

**Sample Quiz 1**  
**International Finance Management**  
**C45.0030.001**

Total points: 20, Time: 20 min

**Q I. (3 points)** (answer only one of the three questions):

**1. Define & give example of a Pass-Through**

*The degree to which the prices of imported and exported goods change as a result of exchange rate changes.*

*For example, suppose that last year the price of a Honda was ¥ 2,400,000 in Tokyo and the exchange rate at the time was ¥ 120/\$, which implies that the \$ price at the time was \$20,000. Suppose further that currently we have exchange rate of ¥ 100/\$, i.e. the yen has appreciated by  $(120-100)/100 = 20\%$ .*

*If there was 100% pass-through, then the price in US\$ shall be  $\$24,000 = ¥ 2,400,000 / ¥ 100/\$$ . However, if the price charged by Honda in US is only \$22,000, then the pass-through has been partial,  $\$22,000/\$20,000 = 1.1$  or 10%. The degree of pass through is*

$$10\% / 20\% = 50 \%$$

**2. Define Interlocking Directorates. How are they perceived in the SWM and in the CWM?**

*Interlocking directorates is the practice of hiring CEOs or related companies on the board of directors of your company. This practice is not favored in the shareholder wealth maximization model (or the Anglo-American model) since this they may stifle competition because decisions may be based on friendship, influence, or promise of reciprocity. In the corporate wealth maximization, interlocking directorates are looked upon beneficially, since they all “all stakeholders” to be represented.*

**3. What are the pros & cons of having the yuan floating? Discuss from the point of view of the US.**

*As we have seen from the two articles on China, there are two sides to the debate. On the one hand, the floating of the yuan may lead to an appreciation of the yuan to US\$ in the long run which is good for the US, since it will help US exporters to become more competitive. On the other hand, if the free floating of the yuan results in a initial outflow (capital flight) of Chinese savings into US\$, then that might generate further depreciation of the yuan, which might not be beneficial to the US, since US exporters will have to compete even harder with the Chinese exporters.*

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

**1. Suppose that one-year interest rates are 6% in the US and 8% in UK. The current spot rate b/n the British pound and US\$ is \$ 1.48/pound. What would you expect the spot rate for the pound to be one year hence if you believe that the international Fisher effect holds?**

From the problem set one, know that  $\frac{S_2}{S_1} = \frac{1+i^{\$}}{1+i^{FC}}$ , where  $S_2$  and  $S_1$  are direct quotes,

that is \$/Pounds. Thus,

$$S_2 = \frac{1+i^{\$}}{1+i^{FC}} S_1 = \frac{1+0.06}{1+0.08} * 1.48\$ / Pound = \$1.453 / Pound.$$

**Note:** If you prefer to use the formula in the textbook, page 75, here is the calculation. According to the international Fisher effect, if  $S_1$  and  $S_2$  are indirect quotes,

$$\frac{S_1 - S_2}{S_2} = \frac{i^{\$} - i^{Pound}}{1 + i^{Pound}}$$

So, substitute for the interest rates and the beginning exchange rate, where the beginning exchange rate is  $\frac{1}{\$1.48 / Pound} = Pound 0.6756 / \$$ ,

$$\frac{0.6756 - S_2}{S_2} = \frac{0.06 - 0.08}{1 + 0.08} = -0.0185,$$

which implies that  $S_2 = \frac{0.6756}{1 - 0.0185} = Pound 0.6883 / \$$ , or in indirect quotes, \$ 1.453 /

Pound, which is the same answer as before. Notice that the first calculation was much shorter 😊.

**2. The mobility of international capital flows is causing emerging market nations to choose between a free-floating currency exchange regime and a currency board (or dollarization). Describe shortly how each of the regimes would work.**

In a free-floating exchange rate system, the exchange rate of a country's currency is determined primarily by the demand & supply of the currency. However, in a currency board, the exchange rate is fixed at par value to another currency (anchor currency) and the government has the obligation to maintain this fixed rate. How does the government manage to maintain the fixed rate? In essence, the government credibly commits itself to maintaining forex reserves exactly equal to the amount of national currency.

**Q III. (3 points)** (answer only one of the two questions):

**1. Classify the following transaction in the BOP: American opens a bank account in Singapore bank?**

*Credit to US financial account, portfolio investment sub-account, debit to Singapore financial account, portfolio investment sub-account.*

**2. Classify the following transaction in the BOP of all involved countries:**

**P & O Shipping (Holland) pays US\$ to Egypt to pass through Suez Canal, payment handled Citibank-NY?**

*Since the entire transaction was handled by a US bank in the US, no transaction would appear on the US BOP. Holland will debit a purchase of services, Egypt would credit a sale of services.*

**Q IV. (4 points)** (answer only one of the two questions):

**1. Explain & give example of covered interest arbitrage.**

*The practice of investing in a currency that offers the higher return on a covered basis is known as covered interest arbitrage. For example, suppose that the Eurodollar rate is 8% per annum, and that the Euroyen rate is 4% per annum. Suppose further that the spot rate is ¥ 106/\$ and the 180 days forward rate is ¥ 103.5/\$, then a covered interest arbitrage is performed as follows:*

