



Institute of Social Studies

Graduate School of Development Studies

COPING WITH CAPITAL INFLOWS SURGE

***THE MACROECONOMIC IMPACT OF THE CAPITAL INFLOWS AND THEIR
MANAGEMENT WITH RESPECT TO CHILE, THAILAND AND KENYA***

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Table of contents

	Page
Acknowledgement	IV
List of tables and figures	V
Chapter one: Introduction	
1.1) Objectives	1
1.2) Background	1
1.3) Problem Statement	4
1.4) Hypothesis	5
1.5) Data and Methodology	6
Chapter Two: The capital Inflows: Theory and Literature Review	
2.1) Conceptual Issues	7
2.2) Theoretical Framework	9
2.3 Capital inflows Literature Review	15
Chapter Three: Capital Inflows and their Macroeconomic Impact	
3.1 Capital Inflows: cross-country comparisons	19
3.2 Macroeconomic Impacts	22
3.2.1 Impact on aggregate demand	22
3.2.2 Impact on exchange rate	24
3.2.3 Impact on current account	27
3.2.4 Impact on inflation	29
3.2.5 Impact on economic growth	31
Chapter Four: The Countries Macroeconomic Policy Response	
4.1 Macroeconomic policy Options	34
4.2 Variations in Policy Responses	44
4.3 Macroeconomic outcomes	46
4.4 Policy Lesson	47
4.5 Policy Implication	48
Chapter Five: Conclusions	50

**For my beloved wife, Yasmin
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List of tables and figures

Tables

3.1 Composition of Capital Flows since 1990-1998

3.2 Use of capital inflows during surge periods

4.1: Summary for the policy measures

A1: Selected Economic Indicators since 1985-1998

A2: Other Selected Economic Indicators since 1990-1998

Figures

3.1 Net Private Capital Inflows

3.2 Real Effective Exchange Rate

3.3 Current Account

3.4 Inflation

3.5 Real GDP

Chapter one: Introduction

The main objective of this paper is to conduct a descriptive comparative study on macroeconomic impacts of capital inflows and their management in Chile, Thailand, and Kenya. The surge of Capital inflows in these countries took place in different time period and had different compositions (recently mainly in the form of volatile short-term capital inflows). The capital inflows had different macroeconomic impacts because of difference in policy environment and the nature of capital composition in these countries. The inflows boost investment in Thailand and Chile (more importantly in Thailand) whereas in Kenya stimulated more consumption and surge in imports. The short-term capital inflows to these countries brought about appreciation of the real exchange rates, deterioration of the current account, capital flight, and uncertainty in the domestic markets. To manage these massive short-term capital inflows governments undertook different policy measures as prudential measures and capital controls to counteract the speculative nature of the inflows. In general, the authorities managed to attain a short-lived relief from these capital controls.

1.1 Objectives of the Research

The objectives of my research paper are to examine the nature and composition of the capital inflow and assess their **macroeconomic impact** on:

- Aggregate demand
- Real exchange rate (RER),
- Current Account of Balance of payment (BOP),
- Inflation
- Economic growth.

1.2 Background

The international community has long recognized that developing countries need a substantial capital inflow of external sources in order to fill the savings and foreign exchange gaps to overcome widespread poverty and to lift living standards to acceptable levels. However, Diaz-Alejandro (1985) was among the first to warn of the danger of financial liberalization. Describing the Chilean experience of the late 1970s and early 1980s.

Chile's first full liberalization of the capital account in 1979 was linked to the subsequent debt and currency crisis in 1982. This was largely the result of liberalizing capital flows when the domestic financial sector had not been reformed, and in the presence of an unsustainable fixed exchange rate, and backward-looking indexation of wages (see, Edwards and Cox, 1997). These weakness, combined with lack of prudential supervisory regulations and a deep recessions beginning at the end of 1981, generated a sharp reduction in capital inflows (capital flight), a deterioration in terms of trade, and resulted in a financial crisis that spread throughout the financial system by the beginning of 1983. To correct this the authorities undertook massive structural reforms in the late 80s such as banking reforms. Hence, capital inflows again started to come in since 1989.

Whereas, in Thailand, the resurgence of capital inflows started since in 1988 due to full integration of the country's financial system with international financial markets. And since the early 1990s, offshore banking (at the Bangkok International Banking Facility, BIBF) has provided direct and relatively cheap links to the international credit markets. Capital inflows in recent years were dominated by private sector short-term capital (Ariyoshi, 2000). These developments bring about significant changes in the nature of capital inflows, and in their impact on the economy. The growing size and volatility of these inflows, particularly in early 1995 threatened the economy. In May 1997, the baht (Thai domestic currency) came under severe speculative attack and the capital started to move out of the country.

In Kenya, liberalization of the financial sector began in 1989 with measures intended to harmonize interest rate regulations for banks and nonbanks financial institutions. The measures include easing rigidities in financial sectors by freeing prices, liberalizing foreign trade and foreign currency transactions, and relaxing credit ceilings and interest rate controls. Liberalisation of the capital account was made in 1991 with out restrictions. However, capital do not seem to come in. Instead, the capital was going out from the country following the liberalisation. The main lesson from Kenya's experience seems to be that rapid and wide-ranging liberalisation may have increased the country's vulnerability to capital flows by providing legal channel for capital flight (Ariyoshi, 2000, 66).

The accumulation of external debt that eventually resulted in the international debt crisis (in 1970s, 1980s and 1990s) was the result of an episode of capital inflows to developing countries in the form of syndicated bank loans directed almost exclusively to public sector

borrowers. The recent history of the international finance market liberalisation, both domestic and international, is characterised by costly financial crises. The recent series of financial crises include the Asian crises, Mexico (in 1976, 1980s, 1995) and Argentina (in 1980s), Brazil, Peru, Thailand and the crises in Chile.

The international capital movements were also having important macroeconomic effects. They were helping finance higher investment and growth, but there was also a tendency for the real exchange rate to appreciate and current account to worsen. Monetary control became difficult as the inflows persisted and an increasing share of inflows came in the form of short-term capital.

The new capital inflows, however, were very different in character from those of the previous episode. The previous capital movements were in the form of multilateral official transfers (grants) and concessional loans. But the new capital inflows mainly are composed of direct foreign investments (FDI- long-term investment) and private portfolio investments (short-term in nature). Perhaps even more surprisingly, in view of the enormous economic costs associated with the debt crisis, the resurgence of capital inflows was not viewed as an unmitigated blessing by the recipient countries. Indeed, the arrival of large amounts of foreign capital was perceived as posing serious challenge to domestic macroeconomic management.

These crises shed light on the danger international short-term capital and importance of its control. In this regard, the authorities of capital recipient countries should play an essential role in the financial markets to overcome market failure and boost economic development. The important role of the country may include capital controls. Developmental states like Chile and Thailand played this essential role of controlling and allocating capital directly into specific sectors in order to promote investment.

This paper examines and reviews both the macroeconomic challenges posed by the arrival of the capital inflows as well as the policy responses undertaken by the recipient countries with respect to Thailand, Chile and Kenya. It is organised into five chapters. The first chapter provides introduction, an overview of the paper. Second chapter looks at some of conceptual issues and theoretical explanations offered for the macroeconomic impact of capital inflows by reviewing the literature on this issue. In chapter three I will analysis the macroeconomic impacts of resurgence of capital inflows in countries under discussion. In Chapter Four I will

turn into an exploration of the policy challenge posed by the inflows, macroeconomic outcomes, policy lessons and implications. The last chapter will be based on conclusions drawn from the analysis. An important issue that rose to the fore in association with the capital inflows of the early nineties was vulnerability of the recipient countries to sudden capital flows, which resulted in currency crisis (in 1997 the Thai baht was in crisis).

1.3) Problem Statement

After capital account liberalisation, the foreign capital started moving to most developing countries during the 1980s and the 1990s. As reported by Eichengreen (1999), that net capital flows to developing countries tripled from USD 50 billion in 1987-89 to more than USD 150 billion in 1995-1997. Capital inflows or capital account transactions often are categorised into foreign direct investment (FDI) and portfolio investment. Direct investment usually involves long term projects and bring not only real assets such as fixed assets and working capital, but also financial flows (equity). Meanwhile, portfolio investment is closely classified as short-term flows and encompasses trade in securities like stocks, bonds, bank loans, and various forms of credits. Unlike FDI, portfolio investment has special characteristics and more volatile in nature.

It is evident that the surge has primarily been an East Asian and Latin American phenomenon. In both cases, the pace of inflows accelerated after 1991. This phenomenon may recently have become more widespread, reaching South Asia as well as Sub-Saharan Africa (particularly Kenya and Uganda) in 1993 (Eduardo, 1995, 10). In economies that are trying to stabilise, macroeconomic problems associated with volatile capital inflows include loss of domestic monetary controls, real appreciation, and increased instability.

The transition was led by East Asian countries that had been much less affected by the debt crisis than had the major countries in Latin America, but many of the latter also soon began to participate in the new capital inflow episode. To date, however, a large number of small low-income countries, particularly in sub-Saharan Africa, remain much less integrated with international financial markets.

1.4) Hypotheses:

a) Impact on exchange rate

My first hypothesis is that when capital inflows such as foreign direct investment (FDI) and portfolio investments (short-term capital inflows) increase in a country will stimulate the *aggregate demand*. In addition, the demand for the local currency may increase which in turn lead to appreciation of local currency. This appreciation will lead to loss of the export competitiveness in the international market. From macroeconomic point of view the episode of capital inflows may lead to *exchange rate appreciation* pressure. All the countries under discussion followed real appreciation in the face of the capital inflows.

b) Impact on Current account

Large proportions of the capital inflows can be used to finance domestic absorption namely investment and consumption. This finance of domestic absorption may tend to increase the imports from abroad. So it is likely to run huge deficit in BOP and hence on *current account*. For instance, Both in Chile and Thailand increase in absorption during the surge of capital inflows were dominated by investment. But the changes in the composition of absorption were heavily biased in favour of investment in Thailand leading to huge current account deficits. However, the capital inflows in Kenya increased more consumption and imports.

c) Impact on inflation

When a capital inflow is associated with an upward shift in the demand for money (induced, say, by financial deregulation), no policy action is required because, in this case, the expansion of the monetary base will not be inflationary or threaten external viability. However, if authorities heavily sterilise the capital inflows the increase in foreign reserves may lead to an increase in reserve money (Thailand and Kenya), which in turn, increase inflationary expectations and a deterioration of external position leading to escalation of domestic prices through expenditure rise. It may be necessary, however, for the central bank to intervene in the (relatively thin) money and foreign exchange markets to smooth fluctuations in the exchange rate and interest rates. One possible cause for concern is that banking credit is likely to expand as money balances increase. With a poorly supervised and weak banking system, the increase in commercial banks' reserves could lead to excessive risk taking in lending activities, and measures may be needed to restrict bank intermediation.

d) Impact on economic growth in host countries

Free Capital mobility may have important benefits such as it lead to economic efficiency and development. Particularly, it creates valuable opportunities for portfolio diversification, risk sharing, and trade. Capital mobility can enable investors to achieve higher risk-adjusted rates of returns. Capital mobility not only bring resources, but also financial market can contribute to enhancing efficiency in resource allocation, easing external constraint, technology transfer, and better management and business practices. In addition, international capital movement increases the availability of foreign savings to supplement domestic resources that deliver faster rates of growth.

1.5) Data and Methodology

I will use data on capital inflows, real exchange rate, balance of payment, and economic indicators from these countries in general. I will use descriptive qualitative research method to make comparative study between the countries such as graphs and tables to explain the impacts and trends, and explore country policy response to manage the capital inflows.

In Sum, the reasons that I opt for these countries are that Thailand is one of the largest capital importers in the South East Asia and also the same for Chile in Latin America. The episode of the inflows in these countries resulted in financial and economic crisis (1982 in Chile, 1997 in Thailand and in 1994 in Kenya). However, by 1992 there were signs that a few African countries, notably Kenya had begun to attract private capital inflows. Many of the less desirable side-effects of capital inflows also became evident. All in these countries real exchange rate pressures and current account deterioration emerged. Attempts to sterilize the foreign exchange transaction through either open market operations or increase reserve requirements often drove domestic real interest rates higher, acting as a further stimulus to inflows and increasing debt-servicing costs for the governments. What is the appropriate policy response, then? The purpose of this paper is to answer some of these questions. The paper presents a theoretical framework to analyse the macroeconomic effects of and the policy responses to a surge in capital inflows.

Chapter 2: The capital Inflows: Theory and Literature Review

This chapter basically focuses on the literature available on capital inflows such as providing definitions for basic concepts and presents a theoretical framework to analyse the macroeconomic effects of the inflows. Finally, it looks into different arguments about the role of capital inflows and its liberalisation.

