context of the establishment of an “Asian Monetary Fund” as a complement to the International Monetary Fund; indeed the regional surveillance mechanism and macroeconomic consultation could be the most important contribution of any proposed Asian Monetary Fund. This is because in order for the Asian Monetary Fund to become an effective tool for crisis prevention (while the International Monetary Fund focuses mainly on crisis management), access to the AMF funds needs to be

“...tied to member economies maintaining pre-determined standards of macroeconomic and financial stability; ...and where necessary, ...to peer review to undertake policy adjustments” (Rajan, 2000, p.16)

- **Human resource development.** Shortage of skills in the financial sector is region-wide. Regional exchange of experiences and expertise is useful. This is being done to some extent under the IMF and World Bank training programs mainly based in Singapore. Nonetheless, more can be undertaken. Regional associations of academic institutions like the ASEAN Universities Network can contribute in strengthening the academic programs related to finance.
- **The last regional concern is related to the issue of further opening up of the financial sector,** perhaps on a regional level as a start. This is related to the issue of the Financial Services Agreement (FSA) under GATS. Pontines (2001) showed the varying levels of openness of the APEC member economies in banking (both lending and deposits), insurance (both life and nonlife) and securities. He also showed the large gap between commitments to the FSA under GATS, on the one hand, and actual practice on the other hand in some cases among the APEC member economies. APEC member economies made only few commitments in cross-border trade as a relevant mode of supply in financial services. In the light of the East Asian crisis where capital mobility with weak supervision and regulation of the financial sector can lead to payments problems, complete liberalization in cross border trade of financial services may not be warranted especially for developing APEC member economies. What may more important is the issue of liberalization in commercial presence as mode of trade in financial services. The APEC member economies committed primarily to increasing the participation of foreign providers on existing local financial institutions rather than opening new ones (Pontines, 2001). Indeed, Sauve (1999) notes that Asia’s commitments in banking are on the whole less meaningful in terms of commercial presence in domestic markets than the commitments of Latin America in the FSA.

While the extent and pace of opening the financial sector to foreign competition is fundamentally a national prerogative, the discussion in this paper largely points toward greater openness to the entry of foreign institutions into the local economies of the APEC member economies. Whereas before the East Asian crisis, a number of East Asian countries can be characterized by a relatively open capital account at the same time that there are restrictions to entry of foreign institutions into the East Asian countries. As a result, East Asian banks were relatively inefficient with inadequate skills in credit and risk analysis on the one hand, and East Asian countries were more vulnerable to large shifts in capital flows on the other hand. What the discussion in this paper suggests is that it may be preferable to have it otherwise. That is, to have greater openness to foreign equity in the financial services sector on the one hand and greater caution in further liberalization of the capital account (or more accurately to put more “sand in the wheels of short term capital inflows into the country). This

means that it would be useful to push for strengthening commitments to the Financial Services Agreement (FSA) under GATS, especially with respect to the mode of commercial presence in supplying financial services internationally. It may be noted that the APEC member economies have agreed under the Bogor Declaration towards free movement of capital and investment within the APEC region by 2020. At the same time, it is important that the liberalization of the financial services sector would need to be undertaken in tandem with ensuring that the supervisory and regulatory environment as well as the capability of the regulatory agencies of the governments are strengthened. Thus, it is best that the multilateral liberalization process in the financial services sector be done in tandem with a *multilateral* effort at strengthening the supervisory and regulatory capabilities of the authorities, especially in developing countries.

Finally, it is apparent that in the light of the lessons from East Asia, Chile and other countries (e.g., Mexico), the deepening of the FSA in the future round of negotiations under the WTO is not enough in addressing the risks and opportunities of financial liberalization and integration. The focus of FSA is primarily the liberalization of entry of foreigners into a country's financial sector. What are also needed are concerted international or regional efforts at strengthening the institutional capacities of developing country authorities in monitoring, analyzing, regulating and supervising financial markets and institutions. What are also useful are international or regional mechanisms that expand risk management instruments (e.g., futures, swaps, options) available to developing country firms at reasonable cost. In short, the negotiations under GATS-FSA need to be done in tandem with international technical and economic cooperation program to strengthen the capacity of developing countries to manage the risks and opportunities of financial liberalization and integration. This is akin to an APEC approach to the usual WTO negotiations.

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Table 1a**External Financing in the Five Most Affected Asian Countries^a**

(In US \$ Billions)

	1994	1995	1996	1997^b
Current Account Balance	-24.6	-41.3	-54.9	-26
External Financing, net	47.4	80.9	92.8	15.2
Private Flows, net	40.5	77.4	93	-12.1
Equity Investment	12.2	15.5	19.1	-4.5
Direct Equity	4.7	4.9	7	7.2
Portfolio Equity	7.6	10.6	12.1	-11.6
Private Creditors	28.2	61.8	74	-7.6
Commercial Banks	24	49.5	55.5	-21.3
Non-bank Private Creditors	4.2	12.4	18.4	13.7
Official Flows, net	7	3.6	-0.2	27.2
Int'l Financial Institutions	-0.4	-0.6	-1	23
Bilateral Creditors	7.4	4.2	0.7	4.3
Resident Lending/others^c, net	-17.5	-25.9	-19.6	-11.9
Reserves Excluding Gold	-5.4	-13.7	-18.3	22.7

