MANAGEMENT OF EXCHANGE-RISK IN ALL INDIA INDUSTRIAL DEVELOPMENT BANKS

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The paper shows the highly unsatisfactory exchange-risk management policies of the three All India Industrial Development Banks (AIIDBs), namely, Industrial Finance Corporation of India (IFCI), Industrial Credit and Investment Corporation of India (ICICI) and Industrial Development Bank of India (IDBI). Generally, the risk is shifted to the borrower on back to back basis, and in some cases to the government of India. By shifting exchange risk to borrowers, they substitute credit-risk for exchange-risk. Earlier, their reluctance to share exchange risk had resulted in accumulation of massive unutilised foreign currency reserves with them.

I. INTRODUCTION

An important task of a development finance institution is mobilisation of resources from abroad to bridge the gap between domestic demand and availability of funds. In the process, it gets exposed to the risk of devaluation of home currency. Since devaluation is inextricably linked to development process[1] and inflation[2], the threat of devaluation for a development finance institution (DFI) is a real one.

Thus, the objective of this paper is to ascertain and evaluate exchange risk management policies of the AIIDBs, i.e. how they manage transaction exposure arising from provision of foreign currency loans. The paper gives a brief description of meaning and types of foreign exchange in Section II. Section III presents exposure management policies followed by the All India Industrial Development Banks (AIIDBs). The Exchange Risk Administration Scheme (ERAS) constitutes the subject matter of Section IV. Finally, Section V contains suggestions for changes in the existing policy.

II. NATURE OF EXPOSURE

Technically, the risk arising from adjustment in the external value of a currency is called foreign exchange exposure.[3] It is defined as the possibility of change in the value of the firm, reported or real, as a result of the volatility of exchange rates. It may be classified into three broad groups : translation or accounting exposure; transaction exposure; and economic exposure.

Translation exposure relates to the past and shows the potential for change in the value of reported earning and shareholders' equity due to a change in the foreign exchange rates used to translate the foreign currency transactions.[4] Since it does not invlove any cash flow, the meaning of gain or loss on translation, i.e. change in reported earnings and net worth as well as what to do about it, is not very clear.

Transaction exposure involves possibility of a real gain or loss as a result of change in local currency required for (available from) a planned foreign currency denominated payment (receipt). Any receivable/payable

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denominated in foreign currency is a source of transaction exposure. In common parlance, it is referred to as exchange-risk, currency-risk and risk due to devaluation.

Economic exposure is a measure of reduction in future cash flow and value of the firm arising from currency adjustment. Unlike transaction exposure, it is much broader in nature and affects competitive position of entire project/firm.

III. EXPOSURE MANAGEMENT BY AIIDBs

Every DFI that has foreign currency obligations is confronted with the dilemma : who bears the exchange-risk and at what cost? Broadly speaking, it has three distinct options : 1. Risk Shifting; 2. Risk Sharing; and 3. Risk Reduction.

In 1978, a review of procedures adopted for loans and credits by the World Bank and its affiliates to development banks revealed[5] : "...(out of 70 development banks in 55 countries) the ultimate borrowers carried the full foreign exchange risk in 29 cases and Governments in 33 cases. In five cases the risk was split, the ultimate borrower carrying the risk between local currency and U.S. dollars and Governments carrying the risk between US dollars and currencies of debt obligation to the World Bank. In one operation, the exchange risk of the ultimate borrower was limited to 3% a year and anything in excess being met by a special Government fund. In the remaining two cases, medium and large scale borrowers carried the exchange risk, while Governments absorbed it in the case of loans to small scale enterprises".

In India, the three AIIDBs are the main purveyors of foreign currency resources for the industrial units.[6] In order to ascertain how their borrowers get protection against exchange-risk, sample information has been obtained through a questionnaire.[7]

Out of 105 respondents, assisted by the AIIDBs, almost three-fifths (62) had obtained foreign currency loans (Table 1). The ultimate borrowers carried the full risk in nearly one-fourth (16) of the cases and the government in just one case, the loan being rupee-tied under the IBRD line of credit. In more than two-fifths (27) of the cases, the government shared the risk with the borrowers under the Exchange Risk Administration Scheme (ERAS), but the Scheme introduced in 1989 on an experimental basis was operational up to 1992 only. Further, almost half (30) of the borrowers used forward cover to reduce the risk, including some of those (12) who were covered under the ERAS.

