

## **Trade Misinvoicing and Capital Flight from India**

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## **Abstract**

The program of economic reform in India in the nineties has led to liberalisation of the current account and the foreign exchange market. The capital account has been made convertible for foreign nationals but it still remains closed for resident Indians. While residents can bring money into the country they are not free to take it out. This has created a situation that encourages trade misinvoicing by residents in order to move capital abroad. This paper attempts to measure the extent of misinvoicing and capital flight from India in the post-reform period.

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## **1.Introduction**

Capital flows from one country to another may take place for a number of reasons. Globalisation of financial markets have resulted in capital flows that result from households' attempts to maximize returns through international portfolio diversification. Savings of households in advanced countries flow to developing countries through portfolio investment via foreign institutional investors (FIIs) whose activities are now spread across stock markets worldwide. The expansion of world trade and commerce has increased enterprises' efforts to promote trade through providing export credits leading to movement of capital. Worldwide dispersal of productive units by multinational enterprises has led them to accumulate working balances abroad and invest directly in the acquisition of productive capacity abroad. Commercial banks' efforts to expand their activities have resulted in their accumulating deposits with foreign banks and acquiring claims on non-residents through portfolio and direct investment.

The above movement of capital can be considered to be "normal". However, capital outflows may also be motivated by the concern that assets held domestically would be subject to substantial loss or impairment due to risks of expropriation, exchange rate depreciation, taxation or other forms of financial repression. They are then not considered part of the normal flow process and

are defined as capital flight (Deppler and Williamson, 1987).

In this paper we attempt to look at the causes and route of capital flight from India in the nineties. The program of economic reform has led to convertibility on the current account. However, the capital account has been made convertible for foreign nationals, but it still remains closed for resident Indians. While residents can bring money into the country they are not free to take it out. It is still illegal for resident Indians to hold bank accounts or other financial assets abroad. Thus there is no legal source of foreign exchange for a resident Indian who wishes to hold such assets abroad. This has created a situation that encourages trade misinvoicing to move capital abroad. This paper attempts to measure the extent of misinvoicing and capital flight from India in the post-reform period.

## **2. Capital Account Convertibility**

Evidence shows that despite strict capital controls, substantial capital flight took place from India in the seventies and eighties (Rishi and Boyce, 1990). The reform process entailed progressive liberalisation of the current account, while the capital account continued to be partially controlled. The decontrol of the capital market included allowing foreign institutional investors to invest in the Indian stock market.

Following the permission to FIIIs to hold shares in the Indian stock market, between 1993 and 1994, India's share of total portfolio equity flows to developing countries rose from 4.1% to 14.3%. In fiscal year 1993-94, portfolio investment by FIIIs rose from \$4 million in the previous year to \$1634 million and inflows through Global Depository Receipts (GDRs) and Euroconvertible bond issues shot up from \$240 million to \$2493 million. Currently, FIIIs, Non resident Indians and overseas corporate bodies can collectively invest up to 30% in a single company out of which 24% is through the automatic approval route. With a view to increasing the flow of funds to the gilts market, the Reserve Bank of India (RBI) has allowed FIIIs, including proprietary funds, to invest in dated Government securities and set up dedicated debt funds. FIIIs have also been permitted to purchase/sell treasury bills within the overall approved debt ceiling. FIIIs have been permitted to take forward covers on their currency exposures on debt instruments.

The move toward capital account convertibility is, however, only partial. While FIIIs, Non resident Indians and overseas corporate bodies are allowed to take money out of the country when ever they wish, resident Indians are not permitted to transfer or hold money abroad. Thus the capital account is fully convertible for foreigners but fully closed for resident Indians. For instance, in reaction to the Asian currency and stock market crisis monthly net FII investment turned negative in November 1997, as there was large-scale

offloading of Indian stocks. Resident Indians do not have the option of holding stocks in foreign financial markets and cannot turn to more lucrative markets if the Indian market is depressed or if they expect the rupee to depreciate.

The partial convertibility of the capital account has been accompanied by convertibility on the current account. The current account was liberalized as part of the reform process. Foreign exchange transactions necessary for imports and exports are permitted. As observed by the Tarapore Committee on Capital Account Convertibility, the above dichotomy of a closed capital account for residents with an open current account would encourage the movement of capital through the current account (RBI, 1997). It has created a situation where there is incentive for capital flows to take place through the current account route by trade misinvoicing. As residents are not allowed to officially move money out of the country as FIIs can, fear of devaluation encourages exporters and importers to under and over invoice their trade figures.