Note:

a. Indonesia, Malaysia, Philippines, South Korea, and Thailand

b. Estimate

c. Including resident net lending, monetary gold, and errors and omissions

Source:

Steven Radelete and Jeffrey Sachs, "The Onset of the East Asian Financial Crisis", March 30, 1998

Table 1b**International Claims Held by Foreign Banks-- Distribution by maturity and sector**
in US \$ Billions

	Obligation by Sector						
	Total Outstanding	Banks	Public Sector	Non-bank Private	Short- term	Reserves	Short- term/Reserves
A. End 1995							
China	41.3	15.8	12.2	13.3	17.5	53.6	0.3
Chile	12.4	3.8	2.8	5.7	-	-	-
Indonesia	35.0	7.8	7.0	20.1	19.4	13.2	1.5
Malaysia	13.5	3.9	2.4	7.1	6.2	25.5	0.2
PNG	0.2	0.0	0.1	0.1	0.1	0.1	0.9
Peru	3.0	1.2	0.9	1.0	-	-	-
Philippines	6.8	1.7	2.6	2.5	5.7	7.1	0.8
Thailand	43.9	14.1	2.8	27.0	29.2	30.3	1.0
Korea	56.6	37.0	5.0	14.6	31.6	25.7	1.2
Vietnam	0.7	0.3	0.2	0.2	2.7	0.9	3.0
Total	213.4	85.6	36.0	91.6			
B. End 1996							
China	48.4	19.4	9.8	19.2	22.3	76.0	0.3
Chile	13.6	3.9	2.5	7.2	-	-	-
Indonesia	44.5	8.9	6.7	28.8	26.0	14.8	1.8
Malaysia	16.8	4.4	2.1	10.1	7.3	23.9	0.3
PNG	0.2	0.0	0.0	0.1	0.1	0.3	0.3
Peru	5.6	2.4	0.9	2.4	-	-	-
Philippines	8.3	2.2	2.7	3.4	5.3	7.8	0.7
Thailand	62.3	25.8	2.3	34.7	41.1	36.9	1.1
Korea	77.5	50.0	6.2	21.4	46.6	32.7	1.4
Vietnam	1.1	0.5	0.2	0.4	3.3	1.4	2.4
Total	278.3	117.5	33.4	127.7			
C. End 1997							
China	55.0	22.8	8.5	23.7	25.4	107.6	0.2
Chile	15.2	3.7	1.7	9.8	-	-	-
Indonesia	55.5	11.7	6.9	36.8	32.2	19.3	1.7
Malaysia	22.2	6.5	2.0	13.7	11.1	27.1	0.4
PNG	0.2	0.0	-	0.2	0.0	0.6	0.1
Peru	8.0	3.4	1.0	3.6	-	-	-
Philippines	13.3	5.2	2.7	5.3	8.0	11.7	0.7
Thailand	70.2	25.9	2.3	41.9	37.6	38.6	1.0
Korea	100.0	65.9	5.7	28.3	66.6	34.1	2.0
Vietnam	1.5	0.6	0.2	0.7	3.8	1.8	2.1
Total	341.1	145.7	31.0	164.0			

cont. Table 1b

International Claims Held by Foreign Banks-- Distribution by maturity and sector

in US \$ Billions

	Obligation by Sector						
	Total Outstanding	Banks	Public Sector	Non-bank Private	Short- term	Reserves	Short- term/Reserves
D. End 1997							
China	63.1	27.1	7.1	28.9	31.5	143.4	0.2
Chile	21.2	3.6	1.8	15.7	-	-	-
Indonesia	58.2	11.7	6.9	39.7	32.9	17.4	1.9
Malaysia	28.8	9.9	1.7	15.9	14.9	20.9	0.7
PNG	0.3	0.0	0.0	0.3	0.2	0.4	0.5
Peru	9.9	3.3	0.6	6.0	-	-	-
Philippines	19.7	8.9	2.4	8.4	11.8	8.7	1.4
Thailand	58.5	17.8	1.8	39.2	34.8	26.9	1.3
Korea	93.4	55.9	3.9	34.2	53.8	20.4	2.6
Vietnam	1.7	0.5	0.1	1.0	2.3	2.1	1.1
Total	354.8	138.7	26.3	189.3			
E. End 1998							
China	58.4	21.5	6.9	29.8	27.9	149.8	0.2
Chile	22.2	3.8	1.7	16.7	-	-	-
Indonesia	44.8	5.1	6.7	33.0	20.1	23.5	0.9
Malaysia	20.8	5.7	1.8	13.2	8.6	25.7	0.3
PNG	0.4	0.0	0.0	0.4	0.2	0.2	1.0
Peru	10.6	2.9	0.7	7.0	-	-	-
Philippines	16.1	6.0	2.1	8.1	7.2	10.8	0.7
Thailand	40.7	8.8	1.9	30.0	23.5	29.5	0.8
Korea	65.3	37.1	5.4	22.7	28.1	52.0	0.5
Vietnam	1.7	0.4	0.1	1.2	2.2	2.1	1.0
Total	281.0	91.3	27.3	162.1			
F. End 1999							
China	46.6	15.8	6.4	24.4	17.7	158.3	0.1
Chile	20.7	1.8	1.4	17.4	-	-	-
Indonesia	40.7	4.2	8.4	28.0	20.0	27.2	0.7
Malaysia	18.1	3.9	2.6	11.6	7.6	30.6	0.2
PNG	0.3	0.0	0.0	0.3	0.1	0.2	0.5
Peru	10.3	2.7	0.9	6.6	-	-	-
Philippines	16.7	5.1	3.0	8.6	5.7	15.0	0.4
Thailand	28.4	3.5	2.0	22.8	23.4	34.8	0.7
Korea	60.7	35.0	5.2	20.3	34.7	74.0	0.5
Vietnam	1.7	0.2	0.1	1.3	2.4	2.9	0.8
Total	244.2	72.2	30.0	141.3			

