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POLICY RESEARCH WORKING PAPER

# What Macroeconomic Policies Are “Sound?”

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In the new globalized financial market environment facing developing countries, volatility has become an increasing fact of life. Faced with such volatility, what broad principles should guide their macroeconomic management?

The World Bank  
Economic Development Institute  
Regulatory Reform and Private Enterprise Division  
and  
International Monetary Fund  
Research Department  
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## Summary findings

Most people agree that the soundness of macroeconomic policies should be judged by their efficacy in meeting the objectives of steady growth, full employment, stable prices, and a viable external payments situation.

What people debate about are the links between macroeconomics and economic structure — and in the current environment, the openness to foreign capital flows.

As developing countries become more integrated into international financial markets, volatility may become an increasing fact of life. Faced with such volatility, how should these countries frame their macroeconomic policies? What broad principles should guide their macroeconomic management?

In many developing countries, the openness of the capital account has been significant. Many countries have made the transition toward an open-economic paradigm. As a result, fluctuations in international capital and currency markets, as well as shifts in foreign investors' attitudes and confidence, have greatly affected local stock market prices, the level of foreign exchange reserves, and the scope for monetary and interest rate policy.

Capital controls and foreign exchange restrictions have been significantly dismantled in a number of developing and transition economies.

In 1970, only 34 countries — or 30 percent of the International Monetary Fund's membership — had assumed Article VIII of the IMF Articles of Agreement, declaring their currency convertible on current account transactions. By 1997, this figure had increased to 77 percent.

Does financial integration make it more difficult to achieve macroeconomic stability? Apparently not, on the whole, although at times large short-term capital flows can lead to misaligned asset prices, including exchange rates.

What financial integration does do is limit how far countries can pursue policies incompatible with medium-term financial stability. The disciplining effect of global financial and product markets applies not only to policymakers — through pressures on financial markets — but also to the private sector.

Rather than constrain the pursuit of appropriate policies, globalization may add leverage and flexibility to such policies, easing financing constraints and extending the time during which countries can make adjustments.

But markets will provide this leeway only if they perceive that countries are undertaking adjustments that address fundamental imbalances.

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This paper — a joint product of the Regulatory Reform and Private Enterprise Division, Economic Development Institute, and the Research Department, International Monetary Fund — was presented at the conference "South Asia Beyond 2000: Policies for Sustained Catch-Up Growth," March 19–20, 1998, Colombo, Sri Lanka. Copies of this paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Bill Nedrow, room G2-072, telephone 202-473-1585, fax 202-334-8350, Internet address [wnedrow@worldbank.org](mailto:wnedrow@worldbank.org). The authors may be contacted at [mdailami@worldbank.org](mailto:mdailami@worldbank.org) or [nhaque@imf.org](mailto:nhaque@imf.org). October 1998. (46 pages)

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# **What Macroeconomic Policies are 'Sound'?**

Mansoor Dailami and Nadeem ul Haque

Paper presented at:

**South Asia Beyond 2000:  
Policies for Sustained Catch-Up Growth  
Colombo, Sri Lanka, 19-20 March 1998**

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## Abstract

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Most people are likely to agree that “sound policies” ought to be judged by their efficacy in fulfilling the socio-economic objectives of steady growth, full employment, price stability, and a viable external payments situation, as mandated by the prevailing socio-political consensus, and framed by the underlying economic structure and institutions. At this level of analysis, the debate centers on the analysis of linkages between macroeconomics and economic structure, principally, in the current international environment, openness to foreign capital flows.

Enhanced volatility may well be a longer-term fact of life facing developing countries as they become more integrated with international financial markets. The question is how to frame macroeconomic policies in the presence of such volatility, and in particular what broad principles should guide policy in several key areas of macroeconomic management.

From the macroeconomic perspective, the openness of capital account in many developing countries has been significant; it has effected a transition toward an open-economy paradigm, in which fluctuations in international capital and currency markets as well as shifts in foreign investors’ sentiment and confidence now have an important bearing on the movement of local stock market prices, the level of foreign exchange reserves, and the scope for monetary and interest rate policy. Capital controls and foreign exchange restrictions have been significantly dismantled in a number of developing and transition economies. In 1970, only 34 countries, or 30% of the IMF’s membership, had assumed article VIII of the IMF Articles of Agreement, declaring their currency convertible on capital account transactions. This had increased to 143, or 77%, by 1997.

Does financial integration make it more difficult to achieve macroeconomic stability? On the whole, it would seem not, even though at times large short-term capital flows can adversely affect macroeconomic stability, resulting in misaligned asset prices, including exchange rates. What financial integration does, rather, is limit the scope for countries to pursue policies that are incompatible with medium-term financial stability. The disciplining effect of global financial and product markets applies not only to policymakers, via financial market pressures, but also to the private sector. Rather than acting as a constraint on the pursuit of appropriate policies, globalization can provide added leverage and flexibility to such policies, easing financing constraints and extending the time period over which countries can implement needed adjustments. Markets will be willing to provide this leeway, however, only if they perceive that countries really are undertaking adjustments that fundamentally address existing and prospective imbalances.

In this context, the paper emphasizes that:

- Besides depending on the causes of capital inflows, appropriate policy responses will be determined by the flexibility afforded by the underpinning institutional structure and the existing policy stance. Countries that pursue relatively balanced macroeconomic policies will clearly find it easier to fashion an appropriate policy response while those pursuing unbalanced policies will be more constrained in dealing with the disruptions caused by inflows, or outflows.
- Fiscal policy has a fundamental role to play since both the direction and magnitude of capital flows are likely to exhibit sensitivity to perceptions of domestic public sector solvency. Potential insolvency can generate large capital outflows and/or large interest rate premia, as creditors try to avoid prospective taxation of domestic assets and demand compensation for exposing themselves to the risk of such taxation. This situation is aggravated when the government makes explicit guarantees to creditors, since the value of such guarantees will fluctuate with the government's perceived financial ability to back them. The upshot is that, in the context of high financial integration, the stock dimension of fiscal policy, in the form of changes in the government's perceived net worth, may itself represent an important source of shocks to the domestic economy, transmitted through the terms on which both domestic and foreign creditors are willing to hold claims on the domestic economy.
- Managing the exchange rate seems to be the revealed preference of most developing countries. The question is, how to manage a float? The emergence of a perceived misalignment and/or a lack of credibility of the commitment to the announced peg -- both of which can happen in any managed exchange rate arrangement--could trigger such large capital flows as to force the abandonment of the peg, as in the Mexican and ERM cases.

The paper also explores the linkage between macroeconomics and openness to foreign capital flows, with particular reference to South Asia. Over the past two years three South Asian countries, India, Pakistan, and Sri Lanka, have commemorated their 50 years of independence. One distinctive feature of South Asian countries is the contrast between openness of polity and economic openness of markets, entrepreneurship, and free choice. There is a continued adherence to planning, and despite deregulation, privatization and liberalization, still need to go further in the direction of reducing the size and the role of the government. South Asian countries have appeared much more hesitant than other developing countries to open up to international private finance, and inflation has been managed at relatively low levels despite large fiscal deficits because of the financial repression that a closed economy supported. The unhappy consequence may have been a lower growth rate than would have happened in the counterfactual.

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# What Macroeconomic Policies are 'Sound'?

## I. Introduction

Most people are likely to agree that “sound policies” ought to be judged by their efficacy in fulfilling the socio-economic objectives of steady growth, full employment, price stability, and a viable external payments situation, as mandated by the prevailing socio-political consensus, and framed by the underlying economic structure and institutions. At this level of analysis, the question of “What macroeconomic policies are sound?” hinges on the role of the state within a particular economic structure and institutions, and is sensitive in its prescription to the degree to which the economy is open to international trade and finance.

Macroeconomics has influenced and been influenced by the evolution of social consensus and the economic structure in a complex interactive manner over the past half century in both developed and developing countries<sup>1</sup>. In the industrial countries, the post-war consensus<sup>2</sup> born out of the exigencies of World War II and the legacies of the Great Depression of the 1930s established the model of the “mixed economy,” and “welfare state,” with the government committed to full employment<sup>3</sup>. The role envisaged for macroeconomic policy under this consensus, whether in the initial closed or its subsequent open economy paradigm, was one of short-term stabilization and “fine-tuning” of the economy. Implicitly embodied in this model

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<sup>1</sup> Macroeconomic stability is a prerequisite of credibility of a government’s commitment to currency convertibility, which in turn is the key element of financial integration. For a description of the macroeconomic requirements for return to convertibility in the postwar period for Europe, see Sachs and Warner (1995).

<sup>2</sup> For a description of the post-war consensus in the United Kingdom, for example, see Skidelsky (1990) and Yergin (1998).

<sup>3</sup> This is enshrined for instance in the Employment Act of 1946 in the United States.

was a general confidence in the ability of the government to interact and manage effectively. Armed with the Keynesian tool of demand management, this model yielded the “belle époque” macroeconomic performance of the 1950s and 1960s in the major industrial countries, but the high and volatile inflation of the 1970s set the stage for the reemergence of conservative and liberal ideology, with its strategic aim price stability rather than full employment. By the early 1980s, the pendulum had swung: “Ten years ago government was widely viewed as an instrument to solve problems; today, government itself is widely viewed as the problem<sup>4</sup>.”

In the context of developing countries, the macroeconomic policy model which came into prominence in the 1980s in response to the debt crisis of the early part of the decade assigned a dominant role to external balance and restoration of confidence to improve creditworthiness. This association with external constraints has led a to disproportionate focusing of attention on the relationship between domestic macropolicy and external balance. From this perspective, macroeconomic policy has been closely related to the availability and price of foreign capital, i.e., the supply curve, or the constraint imposed by the balance of payments. But supply of capital to developing countries tends to be highly correlated with country risk perceptions, as assessed by ratings assigned by credit rating agencies to the country’s foreign currency debt obligations. In assigning such ratings, agencies are known to take into account numerous economic, social, and political factors, but the Asian crisis has raised important concern about their performance<sup>5</sup>.

