FOREX CLASS 23

CLASS WORK COVERAGE

To streamline our learning process, I've categorized the questions we'll tackle in class into four distinct groups:

1. ***Classic:*** *These questions are exactly as presented in your book, providing a familiar foundation.*
2. ***Transformed:*** *Here, we've converted book questions into multiple-choice format to enhance your analytical skills.*
3. ***Adapted:*** *These are similar to book questions but with altered numbers or names, presented as multiple-choice questions for varied practice.*
4. ***Original:*** *These are entirely new questions not found in your book, designed to challenge and expand your understanding.*

This structure will help us navigate through a range of problems, ensuring a comprehensive grasp of the material. Looking forward to our next session!

Q. No	Type	Book	Page No.
65	Classic	CW Q BOOK	26
66	Classic	CW Q BOOK	27
19	Classic	CW Q BOOK	7
67	Classic	CW Q BOOK	27
68	Classic	CW Q BOOK	28
70	Classic	CW Q BOOK	29

Question 65: SSEI CW Book Page No.26

H Ltd. is an Indian firm exporting handicrafts to North America. All the exports are invoiced in US$. The firm is considering the use of money market or forward market to cover the receivable of $50,000 expected to be realized in 3 months time and has the following information from its banker:

	Exchange Rates
Spot	₹ /$ 72.65/73
3-m forward	₹ I$ 72.95/73.40

The borrowing rates in US and India are 6 % and 12% p.a. and the deposit rates are 4% and 9% p.a. respectively.

i. Which option is better for H Ltd. ?

ii. Assume that H Ltd. anticipates the spot exchange rate in 3-months time to be equal to the current 3-months forward rate. After 3-months the spot exchange rate turned out to be ₹/$: 73/73.42. What is the foreign exchange exposure and risk of H Ltd.?

(*Source: ICAI*)

ANSWER:

i. Money market hedge

For money market hedge Indian Firm shall borrow in US$ and then translate them to Indian Rupee and shall make deposit in Indian Rupee.

For receipt of US$ 50,000 in 3 months (@ 1.5% interest) amount required to be borrowed now (US$ 50,000 ÷ 1.015) = US$ 49,261.08

With spot rate of 72.65 the Rupee deposit will be = ₹ 35,78,817.46

Deposit amount will increase over 3 months (@2.25% interest) will be = ₹ 36,59,340.85

Forward market hedge

Sell 3 months' forward contract accordingly, amount receivable after 3 months will be (US$ 50,000 x 72.95)

= ₹ 36,47,500

In this case, more will be received under the money market hedge hence it is better option.

ii. Exchange Exposure to H Ltd.

Expected Realisation as per Forward Rate (US$ 50,000 X 72.95)	₹ 36,47,500
Actual Realisation as per actual Spot Rate (US$ 50,000 X 73.00)	₹ 36,50,000
Gain	₹ 2,500

Question 66: SSEI CW Book Page No.27

Columbus Surgicals Inc. is based in US, has recently imported surgical raw materials from the UK and has been invoiced for £ 480,000, payable in 3 months. It has also exported surgical goods to India and France.

The Indian customer has been invoiced for £ 138,000, payable in 3 months, and the French customer has been invoiced for € 590,000, payable in 4 months.

Current spot and forward rates are as follows:

£ / US$

Spot:	0.9830 – 0.9850
Three months forward:	0.9520 – 0.9545

US$ / €

Spot:	1.8890 – 1.8920
Four months forward:	1.9510 – 1.9540

Current money market rates are as follows:

UK:	10.0% – 12.0% p.a.
France:	14.0% – 16.0% p.a.
USA:	11.5% – 13.0% p.a.

You as Treasury Manager are required to show how the company can hedge its foreign exchange exposure using Forward markets and Money markets hedge and suggest which the best hedging technique is.

(*Source: ICAI)*

ANSWER:

£ Exposure

Since Columbus has a £ receipt (£ 138,000) and payment of (£ 480,000) maturing at the same time i.e. 3 months, it can match them against each other leaving a net liability of £ 342,000 to be hedged.

i. Forward market hedge

Buy 3 months' forward contract accordingly, amount payable after 3 months will be £ 342,000 / 0.9520 = US$ 359,244

ii. Money market hedge

To pay £ after 3 months' Columbus shall requires to borrow in US$ and translate to £ and then deposit in £.

For payment of £ 342,000 in 3 months (@2.5% interest) amount required to be deposited now (£ 342,000 ÷ 1.025) = £ 333,658

With spot rate of 0.9830 the US$ loan needed will be = US$ 339,429

Loan repayable after 3 months (@3.25% interest) will be = US$ 350,460

In this case the money market hedge is a cheaper option.

