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

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Problem Set #7

due Monday November 18, 2019

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

1. *(15 points)* From January 2006 to January 2012 house prices rose by 27% in Canada while they fell by 35% in the United States. Everything else equal we should therefore expect that an appreciation of $E_{USD/CAD}$, the nominal exchange rate between the U.S. dollar and the Canadian dollar, during the same period.

2. *(15 points)* The central Bank of Russia raised the benchmark interest rate by 1 percentage point to 10.5 per cent on December 11, 2014. The rouble-US dollar exchange rate $E_{R/USD}$ reached a record high of 55.47 immediately after the rate rise. (*These are facts*). The rouble response to the rate rise is unusual. *(Hint: Consider at the economic situation (including trade sanctions) and oil prices in Russia during that period).*

PART II.

1. *(70 points)* Consider an economy that starts at full employment with the current account in balance. Let domestic consumption and the current account be

$$C = c \times (Y - T), \quad CA = \overline{CA} + \alpha \left(\frac{EP^*}{P} \right) - m \times c \times (Y - T),$$

where $c \in (0, 1)$ is the marginal propensity to consume, CA is the current account, $\overline{CA} + \alpha \times (EP^*/P)$ are exports, with $\overline{CA}$ being a constant, $\alpha > 0$ and P, P^* being the price level in the domestic and the foreign economy, respectively, and $m \in (0, 1)$ is the share of imports out of private consumption, and T are taxes. Money demand is given by

$$L(Y, R) = a \times Y - b \times R,$$

where $a, b > 0$ are constants and R is the domestic interest rate. The foreign interest rate is R^*. Real domestic money supply is M/P.

   (a) (*12 points*) Write an expression for the DD curve.

   (b) (*12 points*) Write an expression for the AA curve.

   (c) (*12 points*) Suppose the domestic government temporarily reduces taxes, $\Delta T < 0$. Assume that government spending remains unchanged. Analyze the short-run effects on the nominal exchange rate and output using the AA-DD-XX diagram.

   (d) (*12 points*) Find an expression for the short-run change in output, ΔY, as a function of ΔT. Is ΔY positive or negative?

   (e) (*12 points*) Find an expression for the short-run change in the nominal exchange rate ΔE as a function of ΔT. Is ΔE positive or negative?

   (f) (*10 points*) Find an expression for the short-run change in the current account ΔCA as a function of ΔT. Is ΔCA positive or negative?