cont. Table 1b

International Claims Held by Foreign Banks-- Distribution by maturity and sector

in US \$ Billions

F. End 2000	Obligation by Sector						
	Total Outstanding	Banks	Public Sector	Non-bank Private	Short- term	Reserves	Short- term/Reserves
China	58.3	29.7	6.5	20.6	-	168.9	-
Chile	22.3	1.5	1.4	19.3	-	-	-
Indonesia	40.3	4.9	7.7	27.3	-	23.3	-
Malaysia	20.8	3.8	3.5	13.4	-	29.6	-
PNG	0.2	0.0	0.0	0.1	-	0.3	-
Peru	13.2	4.6	0.9	7.7	-	-	-
Philippines	16.5	4.5	3.0	8.9	5.9	15.3	0.4
Thailand	26.7	5.7	2.1	18.6	-	32.7	-
Korea	58.8	33.7	5.2	19.2	-	96.2	-
Vietnam	2.2	0.3	0.2	1.8	-	-	-
Total	259.3	88.7	30.5	136.9	-	-	-

Sources:

Bank for International Settlements and Key Indicators of Developing Asian and Pacific Countries 2000, Vol. XXXI.

Table 2
FDI Inflows, 1980-1999 (B.O.P. basis)
in US \$ Million

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
	Level									
World	54,691	69,395	57,560	50,336	59,978	57,122	88,653	142,479	165,776	199,099
APEC	30,830	38,461	23,416	23,686	38,375	31,734	55,987	93,252	94,704	104,070
	Share to World									
Developed Countries	84.9	66.1	53.7	64.7	69.0	73.0	80.6	82.4	81.1	84.7
European Union	38.9	23.4	24.9	30.6	15.2	27.7	25.3	27.7	36.1	40.6
North America	41.6	37.3	21.8	24.8	49.2	37.4	44.0	47.5	39.0	37.7
Japan	0.5	0.3	0.8	0.8		1.1	0.3	0.8		
Developing Countries	15.0	33.8	46.2	35.3	31.0	27.0	19.4	17.4	18.6	15.0
Africa	0.5	2.7	2.5	2.4	2.4	5.0	2.0	1.8	1.7	2.5
Latin America and the Caribbean	13.5	11.7	13.9	11.5	9.5	12.6	7.2	6.1	5.7	3.7
Asia	0.7	19.2	29.6	20.9	18.8	9.1	10.1	9.4	11.0	8.8
	Level									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
World	209,325	159,833	172,083	226,294	255,988	331,844	377,516	473,052	680,082	865,487
APEC	92,042	59,452	69,505	121,935	142,939	169,224	205,962	245,169	320,958	435,656
	Share to World									
Developed Countries	82.2	71.3	65.4	61.3	56.7	62.0	58.2	58.2	70.7	73.5
European Union	47.0	49.1	45.4	33.3	30.0	34.5	28.8	27.2	36.6	35.2
North America	26.8	16.1	13.9	24.5	20.8	20.5	24.9	24.8	30.6	34.7
Japan	0.8	0.8	1.6	0.1	0.4	0.0	0.1	0.7	0.5	1.5
Developing Countries	17.6	27.1	32.0	35.7	41.0	33.7	38.4	37.8	26.4	24.4
Africa	1.2	1.9	2.2	1.7	2.2	1.4	1.5	1.5	1.1	1.0
Latin America and the Caribbean	4.6	9.9	10.4	7.9	11.8	9.9	12.2	14.6	10.8	10.5
Asia	11.6	15.2	19.2	25.8	26.8	22.1	24.5	21.5	14.5	12.2

Notes:

1. Figures for APEC are totals for the 21 current members of APEC.
2. Shares pertain to percentage share in the World total

Source:

JETRO Statistical Data on east Asia and APEC Member Countries Nov. 2000

Table 3
Trade Intensity of Selected Asia Pacific Economies, 1990

	Japan	China	NIEs	ASEAN 6	South Asia	ANZ	NAFTA	USA	EC 12
Japan	0	1.4	2.69	2.51	1.11	2.07	1.84	2.15	0.47
China	2.2	0	7.64	1.31	1.11	0.59	0.49	0.57	0.23
NIEs	1.81	6.25	1.58	1.82	1.03	1.35	1.65	1.93	0.39
ASEAN 6	2.93	1.21	1.89	4.28	2.18	1.6	1.12	1.36	0.38
South Asia	1.28	0.25	0.96	1.07	2.54	0.87	0.91	1.08	0.72
ANZ	3.77	1.6	1.82	2.03	1.76	5.42	0.76	0.83	0.35
NAFTA	1.59	0.79	1.08	0.82	0.78	1.46	2.19	1.43	0.51
USA	1.88	0.84	1.4	1.06	0.98	1.85	1.49	0	0.62
EC 12	0.32	0.32	0.27	0.32	0.69	0.52	0.43	0.47	1.52

Note: : The index of trade intensity of country i export trade with country j is as follows
 $I_{ij} = (X_{ij}/X_i)/(M_j/W)$

Where:

$X_i = \sum X_{ij}$ =total exports of country I
 $W = \sum Z_i = \sum Z_j$ X_{ij} = total volume of world trade
 M_j =total imports of country j
 X_{ij} = exports from country i to country j

$I_{ij} >$ means more than average (less than average) intensive trade relationship between countries i and j.

