Econ 165 Stanford University
Winter 2002/03 Gerald Willmann

Homework 3

Due date: February 28 at noon

Problem 1: Consider purchasing power parity (PPP).

a) The US does not trade with Cuba. However, the US trades with the EU and the EU trades with Cuba. Suppose absolute PPP holds between the US and the EU and relative PPP between the EU and Cuba. Show mathematically which type of PPP (if any) holds between the US and Cuba.

b) You graduate from Stanford and have two job offers: one in Anywhere, Canada, and the other in Smalltown, USA. The former pays aw Canadian dollars and the latter st US dollars. Explain how you would use PPP or deviations thereof to evaluate these job offers.

c) The dollar has depreciated by about 25% vis-à-vis the Euro over the course of the last 12 months. Find the relevant data to confirm/disprove that this fact is compatible with relative PPP. Can you do the same for absolute PPP?

Problem 2: Consider Euroland and Switzerland.

a) Find the current interest rate for both areas (3 months, 1 year, 2 yrs — your choice). Also find the corresponding Euro-Swiss Franc forward rate and check whether covered interest parity holds.

b) Explain the concept of uncovered interest parity. Consider investing in Swiss or Euro denominated bonds. Relate your investment decision to your expected future exchange rate. Do you see any connection with the forward rate?

c) The EU countries recently agreed to levy a source tax on investment income whereas Switzerland is (in-) famous for its banking secrecy/privacy. How does such a tax influence your uncovered interest parity considerations?

Problem 3: Consider the monetary model of the exchange rate. Suppose there is an unanticipated, one-time increase in the supply of money.

a) What are the effects of this monetary shock on the exchange rate, the interest rate, and the price level in the short and in the long run?

b) Analyze the time from short to long run under the assumption that prices are slow to adjust. Explain why the exchange rate overshoots and derive time paths for the above variables.

c) Suppose the foreign central bank expands foreign money supply at the same time. Analyze the effects of such a joint monetary expansion.