

Issues in Capital Account Convertibility in Developing Countries

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June 2000

Table of Contents

Section	Title	Page
I	Introduction	4
II	Is Capital Account Convertibility a Choice for Developing Countries?	5
III	Trends in International Private Capital Flows in Selected Countries	10
IV	The Road to Capital Account Convertibility: Necessary Reforms, Policies and Pre-Conditions	16
IV.i	Sequencing Current and Capital Account Liberalization	16
IV.ii	Conditions Necessary for an Orderly Liberalization of the Capital Account	20
IV.iii	Fiscal Policy, Monetary Policy, Sterilization and Exchange Rate Policy	25
	Fiscal Control	25
	Monetary Policy	26
	Exchange Rate Policy	27
IV.iv	Prudential and Supervisory Concerns	29
V	Problems in Financial Intermediation and the Risk of Capital Flight in the Transition Process	30
V.i	Impediments to Interest Rate Convergence	30
V.ii	Impediments in Financial Intermediation	31
V.iii	Segmented Markets	34
V.iv	Asset Liability Management and Non Performing Assets	34
V.v	Money Market	35
V.vi	Linkages of the Money Market with Other Segments of the Financial Sector	35
V.vii	The Risk of Capital Flight	36
VI	Capital Controls : Prudence vs. Control	37
VI.i	Comprehending Capital Controls	37
VI.ii	When and What Type of Controls are Effective? Lessons from Country Experience	43
VII	Conclusion	50
	References	54
Annex 1	Capital Controls in Chile	58
Annex 2	Country Experiences	63
Annexe 3	Unrecorded Capital Flows, 1988-1994	79

List of Tables

Table 1	Absolute size of financial account balances	12
Table 2	Financial account as a percentage of GDP	13
Table 3	Financial account as a percentage of gross fixed capital formation	14
Table 4	Estimates of Misinvoicing of Trade Data for Selected Countries, 1990-1998	18
Table 5	Conditions for an Orderly Liberalization of the Capital Account	22
Table 6	Interest Rate Differentials	32
Table 7	Types of Capital Transactions Possibly Subject to Controls	40

List of Boxes

Box 1	What is Capital Account Convertibility?	6
Box 2	Rationale for capital account liberalization	9
Box 3	Types of Capital Controls	42

List of Figures

Figure 1	Latin America and Asia, structure of the financial account - 1990-1998	15
Figure 2	Africa, structure of the financial account - 1990-1998	15
Figure 3	Estimates of regional unrecorded capital flows	48

Issues in capital account convertibility in developing countries¹

I Introduction

This paper draws on the literature and on the experience of thirteen countries in liberalizing the capital account to make five main points:

1. Capital account convertibility is desirable and inevitable as it is part of the inexorable process of globalization.
2. Capital account convertibility is accompanied by some risks. Its benefits are dependent upon the achievement of certain pre-conditions and sequencing patterns and an orderly liberalization procedure.
3. The opening up of the capital account is a more complicated procedure than often thought. It is desirable to opt for a gradual approach so that it can be embedded in the overall reform process.
4. The need to constrain short-term flows in developing countries arises because they do not have sophisticated financial markets to intermediate funds from the short to the long end and cannot therefore bear the risk of financial intermediation. The need to constrain short-term flows should diminish as financial sector development and sophistication progresses.
5. The porosity of the capital account generally points to the ineffectiveness of capital controls. The paper makes a distinction between different kinds of controls and types of transactions on the capital account and emphasizes that capital account liberalization is not an all or nothing affair. The paper makes a case for certain capital controls, which can be used in the transition phase, and those, which may be applied in the long run to contain macroeconomic instability. Three broad strategies for opening up the capital account are discussed.

Along the way, the paper makes a number of other more technical points, and provides analysis to back them up:

1. The debate is relevant even for some countries in Sub-Saharan Africa with relatively small volumes of capital inflow, because even though their share of total developing country inflows is small, the size of flows in relation to GDP and gross fixed capital formation is large.
2. It is important to examine the sequencing of the current and capital account liberalization because of the leakage of capital through leads and lags in the current account when it is liberalized but the capital account remains relatively closed.
3. The impediments in financial intermediation need a closer look because of market segmentation, high interest rate differentials, the lack of an indicative short-term interest rate, non-performing assets and the asset liability management problems in the banking system. These impediments hinder the efficient allocation of resources through an open capital account.
4. Monetary policy in a financially integrated world becomes ineffective. In the transition phase, monetary policy has a role to play. Insulation for this transition phase can be worked through price and quantity controls.

¹ Paper prepared for an ODI Conference on "Capital Account Liberalization: The Developing Country Perspective", 21 June 2000. The author thanks Bruce Weisse for excellent research assistance especially in the preparation of the country experiences with capital account liberalization and capital controls.

5. The achievement of fiscal balance is required for a successful liberalization of the capital account. After liberalization, it needs closer monitoring because the temptation to finance a growing fiscal deficit through private capital flows can be very tempting but can lead a country to increased vulnerability.
6. The paper makes a case for a more flexible exchange rate policy, which can be operated either through a managed float or an exchange rate band depending on the circumstances of the country.
7. The orderly liberalization of the capital account also requires a heightened institutional capacity for setting up prudential regulations and a supervisory framework for monitoring and enforcing them.

The paper is organized as follows. The next section defines capital account convertibility and makes the case for CAC. In section III we look at some trends in private capital flows as a backdrop for the discussion. Section IV covers the conditions necessary for orderly liberalization and takes up the issue of sequencing. The following section points to some of the hindrances in the financial sector which prevent efficient allocation of resources with an open capital account and keeps interest rate differentials high leading to further large and volatile flows. Section VI covers issues regarding capital controls, their classification, coverage and effectiveness based on country experience. The last section draws the main lessons from the analysis.

II Is Capital Account Convertibility a Choice for Developing Countries?

The 1990s were marked by two major events in international financial markets in the context of emerging market economies. One was the rapid increase in international private capital flows, and the other the occurrence of financial crises, beginning first with Mexico in December 1994 and its accompanying contagion effects and the recent crisis in East Asia and Russia. The two events are related in that a surge in capital flows was followed by sudden reversals leading to a financial crisis in the receiving country, accompanied by problems in the region because of herding behavior in international markets. Many believe that an open account is an invitation to a crisis and are of the opinion that a closed capital account will avert disaster. Even a cursory review of crises would negate this as a crisis can occur with a closed as well as an open capital account.² It is imperative for economies to put their house in order if a crisis is to be averted. It may well be the case that developing countries do not have a choice to operate in a closed system and there might be persuasive reasons for orderly liberalization.

One of the most persuasive arguments for capital account liberalization is that globalization has come to stay and that developing countries need to be part of the growing financial integration of countries around the globe in world financial markets. Liberalization in the industrialized countries was a response to the changing realities of the world economy and proceeded in the general background of a move towards flexible exchange rates in 1973. Significant developments in the world economy spurred this process and created the compulsions to liberalize. Notable amongst these developments is the growth of multinational corporations, which increased the demand for international financial intermediation to meet

² It should be noted that Malaysia and Thailand have both had relatively open capital accounts dating back to the 1980s. If capital account liberalization *per se* was the cause of the crisis, it should have happened much earlier. The evidence thus points to the failure of supporting policies (i.e. prudential regulation and monitoring, weaknesses of the financial sector and lack of flexibility in exchange rate policies) as the causes of the crisis.

the needs of business and hedging risk in international markets. A situation arose in which domestic banks in industrialized countries faced competition from international financial markets and governments had to face the risk of evasion of restrictions on the capital account as the growth of offshore banks provided alternative opportunities for meeting the needs of global nature of business. The growth in communications, computers and electronically based payment technology have reduced the cost of collecting, processing and executing transactions which further fostered the process of liberalization. It led to the development of more sophisticated financial products, which have expanded hedging, and investment opportunities and transactions that transcend international boundaries. These developments weakened exchange controls so that the emphasis in the industrialized world today is on surveillance and supervision of markets. The political attitudes towards capital controls on financial and capital markets also changed as globalization progressed. The process of liberalization accelerated in the 1980s and 1990s and as of June 1995, all industrial countries had eliminated controls on both inflows and outflows of capital.

The forces, which led to liberalization in the industrialized world, are increasingly relevant for developing countries too. Compulsions for liberalization are generated by the financial intermediation possibilities offered by offshore centers as

Box 1: What is Capital Account Convertibility?

A working definition of capital account convertibility (CAC) is ‘the freedom to convert local financial assets into foreign financial assets and vice versa at market determined rates of exchange. It is associated with changes of ownership in foreign/domestic financial assets and liabilities and embodies the creation and liquidation of claims on, or by the rest of the world. CAC can be, and is, coexistent with restrictions other than on external payments. It also does not preclude the imposition of monetary/fiscal measures relating to foreign exchange transactions which are of a prudential nature.’³

As the definition indicates, capital account convertibility is compatible with prudential restrictions. Temporary measures to insulate an economy from macroeconomic disturbances caused by volatile capital flows are in accord with an open capital account.

an alternative to heavily regulated and still developing financial onshore markets. They offer attractive opportunities to those countries in need of investment finance to sustain high rates of growth. Errico and Musalem (1999) take a closer look at off-shore banking and point out that off-shore banks seem to exploit the risk-return tradeoff by being more profitable than onshore banks, and in many instances also more leveraged. Risks stemming from offshore activities may be easily transmitted onshore with systematic consequences. Offshore banks have played a role – sometimes a catalytic one – in recent Asian and Latin American financial crises.⁴ Harmonization of tax regimes, financial liberalization under prudential oversight, and

³ Reserve Bank of India, (1997) Report of the Committee on Capital Account Convertibility, Mumbai, p.4.

⁴ Errico and Musalem (1999) note that in East Asia many countries large capital inflows – driven by financial liberalization, pegged exchange rates, and channeled through the domestic banking systems – fuelled credit expansion and led to exposures to liquidity, foreign exchange and credit risks. The regulatory and tax advantages offered by offshore banks induced onshore banks and corporations to tap international capital markets through offshore establishments. In Thailand, the establishment of Bangkok International Banking Facilities in 1993 led to a substantial increase in short-term offshore borrowing, which fuelled unhedged domestic lending to finance equity and real estate purchases. In Malaysia, substantial losses in the offshore operations of at least one bank were not recognized until a broad based reform program in the regulatory and accounting framework was undertaken as a result of the crisis. In Korea, regulations limited commercial banks’ medium- and long-term borrowing in international markets, combined with the perceived official support to banks, encouraged the channeling of short-term international borrowing through the financial system for n-lending to corporations. In

capital account liberalization have reduced the appeal for offshore centers for the industrialized countries. A similar process in developing countries and co-ordination between on shore and offshore supervisor authorities is imperative for internal and international financial stability.

There is also the recognition that globalization has come to stay because of the increased internationalization of business opportunities and the development in information and transaction technologies. It is also accepted that if countries are convertible on the current account, capital controls are porous and ineffective. With increasing financial integration of the developing countries with financial markets in the industrialized world, opening the capital account becomes unavoidable, as a country cannot remain isolated.

*'If countries do not plan for an orderly integration with the world economy, the world will integrate with them in a manner which gives them no control over events. Thus, the question is not whether a country should or should-not move to capital account convertibility but whether an orderly or a disorderly transition is desired.'*⁵

Following the East Asian crisis and the crises in Brazil and Russia many economists argued that globalization has gone too far and argued for the return of capital controls. Krugman (1999) maintained that 'sooner or later we will have to turn the clock at least part of the way back: to limit capital flows for countries that are unsuitable for either currency unions or free floating.' Bhagwati (1998) and Cooper (1998), argue that in a world with imperfect information, existing distortions get augmented in a world of free capital mobility, create situations of moral hazard, encourage excessive risk taking, and generate major and costly crises. A voice of concern was also raised by Joseph Stiglitz (1999), who concluded 'that volatile markets were an inescapable reality. Developing countries need to manage them. They will have to consider policies that put some limit on capital flows.'

Is liberalization reversible?⁶ The forces which have led to globalization in the last decades, are here to stay. The nature of international business and the growing need to diversify risks/returns is aided by the developments in technology that cut across boundaries. The concerns raised by many after the recent crises in world markets opens the debate for the role of capital controls in an open economy and the degree of capital account liberalization, which is consistent with economic fundamentals and the overall reform process.

It would thus seem that in the present environment capital account convertibility is not a choice. The advantages of the capital account liberalization process (see Box 2) are seen in the access to global financial markets for alternative sources of finance. It has made it easier for countries to finance budget deficits and current account positions, and has improved the investment, funding and hedging opportunities of the private sector. This should in theory lead

Latin-America, offshore banks did not serve as intermediaries for capital inflows into the region, but rather as alternatives to domestic financial systems subject to heavy regulations and capital controls.

⁵ Tarapore, S. (1998), p. 71.

⁶ James (1999) points to the lessons from history. The integrated world of the late nineteenth century bore a close resemblance to today's world in which globalization is so heavily debated although the volume of capital flows was relatively greater than in our own decade. The great depression put an end to the world's first experiment with globalization. The economic problems were a consequence of financial vulnerability. He questions whether protection is not more dangerous than the threat itself. He also questions whether we use the fear of a great depression, as justification, for backing away from the integration of the world economy. If so, we might really produce a great depression and, with it, the complete reversal of liberalization.

to inter-temporal consumption smoothing. The costs of this process are because financial integration still has to go a long way till we observe the law of one price. Interest rate differentials cause large and sometimes speculative movements of capital. This has in the case of some countries heightened credit, liquidity and moral hazard risks facing financial authorities, increasing the need for international solutions to problems of prudential stability. The experience of countries that liberalized the capital account starting from a weak initial base and inadequate conditions, end up in a financial crisis. Costs of liberalization also include the risk of capital flow reversals and herding behavior in international financial markets. The experience has also raised concerns about international financial stability in the absence of prudential regulations and restrictions. Today it is recognized that although a liberalized capital account has certain benefits for developing countries it also has certain costs, therefore making liberalization a more complicated procedure.

The costs of liberalization are acknowledged but their existence cannot reverse the globalization process. The discussion in this paper focuses on measures which reduces the risk of globalization. The remainder of the paper therefore discusses the conditions under which an orderly liberalization of the capital account is possible and discusses policies that can lead to a reduction in risks. The paper draws on country experiences and the literature in the field to makes a case for gradualism and opening up the debate on the degree of capital account convertibility which would be consistent with the overall reform process and its progress in an economy. The discussion veers to the timing, speed, sequencing and defining initial pre-conditions. It also raises the issue of prudential and supervisory framework and the role of capital controls in protecting an economy from volatility and disturbance in international markets.

Box 2: Rationale for capital account liberalization

1. In the traditional theory of international trade, capital account liberalization was seen as allowing foreigners to hold domestic capital leading to welfare gains by leading to a higher capital stock and higher GDP growth as well as GNP growth as labor gained at the cost of both domestic and foreign capital. MacDougall (1968). Developing countries were assumed to face scarcity of capital. This assumption is discussed in the framework of the two-gap approach to development. McDonald (1982) surveys the literature. This analysis shows that developing countries should be net borrowers in the development process. Capital flows were welcome as far as they eased the foreign exchange constraint by borrowing externally on the government account. Today dismantling capital controls is also welcomed to relieve liquidity constraints. The advantage is seen in the optimal levels of investment that can be reached by the free access to global savings both by the government and private market participants.
2. A strong argument for opening the capital account is based on the tenets of the modern theory of international finance, which emphasizes the element of risk in international financial markets. The theory maintains that if the price for bearing risk differs across countries, then there are welfare gains in trading in international markets analogous to the trading of commodities (Persson and Svensson 1985, Svensson 1988). It would not be advisable for investors to put all their eggs in one basket (Grubel 1966). An individual investment portfolio should be a mix of assets with different risk/return profiles. The welfare gains are seen in risk diversification by economic agents. Risk diversification can not only take place by holding a portfolio of different domestic assets, but also by diversifying internationally. A Mexican investor, for example, whose portfolio is confined only to Mexican assets runs more risk than one who can diversify risk internationally. The differences in absolute riskiness of countries, low correlation of risky outcomes across countries, and difference in investor preferences, all account for the benefits that accrue because of portfolio diversification. Cross-border portfolio diversification is seen as advantageous in both assets and liabilities.
3. Economists also argue that opening capital account provides opportunities for inter-temporal consumption smoothing. Time and liquidity constraints differ across countries. This would mean that aging economies tend to post excess savings and hence a surplus in the balance of payments on current account which they will run down later in the form of net inflows. A country suffering from a temporary shock will prefer to run a current account deficit to smooth consumption over time. Trade in financial assets would thus relieve liquidity constraints.
4. The more integrated a developing country is with world markets, the greater will be the possibility to reap the dynamic advantages of financial intermediation. Benefits from improved international competition leading to the breaking up of the oligopolistic structure and a more efficient domestic financial system by intensifying competition between financial intermediaries is seen as one of the positive outcomes of capital account liberalization. By squeezing intermediating margins leading to a reduction in the cost for borrowings and an increase in returns to lenders. Greater liquidity leads to a deepening of markets with well-capitalized market participants. The quality of assets improves as a result and also with improved depth and the possibilities for hedging risk and diversification. Developing countries can also gain from financial innovations at lower cost since the cost of developing them has already been carried out in other countries.
5. The free movement of capital leads to additional benefits in the form of the flow of technology and intellectual property.
6. The free movement of capital is expected to bring about convergence of interest rates and tax rates and structures.
7. A liberalized capital account is also seen as way to discipline domestic policies.
8. The declining effectiveness of capital controls may be another reason for removing them. Growing trade integration and the presence of multinationals provides opportunities for financial integration even if controls on capital account transactions are in place.

III Trends in International Private Capital Flows in Selected Countries

The surge of private capital flows to developing countries in the 1990s is by now well documented. A brief re-cap shows that net portfolio and direct investment flows into developing economies expanded substantially rising from roughly \$ 22.3 billion in 1983-88 to \$ 44.5 billion in 1989-92 and averaging \$ 163.9 billion in 1993-96.⁷ Some of the principal forces driving the growth of international investment in developing countries was the liberalization of financial transactions, deregulation of financial markets, the removal of controls on international capital movements and the liberalization of trade and exchange controls. The distribution of the private capital flow was not even. Just 10 countries received about 80 percent of total net private flows to developing countries, and the top 14 accounted for 95 percent, but increasing openness to international financial transactions is nonetheless general: few developing countries are unaffected.⁸ Some of the major recipients of these flows have experienced sharp reversals causing a deep economic and financial crisis, which affected not only the region but also global financial markets. Many of these countries are now on the road to recovery.

⁷ IMF, Balance of Payment Statistics.

⁸ Eichengreen *et al.* (1998), p.5

The global picture on capital flows very often hides the range of problems experienced by small developing countries in Africa. The absolute amounts of private flows to these economies are small, but in many of them the flows are substantial as a share of gross domestic product and gross fixed capital formation, with some African countries experiencing inflows comparable on a relative basis to those seen in East Asia (Tables 1-3). Figures 1 and 2 show the differing compositions of financial account balances in Latin America, Asia and Africa. Thus, while in absolute terms the major recipients of inflows were in Latin America and East Asia, substantial inflows in relation to the size of their economies have created problems of monitoring and management of private capital flows and increased vulnerability in Africa.⁹

⁹ Bhinda *et al.* (1999) provides an overview of the problems involved in measuring capital flows in Africa. National and international sources often provide conflicting estimates of flows and the latter also disagree among themselves. Both sources face problems of assembling data in a timely fashion and interpreting the results. Measurement problems vary across different types of inflows. Foreign direct investment statistics are generally the most disaggregated and comprehensive. UNCTAD data is preferable because it complements IMF data with data culled from recipient countries and the OECD. Portfolio flows only recently started arriving in Africa and as a consequence problems of identification in recipient countries appear in international databases. World Bank and the IMF data are failing to account for large flows at a time of increasing liberalization in financial markets, both abroad and in Africa. In particular, they are failing to report foreign participation in African equity markets and large inflows from equity funds. The private sector maintains the best information of bond flows and the World Bank monitors these reports, but inconsistent reporting systems make the data highly variable.

As inflows to SSA have increased, many African countries have ceased to monitor flows. This has arisen both because monitoring was associated with old exchange control regimes and, because of that, governments were unwilling to continue close monitoring for fear that it would be seen as a prelude to a return to controls. Poor private sector compliance (due in part to fears that customers would be scared away by tougher reporting requirements) and weak legal frameworks exacerbate the problem. Specific problems of monitoring include (a) large unidentified private flows, (b) problems distinguishing official and private flows, (c) difficulties assigning the "term" of the flows and (d) poor timeliness and periodicity of the data.