Thus, the three AIIDBs do not directly bear any risk on account of fluctuations in exchange rates in respect of foreign currency loans. Their stated policy is[8] : "The exchange risk will be borne by the borrowers on back to back basis, i.e., the ultimate borrower is responsible for the exchange risk during the period within which the loan is repayable or the period of actual repayments, whichever is longer. After that the risk is to be borne by the institution in respect of normal fluctuations and by the Central Government in respect of other than normal fluctuations in exchange rates".

Perhaps, the only exception to the above rule has been the partial exchange risk borne by them under the KFW loan agreements.[9] It is interesting to note that initially the ICICI could not find borrowers for its first loan from the International Bank as it refused to bear the exchange risk. At that time the borrowers could readily obtain foreign exchange from the Reserve Bank of India against rupees, without assuming any foreign exchange risk.[10]

Table 1 : Foreign Exchange Exposure Management Practices in Sample Companies@

Asset-size	No. Protection	Forward Cover	ERAS/ Rupee-tied Loan	ERAS and Forward Cover	Total
Up to Rs. 3 crore	1	—	1	—	2
Rs.3-5 crore	—	1	—	—	1
RS.5-10 crore	6	3	1	—	10
Rs.10-20 crore	4	4	4	1	13
RS.20-50 crore	4	4	7*	3	18
RS.50-100 crore	—	3	1	1	5
Rs.100-250 crore	1	2	1	1	5
Above Rs. 250 cr.	—	1	1	6	8
Total	16	18	16	12	62

Note : @ 105 non-government non-trading/financial public limited companies listed at the Bombay Stock Exchange and assisted by the AIIDBs.

* includes one case of 'rupee-tied' loan under the IBRD line of credit.

Further, up to 1972, the borrowers of IFCI were required to bear the risk till such time IFCI repaid the original loan to its foreign lenders.[11] Even after that the policy continued to be inequitable because overdue instalments of foreign currency loans were expressed in foreign currency. Logically, these should be rupee-tied at the exchange rate prevailing on the date on which the instalment was due and paid back by the DFI to its foreign lenders.

Nevertheless, some of the borrowers were able to reduce their risk by making premature payments. The payments accepted in advance of maturities, under the KFW loan agreements, resulted in a loss of Rs. 2.74 crores to the ICICI during 1976-79. Finally, it was compensated by the government of India.[12]

Recently, the issue of absorption of loss on pre-payment of foreign exchange loans resurfaced.[13] Several companies that had borrowed from the AIIDBs tried to pre-pay their loans as they could access the Euro-markets, through equity or convertible bonds, at a much lower cost. While the government, once again, has agreed to bear the exchange-risk, the AIIDBs have insisted that they should be compensated, by the government or the borrowers, for loss of interest as the prevailing interest rates are far lower than the rates at which the loans were originally taken.

To the extent the entire exchange-risk was borne by the borrowers and/or the government, the AIIDBs hardly had the need to adopt risk-reduction policies. However, from the mid-1980s, they have been using forward cover, currency options, currency swaps, and interest rate swaps to reduce their short term cash outflows and eliminate the uncertainty associated with such flows. Presently, some of these 'liability manage-

Table 2 : Foreign Currency Borrowings vis-a-vis Foreign Currency Loans and Advances of AIIDBs, 1971-92.

(Figures are in Rupees Crore)

Year-end	IFCI		ICICI		IDBI	
	Borrowings	Loans and Advances	Borrowings	Loans and Advances	Borrowings	Loans and Advances
1971	21.5	26.1	68.4	73.8	—	—
1972	22.2	27.4	78.6	84.2	—	—
1973	23.4	28.8	93.8	99.9	—	—
1974	23.0	27.9	109.2	113.4	—	—
1975	22.3	26.9	120.1	127.1	—	—
1976	22.0	26.5	169.6	178.6	—	—
1977	22.1	26.0	185.9	195.9	—	—
1978	22.6	25.4	201.2	212.2	—	—
1979	24.0	25.7	224.2	237.1	—	—
1980	22.0	24.7	219.0	234.7	—	—
1981	42.5	47.5	209.2	233.3	—	—
1982	51.0	54.7	292.5	299.5	—	—
1983	59.7	62.0	348.8	372.9	6.1	5.4
1984	62.8	64.0	407.6	455.5	47.8	19.4
1985	94.3	88.8	514.4	557.8	111.9	100.6
1986	169.9	200.2	656.0	684.1	368.3	268.0
1987	292.8	331.1	915.5	926.7	612.7	422.6
1988	611.2	474.8	1143.6	1096.3	910.1	618.3
1989	988.6	616.8	1431.5	1208.8	1537.7	743.0
1990	1357.8	790.3	1901.3	1277.8	2196.9	895.9
1991	1720.5	1131.8	2505.5	1603.0	3235.3	1238.6
1992	2528.2	1844.9	4217.7	2320.8	5591.4	1856.9

Note : (a) In some of the years loan and advances exceed borrowings due to accounting policy for translation of foreign currency loans in default. The effect was closed to differences in Exchange Suspense Account.

