SIMON FRASER UNIVERSITY
Department of Economics

Econ 842   Prof. Kasa
International Monetary Economics   Spring 2009

FINAL EXAM

Answer the following questions True, False, or Uncertain. Briefly explain your answers. No credit
without explanation. (10 points each).

1. Currency crises cannot occur if investors have Rational Expectations.

2. Complete international financial markets imply a constant international distribution of wealth.

3. Consumption will be less correlated across countries when international financial markets are
   incomplete.

4. When there are non-traded goods and complete financial markets, differences in national
   consumption growth rates will be perfectly correlated with real exchange rate changes.

   Answer <u>two</u> of the following four questions.

5. (30 points). Consider a two-country, one-period model of international risk sharing. Home
   and Foreign agents have identical utility functions $u(C)$ $[u(C^*)]$. Home's endowment is given
   by $Y = \bar{Y} + \epsilon$, while Foreign's is given by $Y^* = \bar{Y} - \epsilon$, where ϵ is a zero-mean random shock
   that is symmetrically distributed around 0 on the interval $[-\bar{\epsilon}, \bar{\epsilon}]$. Assume Home and Foreign
   agents can write insurance contracts prior to the realization of the relative output shock,
   which specify a payment by Home to Foreign of $P(\epsilon)$ $[= -P^*(\epsilon)]$.

   (a) Assuming agents can commit, what is the optimal contract? Although the answer should
       be obvious, formally derive the optimal contract by writing down a Pareto problem, and
       use the first-order conditions to characterize the contract. Assume equal Pareto weights.

   (b) Now assume that neither agent can commit to the contract. However, assume that if
       either tries to renege foreign creditors can seize a fraction η of its output. Given this
       assumption, what are the relevant Participation Constraints?

   (c) Write down the incentive constrained Pareto problem, and use it to characterize the
       constrained efficient contract. Show that there is an interval $[-e, e]$ such that $C = C^*$
       for $\epsilon \in [-e, e]$. Solve for e as a function of η.

   (d) Characterize $C(\epsilon)$ and $C^*(\epsilon)$ when ϵ is outside the interval $[-e, e]$. Use a graph to
       illustrate your answer.

6. (30 points). Consider a symmetric two-country, one-good world in which output fluctuations
   reflect fluctuations in productivity and labor input (there is no capital). The representative
   agent in country-i has preferences

$$u(c_{it}, 1 - n_{it}) = \log c_{it} + \gamma \log(1 - n_{it})$$

where c_{it} and n_{it} are consumption and labor in period-t. Output in each country is produced with the linear technology $y_{it} = z_{it}n_{it}$. Each country's productivity shock is i.i.d. Assume that labor is immobile between countries, and that financial markets are complete.

(a) Write down the optimization problem that characterizes a Pareto optimum. What is the aggregate resource constraint? Derive the first-order conditions.(Hint: Since there is no capital, and the productivity shocks are i.i.d., the problem is essentially static, so it is sufficient to consider only one period).

(b) For simplicity, assume the Pareto weights are equal. Solve for the Pareto optimal (and competitive equilibrium) allocations of consumption and labor in both countries.

(c) Explain why output in country 1 depends on the productivity shock in country 2, even though labor is internationally immobile.

7. (30 points). Briefly describe the assumptions and results of the paper "International Real Business Cycles", by Backus, Kehoe and Kydland (JPE, 1992). What were its successes and failures? Describe how these failures motivated the work of Baxter and Crucini (IER, 1995). Were they able to resolve the puzzles identified by Backus, Kehoe and Kydland? Describe how the work of Baxter and Crucini motivated the work of Kehoe and Perri (Econometrica, 2002). How did their analysis and findings differ from those of Baxter and Crucini?

8. (30 points). Briefly compare and contrast first- and second-generation theories of currency crises. What are the strengths and weaknesses of each theory. Which is more supportive of IMF-style bailouts? How would you go about distinguishing between them empirically?