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<sup>4</sup> Owen and Schultze (1976).

<sup>5</sup> In a study of the behavior of US credit agencies, the Moody’s and Standard and Poor’s, Cantor and Packer (1996) found that the main factors that appear to play an important role in determining a country’s rating include: per capita income, GDP growth, inflation, external debt, and default history. The authors also found evidence of a strong relationship between ratings and market-determined credit spreads of sovereign bond issues. Haque et al (1996)



## II. Salient economic features of the South Asia region

In this paper we explore the linkage between macroeconomics and economic structure, principally, openness to foreign capital flows, with reference to South Asia. Rather than tracing the course of macroeconomic policy and performance in each individual member country, the approach here is to provide a general characterization of the region's salient economic features, to serve as a basis for exploring the role of macroeconomic policy<sup>6</sup>. Over the past two years three South Asian countries, India, Pakistan, and Sri Lanka, have commemorated their 50 years of independence. This occasion has afforded an opportunity to take stock of the region's past achievements and the challenges facing it in the emerging era characterized by democratic openness worldwide, the spread of information technology, and greater globalization.

- *Openness in polity and hesitant opening in economy.* The challenge faced by South Asia at independence was not so much one of state building but nation building, a challenge thrust upon the region by the very diversity of their religious, ethnolinguistic, and social structure<sup>7</sup>. Among the greatest achievements of these countries has been the ability to maintain fairly stable constitutional and representative democracies, with all of the characteristics of "open" democracies including guarantees of basic human liberties and frequent, fair elections. In

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found that economic fundamentals affect creditworthiness perception and that a close correlation exists between country credit ratings and capital flows across all country groupings, including heavily indebted countries. Furthermore, until recently country ratings have shown a consistent overall improvement in creditworthiness. This improvement was particularly marked between 1992 and 1996: the average country risk in the Euromoney's ranking has increased from 43.56 in March, 1993, to 50.72 in March 1996, and the ratings of 16 countries in Asia, LAC, and Eastern Europe were upgraded between September 1994, and December 1996, at least by one of the two US major agencies, Moody's and Standard & Poor's. For an interesting analysis of credit rating agencies' failures during the Asian financial crisis, see Huhne (1998).

<sup>6</sup> See Joshi and Little (1994) for a historical analysis of macroeconomic policy in India; also, for an analysis of macro issues in India, Pakistan, and Sri Lanka, see Little, Cooper, Cordon, and Rajapatirana (1993).

<sup>7</sup> For a fascinating description of the interplay between these factors in the case of India, see Khilnani (1997).

India, the very complexity and fragmentation of Indian society has helped the cause of democracy in a significant way. No one group has been strong enough to “capture” the state and direct the resources of the state to itself. Instead, many disparate groups compete for a piece of the pie<sup>8</sup>. The openness in polity, however, has not been, until quite recently, echoed by an economy open in terms of trade and finance. For instance, India did not embrace the economic component of Western liberal democracy after independence from Great Britain as it did the political aspect, engaging in a national agenda of import substitution and non-reliance on the outside world, especially the developed world. As part of a system that would become widely known as the “license raj,” India subjected imports to a complicated battery of regulations and licensing requirements, accompanied by high customs duties that were reduced only in the 1990s. It is well documented that India’s orientation remained overwhelmingly inward-oriented for a longer period of time, in contrast to the outward-oriented, export-driven economies of developing East Asian nations. The contrast between openness of polity and economic openness of markets, entrepreneurship, and free choice is a distinctive feature of India, as well as other South Asian countries.

- *Aversion to domestic inflation.* Maintaining relatively low and stable inflation has had considerable appeal in a democratic country such as India. At political level, countering inflation has the advantage of appealing to various socio-economic classes, including wage earners and small savers, who are often the main victims of high and rising inflation.

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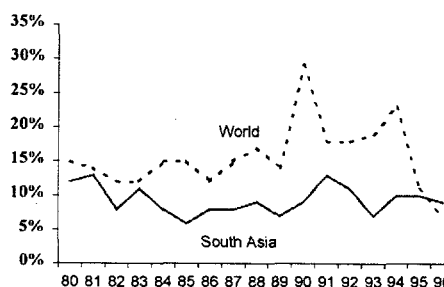
<sup>8</sup> Bardhan (1984) locates the key for the survival of the democratic regime in a contract between wealthy farmers, industrialists, and administrative class. With limited resources and not enough strength to stand alone, these groups have bonded together in a coalition of mutual interest. See also Kohli (1989).

Economically, the basic rationale is that inflation is very costly in terms of efficiency losses in the price system, increases in uncertainty, distortions in the tax system, and shortening of investment horizons. Thus, the loss in output and employment associated with stabilization is viewed as being justifiable in lieu of future gains in efficiency and growth, which are assumed to come with disinflation. The difficulty that many democracies had faced in the past is to muster necessary political will to undertake the necessary stabilization measures in the form of fiscal adjustment. The political base for budgetary austerity in South Asia, as in any other country, is weaker and more fragmented, if it exists at all. Neither cutting back government expenditures nor raising taxes are popular measures, and both are likely to undermine some existing vested interests and privileges. Those affected are likely to raise concern and opposition, and there exist no countervailing groups with interest in budgetary austerity, at least not contemporaneously and not before gains can be realized in the future in improved aggregate economic performance, that could be relied upon as a political basis for

fiscal adjustment<sup>9</sup>. As figure 1 shows, over the past decade and a half, inflation in consumer prices has averaged significantly less in South Asia than in the rest of the world. Mean consumer price inflation rose

Figure 1

**Inflation**  
Annual Percentage Change in CPI




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<sup>9</sup> The few instances that some countries have succeeded in foregoing the necessary political consensus for fiscal adjustment have been because of exceptional circumstances, signifying important turning points in their political and ideological trends. Thus, the considerable fiscal adjustment achieved in the industrial countries in the 1980s was consolidated politically by the resurgence of a conservative ideology, and even that was motivated initially by a backlash against the high and volatile inflation of the 1970s. Similarly, in Latin America, where inflation has been historically high and volatile, it has been the growing realization of the long-term cost of inflation that provided the necessary political consensus for numerous stabilization efforts attempted in the 1980s and 1990s.

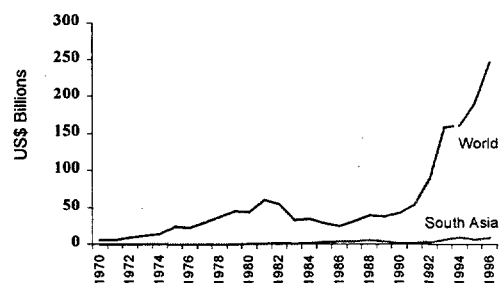
on average by 9.4% in the region from 1980 –1996, compared to 15.6% per year for the world.

- *Grudging opening to international private finance.* Liberalization in domestic financial markets and increased financial and technological innovation have dramatically reduced transaction costs for cross-border financial flows, and by any measure, the effect on the volume of international financial transactions has been extraordinary. For instance, cross-border transactions in bonds and equities in the major advanced countries were less than 10 percent of GDP in 1980 but were generally well over 100 percent of GDP in 1995. Additionally, the average daily turnover in foreign exchange markets, which is particularly relevant to the ability of monetary authorities to influence exchange rates, has grown from about \$200 billion in the mid-1980s to around \$1.2 trillion, equivalent to approximately 85 percent of all countries' foreign exchange reserves.

India and the rest of South Asia have appeared much more hesitant than other developing countries to open up to international private finance. In 1996, total private net capital flows to all developing countries amounted to \$246.51 billion, according to World Bank estimates,<sup>10</sup> which represents a five-fold increase since 1990, and accounts for 86% of total aggregate net long-term flows. As Figure 2 demonstrates, South Asia's share of private capital flows is very small, amounting to \$8.74 billion in 1997,

Figure 2

### Private Capital Flows



<sup>10</sup> *Global Development Finance*, 1998

equivalent to only 3.5% of all private flows to developing countries in 1995.

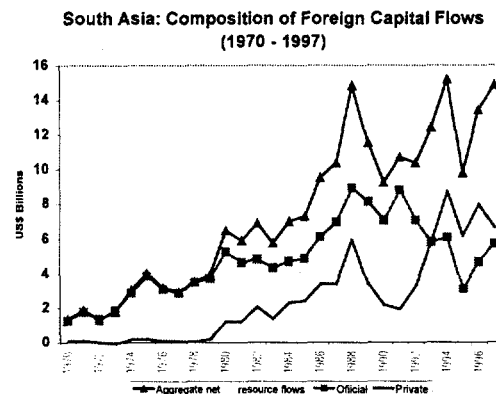
For many developing countries, large private capital flows through foreign direct investment, portfolio investments in domestic stocks and bonds, and euro-equity issues by corporations have emerged to constitute the main component of external finance in the first half of the 1990s. Official flows, once the

largest source of foreign capital for developing countries, have shrunk dramatically in the past decade in all regions of the world. Figure 3 demonstrates that South Asia is no exception, with private capital flows becoming relatively more important in the mid-1990s.