(b) The IDBI launched its foreign currency loan operations in 1982.

Source : Compiled from *Annual Reports* of IFCI, ICICI and IDBI.

ment products' are being offered to the borrowers also.[14]

Apparently, their entry into international capital markets, in the 1980s, enhanced the need and opportunities for managing the exposure. Another reason seems to have been the surplus foreign exchange at their disposal in the later years of the study. For instance, on March 31, 1992, the rupee value of such funds was Rs. 683.3 crore for the IFCI, Rs. 1896.9 crore for the ICICI and Rs. 3734.5 crore for the IDBI (Table 2).

Thus, from the preceding discussion, it is evident that the AIIDBs, in general, have been reluctant to bear the exchange-risk, whereas the government from time to time has come to the rescue of the borrowers. One specific arrangement for splitting the exchange-risk between the borrowers and the government, called the ERAS is discussed in detail in the next section.

IV. EXCHANGE RISK ADMINISTRATION SCHEME

The Exchange Risk Administration Scheme (ERAS) was evolved and operated by the AIIDBs to protect the borrowers from exchange-risk and distribute the cost of such protection among the borrowers equitably. The scheme was introduced from April 1, 1989, on an experimental basis for a period of two years. Later, the scheme was extended up to March 1994, and its scope was extended to cover disbursements under IDBI's Foreign Currency Refinance Scheme.

All eligible borrowers who were not in a position to hedge their foreign exchange exposure had the option to join this scheme in respect of each new loan. The benefits were available only out of commercial borrowings of the AIIDBs and the maximum amount was restricted to the equivalent of the US dollars 60 million, per company as a whole.

Under the scheme, the principal repayment obligation of the borrower was rupee-tied at the rates of exchange prevailing on the date of disbursement. For this facility, the borrowers were charged a composite-cost consisting of three elements : (a) the interest portion arrived at on the basis of average cost of various components of the currency pool; (b) spread of the financial institution(s); and (c) the exchange-risk premium.

The composite-cost was a floating rate determined at quarterly intervals with a 'floor' and a 'cap'. The band — the 'floor' and the 'cap' prevailing at the time of execution of a loan — was applicable during the currency of that loan.

The composite-cost band and the interest rates applicable since introduction of the scheme are given in Table 3. The table shows that during April 1989 to March 1992, the interest rate was revised upward nine times, in four composite-cost bands. The minimum applicable interest rate was 15.47 per cent (15-18 per cent band) and the maximum 26 per cent (23-26 per cent band).

The scheme was operated through the instrumentality of a fund known as the Exchange Risk Administration Fund (ERAF) maintained by the IDBI under its Development Assistance Fund (DAF). The initial corpus of the fund was Rs. 15 crore, contributed equally by IFCI, ICICI and IDBI. The exchange premium element of the composite-cost was transferred to it on a quarterly basis. The balance available in the ERAF, including interest earnings thereon, was available for meeting the exchange-risk element of the loan. The central government was to make good the

Table 3 : Composite-cost Band and Interest Rate Applicable under Exchange Risk Administration Scheme, 1990-92.

Loan Agreement Executed During	Composite-Cost Band (%)	Interest Rate Applicable as on 31.3.92 (Including Interest Tax) (%)
1.4.89 to 31.1.90	15-18	15.47
1.2.90 to 30.4.90	15-18	16.50
1.5.90 to 31.7.90	15-18	17.53
1.8.90 to 31.10.90	17-20	18.05
1.11.90 to 31.1.91	17-20	19.08
1.2.91 to 31.3.91	20-23	20.62
1.4.91 to 31.7.91	23-26	23.72
1.8.91 to 31.10.91	23-26	23.72
1.11.91 to 31.1.92	23-26	24.00
1.2.92 to 31.4.92	23-26	26.00

Note : Interest rate for foreign currency loans out of commercial borrowings and not covered under the ERAS was 2 to 2.5 per cent above all-in-cost of such borrowings.

