Credit Exposure Norms - Measurement of Credit Exposure of Derivative Products - Methodology for Measurement

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The CEOs of the all-India Term Lending and Refinancing Institutions

Dear Sir,

Credit Exposure Norms - Measurement of Credit Exposure of Derivative Products - Methodology for Measurement

Please refer to paragraph 2 (b) of our circular DBS.FID No. C-26 /01.02.00/ 2000-2001 dated June 20, 2001 regarding the measurement of credit exposures for the purpose of Credit Exposure Norms. It had been stated therein that with effect from April 1, 2003:

a) the non-fund based exposures should also be reckoned at 100 per cent value, instead of at 50 per cent, as prescribed earlier; and

b) for determining the credit exposure to individual / group borrowers, the forward contracts in foreign exchange and other foreign exchange derivative products such as currency swaps, options, etc., should be included at their **replacement cost** in determining the individual / group borrower exposures.

The methodology for arriving at the 'replacement cost' of the derivatives was to be advised by us subsequently, which is as under.

There are two methods for measuring the credit risk exposure inherent in derivatives, as described below.

The original exposure method

2. Under this method, which is a simpler alternative, the credit risk exposure of a derivative product is calculated at the beginning of the derivative transaction by multiplying the notional principal amount with the prescribed credit conversion factors. The method, however, does not take account of the ongoing market value of a derivative contract, which may vary over time. In order to arrive at the credit equivalent amount under this method, an FI should apply the following credit conversion factors to the notional principal amounts of each instrument according to the nature of the instrument and its **original** maturity:

Original Maturity	**Credit Conversion Factor to be applied to Notional Principal Amount**	
	Interest Rate Contract	**Exchange Rate Contract**

Less than one year	**0.5 %**	**2.0%**
One year and less than two years	**1.0%**	**5.0 % (2 % + 3 %)**
For each additional year	**1.0%**	**3.0 %**

The current exposure method

3. Under this method, the credit risk exposure / credit equivalent amount of the derivative products is computed periodically on the basis of the market value of the product to arrive at its current replacement cost. Thus, the credit equivalent of the off-balance sheet interest rate and exchange rate instruments would be the sum of the following two components:

(a) the total '**replacement cost**' - obtained by "marking-to-market" of all the contracts with positive value (i.e. when the FI has to receive money from the counterparty); and

(b) an amount for '**potential future exposure**' - calculated by multiplying the total notional principal amount of the contract by the following credit conversion factors according to the residual maturity of the contract:

	Conversion Factor to be applied on Notional Principal Amount	
Residual Maturity	**Interest Rate Contract**	**Exchange Rate Contract**
Less than one year	**Nil**	**1.0 %**
One year and over	**0.5%**	**5.0 %**

3.1 Under the current exposure method, the FIs should mark to market the derivative products **at least on a monthly basis** and they may follow their internal methods for determining the marked-to-market value of the derivative products. However, the FIs would **not** be required to calculate potential credit exposure for **single currency floating / floating interest rate swaps**. The credit exposure on these contracts would be evaluated solely on the basis of their mark-to-market value.

4. The FIs are encouraged to follow, with effect from April 1, 2003, the **Current Exposure Method**, which is an accurate method of measuring credit exposure in a derivative product, for determining individual / group borrower exposures. In case an FI is not in a position to adopt the Current Exposure Method, it may follow the Original Exposure Method. However, its endeavour should be to move over to Current Exposure Method in course of time.

5. Under the extant capital adequacy norms, the credit exposure of the FIs in derivative products also gets reflected in the risk-weighted value of the off-balance sheet items in the CRAR computation, for which the 'original exposure method' has been prescribed in terms of our Circular FIC. Nos.842/01.02.00/93-94 dated March 29, 1994 addressed to the term lending

institutions and 641/01.02.00/95-96 dated March 7, 1996 addressed to the refinancing institutions. The FIs are, however, encouraged to adopt, with effect from April 1, 2003, the Current Exposure Method for computation of CRAR also, subject to the stipulations of para 4 above.

6. Please acknowledge receipt.

Yours faithfully,

(Rajesh Verma)
General Manager-in-Charge