### III. Degree of openness and financial market integration

The focus in this paper on financial integration and capital mobility in the nexus of macroeconomic and economic structure is justified by virtue of the fact that macroeconomic policy affects the real economy largely through the credit and capital markets. Does financial integration make it more difficult to achieve macroeconomic stability? On the whole, it would seem not, even though at times large short-term capital flows can adversely affect macroeconomic stability, resulting in misaligned asset prices, including exchange rates. What financial integration does, rather, is limit the scope for countries to pursue policies that are incompatible with medium-term financial stability. The disciplining effect of global financial and product markets applies not only to policymakers, via financial market pressures, but also to

Figure 3

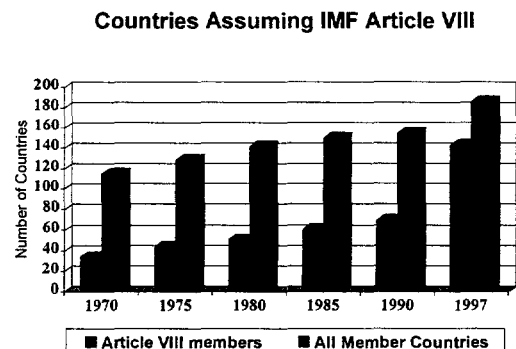


the private sector, by making it more difficult to sustain unwarranted wage increases and price markups. Rather than acting as a constraint on the pursuit of appropriate policies, globalization can provide added leverage to such policies. It may also provide added flexibility. The greater international mobility of private capital, by easing financing constraints, can extend the time period over which countries can implement needed adjustments. Markets will be willing to provide this leeway, however, only if they perceive that countries really are undertaking adjustments that fundamentally address existing and prospective imbalances. Otherwise, markets will eventually exert their own discipline, in such a way that the time period for adjustment may be brutally shortened.

The trend towards economic openness and financial integration has been gathering momentum since the seventies in terms of increased capital mobility, institutional development in the depth and sophistication of money, credit, capital, and Forex markets, and the availability of associated derivative instruments for hedging currency and interest rate risks. Capital controls and foreign exchange restrictions have been significantly dismantled in a number of developing and transition economies. In 1970, only 34

countries, or 30% of the IMF's membership, had assumed article VIII of the IMF Articles of Agreement, declaring their currency convertible on capital account transactions. This had increased to 143, or 77%, by 1997 (see figure 4).

Figure 4



### Box 1: Liberalization of Capital Accounts and Foreign Exchange Regulations in India

The liberalization of India's foreign exchange policy and regulations has been a centerpiece of government's economic reforms and opening up to foreign trade and investment. In a phase manner, the authorities have moved over the past five years to relax restrictions on capital transactions, beginning with those on trade-related and foreign investment inflows. India assumed Article VIII status in August 1994, thereby declaring the Rupee fully convertible on current account transactions. Achievement of capital account convertibility remains a stated policy goal, with progress to date involving selective relaxation/removal of controls on foreign investments in corporate securities, non-residents deposits in commercial banks, and direct investment in manufacturing as well as in the core infrastructural sectors of power, oil and gas, highways, ports, roads, and telecommunications. The existing regulations, provided under the Foreign Exchange Regulation Act (FERA) of 1973 and the amended act of 1993, allows capital transaction on both long and short-term instruments under stipulated quantitative limits. The management of the exchange rate policy in such an environment has been a challenging task, and recent experience illustrates the dilemma facing the authorities in orchestrating greater flexibility in the exchange rate, while maintaining market confidence.

Five South Asian countries – Bangladesh, India, Nepal, Pakistan, and Sri Lanka – accepted Article VIII in 1994, while Bhutan has not yet accepted (see figure 5). Overall, the degree of integration achieved in many developing countries is high enough to strongly affect macroeconomic, regulatory, and prudential policies.

Figure 5

#### Acceptance of IMF Article VIII: South Asia

| Country    | Date                               |
|------------|------------------------------------|
| Bangladesh | April 11, 1994                     |
| India      | August 20, 1994                    |
| Nepal      | May 30, 1994                       |
| Pakistan   | July 1, 1994                       |
| Sri Lanka  | March 15, 1994                     |
| Bhutan     | Has not yet accepted Article VIII. |

Source: *Exchange Arrangements and Exchange Restrictions*, IMF, 1997

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Figure 6 provides a list of IMF member countries according to degree of openness to current account transactions as of 1996. Drawing on the *IMF Annual Report on Exchange*

*Arrangements and Exchange Restrictions*, a quantitative measurement of openness for each country is developed by assigning a dummy variable value of 1 in the presence of any of the 13 specific restrictions listed in Table 1, and zero otherwise. The dummy variables are then aggregated, giving an overall indicator of the amount of restrictions in a given country. It is interesting to note that South Asian countries, especially Sri Lanka and Nepal, are generally quite open, though India has a larger number of restrictions on the current account. No South Asian country, however, has current account restrictions in more than half of the IMF categories. Similarly, Figure 7 and Table 2 provide information on the degree of openness in capital account transactions, compiled in the same manner described above with country-specific dummy variables given a value based on the existence or lack of restrictions in 10 categories. In this regard, South Asian countries are more closed, with Bangladesh, India, and Sri Lanka displaying restrictions in all 10 IMF categories of capital transactions.



Figure 6

## Current Account Restrictions

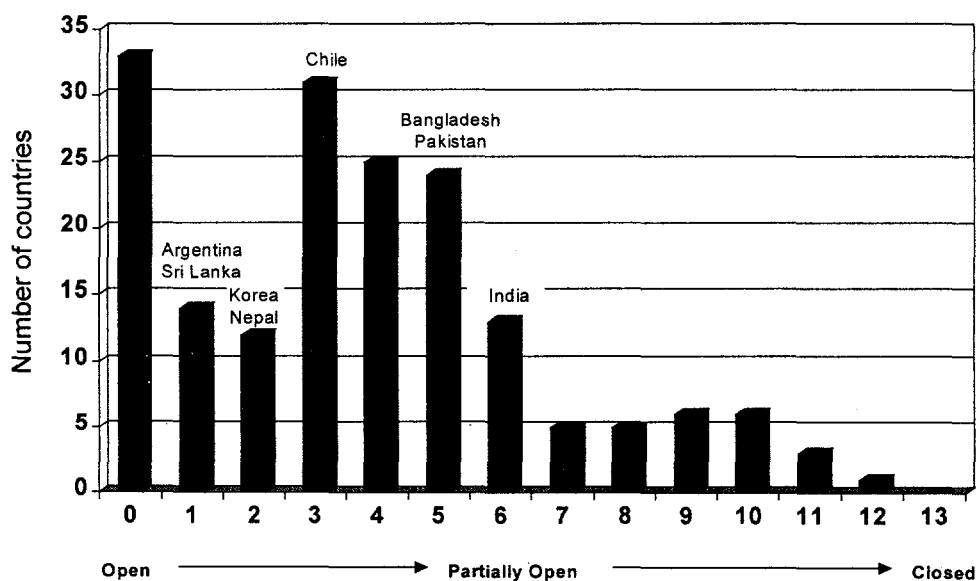


Table 1

### Restrictions on Exchange and Trade Systems

| Type                                     | No. of Countries |
|--|------------------|
| More than one exchange rate              | 28               |
| More than one rate for imports           | 23               |
| More than one rate for exports           | 23               |
| Import rates different from export rates | 22               |
| Payment arrears                          | 51               |
| <b>Bilateral payment arrangements:</b>   |                  |
| With members                             | 52               |
| With non-members                         | 16               |
| <b>Payments restrictions</b>             |                  |
| For current transactions                 | 59               |
| For capital transactions                 | 124              |
| <b>Cost-related import restrictions</b>  |                  |
| Import surcharges                        | 42               |
| Advance import deposits                  | 9                |
| <b>Export proceeds</b>                   |                  |
| Repatriation requirement                 | 121              |
| Surrender requirement                    | 93               |

Source: Author's estimate based on information from *Exchange Arrangements and Exchange Restrictions*, IMF, 1996

Figure 7

## Capital Account Restrictions

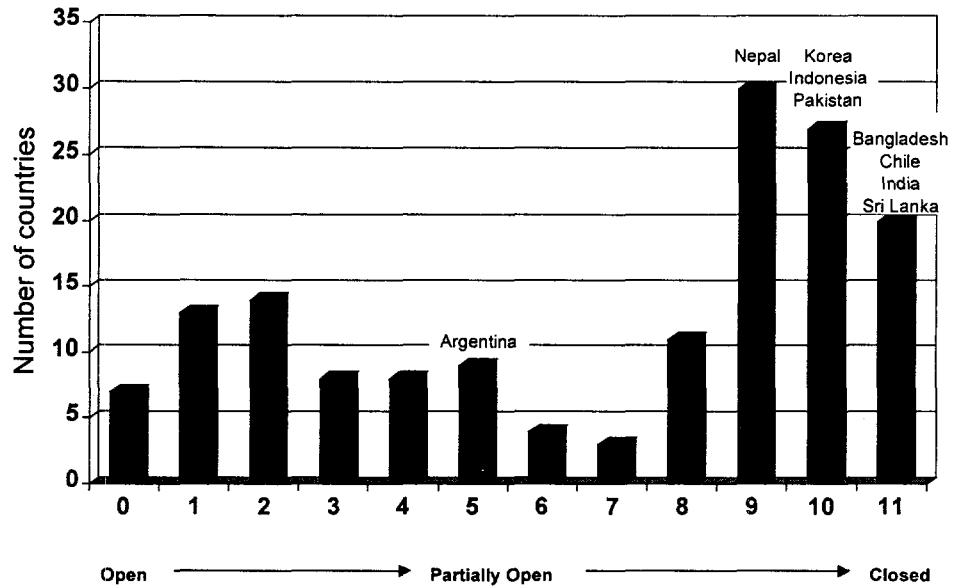


Table 2

### Restrictions on Capital Transactions

| Type                                | No. of Countries |
|-------------------------------------|------------------|
| Capital market securities           | 128              |
| Money market instruments            | 112              |
| Collective investment securities    | 107              |
| Derivatives and other instruments   | 78               |
| Commercial credits                  | 103              |
| Financial credits                   | 76               |
| Guarantees, sureties, and financial | 82               |
| Direct investment                   | 144              |
| Liquidation of direct investment    | 54               |
| Real estate transactions            | 119              |

Source: Author's estimate based on information from *Exchange Arrangements and Exchange Restrictions*, IMF, 1997

#### **IV. Financial integration: Longer-term macroeconomic policy considerations**

From the macroeconomic perspective, the openness of capital account in many developing countries has been significant; it has effected a transition toward an open-economy paradigm, in which fluctuations in international capital and currency markets as well as shifts in foreign investors' sentiment and confidence now have an important bearing on the movement of local stock market prices, the level of foreign exchange reserves, and the scope for monetary and interest rate policy. Thus, financially-integrated developing countries find themselves operating in a very different macroeconomic environment today, one in which capital movements are highly sensitive to changes in prospective foreign and domestic rates of return.

