TREATMENT OF WITHHOLDING TAX RATE UNDER FOREIGN EXCHANGE MARKET

QUESTION NO. 24A ***(Exam Question)(4 Marks)*** A USA based company is planning to set up a software development unit in India.Software developed at the Indian unit will be bought back by the US parent at a transfer or notional or fair arm's length price assessed price of US $10 millions. The unit will remain in India for one year; the software is expected to get developed within this time frame. The US based company will be subject to corporate tax of 30 per cent and a withholding tax of 10 per cent. The software developed will be sold in the US market for US $ 12.0 millions.

Other estimates are as follows:

Rent for fully furnished unit with necessary hardware in India	₹15,00,000
Man power cost (80 software professional will be working for 10 hours each day)	₹400 per man hour
Administrative and other costs	₹12,00,000

The rupee-dollar rate is ₹ 48 / $. **Advise** the US company on financial viability of the project.

Solution:

Proforma of profit and loss account of the Indian software development unit:		₹
Revenue [100,00,000 x 48]		48,00,00,000
Less: Costs :		
Rent	15,00,000	
Manpower (₹ 400 x 80 x 10 x 365)	11,68,00,000	
Administrative and other costs	12,00,000	11,95,00,000
Earning before tax		36,05,00,000
Less: Tax @ 30 %		10,81,50,000
Earning after tax		25,23,50,000
Less: Withholding tax (TDS) @ 10 %		2,52,35,000
Repatriation amount (in rupees)		22,71,15,000
Repatriation amount (in dollars)		**$ 4.7 million**

Conclusion: The cost of developing software in India for the US based company is $5.3 million. [10 - 4.7] . As the USA based Company is expected to sell the software in the US at $12.0 million, it is advised to develop the software in India.

Alternatively, if it assumed that first the withholding tax @ 10% is being paid and then its credit is taken in the payment of corporate tax then solution will be as follows:

Proforma of profit and loss account of the Indian software development unit:		₹
Revenue [100,00,000 x 48]		48,00,00,000
Less: Costs:		
Rent		15,00,000
Manpower (₹ 400 x 80 x 10 x 365)	11,68,00,000	
Administrative and other costs	12,00,000	11,95,00,000
Earning before tax		36,05,00,000
Less: Withholding Tax		3,60,50,000
Earning after Withholding tax @ 10 %		32,44,50,000
Less: Corporation Tax net of Withholding Tax		7,21,00,000
Repatriation amount (in rupees)		25,23,50,000
Repatriation amount (in dollars)		**$ 5,257,292**

Conclusion: The cost of developing software in India for the US based company is $4.7 million. As the USA based

Company is expected to sell the software in the US at $12.0 million, it is advised to develop the software in India.

Alternatively, if it assumed that Since foreign subsidiary has paid taxes it will not pay withholding taxes then solution will be as under:

	₹	₹
Revenue		48,00,00,000
Less: Costs:		
Rent	15,00,000	
Manpower (₹ 400 x 80 x 10 x 365)	11,68,00,000	
Administrative and other costs	12,00,000	11,95,00,000
Earning before tax		36,05,00,000
Less: Tax		10,81,50,000
Earning after tax		25,23,50,000
Repatriation amount (in rupees)		25,23,50,000
Repatriation amount (in dollars)		**$ 5,257,292**

Advise: The cost of development software in India for the US based company is $4.743 million. As the USA based Company is expected to sell the software in the US at $12.0 million, it is advised to develop the software in India.

EXPOSURE MANAGEMENT STRATEGIES MATRIX

QUESTION NO.55 Place the following strategies by different persons in the **Exposure Management Strategies Matrix.**

Strategy 1: Kuljeet a wholesaler of imported items imports toys from China to sell them in the domestic market to retailers. Being a sole trader, he is always so much involved in the promotion of his trade in domestic market and negotiation with foreign supplier that he never pays attention to hedge his payable in foreign currency and leaves his position unhedged.

Strategy 2: Moni, is in the business of exporting and importing brasswares to USA and European countries. In order to capture the market he invoices the customers in their home currency. Moni enters into forward contracts to sell the foreign exchange only if he expects some profit out of it other-wise he leaves his position open.

Strategy 3: TSC Ltd. is in the business of software development. The company has both receivables and payables in foreign currency. The Treasury Manager of TSC Ltd. not only enters into forward contracts to hedge the exposure but carries out cancellation and extension of forward contracts on regular basis to earn profit out of the same. As a result management has started looking Treasury Department as Profit Centre.