Source: Yamazawa and S. Okuda, "Basic Trade Statistics for the APDC Project On Changing Comparative Advantage Patterns and Interegional Trade Expansion in Asia and the Pacific." Institution of Developing Economies, Tokyo, 1994, Mimeo.

Table 4
PORTFOLIO INVESTMENTS OF APEC AND OTHER COUNTRIES; 1990-1997
in US\$ Millions

Countries	1990			1991			1992			1993		
	assets	liabilities	net	assets	liabilities	net	assets	liabilities	net	assets	liabilities	net
Australia	368	7104	7472	-4505	13530	9025	-3727	4853	1126	-9882	10964	7082
Brunei	...	...	0	...	...	0	...	...	0	...	...	0
Canada	-2239	15964	13725	-10179	27527	17348	-9800	20506	10706	-13784	41352	27568
Chile	...	361	361	...	189	189	...	458	458	-90	820	730
China	-241	...	-241	-330	565	235	-450	393	-57	-597	3646	3049
Hong Kong	...	...	0	...	...	0	...	...	0	...	...	0
Indonesia	...	-93	-93	...	-12	-12	...	-88	-88	...	1805	1805
Japan	-37800	46680	8880	-81650	126050	44400	-34570	7610	-26960	-64230	-6650	-70880
Korea	-134	218	84	717	2338	3055	849	4953	5802	-538	10553	10015
Malaysia	...	-255	-255	...	170	170	...	-1122	-1122	...	-709	-709
Mexico	-7354	3369	-3985	-603	12741	12138	1165	18041	19206	-564	28919	28355
New Zealand	-111	282	171	-68	-83	-151	-7	383	376	-288	2435	2147
Papua New Guinea	...	...	...	...	...	...	...	...	...	...	...	...
Philippines	...	-50	-50	-15	125	110	-115	155	40	-949	897	-52
Singapore	-1640	573	-1037	-665	-242	-907	1091	1398	2489	-7833	2867	-4966
Taiwan	...	...	0	...	...	0	...	...	0	...	...	0
Thailand	...	-38	-38	...	-81	-81	...	924	924	...	5455	5455
United States of America	-28770	22020	-6750	-45670	57540	11870	-49170	71980	22810	-146250	110980	-35270
Peru	...	...	0	...	...	0	...	...	0	...	228	228
Russia	...	...	...	...	...	...	...	...	...	...	...	...
Vietnam	...	...	0	...	...	0	...	...	0	...	...	0
Argentina	-241	-1068	-1309	-8261	8744	483	-80	990	910	-2037	30341	28304
Brazil	...	...	0	...	...	0	...	...	0	...	...	0
India	...	...	...	...	5	5	...	284	284	...	1369	1369
APEC (18)	-77891	96135	18244	-142968	240357	97389	-94734	130444	35710	-239005	213334	-25671
APEC (21)	-77891	96135	18244	-142968	240357	97389	-94734	130444	35710	-239005	213562	-25443

Continuation Table 4
PORTFOLIO INVESTMENTS OF APEC AND OTHER COUNTRIES
in US\$ Millions

Countries	1994			1995			1996			1997		
	assets	liabilities	net	assets	liabilities	net	assets	liabilities	net	assets	liabilities	net
Australia	3347	12583	15930	753	12396	13149	-1693	21806	20113	-462	12114	11652
Brunei	...	...	0	...	...	0	...	...	0	...	...	0
Canada	-6587	17155	10568	-5328	17974	12646	-13632	14856	1224	-8094	13580	5486
Chile	-351	1259	908	-13	49	36	-132	1230	1098	-235	2605	2370
China	-380	3923	3543	79	710	789	-628	2372	1744	-899	7703	6804
Hong Kong	...	...	0	...	...	0	...	...	0	...	...	0
Indonesia	...	3877	3877	...	4100	4100	...	5005	5005	...	-2632	-2632
Japan	-91550	64330	-27220	-87240	50670	-36570	-114580	73440	-41140	-71230	99960	28730
Korea	-2028	8149	6121	-2284	13875	11591	-5998	21183	15185	2008	12287	14295
Malaysia	...	-1649	-1649	...	-436	-436	...	-268	-268	...	-248	-248
Mexico	-767	8182	7415	-662	-9715	-10377	544	13418	13962	-708	5037	4329
New Zealand	-74	2168	2094	-277	2920	2643	-424	4237	3813	-110	348	238
Papua New Guinea	...	...	...	-1373	1066.2	-306.8	-1064.5	1134	69.5	...	...	...
Philippines	-632	901	269	-1429	2619	1190	191	5126	5317	-9	555	546
Singapore	-10110	114	-9996	-8616	410	-8206	-10286	1672	-8614	-11807	938	-10869
Taiwan	...	...	0	...	...	0	...	...	0	...	...	0
Thailand	-5	2486	2481	-2	4083	4081	-41	3585	3544	-446	4807	4361
United States of America	-60310	139400	79090	-100070	237480	137410	-115800	367630	251830	-87980	383510	295530
Peru	...	572	572	...	163	163	...	181	181	...	194	194
Russia	114	-33	81	-1704	82	-1622	-173	9917	9744	-157	45597	45440
Vietnam	...	...	0	...	...	0	...	...	0	...	...	0
Argentina	-185	4722	4537	64	5109	5173	-808	11676	10868	-901	11349	10448
Brazil	...	...	0	...	...	0	...	...	0	...	...	0
India	...	5491	5491	...	1590	1590	...	3958	3958	...	2543	2543
APEC (18)	-169447	262878	93431	-206462	338201.2	131739.2	-263544	536544	272882.5	-179972	540564	360592
APEC (21)	-169333	263417	94084	-208166	338446.2	130280.2	-263717	546524	282807.5	-180129	586355	406226