Indeed, viewed from the perspective of the past three decades the relationship of developing countries to international private finance has been characterized by volatility and cycles of excessive optimism and pessimism: The expansion of commercial bank lending expanded in the 1970s ended with the debt crisis of the early 1980s, which was followed by a resumption of capital flows to emerging market economies, and culminated in a currency crisis in Mexico in the winter of 1994-1995.<sup>11</sup> Mexico's particular macroeconomic and external liability profile, i.e. its large concentration of short-term foreign debt, pegged exchange rate regime, and the special political circumstances preceding the crisis gave support to the view that other countries were not likely to face the same fate as Mexico as long as their macroeconomic policies remained on track..

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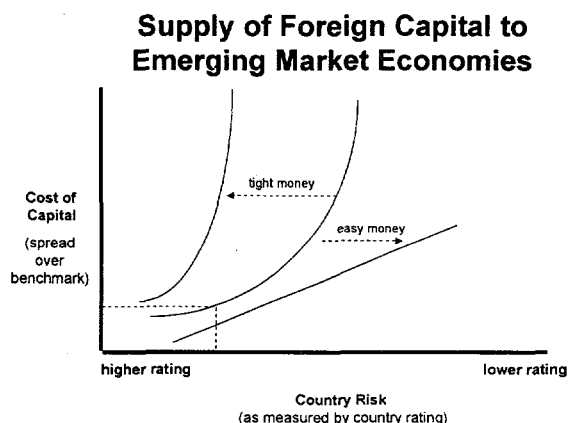
<sup>11</sup> For detailed descriptions of Mexico's peso crisis, see Dornbusch, Goldfarn, and Valdes (1995) and Sachs, Tornell, and Velasco (1996).

This assumption has been challenged recently by the currency and financial crisis engulfing East Asian countries (such as Thailand, Malaysia, Indonesia, and Korea) with traditionally high domestic saving rates, robust growth, and seemingly prudent fiscal stances (see Dailami 1998).

### Box 2: Volatility in the supply of foreign capital

Shifts in the supply of foreign capital have been triggered by exogenous factors, such as the increase in oil prices in the 1970s, the deregulation of pension funds and insurance companies in major industrial countries in the late 1980s, or as a result of institutional innovation and competition. Greater access to foreign capital in the developing countries opens the possibilities of financing a broader set of investment projects, sound as well as ones of a riskier nature. In the current environment, the institutional framework and mechanisms for efficient international risk-sharing is limited, and progress in building the necessary institutional capacity, market development, and transparent regulation for proper loan appraisal and risk management is lagging. Under these conditions, unviable projects can be funded, exposing both the private borrower and the intermediary to default risks. Once the domestic macroeconomic situation or international competitiveness changes, it is not only the risky projects that could fail, but profitable ones as well. In such situations, the creditworthiness of private entities with foreign currency debt obligations is undermined not only because of deterioration in business environment — i.e. rising domestic interest rates, falling stock market prices, and economic recession which seems to characteristically follow a financial crisis — but also because of a higher likelihood that governments will intervene in foreign exchange markets and impose controls on currency convertibility and transferability (see figure 8).

Figure 8



Short of the crisis situation associated with vulnerability, cross-border capital flows may exhibit substantial volatility -- i.e., temporary shocks resulting in above-normal values either of capital inflows or outflows arising from changes in world economic conditions or from less extreme changes in portfolio managers' perceptions of domestic creditworthiness than implied in a crisis situation. Enhanced volatility may well be a longer-term fact of life facing developing countries as they become more integrated with international financial markets, even after stock-adjustment inflows associated with the move to enhanced financial integration have tapered off, and even if severe crises are avoided. The question is how to frame macroeconomic policies in the presence of such volatility, and in particular what broad principles should guide policy in several key areas of macroeconomic management.

We will assume in the following that the objectives of macroeconomic policy would be to provide stable non-inflationary environment that fosters economic growth. From a broader policy perspective, especially in a poor economy, the generation of quality growth -- sustained increases in domestic incomes combined with sustained reductions in the absolute numbers of those living in poverty -- is of paramount importance. Inflation and unsustainable levels of indebtedness which can lead to growth slowdowns are avoided primarily to provide and environment for sustained growth.

From this vantage point, perhaps the most interesting conclusion that one can draw from the East Asian crisis as well as the South Asian experience, is that without macro-stability investment and growth may slow down.

As the new growth literature also emphasizes, the maintenance of low inflation and a reasonably conservative balance of payments scenario may be necessary for growth, but will still

not generate long-term growth if other factors conducive to generation and absorption of technical knowledge, i.e. knowledge capital are not present.<sup>12</sup> We will return to this issue at a later stage after we examine the issue of “What macroeconomic policies are sound?”

### **1. The imperative of maintaining public sector solvency**

Fiscal policy has a fundamental role to play in the context of increased financial integration since both the direction and magnitude of capital flows are likely to exhibit sensitivity to perceptions of domestic public sector solvency. Potential insolvency can generate large capital outflows and/or large interest rate premia, as creditors try to avoid prospective taxation of domestic assets and demand compensation for exposing themselves to the risk of such taxation by continuing to lend in the domestic economy. This situation is aggravated when the government makes explicit guarantees to creditors, since the value of such guarantees will fluctuate with the government's perceived financial ability to back them. The upshot is that, in the context of high financial integration, the stock dimension of fiscal policy, in the form of changes in the government's perceived net worth, may itself represent an important source of shocks to the domestic economy, transmitted through the terms on which both domestic and foreign creditors are willing to hold claims on the domestic economy.

The stock and flow dimension of fiscal policy are not independent. A critical link between them is created by the fact that what matters for creditors is the *perceived* solvency of the public sector. For a government whose long-run fiscal stance is uncertain, short-run policy changes will be scrutinized for the information they may contain about the government's longer-run intentions. Knowing this, governments may be reluctant to act in ways that may be

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<sup>12</sup> See Chui et al. (1998) for an interesting analysis of the relationship between openness and economic growth.

perceived as sending the “wrong” signal to creditors, and this reluctance may limit the government’s short-run policy flexibility. Thus, achieving a reputation for fiscal responsibility may maximize the government’s short-run policy flexibility.

## **2. Signaling credibility**

While public-sector solvency requires that the public sector’s comprehensive net worth be positive, preserving macroeconomic stability in a financially-integrated environment may impose stricter conditions on the public sector’s balance sheet. The composition of assets and liabilities may matter as well. Even a solvent public sector (i.e., one that can credibly honor its obligations over a sufficiently long horizon) may be vulnerable to short-run liquidity crises. Expectations of debt-servicing difficulties can turn out to be self-fulfilling. The likelihood of a “debt run” depends on the maturity and currency composition of the public sector’s liabilities relative to that of its assets -- i.e., on the government’s debt management policies.

In managing its debt composition, the government faces a difficult tradeoff between enhancing its credibility, on the one hand, and exposing itself to liquidity crises, on the other. Long-term (fixed-interest) domestic-currency denominated (nominal) debt, unlike short-term foreign currency debt -- can effectively be repudiated through inflation and/or devaluation, which reduces its real value. Given the nominal interest rate on this debt, it may indeed be sensible for a welfare-maximizing government to do so, especially in circumstances where productive expenditures can be sustained or distortionary taxes can be reduced. However, the prospect of the government’s exercise of this option would raise domestic nominal interest rates, making it expensive for the government to borrow long-term in nominal terms. Even when the government

does not intend to behave in this fashion, the possibility of time-inconsistency may not convince creditors of its honorable intentions. To reduce its borrowing costs the government may thus be induced to borrow short-term and in foreign currency. By doing so, it ties its hands, eschewing the option to gain from devaluation and/or inflation at the expense of its creditors, and thus enhances the credibility of its promise to do neither. The problem is, of course, that in doing so it incurs liquid foreign-currency denominated liabilities, thereby making itself vulnerable to “debt runs” of the type described previously. The Mexican Tesobono crisis was an example of such a run.

Creditors can rationally expect the government to forgo the option to inflate away the real value of their assets if the government is institutionally unable to do so, if it is perceived as placing a high value on the credibility of its policy announcements and/or if inflating creates few net benefits from the government’s perspective. In a recent paper, Dailami and Leipziger (1997) showed that foreign creditors are particularly sensitive to local rates of inflation in pricing their foreign currency loans. The risk premium attached to such loans was shown to be positively related to the domestic rate of inflation, and furthermore, there is evidence that countries with domestic inflation exceeding a benchmark rate have been further penalized with the imposition of a high-risk premium on such loans. Thus, the government can avoid making its borrowing costs overly sensitive to the composition of its debt by creating institutions that limit its discretion (e.g., by increasing the independence of the central bank), by establishing a reputation for nondiscretionary behavior, and by choosing levels of expenditure and mobilizing sources of taxation that minimize distortions.<sup>13</sup> Under these circumstances, the option to borrow long-term

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<sup>13</sup> When credibility problems become extreme, the government’s financing problems may become sufficiently



in domestic-currency terms may be retained and the likelihood that macroeconomic stability will be impaired by the emergence of “runs” on government debt would be minimized. In the absence of a reputation for resisting incentives to act in a discretionary fashion, and when the government’s revenue needs are high and conventional taxation is highly distortionary, governments will lack credibility and creditors’ fears will be heightened.

### **3. The need for fiscal flexibility**

Consider the case of a “pure” external financial shock for a country with well-integrated financial markets. In this case, sterilized intervention is not an option as policymakers have only one independent monetary policy instrument -- either the exchange rate or fixing a monetary target. Faced by an external financial shock, the domestic monetary authorities can choose a value either for the exchange rate or for the domestic money supply (and thus the domestic interest rate), but not for both independently. When both the level and composition of aggregate demand are important to the authorities, they will find themselves one instrument short. In this case, they may face an unpleasant choice between, say, stabilizing domestic demand and safeguarding the competitiveness of exports.