Strategy 4: DNB Publishers Ltd. in addition to publishing books are also in the business of importing and exporting of books. As a matter of policy the moment company invoices the customer or receives invoice from the supplier immediately covers its position in the Forward or Future markets and hence never leave the exposure open even for a single day.

Solution :

Strategy 1: This strategy is covered by **High Risk: Low Reward** category and worst as it leaves all exposures unhedged. Although this strategy does not involve any time and effort, it carries high risk.

Strategy 2: This strategy covers **Low Risk: Reasonable reward** category as the exposure is covered wherever there is anticipated profit otherwise it is left.

Strategy 3: This strategy is covered by **High Risk: High Reward** category as to earn profit, cancellations and extensions are carried out. Although this strategy leads to high gain but it is also accompanied by high risk.

Strategy 4: This strategy is covered by **Low Risk: Low Reward** category as company plays a very safe game.

Diagrammatically all these strategies can be depicted as follows:

NON- DELIVERABLE FORWARD (NDF)

QUESTION NO.75 On 1st February 2020, XYZ Ltd. a laptop manufacturer imported a particular type of Memory Chips from SKH Semiconductor of South Korea. The payment is due in one month from the date of Invoice, amounting to 1190 Million South Korean Won (SKW). **Following Spot Exchange Rates (1st February) are quoted in two different markets:** USD/ INR 75.00/ 75.50 **in Mumbai** ; USD/ SKW 1190.00/ 1190.75 **in New York**
Since hedging of Foreign Exchange Risk was part of company's strategic policy and no contract for hedging in SKW was available at any in-shore market, it approached an off-shore Non- Deliverable Forward (NDF) Market for hedging the same risk.
In NDF Market a dealer quoted one-month USD/ SKW at 1190.00/1190.50 for notional amount of USD 10,00,000 to be settled at reference rate declared by Bank of Korea.
After 1 month (1st March 2020) the dealer agreed for SKW 1185/ USD as rate for settlement and **on the same day the Spot Rates in the above markets were as follows:**
USD/ INR 75.50/ 75.75 **in Mumbai** **USD/ SKW** 1188.00/ 1188.50 **in New York**
Analyze the position of company under each of the following cases, comparing with Spot Position of 1st February:
(i) Do Nothing. **(ii)**Opting for NDF Contract.
Note: Both Rs./SKW Rate and final payment (to be computed in Rs. Lakh) to be rounded off upto 4 decimal points.
Solution:
(i)Do Nothing: We shall compute the cross rates in Spot Market on both days and shall compare the amount payable in INR on these two days.
On 1st February 2020
Rupee – Dollar selling rate = Rs. 75.50
Dollar – SKW = SKW 1190.00
Rupee – SKW cross rate = Rs. 75.50 / 1190.00 = Rs. 0.0634
Amount payable to Importer as per above rate (1190 Million x Rs. 0.0634) Rs. 754.4600 Lakh
On 1st March 2020
Rupee – Dollar selling rate = Rs. 75.75
Dollar – SKW = SKW 1188.00
Rupee – SKW cross rate = Rs. 75.75 / 1188.00 = Rs. 0.0638
Amount payable to Importer as per above rate (1190 Million x Rs. 0.0638) Rs. 759.2200 Lakh Thus, Exchange Rate Loss = (Rs. 759.2200 Lakh - Rs. 754.4600 Lakh) Rs. 4.7600 Lakh
(ii)Hedging in NDF : Since company needs SKW after one month it will take long position in SKW at quoted rate of SKW 1190/ USD and after one-month it will reverse its position at fixing rate of SKW 1185/USD. **The profit/ loss position will be as follows:**

Buy SKW 1190 Million and sell USD (1190 Million/ 1190)	USD 1,000,000
Sell SKW 1190 Million and buy USD at Fixing Rate (1190 Million/1185)	USD 1,004,219

Profit	USD 4,219

Final Position

Amount Payable in Spot Market (as computed earlier)	Rs. 759.2200 Lakh
Less: Profit form NDF Market USD 4219 x 75.50	Rs. 3.1853 Lakh
	Rs. 756.0347 Lakh

Thus, Exchange Rate Loss = (Rs.756.0347 Lakh - Rs.754.4600 Lakh) Rs. 1.5747 Lakh

Decision: Since Exchange Loss is less in case of NDF same can be opted for.

QUESTION NO.5 A US investor chose to invest in Sensex for a period of one year. The relevant information is given below.

