

Foreign Capital Inflow into India: Determinants and Management

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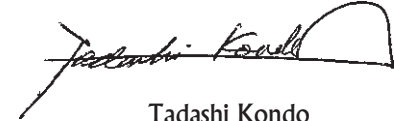
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Foreword

The India Resident Mission (INRM) Policy Brief Series is sponsored by the Asian Development Bank (ADB) and is designed as a forum to disseminate findings from policy research work undertaken on the Indian economy. The series is primarily based on papers prepared under the Technical Assistance (TA) 'Policy Research Networking to Strengthen Policy Reforms in India'. The main purpose of the TA was to provide assistance for developing policy research networking capacity, in order to build support for, and consolidate the reform process. The INRM Policy Briefs provide a nontechnical account of important policy issues confronting India.

A handwritten signature in black ink, appearing to read 'Tadashi Kondo', with a large, sweeping flourish at the end.

Tadashi Kondo
Country Director

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The paper provides a comprehensive review of the issues relating to external capital flows into India during the post-liberalization period. It then delineates the major policy issues arising out of the various concerns. Finally, it puts forward some policy recommendations.

Issues Relating to External Capital Inflow

Under the liberalized foreign exchange transactions regime, the results were dramatic (see Table 1). The *composition* of capital inflow has changed significantly over the years. Dependence on aid has vanished and foreign direct investment (FDI), foreign portfolio investment (FPI), external commercial borrowings (ECB) and nonresident Indians (NRI) deposits dominate the capital flows. Among these again, there has been a gradual shift away from debt components to equity flows (the proportion of nondebt has gone up from about 5% in the second half of the 1980s to over 40% during the 1990s). This has been broadly in line with international developments. Unfortunately, the surge in inflows has not been matched by a corresponding growth in the absorptive capacity of the Indian economy. The major reason is the persistent slowdown of industrial activity since 1997. At the same time, the Reserve Bank of India (RBI) has been reluctant to let the rupee find its market-clearing level under the circumstances. This has resulted in steady accretion to our foreign exchange reserves (FER) over the last few years.

Table 1. Composition of Capital Inflows to India

	1997-98	1998-99	1999-2000	2000-1	2001-2	2002-3
Total capital inflows (Net) (US\$ billion)	9.8	8.4	10.4	10.0	10.6	12.1
Composition of capital flows (Percent to total)						
1. Nondebt-creating inflows	54.8	28.6	49.7	67.8	77.1	46.6
(a) FDI	36.2	29.4	20.7	40.2	58.0	38.5
(b) FPI	18.6	-0.8	29.0	27.6	19.1	8.1
2. Debt-creating inflows	52.4	54.4	23.1	59.4	9.2	-10.6
(a) External assistance	9.2	9.7	8.6	4.3	11.4	-20.0
(b) ECB	40.6	51.7	3.0	37.2	-14.9	-19.4
(c) Short-term credits	-1.0	-8.9	3.6	1.0	-8.4	8.1
(d) NRI deposits	11.4	11.4	14.7	23.1	26.0	24.6
(e) Rupee debt service	-7.8	-9.5	-6.8	-6.2	-4.9	-3.9
3. Other capital	-7.2	17.0	27.2	-27.2	13.7	64.0
4. Total (1 to 3)	100.0	100.0	100.0	100.0	100.0	100.0

Source: RBI Report on Currency and Finance, 2002-03.

The paper illustrates the differential impact of different types of capital inflows through an extension of standard Mundell-Fleming analysis. The conclusions are: (1) an increase in FPI causes currency appreciation and contraction in output and (2) an increase in FDI may lead to a rise in income if the direct plus indirect (crowding in) effects are strong enough. This contrasts with the standard Mundell-Fleming model where additional capital inflow is *always* contractionary because it leads to a fall in net exports through currency appreciation.

Benefits of Capital Inflow

Benefits of capital inflow may be summarized as follows:

- External capital can supplement domestic savings and stimulate economic growth.
- International borrowing and lending enable countries to neutralize fluctuations in income and attain smooth consumption streams. This improves welfare. However, as to the developing countries, capital inflows have been markedly pro-cyclical so that the gap between boom-time and bust-time consumption was actually widened and not narrowed.

- The lenders gain from higher return and better international portfolio diversification.

Problems of Foreign Capital or why 'Too Much Capital' is a Problem

Appreciation of real exchange. In most Latin American countries inflow has been accompanied by marked real appreciation. This has not occurred for the Asian economies, with the exception of the Philippines.

Accumulation of FER. How much FER should a country hold at any point in time to counter speculative attack on its currency? There is no unique answer. However, from a macroeconomic viewpoint, government policies in a demand-deficient situation should try to ensure that the economy's expenditure on capital accumulation is met through domestic, not foreign finance. FDI can be beneficial if it leads to additional investment which cannot otherwise be undertaken or if it acts as a vehicle of better technology or other positive supply-side factors.

