1. Techinfo Ltd. Has imported specialty computer equipments worth US$ 250,000 from a company in US. The amount due for the imports is payable after 3 months. Mr. Garg, the treasury manager of Techinfo has collected the following market quotes:

**Exchange rates:**

| | | |
|---|---|---|
| Sport | Rs./$ | 47.15/47.30 |
| Forward | 3 month | 55/60 |

**Interest rates(p.a.):**

| | |
|---|---|
| Dollar(3 months) | 6.00%/6.50% |
| Rupee(3 months) | 10.00%/11.00% |

The supplier of the equipments has offered a discount of $5000 if the payable is settled at the current date. Mr.Garg is reviewing the following alternatives to settle the payable:

**(i)** Cover through forward market.

**(ii)** Cover through money market.

**(iii)** Avail the cash discount of $5000 by taking a bridge loan at 9% p.a. from a lending institution.

You are required to suggest Mr. Garg the best alternative to settle the payable.

2. Wenden Co is a Dutch-based company which has the following expected transactions

| | |
|---|---|
| **One month : Expected receipt of** | **£2,40,000** |
| **One month : Expected payment of** | £1,40,000 |
| **Three months : Expected receipts of** | £3,00,000 |

The finance manager has collected the following information :

| | |
|---|---|
| **Spot rate (£ per €) :** | **1.7820 ± 0.0002** |
| **One month forward rate (£ per €) :** | 1.7829 ± 0.0003 |
| **Three months forward rate (£ per €) :** | 1.7846 ± 0.0004 |

Money market rates for Wenden Co :

| | Borrowing | Deposit |
|---|---|---|
| **One year Euro interest rate :** | 4.9% | 4.6 |
| **One year Sterling interest rate :** | 5.4% | 5.1 |

Assume that it is now 1 April

**Required :**

**(a)** Calculate the expected Euro receipts in one month and in three months using the forward market.

**(b)** Calculate the expected Euro receipts in three months using a money-market hedge and recommend whether a forward market hedge or a money market hedge should be used.

**3.** Consider K ltd a supplier of jute goods to retailers in the UK and other Western European countries. The company is considering entering into a joint venture with a manufacturer in SWEDEN.

The two companies will each own 50 per cent of the limited liability company JV and will share profits equally. £ 600,000 of the initial capital is being provided by K ltd. and the equivalent in SWEDENian real (SKR) is being provided by the foreign partner. The managers of the joint venture expect the following net operating cash flows, which are in nominal terms:

| | SKR '000 | Forward Rates of exchange to the £ Sterling |
|---|---|---|
| **Year 1** | 6,250 | 7 |
| **Year 2** | 5,500 | 14 |
| **Year 3** | 11,000 | 22 |

For tax reasons JV the company to be formed specifically for the joint venture, will be registered in SWEDEN. Assuming you are financial adviser retained by K Limited to advise on the proposed joint venture.

**(i)** Calculate the NPV of the project under the two assumptions explained below. Use a discount rate of 20per cent for both assumptions.

Assumption 1 : SWEDEN has exchange controls which prohibit the payment of dividends above 30 per cent of the annual cash flows for the first three years of the project. The accumulated balance can be repatriated at the end of the third year.

Assumption 2 : SWEDENian government is considering removing exchange controls and restriction on repatriation of profits. If this happens all cash flows will be distributed as dividends to the partner companies at the end of each year.

**(ii)** Comment briefly on whether or not the joint venture should proceed based solely on these calculations.

**4.** An Indian company is planning to set up a subsidiary in South Africa. The initial project cost is estimated to be ZAR 500 million; Working Capital required is estimated to be ZAR 30 million. The finance manager of company estimated the data as follows :

| | |
|---|---|
| Variable Cost of Production (Per Unit | ZAR 5.20 |
| Sold) | ZAR 4 million |
| Fixed cost per annum | ZAR 15 |
| Selling Price | 6 million units |
| Production capacity | 5 years |
| Expected life of Plant | Straight Line Method |
| Method of Depreciation | (SLM) |
| Salvage Value at the end of 5 years | NIL |

The subsidiary of the Indian company is subject to 40% corporate tax rate in the South Africa and the required rate of return of such types of project is 15%. The current exchange rate is ₹ 5/ZAR and the rupee is expected to depreciate by 3% per annum for next five years.

