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Econ 345 Prof. Kasa
International Finance Spring 2020

PROBLEM SET 2
(Solutions)

1. (25 points). Read the article from *The Economist* entitled "Two Out of Three Ain't Bad", which is posted on the class webpage. According to this article, what is the open-economy 'policy trilemma'? Provide examples of countries that have chosen each corner of the trilemma triangle. Near the end of the article, it discusses recent research by Helene Rey, from the London Business School. In what sense does her work suggest that in the modern world, the trilemma might actually be just a dilemma (i.e., countries really only have one choice). According to Rey, why don't flexible exchange rates support an independent monetary policy?

   The Open-Economy Trilemma refers to trade-offs that must be made when choosing among the following three desirable policies: (1) Stable exchange rates, (2) An independent monetary policy aimed at domestic macroeconomic conditions, and (3) Open capital markets that allow savers to achieve the highest returns, and borrowers to acquire funds at the lowest cost. According to the trilemma, a country can only choose two, not all three. Picking two requires you to sacrifice the third. I will have more to say about this in the next online lecture. For now, you should just be aware of some real-world examples. Canada and the USA are examples of countries that have opted for (2) and (3), and therefore their exchange rates fluctuate in response to supply and demand changes. Hong Kong and the individual countries within Europe are examples of countries that have opted for (1) and (3). Hong Kong pegs its currency to the US dollar, while the individual euro countries have the ultimate fixed exchange rate (i.e., a common currency). As a result, they are not able to use monetary policy to set their own interest rates. Finally, China is the leading example of a country that has opted for (1) and (2). It has a fixed exchange rate (more or less pegged to the US dollar), and an independent monetary policy. To make this work, it must impose capital controls, that restrict the flow of money into and out of the country.

   The research by Helene Rey cited by the article suggests that these days there might only be two options. The option of choosing (2) and (3) [open capital markets and an independent monetary policy] has largely disappeared in a world dominated by massive flows of private capital. Remember, the central bank can only really control one interest rate (e.g., the fed funds rate in the USA). All other rates are 'spreads' over this rate. Rey argues that these days, a country's credit spreads are largely determined by US monetary policy. For example, although the Bank of Canada continues to alter its 'Bank Rate' in an effort to steer domestic credit conditions, its leverage in doing this has diminished over time, as Canadian banks and businesses can increasingly tap into the US financial markets.

2. (25 points). The coronavirus is currently wreaking havoc on the world economy. There are many reasons for this, so let's simplify by focusing on just one. Suppose the primary effect of the coronavirus is to create "uncertainty", which leads investors to increase their demand for "liquidity" (i.e., it increases the demand for money relative to other assets). Use the DD-AA model to show how this would affect the US economy. What happens to US output and the value of the dollar? US policymakers are currently debating whether to respond by cutting interest rate or increasing government spending. Which of these policy responses would Canada favor? Which would China favor? (Hint: The Canadian dollar floats against the US dollar, whereas the RMB is pegged to the US dollar).

   An increase in money demand causes the AA curve to shift down and to the left. This causes output to fall and the exchange rate to appreciate. Note, this is exactly what is happening in the US right now. Macro policy can respond in two ways. The Fed can respond to the increased money demand by increasing the supply. Effectively, they did that recently, by cutting the fed funds rate to zero. Unfortunately, once you cut to zero, there is not much more you can do (ie, you are in a liquidity trap). Rates can't go (much) below zero because currency gives you a zero rate. However, fiscal policy remains effective, and currently Congress is implementing a sitmulus package, in the form of direct increases in spending and cuts in taxes. This will shift out the DD curve. Output will recover, and the dollar will appreciate even more.

   Because Canada floats against the dollar, they would prefer US fiscal expansion. A strong US dollar promotes Canadian net exports. However, since China pegs to the dollar, they would prefer US monetary expansion. If the dollar strengthens, the RMB strengthens too, and this hurts China's trade. They would prefer loose US monetary policy, which enable them to loosen their monetary policy too. (Ignoring capital controls!).