This tradeoff suggests an important role for short-run fiscal flexibility. To the extent that fiscal policy can be counted upon to sustain the *level* of aggregate demand at its pre-shock value (by adopting a more or less expansionary stance as needed), it would be possible to provide a policy for a more managed exchange regime. Monetary response can then be chosen to achieve a desired composition of aggregate demand through an appropriate adjustment in the real exchange

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severe as to warrant the adoption of institutional devices that greatly circumscribe the its freedom of action -- i.e., adopting a currency board or joining a currency union. The position taken in this paper that such arrangements are not necessarily mandated in a highly financially integrated environment reflects the judgment

rate. In the absence of short-run fiscal flexibility, as indicated above, the nature of the monetary response may depend on tradeoffs between the level and composition of demand.

#### **4. Taxation under globalization**

In addition to the implications for the conduct of monetary and fiscal policies, globalization also has implications for countries' tax systems. The origins of national tax systems and the current structure of government spending can be traced back to a period with substantially less open economies and lower factor mobility. Correspondingly, taxation is largely based on the "territoriality principle," that is, the right to tax incomes and activities within the territory of the jurisdiction. In an increasingly global environment, this principle loses efficiency and can prove to be a potential source of conflict.<sup>14</sup>

Globalization may be expected increasingly to constrain governments' choice of tax structures and tax rates, especially in smaller countries. Internationally mobile factors of production-financial capital and some highly trained segments of the labor market can more easily avoid taxes levied in particular countries. The scope for tax evasion by individuals and corporations has also been enhanced. Indeed, many countries have experienced an erosion of the capital income tax base. Some governments have responded to the erosion by establishing favorable tax regimes. This "tax competition" may affect the average tax level of some countries by obliging them to lower tax rates for certain taxes. To the extent that the allocation of capital will be driven by tax considerations rather than by pretax rates of return, the allocation of capital will be less efficient. In a similar vein, personal income taxes and expenditure policies related to

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that the majority of countries have not in recent years faced credibility problems of this degree of severity.

<sup>14</sup> For a detailed discussion of these issues see Tanzi (1995 and 1996).

social spending are likely to become a more important factor in labor migration. Presumably, globalization will increasingly tend to cause tax systems to converge either through tax harmonization or via tax competition across jurisdictions.

## **5. Monetary and exchange rate regime**

In the past, countries have relied on financial repression and direct controls which often entailed the use of punitive measures that segmented their economies from the rest of the world. Partly in recognition of the inefficiencies, caused by those policies and in no small way because of a global trend towards openness (manifested in financial market integration and large capital flows), many countries have moved to more open and market based policies and monetary management--with an increasingly dedicated aim of price stabilization in most cases. As such, monetary management, broadly speaking, will now have to be cognizant of the constraints of the new environment of internal and external liberalization.

The "price" of base money can be seen in three different ways (loosely at least) -- i.e., relative to domestic goods and services (i.e., the inverse of the price level), relative to foreign monies (the nominal exchange rate), and relative to future domestic money (the interest rate). These three prices are linked by important relationships that market forces will ensure will prevail.

1) The principle of arbitrage suggests that the ex-ante risk-adjusted rates of return will be equalized across all assets. In the choice between instruments denominated in domestic and foreign currency, not only interest rates prevailing in international markets matter but also any change in valuation which can arise from exchange rate variations.

2) In the long run, the domestic price level and the exchange rate are ultimately underpinned by purchasing power parity where the relative price of home goods to foreign goods is determined by the final demands for the two goods.

Because of these linkages, there is the 'impossible trinity,' i.e., that monetary aggregates, exchange rates and interest rates cannot all be fixed by the monetary authorities. The central bank can determine only one nominal variable: the level of the monetary aggregate,  $M$ , the interest rate,  $i$ , or the exchange rate,  $e$ . The choice of  $M$  as a policy variable corresponds to a flexible exchange rate regime where the exchange rate and interest rates adjust to equate aggregate supply and demand. In such a system, the authorities can also choose whether to set the interest rate to allow the exchange rate and money supply to be endogenously determined. When the exchange rate is chosen as a policy anchor, in the case for example of a fixed or pegged exchange rate regime,  $M$  and  $i$  are endogenous. With a fixed exchange rate, disequilibrium in the domestic money market would ultimately be eliminated through the balance of payments<sup>15</sup>.

Where substantial, even if not perfect capital mobility has been attained, either conspicuously through liberalization moves, or less directly through erosion and circumvention of exchange controls, the basic principle that must drive monetary and exchange management is that interest and exchange rates are two sides of the same coin. Put another way, they are essentially the same instrument, and it is not possible to use them to pursue two different goals at the same time. Nor is it in general desirable to do so since pursuit of different short-term objectives, and even just the ability to switch between these objectives, is the very crux of the

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<sup>15</sup> Like any monopolist, the central bank can set either the price or the quantity of the product it monopolizes, but not both at the same time in a market-based regime. If the central bank sets the volume of base money, it cannot set independently any of the facets of the price of base money; conversely, if it sets, say, the exchange rate directly, the central bank cannot independently set the volume of base money, nor can it independently set the other facets of the price dimension; the same applies to the central bank setting the interest rate. What it can do, however, is to use one variable as a means to an end defined in terms of another variable--i.e., it can use a base money or an exchange rate target to achieve a domestic price inflation goal, for example, or it can use an

time inconsistency problem in monetary policy, of which we have all become very aware. There may be occasions when shocks of various sorts are simply too large to be accommodated without a temporary change of objective (e.g., a major terms of trade shock or a major banking crisis). In such situations some form of safety valve is likely to be needed in the monetary and exchange operating framework. But the ongoing need is to manage these shocks in a way that assures a return to the basic policy objective as soon as possible, and minimizes the damage to market confidence that such a return may be delayed unduly or too easily reversible in future.

The only real qualification to the aforementioned principle is in respect of the time scale. Capital mobility may not be perfect in the very short-term, even if it is in the slightly longer term. This may give some scope for additional policy flexibility, but only of a very limited sort. The time-varying risk premium which leaves scope for some very short-term flexibility is not something that can be arbitrarily manipulated by the authorities. Rather, the success of shorter-term policy flexibility in the limited circumstances where it is feasible, is predicated importantly on the markets' assessment of the credibility, coherence and consistency of monetary and exchange management over time, including the broader supporting economic policy framework, especially fiscal and public debt management policy.

Taking as given that the ultimate objective of monetary and exchange arrangements is achieving/maintaining some concept of price stability, over the medium to longer term, the first important decision to take in determining the choice of operating framework is the determination of a "nominal anchor". In principle, the anchor role could be played by the exchange rate, by control of some monetary aggregate, by nominal income targets, or by direct inflation targets. In

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interest rate or base money target to achieve an exchange rate objective.

the case of a nominal exchange rate anchor, there is also the basic question of exchange rate regime choice--fixed or pegged, where the central bank sets the market exchange rate directly, and then stands in the foreign exchange market to meet whatever excess demand (positive or negative) results; or less directly managed, where the central bank does not set the market exchange rate directly but nevertheless may target a specific level of the rate through market operations.

Several features of the economy are likely to influence the choice of monetary and exchange management framework. For instance, the more open the economy (the larger the traded goods sector relative to the economy, and the stronger the effect of traded goods prices on the overall domestic price level), the more likely the use of the exchange rate as one of the more important indicators or targets, or even an anchor. Conversely, if the economy is particularly vulnerable to large external shocks (partly depending on the composition and direction of trade, and the extent of specialization in both regards), it may not be desirable to manage the nominal exchange rate too closely since this may restrict the scope for more efficient real exchange rate adjustment.

Where stabilization and liberalization programs have advanced sufficiently, significant capital inflows have often occurred. It is ironic, perhaps, that what is essentially the markets' endorsement of a much improved economic environment should then become a policy dilemma itself for many countries. It is at this stage, faced with choices between nominal appreciation, mounting interest costs from sterilized intervention, or money expansion and consequent inflation risks, that the inter-linkages and trade-offs inherent in money and exchange management become perhaps most obvious--especially when fiscal measures (or other actions

like trade and industrial reforms, or further liberalization of foreign exchange outflows) are not readily available in the shorter-term to ease the trade-offs. In many, though not all cases, the experience of large capital inflows has eventually forced central banks to move to rather more flexible exchange rate regimes. In some others, the authorities have resorted to capital controls or other regulatory measures to discourage inflows, in an effort to avoid making the choice between appreciation, sterilization or inflation. How long such measures retain sufficient effectiveness is a moot point, since they are generally inherently incentive-incompatible; at best, they can buy some time for more coherent policy action.

Relevant to the choice of money or exchange market intervention methods is the relative stage of foreign exchange and domestic money/securities market development, which, in turn, may partly reflect a range of historical, institutional, taxation or regulatory factors. To some extent, the volume and nature of central bank's own transactions may help stimulate market development in the relevant market, or related financial markets. While market development would be not be an objective in its own right for the central bank, it might take market development considerations into account in the details of the design and implementation of particular monetary and exchange instruments, since these latter aspects will impinge on the nature and strength of market development.

Many developing and transition economies are particularly constrained by key markets or instruments that may be at very early stages of development. Markets may not be linked well enough to allow a properly coordinated policy framework. For example, the effective operation of monetary policy by means of indirect instruments in these countries generally requires that there should be a reasonably efficient payments system, and transmission of interest rate effects.