Table 1: Absolute size of financial account balances (in millions of US dollars)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	Average 1990-1998 ¹
Latin America										
Argentina	-5884.0	182.0	7350.0	20328.0	11155.0	4623.0	11175.0	16826.0	19217.0	9441.3
Chile	2857.0	963.9	3132.0	2994.9	5293.6	2356.6	6664.6	7355.2	3181.0	3866.5
Mexico	8441.0	25139.0	27039.0	33760.0	15786.8	-10487.3	6132.0	19253.4	17308.0	15819.1
Asia										
Thailand	9097.8	11759.2	9474.6	10500.0	12167.0	21908.6	19486.0	-16877.3	-14454.0	7006.9
Indonesia	4495.0	5697.0	6129.0	5632.0	3839.0	10259.0	10847.0	-603.0	-9638.0	4073.0
Malaysia	1784.2	5621.3	8746.2	10804.6	1288.0	7638.5	9479.2	2742.4	n.a.	6013.1
Korea	2895.1	6741.3	6994.0	3216.5	10732.9	17273.2	23924.4	-9195.0	-8438.1	6016.0
Philippines	2057.0	2927.0	3208.0	3267.0	5120.0	5309.0	11277.0	6498.0	959.0	4513.6
China	3255.0	8032.0	-250.0	23474.0	32645.0	38673.8	39966.0	22978.0	-6276.0	18055.3
South Asia										
India	5528.1	3450.3	4075.3	7074.3	10575.6	3860.9	11847.8	9634.7	8583.9	7181.2
Africa										
Ghana	250.5	367.8	275.9	642.6	481.7	462.1	285.1	493.8	359.0	402.1
Kenya	360.9	96.6	-270.1	55.1	-41.7	247.9	589.1	362.7	562.1	218.1
Uganda	211.8	137.6	114.8	56.6	76.8	210.7	140.5	300.2	n.a.	156.1
Tanzania	68.1	120.0	70.2	130.5	-91.7	66.7	-92.8	3.6	77.6	39.1
Malawi	128.6	104.3	93.6	188.9	122.0	n.a.	n.a.	n.a.	n.a.	127.5
Mozambique	-83.4	160.9	513.7	246.9	344.4	366.7	235.0	182.2	300.4	251.9
South Africa	243.0	-1284.9	-242.5	-344.1	1087.1	4002.9	3018.2	8131.1	4895.6	2167.4
Zimbabwe	242.6	536.5	373.4	327.2	-25.5	n.a.	n.a.	n.a.	n.a.	290.8

Note:

1. Or for years that are available in the 1990-1998 period - *Source: IMF, International Financial Statistics*

2. The average for the following countries covers a shorter period: Malawi, 1990-1999; Malaysia, 1990-1997; Uganda, 1990-1997; Zimbabwe, 1990-1997

Table 2: Financial account as a percentage of GDP

	1990	1991	1992	1993	1994	1995	1996	1997	1998	Average 1990-1998 ¹
Latin America										
Argentina	-17.5	0.1	3.3	8.6	4.3	1.8	4.1	5.7	6.4	1.9
Chile	9.4	2.8	7.5	6.7	10.4	3.6	9.7	9.8	4.4	7.1
Mexico	3.2	8.0	7.4	8.4	3.8	-3.7	1.9	4.8	4.2	4.2
East Asia										
Thailand	10.7	12.0	8.5	8.4	8.4	13.0	10.5	-11.3	-13.0	5.2
Indonesia	3.9	4.4	4.4	3.6	2.2	5.1	4.8	-0.3	-7.7	2.3
Malaysia	4.1	11.4	14.8	16.2	1.7	8.6	9.4	2.7	n.a.	8.6
Korea	1.1	2.3	2.2	0.9	2.7	3.5	4.6	-1.9	-2.6	1.4
Philippines	4.6	6.4	6.1	6.0	8.0	7.2	13.6	7.9	1.5	6.8
China	0.8	2.0	-0.1	3.9	6.0	5.5	4.9	2.5	-0.7	2.8
South Asia										
India	1.8	1.3	1.5	2.5	3.3	1.1	3.1	2.3	2.0	2.1
Africa										
Ghana	4.0	5.6	4.3	10.8	8.9	7.2	4.1	7.2	n.a.	6.5
Kenya	4.2	1.2	-3.3	1.0	-0.6	2.7	6.4	3.4	4.9	2.2
Uganda	5.7	4.5	3.5	1.7	1.5	3.4	2.2	n.a.	n.a.	3.2
Tanzania	1.0	1.9	1.5	3.8	-3.3	2.6	-3.5	0.1	n.a.	0.5
Malawi	6.9	4.8	5.0	9.4	10.3	n.a.	n.a.	n.a.	n.a.	7.3
Mozambique	-5.8	11.2	41.4	17.5	24.0	24.5	n.a.	n.a.	n.a.	18.8
South Africa	0.2	-1.1	-0.2	-0.3	0.8	2.7	2.3	5.8	3.9	1.6
Zimbabwe	2.8	6.2	5.5	5.0	-0.4	n.a.	n.a.	n.a.	n.a.	3.8

Notes:

1. Or for the years that are available for each country in the 1990-1998 period - *Source: IMF, International Financial Statistics*
2. The average for the following countries covers a shorter period: Ghana, 1990-1997; Malawi, 1990-1994; Malaysia, 1990-1997; Mozambique, 1990-1996; Tanzania, 1990-1997; Uganda, 1990-1996; Zimbabwe, 1990-1994

Table 3: Financial account as a percentage of gross fixed capital formation

	1990	1991	1992	1993	1994	1995	1996	1997	Average 1990-1997 ¹
Latin America									
Argentina	n.a.	n.a.	n.a.	43.3	19.9	9.0	20.2	25.8	23.6
Chile	40.7	14.0	33.4	26.4	45.8	16.6	39.1	37.9	31.7
Mexico	18.0	42.9	37.9	45.2	19.4	-22.7	10.4	24.5	21.9
Asia									
Thailand	26.4	28.8	21.7	21.2	21.1	31.7	26.1	-30.8	18.3
Indonesia	13.9	16.5	17.1	13.6	7.9	17.9	16.1	-1.0	12.7
Malaysia	12.9	33.5	41.6	43.9	4.4	20.3	22.6	6.6	23.2
Korea	3.1	6.0	6.2	2.7	7.9	10.4	13.4	-5.9	5.5
Philippines	20.1	32.2	28.9	25.3	33.8	32.2	58.1	32.3	32.9
China	3.6	7.8	-0.2	14.5	16.7	15.9	14.2	7.4	10.0
South Asia									
India	8.0	6.2	7.4	12.7	15.3	4.8	13.7	10.9	9.9
Africa									
Ghana	29.6	35.2	33.8	45.3	39.2	33.8	20.0	30.9	33.5
Kenya	20.4	6.2	-19.8	5.7	-3.1	12.8	32.2	19.4	9.2
Uganda	38.7	27.3	25.2	11.6	13.2	23.8	13.8	29.4	22.9
Tanzania	7.2	9.8	5.4	11.1	-8.8	6.6	-8.9	n.a.	3.2
Malawi	42.8	27.8	30.3	70.3	38.6	n.a.	n.a.	n.a.	42.0
Mozambique	-18.7	35.3	119.8	54.7	60.0	52.5	33.9	22.4	45.0
South Africa	1.2	-6.4	-1.2	-1.9	5.6	17.7	13.9	36.3	8.1
Zimbabwe	15.2	30.2	24.7	21.1	-1.7	n.a.	n.a.	n.a.	17.9

Note:

1. Or for the years that are available in the 1990-1997 period - *Source: IMF, International Financial Statistics*
2. The average for the following countries covers a shorter period: Malawi, 1990-1994; Tanzania, 1990-1996, Zimbabwe, 1990-1994

Figure 1: Latin America and Asia, structure of the financial account, 1990-1998 (average; millions of US dollars)

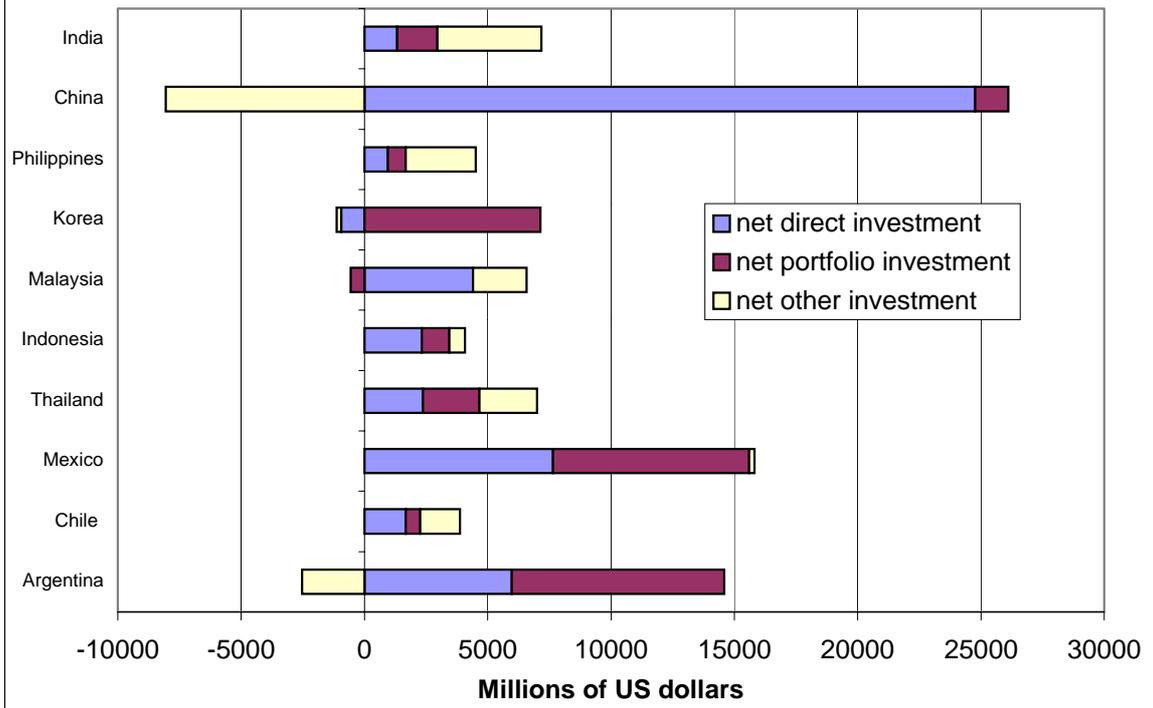
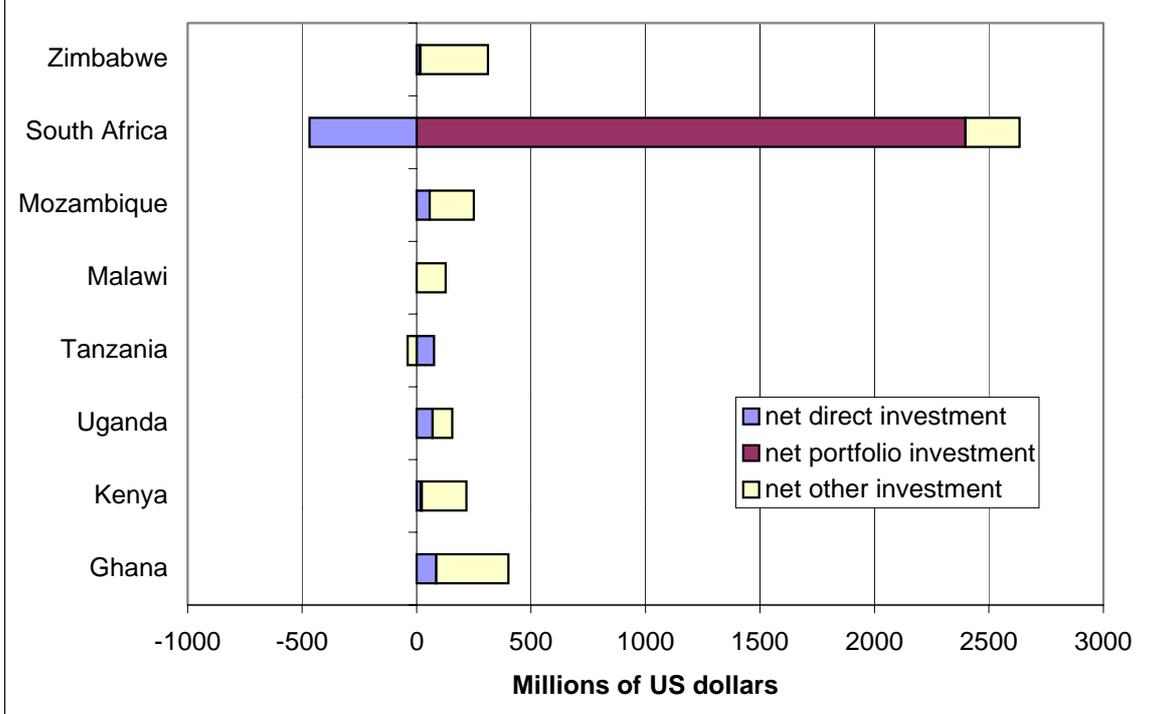


Figure 2: Africa, structure of the financial account, 1990-1998 (average; millions of US dollars)



It is often believed that among the developing regions Africa is least integrated into world economy. Its efforts at opening up the capital account have been largely ignored in the literature. In a recent study by the IMF,¹⁰ Kenya is the only case study that has been covered.

The crisis in East Asia occurred after more than a decade of rapid growth in the region raising living standards. The crisis had its social implications.¹¹ The social dimension of a crisis would be more acute in small developing economies, which have not benefited from a decade of rapid growth. In Africa, a financial crisis would take these economies back by years. After considering the basic underlying conditions in Africa, it is important to opt for the right degree of CAC that maximizes benefits while reducing the risk of generating a financial crisis. Capital account convertibility can be phased out and it may not be desirable for some countries to go in for full capital account convertibility. It is now better accepted that capital account liberalization must be properly sequenced and managed and must take into account underlying institutional capacities. It is important to emphasize that capital account convertibility is a process with other reforms accompanying the changes in capital account openness. Following the recent crisis in East Asia the discussion on capital controls has moved to talking about prudential and preventive capital controls.

IV The Road to Capital Account Convertibility: Sequencing and Pre-Conditions

The accrual of the benefits of capital account convertibility outlined in Box 2 are however dependent on certain pre-conditions and accompanying factors in the absence of which, capital account openness may lead to macroeconomic instability and destabilized financial markets.¹² It is necessary for policymakers to realize that liberalization of the capital account is going to bring about far reaching changes in the developing country scenario and impinge on a wide range of activities. It is therefore necessary to examine the pre-conditions and sequence reforms before deciding on the timing and speed of liberalization.

IV.i Sequencing Current and Capital Account Liberalization

McKinnon (1973 and 1982) Frenkel (1982) and Edwards (1984) made a case for liberalizing the capital account following the opening of the current account and the domestic financial system. According to McKinnon if the opposite sequencing were followed, excessive capital inflows would result in a substantial appreciation of the real exchange rate, which would then hamper the opening up of the current account. Arguments for a simultaneous opening of the current and capital account have been advanced by Little, Scitovsky, and Scot, (1970), Michaely, (1986) and Krueger (1984).

Since many developing economies have signed Article VIII agreements with the IMF, the issue of sequencing current and capital account liberalization needs further qualification as to the time period between current and capital account liberalization as the capital account can be porous because of a liberalized current account. It also needs to focus on the type of restrictions needed on the current account to avoid the loss of capital in the transition stage.

¹⁰ Ariyoshi *et al.*, 1999. Country Experiences with the Use and Liberalization of Capital Controls, IMF, advance copy.

¹¹ Stiglitz (1999).

¹² See for example, Hanson (1994), Mathieson and Rojas-Suarez (1992), and Williamson (1992), Reserve Bank of India (1997), Tarapore (1998), and Johnston, Darbar and Echeverria (1999).

The countries surveyed in this paper embody a variety of experiences with respect to the sequencing of current and capital account liberalization. Kenya and Peru both liberalized the current and the capital account simultaneously. Argentina also liberalized both simultaneously in 1991 (although it had signed Article VIII in 1968). These three countries also initiated 'big bang' liberalizations of the capital account, freeing all external transactions in a short space of time. The other countries sequenced current account liberalization before moving, at very different rates, to liberalize the capital account. Uganda, for example, allowed unrestricted current account transactions in 1993 followed soon after by a *de facto* liberalization of the capital account. Chile liberalized current account transactions in 1977 and only moved gradually to liberalize the capital account over the 1985-1994 period. India accepted Article VIII obligations in 1994 and has since moved cautiously in liberalizing the capital account, allowing convertibility only for non-residents. It has also retained some restrictions on the current account consistent with Article VIII designed to limit capital movements through the current account. Indonesia and Korea both accepted Article VIII obligations in 1988 and pursued increased capital account liberalization in the early 1990s, although both still retain many restrictions.

Current account liberalization can lead to a *de facto* liberalization of the capital account because it is possible for capital to leave through leads and lags. Kasekende *et al.* (1997) and Kimei *et al.* (1997) find evidence of significant capital flows through current account transactions and foreign exchange bureaus for Uganda and Tanzania. Kahn (1991) found substantial evidence of capital flight through the current account for South Africa. Some developing countries retain certain restrictions on the current account with Article VIII status.¹³ It is however difficult to gauge which restrictions achieve the objectives for which they have been set. This is an area for research. India maintained certain restrictions on the current account with Article VIII status to avoid the movement of capital through the current account because controls on the movement of capital by the resident sector have not been liberalized. Hence, certain preventive measures were built into the regulations relating to current account transactions. (In recent weeks some small steps have been made to liberalize this sector but the focus is still on micro management of exchange controls.)

An attempt is made to capture the impact of opening of the current account on the porosity of the capital account. Estimates of misinvoicing of trade data based on partner country comparison of the country with industrialized countries for a select sample of four countries is revealing.

¹³ See Exchange Rate Arrangements and Currency Convertibility: Development and Issues, IMF (1999), p.8.

Table 4: Estimates of Misinvoicing of Trade Data for Selected Countries, 1990-1998 (millions of US dollars)

Country	1990	1991	1992	1993	1994	1995	1996	1997	1998	Article VIII Agreement
Ghana										
Export Misinvoicing	0.00	1.00	-148.82	0.27	-4.82	3.09	39.54	-0.64	0.09	2/21/94
Import Misinvoicing	-0.18	0.36	251.36	1.00	-1.45	-2.64	-1.82	-1.91	-51.91	
Total Misinvoicing	-0.18	1.36	102.54	1.27	-6.27	0.45	37.72	-2.55	-51.82	
Kenya										
Export Misinvoicing			199.81	158.00	-1.27	10.63	237.18	250.27	0.36	6/30/94
Import Misinvoicing			-176.45	-150.18	-7.45	-5.18	-133.90	-5.18	11.81	
Total Misinvoicing										
Malawi										
Export Misinvoicing	4.81	0.27	0.54	-0.09	-0.63	3.45	1.54	11.36	0.36	12/07/95
Import Misinvoicing	64.63	0.09	-0.09	0.27	-0.36	-0.45	-0.27	0.18	-0.45	
Total Misinvoicing	69.44	0.36	0.45	0.18	-0.99	3.00	1.27	11.54	-0.09	
Mozambique										
Export Misinvoicing	-1.00	-0.45	-0.27	-0.18	0.55	-0.55	1.09	28.45	0.27	...
Import Misinvoicing	0.27	6.82	-2.73	-3.27	1.27	-1.09	0.18	0.18	-0.18	
Total Misinvoicing	-0.73	6.37	-3.00	-3.45	1.82	-1.64	1.27	28.63	0.09	
South Africa										
Export Misinvoicing	1266.09	-6.18	494.82	-619.27	1248.73	2182.73	1797.46	1694.91	0.09	9/15/73
Import Misinvoicing	485.73	-158.00	1156.00	1351.91	3034.09	1539.27	1288.46	1864.36	1.00	
Total Misinvoicing	1751.82	-164.18	1650.82	732.64	4282.82	3722.00	3085.92	3559.27	1.09	
Tanzania										
Export Misinvoicing	0.18	-0.09	0.73	0.00	-1.27	2.00	1.45	27.09	40.91	7/15/96
Import Misinvoicing	0.18	-1.55	-2.18	0.27	-1.36	-0.73	-0.64	-69.27	100.36	

Total Misinvoicing	0.36	-1.64	-1.45	0.27	-2.63	1.27	0.81	-42.18	141.27	
Uganda										
Export Misinvoicing	0.00	-0.54	0.27	1.72	6.54	19.72	2.90	2.90	-0.27	04/05/94
Import Misinvoicing	1.81	0.27	-1.18	0.63	0.27	0.00	-0.36	0.54	0.36	
Total Misinvoicing	1.81	-0.27	-0.91	2.35	6.81	19.72	2.54	3.44	0.09	
Zambia										
Export Misinvoicing	511.00	1.55	225.09	-22.91	119.82	24.82	63.55	2.09	0.82	...
Import Misinvoicing	166.64	33.64	-136.82	-182.55	-88.55	-81.18	-43.45	0.00	0.18	
Total Misinvoicing	677.64	35.19	88.27	-205.46	31.27	-56.36	20.10	2.09	1.00	
India										
Export Misinvoicing	1363.09	244.90	772.63	1313.90	2327.81	2212.81	2127.09	3208.36	637.82	
Import Misinvoicing	-1517.55	-191.72	-275.45	-1687.09	-2683.18	-4835.09	-4045.55	-2383.55	782.72	
Total Misinvoicing	-154.46	53.18	497.18	-373.19	-355.37	-2622.28	-1918.46	824.81	1420.54	

Notes:

1. A positive sign indicates a capital outflow and a negative sign an inflow.

Source: Estimates based on data in Direction of Trade Statistics, IMF, for the 1992-1998 period comparing country data with industrialized countries.

The estimate shows that the current account in India continues to remain porous. It also indicates that the Indian current account has always been quite porous so that one does not see the impact of signing the current account convertibility agreement. The movement of capital through the current account is more of a response to the overall climate, so that in the reform period, inflows of capital occur. In the period when the region was under stress, capital did move out because of the anticipated depreciation of the exchange rate. In Ghana, Uganda, Malawi, Kenya and Tanzania with a time lag, current account convertibility did lead to a massive outflow of capital stressing the need to open up a policy discussion on sequencing and timing of the current and capital account liberalization and working out a more effective transition stage. The current account in South Africa is very porous like the India case. Mozambique and Zambia also lose capital through the current account.

The decision to open up the capital account because of pressures introduced by opening up the current account is in principle a bad one. Country experiences with liberalization emphasize the importance of restructuring the financial sector before opening up. In many countries, it is not clear if industrial restructuring was successful before the opening of the current account.

Since the conditions for capital account convertibility are stringent, liberalization of the capital account needs to be gradual. The transition phase needs to be worked out by examining which restrictions on the current account can be an effective means of making capital controls work in the intermediate stage. Further research is needed to examine the objectives of restrictions on the current account restrictions, underlying conditions under which they operate and their effectiveness.

IV.ii Conditions Necessary for an Orderly Liberalization of the Capital Account

The sequencing debate now encompasses not just the sequencing of the current and capital account, but is now extended to other markets. There is a near consensus in the literature that major fiscal imbalances have to be tackled first, macroeconomic stability, domestic financial sector reform and stability and labor market regulations eased early in the reform process. McKinnon (1991) and McKinnon and Pill (1995) focus on sequencing, which should come first, the capital account or the current account? In their view the moral hazard issue associated with the financial sector is an essential factor in determining that capital account liberalization should wait till the end of the reforms. Various instances from Latin America are advanced as evidence of misguided sequencing. Dornbusch (1998) reasons that the McKinnon debate as to which should come first, free trade or free flow of capital misses a practical point. Both involve restructuring, the former of the industrial sector and the latter of the financial sector. Because resources are lost through protectionist policies, the sooner, the better for both. What this argument ignores is that financial and industrial sector restructuring need time for various standards and practices to be put in place. Training itself requires a substantial period of time.

Johnston, Darbar and Echeverria (1999) emphasize that sequencing is more complex so that stylized prescriptions are misleading. Capital account liberalization, economic and other reforms are complex and require attention to linkages among specific components of broader reform areas. Reserve Bank of India (1997), Tarapore (1998), Johnston *et al.* (1999) provides a conceptual framework for an orderly liberalization of the capital account. The emphasis is on the need for an integrated approach towards capital account liberalization, it being a part of the overall reform process. The following sections take up the salient issues that must be

considered for an orderly liberalization. The following table summarizes the pre-conditions based on country experiences.

An examination of country experience reveals that successful liberalizations of the capital account, such as in Chile, were embedded within a broader program that sought to reform the real economy and the financial sector as well as upgrade the governments capacity to prudentially regulate, monitor and enforce capital adequacy standards. Furthermore, the authorities implemented macroeconomic policies that sought to provide greater insulation from unexpected shocks to the economy, such as the achievement of fiscal balance and a more flexible exchange rate regime. Thus, the experience of successful liberalizers must be viewed in their totality, and not just by focusing on specific measures of capital account liberalization. In this section we elaborate the discussion on macroeconomic policy with an open capital account. The issues in financial sector reforms will be discussed in another section.

Table 5: Conditions for an Orderly Liberalization of the Capital Account

Fiscal Consolidation	Consolidating the state’s fiscal position has been a key component of successful efforts to liberalise the capital account. This not only helps ensure macroeconomic stability but also enhances the credibility of policy by easing debt servicing obligations. Smaller deficits should be financed without recourse to an inflation tax, but rather by bond finance. Large fiscal deficits may keep interest rates high and thus contribute to interest rate differentials that induce large inflows of more volatile, short-term capital. In itself, fiscal consolidation and balance is not enough to prevent crises (Thailand, Malaysia, Indonesia), but it has been a necessary component of liberalization (Argentina, Chile, Uganda) and its absence can lead to instability (Brazil).
Inflation Rate	Among central bankers there is an increasing belief that an inflation rate in the low, single-digit range is a desirable objective of policy. The achievement of this policy will require central banks to have greater independence and insulation from populist pressures. With an increasingly integrated world economy and low inflation rates in the industrial countries, it is necessary for developing countries to break inflationary expectations and achieve inflation rates not far out of line with those in the industrial countries. High rates of inflation are destabilizing and require high nominal and real rates of interest which have negative real effects and could reinforce capital inflows (Brazil). Conversely, artificially maintained low interest rates could induce large net outflows of capital.
Financial Sector Reform	A central component of any policy directed at promoting capital account liberalization is the reform and restructuring of the financial sector to avert inefficient allocations of capital. In an environment of liberalized capital flows, weaknesses of the financial system can cause macroeconomic instability and crises (Thailand, Indonesia, Kenya). The choice is therefore between a careful reform of the financial system before or during the process of liberalization, or emergency reforms after a crisis. Banking systems remain weak in many developing countries, burdened either by interest rate controls or mandated lending to favoured groups or firms. In addition, many systems have very high reserve requirements relative to international levels. Reducing these requirements diminishes the effectiveness of monetary policy in the absence of indirect policy tools. Thus, the development of indirect tools such as open market operations and interest rates should become a key objective of policy. Reform must also encompass improved accounting standards, increased monitoring and surveillance of bank risk exposure, and prudential standards that conform to international standards (Basle Committee).

