Name: _____

Quiz 3
International Finance Management
C45.0030.001

10/23/03
Total points: 20, Time: 20 min

Q I. (5 points) (please answer **only one** of the two questions):

Suppose you expect that Yen will appreciate versus the US$ in the coming 90 days. The current spot rate is Yen120/$. You expect an appreciation to Yen110/$. The following options are available to you:

Option	***Strike Price***	***Premium***
Put on Yen	Yen115/$	$0.0002/Yen
Call on Yen	Yen115/$	$0.0001/Yen

a. What option would you buy to speculate on the expected appreciation of Yen? Why?

b. What is the intrinsic value of each of the options, if the current spot rate is Yen 130/$?

2. Suppose you expect that Canadian dollar will depreciate versus the US$ in the coming 90 days. The current spot rate is $0.69/C$. You expect depreciation to $0.60/C$. The following options are available to you:

Option	***Strike Price***	***Premium***
Put on C$	$0.65/C$	$0.004/C$
Call on C$	$0.65/C$	$0.001/C$

a. What option would you buy to take advantage of expected depreciation of C$? Why?

b. What is the net profit from the option you chose in a. (i.e. accounting for option premium) if spot rate at end of 90 days is $0.62/C$?

Q II. (5 points) (please answer **only one** of the two questions):

1. For each of the following positions give a diagram of the payoff and say what is the net profit/ loss at maturity. On the diagram, show where is the strike price & break-even price.

a) short call.

b) long put.

2. Consider a call option and a put option on EUR with strike price on both options $0.95/EUR. The call is sold at a premium of $0.0090/EUR, while the put is sold at a premium of $0.0150/EUR. Both options are with expiration date three months from now and the option contracts are written on EUR 100,000. Calculate net profit for each of the options at maturity when the euro is traded spot at $1.00/EUR

Choose one of the two cases on the next two pages. Answer the two questions for **only one of the cases**.

Case I.
Motorola sold cell phone handsets to a Japanese customer. The sale was for Yen 100,000,000 with payment due in three months. The following info is available:

Spot rate: Yen 118/ $; 3-month forward: Yen 116/$
Money rates (% per annum):
US investment rate: 5 %
Japan investment rate: 0.5%

Motorola can borrow in Yen at 1% above the Japanese investment rate. Motorola can borrow in $ at 2% above the US investment rate. Motorola's cost of capital (WACC) is 12%.

1. **(6 points)** Set up a forward market hedge and a money market hedge. (please show the revenues in terms of future values; when you carry forward the revenues for money market hedge, please use WACC rate)

2. **(4 points)** What is the break-even reinvestment rate when comparing forward and money market hedge alternatives?

Case II.
Eastman Kodak has purchased film-processing equipment from Siemens Germany for €2,000,000. The purchase was made June, payment due 6 months later, in December. Since Kodak is to pay EUR, it considers hedging its forex exposure. The following info is available.

- Spot exchange rate: $0.90/€
- Kodak's cost of capital (WACC) is 15%
- Euro borrowing rate is 8% per annum (or 4% for 6 months)
- Euro investment rate is 6% per annum (or 3% for 6 months)
- U.S. borrowing rate is 7% per annum (or 3.5% for 6 months)
- U.S. investment rate is 5% per annum (or 2.5% for 6 months)
- December call option w/ strike price $.92/EUR, premium is 2%
- December put option w/ strike price $.92/EUR, premium is 1%

1. **(5 points)** Set up a money market hedge for Kodak. (please show the costs in terms of future values; please use WACC rate for carrying forward the payable)

2. **(5 points)** Set up an option market hedge for Kodak. Briefly say which one (money market vs. option market hedge) you would recommend.