

University of Pune
Department of Management Sciences (PUMBA)
 403 (B) – International Finance

Max. Marks: 50

Time: 2 ½ Hours

1. Explain the exchange rate mechanism since prior to 1875 till date
2. Explain the internal and external techniques of hedging
3. On March 01, 2010, MNC Inc. a US company expecting to generate in June a surplus of \$5 million for months. The company has decided to invest the funds for 3-months in T-bills. The present economic scenario suggests that Federal Bank may cut interest rates further, so the yield may decline after 3 months. So it decided to hedge the fall in interest rate through 3-month T – bill futures. The June T – bill futures are quoting currently at 96.25. Standard size of T – bill futures is \$1 million and the tick size is \$25.
 You are required to
 - a. Explain, how the company can hedge through T – bill futures.
 - b. Calculate the annualized discount yield. If in June 3 month T – bills are quoted at 96.50 and 95.75.
- 4.. An American corporation needs Swedish kroner 10 million three months from now to pay a Swedish supplier. The foreign exchange and Euro deposit rates are as under
 Spot (USD / SEK) 9.3065
 3 month forward 9.2155
 Euro SEK 3 months deposit 5%
 Euro \$ 3 months deposit 9%
 The company can borrow in the US at a prime rate of 8% while it can earn 4.75 % on EuroSEK deposits .
 Should it purchase the SEK in the forward market or acquire them indirectly
- 5.. M/s Moon Microsystems plan to export software products to USA. Sister concern of Moon Microsystems, Crescent Energy Systems plans to import capital equipment from Germany. The invoicing can be made in any of the currencies for the exports and imports. Exports of M/s Moon Microsystems will take place 3 months from now. M/s Crescent Energy Systems have to make payment 6 months from now.
 The market rates are:

Spot rate	
\$/ Rs	46.83/84
Euro / Rs	50.41/44
GBP/ \$	1.7605/15
GBP/RS	78.39/45

The annualized Premium

\$	GBP	Euro
6 %	5 %	3 %

Advise the companies about the currency of invoicing

- 6.. The Centralia Corporation is a midwestern manufacturer of small kitchen electrical appliances. The market segment it caters to is the midprice range. It specializes in small and medium-size microwave ovens suitable for small homes, apartment dwellers, or office coffee lounges. In recent years it has been exporting microwave ovens to Spain, where they are sold through a sales affiliate in Madrid. Because of different

electrical requirements in Western Europe, the ovens Centralia manufactured for the Spanish market could not be used elsewhere in Europe without an electrical converter. Thus, the sales affiliate concentrated its marketing effort just in Spain. Sales are currently 9,600 units a year and have been increasing at a rate of 5 percent. Centralia's marketing manager has been keeping abreast of integration activities in the European Union. Since the end of 1992, all obstacles to the free movement of goods, services, people, and capital within the 15 member states of the EU have been removed. Additionally, further integration promises a commonality among member states of rail track size, telephone and electrical equipment, and a host of other items. These developments have led the marketing manager to believe that a substantial number of microwave oven units could be sold throughout the EU and that the idea of a manufacturing facility should be explored. The marketing and production managers have jointly drawn up plans for a wholly owned manufacturing facility in Zaragoza, which is located about 325 kilometers northeast of Madrid. Zaragoza is located just a couple hundred kilometers from the French border, thus facilitating shipment out of Spain into other EU countries. Additionally, Zaragoza is located close enough to the major population centers in Spain so that internal shipments should not pose a problem. A major attraction of locating the manufacturing facility in Zaragoza, however, is that the Spanish government has promised to arrange for a large portion of the construction cost of the production facility to be financed at a very attractive interest rate if the plant is built there. Any type of industry that will improve the employment situation would be a benefit, as the current unemployment rate in Spain exceeds 19 percent. Centralia's executive committee has instructed the financial manager to determine if the plan has financial merit. If the manufacturing facility is built, Centralia will no longer export units for sale in Europe. The necessary information follows.

On its current exports, Centralia receives \$180 per unit, of which \$35 represents contribution margin. The sales forecast predicts that 25xx,000 units will be sold within the EU during the first year of operation and that this volume will increase at the rate of 12 percent per year. All sales will be invoiced in euros. When the plant begins operation, units will be priced at €200 each. It is estimated that the current production cost will be €160 per unit. The sales price and production costs are expected to keep pace with inflation, which is forecast to be 2.1 percent per annum for the foreseeable future. By comparison, long-run U.S. inflation is forecast at 3 percent per annum. The current exchange rate is \$1.52/€1.00. The cost of constructing the manufacturing plant is estimated at €5,500,000. The borrowing capacity created by a capital expenditure of this amount is \$2,904,000. The Madrid sales affiliate has accumulated a net amount of €750,000 from its operations, which can be used to partially finance the construction cost. The marginal corporate tax rate in Spain and the United States is 35 percent. The accumulated funds were earned under special tax concessions offered during the initial years of the sales operation, and taxed at a marginal rate of 20 percent. If they were repatriated, additional tax at the 35 percent marginal rate would be due, but with a foreign tax credit given for the Spanish taxes already paid. The Spanish government will allow the plant to be depreciated over an eight-year period. Little, if any, additional investment will be required over that time. At the end of this period, the market value of the facility is difficult to estimate, but Centralia believes that the plant should still be in good condition for its age and that it should therefore have reasonable market value. One of the most attractive features of the proposal is the special financing the Spanish government is willing to arrange. If the plant is built in Zaragoza, Centralia will be eligible to borrow €4,000,000 at a rate of 5 percent per annum. The normal borrowing rate for Centralia is 8 percent in dollars and 7 percent in euros. The loan schedule calls for the principal to be repaid in eight equal installments. In dollar terms, Centralia uses 12 percent as its all-equity cost of capital. Using the Donald Lessard method calculate the Adjusted Present Value and evaluate the economic viability of the project.

7.. Write short notes on

- a) Mortgage backed securities
- b) Inflation linked bonds
- c) Futures and Forwards
- d) Swaps
- e) Swaptions