

SIMON FRASER UNIVERSITY
Department of Economics

Econ 345
International Finance

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MIDTERM EXAM
(Solutions)

The first five questions are True, False, or Uncertain. Briefly explain your answers. No credit without explanation. (8 points each).

1. According to Uncovered Interest Parity, if the annual US interest rate is 5% and the annual Canadian interest rate is 3%, then the US dollar must be expected to depreciate by 2% over the next year.

TRUE. *According to UIP*

$$R = R^* + \frac{E^e - E}{E}$$

where R is the domestic interest rate, R^* is the foreign interest rate, and $(E^e - E)/E$ is the expected rate of domestic currency depreciation. The idea here is that if the domestic currency is expected to depreciate, then the domestic interest rate must be higher than the foreign rate in order to compensate for the expected capital loss from holding domestic currency. From the above equation it is clear that if $R = .05$ and $R^* = .03$, then the US dollar must be expected to depreciate by 2%

2. Global pandemics cause countries to run current account deficits.

FALSE/UNCERTAIN. *A pandemic causes a temporary decline in output. For a single country, the optimal response is to borrow, so as to smooth out the adverse effects over time. However, by definition a pandemic affects all countries. Not all countries can borrow at the same time. Someone has to be willing to lend! If every country tries to borrow, all that happens is that the world interest rate rises. Of course, in reality the covid pandemic did not affect all countries equally. In this case, there might be some scope for the less affected countries to lend to the more adversely affected countries.*

3. Rapid productivity growth in the tradeable goods sector causes the real exchange rate to appreciate.

TRUE. *This is just the Balassa-Samuelson effect. Higher productivity growth in tradeables raises wages in the tradeables sector, which then causes wages to rise in the nontradeables sector. Higher wages in nontradeables then get passed on in the form of higher prices, which then leads to a real appreciation.*

4. Increased government spending leads to current account surpluses.

FALSE. *Increased government spending shifts out the DD curve, which causes the currency to appreciate. The currency appreciation causes net exports to decline (as long as the Marshall-Lerner condition is satisfied).*

5. If firms engage in 'pricing-to-market' then monetary policy becomes more effective.

FALSE. *Pricing-to-market makes the DD curve steeper, which then reduces the effects of monetary policy on output. (See Lecture 6A, pgs. 8-9)*

6. (20 points). Use the DD-AA model to explain why Trump's tariffs on China's exports to the USA weren't very effective.

The immediate effect of the Trump tariffs was to make Chinese goods more expensive for Americans. As a result, they bought fewer Chinese goods, and more American goods. This shifted out the DD curve in the USA. However, absent any sort of monetary policy response, this would appreciate the US dollar, which then acts to offset the effects of the tariff! This is exactly what happened. (Note: Since China pegs to the dollar, the extent to which the dollar appreciated relative to the RMB was a deliberate choice by China's central bank).

7. (20 points). Suppose you are an advisor to a country that is currently in a recession. The prime minister has asked you to assemble a policy package that will restore full employment without affecting the trade balance. Using the DD-AA model, describe a package of monetary and fiscal policies that will do the job. (Hint: Assume the country has a flexible exchange rate).

Assuming the Marshall-Lerner condition holds, the XX schedule is upward sloping and flatter than the DD curve. (The XX curve represents combinations of E and Y that keep the current account constant. See Lecture 6A, pgs. 3-4). Either a fiscal expansion or a monetary expansion can be used to increase Y back to full employment. However, a fiscal expansion 'worsens' the current account, while a monetary expansion 'improves' the current account. What is needed is a combination of monetary and fiscal expansion, which moves the economy up along the XX curve.

8. (20 points). Suppose a Central Bank wants to achieve a steady inflation rate. Suppose it sees nominal interest rates rising in financial markets. How should it respond to this increase? Should it increase or decrease money growth? Describe how it could use information from the foreign exchange market to help it decide. (Hint: Use the Fisher equation and PPP in your answer).

According to the Fisher equation, $R = r + \pi^e$, where R is the nominal interest rate, r is the real interest rate, and π^e is the expected inflation rate. If R is observed to be rising, this could be happening either because r is rising, or because π^e is rising. The problem is that appropriate monetary reaction depends on which it is. If r is rising, this indicates that real money demand is increasing, perhaps due to expanding economic activity. In this case, the Central Bank would want to accommodate the increased demand for money by monetary easing. Otherwise, there would be pressure for the price level to fall (or for the inflation rate to come in below target). On the other hand, if R is rising merely because people are expecting higher future inflation, then the Central Bank would certainly not want to accommodate this by monetary easing, and thereby generate the higher inflation rate that people are expecting! If anything, they would want to tighten. Now, the point of the question is that the foreign exchange market can be used as an extra signal to help it decide which is the relevant case. We know from PPP that if inflation is going to be higher, then the domestic currency should depreciate. So if at the same time that R is rising, the Central Bank sees that E is rising (ie, the the currency is depreciating), this would suggest that the underlying source of the rise in nominal interest rates is an increase in expected inflation, which should not be accommodated. Conversely, if the currency is appreciating (ie, E is falling), then this would indicate that R is rising because r is rising, and so therefore the Central Bank can safely accommodate this by increasing the money supply.