2.1) Conceptual issues

Conventionally, it is defined the *current account deficit* (of the balance of payment), CAD, as follows:

$$\text{CAD} = \text{Import} - \text{Exports} - \text{Net Factor Transfers from the Rest of the World} \quad (1)$$

The current account is the balance of export earnings (X), net current transfers received (NTR), payment for imports (M) and net factor payments (NFP)-payment of investment income and interest, receipts of workers' remittance, and transfer of profits. All are expressed as percentage of GDP (Jansen, 1997). The current account balance would be identifying the flow of goods and services across the boarder. The current account is also the net result of savings and investment, private and public (Reisen, 1997). The CAD measures the rate at which the country is becoming indebted to the rest of the world. Thus, if measured without error, it represents the growth of the country's overall (i.e., including private and public sectors) net international indebtedness.

International Reserves, R, are defined as official holdings of international short-term liquid assets issued by foreign governments (e.g., US Treasury Bills). Normally, international reserves are held in the form of obligations incurred by hard-currency governments, e.g., U.S. dollars, Euro, etc, and are held at the domestic central bank.

Capital Inflows, KI, are defined as follows:

$$\text{KI} = \text{CAD} + \Delta\text{R}, \quad (2)$$

Where, ΔR denotes accumulation of international reserves. Notice that $KI - \Delta R =$ growth of net international indebtedness. Thus, capital inflows are a gross concept because it does not net out accumulation of international reserves. Capital flows episodes are defined as situations in which there are a sudden and persistent increase in KI. In other words, net capital inflows can be defined as the difference between the capital inflows and the capital outflows. It is the increase in net international indebtedness of the private and the public sectors and are measured by the surplus in the capital account of the balance of payments. Therefore, except for errors and omissions, the capital account surplus equals the excess of expenditure over income (which, in turn, is equal to the gap between national investment and saving) plus the change in official holdings of international reserves. Thus, increase in capital inflows can be identified with larger current account deficits and/or an accumulation of reserves.

The expression “capital inflows” gives the impression that when KI rises more capital gets accumulated. To illustrate this, we recall that the following is an identity in national accounting:

$$CAD = \text{Total Consumption} + \text{Total Investment} - \text{GDP}, \quad (3)$$

Therefore by equation (2) and (3):

$$KI = \text{Total Consumption} + \text{Total Investment} - \text{GDP} + \Delta R. \quad (4)$$

Consequently, given GNP and ΔR , an increase in capital inflows must be reflected in consumption and/or an investment boom.

Capital inflows have many macroeconomic effects on the receiving economy, both in the short run and in long run. Different types of capital inflows have different impacts. The long-term flows: ODA (public sector external borrowing), FDI (foreign direct investment), long-term loans, bonds are more stable, whereas the short-term flows: PFI (portfolio inflows), bank deposits, short-term loans are more volatile and can reverse on short notice, creating serious adjustment problems to the economy. Much of ODA and FDI enter the country as commodities and capital goods rather than finance. But inflows of loans and of PFI may have significant effects on monetary balances and on the stability of financial markets. It is also

important to note that long-term loans may also suddenly change: DFI inflows may suddenly halt, but will not reverse; access to long-term loans or to the bond market can suddenly top or become prohibitively expensive, but the impact on the economy will come more gradually in this case (Jansen, 2002).

The central concern is that capital inflow, although definitely more desirable than capital outflows could be harmful to the recipient country if adequately not managed. The main concern is, thus, not so much with the inflows as such but with the potential outflows. If the 'pull factor' for the capital inflows are not due to domestic fundamentals, because of 'herding' behaviour of the investors may consequence potential danger of outflows. The initial policy reaction such as capital control to the rising capital inflows has been to intervene in the market for foreign exchange and sterilise the effects of the intervention through either open market operations, increase in reserve requirement, or both.

Capital account control or liberalization is an old issue. 'Capital control' means various measures to restrain international movement of capital. As such, they would represent a first-best policy intervention. If the distortion causing the problem that cannot be removed, a second-best option may be to limit foreign borrowing (Montiel, 1998).

Thus, such measures have generally targeted only short-term capital flows. Long term flows, such as FDI (foreign direct investment), are not subject to them. Another approach has been to tax such inflows, either by an explicit tax or by making them subject to higher reserve requirements. Besides, capital controls are neither good nor effective because in most cases control over capital flows failed and private capital can evade the controls almost always (Edward, 1999).

2.2 Theoretical framework

Financial markets have traditionally been inherently short-termists and volatile (see, for example, Keynes (1936), Kindleberger (1978) and Minsky (1982)). However, the evidence gathered in these book seems to indicate that these markets both seem to have become more volatile and that this volatility has the potential to be transmitted in greater and more harmful ways on macroeconomic trends in developing countries.

An up surge in capital inflows requires an increase in the current account deficit by increasing aggregate demand, which push up inflation so that real exchange appreciates. These effects also depend on the exchange rate regime. Under a flexible exchange rate, the nominal exchange rate will appreciate with capital inflows, which affects demand for domestically produced goods and leads to the current account deficit. Under a fixed exchange rate regime the capital inflows are reflected in an increase in foreign reserves and an increase in the money supply and a fall in the domestic interest rates. This stimulates aggregate demand and is likely to result in inflation which leads to an appreciation of the real exchange rate (IBID).

Although the conventional view is that developing countries fundamentals determine behaviour of international financial markets, there is increasing evidence that in many cases it is the endogenous behaviour of international markets that conditions or strongly influences fundamentals in developing countries (see Fitzgerald, 2002). Thus demand and supply curve for emerging market assets are not independent; a supply-led large capital inflows affects the domestic economic situations (generating for example an asset price bubble) in a way that can increase the demand for assets. This makes regulation and other public interventions in international financial markets complicate effective regulation (Griffith-Jones, 2002).

This section basically highlights theoretical understanding of the impact of the capital inflows into different macroeconomic variables in the analyses part of the paper.

1) total expenditure and fiscal implications

From the balance of payments identity, changes in capital inflows (i.e. capital account inclusive of official transfers and errors and omissions) can be decomposed into changes in the trade balance, net factor payments, and international reserves. In other words, capital inflows can be used to finance either current account deficit and/or to accumulate reserves (see equation 2).

Typically, a capital episode is associated with a rise in total expenditure (i.e., Total Consumption + Total Investment) through an increase in aggregate demand and thus a decline in saving so that the investment saving gap widens.

2) Debt maturity

By definition, a capital inflows episode corresponds to a situation in which the government and/or the private sector are increasing the rate at which they fall into debt or lower their net wealth. Issuing debt and selling stocks to foreign residents are two forms of "borrowing." When a foreign resident purchases stocks of a local firm, he is entitled to share in distributed profits and to vote in the company's shareholders meetings. The fund accruing to the investor, therefore, depends on the firm's ability to generate, and willingness to distribute profits. Investors could actually lose the entire value of their investments if the firm goes bankrupt. In contrast, bondholders are the first in line for repayment, which in most cases independent of the firm's performance.

A high volume of short-term debt relative to the stock of international reserves can be a major problem if the country entered into a balance of payments crisis. Short-term debt usually gives rise to the "bunching effect"-instability, where large chunks of debt mature in a short period of time.

3) Monetary consequences (bank sector, inflation)

Banking sector

Capital inflows episode is associated with increase in total expenditure, which in turn, increases the demand for "money," e.g., currency, and demand/time deposits. Thus, even if no international funds are channelled through the banking system, the higher transaction associated with the expenditure will lead firms and individuals to increase their bank deposits. If reserve requirements are less than 100 per cent, banks will probably increase loans.

Trouble starts as capital inflows slow down. Suppose, for example, that capital inflows, KI, go from a positive to zero or become negative. KI is a flow, it measures new borrowing. Thus, when KI goes to zero, it simply means that suddenly no new loans are flowing to the economy. According to equation [4], and taking the change in reserves, R, and GNP as given, a fall in capital inflows, KI, would induce a fall in total expenditure. Therefore, given the positive link between expenditure and deposit, the decline in expenditure would induce a fall in the demand for deposit. Thus, unless banks quickly find an alternative source of finance,

they are likely to stop some of their short-maturity loans. This is a loan reversal shock! Hence, if the government refrains from intervening (through devaluation etc.) this might lead to bankruptcies. However, also predominant banking regulation during capital inflows surge may aggravate prevailing problems if banking supervision is weak and there are inefficiencies in pricing risk, there may be additional reasons to limit banks' role in intermediating the capital inflows such as shifting deposits to the central bank as a reserve requirement measure.

A major concern about the intermediation of international capital flows through the domestic banking system is that individual banks are subject to free or subsidised deposit (i.e., there is an implicit commitment by the authorities that banks especially those of large size will not be allowed to fail. It is well known that this deposits induces banks to increase their risk exposure. In several countries, there has been a sharp expansion of bank loans to finance private consumption. There is evidence that in some of these countries the percentage of nonperforming loans has recently increased over time. All these factors increase the vulnerability of the financial system to reversals in capital inflows (reversal that have the potential to end in financial crisis.

It is the role of bank regulation and supervision to effectively diminish some of these risks. Regulations that limits the exposure of the banks to the volatility in equity and real estate markets could help insulate the banking system from the potential bubbles associated with sizeable capital inflows.

Inflation

The previous section showed how banks may help to channel some of the credits to sectors that have no access to international capital markets but may simultaneously contribute to the magnification of financial difficulties stemming from a slowdown of capital inflows. Central bank's typical reaction to a bout of capital inflows is, however, fear of inflation. This would be fully justified by the logic that capital inflows episode could end up in higher inflation. However, central banks worry because they see monetary aggregates sharply rising, especially when the exchange rate is not allowed to appreciate. Surge in capital inflows particularly short-term and portfolio flows are likely associated with credit booms and asset price bubbles. In other words, to invest in bonds and stocks you need to have a stock and bond markets in the first place.

The concern is that the rise in money supply will fuel inflation. Monetarists like Milton Friedman have said that inflation is always and everywhere a monetary phenomenon. Higher money balances would induce people to spend more. By this he means that there can be only persistent increase in prices if there is a persistent growth of money. The central bank could increase money supply at the beginning of the cycle to prevent the exchange rate not to appreciate. Financial trouble can be avoided but a sequence of capital inflows cycles-where, first, capital flows in, and then those flows subside (and vice versa)-is likely to put the economy on an inflationary path if intervention result in increase in money supply. This need not occur, however, if the assistance to the potentially affected financial institutions comes from the government finances rather than through a monetary expansion by the central bank (Calvo, 1998).

African examples of this fear of monetary expansion associated with the rise in capital inflows and increased purchase of foreign exchange were evident in the capital inflows episode of Kenya in late 1993-1994. These fears led monetary authorities to engage in large-scale sterilisation policies through the open market sale of government securities (i.e., through absorption of domestic money in exchange for domestic public debt), increases in reserve requirement, or both.

4) The role of the exchange rate

Countries that experience a capital inflow may opt to let the nominal exchange rate appreciate. The capital inflows' potential inflationary can be completely avoided by refraining from intervention in the foreign exchange market. But at the cost of appreciating the exchange rate. If the authorities allow the nominal exchange rate to appreciate in response to capital inflows, the profitability of the traded goods sector will obviously be affected adversely. Export become more expensive compared to the import. The sectoral profitability between the traded and non-traded goods sectors would be reversed, which in turn, may damage strategic sectors of the economy. Beside, allowing the exchange rate to fluctuate introduces uncertainty.

Given the change in reserve [R] and GNP level, the increase in capital inflows results in a current account deficit and higher expenditure. To counteract this, authorities allow some appreciation. It follows that the same increase in expenditure will now call for a sharper appreciation rate. Under these circumstances, producers of nontradable goods are secured

from currency appreciation, but those in the tradable sector will suffer more due to the sharper currency appreciation.

An appreciation of the nominal exchange rate in response to increased demand for domestic assets can take place without the need for any policy action in more flexible exchange rate regimes. However, if the prevailing arrangement is one where the rate is set by the authorities (i.e peg, crawling peg, narrow band), then, at some point, a decision has to be made whether a realignment will be undertaken (Reinhart et al, 1996). There are several advantages allowing the nominal exchange rate to appreciate during period of heavy capital inflows (see Calvo, Leiderman, and Reinhart, 1994). First, it insulates the money supply, domestic credits, and the banking system from the inflows; this is particularly desirable if the inflows are perceived to be of a highly reversible nature. Second, if the economic fundamentals warrant a real exchange rate appreciation, the adjustment comes via the exchange rate and not via higher inflation. Third, and related to the previous point, because of the pass-through from the exchange rate to domestic prices, an appreciation may help reduce inflation.

Beside, the reasons given above for allowing the exchange rate to adjust in response to a shift in capital flows, there are other motives for allowing the exchange rate to fluctuate more freely in the presence of the large capital inflows. First, it introduces some uncertainty that may well discourage some of the purely speculative (and highly reversible) inflows. Bacchetta and van Wincoop (1994) argue, in the context of a two-country model, that an increase in exchange rate uncertainty creates a bias toward the domestic assets (since the rate of return on the foreign assets is now more uncertain), dampens the sensitivity of the current account to most types of shocks, and reduces net capital flows. Indeed, the higher uncertainty acts like a Tobin tax. In the event of capital outflows, the greater flexibility takes some of the pressure off foreign exchange reserves. Second, it grants the monetary authorities a greater degree of interdependence and permits them to exercise more control over the monetary aggregates.

