M T W T F S S

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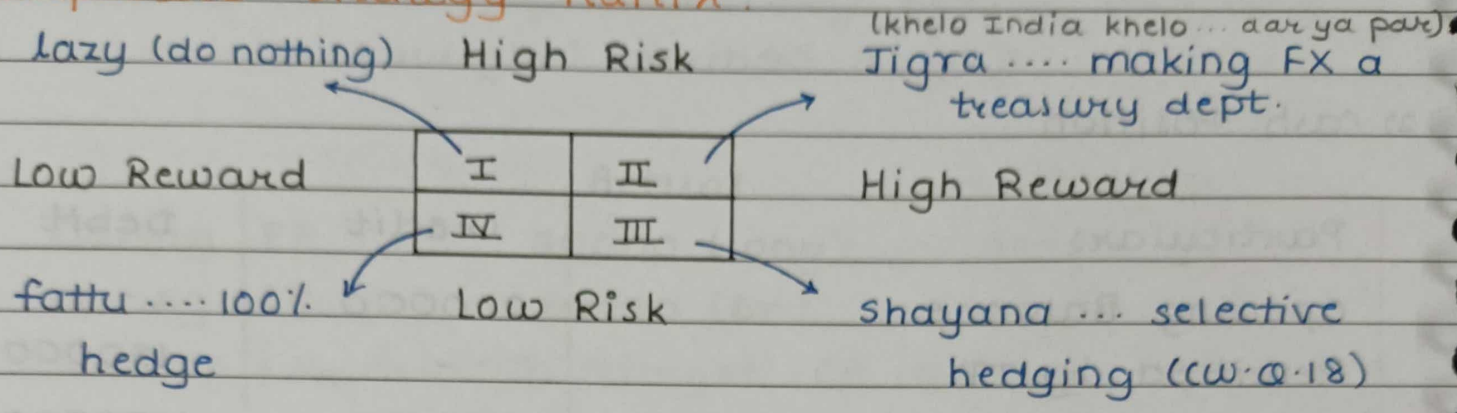
* Part 3 : FX Exposure & Risk

1) Exposure strategy Matrix :



Q·38	pg
CW·15	

Strategy 1 : Lazy → High Risk, Low Reward.
Strategy 2 : Sayana → High Reward, Low Risk.
Strategy 3 : Jigra → High Risk, High Reward.
Strategy 4 : Fattu → Low Risk, Low Reward.

2) Types of FX Exposure :

- **Real**
  - **Direct**
    Transaction Exposure.
    Eg. $5000 receivable in 3 months.
  - **Indirect**
    Economic or Operating exposure.
    Eg. Becker vs. SSEI
    My Vidya competition.
- **Notional**
  Accounting or Translation Risk.
  It is notional bcoz it does not involve any cash flow.
  Eg. Indian Co. having subsidiary in Japan & Hong Kong → need to be translated into ₹

HW · Q·25) pg·11 → Not to be done now → Theory Q.
Self practice → Extra Q·1) HW. soln pg. 59

→ Sums on Transaction Exposure :-

Given FC payable / receivable in future.

Given S_0 ① → S_T : Type 1 sum
② → $E(S_T)$: Type 2 sum
③ → Forward & S_T Imp : Type 3 sum

Calculate Gain / Loss due to transaction exposure.

Type 2 sum :- S_0 & $E(S_T)$ Part-2

Q·40	pg
cw · 16	

Step 1 : Profit based on existing spot rate

Revenue = 200 × 200 × 65
= ₹2600000

Import cost = 200 × 6000 × 66/115
= ₹688696

Labour cost & VOH = (1300 + 650) × 200
= ₹390000

Revenue	2600000
(-) Import cost	(688696)
(-) Labour cost & VOH	(390000)
	₹1521304

Step 2 : Profit as per expected spot rate

Revenue (200 × 200 × 68·90)	2756000
(-) Import cost (200 × 6000 × 69·25/105)	(791429)
(-) Labour & VOH (1300 + 650) × 200	(390000)
	₹1574571

∴ Increase in profit due to txn exposure
= 1521304 − 1574571 = ₹53267

Self Note : $ is receivable ∴ hume sale krna h $ ∴ (₹/$) bid
¥ is payable ∴ hume ¥ kharidna h ∴ (₹/¥) ask.

Q] Calculate the no. of units that need to be sold to maintain profits at earlier / current level despite change in exchange

rate ?

$(x \times 200 \times 68.9) - (x \times 6000 \times 69.25/105) - x \times 1950 = 1521304$

$\therefore x = 193$ units.

Self practice : Extra Q.2] · HW · soln pg. 61

Q.39	Pg
CW. 15	

Type 2 sum : So & E(ST)

S.G $ 10000000 receivable → SGD ↓ ka dar

€ 4000000 payable → € ↑ ka dar

(a)

Step 1 : Profit based on existing spot rate :

Revenue	(20000 × 500 × 33)	330000000
(-) Import cost	(20000 × 200 × 56.56)	226240000
(-) Mfg. cost	(20000 × 1250)	25000000
(-) Fixed cost		10000000
		₹ 68760000

Step 2 : Profit based on expected spot rate on 30/6/10 :

Revenue	(20000 × 500 × 32.15)	321500000
(-) Import cost	(20000 × 200 × 57.32)	229280000
(-) Mfg. cost	(20000 × 1250)	25000000
(-) Fixed cost		10000000
		₹ 57220000

$\therefore$ Decrease in Profit = ₹ 11540000

(b) $(x \times 500 \times 32.15) \div (x \times 200 \times 57.32) - (x \times 1250) - 10000000$

$= 68760000$

$\therefore x = 23434$ units

$\therefore$ Co. should increase its existing supply from 20000 to 23434 units to maintain current profit level of 68760000.

~~Self practice : HW · Q.26] pg. 11~~

Self practice : Extra Q.3] HW · soln · pg. 62

Q·41	pg
CW·16	

Type 2 sum : S_0 & $E(S_T)$

French franc inflow based on current spot rate

= \$124000 × \$5·70/FFR

= FFR 706800

Case 1 : FFR strengthen 5%.

E(S) = 5·7 × 0·95 = 5·415

∴ FFR inflow = \$124000 × \$5·415/FFR

= FFR 671460

∴ Expected loss = 706800 - 671460 = FFR 35340

Case 2 : FFR weaken by 5%.

E(S) = 5·7 × 1·05 = FFR 5·985/\$

∴ FFR inflow = \$124000 × FFR 5·985/\$

= FFR 742140

∴ Expected Gain = 742140 - 706800 = FFR 35340

Self practice : Extra Q·1] HW·soln. pg·61

⇒ V·V·V Important conceptual sum (Type 3 - F & S_T) :-

Technically exposure / risk refers to change in profit/cash flow due to unanticipated change in exchange rate. Usually Forward rate is considered to be anticipated. So, we will focus on the deviation blw Forward (F) & actual spot rate (S_T)

Q·65	pg
CW·26	

(i) will be done later

(ii) we know that FX exposure & risk refers to G/L resulting from unanticipated change in ex·rate.

We have \$50000 receivable in 3 months time.

S_0 = 72·65

3m F = 72·95 (anticipated)

Actual spot rate (S_T) after 3m = 73·00

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So, there is an unanticipated appreciation of ₹0.05/$ (73.00 - 72.95)

Gain = $ 50000 × ₹0.05/$ = ₹2500

Self practice :- Extra Q.2) HW. soln pg. 60