University of California, Davis   Date: June 23, 2009
Department of Economics   Time: 3 hours
International Macroeconomics   Reading Time: 20 minutes

PRELIMINARY EXAMINATION FOR THE Ph.D. DEGREE

Answer question 1 and any three of the other questions (answer four questions in total).

1. **Real Interest Rate Parity**: Consider a small open economy where households solve the following problem:

$$\underset{C_s, B_s, B_s^*}{Max} \; E_t \sum_{s=t}^{\infty} \beta^{s-t} U\left(C_s\right)$$

$$s.t. \; Y_s + \left(1+r_{s-1}\right) B_{s-1} + p_s \left(1+r_{s-1}^*\right) B_{s-1}^* = C_s + B_s + p_s B_s^*$$

   B_t represents home <u>real</u> bonds denominated in units of the home country consumption index, C_t. These bonds pay in the next period real net return r_t, which we assume for simplicity is known in period t when B_t was purchased. Likewise, B_t^* represents foreign real bonds in units of the foreign consumption index, which pay real net return r_t^* . Here p_t is the relative price of one unit of the foreign consumption index in units of the home consumption index. Y_t is endowment.

a) Set up and work through the dynamic programming problem, and derive from the first order conditions the relationship between the real interest rates r and r^*.

b) Explain the economic intuition for why r and r^* can differ from each other.

c) What would the interest rate relationship in (a) above imply in a case where purchasing power parity held in all periods?

d) Extrapolating from the empirical evidence for uncovered interest rate parity and purchasing power parity, discuss how well you think the relationship in (a) should hold in the data.

2) **Macroeconomic Stabilization** (weights: 40 percent each for part (a) and (b), and 20 percent for part (c))
    Take a short-run macroeconomic model under floating exchange rate. State your assumed macroeconomic model VERY briefly.

a) Assume that the economy is initially in full employment show algebraically the reaction function for fiscal policy in order to restore output to full employment level for various types of shocks.

b) Discuss what reservations you might have about the above approach to stabilization policy

c) What shocks would you identify as responsible for the recession of the US economy that
    started in earnest in September 2008? How would you explain the absence of high bank
    lending when the US interest rate is near zero (please feel free to modify the above standard
    IS-LM-BP, if you feel necessary to do so, for your explanation)?

3) **International Monetary System** (weights: 40 percent each for part (a) and (b), and 20
    percent for part (c))

a) Outline and critique the arguments of Milton Friedman in his work, "The Case for Flexible
    Exchange Rates"

b) Outline and critique the Bretton Woods system of adjustable peg in practice.

c) A large part of the G-20 summit in London on April 2, 2009 focused on assigning new
    responsibilities to international financial institutions. Outline and critique some of the
    proposals, and feel free to add some of your own proposals.

4) **Nontraded Goods**: A common approach to explaining several puzzles in open economy
    macroeconomics has been to restrict the degree of openness, such as by assuming some goods
    are nontradable. Discuss how the presence of nontraded goods can help explain the following
    puzzles. In each case discuss what the puzzle is, and how nontraded goods could be a solution.
    Discuss also any special conditions or parameter values that are needed. Also cite relevant
    papers in the literature that have examined this solution.

    a) Consumption correlation puzzle
    b) Portfolio diversification puzzle
    c) Failure of the present value model of the current account
    d) Failure in purchasing power parity / relative price puzzle

5) **Exchange Rate Essay:** Formulate in several paragraphs an argument that either supports or
    criticizes the following statement:

    "Macroeconomic fundamentals are not useful for understanding the determination of the
    nominal exchange rate."