Exam 3. Econ520. Fall 2013

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UNC

Instructions:

- Answer all questions.
- Clearly number your answers. Write legibly.
- Do *not* write your answers on the question sheets.
- *Explain* your answers – do not just state them.
- *Show* your derivations – do not just state the final result.
- Do not refer to any notes or books.
- The total time is 75 minutes.
- The total number of points is 100.

1 Trade Deficits

[25 points] Consider the following quotes:

1. "A current account deficit may indicate that a country offers sound investment opportunities, or it may be caused by investment bubbles or fiscal deficits."
2. "Since I cannot believe that the world will continue to give the United States an enormous gift year after year, I am convinced that at some point in the future, our trade deficit will end and the U.S. economy will have a trade surplus."
3. Each nation is "like a big corporation competing in the global marketplace."

For each quote, explain why you agree or disagree.

2 Open Economy IS/LM Model

Recall the model equations:

$$IS : Y + C(Y - T) + I(Y, i) + G + NX\left(Y, Y^*, P/\left[EP^*\right]\right) \tag{1}$$

$$LM : \; M/P = YL(i) \tag{2}$$

$$UIP : \; E = \frac{1 + i}{1 + i^*} E^e \tag{3}$$

Consider a monetary expansion abroad ($M^* \uparrow$). How does this affect the home economy? Assume that the foreign economy behaves like a closed economy to determine the changes in Y^* and i^*. Contrast two cases:

1. [20 points] Fixed exchange rate.
2. [20 points] Floating exchange rate. Assume that the expected future exchange rate remains unchanged.
3. [10 points] What does your finding imply for the need for coordinated monetary policies under fixed exchange rates?

3 Bond Yields and Expectations

The yield curve plots the bond yield (interest rate) against maturity.

1. [20 points] A downward sloping yield curve is often interpreted as a recession indicator. Explain the logic underlying this interpretation. Illustrate in an IS/LM diagram.
2. [5 points] Would you expect the yield curve to be upward or downward sloping in “normal” times? Explain.

End of exam.

4 Answers

4.1 Answer: Trade Deficits

1. ERP (2013, p. 213): $NX = S^P + S^G - I$. Trade deficits can be due to high investment ("sound opportunities" or "bubbles") or low public saving.

2. Feldstein (2008, p. 115): $NX = Y - C - I - G$. A trade deficit allows a country to consume more than it produces. If a country could run a trade deficit forever, this would indeed be a gift. Of course, one would expect the rest of the world would want to get paid for those gifts eventually. Then the US would have to run a surplus to repay its debts.

3. President Clinton: If a company's production costs are too high (or its productivity is too low), it goes out of business. It is not competitive. This cannot happen for a country. If China's productivity is low relative to the US, either its wages will be low or the Chinese currency will be weak. Competitiveness is a non-issue for a country.

4.2 Answer: Open Economy IS/LM Model

In both cases, a monetary expansion implies $Y^* \uparrow$ and $i^* \downarrow$.

1. Fixed exchange rate:

   UIP implies $i = i^* \downarrow$. This raises investment. $Y^* \uparrow$ raises NX. There is no change in E. The net effect is a domestic expansion. In the background, the domestic money supply rises.

2. Floating exchange rate:

   In the IS curve, replace the real exchange rate with UIP to obtain

   $$Y + C(Y - T) + I(Y, i) + G + NX\left(Y, Y^*, \frac{1+i}{1+i^*}E^e\right) \tag{4}$$

   We also have LM: $M/P = Y L(i)$. The rise in Y^* shifts IS to the right (higher NX). The drop in i^* leads to a dollar appreciation, which reduces NX and shifts IS left. The net effect is ambiguous.

3. Implications for policy coordination: If foreign monetary expansion leads to domestic contraction, there is need for coordination. Imagine the domestic central bank responds by increasing its money supply. That would partly offset the foreign expansion.

End of answers.