SIMON FRASER UNIVERSITY
Department of Economics

Econ 842 — Prof. Kasa
International Monetary Economics — Spring 2019

PROBLEM SET 1 - CURRENT ACCOUNT DYNAMICS

1. (15 points). Consider a 2-period world economy consisting of two countries. Each has preferences

$$U(C_1, C_2) = \sqrt{C_1} + \sqrt{C_2}$$

The Home country has endowments $Q_1 = 1$ and $Q_2 = 2$. The Foreign country has endowments $Q_1^* = 2$ and $Q_2^* = 1.3$. Both countries have open capital markets, and both begin with zero net foreign assets.

(a) Compute the equilibrium world interest rate. (Hint: Equilibrium requires $S(r) + S^*(r) = 0$, where $S(r)$ and $S^*(r)$ are the Home and Foreign saving functions, e.g., $S(r) = Q_1 - C_1(r)$).

(b) Given this interest rate, what are the equilibrium values of Home consumption, C_1 and C_2. Use the above utility function to then compute Home utility.

(c) Now suppose the Foreign country experiences a higher growth rate. In particular, suppose $Q_2^* = 2.5$, with all other endowments remaining the same. What is the new world interest rate? What is Home utility now? Is Foreign growth good or bad for the Home country? Explain.

2. (15 points). Using the data on the webpage, and whatever software you want, report plots of the current account, as a fraction of GDP, for the U.S., U.K, Japan, and Canada.

3. (30 points). Pick a country, and following the procedure outlined on pages 90-93 of the Obstfeld-Rogoff text, test the Present-Value Model of the current account (i.e., test the model's implied cross-equation restrictions). Plot the model's predicted current account against the actual current account. Comment on the model's fit. (Note: Be sure to express everything in real terms. Although variables should also be expressed in per capita terms as well, don't worry about that. It shouldn't make much of a difference here).