SIMON FRASER UNIVERSITY
Department of Economics

Econ 345 | Prof. Kasa
International Finance | Spring 2022

FINAL EXAM
(Solutions)

The first four questions are True, False, or Uncertain. Briefly explain your answers. No credit without explanation. (10 points each).

1. China's economy would be more stable if it did not peg its currency to the US dollar.

   UNCERTAIN. *It depends on whether real (DD curve) shocks or financial (AA curve) shocks are more important in China. If real shocks domiinate, then a flexible rate would produce more stability. If financial shocks dominate, then a fixed rate would produce more stability. (See Lecture Slides 11A, pgs. 2-4).*

2. Exchange rate devaluations increase output.

   UNCERTAIN. *It depends on whether it is expected or unexpected. A surprise devaluation will make domestic goods more competitive, and shift the AA curve out, in response to reserve accumulation. Output will increase (in the short run). However, an expected devaluation will produce capital flight, which will lead to reserve loss and higher interest rates. This will reduce output. See Lecture Slides 7B, pgs. 6-9). Bonus: Devaluations can also be contractionary if there are large unhedged foreign currency liabilities, as occurred during the Asian Crisis. However, students do not need to mention this to get full credit.*

3. US monetary expansion causes output in China to fall.

   FALSE. *The key point here is that China fixes its exchange rate to the dollar. When the US lowers interest rates (monetary expansion), China must also. This will then stimulate China's economy. Note, also the higher US output will produce a positive income effect on the demand for Chinese goods. See Lecture Slides 11A, p. 5.*

4. According to Hume's 'price-specie-flow mechanism', when a country has an overall Balance of Payments deficit, its money supply will decrease.

   TRUE. *An overall BOP deficit will require the Central Bank to sell foreign reserves in order to keep the exchange rate from depreciating. This will then reduce the domestic money supply. See Lecture Slides 7A, p. 8. (Note: during the exam, a student asked about sterilized intervention when answering this question. It is possible that if the CB sterilizes the reserve loss by buying domestic assets, then the money supply will not immediately fall, although eventually the CB will run out of reserves, so this is only temporary. Students do not need to mention the sterilzation possibility in order to get full credit.*

5. (30 points). The current situation in the US economy can be described as follows: unemployment is quite low, output growth is reasonably strong, and as a result, there is upward pressure on wages and prices. Use the DD-AA model to depict this situation in a graph. Explain what would happen over time if US policymakers did nothing. Use a graph to show how the economy adjusts over time. Now

show what would happen if the Fed raises interest rates in an attempt to lower inflation. Finally, the Bank of Canada is also raising interest rates in response to growing inflationary pressure. Explain why the Bank of Canada needs to pay attention to US policy when deciding how much to raise its own interest rate.

*Given the data in the problem, the DD and AA curves intersect to the right of the full employment line. (See Lecture Slides 5B, p. 8, point 2 for an example). As the price level gradually rises, the AA curve shifts down, since $M/P$ decreases. At the same time, higher domestic prices cause the real exchange rate, $EP^*/P$, to appreciate, which reduces net exports, causing the DD curve to gradually shift left. Both curves continue to shift left until they intersect the full employment line. A contractionary monetary policy will speed up the return to full employment. The key difference is that the long-run equilibrium price level will be lower if the Fed engages in monetary contraction. Long-run output will be the same either way.*

*Since Canada has a flexible exchange rate, US monetary contraction will be transmitted 'negatively' to Canada, meaning the higher US interest rates will tend to depreciate the Canadian dollar, and stimulate the Canadian economy. If Canada is already experiencing inflationary pressure, this could be problematic for Canada. The weaker Canadian dollar will also add to inflation via import prices. So the more aggressive is the US, the more aggressive must be the Bank of Canada. (Caveat: the negative income effect in the USA will work against this, since it will reduce demand for Canadian goods. If the income effect dominates, Canada might actually need to be less aggressive).*

6. (30 points). Tensions between China and the USA have increased in recent years. Some people argue that US policymakers must not provoke China, since China holds a large quantity of US Treasury securities, and they could punish the USA by suddenly selling these securities on the open market.

   Do you think this is a credible threat? What would happen to China's money supply if it did this? (Hint: Who holds most of these securities in China?) What would be the effects on China's economy? Would the US economy necessarily suffer? Why or why not? Explain how China could use sterilization to make the threat more credible.

   *This is probably the hardest question on the exam, and will be the hardest to grade. Please be generous with partial credit. The key point here is that since the PBOC holds most of the Treasure securities, if China engages in a large scale sale of US assets, the Chinese money supply will decrease. For the usual reasons, this monetary contraction could lower output (or at least slow the rate of growth!) in China. To avoid this, the PBOC could simply sterilize the reserve loss by buying domestic assets. (Something like this would be necessary if China wants to keep its currency from appreciating). Dumping US securities will of course cause the dollar to depreciate, and US interest rates to rise (since bond prices fall). Higher US interest rates will depress spending in the US, and be bad for the US economy. However, the weaker dollar could actually work in the other direction, so it's not obvious that the US economy would suffer. Some students might mention that the depreciation of the dollar against the RMB (if China lets it happen) would inflict a capital loss on China, since its remaining holdings of US assets are now worth less. However, they don't need to mention this for full credit. The key thing I'm looking for is that dumping US assets would produce a monetary contraction in China unless it is sterilzed.*