### **3. Trade misinvoicing**

Comparing export-import data furnished by India's trading partners with official Indian data can identify trade misinvoicing. The discrepancy between official Indian exports to the world (adjusted for shipping and insurance) and the world's imports from India can be defined as export misinvoicing. Traditionally, all export data are in f.o.b terms (excluding the costs of shipping and insurance) and all

import data are in c.i.f terms (i.e. including the costs of shipping and insurance). Therefore, on adding shipping and insurance costs to the official figure for India's exports to the world we should arrive at the figure for the world's imports from India. The conversion of export data from f.o.b to c.i.f terms is carried out by multiplying it with the cif/fob factor [derived to be 1.11 (IMF Balance of Payments Yearbook 1997)]. The residual discrepancy after this conversion is attributed to export misinvoicing. Export under invoicing takes place when official export data reports lower exports as compared to the actual value of goods transferred out of the country. The purpose of under invoicing is to enable the exporter to retain some export proceeds outside the country.

Similarly, the difference between official figures of India's imports from the world and the world's exports to India (adjusted for shipping and insurance) is attributed to import misinvoicing. If official figures on India's imports were higher than the adjusted figures for the world's exports to India, it would indicate import over invoicing. Import over invoicing would enable the importer to acquire excess foreign exchange and subsequently transfer it abroad. The opposite situation would arise in case of import under invoicing, which would generally be motivated by tariff evasion.

### **3.1. Export Under invoicing**

Data for India's exports to and imports from the rest of the world are sourced



from the Economic Survey, 1997-98. Data for the world's imports from and exports to India are sourced from the Direction of Trade Statistics published by the IMF. Data from these two sources was not found to be comparable initially, because export-import data of India's trading partners is provided on a calendar-year (January to December) basis, whereas official Indian data is available on a fiscal-year (April to March) basis. To make them comparable we converted international data to fiscal-year basis by using quarterly estimates of the world's exports to and imports from India (Source: Direction of Trade Statistics Quarterly, various issues) and consolidating the appropriate quarters to generate fiscal-year estimates.

Trade data comparison between India and the world reveal dominant export under invoicing in India (Table 1(a)).

Exports under invoicing may take place when expectations of exchange rate depreciation are built up in the market. Such an expectation may arise, for instance, if the "official" exchange rate is fixed at levels below the market rate. Under invoicing of exports would enable the exporter to realize a greater amount of domestic currency for the same amount of foreign exchange receipts when the expected depreciation actually takes place. It follows, therefore, that once the expected depreciation takes place under invoicing of exports should reduce. However, a devaluation of the exchange rate may often create uncertainty in

forex markets and fuel suspicions of a further fall. In such a situation an exporter would prefer to under invoice exports and keep capital abroad till such time as the exchange rate policy is made clearer. The actual pattern of export misinvoicing in a year of depreciation of the domestic exchange rate would depend on which of these two factors is stronger.

After 1993-94, market perceptions of the exchange rate may be captured by the forward premium. Forward premia have ranged between 0.5%- 30% in 1993-94 to 1996-97, but are generally in the region of 5-6%. This indicates that the market expects, or at least, does not rule out further depreciation of the rupee. The perception that the rupee would depreciate continues as inflation rates in India continue to be higher than inflation rates in the OECD countries.

The dual exchange rate system adopted in February 1992, that allowed exporters to convert sixty percent of export proceeds at the market exchange rate and the remaining forty percent at a lower official rate, was the first step towards discouraging export under invoicing. This may explain the sharp fall in export under invoicing in 1992-93 to 1.7% of total exports from 7.3% in the previous year. In 1993-94, as the surge in foreign portfolio inflows put upward pressure on the exchange rate, the Central Bank responded by maintaining the rupee dollar rate at nearly constant levels. Despite expectations of appreciation, export under invoicing increased to 5.73% of total exports. Later, there was an

exchange rate depreciation in September 1995, which reduced under invoicing levels to a negligible 0.74% of total exports in 1995-96. Most instances of depreciation were thus accompanied by a reduction in underinvoicing. This suggests that the rupee had been perceived to be overvalued and the depreciation was corrective.