€ Receipt

Amount to be hedged = € 590,000

i. Forward market hedge

Sell 4 months' forward contract accordingly, amount receivable after 4 months will be (€ 590,000 x1.9510) = US$ 1,151,090

ii. Money market hedge

For money market hedge Columbus shall borrow in € and then translate to US$ and deposit in US$

For receipt of € 590,000 in 4 months (@ 5.33% interest) amount required to be borrowed now (€590,000 ÷ 1.0533) = € 560,144

With spot rate of 1.8890 the US$ deposit will be = US$ 1,058,113

Deposit amount will increase over 4 months (@3.83% interest) will be = US$ 1,098,639

In this case, more will be received in US$ under the forward hedge.

PART I: CURRENCY BASICS

Topic 5 FORWARD RATE - TOOL FOR SPECULATION AS WELL AS HEDGING

Question 19: SSEI CW Book Page No.7

ABC Ltd. of UK has exported goods worth Can $ 5,00,000 receivable in 6 months. The exporter wants to hedge the receipt in the forward market. The following information is available:

Spot Exchange Rate	Can $ 2.5/£
Interest Rate in UK	12%
Interest Rate In Canada	15%

The forward rates truly reflect the interest rates differential. Find out the gain/loss to UK exporter if Can $ spot rates (i) declines 2%, (ii) gains 4% or (iii) remains unchanged over next 6 months.

(*Source: ICAI*)

ANSWER:

$$\text{Forward Rate} = \frac{2.50\,(1 + 0.075)}{(1 + 0.060)} = \text{Can\$ } 2.535/£$$

i. If spot rate decline by 2%

Spot Rate = Can$ 2.50 x 1.02 = Can$ 2.55/£

	£
£ receipt as per Forward Rate (Can $ 5,00,000/ Can$ 2.535)	1,97,239
£ receipt as per Spot Rate (Can $ 5,00,000/ Can$ 2.55)	1,96,078
Gain due to forward contract	1,161

ii. If spot rate gains by 4%

Spot Rate = Can$ 2.50 x 0.96 = Can$ 2.40/£

	£
£ receipt as per Forward Rate (Can $ 5,00,000/ Can$ 2.535)	1,97,239
£ receipt as per Spot Rate (Can $ 5,00,000/ Can$ 2.40)	2,08,333
Loss due to forward contract	11,094

iii. If spot rate remains unchanged

	£
£ receipt as per Forward Rate (Can $ 5,00,000/ Can$ 2.535)	1,97,239
£ receipt as per Spot Rate (Can $ 5,00,000/ Can$ 2.50)	2,00,000
Loss due to forward contract	2,761

PART IV: INTERNATIONAL PARITY CONDITIONS

Topic 22 LEADING AND LAGGING

Question 67: SSEI CW Book Page No. 27

XYZ Ltd. has imported goods to the extent of US$ 8 Million. The payment terms are as under:

a. 1% discount if full amount is paid immediately; or

b. 60 days interest free credit. However, in case of a further delay up to 30 days, interest at the rate of 8% p.a. will be charged for additional days after 60 days. M/s XYZ Ltd. has ₹ 25 Lakh available and for remaining it has an offer from bank for a loan up to 90 days @ 9.0% p.a.

The quotes for foreign exchange are as follows:

Spot Rate INR/ US$ (buying)	₹ 66.98
60 days Forward Rate INR/ US$ (buying)	₹ 67.16
90 days Forward Rate INR/ US$ (buying)	₹ 68.03

Advise which one of the following options would be better for XYZ Ltd.

i. Pay immediately after utilizing cash available and for balance amount take 90 days loan from bank.

ii. Pay the supplier on 60th day and avail bank's loan (after utilizing cash) for 30 days.

iii. Avail supplier offer of 90 days credit and utilize cash available.

Further presume that the cash available with XYZ Ltd. will fetch a return of 4% p.a. in India till it is utilized.

Assume year has 360 days. Ignore Taxation.

Compute your working upto four decimals and cash flows in Crore.

(Source: ICAI)

ANSWER:

To evaluate which option would be better we shall compute the outflow under each option as follows:

i. Pay Immediately availing discount

Particulars		
Spot Rate		₹ 66.98
Amount required in US$	[US$ 8 Million (1 – 0.01)]	US$ 7.92 Million
Amount required in ₹	[₹ 66.98 x US$ 7.92 Million]	₹ 53.0482 Crore
Cash Available		₹ 0.2500 Crore
Loan required		₹ 52.7982 Crore
Interest for 90 days @ 9%		₹ 1.1880 Crore
Total Outflow		₹ 53.9862 Crore

ii. Pay the supplier on 60th day and avail bank's loan (after utilizing cash) for 30 days.