Monetary Policy	The development and deepening of financial markets following reform, also changes the context in which monetary policy is conducted. A move from direct monetary policy controls to indirect controls is desirable, as it avoids distortions in financial intermediation and is more flexible for policy purposes. In addition, the development of indirect controls also enables the central bank to more effectively carry out sterilization operations in capital inflow episodes. Appreciation of the exchange rate due to capital inflows diverts investment away from the tradable sector when it persists for a long time. Sterilization is needed to deal with this or it can be combined with other instruments such as reserve requirements, taxes or a partial liberalization of outflows. In small economies the financial markets lack of depth and it may be feasible to rely on more direct monetary policy tools.
Exchange Rate Policy	Exchange rate policy becomes even more central to policymaking concerns with moves towards capital account convertibility. Authorities must decide on the optimal degree of exchange rate flexibility with an aim to prevent either unsustainable appreciations of the real exchange rate that can undermine competitiveness or expensive interest rate defences of fixed rates and/or costly sterilization operations. The balance between these considerations is complex, although there is a general belief that exchange rate regimes have to be more flexible under capital account convertibility.
Current Account Balance	Current account deficits are commonly found in developing countries, reflecting the use of global savings to achieve desired levels of growth and investment. Experience suggests that prudent limits must be set on expanding deficits. The counterpart of current account deficits are expanding external liabilities, and as the deficit rises debt servicing begins to account for an increasing proportion of external earnings that could be otherwise used to increase imports. Thus, high current account deficits may constrain growth by retarding imports as well as leading to fears of contraction and/or crisis.
Foreign Exchange Reserves	With capital account convertibility, the level of international reserves becomes a key consideration for policymakers. Reserves help to cushion the impact of cyclical changes in the balance of payments and help offset unanticipated shocks, which can lead to reversals of capital flows. Reserves also help sustain confidence in both domestic policy and exchange rate policy. The optimal level of reserves is of course contingent on a country's specific circumstances, including its balance of payments, exchange rate regime and access to international finance. Indicators of reserve adequacy should be derived from measures of import cover and debt servicing. Another important ratio to monitor is the ratio of short-term debt and portfolio stocks to reserves to guard against sudden depreciation.

Prudential Norms	The implementation of effective prudential norms in the financial sector is a central requirement for CAC. Given the weaknesses of financial systems in developing countries, authorities should consider moving beyond the prudential standards defined by the Basle Committee (Argentina, for example, has implemented tougher prudential regulations than Basle specifies). Tighter prudential norms may be in the form of steeper capital requirements for banks with higher levels of non-performing loans. Norms should be set with the aim of ensuring the stability, solvency and liquidity of the financial system and not watered down to ensure the survival of weaker institutions. Experience suggests that tougher prudential requirements are either effectively initiated before CAC, or they are imposed in less favourable circumstances following a financial crisis.
Supervision	An essential precondition for capital account convertibility is the establishment of an effective supervisory regime that has the capacity to monitor developments in the financial sector and to enforce its regulations and directives. Weak financial institutions need to be quickly identified, provisions made for losses and prudential standards enforced. The consequences of lax supervision are magnified in the presence of CAC since the linkage between the domestic and international financial systems are far closer and instabilities arising in one can quickly lead, for the individual country, to a domestic financial crisis and/or an external funding crisis. Establishing an effective and efficient supervisory institution is a long-term project that reinforces the need for gradualism in introducing CAC. As financial markets are restructured and reformed, supervisory capability can evolve incrementally, establishing a sound basis for further development. A key institutional reform is that the supervisory agency should be independent from political forces that may compromise its effectiveness.
Lowering tariff barriers	Reforming the trade regime to make it more open to the international economy is part of the structural reforms that should precede CAC. High tariffs, in addition to their allocative inefficiency, encourage direct investment in the economy that is not directed towards export markets, but rather towards ‘tariff jumping’. Lowering tariffs is therefore linked to the promotion of a diversified export base.
Diversified export base	A diversified export base helps cushion the economy from sudden terms of trade or other shocks that may emerge from dependence on a narrow range of exports. Such shocks have immediate effects upon the current account and with a loss of confidence in the country’s capacity to meet debt repayments or sustain the current rate of capital inflows, may drive a capital account crisis as well. Developing countries have traditionally been vulnerable to such shocks to the export sector, often arising from dependence on primary commodity exports. The process of promoting non-traditional exports can encompass promotion of domestic firms through some kind of industrial policy or through the encouragement of foreign direct investment. In the latter case, it is essential that countries promote FDI in exportable sectors.

IV.iii Fiscal Policy, Monetary Policy, Sterilization and Exchange Rate Policy

Country experience with capital flows shows that financial integration boosts growth by increasing investment and consumption and reduces volatility of consumption with the increased opportunities for risk diversification and inter-temporal consumption smoothing. However, large capital flows also lead to rapid monetary, expansion, inflation, and real exchange rate appreciation. The appropriate design of macroeconomic policy is extremely important in an integrated world. Country experiences and the growing literature on the policy response to a surge in capital flows shows that counter cyclical measures such as tight monetary and fiscal policies and flexibility in the exchange rate are essential to manage private capital flows. Other structural measures pertaining to the financial sector, regulation, supervision and capital controls are discussed elsewhere in this paper.

Fiscal Control

Sound macroeconomic policies are a basic pre-requisite for capital account convertibility. The experience of the Southern Cone countries shows that fiscal deficits emerge as one of the important factors accounting for success or failure of liberalization programs. The experience has shown that government finances and tax efforts need to be sufficiently strong to prevent the need for domestic financial repression. Taxes on financial intermediation encourage capital outflows and are no substitute for tax receipts. There is an urgent need in many developing countries to broaden the tax base.

Fiscal control is needed so that monetary policy can be assigned to the external objective. (Mundell, 1962). In the absence of fiscal control, monetary policy is assigned to internal balance, which can only be achieved with the aid of capital controls to insulate the country from international capital movements. The aim of policy should be to assign fiscal policy to attain internal balance and monetary policy to attain external balance. Sound government finances would help in the achievement of this objective. The experience of Singapore and Indonesia has shown that manipulating the flow of liquidity into the banking system using government excess savings partly frees the interest rate from demand management so that it can be used for exchange rate management.

High stocks of domestic public debt approaching unsustainable levels raises the chances of capital flight as domestic investors fear a default on domestic debt.

Keeping these factors in mind, it is essential to control the fiscal deficit and finance it with a minimal recourse to the inflation tax. Financing of the deficit through issuance of bonds is problematic with an open capital account if it undermines the credibility of the country servicing domestic debt. Fiscal discipline gives a signal to investors as to the health of the economy. Moreover, if the fiscal situation is not under control, Central Bank policies can become ineffective because of the lack of fiscal discipline.

Country experiences demonstrate the perverse effects that sustained fiscal imbalances can have in the context of an open capital account. In the 1990s, the Brazilian government ran persistent fiscal deficits that encouraged expectations of continued inflation and high interest rates that reinforced capital inflows into Brazil. The Brazilian experience also demonstrates the ambiguities generated by a federal system in terms of fiscal policy. While the Brazilian federal deficit dramatically deteriorated in 1993-1994, there was doubt as to whether it accurately reflected the fiscal positions of the states. Consequently, when the state of Minas

Gerais ran into fiscal difficulties in 1998, it generated a national crisis as investors worried that it was merely a prelude to further harmful disclosures. The large inflows into Brazil during the 1990s in the midst of this unsure fiscal environment suggests that *push* factors (i.e. falling interest rates in advanced countries) may have predominated over *pull* factors (i.e. domestic reform, improved macroeconomic performance). It might also suggest an investor euphoria driven by the signing of the North American Free Trade Agreement in 1993 that stimulated flows to the Latin America as a whole.

As will be discussed later, the presence of an elaborate capital control regime was unable to offset the negative effects of this structural imbalance. In India, another country with a federal structure, continued fiscal imbalances are currently placing greater pressure on the country's external accounts. Increasing fiscal imbalances leading up to Kenya's first democratic elections in late 1992, along with other factors, hindered the country's ability to induce inflows of capital despite its open capital account. Those countries that have successfully liberalized the capital account – such as Argentina, and Chile have all, with the exception of Colombia, shown a high degree of fiscal discipline. Malaysia managed to attract capital inflows over along period because of prudent fiscal policy.

Monetary Policy

The degree of financial integration also has implications for the conduct of monetary policy. For some countries greater financial integration will impair their ability to run independent monetary policies. As we move to a seamless capital market very few interest rates will be determined domestically apart from interest rates at the very short end. Attempts to depart from the international structure of interest rates may result in very large and possibly volatile capital flows exerting speculative pressure on exchange rates. Movements in exchange rates because of independent monetary polices may cause increases in the currency risk component of interest rates. Monetary policy may therefore in some countries have to passively adopt the monetary policy of a large financial trading partner, than confronting volatile and harmful exchange rate pressures. These are the conditions in a perfectly integrated financial world.

In the intermediate stage of international financial integration a Central Bank does have some control over monetary policy to avoid macroeconomic instability caused by large capital flows. Some of the options for managing capital flows in the short run are:

- To buy up reserves but sterilize the intervention by selling an equal value of domestic currency bonds.
- To increase the cash reserve ratio applying to bank deposits credits from abroad and swap operations.
- Monetary policy support through a tax on inflows.

A pre-requisite for the success of sterilization policy is the move from direct to indirect instruments of monetary policy. In some countries problems can occur because of the lack of depth in the money and government securities market. In some small African economies problems can arise because of limiting structural factors and the size of the economy. While open market operations are a necessary condition for managing private capital flows, for countries with less developed financial sectors it may be more effective to stay with direct tools of monetary policy. Uganda, for example, finds its capacity to sterilize inflows heavily constrained by the lack of sufficient monetary instruments and the thinness of the market. We need to open the debate on financial intermediation of international flows in this scenario.

Even with open market operations, sterilization is not without costs. This policy is designed to mitigate the impact of capital inflows on money supply leading to inflationary pressures, exchange rate appreciation and controlling the domestic money stock. Some of the costs of sterilization are discussed below.

- Presumably capital flows into developing countries attracted by the higher rate of return. If the capital flows are sterilized, the policy will prevent interest rate differential going down attracting further capital flows.
- A policy of sterilization involves issuing domestic bonds to offset an increase in currency flow, results in an increase in public debt.¹⁴
- If the government does not issue domestic bonds, it will have to provide its own currency leading to an increase in money supply and inflation. The consequent build up of reserves would mean the case of a poor country lending abroad. If sterilization takes place through domestic bonds, the country can incur costs amounting to the difference between the interest paid on bonds at home and the interest received on foreign reserves.

The costs of sterilization policy have been clearly reflected in country experience. Both Colombia and Chile experienced high sterilization costs that led them to move to a capital control regime.

Other forms of sterilization through reserve requirements and taxes on capital inflows are discussed elsewhere in this paper. They have been successful in some countries (such as Chile, Colombia and Thailand) in altering the average maturity of the capital inflow, but not the total capital flow. The experience of Chile is particularly interesting in relation to the constraints on monetary policy in a small, open economy with a liberalized capital account (see Annex 1 for a more detailed discussion of the Chilean experience). The conflict between controlling domestic inflation (even with fiscal accounts in balance) and preventing a sharp appreciation of the real exchange rate in the context of large capital inflows, prompted Chile to search for greater flexibility of monetary policy through the implementation of controls on capital inflows. The Chilean controls appear to have provided a ‘wedge’ between domestic and international rates that provided greater scope for authorities to target domestic inflation, while avoiding the costs of sterilization (although it must be noted that other costs were incurred, see Annex 1).

The above measures can only be used in the short-run. Their continuance can lead to agents developing new ways of bypassing these regulations. In the long run, the only solution is to speed up the financial and overall reform, so that outflows can be liberalized so that the two-way movement of capital takes care of financial intermediation, without the necessity for some of these measures. The process would be aided by a flexible exchange rate policy. Monetary policy would get some autonomy in countries where the conditions are right to operate an exchange rate band.

Exchange Rate Policy

The significance of a flexible exchange rate goes up for an economy with an open capital account as the influence of international variables is transmitted more quickly than in an economy with a relatively closed capital account. What is important for an open capital

¹⁴ This is the general case. The case study of India illustrates that the huge stock of ad hoc treasury bills were available for sterilization without increasing the stock of public debt.

account management is that exchange rate policy should be flexible, with market participants bearing exchange risk instead of the balance sheet of a central bank. Furthermore, the resulting uncertainty from a flexible exchange rate may discourage short-term flows. Exchange rate uncertainty may discourage short-term flows. The maintenance of a pegged exchange rate by the Thai authorities in the 1995-1997 period constrained policymaking, discouraged hedging by market participants and reinforced capital inflows. It also provided a fixed target for speculators who were quick to observe the inconsistency between an interest rate defense of the baht peg and the health of the financial sector.

A further advantage of allowing greater exchange rate flexibility is that the appreciation of the exchange rate is which is likely to occur through an appreciation of the nominal exchange rate and not through higher inflation. This gives room for pursuing autonomous monetary policy. It would force market participants to hedge their positions and this would be a beneficial development for foreign exchange market development. A drawback of a floating exchange rate regime is that it may be associated with high volatility, which may damage the growth of strategic sectors like non-traditional exports.

Country experience suggests that as capital account convertibility has progressed, countries have adopted more flexible exchange rate regimes. Of the country's surveyed in Annex 2, Colombia, Peru, Chile, Uganda, and Korea have all opted to introduce greater flexibility into their exchange rate regime. Only, Argentina with its currency board regime and Malaysia, which pegged the ringgit to the dollar as part of its adjustment policy after the Asian crisis, have reverted to inflexible regimes. The particular nature of the Argentine and Malaysian experiences should be noted. Argentina sought credibility for its macroeconomic policy stance after prolonged economic crises in the 1980s and the currency board was the surest method of acquiring this in international markets. Malaysia initiated its pegged regime in the context of a broad policy of capital controls on outflows, which helped ensure its maintenance. Thus, the general experience of capital account liberalization is that a greater degree of exchange rate flexibility is required, even if this takes the form of a currency band which helps reduce the volatility associated with free floating regimes.

It is for this reason that many countries such as Israel, Colombia, Chile and Mexico adopted an intermediate regime of an exchange rate band. Exchange rate bands can be implemented in countries that have depth in the foreign exchange market and the market is well developed so that two-way expectations can drive the exchange rate. It is an intermediate regime, in which monetary policy can be used for domestic objectives most of the time and but will be assigned to the external objective when necessary to avoid what might be a serious misalignment. Correction of exchange rate misalignments cannot be safely left to the market. The choice of an appropriate exchange rate involves a trade-off between the benefit of targeting inflation and the external competitiveness of a country. Actual policy will have to be a mix of both these objectives as either extreme is harmful to a country. Increased capital mobility limits the possibility of targeting the real exchange rate and therefore allowing the exchange rate to fluctuate within a band is a desirable policy. A credible announcement by the authorities that they will intervene to keep the exchange rate within the band will encourage market corrections or limitations to the misalignments without diverting monetary policy from its domestic objectives. Refraining from intervening continually in the market will discourage complacent traders who prevent market corrections through their behaviour. At the margin of the band, as part of official policy, the central bank is expected to intervene but not necessary as market can carry out the corrective speculation. With this policy the central bank can allow the market to work and yet keep the surprise element in its policy.

The central bank can also from time to time review its own choice of the equilibrium exchange rate and signal a major change is warranted by its own intervention and moving the parity around which the exchange rate is fluctuating.

Whether countries opt for a managed floating exchange rate regime or an exchange rate band depending upon their own circumstances, flexibility of the exchange rate is necessary with an open capital account.

IV.iv Prudential and Supervisory Concerns

The internationalization of financial markets also raises concerns regarding the weakness of various institutions around the globe and also many countries in the throes of a crisis. The opening up of the domestic securities market and domestic banking, the relaxation of the constraints on domestic credit foreign borrowing and financial investment by financial intermediaries has led to the emergence of new risk in international financial markets giving rise to a debate on prudential regulations in financial markets. Furthermore, the time available to a country to respond to a systematic disturbance has also become limited, increasing their dependence on authorities in other countries and international organisations such as the IMF.

Country experiences clearly reveal the centrality of effective prudential regulation and enforcement in the financial sector. Capital account convertibility highlights and exacerbates weaknesses of financial intermediation in the domestic economy, as could be seen during the Asian crisis in Thailand and Indonesia.

Closely related to the achievement of better financial regulation and enforcement is the importance of official monitoring and surveillance of international transactions. The institutional capacity of central banks must be improved and extended to adequately discern emerging risk exposures in the country's external accounts. Authorities must develop more effective ways of monitoring the use of foreign funds and strive to ensure that they are deployed largely in tradable sectors that can earn foreign exchange and not in non-tradable and often speculative sectors. The case of Thailand in the 1990s highlighted the risks of neglecting these issues. Despite the presence of controls on inflows, Thailand experienced a crisis that was, in large measure, caused by inadequate monitoring and prudential regulation of the financial sector. Before the crisis, only about half of the banking sectors foreign currency loans were to foreign exchange generating sectors. It must be emphasized that in this regard official regulation/monitoring/enforcement are only one side of the equation and they must be complemented by the development of a financial sector that adequately evaluates and prices risk. A clear benefit of improved monitoring, surveillance and disclosure is that it enhances the credibility and transparency of the government's macroeconomic policy stance, which can help encourage inflows and lower risk premiums.

Capital account liberalization does not mean throwing out the baby with the bath water. Rules and regulations applicable to foreign exchange transactions are a necessary pre-condition to capital account convertibility. Comprehensive work in this direction has been underway under the aegis of the Bank for International Settlements through the Basle Committee on Banking Supervision and the Financial Stability Forum. The Report of Working Group on Capital flows and high leveraged institutions is now available. Other matters on which groups were set up are offshore financial centers and the Joint Forum on financial conglomerates has also issued a report on the supervision of financial conglomerates.

It is accepted that although capital flows have certain benefits, these benefits are accompanied by certain risks. The aim of prudential policy is not to rely on controlling flows directly but developing the wherewithal to limit the risk to an economy from such flows. Implementation of capital controls requires an enforceable system of regulations, which are transparent and non-discriminatory. An adequate system of maintaining information on compilation of exchange control procedures will enhance the ability to monitor and supervise them.

Measures need to be developed to prevent tax evasion and money laundering. Harmonization of taxes is a possible way of dealing with this issue.

V Problems in Financial Intermediation and the Risk of Capital Flight in the Transition Process

V.i Impediments to Interest Rate Convergence

A consequence of liberalization of capital flows is that it will attract further capital inflows owing to the interest rate differential. Theoretically, one of the advantages of financial liberalization with an open capital account is the convergence of interest rates to international levels. Contrary to expectations, financial opening in the Southern Cone and some of the East Asian countries in the 1980s did not lead to convergence of interest rates to international levels. Capital movements were generally free in Indonesia (though there were controls on outflows), Thailand and Malaysia in the 1980s and yet full integration of interest rates did not take place. The experience of these countries emphasizes the point that inconsistent targeting of monetary policy and exchange rates alone cannot explain why interest rates did not converge to international levels. In many countries an increase in demand for credit was observed possibly due to a wealth illusion created by overall liberalization and improved property rights. Also over-valued currencies led to interest rates being maintained at higher levels, as foreign lenders and domestic residents perceived higher exchange risks and demanded higher returns. Today increasing emphasis is also being placed on the structure and organization of the domestic financial market. Microeconomic factors such as segmented capital markets between lending institutions and across uses of funds, oligopolistic structure of the finance industry permitting oligopolistic price behavior, lack of supervision, interlocking ownership of banks and firms, and distress borrowing adding to credit demand and the overhang of bad loans.

Instability in the system can be further aggravated by the credit risk, which accompanies high interest rates that raises the percentage of non-performing assets in the system. Table 6 summarizes the movements in interest rate differentials in selected countries. Some countries like Malawi in the sample have not liberalized as yet.. In many countries the impediments to interest rate arbitrage in the domestic financial system will have to be removed and further reforms set in motion to remove any remaining hurdles to the smooth functioning of financial markets. Two key points emerge from the table. In South Africa and Kenya the real interest rate differential is high. Second, there is considerable fluctuation in the movement of the real interest rate differential for most economies after liberalization. The point is also made in a recent paper by Honohan (2000). In the next section we discuss some of the impediments in developing countries financial systems to aid understanding of the financial intermediation issue.

V.ii Impediments in Financial Intermediation

The need for controlling short-term flows arises because of the inability of financial markets in developing countries to bear the risk for financial intermediation of financial flows from the short to the long end. However, it is tempting for countries to raise capital at the short end because the cost of capital is lower at the short end and higher at the long end of the yield curve. The experience with financial crisis shows that it is advisable to bear the higher cost of capital at the long end of the yield curve and avoid short-term debt driven crisis at a stage when financial markets are not well developed. There is a growing consensus that the build – up of short-term debt was an important factor behind the East Asian debacle. Furman and Stiglitz (1998) remark on the ability of this variable to predict the crisis of 1997. Almost all the crisis-ridden countries have one thing in common, large ratios of short-term debt, whether public or private to international reserves. Rodrik and Velasco (1999) also analyze the role of short-term debt in generating a crisis in a framework that simultaneously determines the debt maturity and the term structure of interest rates. In his view the term structure of interest rates is determined by the riskiness of different debt maturities.

