

## FOREIGN EXCHANGE EXPOSURE & RISK MANAGEMENT

If gain to customer then amounts can't be paid to customer

### (iii) Swap Loss

On 10<sup>th</sup> June bank sell spot to other Bank & buy forward from other Bank

| Particular        | Amount     |
|-------------------|------------|
| Sell Spot         | ₹ 63.8000  |
| (-) Buy Forward   | ₹ 63.9500  |
| Swap Loss         | ₹ 0.15     |
| (-) Contract Size | ₹ 2,00,000 |
| Swap Loss         | ₹ 30,000   |

**Note:** अगर Swap Gain होता तो Ram को Transfer नहीं करते।

### (iv) Interest on Outlay of Fund

On 10<sup>th</sup> June bank buy (\$ 2,00,000 at Cover Rate hence Cash Outflows & sell at \$ 2,00,000 at SR)

| Particular   | Amount        |
|--|---------------|
| Cash Outflow (\$ 2,00,000 × 64.2800)                 | ₹ 1,28,56,000 |
| Cash Inflow (\$ 2,00,000 × 63.8000)                  | ₹ 1,27,60,000 |
| Net Cash Outflow                                     | ₹ 96,000      |
| Interest on Net Cash Outlay (₹ 96,000 12% × (3/360)) | ₹ 96          |

**Note:** अगर Net Cash Inflow होता तो उस पर Interest Ram को Transfer नहीं किया जाता।

### (v) New Contract Rate (Available on 13/6)

| Particular           | Amount    |
|----------------------|-----------|
| Selling Rate of Bank | ₹ 64.2500 |
| (+) Margin           | 0.10%     |
| Customer Rate        | ₹ 64.3142 |
| Round off            | ₹ 64.3150 |

### (vi) Total Cost

| Particular           | Amount     |
|----------------------|------------|
| Cancellation Charges | ₹ 1,56,500 |

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|                                  |            |
|----------------------------------|------------|
| (+) Swap Loss                    | ₹ 30,000   |
| ( + ) interest on Outlay of Fund | 96         |
|                                  | ₹ 1,86,596 |

### **Question – 58**

On 10<sup>th</sup> July, an importer entered into a forward contract with bank for US \$ 50,000 due on 10<sup>th</sup> September at an exchange rate of ₹ 66.8400. The bank covered its position in the interbank market at ₹ 66.6800.

How the bank would react if the customer requests on 13<sup>th</sup> September:

- (i) To cancel the contract?
- (ii) To execute the contract?
- (iii) To extend the contract with due date to fall on 10<sup>th</sup> November?

The exchange rates for US\$ in the interbank market were as below:

|                | <b>10<sup>th</sup> September</b> | <b>13<sup>th</sup> September</b> |
|----------------|----------------------------------|----------------------------------|
| Spot           | US\$1=66.1500/1700               | 65.9600/9900                     |
| Spot/September | 66.2800/3200                     | 66.1200/1800                     |
| Spot/October   | 66.4100/4300                     | 66.2500/3300                     |
| Spot/November  | 66.5600/6100                     | 66.4000/4900                     |

Exchange margin was 0.1% on buying and selling.

Interest on outlay of funds was 12% p.a.

You are required to show the calculations to:

- (i) Cancel the Contract,
- (ii) Execute the Contract, and
- (iii) Extend the Contract as above.

### **Solution:**

#### **(i) Cancellation Rate**

| Particular | Amount |
|------------|--------|
|------------|--------|

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|                     |           |
|---------------------|-----------|
| Buying Rate of Bank | ₹ 65.9600 |
| (-) Margin          | ₹ 0.10%   |
| Rounded Off         | ₹ 65.8930 |

### (ii) Cancellation Charge

| Particular              | Amount    |
|-------------------------|-----------|
| Selling Rate of Bank    | ₹ 66.8400 |
| (-) Buying rate of Bank | ₹ 65.8950 |
| Gain to Bank            | 0.945     |
| (x) Contract Size       | \$ 50,000 |
| Cancellation Charges    | ₹ 47250   |