Source : IFCI, *Operational Statistics*, 1991-92, p. 97.

deficit in the Fund and recoup its surplus, if any.

If a borrower defaulted in meeting four consecutive instalments of principal/interest, he was penalised by charging normal liquidated charges (2 per cent) and denying him the benefit of cover under the ERAF without taking him out of ERAF. The later implies that he continued to pay composite cost under the applicable band but remained liable for his pro-rata share in the deficit, if any of the ERAF.[15]

The yearly accretions to the Fund and exchange fluctuations are given in Table 4, which shows that in 1992, the total corpus of the Fund of Rs. 145.1 crore fell short of total exchange fluctuations by Rs. 598.2 crore. Out of the total exchange fluctuations of Rs. 743.3 crore during 1990-92, almost 90 per cent resulted in 1992 only. The obvious reason is the exchange rate adjustment in July 1991.

With the introduction of the Liberalised Exchange Rate Management System (LERMS) on March 1, 1992, the scheme became redundant. Thus, presently, the only scheme/option that seems to be available to the borrowers against exchange-risk is to take liability management products being offered by the AIIDBs.

Table 4 : Distribution of Exchange-Risk (Loss) under the ERAS*, 1990-92.

(Figures are in Rupees Crore)

Particulars		IFCI	ICICI	IDBI	AIIDBs
A.	**Initial Contribution to ERAF@**	**5.00**	**5.00**	**5.00**	**15.00**
	Add Interest on ERAF				
	1990	0.61	0.62	0.62	1.85
	1991	1.03	1.08	1.35	3.46
	1992	2.63	2.57	4.18	9.38
	Add Premium Recovered from Borrowers				
	1990	0.90	0.84	1.74	3.48
	1991	5.88	5.72	12.74	24.34
	1992	23.86	26.79	36.95	87.60
B.	**Total Size of ERAF in 1992**	**39.91**	**42.62**	**62.58**	**145.11**
	Less Exchange Fluctuations				
	1990	0.89	2.18	0.31	3.38
	1991	18.48	23.38	29.37	71.23
	1992	185.69	205.65	277.34	668.68
C.	**Total Loss**	**205.06**	**231.21**	**307.02**	**743.29**
D.	**Net Burden on the Governement of India/Deficit (B-C)**	**(165.15)**	**(188.59)**	**(244.44)**	**(598.18)**

Note : * ERAS = Exchange Risk Administration Scheme

@ ERAF = Exchange Risk Administration Fund

Source : Compiled from *Annual Reports* of the IDBI.

V. SUGGESTIONS

The practice of shifting exchange-risk to borrowers, who can neither bear nor hedge it, indicates that the AIIDBs have a short term perspective. They simply substitute credit-risk for exchange-risk. Debt-service burden on foreign currency loans goes up with unfavourable movements in exchange rates. Besides, the cost of imported raw-materials also goes up, but an exporter's revenue may actually decline if the demand for his product is price-inelastic.

In operational terms, this implies a reduction in cash flows of the project, erosion of its competitiveness, losses and finally defaults. Table 5 shows that the devaluation of rupee in the year 1991-92 resulted in nearly one-third increase in debt-service burden of foreign currency borrowers. Obviously, all of them will not be able to absorb such a sizeable loss.

This calls for reformulation of exposure management policy of the AIIDBs. Two basic requirements for a successful expo-

Table 5 : Increase in Foreign Exchange Exposure of Borrowers of AIIDBs due to Devaluation of Indian Rupee in the Year 1991-92

(Figures are in Rupees Crore)

Particulars	IFCI	ICICI	IDBI
A. Total Loans Outstanding on 1.4.91	5362.2	6130.4	11042.7
B. Add Disbursement in the year 1991-92	1474.6	1787.0	5759.3
C. Less Repayment by Borrowers in the Year 1991-92	463.7	766.0	2610.9
D. Estimated Loan Amount on 31.3.92	6373.1	7151.4	14191.1
E. Reported Loan Amount on 31.3.92	6787.8	7763.1	14559.8
F. Exposure due to Devaluation (E-D)	414.7	611.7	368.7
G. Foreign Currency Loans Outstanding on 1.4.91	1131.8	1603.0	1238.6
H. Percentage Increase in Liability (F as a percentage of G)	36.7%	38.2%.	29.8%

Source : Compiled from *Annual Reports* and *Operational Statistics* of the IFCI, ICICI and IDBI.

sure management policy are : (a) the objective of the policy is clearly specified; and (b) it should be related to the exchange rate system of the economy. Accordingly, the changes in the policy have been proposed under three assumptions : (a) the purpose is to minimise transaction and economic exposure of the DFI; (b) full float of rupee introduced from March 2, 1993 will continue; and (c) financial institutions will be approached for foreign exchange loans, even though the EXIM policy for 1992-97 allows import of capital goods against spot purchase of foreign exchange from the market implying no exchange-risk for the firm.[16]

It may be further noted that full float of rupee means increased volatility in exchange rates, opportunities for gain due to such volatility, and only gradual decline, if any, in the value of the Indian rupee.