Intervention by the Central Bank in the foreign exchange market often kept the rupee at levels that diverged from what the market would have determined. For instance in the period 1993 to 1995 the Rupee stayed at a constant rate for nearly 2 years. During this period there was market pressure on the rupee to appreciate due to inflow of foreign capital. It was not allowed to do so. But nor was it allowed to depreciate when pressure from the rising current account deficit built up. It was only in August-September 1995 that the RBI finally let go and the rupee fell sharply. The Central Bank's exchange rate policy is not very clearly stated and usually creates fears of depreciation. The fact that the forward rate indicated a higher depreciation than was actually realized is evidence of the market's perception (Figure 1).

Total under invoicing between 1990-91 and 1996-97 amounted to \$ 8.37 billion. In general, in an economy with controlled capital movements, export under invoicing is accompanied by import over invoicing, both of which contribute to illegal capital flight from the economy.

### **3.2. Import Underinvoicing**

We observe import over invoicing in India over most of the 1990s, excepting 1992-93 and 1993-94, when imports were under invoiced by about \$ 1.2 billion (Table 1(b)).

Despite rationalisation of the tariff structure and lowering of tariffs in the post-reform period, India continues to have relatively high tariffs in the post reform period. Mean tariff rates for the economy as a whole fell from 128% in 1990-91 to 71% in 1993-94, and further to 34% in 1997-98 (World Bank, 1998). High tariff rates would normally result in under-reporting of imports, as importers attempt to reduce tariff payments. During 1990-91 and 1991-92, crisis conditions in the domestic economy outweighed the high tariffs and led to capital flight through over invoicing. In the following two years, however, tariff evasion dominated over fears of capital depreciation and import under invoicing took place. The trend reversed from 1994-95, with \$ 3.2 billion of import over invoicing (about to 8.8% of total imports) taking place in that year. The unnaturally high over invoicing in 1994-95 can be attributed to the capital market boom in that period, which facilitated the financing of several industrial projects set up with imports of capital goods. These imports were generally over invoiced, so as to enable corporates to accumulate illegal balances overseas. With the collapse of the public issue market and tightening of credit in 1995-96, over invoicing dropped to 0.15% of

imports.

In the period 1990-97, export under invoicing resulted in capital outflows of about \$ 8.4 billion, and simultaneously imports were over invoiced to the extent of about \$ 8.2 billion. In all, \$ 16.6 billion of capital fled the country through the trade misinvoicing route.

### **3.3. Adjustment of Current Account for Trade Misinvoicing**

The combined effect of export under invoicing and import over invoicing is to overstate the trade deficit or understate the trade surplus (Table 1(c)). Therefore, current account deficit/surplus figures need to be decreased/increased to reflect total trade misinvoicing.

Export under invoicing leads to the current account deficit being larger than if there were no misinvoicing and import under invoicing results in the current account deficit appearing smaller than it would be without misinvoicing. The direction of the net adjustment to the official current account deficit depends on the relative magnitude of the two causal factors.

Official balance-of-payments data thus does not reflect possible misinvoicing in imports and exports. To illustrate, suppose exports and imports are each \$1000, then the trade deficit is zero. In this case, under invoicing of exports of the magnitude of \$200 i.e. reporting exports to be \$800 leads to a current account

deficit of \$200 (assuming zero invisibles). At the same time, import over invoicing, can also take place, say by \$200, motivated by the desire to acquire foreign exchange. This would result in imports being reported as \$1200 and would further increase the deficit to \$400. On the other hand, under invoicing of imports would reduce the current account deficit. Therefore, estimates of capital flight obtained by any of the other methods need to be adjusted by the extent of trade misinvoicing.

### **3.4. Black Market Premium**

All misinvoicing may, however, not constitute capital flight. In most regulated economies, including India, underinvoicing of exports is also encouraged by the existence of a “black” or parallel market for foreign exchange, where the local currency can be sold at a premium to the official exchange rate. Similarly importers could obtain foreign currency ostensibly for imports and sell it at a premium.

The black market premium remained significant in India till the early nineties. For instance, the spread between the official and the black market rate, or the black market premium was as high as 13.77% in March 1992, rising to 24% in February 1993. However, the deregulation of the foreign exchange market has wiped out the premium to a large extent (Marjit, 1998).

