

## Final Exam – Economics 260D

Directions: Answer the following three questions. All questions are of equal point value. You will have two hours.

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1) **Intertemporal approach to the current account:**

Consider a representative agent problem for a small open economy.

$$\text{Max} \sum_{s=t}^{\infty} b^{s-t} \frac{S}{S-1} (C_s)^{\frac{S-1}{S}}$$

$$\text{s.t. } Y_s + r_s B_s - C_s - I_s - G_s = B_{s+1} - B_s$$

The country receives an exogenous endowment of the single type of good ( $Y$ ), and the country can save only in the form of a real bond paying a time-varying return  $r_t$ .

Government purchases ( $G$ ) are exogenous. Assume the usual transversality condition.

Note the following: there is no uncertainty, and the interest rate is time varying. You might find it convenient to make use of the following notation for a time-varying discount factor:

$$R_{t,s} = \left[ \prod_{v=t+1}^s (1 + r_v) \right]^{-1} \quad \text{for } s > t; \quad R_{t,t} = 1$$

- a) Derive first order conditions and solve for consumption and the current account as functions of current and future values of net output ( $Y - I - G$ ) and interest rate ( $r$ ).
- b) What happens to **consumption** and the **current account** in the present period under the following scenarios? Give magnitudes and directions of changes.  
(For these questions, you may assume that the exogenous world interest rate is constant at the value  $r_t = \frac{1}{b} - 1$ .)
  - i. Output endowment ( $Y$ ) rises temporarily this period by 1 unit above its steady state value.
  - ii. Government purchases ( $G$ ) rises permanently by 1 unit above its previous steady state value.
  - ii. A wealth transfer to the small open economy from the rest of the world that takes the following form: valuation effects in asset markets raise the real value of net foreign asset holdings from the previous period ( $B$ ) by 1 unit.
- c) What happens to **consumption** and the **current account** in the present period under the following scenario: a temporary rise in the exogenous world interest rate  $r_{t+1}$ . State whether  $C$  and  $CA$  rise, fall, no change, or ambiguous and what this depends upon. Explain the economic intuition for the result. No need to state exact values. Assume for simplicity that the stock of net foreign assets ( $B$ ) is positive, and that  $Y - I - G = 0$  for all periods here.

2) **International puzzles and asset market integration:**

The following three puzzles are often cited as evidence that international asset markets are not well integrated. Discuss briefly the empirical findings for each puzzle, and then offer an alternative explanation for each that does not indicate international asset market segmentation.

- a) Feldstein-Horioka puzzle
  - b) Portfolio diversification puzzle
  - c) Consumption correlation puzzle
  - d) Failure of uncovered interest rate parity
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**3) Monetary policy:**

In 3-5 paragraphs, formulate an argument regarding whether you think the monetary policy of a typical small open economy should worry about international variables, such as stabilizing the exchange rate and responding to foreign policies; or should policy makers just worry about domestic variables such as inflation and output. Discuss under what conditions it is relatively more important to worry about international dimensions of policy. In your argument cite some of the recent theoretical policy papers studied in class.

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(6/12/06)