Even in those cases, though, there is growing evidence that adoption of indirect instruments has enabled authorities to manage monetary conditions more effectively. So the incentive is there for countries to push forward with structural reforms as conditions permit.<sup>16</sup>

Apart from the more technical factors discussed above, there are some broader aspects of the economic environment that may impact on the choice of operating framework. The magnitude of the fiscal deficit and outstanding public debt (including foreign currency debt) can not only affect monetary and exchange rate policies but also the choice of operating regime. For example, if the fiscal and public debt situation is such that confidence is lacking in the domestic financial policy framework as a whole, this may make the maintenance of fixed or pegged regimes difficult to sustain, and regimes with more flexible exchange rates preferable. Conversely, the type of monetary and exchange regime could impose an effective constraint on fiscal policy and encourage fiscal consolidation although views differ about whether more fixed or more flexible exchange rate regimes provide more effective discipline on fiscal policy. The issue revolves in part around whether quantitative external borrowing constraints for the government are binding--if not, a fixed exchange rate system may not be as immediate a discipline on fiscal policy as a more flexible system where an unpleasant surprise for the markets, in the form of a deterioration in fiscal performance, may be reflected more quickly in an exchange rate depreciation and an increase in local interest rates.

Fragility in the banking system that may need some flexibility in terms of providing additional central bank liquidity either to the system as a whole, or specific banks within it, tends to militate against strictly rule-based regimes (such as those in the form of a currency board

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<sup>16</sup> See Alexander, et al (1995) for a discussion of the requirements of the transition to indirect instruments of



arrangement, or money base targeting, for example). This does not necessarily mean that rules-based or strict targeting regimes cannot be employed in general, but it does demonstrate the need for some form of safety valve to be built in, at least in terms of a contingency plan.

## **6. Managing the exchange rate**

Managing the exchange rate seems to be the revealed preference of most developing countries. The question is, how to manage a float? The emergence of a perceived misalignment and/or a lack of credibility of the commitment to the announced peg -- both of which can happen in any managed exchange rate arrangement--could trigger such large capital flows as to force the abandonment of the peg, as in the Mexican and ERM cases.<sup>17</sup> To the extent that they are actively managed, nominal exchange rates can succeed in more or less tracking the fundamentals, and speculative attacks can be avoided. Governments can achieve enough credibility through “good policy” to avoid such speculative attacks that are driven by self-fulfilling expectations.

One approach to this problem is to consider the exchange rate regime as consisting, at the most general level, of a band around a moving central parity. The decisions that need to be made then consist of how to adjust the parity, how wide to make the band, and how to intervene within the band. Polar cases can be derived in the form of a fixed parity with very narrow bands (amounting to a fixed exchange rate) and very wide bands with no intervention within the band (amounting to fully flexible rates). The closer the policy is to a fixed exchange rate regime, the greater the burden on domestic interest rates and/or the money supply to adjust to shocks.

The desirability of an independent monetary policy for the domestic economy depends on

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monetary policy.

<sup>17</sup> Obstfeld and Rogoff (1995).

two factors: the availability of alternative stabilization instruments (a flexible fiscal policy) and the sources of shocks to the economy. With a flexible fiscal policy, domestic real shocks can be countered through fiscal adjustments, thereby diminishing the value of an independent monetary policy as a stabilization instrument. However, if fiscal policy is not available in the short term (or is costly to use) as a stabilization instrument, domestic real shocks would have to be countered with greater exchange rate flexibility.

Consider, however, an alternative source of shocks that is of much concern to integrating economies - i.e., external financial shocks, say in the form of fluctuations in world interest rates. In this case, exchange market intervention policy determines the form in which the shock is transmitted to the domestic economy. If world interest rates fall, for example, and active (unsterilized) intervention keeps the exchange rate fixed at its central parity, domestic monetary expansion and lower domestic interest rates will ensue--an expansionary shock. If, on the other hand, the central bank refrains from intervention, the domestic currency will appreciate in nominal and real terms, inflation and output growth will slow, and the domestic real interest rate will rise--a contractionary shock. Purely from the perspective of stabilizing domestic aggregate demand, the appropriate intervention policy in this case depends on the extent to which it is deemed feasible or desirable to adjust fiscal policy. If fiscal policy is literally inflexible, then the choice confronting the monetary authorities is to live with a prospect of real appreciation brought about either by nominal exchange rate revaluation (under no intervention), or by overheating and domestic inflation (under full unsterilized intervention). Maintaining unchanged inflation targets, in this context, would likely involve a mixture of nominal (and real) exchange rate appreciation, and lower interest rates. As embodied in the concept of the monetary conditions

index, the contractionary effect of the appreciation would be offset against the expansionary effect of lower domestic interest rates. In contrast, if additional fiscal contraction can be achieved, this should reduce or eliminate the need for real currency appreciation to prevent overheating (though not necessarily nominal appreciation).

Finally, developments in the real sector can affect monetary policy, or at least be a factor in the determination of the stance of monetary policy. For example, in a country which uses a nominal income target, real growth will affect how monetary policy is conducted. In the case of inflation targeting, real growth is highly relevant to an assessment of whether or when capacity constraints may become binding, and hence of future price and wage pressures. Central banks may also not be totally oblivious to political pressures and have to occasionally take real sector developments into account. To maintain export competitiveness, policy might wish to keep the nominal exchange rate such that the real exchange rate does not deviate too much from the value determined by fundamentals, assuming that can be reasonably accurately identified. In the case of a high degree of capital mobility, competitiveness would have to be maintained in a setting constrained by the interest parity condition.

#### **V. Short run considerations: Preventing overheating**

While the large-scale capital inflows that many developing economies have experienced have been beneficial from the standpoint of external balance, they have also created concern about their potential effects on macroeconomic stability and competitiveness of the external sector. Key among these concerns has been an acceleration of inflation and an adverse movement of the real effective exchange rate because of an appreciation of the nominal exchange

rate and/or a widening of the inflation differential vis-à-vis trading partners. The policymakers in developing countries, faced with macroeconomic turbulence in the wake of capital flows of varying maturity, have had to decide to what extent the required adjustment should take place through higher domestic inflation and/or through appreciation of the currency. We argue that the answer depends on the policy objectives of the authorities, the exchange rate regime, the domestic institutional constraints, and, importantly, on the factors causing the inflows.

In practice, identification of the underlying causes of inflows is difficult, and a judgment has to be made on the basis of limited information<sup>18</sup>. We focus on two important policy questions: first, what indicators could be utilized to distinguish between possible causes of capital inflows? And second, depending on the answer to the first question, what would be the appropriate nature, timing and sequencing of the policy actions?

### **1. Macroeconomic effects of capital inflows**

For the purpose at hand, the causes of capital inflows can be usefully grouped into three major categories: (a) whether the inflows reflect an autonomous increase in domestic money demand; (c) whether they are induced by an increase in the domestic productivity of capital; and (b) whether they are caused by external factors such as a decrease in international interest rates, particularly U.S. interest rates. The first two are examples of what in the literature is called a

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<sup>18</sup> The basic framework developed below to address these two questions outlines some guidelines that will be useful in operational settings for identifying the causes of capital inflows and defining the policy reaction in a particular country. Needless to say, capital inflows in any specific country are likely to be associated with a combination of causes, complicating the task of identification and policy formulation. Clearly, our categorization of causes and policy responses will need to be adapted to individual country situations to determine the magnitude and timing of policy changes.

"pull" factor and the last is an example of a "push" factor<sup>19</sup>.

The dominant cause of the inflow and the prevalent exchange rate regime will determine the likely economic impact and the need, if any, for policy intervention. Under a fully flexible exchange rate system, capital inflows (regardless of their cause) will lead to an appreciation of the exchange rate, a fall in the relative price of imported goods and a shift away from consumption of nontradables -- all of which will reduce inflationary pressures. Therefore, all other things equal, the higher the degree of exchange rate flexibility, the less likely it is that capital inflows will have an inflationary effect. Under a managed float or a fixed exchange rate system, the inflationary pressures created by capital inflows will depend on the underlying cause of the inflow. In general, if capital inflows are a response to an increase in the domestic demand for money, they will not have an inflationary effect. If capital inflows increase because of the other factors --domestic productivity or external shocks-- the accumulation of foreign exchange reserves will lead, in the absence of sterilization, to an expansion of the monetary base and result in increased inflationary pressures.

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<sup>19</sup> These explanations have important implications for the sustainability of capital flows and hence for policy design both at the national and international level. If the surge in capital flows has been driven mostly by lower international (US) interest rates, as is argued by some researchers, then a reversal in such rates would threaten the sustainability of capital flows.<sup>19</sup> By contrast, if the magnet for capital flows has been the process of domestic economic reform and productivity enhancement in the developing countries themselves, sustainability would then be a function of the continuation of such reforms (see Dailami and Leipziger, 1997, for further discussion).

## 2. Identifying the causes of capital inflows

Several indicators can potentially be used for the purpose of determining which of the three factors identified above is the dominant cause of a particular capital inflow episode. These indicators could be divided into four categories -- asset prices, monetary and credit aggregates, balance of payments data, and key international variables. Clearly, the usefulness of different domestic financial indicators will depend on the economy's institutional structure, and the sophistication of the data gathering and statistical reporting systems in place. In terms of timeliness, asset prices--both domestic and international-- are likely to have the smallest lags, with data on monetary and credit aggregates and the external accounts having relatively longer lags. Because of the reporting lags, detailed data on the balance of payments or national accounts cannot be employed as indicators in this context. Furthermore, in most developing and transition economies, GDP data is generally available only on an annual basis; in some of these countries, monthly or quarterly industrial production figures may be available with a relatively short lag and could possibly be used.

The behavior of these indicators can provide some information that can potentially be used to identify the cause of inflows. In countries with established financial and equity markets, *relative asset price movements* could be used for identification. Assuming less than perfect substitutability between assets as well as less than perfect capital mobility, an increase in money demand is likely to lead to downward pressure on bond, equity and real estate prices as agents reallocate their portfolios, while inflows due to lower international interest rates will lead to a bidding up of prices on real and financial assets. The effect on asset prices of an increase in

domestic productivity is likely to be the same as that of a fall in international interest rates -- upward pressure on prices of equities and financial assets.