### (iii) Swap Loss

On 10<sup>th</sup> Sep Bank Sold \$ 50,000 at SR & Buy \$ 50,000 at Forward Rate means Sell- Buy Means

| Particular        | Amount    |
|-------------------|-----------|
| Selling Rate (SR) | ₹ 66.1500 |
| Buying Rate       | ₹ 66.3200 |
| Swap Loss         | ₹ 0.17    |
| (x) Contract Size | ₹ 50,000  |
| Swap Loss         | ₹ 8,500   |

### (iv) Interest on Outlay of Fund

On 10<sup>th</sup> Sep

| Particular   | Amount      |
|--|-------------|
| Cash Outflow (Buy\$ at Cover Rate) (\$ 50,000 × 66.68) | ₹ 33,34,000 |
| Cash Inflow (Sell \$ at SR) (\$ 50,000 × ₹ 66.1500)    | ₹ 33,07,500 |
| Net Cash Outlay  | ₹ 26,500    |
| Interest on Outlay of fund (₹ 26,50,012% × 3/360)      | ₹ 26        |

### (v) New FR

| Particular         | Amount    |
|--------------------|-----------|
| Selling Rate (Nov) | ₹ 66.4900 |
| (+) Margin         | 0.1 %     |
|                    | ₹ 66.5565 |
| Rounded Off        | ₹ 66.5565 |

**(I) Cancel the Contract**

| Particular                       | Amount   |
|----------------------------------|----------|
| Total Amount Payable by Customer | ₹ 47,250 |
| Cancellation Charges             | ₹ 8,500  |
| (+) Swap Loss                    | ₹ 26     |
| (+) Interest on Outlay of Fund   |          |

**(II) Execute the Contract**

| Particular   | Amount      |
|--|-------------|
| Total Amount of Cancellation   | ₹ 55,776    |
| (+) Buy \$ 50,000 at SR on 13 <sup>th</sup> Sep<br>(65.9900 + 0.1%) 66.0560<br>(\$ 50,000 × 66.0560) | ₹ 33,02,750 |
|  | ₹ 3,35,826  |

**(III) Extension**

| Particular                                 | Amount     |
|--|------------|
| Total Amount of Cancellation               | ₹ 55,776   |
| Book New Contract for 13 <sup>th</sup> Nov | ₹ 66.55 75 |

**Question – 59**

An import customer booked a forward contract with the bank on 10<sup>th</sup> April for USD 20,000 due on 10<sup>th</sup> June at ₹ 49.4000. The bank covered its position in the market at ₹ 49.2800.

The exchange rate for dollar in the interbank market on 10<sup>th</sup> June and 20<sup>th</sup> June were:

|                                 | 10 <sup>th</sup> June  | 20 <sup>th</sup> June |
|---------------------------------|------------------------|-----------------------|
| Spot                            | USD 1 = ₹ 48.8000/8200 | 48.6800/7200          |
| Spot/ June                      | 48.9200/9500           | 48.8000/8500          |
| Spot/ July                      | 49.0500/0900           | 48.9300/9900          |
| Spot/ August                    | 49.3000/3500           | 49.1800/2500          |
| Spot/ September                 | 49.6000/6600           | 49.4800/5600          |
| Exchange margin is 0.10%        |                        |                       |
| Interest on outlay of funds 12% |                        |                       |

Calculate how the bank will react, if the customer requires on 20<sup>th</sup> June:

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- (i) To cancel the contract.
  - (a) Exchange difference,
  - (b) Swap loss,
  - (c) Interest on outlay of funds and
  - (d) Cancellation charges
- (ii) To Execute the contract.
- (iii) To Extend the contract with due date to fall on 10<sup>th</sup> August.

