SIMON FRASER UNIVERSITY
Department of Economics

Econ 345
International Finance

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MIDTERM EXAM - (Solutions)

Questions 1-4. Answer True, False, or Uncertain. Briefly explain your answer. 8 points each.

1. If a country has a current account deficit then it is investing more than it saves.

   TRUE. *By definition,* $CA = S - I$. *If* $I > S$ *then* $CA < 0$.

2. If both Covered and Uncovered Interest Parity hold then the forward exchange rate is an unbiased predictor of the future spot exchange rate.

   TRUE/UNCERTAIN. *Covered Interest Parity implies*

   $$R = R^* + (F - E)/E$$

   where F *is the forward rate and* E *is the spot rate. Uncovered Interest Parity implies*

   $$R = R^* + (E^e - E)/E$$

   where E^e *is the expected future spot rate. If both hold we have* $F = E^e$*, so the forward rate is equal to the expected future spot rate. Finally, if investors have Rational Expectations, then* E^e *is an unbiased predictor of the future spot rate, so then* F *is also.*

3. Higher domestic interest rates cause the domestic currency to appreciate.

   UNCERTAIN. *It depends on <u>why</u> interest rates are rising. If it's because real interest rates are rising then the statement is true. If it's because expected inflation is increasing then the statement is false.*

4. Market efficiency implies that exchange rate changes should be unpredictable.

   FALSE. *Market efficiency can only be assessed relative to some theory of exchange rate determination. If we define it in terms of Uncovered Interest Parity (i.e., expected returns are equalized), then market efficiency does not imply exchange rate changes should be unpredictable. Interest rate differentials should be able to predict exchange rate changes. In fact, exchange rate changes <u>must</u> be predictable if interest rates differ in order for expected returns to equalized!*

   The following questions are short answer.

5. (18 points). China is often accused of having an 'undervalued' exchange rate. These accusations are usually based on a simple PPP calculation, using national price indexes. According to the Balassa-Samuelson model, why might this be a misleading calculation?

   Let's think of USA as the domestic country and China as the foreign country. PPP would imply

   $$P = EP^* \qquad \Rightarrow \qquad E = \frac{P}{P^*}$$

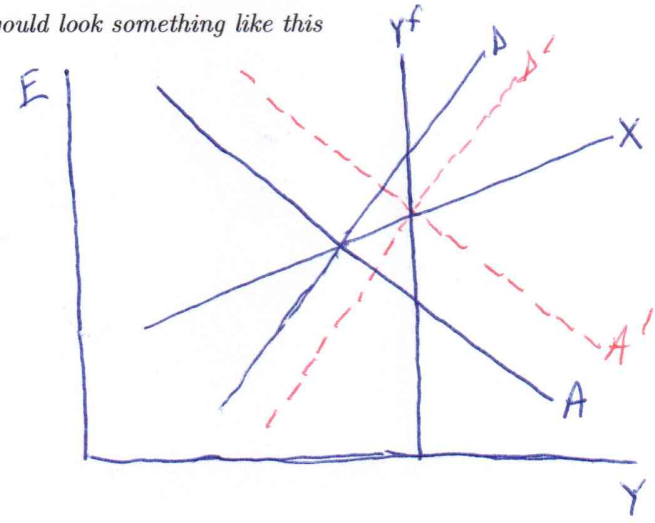
where E is the dollar price of the RMB, P is the US price level, as measured by the CPI, and P^* is China's CPI. Studies often find that $E < (P/P^*)$, suggesting that China's currency is 'undervalued', which supposedly gives China's goods an unfair advantage in world markets. However, broad based price indexes contain many nontradeable goods, and we know from Balassa-Samuelson that the relative price of nontradeable goods tends to be lower in developing countries, because their productivity and wages are lower. This causes $EP^* < P$, and makes China's currency appear to be undervalued. A better way to proceed would be to look at price indexes that only contain tradeable goods, but in practice this is very difficult, since even widely traded goods often have local nontraded services embodied within their prices.

6. (25 points). There has been a lot of recent discussion about the US Federal Reserve 'tapering' its domestic asset purchases, and the prospects for higher short-term US interest rates. Use the DD-AA model to illustrate what effects this might have on the Canadian economy.

   Higher US interest rates shift the US AA curve down and to the left. It would also shift the Canadian AA curve up and to the right (because R^* rises). A stronger US dollar (and weaker Canadian dollar) makes Canadian goods more attractive, which increases spending on Canadian goods. The increase in net exports leads to a movement up along the DD curve, and Canada's output increases. A potential caveat is that higher US interest rates would tend to lower US output (or reduce its growth rate), which produces a negative income effect on Canadian net exports. In principle, this could shift the Canadian DD curve to the left, and potentially offset the outward shift of the AA curve.

7. (25 points). Suppose you get that dream job as economic policy adviser for the Canadian government. Suppose that currently the economy is in a recession, with a current account balance that is near its desired or target level. Use the DD-AA model to depict this situation. What sort of macroeconomic policy package would you recommend in order to restore full employment while maintaining the target current account balance? Illustrate your answer with a graph, and explain in words why it will work.

   The picture would look something like this



   Note that restoring full employment with just a monetary stimulus puts you above the current account target, while restoring full employment with just a fiscal stimulus would put you below it. What is needed is a combined monetary stimulus <u>and</u> fiscal stimulus, which shifts out both the AA and DD curves so that they intersect the XX curve where it intersects the vertical Y^f curve.