Global Business Environment - FIN523
Fall 2019
http://moodle.epfl.ch/course/view.php?id=6271

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Problem Set #9

due Monday December 9, 2019

PART I. *True, False, or Uncertain?* Give a detailed explanation of your answer. Use diagrams when useful.

1. (*10 points*) In December 1994 the yield on 3-month Mexican Cetes was 35%, the yield on a 3-month Tesobonos was 12% and the yield on a 3-month U.S. Treasury Bill was 5%. Calculate the expected depreciation of the Mexican peso relative to the U.S. dollar; calculate the risk of default of Mexican public debt; show your calculations. The expected depreciation of the peso was more than the risk premium.

2. (*10 points*) The reason why actual inflation and inflationary expectations were negative until 2013 in Japan is that the Bank of Japan had not clearly committed to a positive inflation target and to permanent monetary policy changes that this may require.

PART II.

1. (*80 points*) **Fall in World Demand with Fixed Exchange Rate.** Consider an economy that starts at full employment $Y = Y^f$ with the current account in balance $CA = 0$. The exchange rate is fixed at E_0 and the peg is credible $E^e = E_0$. The equilibrium in the goods market is given by $Y = C + G + I + CA$. Private consumption is $C = c(Y - T), 0 < c < 1$, and the current account is:

$$CA = \underline{CA} + \alpha \frac{EP^*}{P} - m\, c(Y - T), \quad 0 < m < 1, \alpha > 0.$$

Unexpectedly at t_0 a recession in the rest of the world reduces the demand for domestic products. This is to say $\Delta \underline{CA} = \Delta WD < 0$. The fall in world demand is believed to be temporary. The home economy continues fixing the exchange rate at E_0 and E^e remains equal to E_0. Prices (at home and abroad) do not rect in the short run.

(a) *(10 points)* In the AA-DD-XX diagram illustrate the short-run equilibrium in the home economy.

(b) *(10 points)* Find short-run ΔY as function of ΔWD and the parameters of the equations given above.

(c) *(10 points)* Find the vertical shift in the XX curve. Namely, finds by how much the exchange rate would have to change $\Delta \tilde{E}$ to keep the current account unchanged at full employment level of output.

(d) *(10 points)* Find the change current account at the short-run equilibrium as function of ΔWD and parameters of the model. Here you should account for the change in output that occurs in the short-run equilibrium.

(e) *(10 points)* Suppose the fall in world demand is permanent. The home economy continues fixing credibly the exchange rate. Would your analysis of (a) to (d) change?

(f) *(10 points)* In the AA-DD-XX diagram illustrate the adjustment process that brings the home economy back to its long-run equilibrium. Please assume the home economy fixes credibly the exchange rate throughout the adjustment.

(g) *(10 points)* Disregard (f). Assume the central bank wants to return to full employment immediately and assume the central bank continues fixing credibly the exchange rate at E_0. Would a change in money supply achieve this? In which way would foreign assets move? In a diagram with the money market at the bottom and the foreign exchange market at the top, please illustrate your answer.

(h) *(10 points)* Continue disregarding (f); assume the change in world demand is permanent. Assume the central bank wants to return to full employment immediately. Would a devaluation or a revaluation achieve this? Please illustrate this solution in the AA-DD-XX diagram. Please calculate the ΔE that brings the home economy back to Y^f.