The main disadvantage of a pure float is that massive capital inflows may induce steep and abrupt movements in the real exchange rate, which in turn, may impose a substantial adjustment burden on the economy. In particular, the concern in many countries has been that real appreciation will harm strategic sectors of the economy, like the nontraditional export sector. This result may be due to the existence of incomplete markets, to the extent that financial markets do not provide enough instruments to hedge against such uncertainty.

5) Current account

In general, an upsurge in capital inflows requires an increase in the current account deficit. The inflow leads to an increase in aggregate demand, which pushes up inflation so that the exchange rate appreciates and current account deficit rises as imports rise and exports fall. The rise in aggregate demand is reflected in an increase in investment and consumption and thus a decline in savings so that the investment-saving gap widens.

Currents account deficit measure the extent of total external financing and signify a strong willingness on the part of non-residents to lend to the country. In the 1990s, equity and portfolio investments began to overtake direct investment, loans, and trade credit as the main forms of external financing. Reisen (1997) suggests that offers of financing by non-residents should be resisted when they cause unsustainable currency appreciation, excessive risk-taking in the banking system, and a sharp drop in private savings, all of which raise sore points in terms of the fundamentals-sentimentals dichotomy.

In principle, large current account deficit are a cause for concern and even more when aid-financed. Large deficits could be problematic if there is a sudden and unexpected slowdown of capital inflows and the government cannot offset it by running down international reserves. A sudden cut in the CAD will lead to a reduction in domestic expenditure (or absorption). Thus, the relative price of nontradable goods is likely to fall. A CAD usually reflects the existence of new loans from the rest of the world (except when the deficit is fully financed by running down international reserves, recall equation [2]).

All the above mentioned multiple concerns have led policymakers in countries experiencing a surge in capital inflows to react by actively implementing *a spectrum of policies* (see Calvo, Leiderman, and Reinhart, 1993 and 1994; Schadler et al, 1993; and Montiel, 1995).

2.3) Capital Inflows Literature Review

Controversy persists on the role of capital flows in boosting development and inducing macroeconomic instability. Major neoclassical arguments emphasise gains from financial liberalisation and international capital mobility based on the belief in efficient market. Under the efficient markets hypothesis, it would be pointless to discuss capital account controls.

Liberalisation is always perceived as beneficial to investors. They argue that financial market can contribute to enhancing efficiency in resource allocation, easing external constraint, technology transfer, and better management and business practices. They strongly support capital account liberalisation and thus against any of capital controls. They argue international capital movement increases the availability of foreign savings to supplement domestic resources and enable investors to diversify risks around the world (Edward, 1995). They argue capital controls limit international market opportunities and restrict domestic financial market competition that induces distortion and inefficiency in the financial system and economy as a whole. However these arguments are valid only with the assumption of 'efficient' financial markets. But this is not true due to lack of better information system, herding and other market distortions (such as financial repression).

The rationale for restricting international capital flows, by contrast, is grounded in the believe that market failures and distortions pervade capital markets around the world. One of the most cited distortions is that of information asymmetries. Information asymmetries are presented in goods markets, but it is in asset markets (money and capital markets) that they become pronounced. Although a firm producing a good is more knowledgeable about the quality of the product than is the buyer, it is not so difficult for a buyer to monitor the quality of, say, the computer chips produced in Taiwan or in Thailand. Banks, for example, exist because of their superior knowledge about the value of the firms to which they lend. Problems of asymmetric information are more extensive in international capital markets, where geographical and cultural differences make harder the task of obtaining information.

Traditionally, most developing countries have kept strong capital controls due to several reasons including balance of payment problem, macroeconomic stability, and national development (Johnston and Tamirisa, 1998). Among others, it is interesting that capital controls can be used for economic development in some cases. Several countries like Japan and Korea that achieved rapid economic development intentionally adopt capital controls in line with broad national development strategy and planning (Collier and Mayer, 1989). If capital outflows are strongly controlled then it would obviously help to increase savings and thus investment. And they are more important because capital inflows are not that much in the early period of development. The government as well can earn revenue from capital controls, which enables it to implement expansionary policy. Besides, capital controls as a form of

exchange rate control are likely to manage exchange rate in such a way that it would maintain foreign reserves, manipulate terms of trade for trade growth and stabilise economy.

Capital account liberalisation can just lead to more instability. Investors may overreact to shocks, withdrawing en masse from countries at economic problems. Despite their benefits, surges in capital inflows also create new macroeconomic problems for the recipients, more pressure on current account deficit due to increasing domestic demand, inflationary effects, weaker monetary control, real exchange rate appreciation and the most problematic is the vulnerability to reversals. Most of all, investors' 'herd' behaviour brings out serious volatility, not related to the real economic fundamentals (Kim and Wei, 1999). These theories can support capital controls to address the economic instability due to rapid movement of short-term capital. This is the message of several theoretical papers emphasising imperfect information. Latin America and East Asian countries experienced a strong real appreciation of their currencies followed by balance of payment crisis after a surge of massive capital inflows.

With open capital market, national government can not have the autonomy of macroeconomic policy. In particular, it is difficult to adopt expansionary monetary policy with freedom of capital movement due to the possibility of capital outflow and attack on the currency, which leads government to restore to restrictions. This is why Paul Krugman, for example, has argued that emergency controls on capital outflows may be a good choice at times of severe speculative attacks from domestic and foreign speculators. Although it is often argued that controls on capital outflows are also likely to reduce capital inflows, many of those who oppose restrictions on outflows favor controls on inflows emphasizing the "precautionary" role of these controls, in contrast to the destabilizing effect of controls on outflows. The list of those supporting restrictions on capital inflows has grown larger in the last decade, with the most ardent supporters including Stiglitz and Barry Eichengreen.

Besides, since all of the markets are not perfect and efficient in reality, the positive relationship between the capital account liberalization and economic efficiency is hard to be justified. When there is a trade barrier free movement of international capital can result in misallocation of capital and difference in tax rate on capital generates capital movement to evade tax, not enhancing efficiency at all (Cooper, 1999). That is, according to 'theory of the second best' there is no reason that free international movement will enhance the efficiency.

Empirical studies also show it is hard to justify the neoclassical liberalization and economic growth (Rodrik, 1998).

As we have seen, there are enough arguments for capital controls with the concern about instability and macroeconomic management. The important role of the government in financial market including capital control (such as taxes and restrictive monetary policy in the form of sterilisation) has been already well acknowledged by many theorists (Saxena, 1999). This follows from the past experience that in Chile and Thailand where weak banking system and assets bubble played a major role in bringing crisis in these countries.

In conclusion, it is argued that capital account liberalization should be preceded by the trade reform (McKinnon, 1991; Edward, 1992a) as well as financial sector reform. The scope of sequencing broadened to the issue of policy responses to the macroeconomic instability (Edward, 1992b), emphasizing the appropriate domestic policy and prudent macroeconomic management.

Chapter Three: Capital Inflows and their Macroeconomic Impact

This chapter looks into the magnitude and the nature of capital inflows and analyses the macroeconomic impacts of the surge of the capital inflows with regard to the countries under discussion. It also provides summary conclusion for each macroeconomic impact discussed.

3.1 Capital Inflows: cross-country comparisons

The description of capital flow experience in this section is based on three countries, namely Chile, Thailand and Kenya. The capital inflow data is from the IMF's World Economic Outlook data set. Capital flows in this data set are classified into five categories: portfolio flows (bonds and equity), short-term flows, FDI (foreign direct investment), other long-term flows, and errors and omissions. The capital inflows experience for each of the countries since 1990 -1998 is described as follows in Table 3.1 below.

Table 3.1: Composition of Capital Flows since 1990-1998 (in percentage of GDP)

	1990	1991	1992	1993	1994	1995	1996	1997	1998
Chile									
Net Private Capital Flows	9.9	5.5	6.9	7.2	11.2	6.7	10.4	9.9	3.6
Short-term Capital Flows	4.8	1.4	4.6	2.4	2.6	1.4	0.1	-	-
Direct investment (FDI)	0.7	1.7	1.7	2.0	3.7	2.9	6.0	5.8	6.2
Net portfolio flows (with errors and omissions)	1.0	1.7	1.9	1.6	0.8	0.3	0.6	2.5	-2.7
Thailand									
Net Private Capital Flows	12.8	10.7	8.7	8.3	8.6	12.9	5.7	-7.6	-16.9
Short-term Capital Flows	7.6	7.5	5.0	3.0	5.5	7.7	5.6	-	-
Direct investment (FDI)	1.9	1.7	1.5	1.3	1.0	1.3	1.4	2.5	6.3
Net portfolio flows (with errors and omissions)	2.3	0.3	0.0	4.2	1.6	1.2	1.8	2.2	3.0
Kenya									
Net Private Capital Flows	2.4	4.3	1.0	0.7	-3.2	-1.1	-1.2	0.1	-0.9
Short-term Capital Flows	2.2	-0.7	4.1	2.5	-2.8	3.7	2.3	-	-
Direct investment (FDI)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net portfolio flows (with errors and omissions)	2.2	-4.2	0.2	1.6	4.0	3.7	6.5	4.0	3.9

Source: International Monetary Fund, World Economic Outlook

- Represents that data is not available

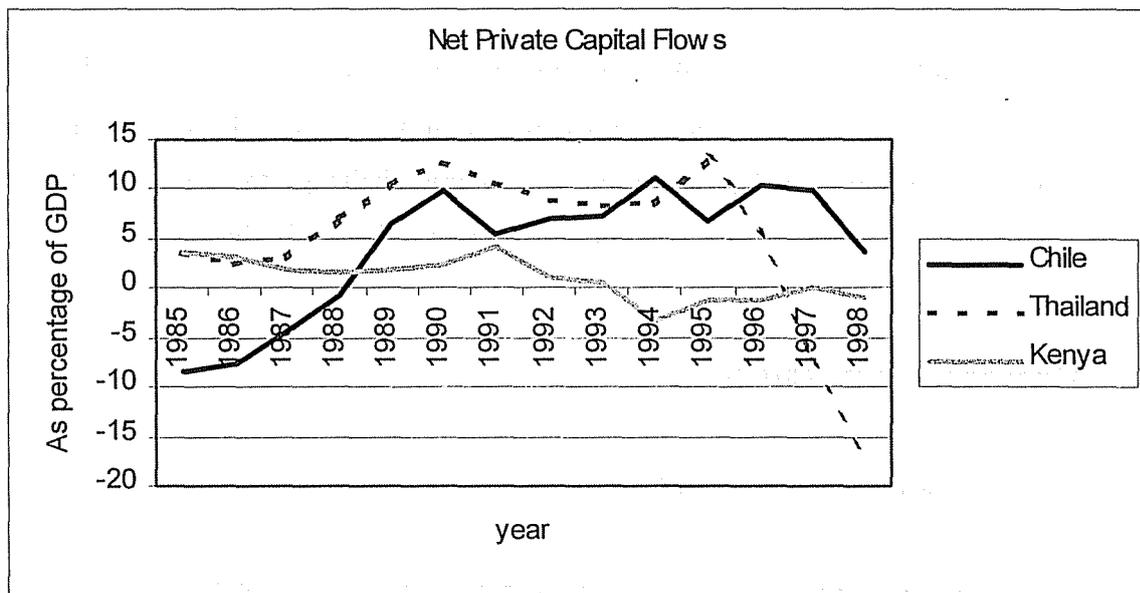
As can be seen from the table, on average since 1990 to 1995 Thailand attracted more private capital inflows compared to Chile. In 1984, the baht was devalued by 14.8 percent, government undertook export-led growth policies and gave priority to promoting capital flows through tax and institutional reforms while developing its financial market. This policy together with large positive interest differentials and a fixed exchange rate promoted large net capital inflows. However, after 1995 onward Thailand suffered more capital out flows, which put Thai baht in crisis in 1997.

In the early 1990s, Chile experienced a surge in capital inflows (see figure 3.1 below). Large capital inflows began in 1990, attracted by two domestic factors (and several external ones); a) the successful transition to democratic rule, which arguably reduced the country risk premium, and b) a policy of tight money and high interest rates launched by the newly independent Central Bank. On average Chile received net capital inflows of 7.9 percent of the GDP since 1990 to 1998, raising demand for the peso and putting upward pressure on the real exchange rate (Edward, 1999). These led policy makers to introduce specific capital controls. Whereas Thailand due to the outflows, it received only net capital inflows of 4.8 percent of the GDP during this period. However, Kenya received only 0.2 percent, even less than a half percent of her GDP. Even if Kenyan authorities tried to eliminate barriers to entry in early 1990s, it doesn't seem to attract more capital inflows instead the country experienced capital flight. The trends of the inflows are shown in figure 3.1 below.

Thailand actually registered larger share of short-term flows over the period as a whole compared to Chile and Kenya. This volatile short-term inflows consequent speculative attack on local currency. We can also note that the short-term inflows in Chile decreased since 1995 after strengthening of the capital control whereas the long-term FDI has increased dramatically. The use of capital controls in Chile has been part of a broad program of economic reforms involving a coherent set macroeconomic and structural policies implemented consistently throughout the period. The Chilean authority goals when they passed capital controls were to slow down the volume of capital flow and to tilt the short-term composition of the flows into long-term investment, so as to reduce real exchange rate appreciation. And also to allow Central Bank to maintain a high differential between domestic and international interest rates, and thus to conduct an independent monetary policy.

