SIMON FRASER UNIVERSITY
Department of Economics

Econ 345 — Prof. Kasa
International Finance — Fall 2016

PROBLEM SET 2
(Solutions)

1. (25 points). Suppose you get a job as an economic advisor to the Chinese government. The economy has been weakening, and you are asked what should be done. One proposal is to allow the currency to depreciate against the US dollar (i.e., a 'devaluation'). Use the DD-AA model to explain why a devaluation might be an effective policy. Can you think of a reason why this might be a dangerous policy? (Hint: What happens if investors begin to suspect another devaluation in the future? Use the DD-AA model to illustrate the effects of an anticipated future devaluation?).

   There is an important difference between one-time unanticipated devaluations, and expected future devaluations. An unanticipated devaluation will tend to stimulate the economy, and the central bank will gain foreign reserves. An expected future devaluation will tend to be contractionary, and the central bank will lose reserves. An unanticipated current devaluation (which is not expected to be repeated in the future), will shift the AA curve out to the right as the central bank purchases foreign exchange reserves (which it pays for by 'printing' domestic money). As a result, the economy expands as you move up along the DD curve, since domestic goods become more competitive in world markets.

   In contrast, an anticipated future devaluation will increase the expected return on foreign assets. To keep the exchange rate from depreciating, the central bank must sell foreign exchange reserves, which reduces the money supply and causes domestic interest rates to rise (so that UIP continues to hold). If the DD curve does not depend on R, then there may be little or no effect on output. However, more realistically, if the DD curve shifts left (e.g., because investment declines when interest rates rise), then both the DD and AA curve shift left so that they intersect at the currently pegged exchange rate. In this case, output falls in response to an expected future devaluation.

   Therefore, while a one-time devaluation might be beneficial, it could turn out to be contractionary if it causes investors to think that it might be followed by future devaluations (as commonly happens in practice). Moreover, if this happens, and the central bank begins to lose reserves, it will eventually run out of reserves. Investors know this, and so fears of a future devaluation can be self-fulfilling (as discussed in class).

2. (25 points). Suppose Hillary Clinton gets elected, and that Donald Trump was right - the U.S. embarks on a program of increased government spending and increased government deficits. Given that China has a 'fixed' exchange rate with the US dollar, use the DD-AA model to analyze the likely consequences for China. Would the Clinton election be good news or bad news for the Chinese economy?

   Like everyone else, I thougth Hillary would win. Oh well, it looks like Trump is also planning a fiscal expansion! The question turns out to be a little tricky, because the answer depends on whether the DD curve depends on interest rates. (In practice, it does, but most of the textbook discussion ignores this. So give them credit either way). The effects on the USA are straightforward. Fiscal expansion shifts out its DD curve, and causes the dollar to strengthen and US interest rates to rise (exactly what we've

been seeing the past week!). The effects on China are a little trickier. First, in practice, China has let its currency fall a bit against the dollar, but let's ignore that to make things simple. (Don't penalize them if they make their answer consistent with what's actually happening!). So let's suppose China keeps its exchange rate pegged to the dollar. Therefore, China must match the higher interest rates in the USA. Two countervailing effects occur in the DD-AA model for China. Higher USA interest rates would cause China's AA curve to shift right. However, China's sale of foreign reserves (or its own domestic monetary contraction), causes its interest rates to rise to the higher USA level. This would cause its AA curve to shift left. If DD does not depend on R, then the two effects exactly cancel, and the DD/AA curves continue to intersect at the current pegged exchange rate. However, as in the previous question, if DD shifts left due to higher interest rates, then the leftward shift in AA dominates, so that the new DD and AA curves intersect at a lower level of output. In this more realistic case, the USA fiscal expansion would be <u>bad</u> for China. Of course, offsetting this is the fact that higher ouput in the USA would cause higher demand for Chinese goods (assuming Trump doesn't try to impose tariffs!)