The subsidiary company shall be allowed to repatriate 60% of the CFAT every year along with the accumulated arrears of blocked funds at the end of 5 years, the withholding taxes are 10%. The blocked fund will be invested in the South African money market by the subsidiary, earning 6% (free of taxes) per year.

Determine the feasibility of having a subsidiary company in the South Africa, assuming no tax liability in India on earnings received by the parent company from the South Africa subsidiary.

**5.** OJ Ltd. Of UK is supplier of leather goods to retails in the UK and other Western European countries. The company is considering entering into a joint venture with a manufacturer in South America. The two companies will each own 50% of the limited liability company JV(SA) & will share profits equally. £450,000 of the initial capital is being provided by OJ Ltd. and the equivalent in South American collars (SA$) is being provided by the foreign partner. The managers of the joint venture expect following cash flows :

| **SA$ 000** | **Forward rates of exchange to the £ Sterling [SA$/£]** |
|---|---|
| **Year 1** | 4,250 10 |
| **Year 2** | 6,500 15 |
| **Year 3** | 8,350 21 |

For tax reasons JV(SA) the company to be formed for the joint venture, will be registered in South America. Ignore taxation in your calculations

**Requirements :**

**(a)** Assume you are financial adviser retained by OJ Limited to advise on the proposed joint venture.

**i.** Calculate NPV of the project under the two assumptions explained below. Use a discount rate of 16% for both assumptions.

Assumption 1 : The South American country has exchange controls which prohibit the payment of cash flows above 50% of the annual cash flows for the first three years of the project. The accumulated balance can be repatriated at the end of the third year.

Assumption 2 : The government of the South American country is considering removing exchange controls and restriction on repatriation of profits. If this happens all cash flows will be distributed to the partner companies at the end of each year.

**ii.** Comment briefly on whether or not the joint venture should proceed based on these calculations.

**6.** Following are the covered after-tax lending and borrowing rates for three units of a Multinational Corporation located in the Japan, Malaysia and India.

| | Lending (%) | Borrowing (%) |
|---|---|---|
| **Japan** | 6.0 | 8.0 |
| **Malaysia** | 6.5 | 7.0 |
| **India** | 7.6 | 8.4 |

Currently, the Malaysia and India units owe ¥140 million and ¥90 million, respectively to their Japanese parent. The Malaysia unit also has ¥45 million in receivables from its India affiliate. The timing of these payments can be changed by up to 180 days in either direction. If Japanese Parent is in deficit of funds, while both the Malaysia and India subsidiaries have surplus cash available, you are required to :

**(a)** Determine the MNC's optimal leading and lagging strategies.

**(b)** Calculate the net profit impact of these adjustments.

**7.** A multinational company has surplus fund of £ 300,000 in UK for 90 days. The company is planning to invest the fund for 90 days. The company is considering to invest the fund in 90-day deposit in banks or invest in CDs for 90 days. The interest rate offered by a British bank on 90-day deposit is 6.5%. The interest rate on CD is 10%, but the minimum size of investment in CD is £ 500,000 and in multiples of £ 500,000. The overdraft charges applicable to the company is 14%. You are required to

**a.** Find out the break-even size of investment in CD and suggest the bank whether to invest in CD or not.

**b.** Compare the gain/loss if the company have decided to invest in a CD against the investment in bank deposits.

**8.** A multinational company based in Germany has its subsidiaries in UK, Singapore, Hongkong and Japan. The cash position of these subsidiaries for the month of February 2003 is as follows:

| | |
|---|---|
| UK. | Cash surplus of £1 million |
| Singapore | Cash deficit of S$1 million |
| Hongkong | Cash deficit of HK$2 million |
| Japan | Cash surplus of JPY 50 million |

The current exchange rates are given below:

| | |
|---|---|
| Euro/£ | 1.5025 |
| S$/Euro | 1.8910 |
| Euro/HK$ | 0.1190 |
| JPY/Euro | 130 |

You are required to determine the cash requirement of the MNC adopts:

**(i)** Centralized cash management.

**(ii)** Decentralized cash management.

**9.** True view Ltd. a group of companies controlled from the United Kingdom includes subsidiaries in India, Malaysia and the United States. As per the CFO's forecast that , at the end of the June 2010 the position of inter-company is as follows:

**i.** The Indian subsidiary will be owned or will receive ₹1,44,38,100 by the Malaysian subsidiary and will to owe or will pay the US subsidiary US$ 1,06,007.