In Thailand private capital flows started to diminish in early 1997. The Thai government intervened heavily to support the peg when the baht came under serious attack for the first time in February 1997 by pumping a large volume of liquidity. This led to further capital outflows and a decline in foreign exchange reserves. In mid-May, Thailand announced capital controls. Finally, on July 2, 1997, the government allowed baht devaluation.

Figure 3.1



Source: All the figures in the paper are graphed the data in the Appendix

Following a collapse of tea and coffee prices in 1987, Kenya was left with a huge budget deficit, a rapidly deteriorating current account positions, and a severe shortage of foreign exchange. Also Real GDP growth slowed and inflation had increased, despite extensive price controls. By 1989, it became evident that without foreign currencies and structural reforms, Kenya would experience a severe economic downturn.

To avoid a severe recession, the government embarked on a wide-ranging capital liberalisation program aiming at attracting foreign savings in 1991. The program intended to remove rigidities in financial sectors by freeing foreign currency transactions, and relaxing and then dismantling credit ceilings and interest rate controls. The same year, some enterprises were permitted to hold foreign currencies.

Despite the introductions of these liberalisation measures, in effect, it rather led to further capital outflows till 1994. During the same time, the economy experienced a sharp downturn from late 1991 onward with sharp dramatic increase in inflation. The misappropriation of public funds led to a further deterioration of economic conditions and by the early 1993 the economy was in crisis. However, after some corrections, it showed some reversal in capital outflows.

Conclusion

The aim of this section was to show the evidence that there were capital inflows indeed in these countries before speaking of their macroeconomic impacts. As we have witnessed there was surge of capital inflows, which posed macroeconomic challenge to these countries such as real appreciation of exchange rate and some other impacts that I will discuss below.

3.2 Macroeconomic Impact

3.2.1 Impact on aggregate demand

National accounting identities equate the trade deficit to the excess of domestic absorption over production. The additional capital inflows can be used to accumulate foreign exchange reserves, increase domestic investment, or increase domestic consumption. Here the CAD and reserve accumulation is calculated as share of capital account (inclusive of grants & errors and omissions).

Table 3.2: use of capital inflows during surge periods a/

	Allocation of capital account (%)			Use of Domestic Absorption (%)		Marginal Investment Impact of Capital flows
	Reserve Accumulation	Net Factor Payments	Net Resource balance deficit	Consumption	Inv't	
Chile	57	71	-28	21	79	34
Thailand	41	10	48	-196	296	174

a/ Surge periods are country-specific based on observed capital inflows profiles. For Chile the surge period is 1989 to 1993 while in Thailand the surge period is 1988 to 1992. Due to data limitation Kenya is not included in this part.

Source: The World Bank and IMF

Table 3.2 provides evidence on this issue for Chile and Thailand experiencing the large surges of private inflows relative to their economies. The first three columns of this table express reserve accumulation, net factor payments, and the trade deficit as shares of the capital inflows for each countries during their respective surge period. Column 4 and 5 refer to the domestic absorption use of the trade deficit financed with capital inflows by examining how increase in absorption between “pre-surge” and “surge” periods were allocated to increase in consumption (that is decreases in domestic saving) and investment. Column 6 estimates the fraction of capital inflows used for investment purposes once reserve accumulation and consumption leakages are deducted.

Large proportions of the capital inflows have been used for reserve accumulation rather than CAD finances. The accumulation of reserve accounted on average 49 % of the inflows for both Chile and Thailand. That is to say, through sterilisation large proportions (49%) of the capital inflows were deposited as a reserve in the Central Bank. In Chile, 57 per cent of the capital inflows were used for reserve accumulation whereas only 41 per cent is used in Thailand for reserve accumulation. They also differ in regard to change in the composition of absorption (column 4 and 5). Both in Chile and Thailand increase in absorption during this period were dominated by investment.

Investment increment indicates that capital inflow that was channelled to current account was used to finance investment rather than consumption. But the changes in the composition of absorption were heavily biased in favour of investment in Thailand. In Thailand, during 1988-91 spending cuts were introduced on nontradables, tight fiscal policy, so as to lower aggregate demand and curb the inflationary impact of the inflows whereas Chile appears to have experienced consumption booms led by private sector consumption. The last column shows the surge of capital inflows was favouring investment in Thailand than in Chile. In other words, this last column on “marginal investment” measures the impact of additional unit of capital inflows, that was not used for reserve accumulation, and on investment.

Conclusion

The additional capital inflows can be used to accumulate foreign exchange reserves, increase domestic investment, or consumption. Therefore, from the above we can conclude that both for Chile and Thailand used 49 % of the inflows as reserves accumulation and rest is used for CAD finances. The inflows in both cases favour investment but more importantly Thailand.

3.2.2 Impact on exchange rate

My hypothesis is that when capital inflows such as foreign direct investment (FDI) and portfolio investments (short-term capital inflows) increase in a country, to undertake investments necessitate buying the local currency and hence the demand for the local currency increases which, in turn, leads to appreciation of local currency. An import relatively becomes cheap and exports expensive. The competitiveness of the export in the international market falls.

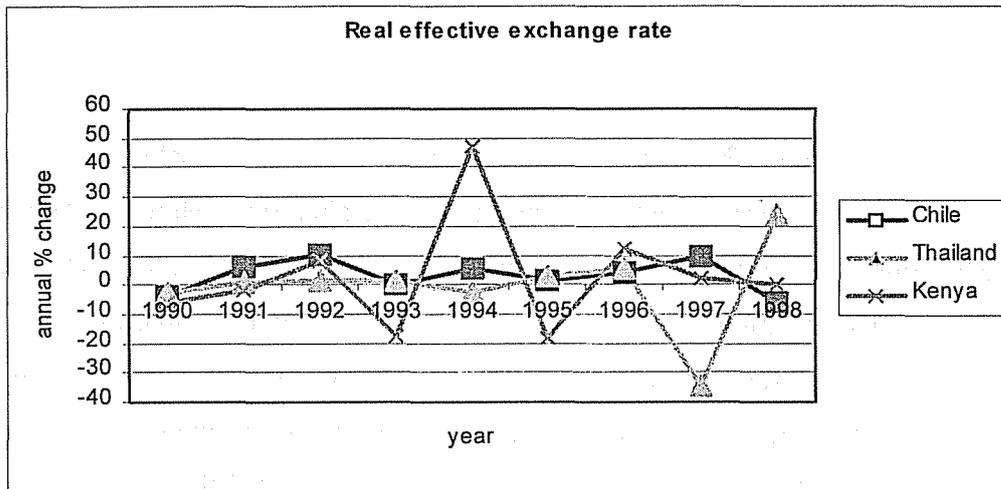
In Chile, the financial liberalisation in the mid 1970s resulted in speculative attacks on domestic currencies and financial crisis in 1982 and 83. In December 1983, a peg regime replaced the fixed exchange rate aiming at maintaining a constant level of real exchange rate against the U.S. dollar. In December 1989, after 17 years of a military regime, a new government was democratically elected and also the domestic interest rates in Chile meant high compared to international levels. Thus, Chile regained access to international markets and capital began to flow in to the country in the early 1990s, raising demand for the peso and putting upward pressure on the real exchange rate (Edward, 1999) see also Figure 3.2.

Chile RER rate followed an appreciation trend of 4% a year during the 1991-94 (Laurens, B., and Cardoso, J., 1998). By late 1990, exporters had begun to complain that the rapid strengthening of the peso in real terms (it had appreciated by more than 20% since 1985) was negatively affecting their ability to compete in international markets (Cowan and De Gregorio, 1997, p.3).

In Thailand, capital inflows accelerated during 1988. The Thai economy started showing signs of overheating in mid-1993, despite the authorities' tight financial policies. Demand pressures were manifested in higher inflation and some widening of the current account deficit, prompting the authorities to tighten the monetary and fiscal policies. The combination of a pegged exchange rate since 1984 and highly liberalised capital inflows, along with large interest rate differentials, created a strong surge of volatile net capital inflows. The inflows were predominantly short-term (about 60% of the total in 1993), mainly in the form of short-term borrowing by banks (Ariyoshi, 2000).

Since late 80s the gradual appreciation continued because Thai inflation was higher than world market, leading to appreciation of the real exchange rate which was not sufficiently corrected by 1981 devaluation. This appreciation was in favour of importers, and they formed a strong lobby to maintain the increasingly overvalued exchange rate (Jansen, 1997).

Figure 3.2



Remarkably little real exchange movement were observed, particularly given the size of the inflows. In fact, the real exchange appreciated slightly in the early 1990s, and began appreciating very slowly since (see figure 3.2 above). However, after the currency crisis RER fluctuated tremendously

After more than a decade of exchange rate stability and impressive economic growth, the growing domestic and external imbalances and the emerging of banking problems since late 1996 the Thai baht came under severe speculative pressure in May 1997. In 1996, export growth began to slow down after growing 20 percent in 1995. Thai export contracted by 1 percent in 1996. This was mainly due to loss of competitiveness associated with Thai baht appreciation on real effective basis. The authorities imposed sever capital controls on May 15, 1997, to stabilise the foreign exchange market and stem speculative attacks on the baht. Financial institutions were asked to refrain from transactions with non-residents, such as baht lending through swaps and sales of baht against foreign currencies, that could facilitates a build-up of baht positions in the offshore market. Later (in June), all such transactions were suspended. In July the central bank introduced a two-tier exchange rate system. Restrictions were eliminated on January 30, 1998.

In Kenya, the financial liberalisation was accompanied by a rise in real interest rates, often from very negative levels. During recent years, Kenya has liberalised remaining exchange restrictions on current account transactions as well as trade and capital account. In addition, some of these countries have also had successful inflation stabilisation programs and somewhat better growth performance. Taken together, it could be argued that the risk premia for this country may have declined. The domestic causes played a crucial role in attracting the capital flows.

As in several Asian and Latin American countries, sterilisation in Kenya, as response to the inflows, took several forms. The Central Bank of Kenya increased its sales of treasury bills during late 1993 and early 1994. In addition, during the October 1993-March 1994 period the statutory cash ratio was raised in three steps from 12 percent to 20 percent. The increased sales of treasury bills and higher reserve requirement drove domestic interest rates higher. Since the Kenya shilling was appreciating during this period the rise in dollar returns was even more dramatic. By mid-1994 the high level of interest rates was increasing debt servicing costs, and stimulating additional inflows. At that time, it was decided that intervention efforts would be scaled down considerably and the shilling was allowed to appreciate further.

Conclusion

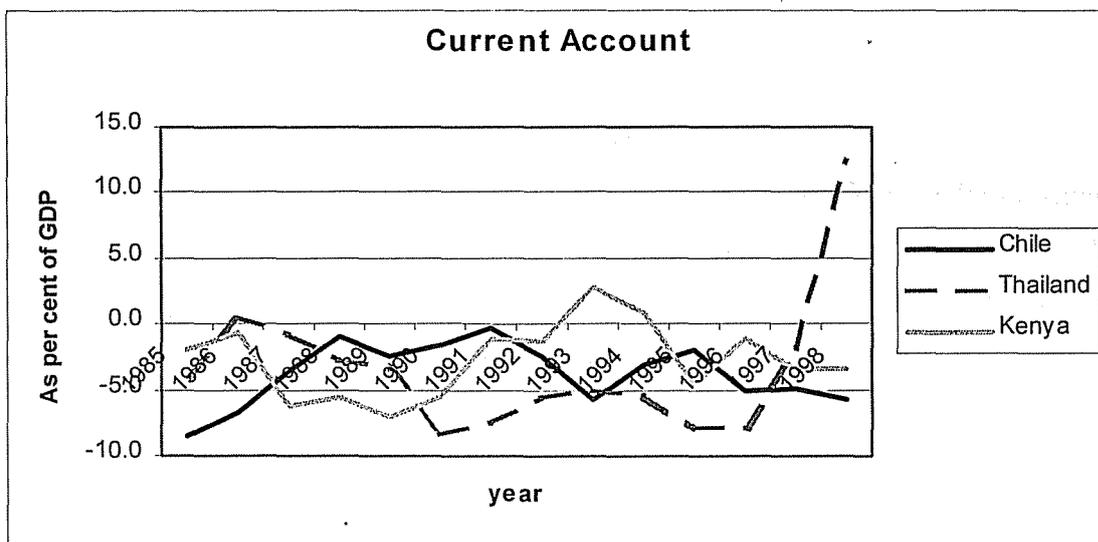
The capital inflows in Chile since early 90s increased the demand for the peso and put upward pressure on the real exchange rate. Chile RER rate followed an appreciation trend of 4 percent a year during the 1991-1994. By late 1990, exporters had begun to complain that the rapid strengthening of the peso in real terms was negatively affecting their ability to compete in international markets. Whereas in Thailand remarkably little real exchange movement was observed. In fact, the real exchange appreciated slightly in the early 1990s, and began appreciating very slowly since. However, after the currency crisis the stable RER fluctuated tremendously. Since 1991, the Kenya shilling was appreciating. Sterilisation and higher reserve requirement drove domestic interest rates higher, which stimulated additional inflows. Since then intervention efforts were scaled down and the shilling was allowed to appreciate. The real appreciation of exchange rate can conflict with development strategies based on the expansion of exports and efficient import substitutions, which rely on a reliable and competitive exchange rate.