It may be argued that in the pre-reform period a considerable portion of what may appear to be capital flight through export under invoicing is not really so, as export earnings enter the country through the black market. However, in the nineties no significant black market for foreign exchange existed as the value of the rupee was market determined. Thus under invoicing of exports was not meant to route export earning back into the country through the black market. Rather, it was done to transfer export earnings to foreign accounts thereby contributing to capital flight. As there is no other advantage from under invoicing exports than to unofficially move capital abroad the extent to which exports and imports are misinvoiced constitute a measure of capital flight. A restricted capital account that does not allow residents to transfer money to foreign accounts through official channels provided the necessary incentive for capital movements in the guise of trade transactions. As the current account was liberalised it was relatively easier to channel money through this route.

## **4. Estimation of capital flight**

There are several approaches to measuring capital flight. We briefly present the residual or broad measure and its variant, the Morgan Guaranty Trust Company method estimates the totality of funds available for capital flight.

### **4.1. The residual method**

The residual or the broad measure is an indirect approach to measuring capital flight based on a comparison between sources and uses of foreign exchange. This method measures capital flight as those inflows of foreign exchange which have no accounted/reported uses. Thus, the residual or difference between inflows and uses of foreign exchange are computed; and a surplus of inflows over reported uses measures the extent of unaccounted uses or reflects capital flight from the country. Foreign exchange inflows are calculated as the sum of the increase in net external borrowing and the total non-debt creating foreign inflows in a given year. Uses of foreign exchange include the current account deficit and the net increase in foreign reserves. Operationally, we compute capital flight as the sum of change in external debt, foreign investment inflows, current account surplus and change in international reserves.

If official sources/inflows exceed the official uses of foreign exchange, then it is



assumed that the forex has been used unofficially or has left the country without being officially recorded. In other words, capital flight has occurred.

#### **4.2. The Morgan Guaranty Trust Company method**

This method of computing capital flight (Morgan Guaranty Trust Co., 1986) is a variant of the residual measure. Inflows of foreign exchange are defined in the same manner, but they are assumed to be used to finance the current account deficit as well as add to the net foreign exchange assets of the banking sector. Commercial banks' net foreign assets are added to those of the central bank on the grounds that the central bank directly or indirectly controls a large fraction of commercial banks' foreign assets in many developing countries (Cuddington, 1986).

The difference between the inflows and uses continues to be defined as capital flight. As in the residual method, negative figures for capital flight suggest net unofficial inflows of forex.

#### **4.3. Measuring Capital Flight for India**

External debt, measured as total external debt less some categories of rupee

debt<sup>1</sup>, and non-debt creating foreign inflows, measured as foreign direct and portfolio investment were obtained from official estimates published in the Economic Survey 1997-98. Similarly, we used official government data for estimates of foreign reserves (excluding gold). Finally, estimates of net foreign exchange assets of the banking system were obtained from the monthly bulletins of the Reserve Bank of India.

Tables 2 and 3 present the estimates of capital flight for India. Total capital flight measured by the residual method, adjusted for trade misinvoicing, amounted to \$10.1 billion over the period 1990-97 (Table2). Using the more comprehensive Morgan Guaranty Trust Company method, capital flight adjusted for trade misinvoicing amounted to \$6.8 billion in the period 1990-97 (Table 3).

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<sup>1</sup> Refers to debt owed to Russia, denominated in rupees and payable in exports.

## **5. Conclusion**

Our results indicate the reforms of the nineties that opened up the capital account to foreigners but kept it closed to India's encourage the movement of capital through illegal routes such as trade misinvoicing. We believe that all the misinvoicing observed in the post reform period constitutes capital flight as there is no black market premium in the forex market that would encourage misinvoicing for rerouting foreign exchange at higher rates. Intervention by the Central Bank in the foreign exchange market to keep the rupee at levels diverged from the market-determined rate created fears of depreciation. The fact that the forward rate indicated a higher depreciation than was actually realized is evidence of the market's perception. The view that the rupee is "overvalued" and would slip lower if left to market forces combined with the existence of a regime restricting residents to hold foreign assets or bank deposits abroad, led to capital flight through trade misinvoicing.