Table 6: Nominal and Real Interest Differentials and Expected Rates of Depreciation¹

Country	1990	1991	1992	1993	1994	1995	1996	1997	1998
Argentina									
Nominal interest differential	1509.5	55.6	12.9	7.9	3.0	5.8	1.8	1.1	2.0
Real interest differential	1470.7	41.6	6.7	6.5	2.5	8.6	3.6	1.8	5.5
Expected rate of depreciation	48.9	3.7	0.8	0.0	0.1	0.0	0.0	0.0	0.0
Chile									
Nominal interest differential	31.9	16.2	14.4	14.8	10.0	7.6	7.9	6.2	9.3
Real interest differential	24.2	9.1	7.7	7.8	5.1	3.2	3.7	2.0	7.7
Expected rate of depreciation	12.7	3.7	10.3	3.8	-5.9	3.8	1.7	8.9	9.5
Mexico									
Nominal interest differential	19.5	10.5	10.6	11.6	8.2	32.0	19.1	8.8	8.2
Real interest differential	13.1	4.7	7.1	9.3	-14.9	0.6	-6.2	-15.4	-20.6
Expected rate of depreciation	6.8	2.5	0.7	7.7	47.4	15.5	4.0	13.3	4.4
Thailand									
Nominal interest differential	3.9	7.6	5.0	5.2	3.4	5.5	4.7	4.7	5.1
Real interest differential	3.0	6.9	4.8	3.1	0.6	2.6	1.2	-2.7	7.0
Expected rate of depreciation	-0.3	-0.5	-0.3	-0.7	-0.9	1.7	19.2	24.2	-9.3
Indonesia									
Nominal interest differential	9.2	17.2	15.7	11.1	7.5	10.6	11.7	14.2	33.5
Real interest differential	6.7	14.6	11.0	6.4	1.6	5.6	6.8	-50.6	-1.4
Expected rate of depreciation	5.5	3.9	2.7	3.4	3.9	4.0	19.5	70.9	-27.5
Malaysia									
Nominal interest differential	-2.4	1.1	4.1	3.6	-0.1	-0.2	1.5	1.9	2.9
Real interest differential	-2.3	-0.2	3.7	2.7	-2.4	-0.7	1.1	-2.0	2.2
Expected rate of depreciation	1.6	-8.0	1.0	1.9	-4.8	0.5	10.6	28.3	-3.3
Korea									
Nominal interest differential	1.6	3.9	6.1	5.2	3.4	2.7	1.9	4.9	7.7
Real interest differential	-1.6	1.6	4.7	2.0	1.8	0.7	-0.3	-1.6	9.1
Expected rate of depreciation	3.5	6.1	2.7	0.1	-4.2	4.1	15.4	32.1	-17.9
Philippines									
Nominal interest differential	11.2	12.7	10.4	6.2	5.5	2.3	4.1	4.3	6.5
Real interest differential	3.3	9.1	7.6	1.5	0.8	-3.8	0.0	-5.2	0.4
Expected rate of depreciation	11.5	-7.7	5.9	-2.7	-2.7	1.9	11.0	27.9	-4.6
China									
Nominal interest differential	0.3	1.5	3.7	7.6	5.9	4.9	1.9	-0.2	-1.8
Real interest differential	0.9	0.6	0.0	-4.5	-15.6	-9.1	-4.0	-1.4	1.4
Expected rate of depreciation	10.1	3.5	4.3	33.1	-3.2	-0.4	-0.3	-0.1	0.0
India									
Nominal interest differential	6.5	9.4	12.7	10.3	7.6	6.6	7.7	5.4	5.2
Real interest differential	3.3	6.3	12.8	6.9	3.1	3.3	5.0	-5.8	n.a.
Expected rate of depreciation	23.0	12.3	15.0	2.8	3.2	8.5	2.4	12.0	4.2
Ghana									
Nominal interest differential	n.a.	15.2	12.4	20.2	18.1	22.6	28.9	29.9	26.5
Real interest differential	n.a.	14.3	5.1	10.2	-16.5	-21.0	-9.6	4.1	n.a.
Expected rate of depreciation	11.3	15.8	32.7	32.2	20.3	26.7	20.1	11.4	12.6

Kenya

Nominal interest differential	5.3	n.a.	n.a.	n.a.	n.a.	7.5	12.0	10.9	12.8
Real interest differential	2.2	n.a.	n.a.	n.a.	n.a.	1.6	1.3	5.4	11.8
Expected rate of depreciation	16.7	14.6	44.5	-3.5	-9.0	10.0	2.8	2.7	14.2

Uganda

Nominal interest differential	22.9	25.1	31.9	12.8	4.9	1.5	5.0	6.0	5.8
Real interest differential	15.2	0.6	29.8	7.2	-0.3	-2.8	0.0	7.6	0.8
Expected rate of depreciation	41.6	35.3	5.1	-22.0	-1.1	7.4	3.4	12.7	14.7

Tanzania

Nominal interest differential	n.a.	n.a.	n.a.	n.a.	n.a.	18.5	8.0	2.0	2.2
Real interest differential	n.a.	n.a.	n.a.	n.a.	n.a.	0.5	-9.1	-14.4	-8.0
Expected rate of depreciation	11.0	26.4	26.5	20.5	11.3	0.9	5.3	7.9	10.8

Malawi

Nominal interest differential	3.8	6.4	12.6	18.3	19.9	31.2	20.7	4.3	13.5
Real interest differential	4.4	2.8	7.8	6.8	-22.8	-3.5	10.6	-38.7	-71.7
Expected rate of depreciation	2.7	22.2	18.2	49.6	42.8	0.2	6.9	47.1	29.5

South Africa

Nominal interest differential	10.5	11.2	9.9	8.1	6.0	7.4	9.3	9.5	10.9
Real interest differential	5.2	4.5	5.2	3.0	0.9	3.0	2.5	3.1	6.8
Expected rate of depreciation	6.3	3.2	12.7	8.0	2.1	15.6	6.7	16.6	9.5

Notes:

1. Nominal interest differential = Deposit rate - LIBOR

Real interest differential is arrived at by deflating nominal interest rates by the inflation rate

Expected rate of depreciation based on adaptive expectations using nominal exchange rate (e):

$$(e_{t+1} - e_t)/e_{t+1}$$

Source: IMF, *International Finance Statistics* (cd-rom)

There is justification for controlling short-term and other flows in the transition phase, as lengthening of maturities can reduce vulnerability to a crisis. The experience of industrialized countries and Chile, Colombia and Malaysia shows that controls of different kinds alter the maturity composition of loans from abroad, without reducing the overall volume of capital flows. But in the long run as well developed financial markets gain sophistication, short-term debt will play a successful role in financial intermediation, increasing both the demand and supply for short-term debt.¹⁵

V.iii Segmented Markets

We now discuss some of the problems with domestic financial intermediation, which needs to be resolved before the economy can intermediate global capital. Financial reforms in many developing countries have encouraged the emergence of market determined interest rates and the move from direct to indirect instruments of monetary policy. The freeing of interest rates has however not resulted in the emergence of an interest rate structure that reflects the differences in liquidity, maturity and risk. The prevailing interest rate structure in many countries is indicative of a segmented financial system. Liquidity shortages/surpluses in the short end of the market do not get automatically adjusted through financial intermediation in other segments of the financial market.

In any financial system there are important linkages between the money market, the capital market, government securities market, the forex and the inter-company deposit market. Volatility in one segment of the market gets transmitted to other segments of the market. Financial intermediation between these segments should act as shock absorbers and contain volatility. The impediments to the working of a seamless financial market can range from purely psychological factors to those that require institutional changes in the banking system, other segments of the financial market and policy changes by Central Banks in these countries. The problems arising for the banking system due to the impediments in the way of financial intermediation, to facilitate efficiency in the working of financial markets in the concerned countries.

V.iv Asset Liability Management and Non-Performing Assets

In some countries, the banks role as intermediary in allocating financial resources in the system gets seriously impaired by the health of its own balance sheet. Maturity mis-matches and non-performing assets are common problems in many banks. Legal reforms for the recovery of bad loans and procedures for their recovery need to be introduced. The Basle Committee recommendations address many of these issues. All countries need to implement these recommendations and upgrade the financial sector to international standards. For a proper asset liability management, interest risk and exchange risk management skills are imperative. The asset liability management of banks is in its infancy. For better asset liability management it is imperative to have an integrated treasury for the government securities, forex and money desk as well as the treasury department of foreign branches abroad. The banks need to consolidate information on its own operation in different segments to enable it

¹⁵ Rodrik (1999) finds as economies become richer and financial markets deeper, the external debt profile shifts to short term liabilities. There is consistent and robust relationship between per-capita income levels and M2/GDP ratios and short-term maturities. He also finds no correlation between short-term debt and trade credit. The relationship of short-term borrowing to corruption is positive in his findings, but not statistically significant. He also finds that the overall debt burden is positively correlated with short term borrowing in the time series analysis.

to better manage their maturity and risk structures. A second much needed step in many developing countries banking systems is to move away from average pricing to marginal pricing in their operations. Training of personnel in asset liability management is imperative.

Apart from skills, the financial market has to mature to provide the opportunities for risk management. The market needs arbitrage opportunities and assets with different risk return profiles. For the debt market to develop, a market determined yield curve is essential since this device facilitates the pricing of floating rate debt instruments. The absence of a term money market in many countries hinders the development of a money market yield curve. In order to enable the banks in carrying out asset liability management, the evolution of an interest rate structure that reflects maturity structures from the short to the long end needs to be taken. Of immediate importance is the development of a short-term reference rate.

V.v Money Market

Of all segments of the money market, the inter-bank market is of crucial importance as it continuously reflects the short-term liquidity conditions of the banking system and serves the purpose of equilibrating short-term liquidity position of banks. It is the most sensitive barometer of the conditions prevailing in financial markets for it not only integrates the flow of funds between money market instruments but also provides operational linkages between money, credit, capital and forex markets. The inter-bank money market should provide for market participants' transaction opportunities at more stable rates of interest. The prevailing interest rate in a mature inter-bank money market should not be widely divergent from those on the other money market instruments. An efficient inter-bank market is the nerve centre of the financial market as it provides direct linkages with the interest rates prevailing on other money market instruments and indirect linkages with the credit, capital, forex and the government securities market. Corrective action by policy makers should therefore be taken for this segment of the financial market without delay.

The interest rate in this segment should be market determined but the central banks should be in a position to fine tune liquidity and interest rates at the short end. The inter-bank segment determines the short-term interest rates around which the term structure of interest rates should develop. In the process of moving from direct instruments of monetary policy to indirect instruments of monetary policy, the Central Bank should be increasingly in a position to fine tune interest rates and liquidity at the short-end.

V.vi Linkages of the Money Market with Other Segments of the Financial Sector

Governments in many developing countries are in the process of building up the capital and government securities market market. These markets are tied to the money market in liquidity pool and the efficiency in their operations is dependent upon a well functioning money market. Therefore an important pre-condition for capital account convertibility and efficient financial intermediation is the development of the money market. Changes in the money market will spill over to the capital market as well. If the money market is in an easy condition, i.e., if the banks are highly liquid, they tend to change their portfolio structure to the detriment of their liquid assets and to the advantage of their longer term and higher yielding assets by purchasing more longer term securities (an increase in trading portfolios). When liquidity is scarce and the money market is correspondingly tight, the banks show restraint in new bond buying. Conditions in the money market also affect transaction of non-banks. Expectations of increases in interest rates (fall in prices of bonds and hence price

losses), private investors also cut down their new purchases. Funds, which would have gone to investments at the long end, are placed at the short end such as time deposits of banks. Monetary policy can succeed in influencing the capital market via the money market as money market rates get transmitted to time deposits and the long term interest rate.

The development of the financial sector therefore needs to target the integration of different segments of the financial market with a healthy money market as the nerve center. Banking reforms are needed to address issues of asset liability and risk management and efficiency in overall operations.

V.vii The Risk of Capital Flight¹⁶

Developing countries faced with the decision to liberalize capital outflows are often in a dilemma for fear that liberalization will lead to capital flight. The loss of domestic savings and the ensuing fall in investment and income is a risk, which no policy maker can afford, particularly as liberalization of outflows also involves pension funds moving out of the country. There are two sides to this argument. Those in favor of a big-bang approach or a faster rate of liberalization argue that an open capital account provide opportunities for risk diversification and financial intermediation leading to an increase in welfare. They also opine that if economic fundamentals are in order and the country's policy is credible, capital flight will not take place. It is also often argued that capital controls are ineffective in stemming outflows of capital, and therefore their removal will not increase the export of capital.

It is certainly true that credibility of policy announcements and good fundamentals are important in keeping domestic capital at home. Capital controls, are however, not totally ineffective. For instance, pension funds in developing country do not move abroad because of the presence of capital controls. Capital controls also give governments and central banks time to react to initial capital flight.

It is necessary at this stage to enumerate the various factors, which can possibly motivate capital flight. In order to do so a distinction is made between a real resource transfer or one-way capital flight; and capital flight as part of a two-way flow. One-way capital flight is motivated by one or a combination of the following set of factors: Taxes (deviations from world levels), inflation, fears of devaluation, threat of default on government obligations due to high or unsustainable fiscal deficits, taxes on financial intermediation, and potential confiscation due to political instability. Two-way capital flows which were in evidence in the late 1970s and early 1980's in many Latin American countries imply foreign borrowing (both public and private) flowing in and domestic capital moving out. Capital flight as part of a two-way flow can be motivated by the differences in taxes and their incidence between residents and non-residents, differences in the nature and incidence of country risk, and asymmetries arising due to differences in the application of guarantees, interest rate ceilings for residents, differences in the availability of information and differences in the non-residents access to foreign exchange denominated claims. The impact of a real resource transfer does lead to a decline in saving, investment and growth. The consequence of capital flight being part of a two-way flow is an erosion of the domestic tax base. This variety of capital flight turns harmful when flight of capital by domestic residents signals to foreign

¹⁶ Capital flight is here referred to the export of domestic capital in response to economic and political uncertainty. The pulling out of capital by foreign investors will be referred to as such. Throughout the paper the term capital flight refers to the flight of domestic capital.

investors that conditions are not so stable in the country resulting in the pulling out of capital by the foreign investor.¹⁷

The factors listed above suggest that before liberalizing capital outflows, care needs to be taken that fiscal control, a competitive and stable exchange rate, and control of inflation are well established. Recent experience also points to the necessity of a reasonably sound and liberalized financial system. The need for fiscal control is borne out by the experience of some countries in Latin America. External borrowing supported large fiscal deficits to an extent that exchange rate policy was totally out of tune with the fiscal deficit. Borrowing at unsustainable levels to sustain the exchange rate financed capital flight. Another feature in many developing countries leading to capital flight is the wedge between rates of return available to domestic and foreign investors caused by factors such as guarantees available to foreign investors or the permission to hold dollar denominated deposits and thus protection against inflation tax or difference in tax rates applicable to foreign investors and domestic investors. Factors causing asymmetric risk and asymmetric information leading to capital flight need to be taken care of.

The liberalization of outflows of capital requires certain **pre-conditions** in the absence of which a country is threatened with a financial crisis. A stable macroeconomic environment and credibility of policy announcements accompanied by the strengthening of the financial sector with adequate regulatory and supervisory requirements is the bare minimum, which must be in place.

VI Capital Controls: Prudence vs. Control

As the definition indicates (Box 1) capital account convertibility is compatible with prudential restrictions. Temporary measures to insulate an economy from macroeconomic disturbances caused by volatile capital flows are in accord with an open capital account.

Developing countries by large use a variety of controls to restrict and regulate the movement of capital. It is meaningful to segregate controls by the objective to which they can be assigned. Controls can be targeted to deal with balance of payments pressures and macroeconomic disturbances generated by volatile capital flows or can be designed to prevent flows from disrupting stabilization and structural reforms. Controls can be put into place to ensure that domestic saving is used to finance domestic investment and to limit foreign ownership of domestic factors of production and may also targeted to enhance the authorities ability to tax domestic financial activities and wealth.¹⁸

The capital account liberalization experience primarily aims at liberalizing controls that hinder the international diversification of domestic savings in a portfolio of home assets and foreign assets and allows agents to reap the advantages of diversification of assets in the financial and real sector. (See Box 2 for the advantages of capital account liberalization). It

¹⁷ Incidentally, during the 1994 December crisis in Mexico, domestic investors moved out of tesobonos first. It is their action that instigated foreign investors to move out of tesobonos too. The inability to roll over the tesobono stock of debt triggered the crisis.

¹⁸ Johnston and Tamirisa (1998) examine the structure and determinants of capital controls based on a cross-sectional study of developing and transitional countries. They categorize capital controls by analytical purposes as being related to the balance of payments, macroeconomic management, market and institutional evolution, prudential and other factors. They find no robust relationship of capital controls with the balance of payments.

aims at allowing the country to reap the advantages of the inflow of foreign savings, information and technology. The benefits of capital mobility come with certain risks. These risks can be categorized into credit risk, interest and exchange rate risk and liquidity risk.¹⁹ There is the additional risk of herding and contagion in international financial markets. The ordering and degree of liberalization is a fine balance between removing the impediments in the way of efficient international financial intermediation as part of the overall reform process and introducing and maintaining prudential standards and the supervisory to contain the risks of international financial intermediation. This is especially relevant as the growing experience with financial market integration indicates that financial markets are imperfect and subject to information asymmetries.²⁰ Theoretical literature does focus on capital market restrictions as welfare enhancing in an imperfect financial world.²¹ Theory as well as practical experience points to the legitimacy of using capital controls of a prudential nature and stronger disclosure and prudential standards.

In the transitional period capital controls may play a role in insulating the economy from volatile capital flows and provide a country time to strengthen initial conditions and allow the authorities to use discretionary policies in the pursuit of this objective. Even in the post liberalization period transitional controls cannot be ruled out. For example, the OECD Code of Liberalization for Capital movements provide for transitional arrangements for retaining controls if a members economic and financial situation does not justify liberalization and also in order to contain adverse developments in the balance of payments.²² Certain advanced economies have retained some selective control of capital movements in accordance with their domestic financial sector development and array of financial instruments, as well as sectoral and strategic considerations. Caution needs to be exercised with the use of controls. Although restrictions for managing macroeconomic disturbances are legitimate, the evidence based on country experiences in Ariyoshi, A. *et al.* (1999), and the survey of crises in Kaminsky, Lizondo, and Reinhart (1998) indicate that capital controls cannot be a substitute for sound macroeconomic policies. Moreover, a crisis can take place both with a closed or open capital account. Closing the economy does not necessarily mean, that a country can escape disaster. Even stringent controls that were strictly administered did not always protect a country from a balance of payments or financial crisis.

The international experience with capital controls highlights that in the short run capital controls may under some conditions provide a brief respite to deal with disturbances or working out a transition phase but over the long run capital controls become ineffective, costly and even distortive. The existence of international arbitrage opportunities has rendered capital controls ineffective. Capital flight has been a feature of almost the entire developing world. Apart from the loss of capital through capital flight the existence of capital controls encourage financial market repression, and inefficiencies in the financial intermediation process. Black markets in foreign exchange, lack of ability to manage interest rate and exchange risk are only some of the problems. Essential institutional and structural reforms are postponed so that the costs of capital controls become prohibitive. They may even provide greater opportunities for corruption.

¹⁹ See Box 2 for a summary explanation of risks in Cross-Border Transactions of Banks, in Ariyoshi *et al.* (1999), IMF, Advance copy.

²⁰ See Eichengreen *et al.* (1999), for a discussion on asymmetries.

²¹ See Dooley, M. (1996). "A Survey of Controls over International Capital Transactions", *IMF Staff Papers*, vol. 43, no. 4, December.

²² See Quirk and Evans (1995) for the industrial experience with capital account liberalization. These authors discuss the effectiveness of controls designed to contain disturbances in the industrialized countries. They conclude that the effectiveness of actions following the 1992 ERM crisis seems likely to have been short-lived.

VI.i Comprehending Capital Controls

The ordering of liberalization is a complex task because apart from sequencing other reforms and pre-conditions with the opening of the capital account, there is an acute need to first understand the nature of capital controls. The complexity of prevalent control regimes in developing countries makes sequencing of liberalization of capital controls a formidable task. Their various types of control and transactions can be classified into many categories by instrument and transactor. The operational side involves looking at the type of control and type of instrument and basic decisions regarding the freedom to be given to which sector/transactor. It does not imply opening up the floodgates once and for all. Johnston (1998) puts it aptly '*Capital account liberalization is not an all or nothing affair...*'

Broadly controls can broadly be grouped into two categories - direct or administrative controls and indirect or market based controls. The former range from outright prohibition or discretionary approval procedures for cross-border transactions. The latter are price based instruments designed to effect price and sometimes both price and volume (see Box III for a further discussion of the classification of capital controls). Administrative controls usually imply an outright prohibition on cross-border transactions. In many cases a discretionary approval procedure may be in place. Market based controls are designed to regulate the flow of liquidity through the price mechanism by making them more costly. The desired effect can be attempted through variety of measures. For instance, through implicit or explicit taxation, reserve requirements, interest rate ceilings, dual or multiple exchange rate systems or discrimination between transactions and investors.

The liberalization of the capital account first needs an understanding of the identification and types of transactions that are possibly subject to controls. (See Table 6)

Table 7: Types of Capital Transactions Possibly Subject to Controls

INFLOWS	OUTFLOWS
Capital and Money Markets	
Purchase locally by nonresidents	<i>Shares or other securities of a participating nature</i> Sale or issue abroad by nonresidents
Sale or issue abroad by residents	Purchase abroad by residents
Purchase locally by nonresidents	<i>Bonds or other debt securities</i> Sale or issue abroad by non residents
Sale or issue abroad by residents	Purchase abroad by residents
Purchase locally by nonresidents	<i>Money Market Instruments</i> Sale or issue abroad by nonresidents
Sale or issue abroad by residents	Purchase abroad by residents
Purchase locally by nonresidents	<i>Collective investment securities</i> Sale or issue by nonresidents
Sale or issue abroad by residents	Purchase abroad by residents
Derivatives and other instruments	
Purchase locally by nonresidents	Sale or issue by nonresidents
Sale or issue abroad by residents	Purchase abroad by residents
Credit operations	
To residents from non residents	<i>Commercial credits</i> By residents to nonresidents
To residents from non residents	<i>Financial credits</i> By residents to nonresidents
To residents from non residents	<i>Guarantees, sureties, and financial backup facilities</i> By residents to nonresidents
Direct Investment	
Inward direct investment	Outward direct investment Controls on liquidation of direct investment
Real estate transactions	
Purchase locally by nonresidents	Purchase abroad by residents Sale locally by nonresidents
Provisions specific to commercial banks	
Nonresident deposits	
Borrowing abroad	
Personal capital movements deposits, loans, gifts, endowments, inheritances, and legacies	
To residents from non residents	By residents to nonresidents
Transfer into the country by immigrants	<i>Settlements of debts abroad by emigrants</i>
Provisions specific to institutional investors	Limits (max) on securities issued by Nonresidents and on portfolio invested abroad Limits (max) on portfolio invested locally

Source: Johnson R, B (1998) Sequencing Capital Account Liberalizations and Financial Sector Reform. IMF Paper on Policy Analysis and Assessment. IMF: New York.

IMF teams have been helping developing economies to develop a consistent classification and identification structure. This is important not only for determining the order of liberalization but also for monitoring capital flows. There are many financial instruments and underlying transactions in opening up the capital account giving rise to many possibilities for the order of liberalization. While many developing countries concentrated on liberalizing inflows/outflows irrespective of resident or non-resident transactions, India liberalized the capital account for non-residents and maintained stringent controls on capital account transactions by residents. Then within each liberalized category there is scope for prudence. For example, the limit to which a bank can borrow from abroad can have a prudential limit. The limits in each country vary from a scale of zero to one. Both aspects are important for the discussion on the order of liberalization of various transactions and instruments based on domestic financial sector reforms, economic fundamentals, international environment and overall economic objectives. The Reserve Bank of India made a step forward in this area by setting out the ordering of liberalization in its *Report of the Committee on Capital Account Convertibility (1997)* based on certain pre-conditions. The Report emphasizes that CAC is a process accompanied by other reforms. Although the report set out a three-year frame for liberalization, the emphasis is on the pre-condition, their status determining the actual speed of opening up. The Report is a useful example to see that even in the proposed liberalized world, the limits on various transactions in the transition phase and maintenance of certain controls and limits as a prudential concern in the long run. Chile and China like India have on occasion used capital control measures to pursue prudential objectives. Ariyoshi, A. *et al.* (1999). Rightly point out that the effective use of such measures rests on the existence of adequate administrative machinery. Recent literature emphasizes the need to understand the nature of capital controls. For example, see Johnston (1998) and Ariyoshi, A. *et al.* (1999). There is understandably no foolproof method of insulating a county against a crisis, but it crucial to talk about the degree of capital account liberalization at various stages of the overall reform process.