**(Exam November – 2023)**

### **Solution:**

#### **(i) Cancellation of Contract**

##### **(a) Exchange Difference**

The forward sale contract shall be cancelled at Spot TT Purchase for \$ prevailing on the date of cancellation as follows:

|                               |           |
|-------------------------------|-----------|
| \$/ ₹ Market Buying Rate      | ₹ 48.6800 |
| Less: Exchange Margin @ 0.10% | ₹ 0.0487  |
|                               | ₹ 48.6313 |

Rounded off to ₹ 48.6325

Exchange Difference Payable

|                                  |            |
|----------------------------------|------------|
| Bank sells \$ 20,000 @ ₹ 49.4000 | ₹ 9,88,000 |
| Bank buys \$ 20,000 @ ₹ 48.6325  | ₹ 9,72,650 |
| Amount payable by customer       | ₹ 15,350   |

##### **(b) Swap Loss**

On 10<sup>th</sup> June the bank does a swap sale of \$ at market buying rate of ₹ 48.8000 and forward purchase for June at market selling rate of ₹ 48.9500.

|               |           |
|---------------|-----------|
| Bank buys at  | ₹ 48.9500 |
| Bank sells at | ₹ 48.8000 |

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|                            |          |
|----------------------------|----------|
| Amount payable by customer | ₹ 0.1500 |
|----------------------------|----------|

Swap Loss for \$ 20,000 is = ₹ 3,000

- (c) Interest on Outlay of Funds On 10<sup>th</sup> June, the bank receives delivery under cover contract at ₹ 49.2800 and sell spot at ₹ 48.8000.

|                            |           |
|----------------------------|-----------|
| Bank buys at               | ₹ 49.2800 |
| Bank sells at              | ₹ 48.8000 |
| Amount payable by customer | ₹ 0.4800  |

Outlay for \$ 20,000 is ₹ 9,600

Interest on ₹ 9,600 @ 12% for 10 days      ₹ 31.56 or ₹ 32.00

- (d) **Cancellation Charges**

| Particulars                              | Amount (₹) |
|--|------------|
| Exchange Difference                      | 15,350     |
| Swap Loss                                | 3,000      |
| Interest on Outlay of Funds              | 32.00      |
| Cancellation Charges payable by Customer | 18,382     |

**OR,**

| Particulars                              | Amount (₹) |
|--|------------|
| Exchange Difference                      | 15,350     |
| Swap Loss                                | 3,000      |
| Interest on Outlay of Funds              | 31.56      |
| Cancellation Charges payable by Customer | 18,381.56  |

- (ii) **Execution of Contract**

Cancellation charges of ₹ 18,382 or ₹ 18,381.56 as computed above will be recovered. The contract will be executed at the spot TT selling rate calculated as follows:

|                                      |           |
|--------------------------------------|-----------|
| Dollar/₹ interbank spot selling rate | ₹ 48.7200 |
| Add: exchange margin at 0.10%        | + 0.0487  |
|                                      | ₹ 48.7687 |

- (iii) **Extension of Contract**

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Cancellation charges of ₹ 18,382 or ₹ 18,381.56 as computed above will be recovered.

The contract will be extended at the current rate.

|   |           |
|---|-----------|
| Dollar/₹ market forward selling rate for August | ₹ 49.2500 |
| Add: exchange margin at 0.10%                   | + 0.0492  |
|   | ₹ 49.2992 |

The exchange rate applied for the extended contract is ₹ 49.3000 or ₹ 49.2992.

### **(8) FOREIGN CURRENCY A/C**

#### **Question – 60**

You as a dealer in foreign exchange have the following position in Swiss Francs on 31<sup>st</sup> October, 2009:

|                                     | <b>Swiss Francs</b> |
|-------------------------------------|---------------------|
| Balance in the Nostro A/c Credit    | 1,00,000            |
| Opening Position Overbought         | 50,000              |
| Purchased a bill on Zurich          | 80,000              |
| Sold forward TT                     | 60,000              |
| Forward purchase contract cancelled | 30,000              |
| Remitted by TT                      | 75,000              |
| Draft on Zurich cancelled           | 30,000              |

What steps would you take, if you are required to maintain a credit Balance of Swiss Francs 30,000 in the Nostro A/c and keep as overbought position on Swiss Francs 10,000?