Widening of current account deficit (CAD). Although Williamson's rule of thumb suggests a safety limit of 40% for the debt-gross domestic product (GDP) ratio, Mexico's crisis started when it was 'only' 8%. Prudent fiscal policy is by itself not enough to avert crisis, as demonstrated by the experience of East Asia. However, with public deficit under control, the financial system can handle inflows better.

Monetization. The heavy capital inflows of the 1990s have been accompanied by slightly higher levels of inflation in Asia, while inflation has fallen in Latin America due to sharp real appreciation of currencies.

Financial crisis. Increased openness to international capital flows has been associated with an increasing frequency of financial crises (Kaminsky and Reinhart 1999; Bordo and Eichengreen 1999). Kaminsky and Reinhart (1999) established, for five industrial and fifteen major emerging economies over the period 1980–1999, a 10 to 15% annual probability of a balance-of-payments (BoP) crisis. One-third of these crises are 'twin' banking and currency crises. Pure currency crises have declined as countries have moved towards more flexible exchange rate systems but banking crises have loomed larger with the dismantling of capital controls and regulations. The average cost of an emerging market currency crisis is estimated at 8% of forgone GDP, rising to as high as

18% when a banking crisis occurs simultaneously. For Indonesia in 1997 the cost was more than 30%. According to one estimate each percentage point fall in growth raises the poverty rate by 2 percentage points. For preventing financial instability, regulations that limit the exposure of banks to the volatility of equity and real estate markets, as well as ensuring risk-based capital adequacy are in order; but the flip side is that these policies may promote *disintermediation*, which refers to new institutions that develop to bypass these restrictions. Moreover, greater control on banks may amount to a reversal of the trend of financial liberalization currently in progress in developing countries.

Optimal Level of Reserves

A country's optimal level of reserves will depend on various factors such as its exchange rate regime, the size of CAD, and its concern about fluctuations in BoP. In general, a fixed-rate regime will require a higher stock of reserves than that of flexible rates. 'Fear of floating' induces many countries to try to maintain an exchange regime intermediate between fixed and flexible rates. This calls for adequate reserves to fight undesirable movements in the exchange rate. Wide swings in the exchange rate increase the riskiness of a country's trading. Although forward markets can be used to hedge against this risk, the cost of hedging is higher when fluctuations in the rate are higher.

Traditionally, the policy autonomy result states that fixed-exchange regime in the presence of mobile capital entails loss of control over domestic money supply. Flexible exchange restores this control, but capital mobility, as pointed out by Frenkel and Mussa (1981), still reduces the effectiveness of monetary policy. A boost to aggregate demand through monetary expansion will be partly dissipated in rise in imports financed by capital inflow. Besides, quick adjustment in the nominal exchange rate in response to change in monetary policy may lead to rapid adjustment in wages and prices and the effect on output and employment may be neutralized. This explains the widely observed aversion of national governments to clean floating.

Reserves are needed not just to cover maturing debt but to meet obligations created by large CADs as well. An empirical study by Bussiere and Mulder (1999) showed that the Guidotti-Greenspan rule (reserves = short-term debt) is most effective as a check against crisis when the current account shows a surplus of 2% as proportion of GDP. As the

deficit in the current account rises, required reserves increase at an increasing rate. Further, Frenkel (1983) found that the greater the variability in BoP (excluding change in reserves), the greater the observed level of reserves. Volatility of capital flows is an important factor because a larger share of FDI and other stable items calls for a lower level of precautionary balances.

An Analysis of Direct and Portfolio Inflows into India in the Postreform Years

Foreign investment flows into India are presented in Table 2.

India's share in global FDI increased from 0.5% in 1992 to slightly above 2% in 1997 and has stayed around that value. In absolute terms inflow declined in 2003-4 after strong growth in the previous two years. The ranking by the United Nations Conference on Trade and Development (UNCTAD) of countries on the basis of FDI relative to GDP for the period 1998–2000 is 119 for India and 47 for China. The corresponding figures a decade ago were 121 and 61, respectively. An empirical study by the RBI to identify the major factors influencing FDI flows into and out of India disclosed that growth in world GDP had a large positive impact and the gross fiscal deficit to GDP ratio had a negative impact on inflows. A unidirectional causal relationship was also found running from FDI to export growth in India. Changes in

Table 2. Foreign Capital Flow to India

	2003-4 (P)	2002-3 (R)	2001-2 (R)
A. Direct	4675	4660	6131
(a) Equity	2387	2700	4095
(b) Reinvested earnings	1800	1498	1646
(c) Other capital	488	462	390
B. Portfolio	11,377	979	2021
(a) FII	10,918	377	1505
(b) DR	459	600	477
Total (A + B)	16,052	5639	8152

Note: P = provisional; R = revised; FII = foreign institutional investment; DR = depository receipts.