Note: APEC (18) includes Australia, Canada, Chile, China, Hong Kong, Indonesia, Japan, Korea, Malaysia, Mexico, New Zealand, Papua New Guinea, Philippines, Singapore, Taiwan, Thailand, and the United States of America

APEC (21) includes APEC (18), Peru, Russia, and Vietnam

Source: Balance of Payments Statistical Yearbook

Table 5**Macroeconomic Performance of 10 Countries During Inflow Episodes Change from immediately preceding period of equal length**

Country	Inflow episode	Average annual GDP growth (percent)	Average annual inflation (percent)	Average current account deficit¹	Average REER²
Argentina	1991-94	9.1	-801.1	1.8	91.7
Brazil	1992-95	3.1	-93.5	0.6	7.4
Chile	1989-95	5.7	-4.1	-4.9	-25.5
Columbia	1992-95	1.6	-4.8	4.9	14.7
Indonesia	1990-95	2.2	1.3	0.2	-29.4
Korea	1991-95	-2.5	0.8	5.0	4.4
Malaysia	1989-95	4.0	1.4	2.9	-24.5
Mexico	1989-94	2.9	-74.4	7.1	20.0
Philippines	1989-95	2.2	-3.1	0.7	-10.7
Thailand	1988-95	3.9	-1.1	2.3	-18.9

Notes: ¹As a percentage of GDP. A minus sign indicates an improvement in the current account balance
²Percentage change in the real effective exchange rate (REER). A positive number indicates an appreciation.

Source: World Bank, (1997) in Lopez-Mejia, Alejandro. "Large Capital Flows: A Survey of the Causes, Consequences, and Policy Responses." Working Paper No. 99/17 IMF (1999).

Table 6**Selected ASEAN Countries: Economic and Financial Indicators**

(Averages, in percent of GDP unless otherwise indicated)

	Indonesia		Malaysia		Philippines ¹		Thailand	
	1991-95	1996	1991-95	1996	1991-95	1996	1991-95	1996
Growth, investment and saving								
GDP growth rate	7.8	7.8	8.7	8.2	2.2	5.5	8.4	6.7
Investment	31.0	32.7	38.7	41.2	21.9	23.9	41.5	42.5
Private	23.1	27.4	25.3	28.6	16.8	19.2	34.8	33.0
Public	7.9	5.3	13.4	12.6	5.2	4.7	8.1	9.5
National saving	28.6	29.3	32.3	36.0	18.2	19.8	34.8	34.5
Private	20.9	23.0	16.1	21.5	15.0	15.5	22.3	21.2
Public	7.7	6.3	16.2	14.5	3.2	4.3	12.5	13.3
Trade orientation								
Exports of goods and nonfactor services	26.5	26.2	84.9	92.0	26.3	33.3	42.5	40.9
Manufactured exports	12.8	13.3	55.9	63.5	15.5	19.8	25.6	24.7
Export growth rate (value in U.S. dollars)	11.4	10.3	20.3	5.8	16.6	17.8	19.7	1.3
Exchange rate								
Real effective exchange rate (percent change over the period; appreciation (-)) ²	-3.3	-5.1	-7.8	-4.2	-36.9	-5.9	-4.7	-5.2
Balance of payments (in percent of GDP)								
Current account deficit	-2.4	-3.6	-6.5	-5.2	-3.6	-4.1	-6.7	-8.0
Capital inflows (net) ^{3+C14}	4.0	5.2	11.5	7.7	3.8	-8.9	10.4	9.2
Foreign direct investment (in percent of capital inflows)	34.6	53.8	81.5	50.7	51.1	16.0	11.4	10.2
Reserves (in months of imports of goods and services)	6.2	6.0	4.3	3.4	2.5	2.8	5.2	5.1
Base money-reserves	0.5	0.6	0.5	0.7	1.1	0.9	0.4	0.5
Broad money-reserves	4.3	4.8	3.7	4.9	3.2	2.9	3.8	3.8
Debt								
External dept (in percent of exports of goods and services)	191.5	178.5	43.8	40.3	168.2	103.6	105.5	118.6
Short-term debt (in percent of external debt)	7.7	8.5	18.2	23.7	15.2	13.8	44.4	43.6
Debt-service ratio (in percent of exports of goods and services)	32.4	32.8	6.7	5.7	25.4	15.4	10.9	11.4
Financial stability								
Inflation (annual average; percent change)	8.9	7.9	4.0	3.5	10.5	8.4	4.8	5.9
Private sector credit (percent change)	21.0	22.4	18.2	26.5	43.1	51.0	23.8	14.6
Central government balance (in percent of GDP)	-0.2	1.0	0.1	0.7	-1.6	-0.4	2.8	2.3
Public dept (in percent of GDP)	37.2	27.7	21.8	15.9	113.0	88.0	17.2	10.1

