Course: International Finance
Course Supervisor: Doc. Ing. Josef Taušer, PhD
Course Lecturer: Ayaz Zeynalov, PhD.
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Currency Derivatives - Futures

SEMINAR #4

Practice 1:

The table below is an excerpt of futures prices. Use this table to answer questions.

	Open	High	Low	Settle	Change	Lifetime High	Lifetime Low	Open Interest
JAPAN YEN (CME) — 12.5 million yen; $ per yen (.00)								
June	.9432	.9460	.9427	.9459	+.0007	.9945	.8540	48.189
Sept	.9482	.9513	.9482	.9510	+.0007	.9900	.8942	1,782
Dec	.9550	.9610	.9547	.9566	+.0008	.9810	.9525	384
Est vol 13,640; vol Fri 15,017; open int 50,355, +414								
New Zealand Dollar (CME) — 125,000 dollars; $ per dollar								
June	.5855	.5893	.5847	.5888	+.0018	.6162	.5607	87,662
Sept	.5840	.5874	.5830	.5871	+.0018	.6130	.5600	2,645
Dec	.5830	.5860	.5830	.5864	+.0018	.5910	.5590	114
Est vol 40,488; vol Fri 43,717; open int 90,412, -1,231								
Swiss Franc (CME) — 100,000 francs; $ per franc								
June	.7296	.7329	.7296	.7313	+.0021	.7805	.7290	43,132
Sept	.7293	.7310	.7290	.7297	+.0018	.7740	.7276	962
Dec	.7294	.7295	.7285	.7282	+.0016	.7670	.7270	640
Est vol 5,389; vol Fri 4,248; open int 44,905, -1,331								

1. What are the CME contracts size for Japanese yen, New Zealand Dollar, Swiss Franc?
   ANSWER: (i) 12.5 million yen; (ii) 125,000 dollars; (iii) 100,000 francs.

2. What are the open interests for the September contracts for all three?
   ANSWER: (i) 1,782; (ii) 2,645; (iii) 962 contracts.

3. What are the daily high, low, and settlement prices for the December contracts for all three?
   ANSWER: (i) high: 0.9610, low: 0.9547, settle: 0.9566; (ii) high: 0.5860, low: 0.5830, settle: 0.5864; (iii) high: 0.7295, low: 0.7285, settle: 0.7282

4. What is the day's cash flow from marking to market for the holder of a NZD June contract?
   ANSWER: 0.0018 x 125, 000 = USD 2.25 (inflow).

Practice 2:

On the morning of Monday, August 21, you purchased a futures contract for 1 unit of CHF at a rate of USD/CHF 0.7. The subsequent settlement prices are shown in the table below.

August	21	22	23	24	25	28	29	30
Future rate	0.71	0.70	0.72	0.71	0.69	0.68	0.66	0.63

1. What are the daily cash flows from marking to market?
   ANSWER: Purchase price is 0.70, and closing price on the same date (21 August) already 0.71, therefore cashflow is 0.71-0.70=0.01. For following dates, we need to look closing price difference, as an example on 22nd August 0.70 - 0.71 (21st August) = - 0.01, etc.

August	21	22	23	24	25	28	29	30
Future rate	0.71	0.70	0.72	0.71	0.69	0.68	0.66	0.63
Cash Flow	0.01	-0.01	0.02	-0.01	-0.02	-0.01	-0.02	-0.03

2. What is the cumulative total cash flow from marking to market (ignoring discounting)?
   ANSWER: -0.07

3. Is the total cash flow greater than, less than, or equal to the difference between the price of your original futures contract and the price of the same futures contract on August 30?
   ANSWER: Equal to

Practice 3:
Specify wherever you see possible ways to hedge each of the transactions. If so, whether it is Future or Forward, and Purchase or Sell?

1. George ltd plans to purchase Japanese goods denominated in yen.
2. Harvard ltd sold goods to Japan, denominated in yen.
3. Yale plc has a subsidiary in Australia that will be remitting funds to the U.S. parent.
4. Brown ltd needs to pay off existing loans that are denominated in Canadian dollars.
5. Princeton ltd may purchase a company in Japan in the near future (but the deal may not go through).

	Forward Contract		Future Contract		Options Contract	
	Purchase	Sell	Purchase	Sell	Call	Put
a.	X		X		X	
b.		X		X		X
c.		X		X		X
d.	X		X		X	
e.					X	

Currency Derivatives - Currency Options

SEMINAR #5

Practice 1:
True/False?

1. The higher the existing spot rate relative to the strike price, the lower is the call option value, other things equal.
2. The shorter the period prior to the expiration date, the greater is the call option value, other things equal.
3. The lower the variability of the currency, the greater is the call option value, other things equal.
4. The at-the-money call option in euros should have a higher premium because the euro should have less volatility than the dollar.
5. The higher the existing spot rate relative to the strike price, the greater is the put option value, other things equal.
6. The longer the period prior to the expiration date, the lower is the put option value, other things equal.
7. The greater the variability of the currency, the lower is the put option value, other things equal.

ANSWERS: All statements are false.

Practice 2:
NOK call option is available, with a strike price of \$0.20 and a call premium of \$0.01. A buyer of a NOK put option with an exercise price of \$0.20 and a premium of \$0.02 per unit. Please draw contingency graphs for Buyer/Seller in currency Call and Put options.
ANSWER: Please follow instruction from previous example. For more details you can look at Jeff Madura, International Financial Management [9th edition], Thomson/South-Western, Chapter 5, Contingency Graphs for Currency Options pages: 122-124