Answers to Problem Set #6

1a.   As foreign and domestic assets become more substitutable, the CF becomes flatter, because a small change in the interest rate now has a larger effect on capital flows.
b.   A flatter CF curve, similar to increased interest rate sensitivity, translates into a flatter IS curve.
c.   If the IS curve become flatter, shifts in the LM curve translate into larger changes in Y and smaller changes in r. This means that the Fed has less control over interest rates.
d.   As noted in c, a flatter IS curve means monetary policy would have greater influence on output.

r | LM1 → LM2

ISflat

ISsteep

Y
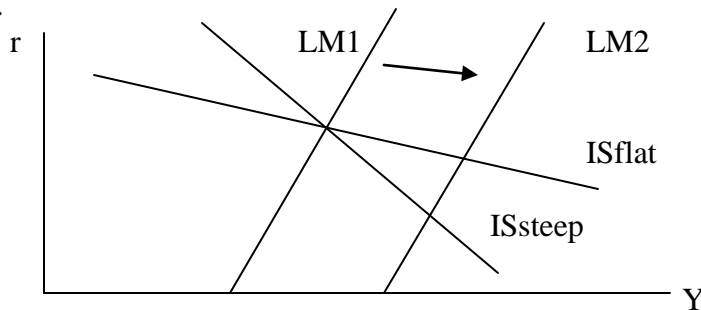
2a.   In the Mundell-Fleming variation of the IS-LM model, changes in interest rates are required to change the level of investment without affecting Y or E. Consider four options:
↑MP and ↑ FP – this would raise income (violating the assumptions)
↑MP and ↓ FP – this would reduce the interest rate but this will lower the exchange rate as capital would flow out (violating the assumptions)
↓MP and ↓FP – this would reduce income (and violate the assumptions)
↓MP and ↑FP – this would raise the interest rate which would cause E to rise so capital would flow in (violating the assumptions).

b.   Policymakers could ↑MP, ↓FP, and place quotas on imports. These opposite pressures for MP and FP would mean lower interest rates and unchanged income. The fall in interest rates would cause the exchange rate to fall and investment to rise. To counter the downward pressure on the exchange rate, import controls could be imposed. Investment in this case would rise, but contractionary FP and increased net exports would bring Y back to its initial level.

c.   Policymakers could follow the same policies as in part b for MP and FP which again could be designed to yield lower r and the same Y with increased I. If the lower interest rate set in the home country, which puts downward pressure on the exchange rate, is matched by similar policies abroad (↑MP, ↓FP), capital outflow would not take place since the exchange market balance would not change (since relative interest rates would not have changed.) In this case, increased I, the same Y, and the same E could be generated.

3a. In the Mundell-Fleming model, a fall in consumer confidence shifts the IS curve to the left. If the exchange rate floats freely, the LM curve would be unaffected. As shown below, E would fall and Y would remain unchanged. The fall in E would cause the trade balance to increase and thus replace the decline in consumption.

Under fixed exchange rates, when the IS Curve shifts to the left, M has to fall to keep E constant; therefore, the LM curve would shift left until E returns to its initial level so net exports would not be affected. Output would fall, while the exchange rate remained constant.

E   LM

IS

IS'

Y

E   LM'   LM

IS

IS'

Y
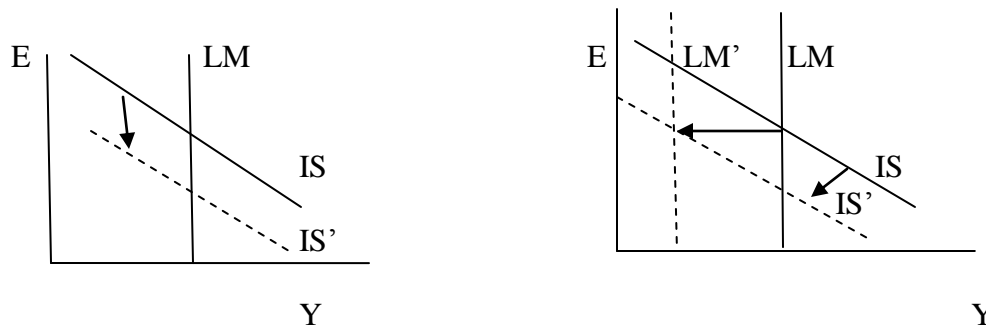
b. In terms of the Mundell-Fleming model, the switch in consumption can be represented as a decline in net exports. The graphics would be the same as in part a. With floating exchange rates, E would fall and Y would not be affected. The trade balance would also not be affected as both S and I remain the same; therefore, the decline in net exports from the shift in car consumption would be replace by an equivalent increase in net exports from some other goods substitution.

With fixed exchange rates, the graph on the right above also still holds. In short, M falls to keep the exchange rate constant which means that aggregate net exports would fall. The inward shifts in the IS and LM curves, thus, would yield lower Y.

c. Increased automated banking leads to reduced demand for money. Since the stock of money and the price level are fixed in the Mundell-Fleming model either Y must rise or r fall to sustain the given level of real balances (M/P.) This would be the result of a rightward shift in the LM curve. The decline in interest rates would lead to a capital outflow. In a small country, such an outflow would continue until interest rates returned to the world level. As capital flows out of a country, the exchange rate would fall and net exports and output would rise.

Under fixed exchange rates, the shift of the LM curve to right would only be temporary as the fall in E would require the LM curve to shift back. Y. NX and E would not change.

E   LM   LM'

IS   Y

E   LM   LM'

IS   Y