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**Figure 1 Forward rate and actual exchange rate of the Rupee**

<b>Table 1(a) Capital flows through export misinvoicing</b>					
<b>Year</b>	<b>India's exports</b>	<b>Adjusted</b>	<b>World's imports</b>	<b>Export under invoicing</b>	
<b>\$ billion</b>	<b>To world</b>	<b>Exports</b>	<b>from India</b>	<b>In \$ billion</b>	<b>as % of ttl. exports</b>
1990_91	18.48	20.51	22.38	1.87	10.12
1991_92	18.27	20.28	21.61	1.33	7.28
1992_93	18.87	20.94	21.26	0.32	1.70
1993_94	22.68	25.18	26.48	1.30	5.73
1994_95	26.86	29.81	30.53	0.72	2.68
1995_96	32.31	35.87	36.11	0.24	0.74
1996_97	33.76	37.48	40.06	2.58	7.64
<b>Total</b>				<b>8.37</b>	

<b>Table 1(b) Capital flows through import misinvoicing</b>					
<b>Year</b>	<b>World's exports</b>	<b>Adjusted</b>	<b>India's imports</b>	<b>Import over invoicing</b>	
<b>\$ billion</b>	<b>to India</b>	<b>exports</b>	<b>From World</b>	<b>In \$ billion</b>	<b>As % of ttl imports</b>
1990_91	23.99	26.63	27.92	1.29	4.62
1991_92	18.03	20.01	21.06	1.05	4.99
1992_93	22.64	25.13	24.32	-0.81	-3.33
1993_94	24.44	27.13	26.74	-0.39	-1.46
1994_95	29.52	32.77	35.90	3.14	8.75
1995_96	39.21	43.52	43.67	0.15	0.34
1996_97	39.86	44.24	48.06	3.82	7.95
<b>Total</b>				<b>8.24</b>	

<b>Table 1(c) Capital outflow through misinvoicing</b>			
	<b>Outflow through Misinvoicing</b>	<b>Current a/c surplus Unadjusted</b>	<b>Current a/c surplus Adjusted</b>
1990_91	3.16	-9.680	-6.523
1991_92	2.39	-1.178	1.207
1992_93	-0.50	-3.526	-4.025
1993_94	0.91	-1.158	-0.246
1994_95	3.86	-3.369	0.489
1995_96	0.39	-5.899	-5.507
1996_97	6.40	-3.661	2.739
<b>Total</b>	<b>16.61</b>	<b>-28.471</b>	<b>-11.866</b>



<b>Table 2 Capital flight estimation using the residual method</b>					
<b>Fiscal Year \$ mn</b>	<b>Change in External Debt</b>	<b>Non-debt Creating foreign Inflows</b>	<b>Adjusted Current a/c Surplus</b>	<b>Change in forex assets*</b>	<b>Capital flight adjusted for misinvoicing (Col. 1+2+3+4)</b>
	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	
1990_91	6118	103	-6523	1137	834.63
1991_92	3911	133	1207	-3383	1868.44
1992_93	4542	559	-4025	-731	345.01
1993_94	3204	4153	-2455	-8724	-1612.53
1994_95	6773	5138	4887	-5640	6759.75
1995_96	-5418	4881	-5507	3690	-2354.31
1996_97	747	6008	2739	-5243	4251.36
<b>Totals</b>	19877	20975	-11865	-18894	10092.35

**\* An increase in reserves is indicated by a negative sign and decrease by a positive sign**

<b>Table 3 Capital flight estimation using the Morgan Guaranty Trust method</b>					
<b>Fiscal Year \$ mn</b>	<b>Sources of Forex</b>	<b>Adjusted Current a/c Surplus</b>	<b>Net forex Assets of the Banking sector</b>	<b>Change in Forex assets*</b>	<b>Capital Flight adjusted for Trade misinvoicing</b>
	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	
1990_91	6221	-6523	5511	1698	1396.1
1991_92	4044	1207	8218	-2707	2544.8
1992_93	5101	-4025	7752	465	1541.3
1993_94	7357	-2455	17409	-9657	-2545.2
1994_95	11911	4887	24971	-7562	4838.1
1995_96	-537	-5507	23885	1085	-4958.8
1996_97	6755	2739	29411	-5526	3968.9
<b>Totals</b>	40852	-11865	117156	-22201	6785

**Note: Sources of forex = Change in external debt + non-debt creating foreign inflows**

**\* An increase in reserves is indicated by a negative sign and decrease by a positive sign**