Notes: ¹All ratios are in percent of GNP, unless otherwise indicated.²For 1996, December 1996 over December 1995.^{3+D18}Includes errors and omissions.**Sources:** IMF, World Economic Outlook: A Study by the Staff (Washington, various issues) and IMF staff estimates.<http://www.imf.org/external/pubs/nft/macro/overview.htm>

Table 7

Policy Responses to Capital Surge

Response	Argentina	Brazil	Chile	Columbia	Hungary	India	Indonesia	Korea	Malaysia	Mexico
Magnitude of the surge (net private capital flows as percentage of GDP)	2.8	3.0	5.8	4.8	14.8	1.8	1.8	2.3	9.4	5.3
Policy response										
<i>Reduce net inflows of foreign exchange</i>										
Controls on inflows		x	x	x		x	x		x	x
Liberalize capital outflows			x	x		x		x	x	x
Liberalize trade			x	x		x	x	x	x	x
Reduce official borrowing			x		x					
Float/appreciate exchange rate			x	x						
<i>Reduce impact on monetary aggregates</i>										
Sterilised intervention		x	x	x		x	x	x	x	x
Higher reserve requirements			x	x		x		x	x	
<i>Reduce impact on aggregate demand</i>										
Fiscal contraction	x		x			x	x	x	x	x

Response	Morocco	Pakistan	Peru	Philippines	Poland	Sri Lanka	Thailand	Tunisia	Turkey	Venezuela
Magnitude of the surge (net private capital flows as percentage of GDP)	3.5	3.6	6.4	4.3	6.5	5.5	9.9	5.1	3.0	2.7
Policy response										
<i>Reduce net inflows of foreign exchange</i>										
Controls on inflows						x	x			
Liberalize capital outflows		x		x		x	x			
Liberalize trade		x		x		x	x			
Reduce official borrowing	x			x			x	x		x
Float/appreciate exchange rate				x						
<i>Reduce impact on monetary aggregates</i>										
Sterilised intervention		x		x		x	x			
Higher reserve requirements				x		x				
<i>Reduce impact on aggregate demand</i>										
Fiscal contraction				x			x			

Note: ¹This is the annual average for the surge period.

Source: World Bank, (1997) in Lopez-Mejia, Alejandro. "Large Capital Flows: A Survey of the Causes, Consequences, and Policy Responses." Working Paper No. 99/17 IMF (1999).

Table 8
Indicators of the Efficiency of the Banking Industry in APEC Economies

Economy	Share of State-owned Banks (% share of assets)	Operating Costs (% of total assets)	Net Interest Margins (% of total assets)	Commerical Bank Reserves (% of loans to non-government sector)		Average Inflation Rates
	1994	1990-94	1990-94	1994	1995	1990-94
Australia	0.0	3.5	3.7	1.7	1.6	2.0
Chile	14.0	3.0	6.1	6.7	5.3	15.2
Hong Kong	0.0	0.8	1.6	0.1	0.1	9.6
Indonesia	48.0	2.4	3.3	0.5	1.1	8.8
Japan	0.0	0.8	1.1	1.3	1.2	1.7
Korea	13.0	1.7	2.1	6.4	6.6	6.6
Malaysia	8.0	1.6	3.0	11.1	11.0	4.1
Mexico	28.0	3.9	5.1	1.6	20.4	13.7
New Zealand	0.0	3.0	3.3	2.4	2.3	1.7
Philippines	23.0	4.2	3.9	25.2	17.3	11.7
Singapore	0.0	1.4	1.6	6.7	6.5	2.8
Chinese Taipei	57.0	1.3	2.0	9.9	8.7	3.8
Thailand	7.0	1.9	3.7	2.4	2.9	4.6
United States	0.0	3.8	4.2	1.5	1.4	1.1

Source:

Dickie, Paul M. and Marion Bond. "Creation of Market-Based Financial Structures and Policy Instruments to Facilitate Increased Capital Mobility in the APEC Region." in D.H. Brooks and M. Queisser (eds.) **Financial Liberalisation in Asia: Analysis and Prospects**. ADB and OECD, 1999.

Table 9
Indicators of Institutional Framework (mid 1997)

Country	Bank Regu- Qual	Bank Sup. Qual.	Transparency	GS Fragility	GS Camelot
				<i>0 = best 24 = worst</i>	<i>1 = best 10 = worst</i>
Hong Kong	VG, I	G, I	VG	8	3.5
India	Sat, I	F, I	F, I	11	5.8
Indonesia	Sat, I	W, I	Sat	15	4.6
Korea	W, I	Fair	F, I	18	na
Malaysia	Sat, I	W, I	Sat	15	4.5
Philippines	G	Fair	Sat	13	3.7
Singapore	VG	VG	Poor	7	4
Thailand	W, I	Weak	P, I	22	5.2

Note: VG = Very Good; G = Good; Sat = Satisfactory; F = Fair; P = Poor; I = Improving
 GS Fragility = Goldman Sachs Fragility Score
 GS Camelot = Goldman Sachs Camelot Score for domestic banks only, for asset quality (25%), management (20%), capital adequacy (15%), earnings (15%), operating environment (15%), & Transparency (5%).