Box 3: Types of Capital Controls

Capital controls have in general taken two main forms: (a) **direct or administrative** control and (b) **indirect or market-based** controls

(a) Direct or administrative capital controls **restrict capital transactions and/or the associated payments and transfers of funds through outright prohibitions, explicit quantitative limits, or an approval procedure (which may be rule-based or discretionary). Administrative controls typically seek to directly affect the volume of the relevant cross-border financial transactions. A common characteristic of such controls is that they impose administrative obligations on the banking system to control flows.**

(b) **Indirect or market-based controls** discourage capital movements and the associated transactions by making them more costly to undertake. Such controls may take various forms, including: dual or multiple exchange rate systems; explicit or implicit taxation of cross-border financial flows (e.g. a Tobin tax); and other predominantly price-based measures. Depending on their specific type, market-based controls may affect either the price or both the price and volume of a given transaction.

- In *dual (two-tier) or multiple exchange rate systems*, different exchange rates apply to different types of transactions. Two-tier foreign exchange markets have typically been established in situations in which the authorities have regarded high short-term interest rates as imposing an unacceptable burden on domestic residents, and have attempted to split the market for domestic currency by either requesting or instructing domestic financial institutions not to lend to those borrowers engaged in speculative activity. Foreign exchange transactions associated with trade flows, FDI, and usually equity investment are excluded from the restrictions. In essence, the two tier-market attempts to raise the cost to speculators of the domestic credit needed to establish a net short domestic currency position, while allowing nonspeculative domestic credit demand to be satisfied at normal market rates. Two-tier systems can also accommodate excessive inflows and thus prevent an overshooting exchange rate for current account transactions. Such systems attempt to influence both the quantity and the price of capital transactions. Like administrative controls, they need to be enforced by compliance rules and thus imply administration of foreign exchange transactions of residents and domestic currency transactions of nonresidents to separate current and capital transactions.
- *Explicit taxation of cross-border flows* involves imposition of taxes or levies on external financial transactions, thus limiting their attractiveness, or on income resulting from the holding by residents of foreign financial assets or the holding by nonresidents of domestic financial assets, thereby discouraging such investments by reducing their rate of return or raising their cost. Tax rates can be differentiated to discourage certain transaction types or maturities. Such taxation could be considered a restriction on cross-border activities if it discriminates between domestic and external assets or between nonresidents and residents.
- *Indirect taxation of cross-border flows, in the form of non-interest bearing compulsory reserve/deposit requirements* (URR hereafter) has been one of the most frequently used market-based controls. Under such schemes, banks and nonbanks dealing on their own account are required to deposit at zero interest with the central bank an amount of domestic or foreign currency equivalent to a proportion of the inflows or net positions in foreign currency. URRs may seek to limit capital outflows by making them more sensitive to domestic rates. For example, when there is downward pressure on the domestic currency, a 100 percent URR imposed on banks would double the interest income forgone by switching from domestic to foreign currency. URRs may also be used to limit capital inflows by reducing their effective return; and they may be differentiated to discourage particular types of transactions.
- *Other indirect regulatory controls* have the characteristics of both price- and quantity-based measures and involve discrimination between different types of transactions or investors. Though they may influence the volume and nature of capital flows, domestic monetary control considerations or prudential concerns may at times motivate such regulations. Such controls include: provisions for the net external position of commercial banks, *asymmetric open position limits* that discriminate between long and short currency positions or between residents and nonresidents; and certain credit rating requirements to borrow abroad. While not a regulatory control in the strict sense, reporting requirements for specific transactions have also been used to monitor and control capital movements (e.g., derivative transactions, non-trade related transactions with nonresidents).

Source: Ariyoshi *et al.* (1999) Country Experiences with the Use and Liberalisation of Capital Controls. IMF, advance copy.

VI.ii When and What Type of Controls are Effective? Lessons from Country Experience

There is a definite limit to the effectiveness of capital controls. In an extensive survey of the literature, Dooley (1996) suggests that capital controls in the *industrialized* countries have been 'effective' in the narrow sense of influencing yield differentials but that there is little evidence that controls have helped governments achieve policy objectives. The experience from developing countries is not as thoroughly investigated in the literature, but available studies and the survey of country experiences presented in this paper suggest a number of lessons. In this discussion, we distinguish between controls on inflows and outflows of capital and direct and indirect instruments of control. Direct controls, such as prohibitions on certain types of transactions, are non-market based and are relatively less reliant on administrative enforcement. Indirect controls, such as reserve requirements and exit levies, are market-based and seek to alter the decisions of private agents by shifting relative prices.

The first lesson to emerge from an examination of country experiences is that the effectiveness of controls is often dependent on the administrative capacity of governments and the presence or absence of complementary policies directed at the target of the controls. Chile, Colombia and Malaysia all implemented relatively successful control regimes and in all three countries the administrative capacity to implement controls efficiently and flexibly was quite high in comparison with many other developing countries. Colombia and Chile both established strong independent central banks in the late 1980s and early 1990s, which were largely shielded from political pressures and corruption. In Chile, in particular, there is a tradition of respect for the law and bureaucratic professionalism.

However, administrative capacity is not, in itself, sufficient to ensure the success of a capital control regime. Controls must be embedded within a broader policy framework that provides support to achieve the control regime's objectives. Chile's unremunerated reserve requirement (URR) was supplemented by a flexible policy that allowed a degree of real exchange rate appreciation and sterilized inflows in conjunction with a tighter fiscal policy. Colombia, which also implemented a URR, had a somewhat less favourable policy environment since the government pursued a strongly expansionary fiscal policy after 1991, which made it harder for the control regime to achieve its objectives. In Malaysia, the 1994 control regime was largely successful in containing short-term inflows and monetary expansion and instilling stability in the foreign exchanges. However, the effect of the controls themselves is not easy to discern, since the central bank was also simultaneously taking action to lower the interest rate differential and ending sterilization operations, which may also be expected to lower short-term flows. Similarly, Thailand's mix of administrative and price-based controls to limit inflows in 1995-1996 achieved their objectives of reducing net capital inflows and lengthening maturities. They were complemented however by policies such as implementing prudential reductions of loan-deposit ratios in vulnerable banks. It must be noted, however, that the control regime was also probably aided by declining investor confidence in the Thai economy itself that acted to reduce inflows. The Brazilian experience, discussed more fully below, provides perhaps the best example of implementing a control regime in a non-supportive policy framework. The evidence therefore suggests that controls are best viewed as part of a wider and complementary policy stance that is also largely directed at the same target as the controls.

Second, and closely related to the first point, country experiences suggest that controls are no substitute for effective macroeconomic management. The experience of Brazil illustrates the

ineffectiveness of controls in an environment of pervasive macroeconomic imbalances. A complex mixture of direct and indirect controls was largely ineffective in stemming inflows, shifting their composition towards longer-term flows and providing a greater degree of monetary independence. The inability of the state to reign in large fiscal deficits fuelled expectations of continued inflation and resulted in widening interest rate differentials. These interest differentials combined with a stable exchange rate to induce large inflows of capital. The imposition of direct and indirect capital controls in mid-1993 and their intensification under the *Real* plan in 1994 had little effect on the rising level of inflows. In the 1988-1991 period, net private monthly capital flows averaged \$39 million, while in the 1992-1995 period they rose to \$970 million (Ariyoshi *et al.*, p.3). Set against these large structural imbalances in the macroeconomy, controls were hopelessly overwhelmed.²³ In Thailand, controls were effective in limiting inflows for a time, but they were unable to protect Thailand from a devastating reversal of flows in 1997. The build-up of short-term, unhedged debt that was encouraged not only by the Bangkok International Banking Facility (BIBF) that greatly eased access to foreign funds, but also by a macroeconomic policy that maintained a pegged exchange rate regime and heavily sterilized inflows (Lopez-Mejia, p.49).

Third, country experiences suggest that in the short-run capital controls may under some conditions provide a respite for policymakers to either adjust macroeconomic policy or complete reforms. The experiences of Chile and Colombia with unremunerated reserve requirements (URR), Malaysia's with direct controls on inflows (1994) and outflows (1998-) and Thailand's use of direct and indirect controls in 1995-1996, suggest that controls can be effective in limiting external liabilities, shifting their composition and providing a degree of monetary independence in the short- to, possibly, medium-term. The Chilean and Colombian authorities explicitly used controls to enable them to simultaneously pursue internal and external balance in the context of large capital inflows. This would imply a 'wedge' between international and domestic interest rates that allows scope for an independent monetary policy. Sebastian Edwards (1988) argued that if capital controls in Chile were effective, then we should have observed the dollar and peso interest rate differentials (adjusted for expected devaluation) widening after their imposition. While he found that in the long-run controls have little impact on interest rate differentials, in the short-run, after the implementation of controls, he found that the differentials become more stable. The differential between international and domestic real interest rates increased after the URR was introduced, from 3.1 percent in the 1985-1991 period to 5.2 percent during 1992-1997, with only part of this increase attributable to a fall in international rates. The balance of evidence from studies on the URR in Chile suggests that it did provide manoeuvring room for the monetary authorities (see Annex 1 for a fuller discussion of the Chilean case).²⁴ Similarly, in Colombia, Villar and Rincon (2000) conclude that the URR allowed the authorities to 'increase the domestic real interest rate and to discourage aggregate demand in the process of stabilisation without creating additional pressures towards a real appreciation of the Colombian peso, which would have aggravated the external imbalances (Villar and Rincon, p.54).'

Malaysia (1994) and Thailand (1995-1996) implemented capital control regimes to limit inflows and regain a degree of control over monetary aggregates. Malaysia initially sought to sterilize the inflows, but the persistence (encouraged by the sterilization policy) of large

²³ It should be noted that while the Brazilian authorities possessed a strong administrative capacity to implement controls, they were constrained and often frustrated by sophisticated financial markets that could find ways around the control regime.

²⁴ However, it must be noted that this benefit came at the cost of raising the cost of capital to Chilean firms, particularly small- and medium-sized firms.

interest rate differentials, continued expectations of an appreciation and mounting quasi-fiscal costs, led authorities to first use direct monetary instruments (such as successive increases in statutory reserve requirements) and finally to the imposition of capital controls. Perhaps the most important measure was the prohibition on domestic residents selling short-term money-market instruments to foreigners, which appeared to lead to a sharp fall in the volume and an altered composition of capital inflows. Inflows as a percentage of GDP declined from 17.2 percent of GDP in 1993 to 2.1 percent in 1994 while short-term flows declined from 8.6 percent of GDP to -4.6 percent of GDP (Reinhart and Smith, pp.10-11). As noted above, the 1994 controls were broadly successful in regaining some traction on the monetary aggregates and braking their growth. While complementary policies were also important in achieving this result, the design of the control regime was also important. First, controls were announced to be temporary and would therefore not impose the costs of an extended control regime. Secondly, as noted above, controls were embedded in a broader policy that sought to reduce interest rate differentials, curtail sterilization operations and impose prudential requirements that reduced the excess liquidity in the banking system by requiring banks to include in their liability base all inflows of funds from abroad, thus making them subject to reserve and liquid asset requirements (Ariyoshi *et al.*, pp.10-11). Thirdly, the controls were focused on the money market, a sector that can be regulated and carefully monitored if participants fall under the purview of regulatory authorities.

Thailand (1995-1996) also maintained a mixture of direct and market-based controls that sought to restrain inflows, alter their maturity structure and provide some room in which policy could operate. Among the elements of the control regime were direct controls such as an asymmetric open position limit for short and long positions, and indirect controls such as a seven percent reserve requirement on non-resident baht accounts with less than one-year maturity and on the short-term foreign borrowing of finance companies. Continuing inflows led to intensification of these measures in mid-1996, with the seven percent reserve requirement extended to short-term non-resident baht borrowing and to short-term offshore borrowing by commercial and BIBF banks. Ariyoshi *et al.* (forthcoming) concludes that the controls were effective in reducing net capital inflows and the share of short-term inflows in total inflows. However, controls did not prevent Thailand from experiencing a devastating reversal of inflows in 1997. Furthermore, they did not prevent foreign funds from flooding non-tradable sectors such as property and construction. There is also a difficulty in determining the causal factors behind the decline in inflows: investor confidence was already beginning to wane when the controls were implemented. While the controls may have provided some breathing space for the Thai authorities, it is likely that the controls were too little too late, since the accumulation of short-term debt had already been significant. Furthermore, the poor quality of financial regulation and enforcement had already begun to magnify Thailand's vulnerability to sudden reversal.

In terms of controls on capital outflows, the experience of Malaysia from 1998 to the present is perhaps the most notable. In the wake of the Asian crisis in 1997, Malaysia at first imposed limitations on ringgit non-trade related swap transactions with non-residents. However, outflows continued through unrestricted channels while interest rates continued to rise. In September 1998, control measures were introduced to eliminate the offshore ringgit market, provide a degree of monetary independence and insulate the economy from further adverse developments in international financial markets. The measures included the elimination of channels for taking ringgit abroad and requirements for the repatriation of ringgit held abroad. Repatriation of portfolio capital held by non-residents was prohibited for a 12-month period and various controls on transfers by residents were also implemented.

Measures to close loopholes were also introduced, including amending the Company Act to limit dividend payments. In February 1999, the controversial one-year restriction on repatriation of portfolio capital was replaced by a more market-based exit levy applied to the principal and profits of non-residents' portfolio investments that penalized the early withdrawal of funds.

Assessing the impact of the Malaysian outflow control regime since 1998 is still very much an issue requiring further research. The controls appear to have been effective in eliminating the offshore ringgit market, particularly by freezing external ringgit accounts. Ariyoshi *et al.* (forthcoming) argue that the absence of speculative pressure on the ringgit following the imposition of controls, in the context of a pegged exchange rate and significantly relaxed monetary and fiscal policies, provides evidence of the effectiveness of controls. It is therefore likely that the controls provided a breathing space in which the Malaysian authorities could adjust macroeconomic policy and further financial sector reform. The effectiveness of the controls was also greatly aided by the general return of confidence in the region. While Malaysia has rebounded sharply, so have other countries, such as Thailand and Korea, that did not implement controls.

Fourth, country experience suggests that controls on capital outflows are generally ineffective. Theoretical and empirical evidence documents the porosity of the capital account.²⁵ For example, Johnston and Ryan (1994) study the impact of capital controls on the private capital account of countries' balance of payments by examining industrial and developing country data for the period 1985-1992. They conclude that capital controls operated by developing countries have not been very effective in insulating these economies from balance of payments crises. Industrial country controls had some effect in inhibiting direct investment and portfolio outflows, but not in controlling other private capital movements. In a finding that is consistent with other studies, they conclude that controls have a limited ability to insulate national monetary policies. They find that developing countries with capital controls experience capital flight and industrial countries have observed outflow of capital flows after liberalization.

Empirical estimates of unrecorded capital flows demonstrate their massive scale and extent across developing countries, many of them with capital control regimes on either inflows or outflows. Figure 3 shows the results of these empirical estimates aggregated by region (Annex 3 presents the country-level results).²⁶ The estimates are based on the double entry accounting system in the balance of payments by matching up sources and uses of finance. While the estimates are often referred to as capital flight, they capture other elements besides flight flows and also reflect the quality of the data. Despite the weaknesses that afflict these estimates, they are indicative of the scale of unrecorded capital flows in developing countries. Thus, they stress the need to both improve capital flow monitoring and surveillance and remove restrictions on some classes of outflows so that the authorities have a better idea of the scale of capital flows which impinge on their ability to conduct monetary, fiscal and exchange rate policies.

²⁵ See the excellent survey article by Dooley (1996).

²⁶ Large-scale capital flight across countries is one explanation for Rodrik (1998) finding that capital controls do not hinder growth. This finding has been frequently used cited by the World Bank and Joseph Stiglitz in his papers. The lesson here is different: because capital controls are ineffective, capital controls did not hinder growth in the long run.

Fifth, given an adequate institutional capacity, the Indian experience suggests that outflow controls on some classes of financial institutions, such as banks, pension funds and authorized dealers, are generally effective. Both banks and pension funds are usually both highly regulated already and this fact coupled with their finite number diminishes the costs of extending monitoring to their external transactions. These institutions and authorized foreign exchange dealers engage in business with the express permission of the Central Bank, and this power to withhold licenses is in most circumstances a powerful tool in disciplining their behaviour. It must be reiterated, however, that the Central Bank must develop the institutional capacity to monitor and enforce such controls.

A further issue that must be briefly addressed is the Tobin tax.²⁷ Of the countries discussed in this paper only Colombia, very briefly, implemented a Tobin tax on capital inflows.²⁸ A Tobin tax on foreign exchange transactions was intended to discourage short-term, speculative movements of capital. In order to be effective in preventing large inflows or outflows (such as during a serious financial crisis), however, a Tobin tax is likely to be completely ineffective unless it were greatly increased in size. It may have some effect, in conjunction with other steps, as a short-term measure to help provide a breathing space for the authorities. If the tax were implemented in the long-term, it would soon be priced into a higher cost of capital and have little effect on short-term movements and probably greater effects on the capacity of small- and medium-sized firms to raise capital.

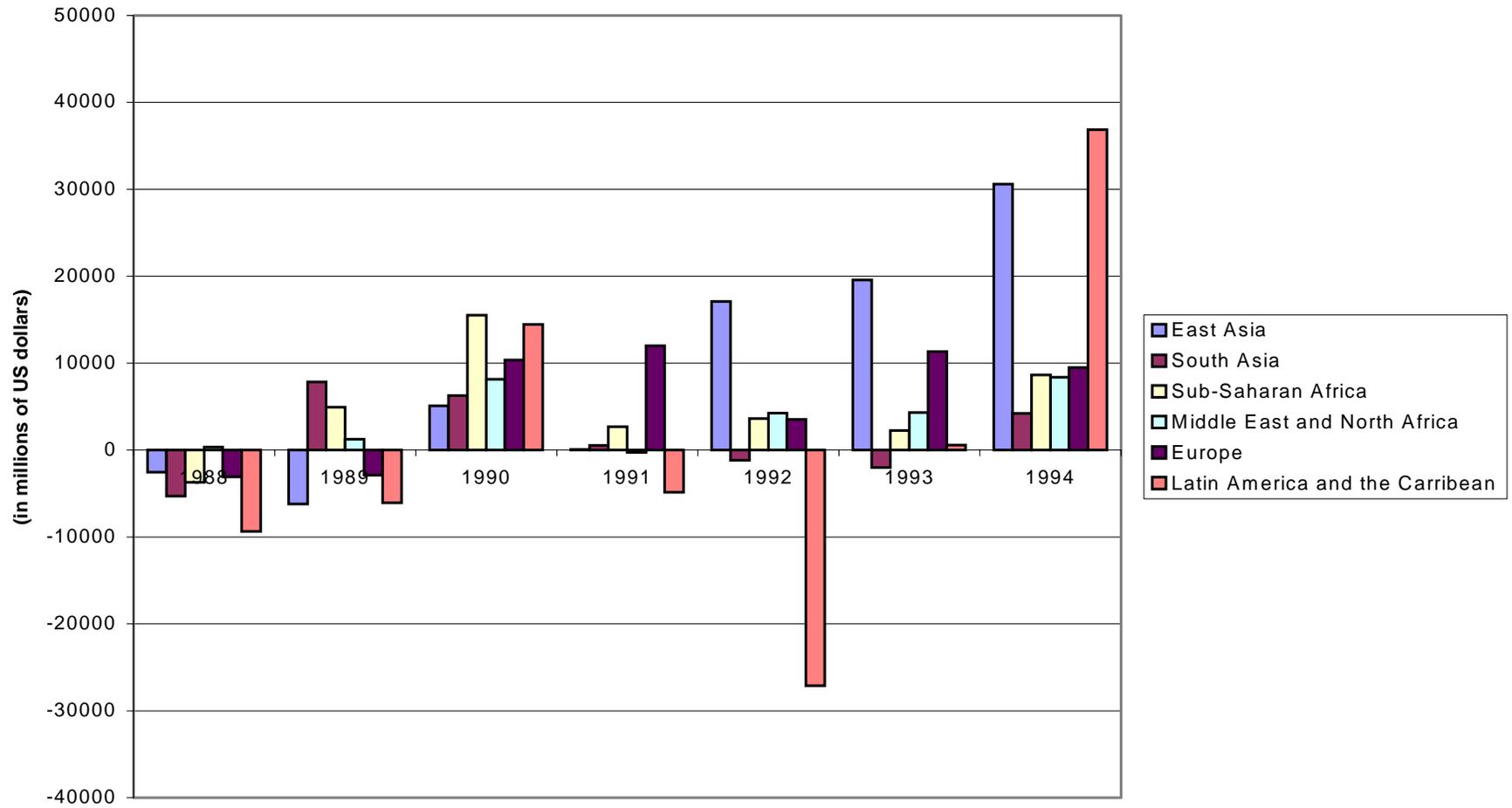
There are three strategies for opening up the capital account based on country experiences:

1. The opening up of the capital account based on distinctions between residents and non-residents. Both South Africa and India have followed a similar approach to opening up the capital account. In South Africa the following sequencing was adopted.
 - a. The abolition of controls on current account transactions
 - b. The abolition of exchange controls on non-residents
 - c. The abolition of exchange controls for foreign direct investment by domestic corporate
 - d. Allowing insurers and pension funds, unit trusts and other financial institutions to acquire foreign investments in order to diversify their total portfolio investments
 - e. And a progressive relaxation of all other controls on outward investments, current account transfers by residents.

²⁷ For a discussion of the Tobin tax, see *Economic Journal*, vol.105, no.428, "Policy Forum: Sand in the Wheels of International Finance".

²⁸ Colombia introduced a Tobin tax on all capital inflows, including trade finance, in an Emergency Decree of January 1997 when international reserves increased dramatically. The Decree was declared unconstitutional in March 1997 and instead the Central Bank increased reserve requirements further (Villar and Rincon, p.33).

Figure 3: Estimates of Regional Unrecorded Capital Flows



India is following a similar approach. It has liberalised current account transactions and relaxed controls on non-residents and some relaxations on FDI by corporates. Prudential limits and quantity restrictions are used to regulate the flow of capital. The cash reserve ratio is applied only to non-resident Indian deposits in the banking system. The next stage of liberalization will deal with pension funds, insurance sector and unit trusts and liberalization for the resident sector. The assumption in both these cases seems to be that a crisis is caused by the outflow of capital by the resident sector. It is feasible that because of asymmetric information, domestic investors do move out first when the investment climate changes. The Mexican residents moved out of Tesobonos first, followed by FIIs. Recent crises, however, do assign an important role to reversal in FIIS expectations that led to a reversal of capital flows.

2. A policy of first liberalising inflows and then outflows. In the liberalization process use were made both of prudential limits in the form of quantity controls and price controls. Management of the open capital account in this case is not by restrictions on residents but rather by the use of price instruments²⁹ and prudential limits with the intent of transforming maturity structure of capital flows and insulating the impact of large and volatile flows on monetary and exchange rate policy. See for example the experiences of Chile, Colombia and Malaysia. Note that outflows in many countries have been liberalized because of pressure on the macroeconomic management of capital inflows (such as the quasi-fiscal costs associated with sterilization or the inability to conduct open market operations) without satisfying the pre-conditions necessary for an open capital account.

3. A big bang approach simultaneously liberalising controls on inflows and outflows.

Is it sensible to liberalize on the path adopted by India and South Africa? Is the Chilean type of liberalization a more suitable solution? The effectiveness of capital controls discussed in this paper give us some pointers to policy

- a. Price controls are only effective in the short run in lengthening average maturities. They however are not very effective in changing the total capital flow or the impact of the capital flow on monetary and exchange rate policy
- b. Controls on capital outflows are generally ineffective as demonstrated by the estimates of unrecorded capital flows
- c. In a well-regulated and supervised system quantity limits on capital outflows can be effective on some class of institutions such as banks, pension funds and authorized dealers.

