

SIMON FRASER UNIVERSITY
Department of Economics

Econ 345
International Finance

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PROBLEM SET 2
(Solutions)

1. (25 points). On Saturday March 22, 2024, an article entitled “How Economic Trouble in China Could Be Propelling the Dazzling Rise of Bitcoin”, appeared in *The Globe and Mail*. The following passage appears,

The Guardian recently reported that the crackdown on Chinese billionaires, sluggish growth and waning stock markets are triggering an enormous outflow of funds from China. In the first half of 2023, there was a shortfall of US\$19.5 billion in China’s balance of payments - an indicator of capital flight. The true figure may be many times higher. Mainland Chinese are snapping up luxury condos in Singapore and elsewhere in great numbers, and immigration consultants say many thousands of wealthy Chinese families are leaving the country.

Use the DD-AA model to illustrate the effects of ‘capital flight’ on China’s economy. (Remember, China pegs to the US dollar). Describe the two offsetting effects on the AA curve. If investment depends on the interest rate (as it surely does), how is the DD curve affected? How is equilibrium output then affected? Can capital flight explain the recent weakness in the Chinese economy?

This is an open-ended question, without a single correct answer. So please read carefully, and be generous with partial credit. A lot will depend on how the PBOC responds to the capital flight. Here I assume the PBOC keeps the exchange rate fixed, and the public does not expect the exchange rate to depreciate. If they do, this could be an additional source of capital flight, so don’t deduct points if someone assumes this.

If suddenly investors view Chinese assets as riskier, this will add a risk premium to the UIP relationship, and cause the UIP line to shift up in the foreign exchange market. This creates pressure for the RMB to depreciate. To prevent the RMB from depreciating, the PBOC must raise interest rates. If investment responds to the interest rate, this will cause the DD curve to shift left. (This is a little tricky, since movements in the interest rate that are consistent with UIP are reflected by a movement along a (flatter) DD curve. So a shift requires a deviation from UIP. However, students don’t need to mention this). At the same time, higher interest rates reduce money demand, and so the PBOC must reduce the money supply, through some combination of foreign and domestic asset sales. This shifts the AA curve left. If the PBOC keeps the exchange rate fixed, then the new DD and AA curves intersect at the same exchange rate, but at a lower level of output. Hence, capital flight could indeed be causing a slowdown in the Chinese economy!

2. (25 points). In mid 2014 the value of the Canadian dollar was above 0.9 US dollars. At the time, world oil prices were about US\$100/barrel. Over the next 5 years both oil prices and the Canadian dollar fell sharply. At the outbreak of the pandemic, oil was selling at about US\$60/barrel and the C\$ had sunk to about 0.76. Since the pandemic, oil prices have recovered while the C\$ remains stuck at around 0.75.

Explain how the Balassa-Samuelson model of real exchange rates might help to explain the recent behavior of the C\$. (Hint: Canada exports oil and is a price taker in world markets. Hence, you can think of an oil price change as a change in the productivity of Canadian tradeable goods). How might you explain the puzzling experience since the pandemic, when oil prices rose and the Canadian dollar stayed constant? (Hint: How do you think the ‘green transition’ has affected the productivity of Canada’s tradeable goods industry?)

Again, this is an open-ended question, with more than one ‘correct’ answer. I’m just looking for something that makes sense in terms of basic economic reasoning. The initial decline in the C\$ can be explained pretty simply by standard Balassa-Samuelson logic. Lower world oil prices is like a negative productivity shock to Canada’s tradeable goods industry, which causes a real depreciation of the C\$. Without any offsetting monetary reaction, this would induce a nominal depreciation. The recent decoupling between oil prices and the C\$ is harder to explain. I guess what I had in mind is that the recent ‘green transition’ has had the effect of being a negative productivity shock to Canada’s export sector (that doesn’t mean the shift out of fossil fuels is necessarily a bad thing! There could be offsetting benefits). So even though oil prices have risen, the implicit ‘taxes’ associated with the green transition are offsetting it, so the C\$ hasn’t moved. Another (simple) explanation would be if inflation in Canada has been higher than in the US, in which case standard PPP considerations might be offsetting the Balassa-Samuelson effect. Unfortunately, this doesn’t really work empirically, since inflation was actually a bit higher in the USA during 2022 and 2023, although I think Canada’s inflation rate might be a bit higher now. Another factor might simply be the fact that overall growth in the USA has been faster than in Canada in recent years. This will tend to increase the relative demand for US dollars and put downward pressure on the loonie.