

SIMON FRASER UNIVERSITY
Department of Economics

Econ 345
International Finance

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FINAL EXAM
(Solutions)

Questions 1-5. Answer True, False, or Uncertain. Briefly explain your answer. No credit without explanation (8 points each).

1. Rapid productivity growth causes the exchange rate to appreciate.

TRUE/UNCERTAIN. *This would tend to be true if productivity is biased toward tradeable goods industries (i.e., Balassa-Samuelson). However, a balanced/neutral increase in productivity amounts to an increase in domestic output supply, which would tend to produce a (real) depreciation. At the same time, higher domestic output would tend to increase domestic money demand, which would create pressure for the nominal exchange rate to appreciate. So in principle it could go either way. (If they answer TRUE and say something about Balassa-Samuelson, give them at least 6 pts).*

2. With fixed exchange rates, monetary policy cannot be used to stabilize domestic output.

TRUE/UNCERTAIN. *This is true for a small open economy, with open capital markets, and with perfect substitutability between domestic and foreign bonds (i.e., no risk premium). If any of these conditions do not hold, then there might be some scope for an effective monetary policy, even with fixed exchange rates. (If they say true, and explain why, then give them at least 6 pts).*

3. The IMF should not bail out countries that experience a currency crisis.

UNCERTAIN. *It depends on why the crisis occurs. According to first-generation crisis theories, the IMF should not bail out the afflicted countries, since the crisis reflects poor/inconsistent macroeconomic policies. However, according to second-generation crisis theories, where currency crises resemble bank runs, there might be a role for IMF bail outs, particularly from an ex ante perspective. Of course, this distinction between first- and second-generation crisis theories is much easier to make in theory than in practice.*

4. Sterilized intervention is only effective if domestic and foreign bonds are perfect substitutes.

FALSE. *It's the opposite. If domestic and foreign bonds are perfect substitutes, so that only expected returns matter, then sterilized intervention will be ineffective. Sterilized intervention works by influencing the risk premium. If domestic and foreign bonds are perfect substitutes, there is no risk premium.*

5. Fiscal expansions in the USA (e.g., higher government spending or lower taxes) cause output in China to decrease.

TRUE/UNCERTAIN. *A US fiscal expansion shifts out the US DD curve, and causes US interest rates to rise. Since China has a fixed exchange rate vis-a-vis the US, it must match the higher US interest rate (e.g., by selling foreign exchange reserves). Higher interest rates in China depress spending and cause China's DD curve to shift left. At the same time, selling fx reserves to support the currency causes its AA curve to shift left. They intersect at the same exchange rate (by assumption), but at*

a lower output level. The result could go the other way, however, if the US fiscal expansion results in sufficiently higher US income and imports from China, so that an increase in Chinese net exports outweighs the effects of higher interest rates, and the DD curve actually shifts out.

The following questions are short answer. 20 points each.

6. Japan recently announced a large ‘quantitative easing’ program, which will involve the Bank of Japan purchasing more than \$ 1 trillion of assets over the next two years. Use the DD-AA model to analyze the effects of this policy on China.

Since the US floats against Japan, and China pegs to the dollar, China effectively floats against Japan. The recently announced asset purchase program by Japan will shift out its AA curve, and effectively lower the foreign interest rate from China’s perspective. A lower R^ causes China’s AA curve to shift down, and China’s currency appreciates against the yen. This currency appreciation will reduce China’s net exports and income. (For full credit they should have a graph showing the downward shift of China’s AA curve). Really alert students might mention that if the program is successful, and Japanese incomes rise, then this might increase demand for Chinese exports, and shift out China’s DD curve. This could result in higher Chinese income (and a even greater appreciation of the yuan). However, they do not need to mention this possibility for full credit.*

7. In recent years the international financial position of the USA can be described roughly as follows: It has a foreign debt to GDP ratio of approximately 100%. It has a foreign asset to GDP ratio of approximately 75%. Hence, it has a net foreign debt ratio of approximately 25% of GDP. Its foreign debt is denominated entirely in US dollars. However, roughly 2/3 of its foreign assets are denominated in foreign currency. During this same period the US dollar has depreciated by about 10% on average, while at the same time the US has been running current account deficits of about 3-5% of GDP.