*Step 1. Borrow for 180 days the amount of \$1,000,000 @ 8% per annum and convert them @ the spot rate of ¥ 106/\$ to ¥ 106,000,000.*

*Step 2. Invest the proceeds, ¥ 106,000,000, in a Euroyen account for six months, earning 4% per annum, or 2% per 180 days.*

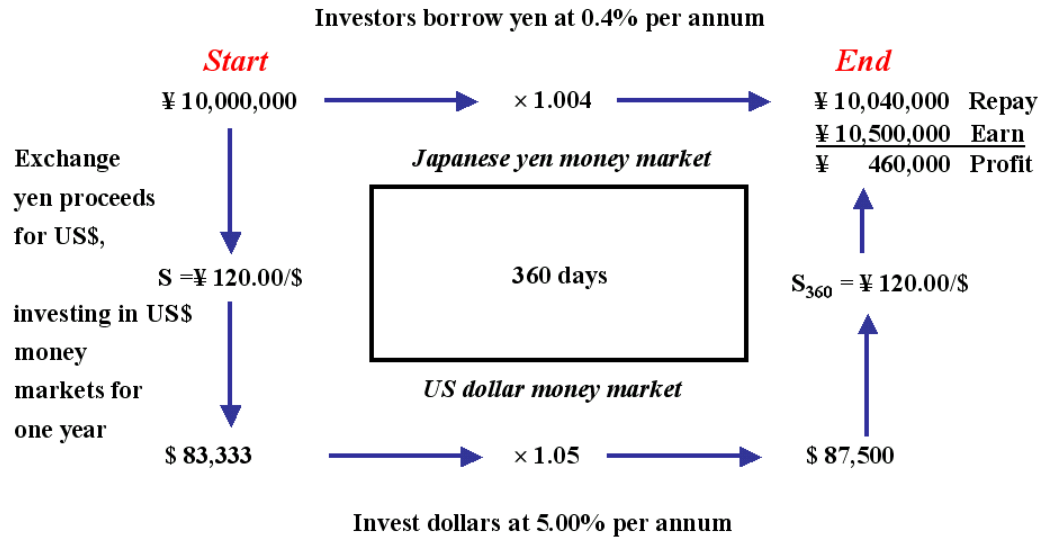
*Step 3. Simultaneously sell the future yen proceeds (¥ 108,120,000) forward for dollars at the 180-days forward rate of ¥ 103.5/\$, to obtain gross revenues of \$1,044,638.*

*Step 4. Calculate the cost of funds (interest paid for borrowing US\$) at the Eurodollar rate of 8% per annum, or 4% per 180 days, with the principal and interest then totaling \$1,040,000. The profit from CIA is \$1,044,638 - \$1,040,000 = \$4,638.*

**2. Explain & give example of uncovered interest arbitrage.**

*Uncovered interest arbitrage is to borrow in countries and currencies w/ relatively low interest rates and convert the proceeds into currencies that offer much higher interest rates. This transaction is “uncovered” b/c the investor does not sell the higher yielding currency proceeds forward. An example of the UIA is the “yen carry trade”, as described below:*

### The Yen Carry Trade



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Notice that the transactions will end in 360 days, when the investor will convert the proceeds from the US\$ market into yen at the then-current spot rate.

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

**1. The EUR/USD spot exchange rate is 0.88 and the 180-day forward rate for EUR/USD is 0.85. Please write the appropriate formula to derive the forward premium or discount and indicate where each number would be plugged in (but you do not need to calculate the exact rate). Does your result imply the Euro will be stronger or weaker in 6 months?**

Since the quotes are indirect from the point of view of US, we have the following

$$f^{EUR} = \frac{S^{EUR/US\$} - F_{180}^{EUR/US\$}}{F_{180}^{EUR/US\$}} \times \frac{360}{180} \times 100 = \frac{0.88 - 0.85}{0.85} \times \frac{360}{180} \times 100 = 7.06\%,$$

i.e. the Euro is traded at a premium of 7.06 % per annum forward.

**2. Money and foreign exchange markets in Frankfurt and New York are very efficient. The following information is available:**

	Frankfurt	New York
Spot exchange rate	\$0.9000/Euro	\$0.9000/Euro

One-year treasury bill rate	6.00%	3.00%
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Estimate today's one-year forward exchange rate between the dollar and the euro.

**Note:** no need to give an exact numerical number, full credit will be given if you set up the calculation (formulas) & show where shall we plug the provided info.

*The forward rate is given by*

$$F_{360}^{USD/EUR} = S^{USD/EUR} \frac{\left(1 + i^{USD} \frac{360}{360}\right)}{\left(1 + i^{EUR} \frac{360}{360}\right)} = 0.90 \times \frac{(1 + 0.03)}{(1 + 0.06)} = \$0.875 / EUR.$$