3.2.3 Impact on current account

Is current account a problem? Popular analysis suggests that large current account deficits are a sign of disequilibrium and should be brought under control. I agree, in principle, that large deficits are a cause for concern. However, the size of the current account deficit does not give rise to normative judgments; a deficit worth 3 per cent of GDP may be 'excessive' in one country, while a deficit worth 12 per cent of GDP may be justified for another country. Rather what matters for governments are the sources of the current account deficit. Foreign savings should be resisted to some extent when they are seen to finance excessive consumption or unproductive investment. Otherwise debt servicing would be a self-fulfilment for the country if these resources are not used in proper ways.

In Chile, the current account had been improving since early 80s after the structural reform was under taken. The current account deficit was cut 11 percent of GDP in 1984 to one percent at the end of 1988. However, deteriorated since the inflows in 1990s. In 1991, the pressure of capital inflows subsided somewhat due to government control on short-term capital inflows and hence current account improved. The capital control may have influenced the composition of such inflows, and thus have had some impact in determining whether the net inflows were directed to the domestic banking system and reduce volatile short-term capital inflows. In 1995, after strengthening of the control in inflows the current account has improved but fluctuated and showed some tendency to widen on average.

Figure 3.3



In Thailand, inflows accelerated during 1988 leading to some widening of the current account deficit. Current account deficits have grown sharply since 1988 peaking at 8.5% of GDP in 1990 and declining thereafter (see figure 3.3). Since 1997, the CAD was at surplus of on average 12.5 per cent of the GDP in 1998. The Thai current account deficit was financed by short-term capital inflows. A growing proportion of the net inflows was short-term in nature, reaching 60% of the total in 1995. Consequently in 1995, Thailand began to restrict short-term capital inflows by imposing 7 percent reserve requirement on banks' non-resident baht accounts. These restriction were extended in 1996, inter alia, to cover new foreign borrowing of less than one year. In 1996 growth and investment levels deteriorated in the face of an appreciating real exchange rate and capital inflows and exports declined sharply.

The current account deficit, high interest rates, and increasing inflation left the country vulnerable to external shocks. In addition, banking sector problem lead to a loss of confidence and capital outflows. In July 1997, the country was in crisis, run on the currency, and large foreign exchange losses, the authorities floated the baht and adopted a managed floating exchange rare.

The Kenyan current account had improved since 1989 to 1994 reaching surplus in year 1993 and 1994 due to cut in government expenditure but after 1994 it continued to fluctuate highly in deficit and deteriorated reaching worst in 1995 (see above figure 3.3). In the late 1980s and early 1990s, agriculture has grown slowly and food prices have not set the inflationary pace. But since mid-1990s the income and monetary effects of transactions with the out side world and trends in domestic credit creation have emerged as important explanatory variables for the domestic disequilibria.

A current account deficit is a trade problem (imports exceed exports), but also an internal imbalance problem (investment exceed savings) and a financial problem (debt accumulation and debt service). The solution to a current account problem is not just a matter of trade policy (devaluation), but also a matter of demand management (bringing saving and investment closer together) and of financial (debt management).

Conclusion

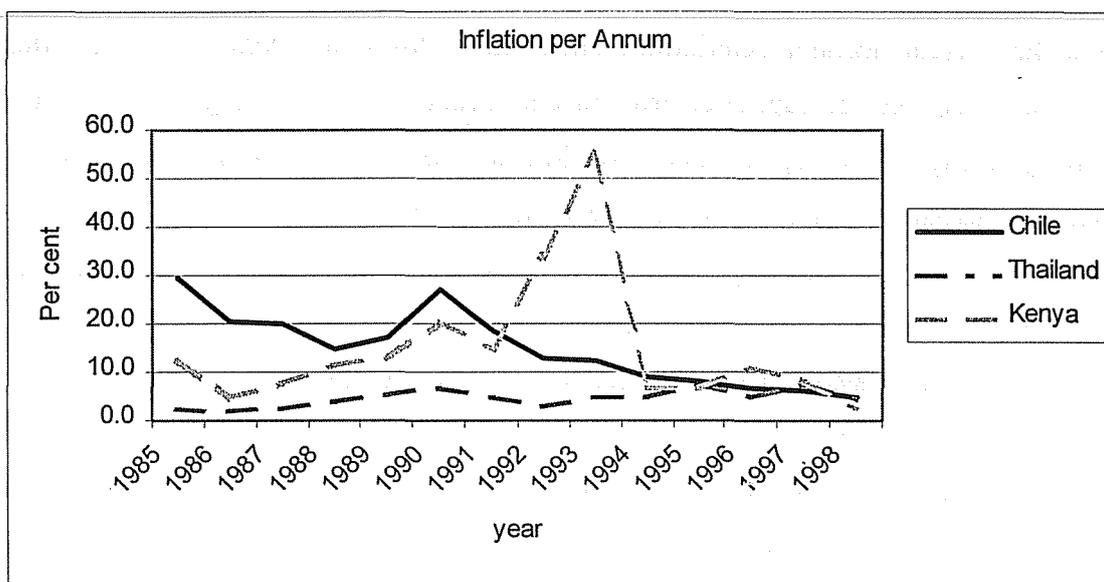
In Chile the current account deteriorated since the inflows in 1990s. However, after the government introduced the capital control current account was improving till 1995. In 1995, after strengthening of the capital control on inflows the current account has improved but fluctuated immediately and showed some tendency to widen on average. In Thailand when capital inflows accelerated during 1988 lead to some widening of the current account deficit peaking at 8.5% of GDP in 1990 and declining since. In 1996, just before baht crisis, growth and investment deteriorated and exports declined sharply. Due to massive capital outflows the CAD was at surplus of on average 12.5 per cent of the GDP in 1998. Whereas the Kenyan current account had improved since 1989 to 1994 reaching surplus in year 1993 and 1994 due to cut in government expenditure but after 1994 it continued to fluctuate highly in deficit and deteriorated reaching worst in 1995.

3.2.4 Impact on Inflation

Indeed, the arrival of large amounts of foreign capital was perceived as posing serious challenge to domestic macroeconomic management. The concern is that the rise in money supply will fuel inflation. Central bank's typical reaction to a bout of capital inflows was fear of inflation. This would be fully justified by the logic that capital inflows episode could end up in higher inflation if the exchange rate is not allowed to appreciate.

In Chile the resurgence of capital inflow lead to a sharp rise in inflation since late 80s. To deal with the effect Chile has adopted a broad program of economic reforms involving a coherent set of macroeconomic and structural polices implemented throughout the 1990s, which involved the use of wide range measures including quantitative limits, price-based instruments, strong banking system and prudential measures. The skilful co-ordination of these policies has allowed Chile to achieve a gradual and steady lowering of inflation from 30 percent to about 4 percent a year. Inflation declined enormously after the tight monetary policy.

Figure 3.4



The growing size and volatility of these inflows, particularly in early 1995, threatened the inflation outlook in Thailand. The authorities attempted to cope with capital inflows through a combination of monetary, prudential, and market-based capital control measures. To slow credit growth and reduce the inflationary impact of the inflows, they raised the policy rate in March 1995 (Ariyoshi, 2000, 51). Due to these controls, sterilization, fiscal restraint, and increase in reserve requirements may have succeeded in preventing explosive monetary growth in Thailand. There were no instances in which inflation accelerated drastically during the inflows episode in this country and hence remained throughout less than 10 per cent.

More uniquely, African examples of this fear of monetary expansion associated with the rise in capital inflows and increased purchase of foreign exchange were evident in the capital inflows episode of Kenya in late 1993-1994. Despite the introduction of the liberalization measures, the economy experienced a sharp economic downturn from late 1991 on ward. Inflation increased from 21.8 per cent to 53.5 per cent during the same period. Early 1993, the economy was in crisis. The money supply continued to increase throughout the period and inflation accelerated further. These fears led monetary authorities to engage in large-scale sterilization policies through the open market sale of government securities (i.e., through absorption of domestic money in exchange for domestic public debt), increases in reserve requirement, or both.

By and large, they have been successful in preserving macroeconomic stability with regard to inflation in the face of inflows, and all the countries seem their goal to attain and reduce the same level of inflation.

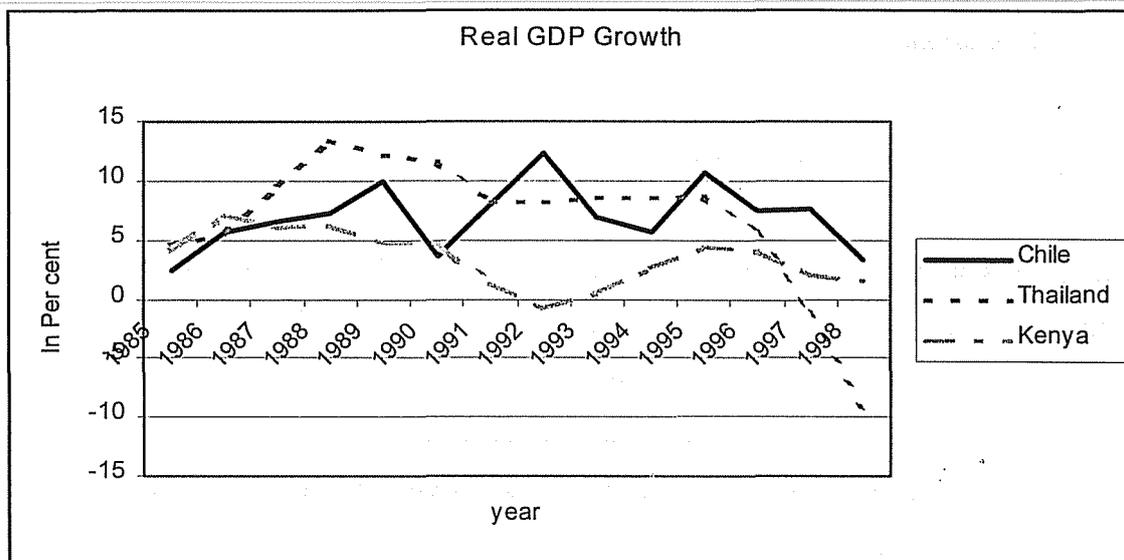
3.2.5 Impact on economic growth

Chile achieved stabilisation and reform by the mid-to-late 1980s most structural reforms had been completed, economic growth was in the 5-7% range, and inflation was moderate and falling. Large capital inflows began in 1990. Since the inflows growth was accelerating reaching its boom in 1992. However, after massive surge of volatile short-term capital inflows the real exchange rates had shown appreciation and current account deteriorated leading to deterioration of economic growth till 1994. Government strengthened its control on capital inflows in 1995 during the same year the growth showed improvement but fluctuated since then like the other countries under discussion. See the figure 3.5 below.

Thailand has received extraordinary large capital inflows starting in 1988—the year that dividend and principal repatriation for foreign capital were liberalised. Such inflows contributed to strong economic performance during late 80s and an increasing opening of the economy. In 1988-90 witnessed an investment boom, very high growth and thereafter a slight deceleration took place, largely as a result of domestic political uncertainty. Growth fell to the 8-8.5% range. However, concern about the sustainability of the exchange rate and the solvency of the financial system subsequently resulted in a sharp reversal of capital inflows and a currency crisis.

In 1995 growth and investment levels started to deteriorate in the face of an appreciating real exchange rate and capital inflows and exports declined sharply. In 1997, the country was in crisis. During this period like any other economic fundamentals the real GDP growth was in negative. For all the countries under review experienced economic turn down since 1996. But Thai economy was hit worst. The large current account deficit, high interest rates, and increasing inflation left the country vulnerable to external shocks and a shift in market sentiment. High interest rates to counteract outflows aggravated the solvency and liquidity position of many banks and finance companies and resulted in inadequate loan provisioning.

Fig 3.5



Following the collapse of the East African Common Market, Kenya currently faces a multitude of problems. These include a stagnating economy, growing political unrest, a huge budget deficit, high unemployment, and a sustainable balance of payment problem. To avoid a recession, the government embarked on a wide-ranging liberalization program aimed at attracting foreign savings. The program intended to remove rigidities in the real and financial sectors by freeing prices, liberalizing foreign trade and foreign currency transactions, and relaxing and then dismantling credit ceilings and interest rate controls.

A significant step toward liberalization of current account and capital account transactions was made in 1991. Despite the introduction of these liberalization measures, the economy experienced a sharp economic downturn from late 1991 onward. Economic growth decelerated from 4.7 per cent in 1991 to -0.8 percent in 1992, while inflation increased from 21.8 per cent to 53.5 per cent during the same period. The Kenyan economy has been improving since 1993 to 1995, however, continued to register declining economic growth rate performance in the past four years after 1995 massive economic liberalization.

