SIMON FRASER UNIVERSITY
Department of Economics

Econ 345 Prof. Kasa
International Finance Spring 2020

FINAL EXAM
(Solutions)

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

1. The IMF should not bail out countries experiencing a currency crisis.

   UNCERTAIN. *True, if 'first-generation', i.e., the country is engaged in inconsistent macroeconomic policies. However, False, if 'second-generation', ie., if the crisis reflects the presence of multiple equilibria and a self-fulfilling panic.*

2. If a country fixes its exchange rate, it gives up control of its monetary policy.

   TRUE/UNCERTAIN. *The central bank can either fix the interest rate/money supply, or the exchange rate, but not both (due to Uncovered Interest Parity). There are potential exceptions, however. One is to follow China's example, and impose capital controls. Another is to exploit the potential presence of a risk premium, and engage in sterilized intervention. A third possibility is that some other country pegs to you, as countries did to the US dollar during Bretton Woods. Give 8 points for just True, and 10 points if at least one of the exceptions is mentioned*

3. Expansionary monetary policy in the USA is bad for Canada.

   TRUE/UNCERTAIN. *The notes emphasized that monetary transmission is 'negative' with flexible exchange rates, due to the resulting depreciation of the US dollar, which reduces Canada's net exports. This is the answer most people will give. Give 9 points for this. However, for full credit, they should note that there is an offsetting positive income effect at work, arising from higher US income, which produces a direct positive effect on Canadian net exports.*

4. Sterilzed intervention will be ineffective if investors are risk neutral.

   TRUE/UNCERTAIN. *Sterilzed intervention works by changing the risk premium. If investors are risk neutral, there will obviously be no risk premium. The only potential exception to this is that sterilized intervention might signal future changes in (unsterilized) monetary policy, in which case it could still influence the exchange rate, even under risk neutrality. However, they do not need to mention this for full credit.*

5. (30 points). Currently, the International Financial System is based on a handful of government-issued currencies (e.g., the US dollar, the euro, and the British pound). Many people argue that it makes more sense to move to a system based on a digital currency (e.g., Bitcoin). A key distinguishing feature between these 2 systems is that digital currencies limit the 'supply'

of money via a costly process of 'mining'. Nakamoto's original 2009 blueprint for bitcoin explicitly noted that limitation in the supply of bitcoin was designed to mimic features of the 19th century Gold Standard.

Given our discussion of how the Gold Standard operated, do you think it would be a good idea to move to a Bitcoin-style system of International Finance? What are the pros and cons of a monetary policy based on controlling the price level (the current system) versus one based on controlling the money supply (a Bitcoin system).

This is the hardest question on the exam. Please be generous with partial credit. There is no specific right/wrong answer I am looking for. However, I did suggest they read an article by Paul Krugman, entitled "Golden Cyberfetters", and hopefully some of the good students will be able to discuss it. I also briefly talked about it in class. Krugman's basic point is that there were good reasons the Gold standard finally collapsed during the Great Depression. When the money supply is fixed, the price level must adjust to maintain equilibrium in the money market. When uncertainty and panic occur (as during a recession), money/liquidity demand increases. If M cannot respond, then P must fall. Unfortunately, deflation increases real debt burdens, forcing many people into bankruptcy. People default on loans, which puts pressure on banks. If banks fail, that exacerbates the problem, since (outside) money will fall. This is what happened during the Great Depression. The conventional wisdom is that the Great Depression would not have been nearly as bad if countries had not tried to stay on the Gold Standard, which limited their ability to use monetary expanion to offset the early phase of the recession. Advocates of bitcoin have failed to describe how such a system would be consistent with a central bank's 'lender of last resort' function.

The basic trade-off is that you can either control the money supply (as with bitcoin) or control the price level (as with today's current inflation-targeting centrol banks). But you can't do both as the same time. Today's monetary policymakers do not pay attention to what the money supply is. It's even hard to define! This drives bitcoin people crazy, because they worry it will lead to uncontrolled inflation. In fairness, unbacked fiat money systems have often led to hyperinflation, but that's because government's abused them. Assuming we have learned not to do that, Krugman argues that it is better to avoid financial panics and unanticipated wealth redistributions associated with changing inflation rates, and let Central Banks adjust the money supply as needed in order to control the inflation rate.

6. (30 points). Several countries are blaming China for the current coronavirus crisis. In response, they want to retaliate in some way. One possibility would be to impose tariffs on Chinese exports. Suppose this actually happens. Use our DD-AA model to describe the effects on China's economy. (Just describe how the curves shift, and how E and Y are affected. You don't need to draw graphs.) Remember, China currently 'pegs' its currency to the US dollar. How would China's central bank have to respond to the tariffs? Would this response help or hurt the Chinese economy? Describe how 'sterilization' could be used to mitigate the effects of the tariff. Suppose that China responds by retaliating itself against the tariffs. How might China do this without imposing its own tariff?

   (Please, when answering this question, refrain from political commentary. Stick to the economics).

   I'm looking for 4 main things:

1. The tariff shifts China's DD curve left. This lowers China's output, and puts upward/depreciation pressure on the RMB.

2. Because China pegs to the dollar, to maintain the peg the PBOC would need to sell foreign reserves and reduce the money supply. This would shift its AA curve left. The key point is that maintaining the peg would <u>exacerbate</u> the negative effect on China's economy.

3. China could mitigate this negative effect by sterilizing its foreign reserve sales (ie, by purchasing RMB assets). This would allow China's interest rates to fall without triggering an RMB depreciation.

4. Even without sterilization, China could simply relax the peg, and allow its currency to depreciate against the dollar. This would largely nullify the effects of the tariff. Note, this would likely be a better option than imposing its own tariffs, which probably would hurt China as much as it hurts other countries.