**ii.** The Malaysian subsidiary will be owed or will receive MYR 14,43,800 by the US subsidiary and will owe it or will pay US$ 80,000

Suppose you are head of central department of the group and you are required to net off inter-company balances as far as possible and to issue instructions for settlement of the net balance. For this purpose, the relevant exchange rates may be assumed in term of £1 are US$ 1.415; MYR 10.215; ₹68.10. What are the net payments to be made in respect of the above balances?

**10.** Pacific Leather Goods Ltd. an Indian manufacturer exports leather goods to USA. The company is exporting 5000 units at a price of $60. The company has imported some specialty chemicals from Europe to produce the export items. The cost of chemicals per unit of leather good stands at Euro 10. The fixed overhead costs per unit comes at Rs.250 and other variable overheads, including the freight cost, add upto Rs.1250 per unit. The payments for both exports and imports are due in six months.

The current exchange rate are as follows:

| | |
|---|---|
| Rs./$ | 46.90 |
| Rs./Euro | 40.40 |

After six months (at the time of settlement of payments) the exchange rate turns out as follows:

| | |
|---|---|
| Rs./$ | 47.90 |
| Rs./Euro | 41.25 |

You are required to:

**a)** Calculate the loss/gain due to transaction exposure.

**b)** Based on the following additional information calculate the losses/gains due to transaction and operating exposure if the contracted export price per unit is Rs.2700:

- The current exchange rate changes to

  | | |
  |---|---|
  | Rs./$ | : 47.50 |
  | Rs./Euro | : 40.80 |

- Price elasticity of demand for the company's product in the USA is estimated to be 1.60.
- The payments are to be settled at the end of sixth month.

**11.** **CRMNEXT Imported** WakaWaka Solar Lamp equipment and accessories at a cost of ISK 70 million from FRISK Software International of Iceland on May 01, 2016 and the amount is payable on October 30 2016.The firm approaches a bank in Delhi, which informed him that no forward quotation is available for ISK in the Indian market and the bank has to quote a rate based on the 6 month ₹/$ forward in the Delhi market and 6 month ISK/$ forward in the Iceland market. The exchanges rates quoted to the firm on May 01, 2016 at Delhi and Iceland market are as follows :

| | | | |
|---|---|---|---|
| Delhi | ₹/$ Spot | : | 64.81/06 |
| | 6 months forward | : | 50/60 |
| Iceland | ISK/$ spot | : | 102.19/102.69 |
| | 6 months forward | : | 4.00/4.50 |

The treasurer of the firm believes that the forward market is over estimating the weakness of rupee against dollar. So instead of going to the Delhi bank for forward selling of ISK, it is planning to buy ISK 6 month forward in Iceland market against dollar to settle the payable, and buy US $ against rupee after 6 months in the Delhi spot market to deliver US $ against ISK in the Iceland.

If the ₹/$ spot exchange rate on October 30 2016 in Delhi turns out as 65.21/66.21.

You are **required** to calculate the saving the firm can make from the strategy instead of buying ISK from the Delhi bank.

**12.** Bharat Electronics Limited in Bangalore exports space vehicles to Belgium by importing all the components from south Korea. Imports are invoiced in Hong Kong dollars and exports in Euro. The company is exporting 6000 unit at a pries of Euro 165 per unit. The cost of imported components is HK$ 75. The fixed cost and other variable costs per unit per unit are ₹1200 and ₹2500 respectively. The cash flows in foreign currencies are due in six months. The current exchange rates are as follows :

₹/Euro : 59.60/62

₹/HK$ : 5.96/5.98

After six months the exchanges rates (at the time of receipts and payments of foreign currency) turn out as follows :

₹/Euro : 60.30/32

₹/HK$ : 6.23/25

You are required to :

**a.** Calculate the loss/gain due to the transaction exposure.

**b.** Based on the following additional information, calculate the loss/gain due to transaction and operating exposure if the life contracted price of washing marching is ₹9500.

- The current exchange rates change to
  ₹/Euro : 59.85/87

  ₹/HK$ : 6.00/02
- Price elasticity of demand of the product in Germany is estimated as 2.5.
- Payment and receipts are to be settled/received at the end of six months.