Source: RBI Annual Report, 2003-04.

export growth also stimulated FDI inflows after a lag of two quarters (RBI 2003).

Correlation between Foreign Capital Inflow and Growth

Is there a positive connection between foreign capital inflow and growth? Evidence on this very important question is far from unambiguous, with China lending support and Brazil negating it. Since 1994, Brazil has attracted enormous FDI from the developed countries, but neither the growth rate nor export prospects have showed commensurate results. The study by Carkovich and Levine (2002) fails to find strong evidence of positive correlation between FDI inflow and output growth. More recently, Mazumdar (2005) has failed to find any significant impact of FDI on productivity in Indian industry. In their attempt to measure the link between growth and capital inflow into India, Marwah and Klein (1998) start by discussing the two alternative frameworks for analyzing the impact of inflows: (a) a macroeconomic growth model in which the effect of FDI is examined through its effects on the saving ratio and the capital output ratio; and (b) a multifactor production function is estimated to capture the change induced by FDI in the relevant parameters. Adopting framework (b) they assume constant returns to scale and four main inputs—labor, domestic capital, foreign capital, and imports. Results suggest that for every one-percentage growth point, 0.351 is generated by growth of domestic and foreign capital nested together, 0.569 by labor, and 0.08 by imports. The contribution of the two types of capital to growth in productivity can be allocated in proportion to their respective weights in the total nest.

Over the last decade India has steadily grown in importance as destination of global investment in emerging equity markets. Foreign institutional investment (FII) as a fraction of market capitalization increased from 7.06% in 1999-2000 to 13.5% in 2000-1 and to 14.1% in 2001-2. The inflow, however, is still very small in relation to GDP. In fact, the FII-GDP ratio is the lowest among the emerging market economies. The registered FIIs come from as many as 28 countries. US-based institutions account for 42%, those from the UK 20%, and West European countries approximately 17%.

There is strong positive correlation between inflows and contemporaneous stock returns in India. Market return emerges as the prime mover of FII inflow. 'Push' (or external) factors like US equity returns, changes

in interest rates, or stock market volatility do not appear to have had a significant influence in motivating inflows. This is a cause for concern because a drop in return may result in sudden massive withdrawals with disturbing consequences for the economy (Coondoo and Mukherjee 2004).

However, in the regression analysis of Gordon and Gupta (2003) the following variables were found to be significant: lagged dependent variable (positive), lagged domestic stock market return (negative), lagged exchange depreciation (negative), lagged rating downgrades (negative), beginning-of-the-year effect (positive), lagged or contemporaneous emerging market yield (positive), and London interbank offered rate (LIBOR) (negative). The following were not found to be significant: liquidity in the domestic stock market, industrial growth in India, in emerging markets, or in developed countries, and the dummy for the relaxation of rules governing FII investment in India. It was also found that while the magnitude of flows is small compared to other emerging markets, flows to India are less volatile and more resilient. The coefficient of variation for flows was measured to be 1.58 for India, the corresponding figures for the Philippines, Thailand, Korea, Chile, and Brazil being 1.79, 25.07, 1.82, 1.94, and 2.14, respectively.

FPI flows to the secondary equity market do not stimulate investment directly. They can contribute to growth only by enhancing the liquidity and efficiency of capital markets. But here also, as with FDI, the presence of adequate financial market infrastructure and legal mechanisms relating to property rights and active stock market participation by domestic savers are crucial ingredients of success.

Large capital inflows have called for adjustments in domestic economic policies. The burden has fallen disproportionately on monetary policy owing to the low flexibility of fiscal maneuvers. The 'capital account offset coefficient'—the response of FER to domestic credit (DC)—measures the degree to which capital inflows offset the effect of a change in DC. A coefficient of unity implies perfect capital mobility leaving no scope for independent monetary action. A coefficient of zero holds for completely closed capital accounts. For India the offset coefficient was estimated to be -0.3 over the period April 1993–March 1997 (Pattanaik 1997), suggesting that authorities have sufficient independence to pursue domestic goals.