The deteriorating economic performance is reflected in poor fiscal performance, rising inflation and a depreciating local currency. The external position of the country also continues to deteriorate as a widening trade deficit, resulting from poor export performance, reflects in a

widening current account deficit. Real GDP growth was estimated to remain weak at 2.0 per cent in 2001 and is projected at 1.2 per cent in 2002 (African Economic Outlook, 2002). It is also important to note that coffee and tea remained the predominant export items. This heavy reliance on a few export crops exposes the economy to exogenous shocks emanating from the outside world.

Conclusion

Since the surge of the capital inflows in Chile in 1989, economic growth was ranging between 5-7 per cent. However, after massive surge of volatile short-term capital inflows the RER had shown appreciation and current account deteriorated leading to deterioration of economic growth till 1994. Authorities strengthened its control on capital inflows in 1995. During the same year the growth showed improvement but fluctuated since then, following the same trend like the other countries under discussion.

In Thailand, capital inflows contributed to strong economic performance. In 1988-90 witnessed an investment boom, very high growth and thereafter a slight deceleration took place. Growth fell to the 8-8.5% range. In 1995 growth and investment levels started to deteriorate in the face of an appreciating real exchange rate and capital inflows and exports declined sharply. In 1997, the country was in crisis. During this period like any other economic fundamentals the real GDP growth was in negative. For all the countries under review experienced economic turn down since 1996. But Thai economy was hit worst.

A significant step toward liberalization of current account and capital account transactions was made in Kenya in 1991. However, economic growth decelerated from 4.7 per cent in 1991 to -0.8 percent in 1992. To avoid recession government embarked on wide-ranging liberalization program in 1992. The Kenyan economy has been improving since 1993 to 1995, however, continued to decline in the past four years.

Chapter Four: The Countries Macroeconomic Policy Response

This chapter focuses on the macroeconomic policies implemented (policy options) to overcome the challenge posted by the inflows, variations in policy responses, macroeconomic outcomes of these policies , policy lesson drawn and policy implications.

4.1 The Macroeconomic Policy Options

Table 4.1: Summary for the policy measures

Country	Monetary Policy (URR & Sterilisation)	Exchange rate policy	Administrative Measure(capital outflow)	Fiscal policy
Chile	1991, 20 % URR increased to 30% in 1992 1995 its coverage extended to foreign currency deposits In June 1998 URR was lowered to 10% & in September was eliminated Heavy sterilisation, particularly in 1990-1992.	In 1992, 5 % revalued again in 1994 revalued by additional 10 %	In 1991 FDI outflows & bank lending abroad was liberalised	In 1991 tax on short-term borrowing were imposed
Thailand	In 1995, 7% URR imposed In 1996, 7% URR extended to new short-term off shore borrowing & reporting requirement imposed. Heavy sterilisation, particularly in 1989-91 and then reduced in mid 93. At the end of 1996 all restrictions were eliminated.	Authorities restrain from allowing appreciation Two tier exchange rate system introduced	In 1991 outflows allowed but control reimposed in 1997 after the baht crisis	Tighten fiscal policy (cutting spending during 1988-93)
Kenya	In October 1993 to March 1994 12 % URR were increased to 20% Large-scale sterilisation through OMO	In 1995, maintained flexible exchange rate system	In 1992 Capital outflows permitted	distortionary taxation on short-term inflows

OMO-open market operation

URR- unremunerated reserve requirements

Almost all of the developing countries have participated in the capital inflow episode of the nineties. The macroeconomic challenge posed for such countries by the arrival of capital inflows was the possibility that such inflows would result in overheating. The rationale for policy intervention emerges from concern that capital inflows can lead to inflationary pressure, real exchange rate appreciation and loss of competitiveness, and a deterioration of the current account. In addition, the inflows can destabilise domestic financial markets. These concerns have often led the authorities to react to the capital inflows by implementing a variety of policy measures. Particularly, countries under discussion their policy response is summarised in the above table 4.1.

To start with, Controls on cross-border capital flows in these countries encompass a wide range of diversified, and often country-specific, measures. The policy measures include a) direct intervention to reduce gross inflows, in the form of controls or taxes on capital imports b) the removal of restrictions on capital outflows, to reduce net inflows c) increased exchange rate flexibility, allowing some of the demand to be reflected in an appreciation of the domestic currency d) restrictive monetary policy, in the form of sterilised intervention, or increases in reserve requirement. These restrictions on and impediments to capital movements have in general taken to two broad forms: (a) “administrative” or direct controls and (b) “market-based” or indirect controls.

The appropriate policy response to capital inflows clearly depends on the composition of the inflows (that is, whether they are short or long term), the availability and flexibility of various policy instruments, and the prevailing policy environment and the extent of policy makers’ credibility are key instruments of the form and timing of the appropriate policy response (Khan, 1995). The role and merits of some of those policies are examined below.

Restrictions on gross capital inflows

The general principle for the capital control was to limit short-term capital inflows. Taxes on short-term borrowing abroad were imposed in some countries. Chile in 1991-1998, Thailand in 1995-1997 have all used capital controls to limit short-term capital inflows. Chile combined market-based controls (indirect taxation of inflows through reserve requirement), with direct (minimum stay requirement for direct and portfolio investment) and other regulatory measures such as extensive reporting requirement on banks for capital transactions.

The authorities contend that with out such regulations the size of the net capital inflows could have been larger and the same monetary policy could not have been applied. Some observers also have even attributed Chile's strong banking system performance for achievements (Edwards, S., 1998b).

There is some evidence that shows the Chilean authorities indeed affected the composition of inflows by restricting capital mobility. Since mid 1990s, when relatively restrictions on capital inflows were in place, the maturity of inflows to Chile was in favour of medium and long-term capital inflows. Soto (1997) finds that it has significantly altered the composition of capital inflows, leading to a relative decline in short-term flows. Moreover, Soto finds that this effect is prolonged over time. The Chilean experience has been viewed by many as a means of controlling the composition of foreign borrowing with out hindering the volume of capital inflows to the country.

In August 1995, Thailand, attempted to cope with capital inflows through a combination of monetary, prudential, and market based capital control measures. The measures included a 7% reserve requirement (held at the central bank) on non-resident baht accounts with less than one-year maturity and on foreign companies' short-term borrowing. As prudential measures, the minimum capital adequacy requirement for commercial banks was also raised. Towards the end of 1996, all the restrictions on foreign borrowing were eliminated. The controls, in addition to weak economic fundamentals, undermined investors confidence, and discouraged foreign capital inflows, resulting in a decline in net private inflows of capital (from more than 5 % of GDP in 1996 to an average of about -12 % in 1997-98) (Ariyoshi, 2000, 58).

In Kenya, the cause behind the surging capital inflows has been a commodity price boom (see Cuddington, 1989). In some of the recent inflow episodes, the boom in coffee prices may also have fuelled the surge in inflows (Calvo, 1998). In addition, the sharp rise in domestic real interest rates was a key "pull" factor behind the rising capital inflows in Kenya since 1994. Since then the inflows improved with slow rate even though it was negative. Also domestic causes played a crucial role in attracting the inflows. For instance, Kenyan authorities during period of heavy inflows in October 1993 to March 1994 statutory cash ratio (reserve requirement) was increased in three steps from 12 percent to 20 percent. During the same year the net private capital inflows was the lowest.

In sum, there is some evidence that the inflow controls were partly effective in Thailand, in reducing the level and affecting the maturity of the inflows while curtailing sterilisation operations, and in Chile, in maintaining a wedge between domestic and foreign interest rates and affecting somewhat the composition of the inflows. In Kenya also after the imposition of the reserve requirement the net capital inflows were at the lowest even if it was already declining.

Exchange Rate Flexibility

There have been wide differences among countries in the degree of exchange rate flexibility in the present episode. However, the common ground appears to be that all central banks intervene in the foreign exchange market to some degree and that no country has operated under a free float. Chile has allowed exchange rate to fluctuate extensively that allowed for an orderly appreciation of the currency. In 1992, soon after the introduction of the URR, and in response to continuing capital inflows and mounting pressure on the currency, the central bank revalued by 5 percent. In 1994, the currency was revalued by an additional 10 percent.

In Thailand, net total capital inflows rose strongly, with the capital account surplus rising from 8.5 percent of GDP I 1994 to 13.1 percent of GDP in 1995, owing to an increase in both short-term and longer-term inflows (Ariyoshi, 2000, 52). The growing size and volatility of these inflows, not only threatened the inflation outlook, but also complicated the implementation of monetary policy in an environment with a fixed exchange rate. The authorities feared that a more flexible exchange rate would lead to an exchange rate appreciation, deterioration in the current account, and a weakening of the banking system. Therefore, the government increased the coverage of the reserve requirement and adopted other prudential measures such as the minimum capital adequacy requirement for commercial banks.

Reliance on capital controls in Thailand may have delayed a much needed move toward greater exchange rate flexibility. The central bank introduced a two-tier exchange rate system. Once the economic environment showed improvement most of the controls were abolished or substantially modified at the end of January 1998.

Following a collapse of tea and coffee prices in 1987, Kenya was left with a severe shortage of foreign exchange. The Kenyan economy was characterised by a highly regulated financial sector and exchange system in the late 1980s. To avoid the shortage of foreign exchange, the government embarked on a wide-ranging liberalisation program aiming to attract foreign savings. A significant step toward liberalisation of the capital account was made in 1991. Finally, in 1995 all remaining foreign exchange controls were eliminated and all remaining restrictions on capital account transactions were eliminated with a few exceptions. Kenya has maintained a flexible exchange rate system since 1995.

Despite these wide-range liberalisations, capital does not seem to come in to Kenya and the economy experienced a sharp economic downturn from late 1991 onward. Economic growth decelerated from 4.7 percent in 1990 to -0.8 percent in 1992, while inflation increased from 21.8 percent to 53.5 percent during the same period. The main lesson from Kenya's experience seems to be that rapid and wide-ranging liberalisation has increased the country's vulnerability to capital flows by providing legal channels for capital flight.

Encouragement of gross outflows

A different approach to tempering the impact of large gross capital inflows has been to remove controls on capital outflows and thereby increase outflows (Reinhart, 1996). This policy is aimed to reduce net inflows and is an attempt to reduce the size of the shock disturbing the economy.

Restrictions on capital outflows in Chile were gradually reduced over the decade. Outward foreign direct investment (FDI) was liberalised at an early stage in 1991-92, which was accompanied by a gradual liberalisation of bank lending abroad. Since 1992, domestic investors' ability to invest abroad has been gradually liberalised. Finally, the minimum holding period of capital was reduced from three to one year in 1995. The rationale for maintaining the minimum-stay requirements was related to concerns of volatility of capital flows, which are justified mainly for prudential reasons. The impact of outflow liberalisation on net inflows of capital can be ambiguous. Outflows liberalisation has been suggested in the literature as one way of reducing the potentially adverse macroeconomic consequences of large inflows of capital in Chile (Quirk-Evans 1995, Schadler et al, 1993).

Liberalisation of outflows should increase residents' holdings of foreign assets reducing net inflows of capital, which in turn should diminish exchange rate and monetary pressures. Available data indicate that in Chile outflows of capital have gradually increased after the liberalisation of outflows, which should have reduced net inflows. However, outflows liberalisation may also lead to larger inflows of capital. A number of authors including Williamson (1991), and Labàn and Larrain (1998), and Laurens and Cardoso (1998) in the case of Chile, have argued that liberalisation of outflows by reducing uncertainty of investors in the country and by lowering domestic asset prices can also increase capital inflows (Simone, et-al, 1999, p. 9).

In Thailand, capital inflows were promoted at a relatively early stage while outflows were liberalised only gradually. Given the limited policy options, the authorities attempted to cope with capital inflows through a combination of monetary, prudential, and market based capital control measures. Liberalisation of capital outflows was allowed in April 1991. Residents were permitted to export capital for investment purposes and so as to counteract the inflows. In effect the net capital inflows started to decline gradually. However, the net capital inflows increased sharply in 1994 reaching the same level as 90s.

Despite this capital outflows liberalisation the net capital inflows has increased which may tell us that allowing capital repatriation has attracted more inflows busting the investors' confidence. In 1993, 60 per cent of the inflows were short-term borrowing by banks. Due to volatility behaviour of these inflows, the Thai baht also came under speculative pressures in early 1995 and sever speculative pressure in May 1997. Before 1997, the capital account had been almost fully liberalised on the inflow side, except for the reserve requirement on short-term foreign borrowing, while outflows were liberalised only gradually. The authorities imposed capital controls on May 15, 1997. The control did not prevent outflows as the result of the sharp rise in the spread between the onshore and offshore interest rates created arbitrage opportunities, and thus incentives for circumventing the controls (Ariyoshi, 2000).

In Kenya, contrarily all the restrictions in capital account were removed in order to attract more capital to the country to boost the economy which include measures that allow domestic investors to invest part of their capitals abroad. However, even if some capital outflows were permitted, capital didn't seem to come in. Instead, the wide-ranging liberalisation has increased the country's vulnerability by providing legal channels for capital flight. Since 1993, thus, the net private capital inflows remained negative showing more capital outflows

than inflows. It is also important to note that capital inflows in this country are more related with the economic performance such as real GDP growth.

Monetary Policy

All of the recipient countries have implemented restrictive monetary policy in the form of sterilised intervention, or/and increases in reserve requirement.