*Interest rates* can be useful for differentiating between capital inflows caused by "push" and "pull" factors. Other things equal, inflows arising from "pull" factors will tend to put upward pressure on domestic nominal interest rates while inflows due to the "push" factors will tend to lower them. Returns to foreign investors can also provide useful information. Real returns for foreign investors, which depend on the expected path of the exchange rate (together with foreign inflation rather than domestic inflation), are likely to be higher than those available in their own countries, in the case of "pull" factors than in the case of "push" factors.

A money demand-driven capital inflow would increase money balances without increasing inflation, thus raising *real money balances*. The impact effect of inflows generated by a decrease in international interest rates would be an increase in nominal and real balances; thereafter, as inflation rises there will be a decline in real balances. While the lag in the price response may be substantial in low inflation countries, it is likely to be shorter in high inflation countries. In the case of a positive shock to domestic productivity, interest rates as well as domestic income will increase, with the net effect on money demand depending on the relevant elasticities. However, it is likely that desired holdings of real balances will be reduced because of higher returns on competing assets such as equities.

*Foreign currency deposits* in the banking system should decrease when there is an increase in the domestic demand for money, and possibly, when international interest rates decline. However, in the case of a domestic productivity shock, the effect is ambiguous: an increase in the demand for domestic currency leads to a reduction while the income effect works

in the opposite direction.

While examining the *composition of capital inflows* can potentially provide information about the causes of the inflows, it is often difficult to distinguish between foreign direct investment flows and portfolio investment flows, especially in the short term. In general, an increase in money demand, or a temporary fall in international interest rates, is liable to attract a relatively larger proportion of short-term flows; whereas an increase in the domestic productivity of capital will attract a relatively larger proportion of foreign direct investment. Here too, lags may be important and they will depend, *inter alia*, on the regulatory environment as well as the absorptive capacity of the country. The initial response to higher domestic productivity of capital may be larger portfolio flows with direct investment taking a longer time to flow in.

Although the indicators described above provide information for guiding policy, the problem of disentangling the effects of different factors from observed indicators can be quite complex. Even in the simplest cases, the message from the indicators about what is causing the capital inflows can be ambiguous. To eliminate or reduce such ambiguities, additional complementary information may be available. For example, the views of market participants could provide useful insights into factors underlying the flows. Broader changes in the economic framework, such as economic reforms that increase productive opportunities in the economy and/or the efficiency of financial intermediation could be a driving force behind the inflows.

Finally, even when the indicators send a clear message, this needs to be evaluated against a counterfactual. In other words, the behavior of the indicators has to be interpreted in relation to what would otherwise have happened, but that--in practical terms--is very difficult. Obviously, judgment will play an essential role in devising a suitable counterfactual.



### **3. Formulating a policy response**

The appropriate policy response, besides depending on the causes of capital inflows, will be importantly determined by the degree of flexibility provided by the domestic institutional structure and the existing policy stance. Countries that pursue relatively balanced macroeconomic policies will clearly find it easier to fashion an appropriate policy response while those pursuing unbalanced policies -- the most common form of which is an excessively expansionary fiscal policy whether or not compensated by a tight monetary policy-- will be more constrained in dealing with the disruptions caused by inflows, or outflows.

In general, countries have three main instruments at their disposal to deal with the possible inflationary effects of capital inflows: sterilization; exchange rate appreciation; and fiscal policy. The mix of instruments used will depend on the institutional structure of the country and the history of policies pursued in the past. The ability to sterilize the effects of the capital inflow on the monetary base could be restricted by the lack of suitable instruments at the disposal of the central bank and the state of development of the financial markets. Such operations could be further constrained if the central bank's previous intervention activities have already led to a large quasi-fiscal deficit arising out of the differences between the interest earned on its foreign exchange reserves and the borrowing costs incurred to finance its sterilization operations. Although fiscal policy is an appropriate instrument for the medium-term and some countries have adopted a tighter fiscal stance in the face of concerted capital inflows, the lags associated with implementation may make it somewhat unwieldy for purposes of short-term demand management. Finally, the use of exchange rate appreciation may be constrained by

competitive considerations.

Temporary capital controls is a potential instrument if the use of the three instruments mentioned above is severely restricted and/or their effectiveness is limited<sup>20</sup>. Two considerations will influence the utilization of such controls: First, capital controls are effective only for a short period of time and that, if kept in place for long, are likely to adversely affect the development of the financial system. Second, institutional factors can sometimes be pivotal in determining an appropriate response to capital inflows. With macroeconomic stabilization and deregulation of the economy, the returns to investment may rise sharply and attract capital flows, while the banking system responsible for intermediation of these flows may still not have fully recovered from past financial repression and weak prudential supervision. In such circumstances, the use of capital controls and other prudential supervision measures to direct the flow of capital into the purchase of relatively safe assets may be justified. As the quality of prudential supervision improves and the capacity of the banking system to handle such flows increases, capital controls can then be progressively dismantled.

When the capital inflow is associated with a *money demand shock* (induced say by financial deregulation) no policy action is required. In this case the expansion of the monetary base will be non-inflationary. Intervention by the central bank in the money and foreign exchange markets, however, may be necessary to smooth fluctuations in interest rates and the exchange rate. One possible concern even in this situation relates to intermediation and expansion of banking system credit that will likely accompany increased money balances. A poorly supervised and weak banking system could potentially lead to excessive risk taking in

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<sup>20</sup> For a collection of recent papers on the effectiveness of capital controls, see Leiderman and Razin, eds. (1994).

lending activities and measures may be needed to restrict bank intermediation.

When the inflow is caused by a decrease in international interest rates or by a domestic productivity shock, it is important to distinguish between a sustained or a temporary increase in capital inflows. For a *sustained increase*, say due to an increase in the domestic productivity of capital, policymakers would have to decide on how best to achieve the required appreciation of the real effective exchange rate. Adjustments in goods, factor, and asset prices will ultimately induce such a change regardless of the exchange rate regime, and the policy response should not in general inhibit that adjustment. Nonetheless, in economies with flexible exchange rate arrangements, the real exchange rate appreciation could potentially be achieved through a nominal exchange rate appreciation rather than an inflationary increase in the prices of non-traded goods. Over the medium term, a tightening of fiscal policy may be needed to contain inflation and prevent an excessive appreciation of the real effective exchange rate. Experience suggests that a tighter fiscal stance has been necessary in countries confronted with concerted capital inflows; especially when the inflows have been large relative to the absorptive capacity.

For a *temporary increase* in capital flows, say due to a decrease in international interest rates, sterilized intervention and possibly some exchange rate appreciation could be used to limit the inflationary impact of inflows. If feasible, sterilization of the inflows is the most appropriate response as the intervention could be quickly reversed if offsetting capital outflows eventually occurred, and there would be no adverse consequences for external competitiveness. Adjustments in fiscal policy could generally be avoided unless constraints imposed on sterilization were severe and the economy's competitive position weak.

With *unbalanced financial policies*, the level of domestic interest rates and expected

exchange rate movements are likely to be the dominant factors influencing speculative inflows. If the high real domestic interest rates that provide a strong incentive for capital inflows are due to a loose fiscal-tight monetary policy configuration, then making the appropriate fiscal and monetary adjustments and correcting the policy mix is clearly a first best policy response. However, the reduction in interest rates, while reducing the incentive for speculative inflows could, stimulate domestic aggregate demand and increase inflationary pressures. In those situations where controlling inflation is an overriding objective and corrective action for the unbalanced policy mix is expected, the response should be similar to that for a temporary external shock, namely sterilized intervention combined with some exchange rate appreciation. Sterilized intervention and exchange rate appreciation would clearly not be part of an effective solution in circumstances where fundamental policy adjustments are unlikely to be forthcoming, especially if the high domestic interest rates are driven by excessive public sector borrowing.

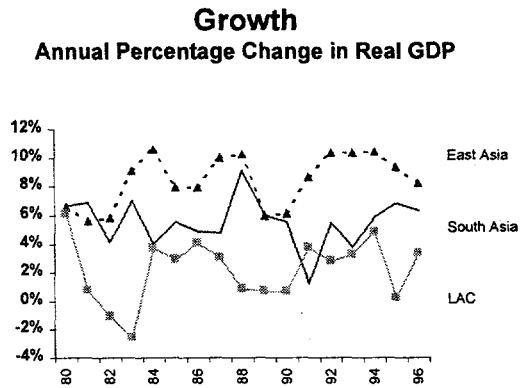
## **VI. Conclusion**

What does all this mean for South Asia? South Asia has not accepted globalization to the same extent that some other regions have. It is still in the process of opening out and is proceeding to do it at a pace that is relatively slow compared to many other countries. While this may have protected it from the vicissitudes of international financial markets, it has also not been able to draw upon those market for the financing of its investment needs.

It is interesting to note the similarities in the policy approach among countries in the South Asian region. Countries in the region-- perhaps because of a common colonial heritage-- have been pursuing fairly similar approaches to economic policy despite some apparent

differences. They have all relied on capital controls and high protective tariff barriers to insulate themselves from external influences. They continue to adhere to planning and despite deregulation, privatization and liberalization, still need to go further in the direction of reducing the size and the role of the government. Inflation has been managed at relatively low levels despite large fiscal deficits because of the financial repression that a closed economy supported. The unhappy consequence may have been a lower growth rate than would have happened in the counterfactual. Indeed, South Asia's growth pattern over the past two decades has been consistently lower than East Asia and higher than Latin America and the Caribbean (see Figure 9).