Instead of shifting the risk to the borrowers on back-to-back basis, the AIIDBs should adopt a case-by-case approach. At the time of project appraisal, they should examine the sensitivity of the project cash flows to exchange rate adjustments. Entire exposure should be shifted to the borrowers where the projects operating cash flows are insulated from exchange-risk (no exports or imports) and foreign currency loans constitute an insignificant part of the total project cost. For exporters, the loan account should be operated in the currency in which they would receive their export revenue. This will automatically neutralise a part of the exposure. If the residual exposure is too big for the borrower to absorb, he may be covered under risk sharing scheme(s).

For risk sharing, a modified ERAS may be introduced. First of all, the benefit under the scheme should be limited to those who cannot absorb the loss from devaluation, on their own. This apart, the exposure should be shared by the borrowers, the DFI and the government on a pre-determined basis. For example, exchange-risk of the borrower may be limited to 3 per cent per

year, that of the DFI to 3-10 per cent and anything above that should be met by the government. Financial liberalisation notwithstanding, there is a prima-facie case for government intervention. After all, macroeconomic management is a prime responsibility of the government.

Alternatively, maximum exposure of the borrower and the DFI, during the currency of the loan, should be specified in rupee terms, at the time of execution of loan; the residual risk should be borne by the government.

The third possibility is to revive the erstwhile ERAS with the stipulation that the DFI will transfer a certain proportion of its profit to the ERAF. For tax purposes, the said apporpriation of profits should be treated as a charge against income (as would be done in the case of default). If the DFI fears its adverse effect on profitability, the spread may be suitably adjusted. Obviously, an explicit 'interest surcharge as a protection against devaluation' will not be acceptable to the borrowers.

Notes

1. Often developing countries have an adverse balance of payments as they have to import capital goods and other inputs, but their exports have low value added content.

2. According to the purchasing-power parity theory, inflation is a source of devaluation. But there is some evidence to suggest that inflation in Argentina, Brazil and Israel have been initiated by devaluation. This vicious circle has been noted in some of the high inflation countries like Yugoslavia. See Ramachandran (1991), pp.128-29. For a brief and lucid discussion on purchasing power parity theory, see Caves and Jones (1973), pp. 335-39.

3. For detailed discussion on concepts discussed here and other related issues, see Shapiro (1975), pp. 485-502; and Shapiro (1978), pp. 7-16.

4. Some relevant rules for translations are FASB 8, FASB 52 and ICA 1650. In India, the Institute of Chartered Accountants of India specified the rules vide its Accounting Standards (AS) 11 in 1989. Now they have withdrawn it and issued a revised exposure draft. For AS 11 (Revised), see *The Chartered. Accountant* (India), August 1993, pp. 119-21.

5. Raghavan (1982), pp. 207-8.

6. ICICI started foreign currency lending operations in 1958, IFCI in 1961 and IDBI in 1982.

7. Sample comprised of manufacturing public limited companies listed at the Bombay Stock Exchange in 1991.

8. Specifically provided in Section 27(4) of Industrial Finance Corporation Act, 1948 and Section 12(4) of Industrial Development Bank of India Act, 1964.

9. IFCI (1985).

10. Boskey (1964), pp. 87-88.

11. IFCI, *Annual Report* 1981-82, p.43.

12. See, notes forming parts of accounts, ICICI, Annual Reports for the years 1976 to 1988.

13. See Datta Gupta (1994). Also *The Economic Times*, New Delhi, December 17 and 18, 1993.

14. IDBI, Press release number RPD/PPR/334, dated August 3, 1993.

15. IFCI, *Annual Report 1989-90*, p.92.

16. This forced the AIIDBs to abandon their plans to raise further foreign currency loans and to request the Reserve Bank of India (RBI) to swap their idle foreign exchange funds. Reported in *Indian Express*, New Delhi, March 30, 1993.

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