Country experience reveals that price controls can be used for macroeconomic management of flows in the short run in the face of large and volatile capital flows with other supportive policies. Brazil is a case in point where capital controls did not work because of lack of supportive policies. In the transition phase where countries are reforming the financial sector and putting other pre-conditions into place quantity restrictions on some classes of financial institutions in conjunction with price controls for macro-management discussed here may well work.

²⁹ The cash reserve ratio in India was applied only to non-resident Indian deposit schemes to regulate the flow of capital.

VII Conclusion

The analysis in the paper points to a number of conclusions with regard to the desirability, pace and form of capital account liberalization.

1. *Capital account liberalization is not a choice.* Globalization of the world economy is a reality that makes opening up of the capital account an unavoidable process. It is prudent for developing countries to work out an orderly liberalization of the capital account instead of reforming under duress after a crisis has hit the country.
2. *The main impediments in the way of capital account convertibility are the weak initial conditions related to the health and development of the financial sector and problems related to asset liability management of the banking system.* Of crucial importance are measures addressing bank soundness, interest risk management, hard budget constraints for public enterprises, the oligopolistic structure of the banking industry, and market segmentation. Without underlying changes in the structure of the financial system, macroeconomic and financial instability is a predictable consequence of moves towards capital account liberalization.
3. *Macroeconomic stabilisation and flexibility are required for a successful liberalization of the capital account.* A successful capital account convertibility programme requires the achievement of the following macroeconomic targets:
 - reductions in inflation levels to those prevailing in industrialized countries
 - reductions in the gross fiscal deficit to gross domestic product ratio
 - sufficiency of foreign exchange reserves
 - sustainable current account deficits
 - a stable and competitive exchange rate regime
 - development of indirect instruments of monetary policy
4. *Liberalization of the capital account will be a gradual process accompanied by fiscal and financial reforms.* International portfolio diversification requires skills in managing interest and exchange risk. It also requires availability of information to all market participants. The *modus operandi* for tracking information in many developing countries is still not in place. Moreover, many banks and financial institutions have problems in managing domestic interest risk and exchange risk in the domestic forex market. The development of risk management techniques in both the domestic and international markets are therefore imperative. In some countries, the supervisory and regulatory regimes need to be improved and brought up to international standards, which further reinforces the case for gradualism. Developing different segments of the financial market is dependent on a well-functioning money market. Since market segmentation in the financial sector is still a feature of markets in developing countries, and the banking sector remains vulnerable, a ‘big bang’ approach will lead to instability and sow the seeds for an ensuing banking crisis.
5. *Sequencing current and capital account liberalization.* Liberalization of the controls on the current account combined with a relatively closed capital account leads to the loss of capital through leads and lags in the current account. Some restrictions on the current account are needed in the transition phase to give the country time to reform without dealing with the problem of capital flight through this channel. The decision to open up

the capital account because of pressures introduced by the opening of the current account is a poor policy decision.

6. Country experiences suggest that there are three strategies for opening the capital account and that it is practical and feasible to be at different points along the spectrum leading to a fully convertible capital account.
 - i. *The opening up of the capital account based on distinctions between residents and non-residents* (an approach followed by India³⁰ and South Africa). In both these cases the assumption seems to be that outflow of capital by residents can cause a crisis since opening up is more cautious for the resident sector. There is some basis for this. In the 1994 Mexican crisis domestic residents moved out of Tesobonos first setting a signal for FIIs. However, as country experiences shows that FIIs are equally likely to exit from a country based on their perceptions about the economy
 - ii. *Opening first the inflow side and later liberalizing outflows (same as (i) but the opening up is not restricted between residents and non-residents. After liberalization of inflows and outflows, management of the open capital account with the aid of price instruments (when required) that are designed to alter the maturity structure of inflows and their impact on monetary and exchange rate policy* (an approach followed by Chile, Colombia and Malaysia). The experience of these three economies points to the importance of overall supportive policies to make these controls work.
 - iii. *A 'big bang' approach that simultaneously liberalizes controls on inflows and outflows* (an approach followed by Argentina, Peru and Kenya).

The country experiences described in this paper suggest that either option (i) or (ii) is preferable for most developing countries. Each country has to decide on the degree of capital account convertibility based on its own conditions. If a country decides on a given degree of CAC, over time it should move towards greater openness consistent with its overall reform process.

7. *Capital flight may be a problem for economies opening their capital accounts.* The overall investment climate, political and economic instability, and asymmetric risk and information motivate capital flight. Capital can also leave through leads and lags if the current account is convertible and the capital account remains restricted. Further work is needed based on country experiences to determine which restrictions on the current account can be used effectively in the transition phase. Evidence on unrecorded capital flows demonstrates that capital can leave through various channels under both closed and open capital account regimes. While unrecorded flows may occur because appropriate information systems are still not in place, they also reflect genuine capital flight motives. The porosity of the capital account emphasizes the need to bring about the necessary reforms to control unrecorded capital flows. The conditions for liberalization discussed in this paper will be conducive for the return of past capital flight.
8. *Capital account convertibility is consistent with some restrictions that can be used to insulate a country from macroeconomic instability in the face of large and volatile flows.* Prudential limits on certain classes of transactions are also consistent with a convertible

³⁰ The cash reserve ratio in India was applied only to non-resident Indian deposit schemes to regulate the flow of capital.

capital account. Individual components of the capital account can be liberalized selectively while the sequencing of liberalization at each stage must explicitly take into consideration the individual circumstance of each country. Experiences of selected countries can serve as a guide to the outcome of some policy measures. The experience with capital controls in managing flows is useful and there are important lessons for countries contemplating liberalization. Restrictions on certain classes of institution, such as banks, pension funds and authorized dealers are generally effective. However, other restrictions on outflows are not effective. Price-based controls can alter the maturity structure of inflows but have little effect on total inflows. While they may provide monetary autonomy in the short-run, they cannot be used to insulate monetary and exchange rate policy. The objective of liberalization is to improve efficiency in international financial intermediation. Its achievement requires the liberalization process to be embedded in an overall process of reform of the financial sector and commitment to prudent macroeconomic policies. Capital controls are not a substitute for prudent macropolicies.

9. *The need to constrain short-term inflows arises from the inability of financial systems in developing countries to intermediate capital from the short-end to the long-end and cannot therefore bear the risk of financial intermediation. The management and monitoring of short-term inflows must therefore be a central concern of policymakers.* Over time, as the financial sector becomes more sophisticated, the need to constrain short-term inflows should diminish. Country experience suggests that excessive short-term flows that find their way into non-tradable and speculative sectors are a prime source of vulnerability to sudden reversals of capital inflows. If policies such as sterilization or the liberalization of outflows fail to stem the inflow, countries might look to the imposition of prudential controls that seek to alter the composition and/or maturity structure of inflows. Experience also suggests that they can help provide a measure of monetary autonomy. It should be emphasized that these controls should be of a temporary nature, as control regimes lose effectiveness over time as their negative effects on allocative efficiency increase.
10. *Offshore centers can play a role in a financial crisis and create havoc for a developing economy.* Harmonization of tax regimes, financial liberalization under prudential oversight, and capital account liberalization can reduce the appeal of offshore centers. A process of coordination between onshore and offshore supervisory authorities will also contribute to financial stability in the world economy.
11. *The relative size of inflows into many poor economies is very high by world standards. Therefore, further research must be directed at the process of capital account convertibility in the context of these economies.* Further work is needed to analyse the issues raised here in the context of economies, such as those in Sub-Saharan Africa, where recourse to indirect instruments of monetary policy, hedging interest rate risk and exchange rate risk is constrained by the lack of depth in the financial market. In this context other bottlenecks are the limited number of market participants. The development of the financial market and its structure may be constrained by the size of the economy. The degree of capital account convertibility and the management of the capital account will need a new focus because of the paucity of financial instruments and the inadequate financial infrastructure, which was less acute in other economies. Problems can also be foreseen in the dilemmas posed by floating exchange rate regimes.

In the face of these a strategy for smaller economies to manage capital flows and the degree of capital account convertibility needs to be debated and researched.

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Annex 1: Capital Controls in Chile

The massive increase in the volume of international capital flows and the consequent vulnerability of many countries to the sudden withdrawal of these funds has rekindled the debate on the advisability and practicality of capital controls. During the 1990s, Colombia, Malaysia, Spain (1989) and Thailand have instituted controls on capital inflows. However, Chile's capital control regime has been the main focus of debate among policymakers and academics.

In June 1991, Chile instituted controls on capital inflows in order to pursue several policy objectives. The first of these was to limit the country's exposure to a surge in capital inflows and avoid the consequent pressure for real exchange rate appreciation that would undermine the country's competitiveness. Secondly, the authorities hoped that the controls would lengthen the maturity structure of the country's external liabilities by discouraging more volatile short-term capital flows. Thirdly, it was hoped that controls would enable Chile to pursue a more independent monetary policy that would enable the authorities to target the inflation rate while preventing a sharp appreciation of the real exchange rate (Zahler, p.163).

These objectives emerged from the belief of Chilean policymakers that the forces propelling capital inflows were not related to structural forces such as a permanent improvement in the trade accounts, a trend increase in foreign direct investment or a more permanent shift in the country's terms of access to international capital markets. Rather, policymakers believed that more short-term forces were driving the capital inflows and therefore sought to avoid volatile movements in a key price - the real exchange rate - fuelled by these transitory forces. In a small open economy like Chile's, high real exchange rate volatility can have an adverse effect on the inflation rate, trade flows and investment by heightening uncertainty among economic agents. Thus, Chilean policymakers sought to smooth out transitory movements in the real exchange rate that could be quickly reversed.

Apart from the issue of increased exchange rate volatility, Chilean policymakers were also concerned that an 'excessive' capital inflow-driven exchange rate appreciation would hinder economic growth by undermining the competitiveness of the country's export sector. Chile, along with many other nations, has sought to achieve higher rates of growth through the development of its export sector. A currency that remains appreciated over time can hinder growth in this sector by increasing bankruptcies in the export sector and discouraging investment. Furthermore, once the exchange rate returns to its long-term equilibrium level, inflation can be expected to increase as upward pressure is placed on imports.

Thus, since Chilean policymakers sought to control both their domestic interest rate and exchange rate, they sought to create room for an independent monetary policy by restricting capital inflows. While other mechanisms could conceivably create this independence or at least improve the trade-off between these objectives, such as raising domestic savings (both public and private), trade liberalisation (to encourage imports), capital account liberalisation (to encourage outflows) and sterilizing inflows, they all have their own set of drawbacks. Personal savings decisions are more long-term in nature and not in the immediate control of policymakers and are therefore ill suited to dealing with cyclical policy issues. Similarly, varying fiscal policy is subject to greater lags and political constraints. Trade policy is also unsuited to dealing with cyclical issues, as it properly should be directed towards more long-term development issues and taxation concerns. Liberalizing capital outflows can also have the effect of reinforcing inflows by providing greater security through easier possibilities of

exit. Sterilizing inflows is a more viable strategy that has been used by many countries in dealing with temporary inflows of capital. However, sterilization becomes more difficult if the absolute size of inflows is large and they are sustained over a long period of time. Quasi-fiscal losses associated with sterilized intervention can be large and significantly compromise the central bank's operation of monetary policy in the future.

Thus, instead of opening the floodgates to capital inflows and then seeking to adjust to them through sterilized intervention or other policies, the Chileans sought to preclude the entrance of these flows into the national economy and thus seek to reconcile its policy objectives.

The Chileans sought to pursue these objectives by applying an unremunerated reserve requirement (URR) to capital inflows. Initially, all external credits (with the exception of credits to exporters) were subject to a mandatory deposit of 20 percent of their value at the central bank. Subsequently, this policy was extended to uniformly cover all external credits irrespective of their maturity. However, since it was mandatory to maintain the deposits for one year, it implied a tax rate that was inversely related to the maturity of the credit. The URR is thus equivalent to a tax per unit of time that declines as maturities lengthen. Investors could also opt to pay an up-front fee determined by the relevant foreign exchange rate and the percentage of the capital inflow subject to the URR.

The Chileans maintained a flexible policy with regard to the URR. During the period when it was in operation (June 1991 - September 1998),³¹ the Central Bank of Chile altered the rate of the requirement, the categories of inflow that were subject to it, the denomination of the reserve deposit and fee payment, the holding period and the restrictions to rolling over maturing investments (Gallego *et al.*, p.4).

The evaluation of the URR both in terms of achieving its objectives and in economic efficiency has been the subject of considerable debate. The empirical literature on capital controls in Chile has broadly focused on two different estimation techniques, single equation models (SEMs) and vector-autoregressive models (VAR). The former regress the domestic interest rate, the real exchange rate and the composition of flows against the URR and other explanatory variables. While the SEMs seek to measure the direct effect of the URR on the dependent variables (controlling for other determinants), a disadvantage is that it requires strong assumptions regarding the functional form of the equations and exogeneity of the explanatory variables. In contrast, the VAR approach identifies the dynamic relationship among the variables and imposes only a few identification restrictions at the cost, however, of failing to provide a direct measure of the effect of the URR on the variables of interest or of specifying the channels through which the URR operates (Gallego *et al.*, p.2).

The literature on capital controls in Chile has focused on three questions that are useful for categorizing the various studies:

1. Has monetary policy increased its effectiveness as a result of capital controls?
2. Have the capital controls allowed for a lower real exchange rate (a more depreciated currency) than would otherwise have occurred?
3. Have capital controls changed the maturity composition of capital inflows (i.e. discouraged more volatile short-term flows and encouraged more stable longer-term flows)?

³¹ The Central Bank of Chile has not dropped the URR and has retained the right to use it again in the future. However, its rate was dropped to zero in September 1998 (Gallego *et al.*, p.2).

On the first question, the evidence suggests that the URR was successful in increasing domestic interest rates and providing some degree of monetary independence. Throughout the 1990s, Chile maintained domestic real interest rates above international levels. The differential of real interest rates increased after the URR was introduced, from 3.1 percent during 1985-1991, to 5.2 percent during 1992-1997, with only part of the increase attributable to a fall in international rates (IMF, forthcoming). Using the SEM approach, Eyzaguirre and Hebbel (1997) find that the URR increases the effectiveness of monetary policy by permitting a higher interest rate differential with foreign interest rates. De Gregorio *et al.* (1997) and Gallego *et al.* (1999) conclude that the controls provided additional room in which the monetary authorities could manoeuvre by allowing for a higher domestic interest rate. In contrast, using the SEM approach, Valdes and Soto (1998) argue that under a exchange rate regime with predetermined rules, the ability of the URR to provide monetary autonomy is dependent on the ability to reduce total inflows. They conclude that since the URR did not discourage total net short-term credit inflows to the private sector, the URR failed to contribute to monetary independence.

On the question of whether controls have enabled the real exchange rate to be lower than it otherwise would have been, studies suggest that the URR had no significant effect on the real exchange rate and, if it did, the effect was transitory. Over the 1991-1997 period, Chile's real exchange rate appreciated on average 4 percent a year (IMF, forthcoming). Soto and Valdes (1996) and Valdes and Soto (1998) conclude that the URR failed to alter the appreciating trend of the real exchange rate in the 1990s. Eyzaguirre and Hebbel (1997) find that the URR depreciated the real exchange rate, although the effect was only temporary. Similarly, Gallego *et al.* (1999) does not find any significant effect of the URR on the real exchange rate. Using the VAR approach, De Gregorio *et al.* (1997) did not find any significant effect of the URR on the real exchange rate, but rather a transitory depreciation caused by a tightening of the control. However, Soto (1997) finds that the URR has reduced the volatility of the real exchange rate, which suggests that it may have facilitated an orderly appreciation.

The balance of the evidence on the third issue - whether the maturity structure of Chile's external liabilities has been altered by the capital controls - suggests that the URR has lengthened the maturity structure of external liabilities. Eyzaguirre and Schmidt-Hebbel (1997), De Gregorio *et al.* (1997) and Gallego *et al.* (1999) conclude that the URR reduced the share of short-term flows and increased that of long-term flows. Sebastian Edwards (1999) finds that Chile's controls did increase the maturity of its foreign debt significantly, although he notes that even in 1996 more than 40 percent of the country's debt to BIS banks had a maturity of less than one year and the total volume of aggregate capital inflows during the 1990s did not decline (Edwards, p. 82). In contrast, Soto and Valdes (1996) and Valdes and Soto (1998) found that the URR changed the composition of inflows, reducing the share of taxed flows in total short-term credit, but its effect on total short-term credits (taxed plus exempt operations) was not significantly different from zero.

In addition, it does not appear as though the URR has been effective in moderating capital inflows. In 1990-1995, average inflows amounted to 7.3 percent of GDP and in 1996-1997 they increased to 11.7 percent of GDP before falling in 1998. The studies suggest that the effect of the URR on total inflows was mostly when it was introduced (or amended) and the magnitude of the effect was either small or transitory (IMF, forthcoming).

In addition to whether the URR achieved the objectives set out for it by the authorities, the question of the economic efficiency of the controls must also be briefly considered.

Edwards (1999) argues that the URR has increased the cost of capital significantly, especially for small- and medium-sized Chilean firms that found it difficult or impossible to evade the controls on capital inflows. He notes that in 1996, the cost of funds for smaller Chilean firms was as high as 24 percent (in US dollar terms, this translates into more than 21 percent). Thus, he notes that a country considering the adoption of URR-type controls must balance this higher cost of capital for small- and medium-sized firms with the potential benefits. It is thus likely that the higher domestic interest rates caused by URR reduce investment and long-term growth (the cost being dependent on the interest elasticity of investment). Gallego *et al.* (1999) argue that these costs were not negligible - the URR and the policy stance that accompanied it retarded Chilean growth by about half of a percentage point during the 1990s.

It is also possible that the URR leads to a misallocation of resources in the domestic economy. Since the URR tends to increase short-term interest rates proportionately more than long-term rates, it will discriminate against short-term projects and those sectors that are more dependent on bank financing.

Gallego *et al.* (1999) argue that over time the URR loses its effectiveness, and thus for a given interest rate differential sought by the authorities, a rapid accumulation of reserves may ensue. The net quasi-fiscal costs associated with funding this excess of reserves is not negligible, reaching 0.5 percent of GDP in 1998.

While they are difficult to estimate, there are also likely to be rent-seeking costs associated with trying to avoid the inflows tax and, at the other end, costs associated with continual attempts to close loopholes.

These costs must be placed alongside the possible costs of a sudden reversal of capital flows that can result in recession and financial crisis. Chile weathered the wave of instability in global financial markets in 1997-1998 and the URR may have helped by diminishing the country's exposure to short-term external liabilities. The costs of external crises in terms of longer-term growth, capital flight and disruption of access to international financial markets were vividly demonstrated during the 'lost decade' of Latin American growth after the debt crisis of the early 1980s.

In considering what lessons can be derived from the Chilean experience, particular emphasis must be placed on the underlying institutional structures. The Central Bank of Chile has a strong capacity to enforce its policies because of a long tradition of law compliance by the government, the public and the business community. Corruption, a pervasive feature of many developing countries, is also largely absent in Chile. In countries with weaker institutional and legal structures, an URR-type policy may degenerate rapidly in the midst of political favouritism and thereby encourage corruption.

A second broad lesson that can be derived from the Chilean experience is that capital controls are not a substitute for sound macroeconomic policy and rigorous financial regulation. The URR is simply a supportive policy that aimed to improve the trade-off between monetary and exchange rate policies and provide some degree of insulation from the more volatile elements in global finance. There is thus a danger that an URR-type policy may be used either as a substitute for other macroeconomic policies or to delay needed reforms in the domestic economy. It must be noted that Chile has a well-regulated and highly capitalized financial sector and has pursued sound fiscal policies (Ariyoshi *et al.*, forthcoming).

Annex 2: Country Experiences

Argentina

Background	In the 1970s and 1980s, Argentina experienced severe hyperinflation that had completely undermined the credibility of monetary policy and subverted economic growth. The Convertibility Plan of 1991 sought to regain monetary control and credibility by establishing a currency board that prevented the monetization of the fiscal deficit and ensured the complete liberalization of international payments and transfers on both current and capital account. In conjunction with this radical restructuring of monetary and payments policy, Argentina pursued a policy of trade liberalization, privatisation, deregulation, fiscal consolidation and initiatives to improve the operation and prudential supervision of the financial system.
Sequencing of reforms	Argentina accepted Article VIII obligations in 1968. However, current and capital account transactions were both liberalized simultaneously in 1991, completing a process that had begun in 1989. Financial sector reform continued throughout the period and was pushed even further during the Mexican crisis of 1994-95, when authorities required capital adequacy ratios that went beyond those specified by the Basel Committee, increased liquidity and encouraged increased foreign participation.
Exchange rate policy	Argentina adopted a currency board system in 1991 that set the exchange rate of the peso to the US\$ at 1:1.
Direct or indirect monetary policy tools	Not relevant in a currency board regime.
Ability to sterilize inflows	Argentina does not have an independent monetary policy since under a currency board system the monetary base is determined by international reserves.
Result of capital account liberalization	Argentina was able to attract large inflows of private capital in the aftermath of this radical reform program. Foreign direct investment and portfolio flows reached 11 percent of GDP in 1993, compared with less than 1 percent in 1990. Real GDP growth averaged more than 7 percent in the three years following the convertibility plan while consumer price inflation declined dramatically to 4 percent in 1994. After a recession in 1995, growth quickly resumed.
Crisis?	No. However, Argentina did suffer from the Latin American contagion in the wake of the Mexican crisis in 1994-95. Under a currency board system in place this resulted in a sharp contraction of the monetary base and real economic activity. Instead of re-imposing capital controls, the government further tightened fiscal policy and sought to lengthen the maturity of public debt, use fixed-rate instruments and seek to pre-borrow funds in better market conditions. It also further strengthened the banking system.
Lessons	Argentina's reform process has re-established confidence in the country's macroeconomic and financial framework and it has been able to benefit from renewed access to the international financial markets. This has come at the cost of a severe loss of monetary and fiscal autonomy and the vulnerability of the real economy to foreign shocks. The radical policy prescription also depends upon wide political acceptance, which is not always easy to maintain in the face of high domestic unemployment. Argentina's experience also suggests that while the sequencing of capital account liberalization is important, strong and credible supporting policies are required to sustain it. The confluence of institutional capacity and political support in Argentina suggests its experience is less applicable to other countries.

