THE HONG KONG POLYTECHNIC UNIVERSITY

HONG KONG COMMUNITY COLLEGE

Subject Title : International Finance **Subject Code** : CCN2122

Session : Semester One, 2017/18

Numerical Answers

Question B2

Spot rate 1 year ago = $1.50
Forward rate 1 year ago = $1.50 x (1– 0.04) = $1.44
Dollars received to buy 1,000,000 pounds = 1,000,000 x $1.44 = $1,440,000
Spot rate of pound now = $1.5 x (1 + 0.06) = $1.59
Dollars that are now required to buy the 1,000,000 pounds = $1,590,000
Profit = $1,590,000 - $1,440,000 = **$150,000**

Question C1

(a) Sell forward to lock the exchange rate of $1.24.
Convert $1,000,000 to pounds then invest in U.K to earn 6% interest
$1,000,000/$1.2 = **£**833,333.33
On year later, the investor has:
£833,333.33 × 1.06 = **£**883,333.33
Convert back to U.S. dollar:
£883,333.33 × $1.24 = $1,095,333.33
Yield = ($1,095,333 – $1,000,000)/$1,000,000 = 9.53%

Thus, U.S. investors can benefit from covered interest arbitrage because this yield exceeds the U.S. interest rate of 4% percent.

(b) Under IRP, the forward discount should be
$p = 1.04/1.06 - 1$
$p = -1.8868\%$
The forward rate should be:
(F- $1.2)/$1.2) = - 1.8868%
F= $1.1774/**£**

(d) e = 1.04/1.06 – 1 = -1.8868%
One year spot = $1.2 x (1-1.8868%) = $1.1774

(e) 1. Convert dollars to pounds $1,000,000/ $1.2 = 833,333.33 pounds
2. Invest pounds for 1 year and receive 83,333.33 pounds x 1.06 = 883,333.33 pounds
3. Convert pounds back to USD and receive 883,333.33 x $1.1 = $971,666.67
The percentage return is $971,666.67/1,000,000 -1 = -2.83%

Question C2

(b)(i) QT must purchase 50m/5m = 10 contracts.

Option payoff per unit:
($0.0090-$0.0085) = $0.0005

Option profit per unit:
$0.0005 - $0.0007 = -$0.0002

Total Profit = -$0.0002 x 50m = -$10,000 (loss)

(b)(ii) In order to break-even, the 3-month spot rate should be ($0.0085+$0.0007) = $0.0092.

(b)(iv) Maximum loss is the premium paid.
$0.0007 x 50m = $35,000

(c) Contract needs:
50m/12.5m = 4 contracts

As QT is required to pay foreign currency, QT should **Buy** 4 future contracts.