Particulars		
Applicable Forward Rate		₹ 67.16
Amount required in	[₹ 67.16 x US$ 8 Million]	₹ 53.7280 Crore
Loan required	[₹ 53.7280 Crore – ₹ 0.25 Crore]	₹ 53.4780 Crore
Interest for 30 days @ 9%		₹ 0.4011 Crore
		₹ 53.8791 Crore
Interest earned on Cash for 60 days @ 4%		₹ 0.0017 Crore
Total Outflow		₹ 53.8774 Crore

iii. Avail supplier offer of 90 days credit and utilize cash available

Particulars		
Amount Payable		US$ 8 Million
Interest for 30 days @ 8%		US$ 0.0533 Million
Amount required in ₹		US$ 8.0533 Million
Applicable Forward Rate		₹ 68.03
Amount required in ₹	[₹ 68.03 x US$ 8.0533 Million]	₹ 54.7866 Crore
Cash Available		₹ 0.2500 Crore
Interest earned on Cash for 90 days @ 4%		₹ 0.0025 Crore
Total Outflow		₹ 54.5341 Crore

Decision: Cash outflow is least in case of Option (ii) same should be opted for.

Question 68: SSEI CW Book Page No. 28

DEF Ltd. has imported goods to the extent of US$ 1 crore. The payment terms are 60 days interest-free credit. For additional credit of 30 days, interest at the rate of 7.75% p.a. will be charged.

The banker of DEF Ltd. has offered a 30 days loan at the rate of 9.5% p.a. Further their quote for the foreign exchange is as follows:

Spot rate INR/US$	₹ 75.50
60 days forward rate INR/US$	₹ 76.15
90 days forward rate INR/US$	₹ 76.45

Advice which one of the following options would be better for DEF Ltd.

i. Pay the supplier on 60th day and avail bank loan for 30 days.
ii. Avail the supplier's offer of 90 days credit.

Note: Consider 360 days a year and calculation to be in crore rounding off upto 4 decimal point for INR and 5 decimal points for USD.

(*Source: ICAI*)

ANSWER:

i. Pay the supplier in 60 days

If the payment is made to supplier in 60 days the applicable forward rate shall be ₹ 76.15 for 1 USD

Payment Due	USD 1 crore
Outflow in Rupees (USD 1 crore × ₹ 76.15)	₹ 76.1500 crore
Add: Interest on loan for 30 days @ 9.5% p.a.	₹ 0.6029 crore
Total Outflow in ₹	₹ 76.7529 crore

ii. Availing supplier's offer of 90 days credit

Amount Payable	USD 1.00000 crore
Add: Interest on credit period for 30 days@7.75% p.a.	USD 0.00646 crore
Total Outflow in USD	USD 1.00646 crore
Applicable forward rate for 1 USD	₹ 76.45
Total Outflow in ₹ (USD 1.00646 crore ×₹ 76.45)	₹ 76.9439 crore

Advice: Since cash outflow is least under Option 1 it is better to avail loan from bank .

Question 70: SSEI CW Book Page No. 29

BC Export Co are holding an Export bill in United States Dollar (USD) 1,00,000 due 60 days hence. Rate at which deal was finalized @ Rs.47.50 per USD. The Company is worried about the fluctuating exchange rate. The Firm's Bankers have agreed to make advance against the bill after deduction of interest 9% per annum and also quoted a 60-day forward rate of Rs.48.10. The cost of capital for the exporter is 15% p.a. Advise whether the exporter will agree to the banker's offer.

(Source: ICAI)

ANSWER:

BY SANJAY SARAF SIR

Alternative 1: Bill Discounting

Value of Export in INR	47,50,000
Less: Interest i.e. Discount @ 9% p.a. for 60 days	71,250
Net amount to be received	46,78,750
Add: Cost of fund saved @ 15% p.a. for 60 days	1,16,969
	47,95,719

Alternative 2: Forward Cover

Inflow after 60 days 1,00,000 × 48.1= 48,10,000

Alternative 1 is better. Firm should not accept banks offer.

BY ICAI

	Rs.
Value of the export in INR	47,50,000
Interest @ 1.5% for 60 days	71,250
Net Amount to be received	46,78,750
Cost of the fund @ 15% p.a. for 2 months	1,42,362
Net Saving (cost of fund – interest)	71,112
Difference to be paid after 60 days at forward rate (48.10 – 47.50) x 1,00,000	60,000

Hence the exporter should agree to the offer of his banker.