Kenya

Background	Kenya experienced a severe economic crisis in the late 1980s, fuelled by a dramatic decline in the price of two of its main commodity exports, tea and coffee, that resulted in widening fiscal and current account deficits and a shortage of foreign exchange. Growth slowed while inflation accelerated. Kenya in the late 1980s was characterized by a highly regulated financial system and highly controlled payments and trade regimes. The financial system was poorly supervised and a clientelistic political system generated pressures to grant credits to favoured groups and firms.
Sequence of reforms	The government significantly liberalized current and capital account transactions in 1991 when it introduced foreign exchange bearer certificates of deposits (FEBCs) that allowed the bearer to redeem them for foreign exchange for any external transaction. Kenya accepted Article VIII obligations in 1994. In 1995, remaining foreign exchange controls were eliminated and with a few exceptions all restrictions on the capital account were removed. Financial sector reforms were largely neglected.
Exchange rate policy	Kenya has a unified exchange rate regime in which the exchange rate is determined in the interbank market. The official exchange rate is set at the previous day's average market rate. The US dollar is the principal intervention currency.
Direct or indirect monetary policy tools	The central bank relied on direct measures to control monetary policy including differentiated credit ceilings and interest rate controls. In the late 1980s, the government sought to move to more indirect means of controlling monetary policy by abolishing credit ceilings and interest rate controls.
Ability to sterilize inflows	Kenya's capacity to effectively sterilize capital inflows has yet to be tested since the country has failed to attract large inflows of capital.
Result of capital account liberalization	Kenya's reform program failed to attract significant inflows of foreign capital or to prevent the country from experiencing another economic crisis. Growth declined, inflation accelerated and inconsistent policies generated by the country's first democratic elections in late 1992 resulted in an economic crisis in early 1993. The money supply expanded rapidly, resulting in a M2/GDP ratio that rose from 29.7 percent in 1990 to 37.1 percent in 1993. Pervasive weaknesses in the financial system exacerbated the crisis and prudential regulation and enforcement remained feeble as banks regularly breached legal reserve ratios.
Crisis?	Yes. Beginning in late 1991, the economy moved into crisis as economic growth declined and inflation increased. Inconsistent policies pursued before the first democratic elections, including the misappropriation of public funds, deepened the crisis. Money growth and unsound financial practices mixed with weak regulation to cause widespread loss of confidence and a sharp depreciation of the currency.
Lessons	The essential lesson from Kenya's experience is that rapid and wide-ranging liberalization in the context of major macroeconomic imbalances increases a country's vulnerability to capital flows by providing legal channels for capital flight. For this reason the country experienced only small inflows of foreign investment and capital. The experience also clearly reveals that liberalization of the financial sector and the capital account is an insufficient condition for economic recovery. These reforms must be embedded in a larger reform process that addresses the major imbalances in the economy. It is also possible that capital account liberalization in the context of inadequate institutional capacity and insufficient accompanying structural and macroeconomic reforms.

Peru

Background	Peru experienced a major economic crisis in the late 1980s following a short-lived boom, resulting in real GDP contracting by 20 percent in 1988-1989, and a collapse in investment and hyperinflation. In 1990, a new administration implemented an extensive liberalization program that sought to renew economic growth and contain inflation. Within this larger reform program, both the financial sector and the capital account were to be liberalized.
Sequencing of reforms	Liberalization of the current account and capital account were undertaken concurrently in 1991. Foreign and domestic investors were accorded similar terms. Foreign investors were allowed to freely remit profits and dividends and re-export capital. To enhance credibility these reforms were included in the new state constitution of 1994. Financial sector reform was also carried out in the early 1990s with the liberalization of interest rates and the ending of government intervention in the allocation of credit.
Exchange rate policy	The multiple exchange rate regime was unified in 1990 and the exchange rate was allowed to float.
Direct or indirect monetary policy tools	Peru continues to rely on direct instruments of monetary control although progress has been made in developing more indirect instruments.
Ability to sterilize inflows	With the relatively undeveloped state of indirect instruments of monetary control and the thinness of domestic markets, Peru's ability to sterilize inflows is constrained.
Result of capital account liberalization	Peru experienced a large inflow of foreign capital as a result of the policy reform. The stock of foreign direct investment increased from US\$1.3 billion in 1990 to US\$6.0 billion in 1995, accounting for about 4.5% of GDP in the 1994-1997 period. Inflows were also sustained by a widening interest rate differential caused by tight Peruvian monetary policy and declining US interest rates. Under the floating exchange rate regime these inflows resulted in a 25 percent appreciation of the real effective exchange rate between 1990 and 1995. The current account deficit widened from 3.8 percent of GDP in 1990 to 7.3 percent in 1995 fuelled by an increase in investment. Inflows of private capital largely financed this expanding deficit. A tighter fiscal policy and high reserve requirements on dollar deposits caused a substantial increase in reserves which has more than covered the increase in short-term debt.
Crisis?	No. Although the country did come under pressure during the Mexican crisis of 1994, although by tightening prudential regulations and surveillance the country was able to emerge relatively unscathed.
Lessons	The Peruvian experience, like the Argentine, points to the necessity - especially during rapid liberalizations of the capital account - of placing CAC within a broader reform framework that addresses macroeconomic and structural imbalances and that emphasizes financial sector reform. Some analysts have argued that the large real appreciation, in conjunction with tight monetary and fiscal policies, have greatly harmed an export sector that is crucial to long-term growth. Thus, they argue that Peru may have benefited by either retaining some control over the exchange rate or controlling capital inflows.

Chile

Background	After a previous policy of rapid liberalisation ended with a banking crisis in the mid-1980s, Chile gradually pursued capital account liberalisation in the 1988-1997 period. Chile sought to pursue an export-oriented strategy that required a stable exchange rate and inflows of foreign capital to promote non-traditional exports. Chile sought to maintain both internal equilibrium (by setting high domestic interest rates) and external equilibrium (by preventing a real appreciation of the currency). Consequently, the authorities sought to control capital inflows by requiring foreign investors to place an unremunerated reserve (URR) at the central bank. The cost of the URR to investors was inversely proportional to the maturity of the inflow. Thus, the URR was intended to (a) increase monetary independence, (b) discourage short-term inflows, (c) restrain real exchange rate appreciation and (d) limit total capital inflows.
Sequencing of reforms	Chile accepted Article VIII obligations in July 1977. In the initial phase of the recent reform effort (1985-1989), the authorities focused on restructuring of the banking system, trade reform, the selective liberalisation of direct and portfolio capital inflows, and on creating the institutional independence of the Central Bank of Chile (CBC). The initial phase thus focused more on providing more liberal access to foreign exchange for current account transactions, which complemented a policy of lowering tariffs. In the later phases, the authorities concentrated upon the development of financial markets, the adoption of more flexible interest rate and exchange rate policies, and the progressive relaxation of controls on capital inflows and outflows.
Exchange rate policy	In 1983, Chile replaced a fixed exchange rate with a crawling peg regime that sought to maintain a constant level of the real exchange rate against the US dollar. Later, a crawling band was introduced that enabled the exchange rate to float freely within a +/-0.5 percent band (later raised to +/-2 percent).
Result of capital account liberalization	Over the 1994-1997 period, Chile attracted foreign direct investment equivalent to nearly 6 percent of GDP, one of the highest rates in the world. The macroeconomic environment has been stable with low inflation, a balanced fiscal position and high rates of economic growth.
Effectiveness of capital controls	<p>The effectiveness of Chile's controls on capital inflows (URR) has been the subject of considerable debate. The balance of the evidence from the studies conducted to date suggest the following conclusions (for more information see the note in the Annex):</p> <ol style="list-style-type: none"> 1. The controls have provided some room for an independent monetary policy by increasing the wedge between domestic and international interest rates. 2. The controls have lengthened to some extent the maturity structure of capital inflows. 3. Controls had no effect on the level of total inflows 4. Controls had no effect on the exchange rate.

<p>Cost of controls</p>	<p>In addition to whether the URR achieved the objectives set out for it by the authorities, the question of the economic efficiency of the controls must also be briefly considered.</p> <ul style="list-style-type: none"> • Cost of capital: Edwards (1999) argues that the URR has increased the cost of capital significantly, especially for small- and medium-sized Chilean firms that found it difficult or impossible to evade the controls on capital inflows. He notes that in 1996, the cost of funds for smaller Chilean firms was as high as 24 percent (in US dollar terms, this translates into more than 21 percent). Higher domestic interest rates caused by URR may thus reduce investment and long-term growth. Gallego <i>et al.</i> (1999) argue that these costs were not negligible - the URR and the policy stance that accompanied it retarded Chilean growth by about half of a percentage point during the 1990s. • The URR may lead to a misallocation of resources in the domestic economy. Since the URR tends to increase short-term interest rates proportionately more than long-term rates, it will discriminate against short-term projects and those sectors that are more dependent on bank financing. • Gallego <i>et al.</i> (1999) argue that over time the URR loses its effectiveness, and thus for a given interest rate differential sought by the authorities, a rapid accumulation of reserves may ensue. The net quasi-fiscal costs associated with funding this excess of reserves is not negligible, reaching 0.5 percent of GDP in 1998. • While they are difficult to estimate, there are also likely to be rent-seeking costs associated with trying to avoid the inflows tax and, at the other end, costs associated with continual attempts to close loopholes.
<p>Lessons</p>	<p>The Chilean experience demonstrates that an incremental process of capital account liberalization within a strong supporting reform framework can be highly effective. The Chilean authorities pursued a cautious policy of developing an institutional structure that could accommodate a higher level of capital inflows. Policy towards inflows remained flexible, with the capital control policy complemented by (a) a degree of real exchange rate appreciation and (b) sterilized intervention accompanied by tighter fiscal policy. The Chilean experience also illustrates the possibilities of controls on capital inflows. It is necessary to stress two points. First, controls were part of a broader strategy that sought to both encourage inflows and diminish their potentially more harmful effects on monetary independence, the exchange rate and systemic vulnerability. Second, Chile has a strong institutional capacity to manage a capital control regime that allows it to be implemented efficiently and insulates it from corruption.</p>

Uganda

Background	Following the ascension into power of the current administration in 1986, an Economic Reform Program (ERP) that included stabilisation and structural adjustment policies was initiated in 1987. A gradual approach towards liberalisation of markets in Uganda was adopted, to dismantle the previously extensive control regime on economic transactions and create a more competitive environment.
Sequencing of reforms	Starting with the domestic markets, the government first liberalised prices in the goods market with the exception of oil and oil products. This was followed by the gradual liberalisation of the financial sector, initiated in 1988, and reform in 1994. In the meantime, the exchange and payments system was also systematically liberalized culminating in Uganda's acceptance of Article VIII obligations in 1993 to allow for unrestricted current account transactions. In July 1997, the capital account was finally liberalized - an act of formalising the <i>de facto</i> open capital account that already existed.
Exchange rate policy	In 1990, the ' <i>kibanda</i> ' (parallel forex) market was legalized, but a multiple exchange rate regime existed until November 1993, when on the introduction of an interbank forex market, the market was fully unified. Uganda today pursues a floating exchange rate regime with intervention by the central bank to ensure stability in the market only.
Direct or indirect monetary policy tools	The government has gradually reduced reliance on direct tools of monetary control. It has increased the use of indirect tools of monetary control since 1993, although the array of instruments available is still limited, largely on account of the thinness of the financial system. Nonetheless, it has managed to control inflation through efficient use of the few available instruments and the close coordination between monetary and fiscal policy.
Ability to sterilize inflows	The approach initially involved the use of both fiscal and monetary instruments. However, in the recent past, it has largely relied on monetary policies. Due to the limited monetary instruments and thinness of the market, capacity to sterilize inflows is heavily constrained.
Result of capital account liberalization	The reform process in general has managed to close the savings-investment gap in the economy as the high GDP growth rates, averaging 6.5% per annum over the last decade, has been largely financed from foreign resources. The role of private capital has been enhanced through capital flows as it now stands at 12.8% of GDP up from 9.6% in 1996. Private domestic savings on the other hand were recorded at 8.6% and 6.9% respectively.
Crisis?	No. To the extent that the bulk of capital flows was returning capital by residents and steady FDI flows to finance long-term projects, Uganda has not experienced substantial problems associated with fluctuations in net flows. Major challenges have been in the areas of exchange rate management and monitoring capacity as the country continues to realize the gains of an open capital account.
Lessons	<ul style="list-style-type: none"> • Capital account liberalisation in an environment with sound macroeconomic policies has the capacity to increase capital inflows. • Macroeconomic management under Fund programs constrains the capacity of authorities to handle temporary crises hat are associated with speculative behaviour. • There are challenges that deal with data collection for policy management, prudential management and regionalism which need to be addressed carefully for the purpose of proper economic management under a liberalised capital account.

Indonesia

Background	In 1985, Indonesia initiated a reform program that was intended to reorient the economy away from its dependence on the oil sector and towards an internationally competitive industrial export sector that could help absorb the growing labour force. This objective required reform on a broad front, including the liberalization of direct investment flows to promote export diversification, maintenance of a competitive exchange rate, trade liberalization, improvements in monetary management and strengthening the financial sector.
Sequencing of reforms	Indonesia accepted Article VIII obligations to liberalize payments for current international transactions in 1988. On the capital account, Indonesia maintained selective controls on both capital inflows and outflows. The financial sector was reformed in phases from interest rate reform in the early 1980s to a greater emphasis on accounting standards and prudential regulation in 1995-96.
Exchange rate policy	The rupiah floated freely in a trading band of +/-8 percent (immediately before rupiah floated in July 1997 this band was widened to +/-12 percent). Indonesia's real effective exchange rate remained remarkably stable over the 1987-1997 period.
Capital controls	On the inflow side, selective controls were maintained on direct investment (domestic ownership requirements), portfolio investment (purchases of equity by foreigners was prohibited) and bank borrowing in foreign markets. While capital outflows by resident individuals were open in 1985, lending abroad by banks and financial institutions was prohibited (this prohibition was maintained in the 1985-1996 period).
Effectiveness of controls	Over the 1990s, Indonesia has imposed controls on both inflows and outflows. In 1990-91, in the context of overheating economy and a stable real exchange rate, large inflows (mainly composed of commercial bank borrowing) were perceived to be excessive and a threat to macroeconomic management. The authorities re-imposed quantitative controls on offshore borrowing by banks and state enterprises and introduced stricter limits on the open foreign exchange positions of banks. Indonesia imposed controls on capital outflows in response to the Asian crisis in July 1997. These controls took the form of restrictions on non-resident transactions in the forward market (\$5 million per customer) and limiting the net open position of banks in the forward market (\$5 million per bank).
Crisis?	Yes. Indonesia initially seemed poised to weather the 1997 Asian financial crisis given its smaller current account deficit and decision to widen the trading band of the rupiah. Widespread concerns about the soundness of the banking sector, however, renewed speculative pressure on the rupiah and after its forced float promptly collapsed in value. From an average rate of 2,342 against the US dollar in 1996 the rupiah traded at 10,013 in 1998.
Lessons	The Indonesian experience illustrates the problems created by large inflows into a poorly regulated and supervised financial system. These problems were related to the nature of the interaction between the political elite and financial industry, which obscured the functionings of this system from outside investors and allowed insiders to socialize the risks of their behaviour. Thus, there was little to sustain the confidence of outside investors when better-regulated systems in countries like Malaysia came under pressure. Indonesia also reflected the general problem of Asian countries in 1997: short-term, dollar-denominated debt far in excess of international reserves. According to the BIS, \$34.2 billion of Indonesia's total private foreign debt of \$55 billion – equivalent to 16% of GDP – was due to mature in less than one year. In the 1995 to mid-1997, Indonesian firms had doubled their exposure to take advantage of the spread between international and domestic interest rates. The government failed to curb or effectively monitor the inflow. Thus, the Indonesian experience points to fundamental structural in the pre-conditions for CAC as well as failures of regulation, monitoring and enforcement.

Korea

Background	<p>Throughout its period of rapid industrialisation from the 1960s to the late 1980s, the Korean economy was characterized by extensive government intervention. A key instrument of policy control was its use of the nationalized financial system to provide directed credits to certain industrial sectors, while monetary policy was pursued mainly through direct instruments, including ceilings on lending rates.</p> <p>While this served to mobilize large resources for industrial development, it also helped ensure that the development of the financial system lagged that of the real economy. Over the course of the late 1980s, Korea pursued a policy of gradually liberalizing the domestic financial system and the capital account, although this was accelerated under the Kim Young Sam administration in 1993.</p>
Sequencing of reforms	<p>In 1988, Korea accepted Article VIII obligations ensuring full convertibility for current account transactions. Liberalization of the capital account was gradual and selective and a comprehensive liberalization plan was not adopted until 1993. Korea's policy towards capital account transactions was guided by developments in the current account. In response to a significant current account surplus in 1986-89, authorities moved to curtail net capital inflows, whereas in the early 1990s as the current account weakened, they moved to encourage inflows. Policy thereafter was towards gradually liberalizing capital account transactions. Financial sector reform, including efforts to improve regulation and supervision, was pursued concurrently.</p>
Exchange rate policy	<p>As part of the reform process, Korea moved from pegging the won to a basket of currencies to the Market Average Exchange Rate (MAER) system in order to allow exchange rates to be determined more by market forces. The exchange rate is determined on the basis of the weighted average of interbank rates for the won-dollar spot transactions of the previous day. During each business day, the won rate against the dollar in the interbank market is allowed to fluctuate within margins of +/- 2.25 percent against the market average of the previous day.</p>
Result of capital account liberalization	<p>One key consequence of the increased access of Korean financial institutions to external financing was a rapid expansion of foreign debt, which nearly trebled from \$44 billion in 1993 to \$120 billion in September 1997. While this level of foreign debt accounted for only 25 percent of GDP in 1997, which was considerably lower than that of other comparable countries, a critical dimension was the maturity structure of the debt. The share of short-term debt rose from an already high 43.7 percent in 1993 to an extremely high 58.3 percent at the end of 1996. Newly-licensed merchant banks assumed a very large share of this short-term debt. Thus, although measures were undertaken in the 1990s to liberalise and strengthen the financial sector, persistent weaknesses of oversight and regulation remained which helped propel the country into crisis in late 1997.</p>
Crisis?	<p>Yes. Korea was hit by the Asian financial crisis of 1997. The sharp rise in the short-term debt to reserves ratio and concerns about the stability of the financial sector (especially the finance companies) encouraged continual pressure against the won. When the won was forced out of its trading band its value promptly collapsed. From an average of 804 won per US\$ in 1996 the rate had depreciated to an average of 1401 won per US\$ in 1998.</p>
Lessons	<p>The Korean experience suggests the danger of liberalizing the capital account in the context of inadequate prudential regulation and an unreformed financial system. The failure to adequately monitor the activities of the finance companies was a serious gap in the regulatory regime that greatly increased the vulnerability of the country to sudden flow reversals. The precipitous dismantling of Korea's traditional system of coordinating long-term investment resulted in a poor allocation of these funds. This reflected as well a changing relationship between the state and the large <i>chaebols</i> (conglomerates) that dominate the economy, with the government no longer clearly as dominant a player in the new democratic dispensation. With the absence of state coordination and poor financial intermediation, funds flowed into low quality investments in sectors which already had serious problems with overcapacity. The Korean experience thus focuses on the appropriate preconditions for CAC (liberalization of the real sector), financial reform and improved regulation. It also points to the lessons of failed sequencing. Korea liberalised short-term flows first and as part of crisis management in 1997-98 liberalised long-term flows.</p>

Colombia

Background	Colombia experienced a surge of private capital inflows in the early 1990s, increasing from 0.2 percent of GDP in 1990 to more than 7 percent of GDP in 1997. The inflows were in response to an extensive program of structural reforms that included liberalization of the exchange and trade system, dismantling of interest rate controls, financial reform, encouragement of FDI, and a tighter monetary policy. In order to restrain inflows, the authorities Colombia introduced an unremunerated reserve requirement (URR) on capital inflows similar to Chile's.
Sequencing of reforms	In 1991 the Colombian authorities initiated a broad reform program which significantly increased the country's openness to the world economy. The reform effort included liberalization in the trade regime (the traditional system of prior-licensing of imports was dismantled) and the real economy as well as a liberalization of capital account transactions (with particular emphasis on encouraging FDI). Financial sector reform has proceeded in tandem with this process, with emphasis placed on improved prudential regulation and monitoring.
Exchange rate policy	In early 1994, a crawling band was introduced that made explicit what had already been central bank policy. The width of the band was set at +/-7 percent and the rate of crawl of the band was based on expected inflation differentials with trading partners. In September 1999, a floating regime was introduced for the peso. The Banco de la Republica has announced, however, that it will intervene to accumulate reserves and reduce short-run volatility through auctions of put or call foreign exchange options whenever the average exchange rate of a given day is more than 5% above or below its 20-day moving average.
Result of capital account liberalization	Colombia attracted large inflows of foreign private capital after structural reform. Inflows amounted to 5 percent of GDP in 1993 and 8.4 percent of GDP in 1996. To restrain inflows and their pressure on the exchange rate, Colombia at first intervened by partially sterilizing the inflows through open market operations. However, Central Bank losses as a result amounted to 0.8 percent of GDP in 1991 and the higher interest rates continued to induce inflows. In addition to devaluing the peso, easing restrictions on outflows, and strengthening prudential regulation, the authorities imposed a 10 percent withholding tax aimed at current account transactions used for speculative purposes. In 1993, an unremunerated reserve requirement was imposed on external borrowing of less than 18 months maturity.
Effectiveness of controls	Evidence suggests that the URR lengthened the maturity structure of external debt, although this must be interpreted with caution since Colombia concurrently introduced an exchange rate band that may have helped reduce speculative flows. The effects of the URR on total inflows in inconclusive, although as noted above inflows increased in size after the introduction of the URR. Villar and Rincon (2000) argue that the URR was effective in providing room in which the central bank could reconcile dampening domestic demand while braking the appreciation of the peso. The effectiveness of the controls in reducing the volatility of inflows is still to be determined, but the Chilean experience suggests that the volatility of inflows might decrease.
Lessons	The Colombian experience reflects a number of the themes of capital account liberalization. First, the evolution of the Colombian exchange rate regime has been towards greater flexibility during the period of capital account liberalization. Second, the presence of lax fiscal policy has complicated the task of monetary policy in controlling inflation and limiting real exchange rate appreciation. This led to the imposition of a URR similar to Chile's. Third, the authorities have improved the functioning of the financial system and the quality of regulation that has proved instrumental in the success of the liberalization program.

Brazil

Background	In the early 1990s, the Brazilian economy was experiencing an inflationary spiral. A wide arsenal, including price and wage controls, freezing bank deposits, tighter monetary policy, tax increases and sequestering financial assets, was deployed unsuccessfully against it. Large fiscal funding requirements encouraged expectations of further inflation and raised the interest rate differential which, in conjunction with a stable exchange rate, induced large inflows. These inflows were further encouraged by a further liberalization of capital inflows.
Sequencing of reforms	Brazil signed Article VIII in November 1999. Capital account liberalization has progressed in fits and starts over the course of the 1980s and 1990s since it has been complicated by the large imbalances that have led to periods of hyperinflation. Financial sector reform has also proceeded at a fitful pace, although Brazil already possesses a relatively sophisticated financial system.
Exchange rate policy	The central bank sets an adjustable band for the dollar value of the real and maintains a continuing crawling peg within the band.
Capital controls	<p>Large inflows led the authorities to introduce various control measures to contain short-term inflows. With a lack of fiscal adjustment, domestic interest rates had to be kept high to reduce aggregate demand, while pressures for exchange rate appreciation and sterilization costs had to be reduced.</p> <p>A complex mixture of direct and price-based measures were used, including changing banking regulations and increasing amortization terms for loans. Coverage was extended as markets adopted derivative strategies based on exempted inflows to circumvent the controls, while tax rates were altered to target short-term inflows. Regulations were also loosened during the Mexican and Asian crises to relieve pressure on the capital account.</p> <p>After the Real Plan was introduced in 1994, more controls were implemented to lengthen the maturity structure of inflows by, among other measures, banning investments in certain assets and increasing the entrance tax on certain classes of inflows. In 1995, differentiated tax rates related to the maturity of loans was introduced along with measures to ban on short-term inflows into fixed income investments and foreign access to the derivative market.</p>
Effectiveness of controls	The various controls on capital inflows and the liberalization of outflows appear to have reduced net inflows into Brazil. Over the 1992-1995 period, average monthly net private capital flows were \$970 million, which consisted primarily of short-term funding. The porosity of the controls in the context of highly sophisticated financial markets, high interest differentials and fiscal imbalance rendered the controls largely ineffective in altering the size of composition of inflows.
Lessons	The Brazilian experience suggests that the lack of macroeconomic reforms (especially in terms of fiscal policy) can induce perverse outcomes with respect to inflationary expectations and capital inflows. In a context of high interest rate differentials and sophisticated financial markets, it is unlikely that capital controls will be able to effectively alter the scale of net inflows or their composition. Cardoso and Goldfajn (1998) find that an increase in controls have a temporary effect on the scale and composition of inflows, but that the effect is only temporary.