Size of investment ($)	20,00,000	Spot rate 1year ago (₹/$)	42.50/60
Spot rate now (₹/$)	43.85/90	Sensex 1 year ago	3,256
Senex now	3,765	Inflation in US	5%
Inflation in India	9%		

(i) Compute the nominal rate of return to the US investor.

(ii) Compute the real depreciation /appreciation of Rupee.

(iii) What should be the exchange rate if relevant purchasing power parity holds good?

(iv) What will be the real return to an Indian investor in Sensex?

Solution:

(i) Nominal rate of return to the US investor

Size of investment ($)	20,00,000
Size of investment (₹) ($ 20,00,000 x 42.50)	8,50,00,000
Sensex at T_0	3,256
No. of units of Sensex that can be purchased at T_0 (₹ 8,50,00,000/3,256)	26,105
Sensex at T_1	3,765
Sale of Sensex (26,105 x 3,765)	9,82,85,325
US$ at T_1	₹ 43.90
Equivalent Amount in US$	22,38,846
Gain in US$	2,38,846
Nominal rate to US investor	11.94%

(ii) Real Appreciation/Depreciation of Rupee

Real Exchange Rate (Buying) $= 43.85\frac{(1+0.05)}{(1+0.9)} = 42.24$; **Real Appreciation of ₹** $= \frac{42.50-42.24}{42.50} \times 100 = 0.61\%$

(iii) Exchange rate if relevant purchasing power parity holds

Buying Rate $= 42.50\frac{(1+0.09)}{(1+0.05)} = 44.12$; **Selling rate** $= 42.60\ \frac{(1+0.09)}{(1+0.05)} = 44.22$

Exchange rate = 44.12/44.22

(iv) Real return to Indian Investor in Sensex

Nominal Return $= \frac{3,765-3,256}{3,256} \times 100 = 15.63\%$; **Real return** $= \frac{(1.1563)}{(1.09)} - 1 = 0.0608$ or 6.08%

QUESTION NO.8 XP Pharma Ltd., has acquired an export order for ₹ 10 million for formulations to a European

company. The Company has also planned to import bulk drugs worth ₹ 5 million from a company in UK. The proceeds of exports will be realized in 3 months from now and the payments for imports will be due after 6 months from now. The invoicing of these exports and imports can be done in any currency i.e. Dollar, Euro or Pounds sterling at company's choice. The following market quotes are available.

	Spot Rate	Annualised Premium
₹ / $	67.10 / 67.20	$ - 7%
₹ / Euro	63.15 / 63.20	Euro - 6%
₹ / Pound	88.65 / 88.75	Pound - 5%

Advice XP Pharma Ltd. about invoicing in which currency. (Calculation should be upto three decimal places).

Solution:

(i) Proceeds of Exports in INR = ₹ 10 Million

Position of Inflow under three currencies will be as follows:

Currency	Invoice at Spot Rate	Expected Rate after 3-months	Conversion in INR after 3-months
$	₹100,00,000/₹67.10=$149031.297	₹67.10(1+0.07/4)=₹68.27	₹68.27x$149031.297=₹1,01,74,367
€	₹100,00,000/₹63.15=€1,58,353.127	₹63.15(1+0.06/4)=₹64.10	₹64.10x€1,58,353.127=₹ 1,01,50,435
£	₹100,00,000/₹88.65=£1,12,803.158	₹88.65(1+0.05/4)=₹89.76	₹89.76x £1,12,803.158=₹ 1,01,25,211

(ii) Payment of Import in INR = ₹ 5 Million

Position of outflow under three currencies will be as follows:

Currency	Invoice at Spot Rate	Expected Rate after 6-months	Conversion in INR after 6-months
$	₹50,00,000 / ₹67.20 = $74404.762	₹67.20 (1 + 0.07/2) = ₹69.55	₹69.55 x $74404.762 = ₹51,74,851
€	₹50,00,000 / ₹63.20 = €79,113.924	₹63.20 (1 + 0.06/2) = ₹ 65.10	₹65.10 x €79,113.924 = ₹51,50,316
£	₹50,00,000 / ₹88.75 = £56,338.028	₹88.75 (1 + 0.05/2) = ₹90.97	₹90.97 x £56,338.028 = ₹51,25,070

Advice: Since cash inflow is highest (1,01,74,367) in case of $ hence invoicing for Export should be in $. However, cash outflow is least (51,25,070) in case of £ the invoicing for import should be in £.