Source: ADB 1999, Vol. 1, p.65

Table 10
Indicators of Institutional Framework (mid 1997)

Country	Property Sector Risks	Exposure % of Total Loan	Loan % of Collateral
Hong Kong	Mod.	40 - 55	50 - 70
Indonesia	High	25 - 30	80 - 100
Korea	Mod.	10 - 15	60 - 100
Malaysia	High	30 - 40	80 - 100
Philippines	Mod.	15 - 20	70 - 80
Singapore	Mod.	30 - 40	70 - 80
Thailand	High	30 - 40	80 - 100

Note: "High" risk because of large proportion of property loans and large proportion of loans collateralised by real property.

Source: J.P. Morgan 1998, cited in ADB, 1999, Vol. 1, p. 57

Table 11

Time Period for Overdue Criteria for Interest Suspension and Loan Classification

Country	Period Overdue for Interest Suspension	Substandard	Doubtful	Loss
Indonesia				
Old¹	1 - 12 months	1 - 12 months ²		21 months ³
New	3 months	3 months	6 months	9 months
Korea				
Existing	Immediately when past due	Normally not classified until 3 months past due unless declared bankrupt		
Proposed	No changes currently proposed		3 - 12 months	12 months
Malaysia				
Old	6 months	6 months	9 months	12 months
New⁴	6 months	3 months	6 months	9 months
Philippines⁵	3 months	3 months (unsecured)	... ⁶	Over 6 months (unsecured)
Thailand				
Old	6 months ⁷	6 months (unsecured) 12 months (secured)	Over 6 months (unsecured) Over 12 months (secured)	Over 6 months Over 12 months
New	3 months	3 - 6 months	6 - 12 months	Over 12 months

IMF Notes:

¹Varies by type of credit and installment period.

²Credit exceeds overdue criteria for substandard but is considered collectible and the value of collateral is not less than 75 percent or credit cannot be collected, but value of collateral not less than 100 percent

³Refers to 21 months after a credit has been classified as doubtful and there is no repayment.

⁴Effective march 1999.

⁵New rules issued October 1997, which tightened overdue criteria for classifying loans depending on number and amount of arrearages, refer only to installment loans.

⁶A loan previously classified as substandard in the last examination is reclassified as doubtful if principal has not been reduced by at least 20 percent during during the preceeding 12 months.

⁷Effective January 1998 irrespective of collateral; previous limit (since July 1995) was 12 months for secured loan.

Source:

IMF; national authorities in Carl-Johan Lindgren, Tomas J.T Balino, Charlie Enoch, Anne-Marie Gulde, Marc Quintyn and Leslie Teo. "Financial Sector Crisis and Restructuring: Lessons in Asia." Washinton D.C, IMF (1999).

Table 12
Loan Provisioning Requirements: Comparative Information
(In Percent)

Country	Unclassified Standard	Special Mentioned	Substandard	Doubtful	Loss
Indonesia					
Old	0.5	n.a	10 ²	50 ²	100 ³
New	1	5	15	50	100
Korea					
Existing	0.5	23	20	75 ⁴	100 ⁴
Proposed	No changes currently proposed				
Malaysia					
Old ⁵	0	0	0 ⁷	50 ⁶	100 ⁶
New ⁵	0	0	25 ⁹	50 ⁶	100 ⁶
Philippines					
Old	0	0	0 ⁷	50	100
New ⁸	0	5	25 ⁹	50	100 ⁹
Thailand					
Old	0	0	15 ^{10, 11}	100 ¹⁰	100 ¹⁰
New ¹²	1	2	20 ¹⁰	50 ¹⁰	100 ¹⁰

IMF Notes:

¹Based on uncollateralized portion

²Effective at the end of 1996 for Substandard and 1993 for Doubtful and Loss.

³Classified as precautionary loans.

⁴That portion of a loan classified doubtful or loss that is fully secured will normally be classified substandard to the extent of the market value of the collateral.

⁵Effective 1998 general provision increased from 1 percent to 1.5 percent of total outstanding loans (including interest), net of interest in suspect and specific provisions.

⁶Provision computed against uncollateralized portion.

⁷For collateralized; 25 for uncollateralized

⁸Effective October 1997 a general provision of 2 percent on gross loan portfolio to be phased in through October 1999 adopted.

⁹For both collateralized and uncollateralized.

¹⁰Provision computed against uncollateralized.

¹¹Since June 1997.

¹²Stricter criteria for secured loans.

Source:

IMF; national authorities in Carl-Johan Lindgren, Tomas J.T Balino, Charlie Enoch, Anne-Marie Gulde, Marc Quintyn and Leslie Teo. "Financial Sector Crisis and Restucturing: Lessons in Asia." Washinton D.C, IMF (1999).