**(SM TYK – 51 & MTP March – 2022)**

#### **Solution:**

#### **Cash Position**

|                          | <b>Cr.</b> | <b>Dr.</b> |
|--------------------------|------------|------------|
| Opening balance credit   | 1,00,000   | ---        |
| TT sales                 | ---        | 75,000     |
|                          | 1,00,000   | 75,000     |
| Closing balance (credit) | ---        | 25,000     |

**Exchange Position**

|                                     | Long     | Short    |
|-------------------------------------|----------|----------|
| Opening balance over brought        | 50,000   | ---      |
| Purchased bill                      | 80,000   | ---      |
| Forward sales                       | ---      | 60,000   |
| Forward purchase contract cancelled | ---      | 30,000   |
| TT sales                            | ---      | 75,000   |
| Draft cancelled                     | 30,000   | ---      |
|                                     | 1,60,000 | 1,65,000 |
| Oversold position                   | 5,000    | ---      |

The bank has to buy spot Swiss Francs 5,000 to increase the balance in NOSTRO A/c Swiss Francs 3,000 this would bring down the oversold position as nil.

Since bank requires overbought position of Swiss Francs 10,000 it has to buy forward Swiss Francs 10,000.

**Question – 61**

ABN-Amro Bank, Amsterdam, wants to purchase ₹ 15 million against US\$ for funding their NOSTRO account with Canara Bank, New Delhi. Assuming the inter-bank, rates of US\$ is ₹ 51.3625/3700, what would be the rate Canara Bank would quote to ABN-Amro Bank? Further, if the deal is struck, what would be the equivalent US\$ amount.

**(SM TYK – 02)**

**Solution:**

\$ Required to buy ₹ 15,000,000

$$\begin{aligned} &= \frac{\text{₹ } 15,000,000}{51.3625} \\ &= \$ 2,92,042 \end{aligned}$$

**Question – 62**

XYZ Bank, Amsterdam, wants to purchase ₹ 25 million against £ for funding their NOSTRO account and they have credited LORO account with Bank of London, London.



Payable = ₹ 3,400 lacs

Buy ₹ 3,400 lacs at SR ₹/₹ = 3.40

$$\frac{₹ 3,400}{3.40} = ₹ 1,000 \text{ lacs}$$

Borrow ₹ 1,000 lacs at 18%. p.a. for 6 months

Cash outflows = 1,000 (1.045)<sup>2</sup> = ₹ 1,092.03 lacs

**Option 2: Loan from Japan**

Loan amount = ₹ 3400 lacs

Borrow ₹ 3,400 lacs at 2 % p.a. for 180 days

Cash outflows (₹ 3,400 lacs × 1.01) = ₹ 3,434 lacs

Buy ₹ 3,434 lacs at 180 day FR ₹/₹ = 3.45

$$\frac{₹ 3,434}{3.45} = ₹ 995.36$$

Commission [Payment आज होता है।]

$$\text{Loan amount} = \frac{₹ 3,400}{3.40} = ₹ 1,000 \text{ lacs}$$

$$\text{Commission} = 1,000 \text{ lacs} \times 1\% = ₹ 10 \text{ lacs}$$

$$\begin{aligned} \text{Commission after 6 month} &= 10 (1.045)^2 \\ &= ₹ 10.92 \text{ lacs} \end{aligned}$$

$$\begin{aligned} \text{Total cash outflows} &= ₹ 995.36 + 10.92 \\ &= 1,006.28 \text{ lacs} \end{aligned}$$

Loan from Japan is better due to lower cash outflows.

**Question – 64**

An Indian company obtains the following quotes (₹/\$)

Spot: 35.90/36.10

3 Months forward rate: 36.00/36.25