India

Background	After the economic crisis of 1991, India embarked on a liberalization process that has begun to reverse decades of inward-looking and interventionist policies. Industrial licensing has been abolished and trade barriers have been reduced. Over the course of the 1990s, a cautious and gradual move towards more capital account openness was underway, although considerable obstacles to full convertibility are still present.
Sequencing of reforms	Signed Article VIII in August 1994, although some current account controls have been maintained that are consistent with these obligations. Capital account liberalization has proceeded at a gradual pace. The 1997 Tarapore Committee on Capital Account Convertibility recommended a cautious approach that seeks to establish the preconditions for liberalization on a sound footing. These include fiscal consolidation, an inflation target and, most importantly, the strengthening of the financial system. Consequently, more stable flows such as direct and portfolio investment have been liberalized first, followed by partial liberalizations of debt-creating flows, derivative transactions and capital outflows. Financial reform has continued concurrently.
Exchange rate policy	India has pursued a flexible exchange rate policy in the context of a managed float.
Capital controls	India maintains an extensive capital control regime, despite the liberalization of the past decade. Controls have been quantity-based rather than market-based and have been administratively enforced. They have been oriented towards limiting the country's external debt, particularly acting to reduce excessive exposure to short-term foreign debt. Controls remain on the external exposure of pension funds and insurance companies and the external assets of banks are closely monitored.
Effectiveness of controls	India's controls have been largely effective in limiting measured capital flows and in shifting their composition towards long-term flows. Among other factors, such as the economy's limited trade and financial linkages with the global economy, controls insulated India from the 1997 Asian crisis. Indeed, long-standing and extensive capital controls have reduced the country's vulnerability to external crisis. It should be noted however, that the extensive controls of the 1970s and 1980s did not prevent India from experiencing high levels of external indebtedness and balance of payments crises in 1980 and 1991. There is evidence of evasion and avoidance of controls working through trade misinvoicing. Furthermore, controls carry significant administrative costs, burden legitimate transactions and create inefficiency.
Lessons	India's experience illustrates the gradual approach to capital account liberalization. CAC has proceeded gradually in the context of a broad reform agenda that encompasses trade, competition and industrial restructuring. Emphasis has been placed on the reform of the financial system as a pre-condition for capital account liberalization. The Report of the Committee on Banking Reform has set out the large-scale reform agenda that is required. India's experience also reveals the effectiveness of the present control regime in preventing, along with other factors, a build-up of short-term external liabilities that could increase the country's vulnerability to externally-generated crises. In contrast to the countries affected by the Asian crisis, India also limits banking assets held in real estate, foreign currency and equities. Thus, the balance sheets of Indian banks are not subject to the same degree of volatility. By effectively shifting the composition of inflows towards more stable, long-term flows, India can receive the benefits of capital account liberalization while limiting vulnerability while financial sector reforms proceed.

Malaysia

<p>Background</p>	<p>In the early 1990s, Malaysia faced large inflows of foreign capital, comprising both short- and long-term capital. The significant increase in short-term inflows (which rose from 5.3 percent to 8.7 percent of GDP in 1993), induced mainly by a high interest rate differential and expectations of a ringgit appreciation, increased concerns regarding sustainability and stability. Domestic interest rates, however, remained high to restrain inflation. The high costs of sterilization and its maintenance of high interest rates, led authorities to implement controls on short-term capital inflows.</p> <p>In 1997, in the midst of a financial crisis, Malaysia implemented controls on capital outflows in order to limit downward pressure on the exchange rate and upward pressure on domestic interest rates that were exacerbating the contraction that was already under way and undermining the financial system. The controls also served to "buy time" for domestic adjustment and to insulate the economy from the international market turmoil. Initially, the authorities tried to break the link between onshore and offshore rates by setting limits on ringgit non-trade related swap transactions with non-residents, but these reinforced large interest differentials and induced greater outflows. Consequently, the authorities decided to impose direct exchange and capital control measures in September 1998. These sought to contain ringgit speculation and the outflow of capital by eliminating the offshore ringgit market.</p>
<p>Sequencing of reforms</p>	<p>Malaysia accepted Article VIII obligations in 1968. Malaysia has always had a relatively open capital account. Since the mid-1980s portfolio inflows have been free of restrictions, and bank's foreign borrowing and lending in foreign exchange has been free (except for net foreign exchange open position limits). Residents' foreign currency borrowing is subject to limits that require approval if they are to be exceeded. Before the crisis, cross-border activities in ringgit were also free. Financial sector reform has been accelerated in the wake of the crisis.</p>
<p>Exchange rate policy</p>	<p>Before the July 1997 crisis, Malaysia engaged in a managed float of the ringgit. With the imposition of controls in September 1998, Malaysia pegged the ringgit to the US dollar.</p>
<p>Capital controls</p>	<p>Inflow controls in 1994 were seen as temporary measures to restrain short-term inflows, particularly in the form of foreign borrowing by banks and ringgit deposits opened by bank and non-bank foreign customers. The measures included :</p> <ul style="list-style-type: none"> • prohibitions on residents selling Malaysian money market securities to non-residents, • prohibitions on banks engaging in non-trade related bid-side swap or forward transactions with non-residents, • ceilings on banks' net liability positions (excluding trade and FDI flows) to curtail foreign borrowing to engage in non-trade and portfolio transactions, • a requirement that banks place with the central bank the ringgit funds of foreign banks maintained in non-interest bearing accounts. <p>In addition to these measures also eased interest rate policy, curtailed sterilization measures and introduced increased prudential regulation to contain the excess liquidity in the banking system. The controls were largely lifted by the end of 1994.</p> <p>The outflow controls imposed in September 1998 sought to eliminate channels through which speculative positions against the ringgit could be taken. The controls excluded FDI and current international transactions. The essential elements of the controls were:</p> <ul style="list-style-type: none"> • the closure of all channels for taking ringgit abroad • required the repatriation of ringgit held abroad to Malaysia • blocked repatriation of portfolio capital held by non-residents for 12 months • imposed restrictions on transfers of capital by residents <p>Further measures to close loopholes, such as amending the Companies Act to limit dividend payments, were also enacted.</p> <p>In February 1999, the one-year restriction on repatriation of portfolio capital was replaced by an exit levy that penalizes early withdrawal of funds. The levy applies to principal or profits of non-residents' portfolio investments, depending on whether the funds were brought in before or after February 15, 1999. The objective was to encourage investors to extend their investment horizons in Malaysia and to induce a smooth outflow of funds (rather than a sudden outflow when the holding period expired).</p>

<p>Effectiveness of controls</p>	<p>The 1994 controls on capital inflows were largely successful in achieving their objectives of containing short-term inflows and the monetary expansion and instilling stability in the foreign exchanges. Monetary aggregates significantly decelerated and the capital account surplus fell in response to a reversal in short-term inflows in the second half of 1994 (particularly new external liabilities of the banking system). Long-term flows such as FDI were unaffected. Some caution is required in interpreting the evidence, however, since authorities were simultaneously lowering the interest rate differential and ending sterilization operations which may also be expected to lower short-term flows.</p> <p>The controls on outflows imposed in late 1998 were effective in eliminating the offshore ringgit market. The restrictions on the internationalization of the ringgit were essential in achieving this objective, especially the freezing of external ringgit accounts. The absence of speculative pressure on the ringgit, following the imposition of controls and the currency peg, in an environment of significantly relaxed monetary and fiscal policy is evidence of the controls' effectiveness. No parallel market has emerged and evasion and avoidance of controls through measures such as misinvoicing appear minimal. More studies are required to estimate the effectiveness of the controls.</p>
<p>Crisis?</p>	<p>Yes. Malaysia was hit by the 1997 Asian crisis which followed the Thai baht's devaluation. While Malaysia's fundamentals were relatively strong (high growth, low inflation, full employment, relatively strong financial system and, in contrast to Thailand and Indonesia, no massive build-up of short-term overseas debt), two vulnerabilities had been developing: a massive accumulation of outstanding domestic credit and a large exposure of the banking system to the property sector and share trading. When the crisis erupted, the ratio of outstanding credit to GDP stood at 160%, up from an average level of 85% during 1985-1989. As much as 45% (and perhaps as high as 55%) of outstanding bank credit in 1996 was to the property and share trading sector. Thus, speculators reasoned that an interest rate defence of the ringgit was untenable and that the massive increase in credit was evidence of a decline in the quality of borrowers. After the baht's fall, the ringgit was placed under speculative pressure. Bank Negara relented and the currency depreciated rapidly. In contrast to Thailand and Indonesia which accepted IMF programs, Malaysia stood apart and instead implemented a capital control regime that would insulate it from market pressures while it sought to stimulate a recovery through more relaxed monetary and fiscal policy and reform the financial structure.</p>
<p>Lessons</p>	<p>The Malaysian experience with inflow controls in 1994 suggests that they can be effective when they are complemented by measures to reduce the interest rate differential and heighten prudential regulation. It also suggests that controls that are temporary in nature are also more effective in that they limit the increased porosity of controls that develops over time. The overall macroeconomic policy stance, particularly by maintaining a tight fiscal policy, also served to complement the inflow controls.</p> <p>While Malaysia had comparatively strong fundamentals when compared to other affected countries, the 1997 crisis revealed weaknesses generated by rapid credit expansion and the consequent deterioration of bank asset quality. The crisis led to a reassessment of the risks associated with regional banks and pressure soon escalated against the ringgit. The Malaysian experience suggests the importance of close central bank monitoring of the uses to which external funds are being directed and whether their properties are consistent with the type of inflows (for example, the excessive funding of non-tradeable sectors such as real estate with short-term inflows may signal greater vulnerability). Furthermore, improved bank surveillance and enforcement is required to rapidly ensure provisioning in banks with escalating non-performing loans.</p>

Thailand

<p>Background</p>	<p>Like Malaysia, in the early 1990s Thailand experienced a large inflows foreign capital. A pegged exchange rate, an open capital account and large interest rate differentials induced large and often volatile short-term inflows. The establishment of the Bangkok International Banking Facility (BIBF) in 1993 along with incentives to borrow through it, accelerated short-term capital inflows. The size and volatility of inflows increased inflationary pressure and hindered monetary policy. In 1995, through monetary, prudential and market-based capital control measures, the authorities sought to deal with the large inflows. Continued strong inflows required an extension of the control program in 1996.</p> <p>In 1997, Thailand was hit by substantial speculation against the baht in the wake of a deteriorating current account deficit and developing financial sector problems. These trends led to increasing questioning of the sustainability of the exchange rate peg. It was, correctly, assumed that the high interest rates required to sustain the peg were incompatible with the state of the economy and the stability of the banking system. To combat the speculative pressure, the authorities imposed capital controls in May 1997. The controls sought to close the channels for speculation against the baht.</p>
<p>Sequencing of reforms</p>	<p>Thailand accepted Article VII obligations in 1990. Thailand has always maintained a fairly open capital account, particularly with respect to capital inflows. The establishment of the BIBF in 1993 greatly increased the freedom to import short-term foreign capital into the country. While inflows were liberalized early in the reform effort (1985-1986 and 1990-1995) outflows were liberalized only gradually (1990-1992, 1994). Financial sector reform lagged this process of openness and was one of the key factors leading to the crisis.</p>
<p>Exchange rate policy</p>	<p>Thailand pegged the baht to a basket of currencies (primarily weighted towards the US dollar) since 1984. In the aftermath of the crisis, the control regime resulted in the creation of a two-tier currency market, with separate exchange rates for investors who buy baht in domestic and overseas markets.</p>
<p>Controls</p>	<p>In conjunction with raising interest rates, increased sterilization of inflows and the prudential reduction of loan-deposit ratios in vulnerable banks, the authorities introduced more direct controls aimed at capital inflows in August 1995. These included:</p> <ul style="list-style-type: none"> • asymmetric open position limits for short and long positions • a reporting requirement for banks on risk control measures in foreign exchange and derivatives trading • a seven percent reserve requirement on non-resident baht accounts with less than one-year maturity and on finance companies' short-term foreign borrowing. <p>Restrictions were also placed on banks' non-priority lending in foreign exchange and on their foreign currency exposure.</p> <p>In 1996, with continued strong inflows, the authorities (a) extended the seven percent reserve requirement to non-resident baht borrowing with a maturity of less than one year and new offshore borrowing of maturities of less than one year by commercial and BIBF banks, (b) the minimum capital adequacy requirement for commercial banks was raised.</p> <p>In 1997, in the face of declining reserves and a costly interest rate defense of the baht, the Thai authorities sought to prevent speculation against the baht by adopting a set of capital controls. These included:</p> <ul style="list-style-type: none"> • financial institutions were required to suspend transactions with non-residents that could lead to a build-up of baht positions in the offshore market. • The prohibition on purchasing before maturity baht denominated bills of exchange and other debt instruments requiring payment in US dollars. • Foreign equity investors were prohibited from repatriating funds in baht (but were free to repatriate funds in foreign currencies) • Non-residents were required to use the onshore exchange rate to convert baht proceeds from sales of stocks. <p>The controls sought to deny non-residents without genuine commercial or investment transactions access to domestic credit needed to create a net short domestic currency position, while exempting genuine business related to current account transactions, FDI flows and portfolio investments.</p>

<p>Effectiveness of controls</p>	<p>The 1995 measures contributed to a slowdown in economic activity and decelerated the pace of foreign borrowing but it was only with the extension of the measures in 1996 that total net flows fell and shifts in their composition were seen. The mix of measures designed to address large capital inflows seem to have attained their objectives:</p> <ul style="list-style-type: none"> • net capital inflows were reduced • short-term net inflows declined as a percentage of total inflows between 1995 and 1996 • the maturity of BIBF loans increased • the share of short-term debt in total debt declined • marginally reduced the growth of non-resident baht accounts <p>Two cautionary notes are required, however. First, isolating the effectiveness of the control regime from other factors (such as declining investor confidence) is difficult. Second, the true maturity of inflows is often weakly related to their maturities as measured in the balance of payments accounts. The controls did not prevent Thailand from experiencing the devastating experience of a reversal of inflows a year later and, as that crisis revealed, they did not prevent foreign funds from flooding non-tradable sectors with no capacity to generate foreign exchange. Only about half of bank's foreign currency loans were granted to foreign exchange generating sectors.</p> <p>The 1997 controls reduced trading in Thailand's swap market where investors buy and sell to hedge currency risks for investments in Thailand. They also temporarily halted speculative attacks on the baht by segmenting the onshore and offshore markets. However, controls did not prevent outflows through other channels, given the large spread between the onshore and offshore interest rates. Controls also could not prevent the devaluation of the baht in July 1997 that initiated the Asian crisis. The 1997 controls provided only very brief respite for the Thai authorities. Circumvention was aided by the narrow range of the controls, their inability to eliminate the offshore baht market (as Malaysia post-crisis controls eliminated the offshore ringgit market), and the continued deterioration of conditions in the financial sector and the macroeconomy. Thus, controls served to undermine investor confidence further and discouraged capital inflows. In January 1998, as the economic environment improved, controls were removed and the baht appreciated along with riding stock market prices.</p>
<p>Crisis?</p>	<p>Yes. Thailand experienced weakening fundamentals during the course of 1997 and increasing speculative pressure against the baht. The combination of a fragile financial system, a pegged exchange rate and liberalized short-term inflows built-up large exposures to short-term foreign currency denominated debt that raised fundamental concerns of policy viability. The devaluation of the baht in July 1997 signalled the start of the Asian financial crisis.</p>
<p>Lessons</p>	<p>Thailand's experience with capital account liberalization highlights several important points. First, the reform of the financial sector and improvements in prudential regulation and enforcement lagged the implementation of greater capital account liberalization (especially the introduction of the BIBF in 1993). Second, the liberalization of short-term inflows in the context of high domestic interest rates and a pegged exchange rate led to a substantial increase in short-term liabilities of banks and financial companies. Third, the use of controls in 1995-1996 may have precluded moves towards greater exchange rate flexibility and development of indirect monetary policy instruments. Fourth, the controls implemented before the currency crisis of July 1997 were ineffective in altering the basic constraints facing Thai policymakers: they failed to halt the speculative pressure against the baht and may have exacerbated negative perceptions of Thai policy. The experience demonstrates that, as in Brazil, controls cannot be a substitute for sound macroeconomic policies, financial sector reform and effective prudential regulation and enforcement.</p>

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Annex 3: Unrecorded Capital Flows, 1988-1994 (millions of US dollars)

Regions	1988	1989	1990	1991	1992	1993	1994
East Asia							
Cambodia	0	0	0	0	36	38	-61
Fiji	-20	-9	4	-21	5	44	57
Indonesia	887	1352	6827	4981	22698	17625	20668
Korea	1473	-529	1637	-2727	-1285	5910	-598
Laos	92	71	252	47	-1	39	64
Malaysia	-1285	-1403	-442	260	-1109	-2172	6103
Mongolia	-1035	-1360	-524	0	198	53	80
Myanmar	-230	-454	223	196	330	-270	113
Papua NG	-189	-20	287	300	1467	212	223
Philippines	-904	-1229	-228	-403	-1584	1195	1751
Thailand	-1313	-2597	-3013	-2612	-3588	-3263	2174
Tonga	-11	2	26	-10	-6	-2	24
Vanuatu	21	1	29	33	31	134	-10
Samoa	-7	0	15	22	-63	47	0
China	3268	1269	10425	9217	25346	24407	24188
South Asia							
India	-4268	8301	3838	-1058	823	-979	1040
Maldives	-5	8	26	2	-2	-23	9
Nepal	-87	-11	-38	-337	-306	-86	-99
Pakistan	-1236	389	1214	1738	-936	-826	1774
Sri Lanka	205	-479	300	-170	-657	-520	278
Bangladesh	121	-355	947	374	-96	447	1241
Sub-Saharan Africa							
Angola	451	989	672	474	365	-74	0
Benin	-167	114	-20	18	-61	37	108
Botswana	-160	-20	-123	-513	-250	-348	-351
Burkina Faso	-67	-16	16	13	-40	-94	0
Burundi	-45	39	-43	-8	-21	3	30
Cameroon	-275	338	692	-293	151	-766	0
Cape Verde	-5	3	-7	5	-11	-21	-7
Central African Republic	-22	-18	-78	37	-46	10	-69
Chad	63	-65	91	47	35	20	-7
Comoros	-3	-22	5	-17	1715	-1369	-1745
Congo (Brazzaville)	-658	100	309	-555	-407	-190	0
Cote d'Ivoire	-1237	426	1337	-493	-1112	-54	-655
Eithiopia	144	22	31	524	-13	20	0
Equatorial Guinea	-5	-1	4	31	20	40	77
Gabon	-255	308	618	141	-230	-142	468
The Gambia	6	52	56	13	31	15	7
Ghana	-373	111	186	82	-18	-129	912
Guinea	17	-21	106	-88	-143	229	80
Guinea Bissau	-12	18	89	17	-66	11	0

Regions	1988	1989	1990	1991	1992	1993	1994
Kenya	-394	-576	760	126	-768	-169	474
Lesotho	31	70	133	91	31	-30	101
Madagascar	-132	-246	159	72	-837	-254	58
Malawi	528	1620	2330	3849	4251	4797	5160
Mali	-185	-41	140	-51	-104	-113	107
Mauritania	-62	-110	172	49	-225	14	133
Mauritius	-164	-245	-178	-137	-75	-150	192
Mozambique	-194	-91	-71	-287	-125	0	0
Niger	-73	-270	155	-228	-75	19	0
Nigeria	1211	2538	5639	1173	3453	1502	2505
Rwanda	-25	-50	14	2	-38	-38	-56
Senegal	-410	-817	318	-374	-232	-192	0
Seychelles	-13	-11	46	15	-5	-20	27
Sierra Leone	-28	-10	65	95	-6	3	-69
Somalia	-19	-63	136	-32	-106	34	54
Sudan	12	1761	1090	-420	-226	0	0
Swaziland	46	13	58	58	-35	84	50
Tanzania	4	-531	-15	-326	-326	-156	71
Togo	-43	-105	-25	-6	-37	-66	115
Uganda	-170	10	179	55	45	-54	292
Congo	-817	-150	290	139	-600	225	799
Zambia	-40	-288	-7	-284	-401	-207	-349
Zimbabwe	-167	169	211	-313	174	-120	224

Middle East and North Africa

Algeria	357	674	2084	1601	44	-551	889
Egypt	625	-649	-279	5987	9556	312	5176
Iran	-1173	-1803	3153	-5044	-1636	5800	2966
Jordan	-1034	646	215	-1950	-1814	-512	-385
Morocco	518	-30	160	-3208	-918	-439	657
Oman	334	130	879	-460	-734	-110	-922
Syria	879	2208	1476	2563	121	358	-108
Tunisia	-160	79	448	239	-358	-543	94

Europe

Albania	-161	-290	188	23	83	168	-44
Bulgaria	-381	858	-76	1127	-586	-658	-927
Estonia	0	0	0	0	283	129	219
Hungary	-705	27	1821	1418	446	-2199	1641
Malta	166	74	256	170	-31	-9	-317
Poland	-1175	-277	7309	4596	-5547	-5561	-4038
Portugal	-1442	-173	2562	-53	4738	10782	10711
Romania	587	-611	-1691	681	-319	58	776
Slovenia	0	0	0	0	407	2171	292
Turkey	810	-398	4958	3763	4057	6461	1169
Yugoslavia	-760	-2092	-4967	270	0	0	0

Regions	1988	1989	1990	1991	1992	1993	1994
Latin America							
Argentina	-2000	7595	-1	2746	-3582	2137	18802
Barbados	141	13	71	-10	98	-4	344
Belize	-8	-11	26	21	-10	-13	0
Bolivia	-1159	-950	-41	-437	-321	-307	400
Brazil	1618	-3810	1561	115	1423	10248	4266
Chile	-1990	-1315	-770	-2017	-1424	-254	149
Columbia	-263	-205	770	1049	423	-1380	632
Costa Rica	-490	-406	-901	20	-413	-223	-341
Dominica	4	-20	-18	-7	-14	-17	-3
Dominican Republic	52	-42	354	-134	-174	153	50
Ecuador	-229	-59	476	-186	-186	1057	1855
El Salvador	75	-180	-220	-39	-104	-422	45
Grenada	13	-16	3	-11	-15	22	-45
Guatemala	-100	-365	68	-662	-664	-574	-513
Haiti	-82	-71	33	-271	-19	-89	-73
Honduras	-69	-12	305	-513	-2	384	155
Jamaica	-286	-279	-198	-298	-204	-385	-11
Mexico	-3113	-8204	4054	-4100	-18267	-5703	11213
Nicaragua	6	576	683	-129	-210	-942	-90
Panama	1001	394	188	-243	-173	411	-491
Paraguay	-202	155	-593	-578	-549	-615	-526
Peru	-476	-122	340	-1464	-2506	-529	162
St Kitts	-3	6	10	-8	-7	-15	-11
St Lucia	13	-27	-5	-17	-1	-9	0
St Vincent	6	-5	5	-8	-5	15	76
Trinidad and Tobago	356	82	844	269	234	81	627
Uruguay	-428	1464	597	-28	-1520	-57	-34
Venezuela	-1748	-226	6693	2132	1210	-2664	42