

Economics 136
Problem Set #5

(Due in lecture: Thursday, April 27th)

1. On May 15th Company X has negotiated a contract to sell 1 million barrels of crude oil. The price in the sales contract is the spot price on August 15th, the day when the delivery is scheduled. May 15th spot price of crude oil is \$23 per barrel. August oil futures price is \$21.50 per barrel. Oil futures contract is written for 1,000 barrels.
 - a) How can the company X protect itself against the uncertainties of price of crude oil? Explain in detail the company's hedging strategy.
 - b) What happens to company X profits (as a result of hedging) if the price of oil on August 15th happens to be:
 - i. \$19
 - ii. \$24
2. Suppose the one-year forward \$/DM exchange rate is \$0.73 per DM and the spot exchange rate is \$0.695 per DM. What is the forward premium on DM (the forward discount on dollars)? What is the approximate difference between the risk free interest rate on one-year dollar deposits and DM deposits?
3. Company A wants to borrow £10 million at a fixed rate of interest for 5 years. Company B wants to borrow \$16.7 million at a fixed rate of interest for 5 years. (Spot exchange rate is 1.67\$/£). The companies have been offered the following rates:

	DOLLARS	POUNDS
Company A	8%	11.60%
Company B	10%	12%

- a) Which company do you think has a better credit rating?
- b) Design a swap strategy for both companies that will make them both better off.
Note: There are many possible arrangements here and the gains from the swap do not have to be fair.