Table13**Comparison of Major Banking Sector Regulations**

Country	Regulations
1. Loan Classification and Provisions	
Indonesia	Current (0.5%), special mentioned (1.25% gross of collateral), substandard 3.75% net of collateral)
Korea	Normal (0.5%), precautionary (2%), substandard (20%), doubtful (75%), estimated loss (100%)
Malaysia	Substandard (20%), doubtful (50%), and bad (100%)
Philippines	Unclassified (0%), loans specially mentioned (5%), substandard (25%), doubtful (50%), loss (100%)
Thailand	Pass (1%), special mention (2%), substandard (20%), doubtful (50%), doubtful of loss and loss (100%)
2. Single Customer Limit	
Indonesia	20% of equity capital (10% for related party)
Korea	loans: 15% of the equity capital; guarantees: 30%
Malaysia	25% of bank's shareholders' funds
Philippines	25% of unimpaired capital
Thailand	25% of Tier 1 capital
3. Group Limit	
Indonesia	50% of equity capital
Korea	current-45% of bank's equity capital; June 1999-50%; and end of 1999-25%
Malaysia	50% of total credit facilities
Philippines	30% of unimpaired capital
Thailand	Incorporated with single customer limit
4. Credits for Small and Medium Enterprises	
Indonesia	20% of credit to small businesses. Or 25% of loan growth from small business credit.
Korea	45% of an increase of total loans (regional banks-60%, foreign banks-35%)
Malaysia	During April 1998-March 2000, as group; commercial banks-RM 1 billion, financial companies-RM 240 million
Philippines	Out of total loans; small enterprises-6%, medium-sized industries-2%
Thailand	No regulations (In process of classifying SME as priority sectors)
5. Lending to the Property Sector	
Indonesia	No new loans for land purchase or property development, except in the case of low-cost housing.
Korea	None
Malaysia	Exposure to the broad property sector limited to 20% of outstanding loans; no bridging finance for the development of properties exceeding RM 250,000
Philippines	20% of total loan portfolio
Thailand	Lending growth is monitored by the central bank (Low-cost housing is classified as a priority sector; land accumulation, condominium, and golf courses are classified as a non-priority sector)
6. Lending to Stock and Share Purchases	
Indonesia	Prohibited from underwriting CPs
Korea	No lending for speculation purpose
Malaysia	No lending based on collateral of its own stocks or in excess of 20% of the issued stocks of any other corporation.
Philippines	Out of total outstanding loans: commercial banks and finance companies-20%, merchant banks-30%
Thailand	For finance and securities companies, margin loan is classified as a non-priority sector
7. Capital Adequacy Ratio Target	
Indonesia	4%; end of 2001-8%
Korea	March 1999-6%; March 2000-8%; end of 2000-10% (For the banks not doing international businesses, apply lower ratios by 2%.)
Malaysia	8%
Philippines	8% (BIS standard), 10% of total risk assets
Thailand	Commercial banks: 8.5% (4.25% for Tier 1 capital); Finance companies

Source:

Adhikari, Ramesh and Soo-Nam Oh. "Banking Sector Reforms Recovery Prospects and Policy Issues." in R. Adhikari and U. Hiemenz (eds.) Achieving Financial Stability in Asia. ADB and OECD 2000.

Cont. Table 13

Country	General Ownership	Bank Ownership	Remarks
8. Opening the Financial Market to Foreign Participants			
Indonesia	Restrictions sharply reduced, except a few	99%	World's 200 biggest banks above the rating A are allowed to open branches in Jakarta
Korea	No general restriction (30% for 39 public interest corporations)	10% by reporting (domestic investors are allowed only up to 4%)	No difference in business between domestic and foreign banks
Malaysia	30% (49% for telecoms)	30%	No new license issued since 1983 (both domestic and foreign banks) Foreign banks are allowed to extend financing to non-resident controlled companies (NRCCs) up to maximum of 40 percent of total financing requirement of the NRCCs Restriction on opening of branches, including off-branch ATMs, for foreign banks
Philippines	Various (40% for mining and telecoms)	30% (40% on approval)	Foreign banks may acquire, purchase or own up to 60% of the voting stock. Foreign banks may set up branches with full banking authority No difference in business between domestic and foreign banks
Thailand	100% for 10 years		No difference in business between domestic and foreign banks

Country	Regulations
9. Other Regulations	
Indonesia	Net open position: 25% of bank capital for the weekly average net position of both on and off balance sheet positions Loan deposit ratio: maximum 110%
Korea	Loans exceeding 15% of capital: 500% of total capital (Loans exceeding 10% of capital: 500% of total capital by March 2000) Chaebol: debt/equity ratio should be lowered to 200% by end-1999; no new cross-debt guarantees are allowed and existing ones should be resolved by March 2000.
Malaysia	Loans to Bumiputra Community: 30% of total loans, each for commercial banks and finance companies as a group
Philippines	30% liquid cover on all foreign exchange liabilities Ceiling on equity investment varying across types of banks Limits on aggregate insider loans: 15% of total loans or 100% of net worth
Thailand	Net open foreign exchange position: the higher of 15% of Tier 1 or \$5 million

Source: Adhikari, Ramesh and Soo-Nam Oh. "Banking Sector Reforms Recovery Prospects and Policy Issues." in R. Adhikari and U. Hiemenz (eds.) Achieving Financial Stability in Asia. ADB and OECD 2000.