Has US foreign wealth been increasing or decreasing during this period? Explain the relevance of this result for the use of current accounts as measures of changes in a nation’s wealth.

First, note that foreign currency assets as a share of GDP is 50%. That is,

$$\begin{aligned} \frac{\text{For. Curr. Assets}}{Y} &= \frac{\text{Total Assets}}{Y} \times \frac{\text{For.Curr. Assets}}{\text{Total Assets}} \\ &= \frac{3}{4} \times \frac{2}{3} \\ &= \frac{1}{2} \end{aligned}$$

Therefore, a 10% depreciation of the dollar produces a capital gain that is 5% of GDP. This capital gain is not reflected in the current account, which simply records flows of goods and asset income. Also note that this capital gain completely offsets the recent current account deficits! US wealth hasn’t been decreasing, it’s been increasing!

Some people have noted this and argued that the increasing importance of foreign asset stocks and the resulting increasing importance of unrecorded capital gains and losses has made the official current account numbers increasingly misleading, and perhaps even ‘irrelevant’. Hopefully, they will say something about the difference between net and gross and asset trades, and point out that the current account only records net trades. We talked about this issue on the last day of class, when we discussed Obsteld’s article. You could look at the solution to Q2 on prob set 3 for more discussion.

8. Many European countries are in the midst of severe recessions. For example, unemployment in Greece is approaching 30%! As you know, Europe shares a common currency. What are the connections

between Europe's monetary union and the recent economic turmoil in countries like Greece, Italy, Spain, and Portugal? What could Europe have done differently to avoid the crisis? Be sure to mention Mundell's 'Optimum Currency Area' criteria. Looking forward, how might domestic fiscal policies be used to respond to the crisis? (Hint: Remember problem set 2!)

Obviously, this is difficult question. It will be hard to grade. Please read their answers carefully, and be generous with partial credit. Their answers are liable to be all over the map, so mainly make sure that what they say makes economic sense.

Here's what I would say - The key point is that monetary and fiscal policy are inextricably linked through the government's budget constraint. The EMU centralized monetary policy, but did not centralize fiscal policy. This created a potential train wreck, since southern European countries had a long tradition of financing fiscal deficits with the help of the inflation tax. One of two possibilities could have made this work: (1) Northern Europe learns to love inflation, or (2) Southern Europe learns to balance its government budgets. In the end, neither happened. Of course, people recognized this danger, and the architects of the Euro tried to ensure fiscal 'responsibility' in Southern Europe by getting everyone to agree to a so-called 'growth and stability pact', which supposedly placed limits on fiscal deficits. The timing was unfortunate, however, since the first countries to violate it (during the 2001-2002 recession) were Germany and France! Not surprisingly, they decided not to enforce it, and the growth and stability pact was quickly revealed to be toothless.

I'm guessing/hoping that most students will simply mention the 4 Optimum Currency Area criteria, and that Europe should have tried to make sure they satisfied them. These are:

- Extent of Bilateral Trade
- Correlation of Business Cycles
- Degree of Factor Mobility
- Fiscal Transfers/Risk-Sharing

The first one was actively addressed by bringing down intra-European trade barriers, and creating a 'single market'. There's not much directly that can be done about the second. The third was partially addressed by policies that made it easier to move between countries. However, most economists think that Europe's factor markets are still more segmented than are markets within Canada or the USA. The issue of fiscal transfers and fiscal centralization fits into the last one. Again, they made some progress on this, but are still well short of the 'fiscal federalism' of the USA and Canada. Of course, 'transfers' are taking place, but in a very costly and messy way (ie, via default).

For the last part of the question (i.e., 'looking forward'), I was hoping they would mention something about using domestic fiscal policies to mimic a currency depreciation, and maybe even cite Gopinath et al.'s paper. Traditional expansionary fiscal policies won't work, since they exacerbate an already unsustainable fiscal deficit, but a combined import tariff and export subsidy could work, and be self-financing. If they mention this, along with Mundell's OCA criteria, give them full credit.