Sterilisation

Sterilisation-the exchange of domestic securities for foreign exchange-can help to insulate the domestic economy from the macroeconomic effects of capital inflows. Sterilisation would keep domestic interest rates higher than they would be in the absence of the sterilisation. At worst, this may provide incentives for further short-term inflows. In addition, sterilisation results in an increase in the public debt and entails quasi-fiscal costs to the extent that the interest rate on domestic bonds is higher than that on foreign exchange reserves. The magnitude of these costs will be greater the higher the degree of capital mobility and the larger the gap between domestic and foreign rates of return. Thus the feasibility of this policy is also at issue. Even if sterilisation succeeds in limiting domestic monetary expansion, it may not insulate the economy from the effects of capital inflows.

In Chile the initial policy response to the capital inflows include heavy sterilisation by means of open market operations (OMO), particularly in 1990-92. Index Central Bank bonds of several maturities were issued as part of large open-market operations. Sterilisation also attempted through the transfer of public sector deposits out of commercial banks to the Central Bank. While sterilisation of most of the intervention helped prevent a monetary expansion, this policy imposed sizeable costs on the central bank, reflecting the differential between the interest cost of sterilisation and the return on foreign assets (roughly 1 per cent of GDP annually during the 1990s) (Ariyoshi, 2000, 47).

In Thailand, policy responses to the capital inflows include heavy sterilisation by means of open market operations, particularly in 1989-91. The discount rate was increased sharply and commercial banks' access to refinancing facilities at the Central Bank curtailed. Sterilisation also attempt through transfer of public sector deposits out of commercial banks to Central Bank. In 1987-92, a sharp increase in the share of government deposits held at the Central

Bank rather than at commercial bank were introduced. Sterilisation efforts were reduced in mid-1993.

Overall, sterilisation together with regulatory controls imposed on capital inflows in 1995-96 seem to have reduced net capital inflows into Thailand particularly reducing the share of short-term net inflows from 62 per cent of the total capital inflows in 1995 to 32 per cent in 1996 and lengthened the maturity of the loans (the share of long-term loans rose from 14 per cent in 1995 to 34.3 per cent in 1996). It is difficult, however, to isolate the impact of the controls from those of the deterioration in investor confidence and other external factors (IBID, 52).

In Kenya, fear of monetary expansion associated with the rise in capital inflows and increased purchases of foreign exchange were evident in the capital inflow episodes in late 1993-94. These fears led monetary authorities to engage in large-scale sterilisation policies through the open market sale of government securities, increases in reserve requirement, or both (Calvo, 1998, p17). That means absorption of domestic money in exchange for domestic public debt (e.g. Treasury Bills). Sterilisation is therefore equivalent to the central bank acquiring international reserves in exchange for domestic public debt. Investors may require an interest rate premium on domestic public debt.

Therefore, the interest rate on domestic public debt will exceed that of international reserves, generating a larger fiscal deficit (since those deficits are usually borne by the central bank, they are called *quasi-fiscal deficits*) and stimulating additional inflows.. In the case of Kenya, the rising burden of servicing the public debt became evident, as in the 1993/94 budget domestic interest payments were 1.5 per cent of GDP above the level that was programmed. The interest differential led Kenya in 1994 to stop sterilisation (Calvo, 1998).

Unremunerated Reserve Requirement (URR)

The introduction of the reserve requirement was motivated by macroeconomic and prudential considerations. The URR is an indirect, price-based measure in the form of a one-year compulsory deposit at the central bank of a fraction of certain capital inflows. Its purpose is to reduce certain capital inflows by increasing their cost.

Regarding the prudential considerations, the measure was expected to discourage short-term external borrowing. By reducing the volume of external short-term debt the measure was expected to enhance financial stability and, thus, reduce external vulnerability (Le Fort, 1996). The reserve requirement increases the cost of foreign borrowing) or conversely reduces the rate of return for a foreign investor), thus filling all or part the gap between domestic and international interest rates (Cardoso, 1998).

The main instrument for restricting capital flows in Chile has been the URR on capital flows. Chile introduced restrictions on capital inflows (URR) in June 1991. Initially, all portfolio inflows were subject to a 20% reserve deposit that earned no interest. In July 1992 the reserve requirement on portfolio inflows was raised to 30%, and the holding period was set at one year. During the same month, reserve requirements were extended to trade credits and loans related to direct foreign investment. In 1995 capital controls were extended to cover international issues of bonds. With markets in turmoil and the Chilean peso under attack, in June 1998 the reserve requirement was lowered to 10%, and in September of that year reserve requirement was eliminated.

Since domestic interest rates in Chile meant high compared to international levels reserve requirement can be expected to help to minimise exchange rate appreciation pressures in the face of substantial capital inflows and to enhance the autonomy of monetary policy so that the effect of a tight monetary policy on the exchange rate would be minimised. As such, the Chilean authorities have argued that, due to the non-remunerated reserve requirement, Chile's RER rate has appreciated less than in other countries of the region.

However, the URR has received a lot of attentions and has been subject to an intensive debate. Since the URR was not universally applied to all foreign capital inflows, the regulations tended to lose their effectiveness over time, as ways circumventing them were developed channelling the inflows through exempted windows. Several studies have been done to test the effectiveness of the reserve requirement particularly by Valdes and Soto (1996), Soto (1997), and Edward (1998a, and 1998c).

But, the literatures do not provide empirical evidence that would support a prolonged effect of the reserve requirement on the real exchange rate. Cardoso and Laurens (1998) find that the introduction URR had only temporary effects on the composition of external financing, which

is consistent with the view that the private sector will attempt to circumvent any restrictions to capital movements. Quirk and Evans (1995) observe that net short-term private capital inflows recorded in the balance of payments decreased in 1991 with the introduction of URR as part of capital control. However, they also observe that 'net errors and omissions' and the estimated trade misinvoicing also increased sharply in the same year. One possible interpretation of that evidence is that an increase in unrecorded short-term flows reflecting an attempt by the private sector to circumvent the capital restriction.

Valdes and Soto (1996) use a capital control index in the context of a single equation model. The results suggest that there is no evidence of a positive long-run effect. Soto (1997) also finds a negative relationship between the reserve requirement and exchange rate volatility, 30 percent reserve requirement would reduce volatility by approximately 20 percent. It is measures implemented by Chile whose specific objective was to reduce market volatility. While Soto finds a small and short-lived positive effect on the RER, Edwards concludes that the behavior of the RER was not affected by the capital controls.

In Thailand, in August 1995 the authorities started to introduce restrictions on capital inflows. The measures included a 7 per cent reserve requirement (held at the central bank) on nonresident baht accounts with less than one-year maturity and on finance companies' short-term foreign borrowing. Also reporting requirements were imposed for short foreign currency positions. Further tightening of the restrictions occurred from April to June 1996, when the 7 per cent reserve requirement was extended to new short-term offshore borrowing with maturity of less than one year by commercial banks and BIBF banks. Toward the end of 1996, all restrictions on foreign borrowing were eliminated (Ariyoshi, 2000).

In Kenya, during the October 1993-March 1994 period the statutory cash ratio was raised in three steps from 12 per cent to 20 per cent. The increased sales of treasury bills and higher reserve requirements drove domestic interest rates higher. Since the Kenyan shilling was appreciating this period the rise in dollar returns was even more dramatic. By mid-1994 the high level of interest rates was increasing debtservicing costs, generating quasi-fiscal losses and stimulating additional inflows. At the same time, it was decided that intervention efforts would be scaled down considerably and the shilling was allowed to appreciate further (See Kimei, Mjerna, Tarimo, and Msutze, 1997).

Fiscal Policy

Some countries have complemented monetary and exchange rate policies with fiscal measures, such as the taxation of capital inflows and/or a reduction in public expenditure. Taxes on short-term borrowing abroad were imposed in Chile in 1991. This policy conveys the powerful message that the authorities are concerned with short-term consequence speculative attack. Such policy can coexist with policies that encourage specially foreign direct investment. However, even if they can be effective in the short run, private sectors are quick to circumvent the taxation (Khan, 1995). In Kenya, to make short-term inflows costly authorities imposed distortionary taxation on short-term inflows (Calvo, 1998). This tax would increase the cost of borrowing and hence decrease returns from such inflows. As such, in effect reduce the amount of new short-term borrowing.

Another policy reaction to capital inflows has been to tighten fiscal policy. In Thailand, during 1988-91 spending cuts were introduced on nontradables such as investment in infrastructure, so as to lower aggregate demand and curb the inflationary impact of the inflows (Montiel, 1998; Schadler, 1993; Reinhart, 1996).

4.2 Variations in Policy Responses

This section examines *policy measures* with their respective *policy objectives* with which policies of each of these types were adopted by these countries during the capital inflows episode, as well as the modalities of their implementation.

Measures to Impede Gross Inflows

Controls, taxes, or other impediments to inflows were adopted in several countries, and they have taken many forms. The most straightforward of these consist of quantitative restrictions on foreign borrowing. For instance, Chile adopted URR in 1991. URR were supplemented with other measures to increase the cost of carrying foreign exchange liabilities. Chile also adopted a stamp tax to foreign loans. Thailand has adopted URR in 1995 and in 1990 started taxing foreign borrowing. Chile sought to discourage inflows by increasing the risk associated with foreign borrowing. Chile adopted exchange rate band, and widened them during the

inflow episode. Chile permitted extensive variation of the exchange rate within the band to stabilize the path of the exchange rate. In Kenya, in October 1993 to March 1994 12 % statutory cash ratio was increased to 20%.

Encouragement for Gross Outflows

Many countries relaxed controls on capital outflows when inflows were high. Thailand, Chile and Kenya removed a number of restrictions including measures such as explicitly permitting residents to invest abroad, removing restrictions on repatriation of capital and interest by foreign direct investors (outflows were liberalized in Chile and Thailand in 1991 and 1992 in Kenya).

Exchange Rate Policy

In Chile and Kenya capital inflows have been associated with considerable real exchange rate appreciation than Thailand (Chile in 1990-1992 and again in 1994 whereas in Kenya in 1993 and 1994), possibly reflecting a greater weight given to inflation than a competitive target. In other words, allowing movement (appreciation) would absorb some of the pressure from capital inflows. Chile revalued its RER by 5 per cent in 1992 and revalued additional 10 % in 1994. Kenya in 1995 maintained flexible exchange rate system.

Although various reasons account for the variations in the response of the real exchange rate, important differences in the composition of aggregate demand may play a key role in determining whether the real exchange rate appreciate or not. In addition, differences in the domestic policy response are likely to play a key role in explaining the differences in real exchange rate behavior among the countries. Specifically, the behavior of public sector consumption influences the real exchange rate by affecting both the level and composition of aggregate demand. Other things being equal, the more restrained the fiscal stance at the time of capital inflows, the weaker the real exchange rate appreciation. There were fiscal spending contraction most markedly in Thailand during 1988-91, at the time of the inflows (see Schadler and others (1993)). In addition, comparatively effective sterilisation of capital inflows which was successful in limiting the expansion in credit and money aggregates and in aggregate demand may have contributed to the differences in real exchange rate behavior.

Measures to Restrict Base Money Growth

By far all the countries examined here the most common response to the receipt of capital inflows has been sterilized intervention. Thailand (1989-90) employed reduction of access to the discount window (repurchase market). Chile (1990-92) was particularly aggressive initially in their pursuit of sterilization when inflows accelerated, seeking to offset all effects of capital inflows on the monetary base, while Thailand was not so ambitious, seeking only to improve effects on the base (Reinhart and Dunaway, 1995). In Kenya aggregate money started increasing particularly in 1992-1993. Thus, To mitigate the effect the authority adopted large-scale sterilization.

Since sterilization the aggregate money declined significantly (Table A2). In effect, the policy drove domestic interest rate even higher than before the inflows leading further inflows (Montiel, 1998). This suggests that whether desirable or not, sterilization remained a realistic option for these countries, at least in the short run. However, capital mobility is higher in the long run than short run as such sterilization may indeed represent only a temporary option in most cases.

Restrictive Fiscal Policy

Fiscal tightening was an important component of the policy response in Thailand particularly in 1988-93 than compared to other countries. For Thailand, it was one of these policies that helped to maintain moderate exchange rate appreciation compared to other countries under discussion before the crisis. Other countries followed taxing short-term borrowing from abroad as shown in Table A2.

4.3 Macroeconomic Outcomes

How well did these measures succeed in preventing macroeconomic instability in the face of inflows? Significant real exchange rate appreciation was widespread except Thailand. Thailand also after the crisis experienced high volatility of exchange rate. Chile experienced a mild appreciation compared to volatility in Kenya. All of these countries examined avoided a real appreciation, though the real exchange rate appreciated and fluctuated in Thailand after the baht crisis in 1997. Fiscal restraint appears to have played a role in avoiding stronger real appreciation as well as more rapid inflation (Montiel, 1998).