Figure 9



Judging from the experiences of Latin America or even East Asia, countries in the region have been fairly stable. While these countries have had many years with balance of payment difficulties, i.e. with a current account deficit exceeding 2% of GDP<sup>21</sup>, the incidence of external payments crises have been limited. They have been relatively quick to undertake stabilization programs to stem potential inflation or debt service difficulties. Growth, though not spectacular and certainly not enough to allow a rapid catch-up to the rest of the world, has been positive for the most part and fairly steady. Despite the obvious costs to controls in terms of forgone growth,

<sup>21</sup> In the case of Pakistan and Sri Lanka, the current account deficit has exceeded 2% of GDP a total of 17 times over the period from 1975-1995. India, on the other hand, experienced only 5 years of large current account deficits (over 2% of GDP) during this period. See Table 3 in the annex for a country-by-country breakdown.

they have been maintained ostensibly to prevent a macroeconomic crisis or for some socio-political reason such as redistribution. This has led some to argue that the aversion to the risk of a macroeconomic crisis is evident in policymaking in South Asia outweighs the weight that is placed on growth.

In the last few years this has changed as the countries in the region are increasingly accepting openness. The conduct of macroeconomic policy in the environment of controls that have prevailed so far has been mostly dictated by the large fiscal deficits which the monetary regime has had to finance mainly through financial repressive policies rather than through direct central bank financing. In the future, considerations that are laid out in this paper are therefore likely to become increasingly relevant to how macroeconomic policy will be conducted. Recent empirical work on growth would suggest that the acceptance of the new open environment combined with appropriate macroeconomic policy choices as outlined above and the requisite structural changes to ensure sound governance and regulatory changes, South Asia will possibly be able to achieve a higher growth of output than it has in the past.

## VII. Annex

**Table 3** Countries having large current account deficit (1975-1995)  
(number of years with current account deficit greater than 2% of GDP)

| COUNTRY            | Frequency (number of years) | Relative frequency |
|--------------------|-----------------------------|--------------------|
| Argentina          | 10                          | 0.53               |
| Bangladesh         | 11                          | 0.58               |
| Bolivia            | 17                          | 0.89               |
| Brazil             | 9                           | 0.45               |
| Cameroon           | 17                          | 0.94               |
| Chile              | 14                          | 0.70               |
| China              | 3                           | 0.23               |
| Colombia           | 7                           | 0.35               |
| Costa Rica         | 17                          | 0.94               |
| Dominican Republic | 18                          | 0.90               |
| Ecuador            | 15                          | 0.79               |
| Egypt              | 10                          | 0.56               |
| El Salvador        | 11                          | 0.58               |
| Ethiopia           | 13                          | 0.72               |
| Gabon              | 6                           | 0.35               |
| Guatemala          | 15                          | 0.83               |
| Honduras           | 20                          | 1.00               |
| India              | 5                           | 0.25               |
| Indonesia          | 8                           | 0.57               |
| Jamaica            | 13                          | 0.68               |
| Jordan             | 12                          | 0.60               |
| Kenya              | 14                          | 0.70               |
| Korea              | 6                           | 0.32               |
| Malaysia           | 10                          | 0.50               |
| Mexico             | 10                          | 0.63               |
| Morocco            | 13                          | 0.65               |
| Nepal              | 13                          | 0.68               |
| Nicaragua          | 16                          | 0.89               |
| Nigeria            | 6                           | 0.33               |
| Pakistan           | 17                          | 0.89               |
| Panama             | 10                          | 0.56               |
| Paraguay           | 19                          | 0.95               |
| Philippines        | 13                          | 0.72               |
| Singapore          | 10                          | 0.50               |
| Sri Lanka          | 17                          | 0.85               |
| Tanzania           | 17                          | 0.89               |
| Thailand           | 18                          | 0.90               |
| Tunisia            | 17                          | 0.89               |
| Turkey             | 8                           | 0.40               |
| Uganda             | 10                          | 0.67               |
| Uruguay            | 8                           | 0.47               |
| Venezuela          | 8                           | 0.40               |
| Zambia             | 13                          | 0.93               |
| Zimbabwe           | 9                           | 0.50               |

Source: Author's compilation based on data from the World Bank and IMF.

Table 4

## Aggregate private capital flows (long-term) to developing regions, 1980-97

|   | Average<br>1980-89 | 1990 | 1991 | 1992 | 1993  | 1994  | 1995  | 1996  | 1997  |
|---|--------------------|------|------|------|-------|-------|-------|-------|-------|
| <i>(US\$ billions)</i>  |                    |      |      |      |       |       |       |       |       |
| All Developing countries  | 40.4               | 41.8 | 54.7 | 90.2 | 157.3 | 160.8 | 189.2 | 248.1 | 256.1 |
| South Asia  | 2.7                | 2.4  | 1.9  | 3.0  | 6.4   | 9.1   | 6.7   | 8.7   | 9.3   |
| Sub-Saharan Africa  | 2.6                | 1.4  | 2.1  | 1.0  | 2.7   | 5.0   | 9.6   | 4.6   | 8.3   |
| East Asia & Pacific   | 9.1                | 17.2 | 20.8 | 37.5 | 63.5  | 70.5  | 82.9  | 101.3 | 87.4  |
| Europe & Central Asia   | 6.8                | 7.9  | 5.1  | 17.3 | 20.6  | 11.3  | 26.6  | 36.2  | 41.6  |
| Latin America & the Caribbean   | 15.3               | 12.4 | 22.8 | 30.7 | 60.0  | 58.9  | 62.1  | 95.1  | 95.4  |
| Middle East & North Africa  | 3.9                | 0.5  | 2.0  | 0.7  | 4.1   | 6.0   | 1.3   | 2.2   | 14.1  |
| <i>(percent of total private capital flows to developing countries)</i> |                    |      |      |      |       |       |       |       |       |
| South Asia  | 6.7                | 5.7  | 3.5  | 3.3  | 4.1   | 5.7   | 3.5   | 3.5   | 3.6   |
| Sub-Saharan Africa  | 6.4                | 3.3  | 3.8  | 1.1  | 1.7   | 3.1   | 5.1   | 1.9   | 3.2   |
| East Asia & Pacific   | 22.5               | 41.1 | 38.0 | 41.6 | 40.4  | 43.8  | 43.8  | 40.8  | 34.1  |
| Europe & Central Asia   | 16.8               | 18.9 | 9.3  | 19.2 | 13.1  | 7.0   | 14.1  | 14.6  | 16.2  |
| Latin America & the Caribbean   | 37.9               | 29.7 | 41.7 | 34.0 | 38.1  | 36.6  | 32.8  | 38.3  | 37.3  |
| Middle East & North Africa  | 9.7                | 1.2  | 3.7  | 0.8  | 2.6   | 3.7   | 0.7   | 0.9   | 5.5   |

Note: 1997 data are estimates.

Source: World Bank, Debtor Reporting System.



Table 5

**Private capital flows to South Asia, 1990-97**  
(US\$ billions)

|                           | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 |
|---------------------------|------|------|------|------|------|------|------|------|
| South Asia                | 24   | 1.9  | 3    | 6.4  | 9.1  | 6.7  | 8.7  | 9.3  |
| of which:                 |      |      |      |      |      |      |      |      |
| - FDI                     | 0.5  | 0.4  | 0.7  | 1.1  | 1.6  | 2.9  | 3.4  | 4.1  |
| - Portfolio capital       | 0.1  | 0    | 0.4  | 2    | 6.2  | 2.3  | 5.2  | 3    |
| > International issues    | 0    | 0    | 0.3  | 0.3  | 4.3  | 0.3  | 1.2  | 0.7  |
| > Local equity investment | 0.1  | 0    | 0.1  | 1.7  | 1.9  | 2.0  | 4.0  | 2.3  |
| - Other private           | 1.8  | 1.5  | 1.9  | 3.3  | 1.3  | 1.5  | 0.1  | 2.2  |

Note: 1997 data are estimates.

Source: World Bank, Debtor Reporting System

Table 6

## Foreign direct investment to developing regions, 1990-97

|                               | 1990  | 1991  | 1992  | 1993   | 1994   | 1995   | 1996   | 1997   |
|-------------------------------|-------|-------|-------|--------|--------|--------|--------|--------|
| <i>(US\$ billions)</i>        |       |       |       |        |        |        |        |        |
| All Developing countries      | 23.6  | 32.8  | 45.3  | 65.6   | 86.8   | 101.3  | 119.8  | 120.5  |
| Sub-Saharan Africa            | 0.9   | 1.6   | 1.6   | 1.9    | 3.3    | 3.6    | 3.5    | 3.2    |
| East Asia & Pacific           | 10.2  | 13.1  | 21.5  | 38.5   | 44.3   | 50.2   | 58.7   | 51.6   |
| Europe & Central Asia         | 1.1   | 3.5   | 4.7   | 6.5    | 7.2    | 16.5   | 16.0   | 15.9   |
| Latin America & the Caribbean | 8.1   | 12.5  | 14.4  | 13.3   | 27.5   | 28.8   | 37.5   | 43.0   |
| Middle East & North Africa    | 2.8   | 1.7   | 2.4   | 4.3    | 2.9    | -0.7   | 0.7    | 2.7    |
| <i>(US millions)</i>          |       |       |       |        |        |        |        |        |
| South Asia                    | 464.0 | 388.9 | 749.2 | 1117.4 | 1583.7 | 2937.2 | 3439.9 | 4120.0 |
| Afghanistan                   | 0.0   | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| Bangladesh                    | 3.0   | 1.0   | 4.0   | 14.0   | 11.0   | 2.0    | 15.0   | 20.0   |
| Bhutan                        | 0.0   | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| India                         | 162.0 | 74.0  | 277.0 | 550.0  | 973.3  | 2144.0 | 2587.0 | 3100.0 |
| Maldives                      | 5.6   | 6.5   | 6.6   | 6.9    | 7.0    | 8.0    | 9.0    | 10.0   |
| Nepal                         | 6.0   | 2.0   | 4.0   | 6.0    | 7.0    | 8.0    | 19.0   | 50.0   |
| Pakistan                      | 244.0 | 257.0 | 335.0 | 346.0  | 419.0  | 719.2  | 690.0  | 800.0  |
| Sri Lanka                     | 43.4  | 48.4  | 122.6 | 194.5  | 166.4  | 56.0   | 119.9  | 140.0  |

Note: 1997 data are estimates.

Source: World Bank, Debtor Reporting System.

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