Most of the inflows have been added to the FER of the RBI. The share

of DC in reserve money has gone down dramatically from 91% in 1991 to 3% in March 2003. The major reasons behind high 'banking' are:

- (a) The larger the percentage of volatile items in total inflow the higher is the proportion held as reserves for prudence and stability. For India, the share of FDI is still very low.
- (b) The experience of East Asia has demonstrated that inflows intermediated through commercial banks may lead to credit expansion which, instead of stimulating investment, may trigger a consumption boom (with a strong import bias) or a speculative asset bubble (typically in equity or real estate). Capital may take flight en masse when the bubble bursts. To avert disasters of this type RBI has deliberately tried to keep bank intermediation of inflows at a manageably low level.
- (c) Since absorption of foreign exchange through imports continues to be low, RBI has to go for extensive 'banking' to prevent appreciation of the rupee. The degree of exchange rate passthrough for our exports has been estimated at 0.82 (RBI 2003).
- (d) Sterilization is done to check unplanned expansion of money supply. The extent of sterilization is captured by the 'sterilization coefficient'—the response of change in DC to that in FER. Using monthly data from April 1994 to September 2003 it was estimated at -0.92. That is, an additional Rs. 100 of FER induced an act of sterilization that drained away DC worth Rs. 92 from the system.
- (e) Although inflation targeting has been formally given up in India, RBI continues to follow an almost textbook version of monetarism in its approach to inflation. For India, econometric tests have failed to consistently support a causal relation between monetized fiscal deficit and inflation (Balakrishnan et al. 1994). The study by Pattanaik, Kapur, and Dhal (2003) also concludes that the effect of monetary shocks on inflation is almost negligible.
- (f) The real reason may be the RBI's fear, not unfounded, that given the banks' reluctance to lend to business excess liquidity may find its way into speculation in the markets for currency, real estate, or equity. After the reduction in bank rate in March 1998 bank lending to nonprime borrowers did not pick up. Instead, in a situation of depreciating rupee banks used their

liquidity to arbitrage between the spot and forward foreign exchange markets (Mukhopadhyay 2000).

To stimulate absorption and thereby slow down the rate of reserve accumulation, some economists have recommended an acceleration of import liberalization. A number of studies done at the Indian Council for Research in International Economic Relations (ICRIER) (Banga 2003; Virmani et al. 2004) have concluded that the reduction of tariffs has had a favorable impact on intra-industry trade, net exports, and efficiency-enhancing FDI inflow. This author's view is that the reduction of peak tariffs should certainly continue but the composition of imports should be closely watched, because liberalization resulting in a consumption splurge will render CAD unsustainable.

Three crucial preconditions were laid down by the Tarapore Committee for attaining full capital convertibility—fiscal consolidation (deficit equal to 3.5% of GDP in 1999-2000), a mandated inflation target (3–5% per annum on average), and strengthening of the financial system. Of these, realized inflation is close to the target, fiscal consolidation is way off the mark, and financial reform is far from complete. So irrespective of the current stock of FER, controls on capital flows should not be hastily dismantled.

Recently, the Planning Commission has floated the idea that our large and rising FER should be utilized for infrastructure investment. Since inadequate infrastructure is widely recognized as a major constraint on India's growth, putting the so-called idle reserves earning very low returns into this activity with high social returns seems a particularly promising idea. The RBI clearly does not think that reserves are excessive. It is holding the amount and investing it the way it does precisely because it thinks that to preserve stability in BoP it may be necessary to release a large part of these reserves at short notice. And given the composition of our inflow—low proportion of stable, long-term flows—who can say that its action is not justified. So chances are slim that RBI and the Planning Commission will ever see eye to eye on the proposed scheme.

On the basis of his discussion on the issues relating to capital inflow this author suggests the following measures for improving monetary and reserve management:

- (a) Improve credit delivery for reducing the need for sterilization;
- (b) Change the composition of inflows in favor of FDI;

- (c) Further develop the currency and capital markets; and
- (d) Enhance efficiency and integration of foreign exchange market.

Policy Conclusions

- Reduce sterilization and concentrate on improving the credit pass-through of monetary policy. The credit starvation of small and medium enterprises must be eliminated. Adequate absorption of foreign capital cannot be ensured by growth in service exports alone.
- Shed the reluctance to check the torrent of FII, explore effective methods of restricting this flow rather than novel methods of sterilization. Due to the thinness of the market (and its susceptibility to manipulation) large portfolio flows may cause equity bubbles. Reduction in non-FDI flows will reduce the need for large unproductive reserves.
- Exchange rate protectionism should be gradually eliminated and the currency should be allowed to appreciate in response to capital inflow. Protecting the exchange-sensitive sectors should not be the overriding concern of policy.
- Trade liberalization should continue to stimulate absorption of foreign exchange. But the process should be carefully managed and monitored; otherwise surge in consumption imports will render CAD unsustainable.
- There should be no let-up in financial reforms that will strengthen the currency and capital markets. This will promote the participation of domestic investors.
- Investment in infrastructure in general (and not only in telecom) must increase to boost domestic investment and attract FDI in manufacturing.
- The approach to capital account convertibility should continue to be cautious until the crucial preconditions are fulfilled.
- Following the advice of Feldstein (1998), a part of the reserves may be invested in higher-yield (higher-risk) securities.

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