Increases in current account deficits have been common during inflows episode. This is because few governments will resist the temptation to let the real exchange rate appreciate as long as money is flowing in and financing their current account deficits. In the end, correcting overvaluation always leads to painful adjustment. Chile and Thailand registered larger deficits compared to Kenya. The current wave of capital inflows does seem to have been associated with an investment boom, particularly in Thailand during 1988-90. Thus, the increases in current account deficits have accommodated an increase in domestic saving, particularly sharp increase in Thailand (IBID). Chile appears to have experienced consumption booms led by private sector consumption. The Kenyan economy has been improving since 1993 to 1995.

4.4 Policy Lesson

A systematic attempt to draw lessons about effectiveness based on these countries' experience would require linking individual policies to their outcomes in particular countries. The lessons to be reported in this section would be those that can be crudely inferred from cross-country patterns of policy choices and macroeconomic outcomes.

Administrative controls (capital controls and liberalisation of outflows)

After the capital controls were imposed, inflows have slowed both in Chile and Thailand suggests that controls can work, at least in some cases and at least temporarily. Including Kenya, moreover, controls have been credited altering the composition of inflows in favour of those with longer maturities (Calvo; Montiel, 1998). With regard to liberalisation of outflows, it is clear from country experience that substantial inflows followed the removal of restrictions on outflows-as discussed by Bartolini and Drazen (1997). This is consistent with the view that the removal of restrictions on outflows simply attracts additional inflows.

Flexible Exchange rate policy

Concerning use of the exchange rate to achieve the same result, the lessons are several. Flexible exchange rate allows nominal exchange rate to movements to absorb some of the pressures exerted by capital inflows in the foreign exchange markets. Nominal exchange rate adjustment was essentially confined to two countries (Chile and Kenya). Thailand restrained itself from this policy because of fear of huge deficit it may consequence.

However, Countries that adopted managed to avoid real appreciation over the course of the surge episode. The link between real appreciation and the emergence of current account deficits is not sound. Avoiding real appreciation has not necessarily implied avoiding current account deficits. The emergence of large current account deficits was not restricted to countries that experienced real appreciation. For instance, Thailand had large adverse movement in the current account balance with stable real exchange rates before the baht crisis.

Monetary Policy

All the countries adopted URR and it has helped to reduce gross capital inflows by favouring medium and long-term capital inflows. However, lessons concerning sterilised intervention are mixed. Indeed, all the countries registered an increase in domestic interest rates over the period of sterilisation (see Frankel, 1994). Finally, sterilisation does not seem to have completely insulated recipient economies from the effect of capital inflows (Montiel, 1998).

Fiscal Policy

Even if all the three countries adopted this policy, experience suggest that this has not proven to be flexible instrument in responding to inflows. However, real appreciation was avoided in countries such as Thailand that tightened fiscal policy in response to inflows. The frequency of real appreciation elsewhere supports the implication of theory that, in the presence of capital inflows, the avoidance of real appreciation requires a fiscal contraction (Montiel, 1998, p 38).

4.5 Policy Implication

The policy implication that can be learned from the analysis is related both to *macroeconomic management of capital inflows* and to the *style and pace of capital account liberalization*. We have seen from the analysis, that capital flows to these countries pose two clearly related problems. The first one is that there was a structural decline in capital inflows. The second, is the nature of the inflows to be pro-cyclical and short-termist. I will therefore divide my policy suggestions from these two dimensions. Firstly, it is indispensable encouraging a recovery of private flows to these countries, especially long-term ones. Portfolio flows are generally the

most volatile private capital inflows and thus stabilising those already present is therefore as important as attracting additional flows. Secondly, authorities should use appropriate macroeconomic measures to diminish the pro-cyclical and short termist of such flows. The objective of sustaining economic growth in the face of volatile capital inflows requires the use of a battery of policy instruments.

There is a broader consensus that international capital mobility is a necessary component of the development process. However, this view mostly take no account of important real-world conditions such as informational bottlenecks, domestic market structure, the volume and timing of financing, and its costs and volatility. Therefore, with regard *the style and pace of liberalization*, slow and gradual liberalization of the capital account is desirable especially in the early stage of development, and should be done when the economy is properly stabilised, and has a healthy financial sector. There is a lesson that can be learned from Kenya's past experience that rapid capital account liberalisation does expose to a greater degree of volatility.

Conclusion

In sum, the above discussion has highlighted that the risks associated with capital inflows create policy dilemmas. There is no a single best policy for managing the inflows. The appropriate policy mix will depend on the nature of the inflows, their causes, and the macroeconomic and policy climate of the recipient country. Although no single policy exists for all countries, to limit some of the risks associated with short-term inflows, a reasonable sequencing of policies would consist of those flows through sterilised intervention, greater exchange rate flexibility, and/or increased marginal reserve requirements, accompanied by allowing appreciation of the currency.

Chapter Five: Conclusion

As we have seen there were massive surge of capital inflows in these countries. These capital inflows posed macroeconomic challenge to these countries such as real appreciation of exchange rate, huge current account deficits and fluctuating economic growth. These macroeconomic impacts necessitated governments to undertake some policy measures to overcome these challenges. Some of these macroeconomic impacts and policies are summarised below.

Macroeconomic impact

Impact on aggregate demand, as we have seen, the additional capital inflows can be used to accumulate foreign exchange reserves, increase domestic investment, or increase domestic consumption. In other words, capital inflows can be used to finance either current account deficit and/or to accumulate reserves (see equation 2). Large proportions of the capital inflows have been used for reserve accumulation rather than CAD finances. The accumulation of reserve accounted on average 49 % of the inflows for both Chile and Thailand. The remaining 51 per cent were used to finance current account deficit. The capital inflow that was channelled to current account was used to finance investment rather than consumption for both Chile and Thailand. The capital inflows in both cases favour investment but more importantly Thailand whereas in Kenya stimulated more consumption and surge in imports.

Impact on real exchange rate, the capital inflows in Chile since early 90s increased the demand for the peso and put up ward pressure RER. Chile RER rate followed an appreciation trend of 4 percent a year during the 1991-1994. By late 1990, exporters had begun to complain that the rapid strengthening of the peso in real terms was negatively affecting their ability to compete in international markets. Whereas in Thailand remarkably little real exchange movement was observed, given the size of the inflows. In fact, the real exchange appreciated slightly in the early 1990s, and began appreciating very slowly since. However, after the currency crisis the stable RER fluctuated tremendously. Since 1991, the Kenya shilling was appreciating. Sterilisation and higher reserve requirement drove domestic interest rates higher, which stimulated additional inflows. Since then intervention efforts were scaled down and the shilling was allowed to appreciate further.

Impact on current account, In Chile the current account deteriorated since the inflows in 1990s. However, after the government introduced the capital control current account was improving till 1995. In 1995, after strengthening of the capital control on inflows the current account has improved but fluctuated immediately and showed some tendency to widen on average. In Thailand when capital inflows accelerated during 1988 lead to some widening of the current account deficit peaking at 8.5% of GDP in 1990 and declining since. In 1996, just before baht crisis, growth and investment deteriorated and exports declined sharply. Due to massive capital outflows the CAD was at surplus of on average 12.5 per cent of the GDP in 1998. Whereas the Kenyan current account had improved since 1989 to 1994 reaching surplus in year 1993 and 1994 due to cut in government expenditure but after 1994 it continued to fluctuate highly in deficit and deteriorated reaching worst in 1995.

Impact on Inflation, Indeed, the arrival of large amounts of foreign capital was perceived as posing serious challenge to domestic macroeconomic management. The concern is that the rise in money supply will fuel inflation. Due to their policy measures countries have been successful in preserving macroeconomic stability with regard to inflation in the face of inflows, and all the countries managed to reduce the level of inflation.

Impact on economic growth, since the surge of the capital inflows in Chile in 1989 economic growth was ranging between 5-7 per cent. However, after massive surge of volatile short-term capital inflows the RER had shown appreciation and current account deteriorated leading to deterioration of economic growth till 1994. Authorities strengthened its control on capital inflows in 1995. During the same year the growth showed improvement but fluctuated since then, following the same trend like the other countries under discussion.

In Thailand, capital inflows contributed to strong economic performance. In 1988-90 witnessed an investment boom, very high growth and thereafter a slight deceleration took place. Growth fell to the 8-8.5% range. In 1995 growth and investment levels started to deteriorate in the face of an appreciating real exchange rate and capital inflows and exports declined sharply. In 1997, the country was in crisis. During this period like any other economic fundamentals the real GDP growth was in negative. For all the countries under review experienced economic turn down since 1996. But Thai economy was hit worst.

A significant step toward liberalization of current account and capital account transactions was made in Kenya in 1991. However, economic growth decelerated from 4.7 per cent in 1991 to -0.8 percent in 1992. To avoid recession government embarked on wide-ranging liberalization program in 1992. The Kenyan economy has been improving since 1993 to 1995, however, continued to decline since.

Macroeconomic policies

The risks associated with capital inflows created policy dilemmas. There is no a single best policy for managing the inflows. The appropriate policy mix will depend on the nature of the inflows, their causes, and the macroeconomic and policy climate of the recipient country. Although no single policy exists for all countries, to limit some of the risks associated with short-term inflows, a reasonable sequencing of policies would consist of those flows through sterilised intervention, greater exchange rate flexibility, and/or increased marginal reserve requirements, accompanied by allowing appreciation of the currency.

Statistical Appendix

Table A1: Selected Economic Indicators 1985-1998

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Chile														
	(In per cent of GDP)													
Net private capital flows	-8.5	-7.7	-4.3	-0.7	6.6	9.9	5.5	6.9	7.2	11.2	6.7	10.4	9.9	3.6
Current account balance	-8.6	-6.7	-3.6	-1.0	-2.5	-1.6	-0.3	-2.4	-5.8	-3.1	-2.0	-5.1	-4.9	-5.7
	(Annual percentage change)													
Real GDP	2.5	5.6	6.6	7.3	9.9	3.7	8.0	12.3	7.0	5.7	10.6	7.4	7.6	3.4
Inflation	29.5	20.6	19.9	14.7	17.0	27.3	18.7	12.7	12.2	8.9	8.2	6.6	6	4.7
Thailand														
	(In per cent of GDP)													
Net private capital flows	3.8	2.5	3.1	7	10.3	12.8	10.7	8.7	8.3	8.6	12.9	5.7	-7.6	-16.9
Current account balance	-4.0	0.6	-0.7	-2.7	-3.5	-8.3	-7.5	-5.5	-5.0	-5.4	-7.9	-7.9	-1.9	12.4
	(Annual percentage change)													
Real GDP	4.6	5.5	9.5	13.3	12.2	11.6	8.1	8.2	8.5	8.6	8.8	5.5	-1.3	-9.4
Inflation	2.4	1.8	2.5	3.8	5.4	6.6	4.7	3	4.6	4.6	7.5	4.8	7.6	4.3
Kenya														
	(In per cent of GDP)													
Net private capital flows	3.7	3.1	1.9	1.5	2	2.4	4.3	1.0	0.7	-3.2	-1.1	-1.2	0.1	-0.9
Current account balance	-1.9	-0.6	-6.3	-5.5	-7.1	-5.6	-1.1	-1.3	2.9	0.9	-4.5	-1.1	-3.5	-3.5
	(Annual percentage change)													
Real GDP	4.3	7.2	5.9	6.2	4.7	4.7	1.4	-0.8	0.4	2.6	4.4	4.1	2.1	1.5
Inflation	13.0	4.8	7.6	11.2	12.9	20.6	14.6	33.6	54.6	6.6	6.9	10.8	8.3	2.5

Source: IMF Economic Outlook 2002 Data Set (for 1985-1989) and Ariyoshi, 2000 (for 1990-1998).

Table A2: Other Selected Economic Indicators since 1990-1998 (Annual Percentage change)

	1990	1991	1992	1993	1994	1995	1996	1997	1998
Chile									
Reserve money	54.4	23.7	21.7	13.6	20.7	13.9	15.9	16.0	-3.6
Broad money	23.5	28.1	23.3	23.4	11.3	25.8	19.6	16.3	9.6
Nominal exchange rate ¹	13.6	11.3	2.0	12.7	-6.3	0.8	4.4	3.5	7.7
Real Effective exchange rate ²	-3.8	6.5	10.4	0.4	5.8	1.7	3.9	9.6	-6.1
Thailand									
Reserve money	18.6	13.3	17.9	16.1	14.5	22.6	12.0	4.5	0.4
Broad money	26.7	19.8	15.6	18.4	12.9	17.0	12.7	2.0	6.1
Nominal exchange rate ¹	-1.6	-0.0	0.9	0.1	-1.8	0.4	1.7	84.5	-22.3
Real Effective exchange rate ²	-2.9	0.6	1.8	1.8	-2.6	3.0	5.4	-33.0	23.8
Kenya									
Reserve money	21.8	15.7	53.5	52.5	31.3	28.7	8.2	-1.5	-1.7
Broad money	20.1	19.6	39.0	28.0	27.4	12.5	15.9	9.8	3.1
Nominal exchange rate ¹	11.5	16.6	29.0	88.2	-34.2	24.8	-1.6	13.9	-1.2
Real Effective exchange rate ²	-5.7	-2.1	8.6	-17.5	47.4	-18.3	12.3	1.9	0.1

Source: Extracted from Ariyoshi, 2000

1 Domestic currency units per U.S. dollar

2 Increase means an appreciation

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