International Financial Management FINA 4836
Rauli Susmel Spring 1997

First Midterm Exam

No points will be given by simply writing down formulas, and writing down definitions or irrelevant statements from the book, or saying "yes," will get you zero points. Justify all your answers. If you cannot prove something give some intuition. Good luck. Reminder: this is an open book exam, but no open notes.
Time: 1hr 20 minutes.

I. Problems (10 points each).

1. You are the President of the U.S. Federal Reserve and your priority is to maintain a stable USD. You have a USD 40 billion intervention fund to directly affect supply or demand of foreign exchange. How would you use the intervention fund in the following scenarios:

i. Japanese interest rates are suddenly reduced.

ii. U.S. inflation increased by 1.7%, while British inflation increased by 2.2%

iii. German GDP is growing at a faster rate, 4.5%, while U.S. GDP growth is stable at 2%.

iv. There is a political crisis in Europe, increasing European uncertainty.

2.

i. Assume an Australian Dollar (AUD) is worth 90 Japanese Yen (JPY), that is, S_t = 90 JPY/AUD. Also, assume a JPY is worth 5 Chilean pesos CLP (S_t = 5 CLP/JPY). What is the cross rate AUD/CLP?

ii. Compute the forward discount or premium for the JPY/AUD whose 90-day forward rate is 93 JPY/AUD. State whether your answer is a discount or premium.

iii. Suppose Bank Three quotes .025 AUD/CLP. Is arbitrage possible? If yes, describe a triangular arbitrage strategy and determine its profits.

3. Norway has a floating exchange rate system. Norway is a big oil exporter.

i. Suppose there is a decrease in the price of oil. What is the effect of this decrease on the NOK/USD exchange rate? Does this decrease in the price of oil affect Norway's FX reserves?

ii. The krone (NOK = Norway's currency- is depreciating against the USD. Norges Bank, Norway's Central Bank, decides to intervene to stop the NOK's depreciation. Norges Bank does not want to affect local interest rates. With the help of two graphs –one for the FX market, one for Noway's money markets-, describe what Norges Bank can do.

iii. Briefly discuss a potential side effect of Norges Bank's sterilization on Norway's economy.

4. Mr. Kramer, a U.S. investor, has USD 10,000 to invest. The one-year interest rate offered in the U.S. is 7%, while the one-year interest rate offered in France is 5%. The spot rate is .18 USD/FRF, that is USD .18 per French franc. Mr. Kramer is offered a one-year forward contract at .212 USD/FRF.

i. Determine the arbitrage-free one-year forward contract exchange rate. Can Mr. Kramer make a risk-free profit?

ii. Describe a covered arbitrage strategy

iii. Calculate the arbitrage profits.

iv. Calculate the forward premium and the interest rate differential. Determine the direction of capital flows between France and the U.S.

II. WSJ CASE (20 points)

Read the attached WSJ article (Feb. 19, 1997) and briefly answer the following questions:
Note: No points will be given by simply writing lines from the article.

1) Why has been the dollar appreciating lately? Be precise.

2) Marc Chandler said that the dollar might start "to rally again" as investors take profits on old positions to begin buying anew. Does this statement make sense? Why?

3) The article says that central banks were checking prices at "sensitive levels." How can a Central bank impose "sensitive levels"? (Hint: draw a graph to show the effect of the Bundesbank's intervention in the foreign exchange rate market. The Bundesbank is Central Bank of Germany.)

4) Why has the sterling (GBP) suffered after Bank of England Governor Eddie George suggested that the sterling's recent strength may have reduced pressures for an increase in U.K. interest rates?

5) The article reports late afternoon New York quotes (i.e., end of day quotes) for the DEM/USD, USD/GBP and JPY/USD? Suppose you believe in the IFE (international Fisher effect). Which currency has the highest interest rate differential against the USD? (First, write down all the quotes in direct terms, i.e., USD per unit of foreign currency).