Assignment 4 EE312 (Semester 2/2019)

1. Due March 1st, 2020 (before 11.30 pm. Submit your work on the BE Moodle.)
2. For question 1 and question 3, even-numbered groups are assigned to do even-numbered sub questions.
3. For question 2, you must attempt all.

Question 1: Use the demand and supply model. Predict the directional change of the exchange rate (baht/USD) under the following situations.

1.1 The bank of Thailand cuts its policy rate.

1.2 Market expects that US dollar will be appreciating in the future.

1.3 The US government has imposed a trade sanction on Thai's agricultural product exported to the US market.

1.4 A positive improvement in production technology of Thailand causes a decrease in domestic price.

Question 2 Suppose that S&P, an international credit-rating agency, has decided to *downgrade* the credit rating of Thai economy. Answer the following problems.

a) Under the flexible exchange rate, how does the upgrade of credit rating affect the value of Thai currency?

b) If the authority wishes to resist the movement of the exchange rate (baht/USD), what does the authority need to do? Explain about the implementation process under the forex market intervention.

c) Discuss about the unintended impact of the forex market intervention on the domestic financial system. If the authority wishes to limit the sided effect of the forex market intervention, what does the authority need to do?

Question 3 Under the Mundell-Fleming model, analyze the impact of the following situations on output, real interest rate, exchanger rate, unemployment rate. Analyze the impact under both fixed and flexible exchange rate system

3.1) A reduction of money supply.

3.2) An increase in government spending.

3.3) Thai government has imposed a tariff on imported products.

3.4) Thai's credit rating condition has been improved.

Question 1: **Use the demand and supply model. Predict the directional change of the exchange rate (baht/USD) under the following situations.**

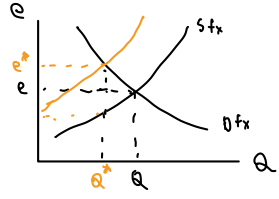
1.1 The bank of Thailand cuts its policy rate.

1.2 Market expects that US dollar will be appreciating in the future.

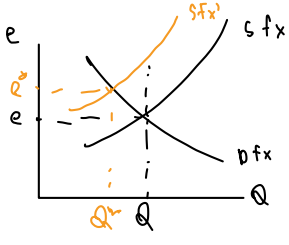
1.3 The US government has imposed a trade sanction on Thai's agricultural product exported to the US market.

1.4 A positive improvement in production technology of Thailand causes a decrease in domestic price.

1.1 When r ↓, Thai Baht will be demanded lesser and US dollars will be demanded more because when r ↓ foreign investors would take money out of Thailand so supply curve with shift left. As a result, Thai baht will depreciate and US dollar will appreciate.



1.3 When US government impose a trade sanction, Thai's export will decline because U.S.'s demand on Thai's product decrease. As a result, demand for Thai baht will decrease and Thai Baht will depreciate. At the same time, US dollar's demand will increase. Supply curve will shift left due to the decline in export.



Question 2 Suppose that S&P, an international credit-rating agency, has decided to *downgrade* the credit rating of Thai economy. Answer the following problems.

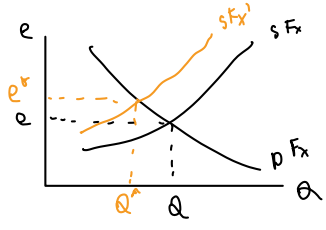
a) Under the flexible exchange rate, how does the upgrade of credit rating affect the value of Thai currency?

b) If the authority wishes to resist the movement of the exchange rate (baht/USD), what does the authority need to do? Explain about the implementation process under the forex market intervention.

c) Discuss about the unintended impact of the forex market intervention on the domestic financial system. If the authority wishes to limit the sided effect of the forex market intervention, what does the authority need to do?

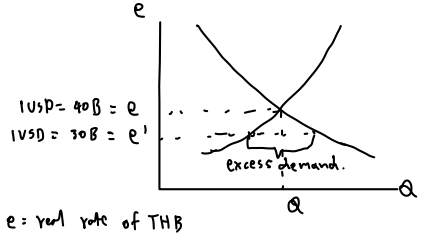
$$e = \frac{P}{P^*}$$

a.) The upgrade of credit rating would increase the demand of foreign investors to invest in Thai assets. So if credit rating of Thai economy is upgraded, the investors would invest in Thai assets more, then the demand for Thai Baht will increase. As a result, Thai Baht will depreciate.



b.) Suppose 1USD = 30 Baht before downgrading and it's 1 USD = 40 Baht.

If the authority wants to rest the movement of the exchange they have to fix exchange rate. For this case Thai Baht is over valued so demand for US dollar will increased (people want to trade THB for USD). Central bank has to use reserved US dollar to trade with people at fixed rate (1 US1 = 30 Baht)



e = real rate of THB

e' = fixed rate of THB

c.) Unintended impact is that reserved US dollar is limited, if central bank can't continue letting people exchange for US dollar any more (reserved USD is gone), Thai Baht will be devalued because of imbalance of exchange rate, the country may face financial crisis like Thailand in 1997.

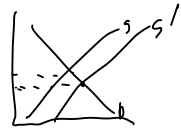
Question 3 Under the Mundell-Fleming model, analyze the impact of the following situations on output, real interest rate, exchanger rate, unemployment rate. Analyze the impact under both fixed and flexible exchange rate system

3.1) A reduction of money supply. $M_S \downarrow \rightarrow i \uparrow \rightarrow$ LM shift left

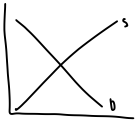
3.2) An increase in government spending.

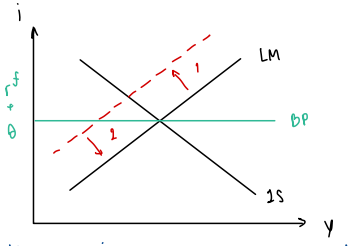
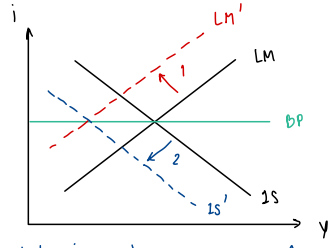
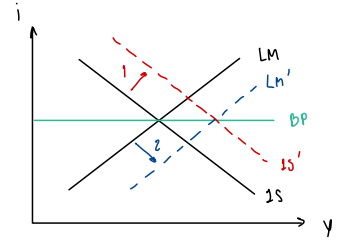
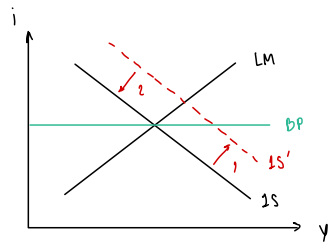
3.3) Thai government has imposed a tariff on imported products. $\rightarrow$ LM$\downarrow$ $\rightarrow$ GDP$\uparrow$ $\rightarrow$ Y$\uparrow$ $\rightarrow$ IS shift right

3.4) Thai's credit rating condition has been improved.



BOP$\geq$0 $Y = C + I + G + (X - M(1+t))$ $(X - M(1-t))$



	fixed exchange rate	flexible exchange rate
3.1)	 Y remains i remains e remains u remains	 Y$\downarrow$ i remains e$\downarrow$ u$\uparrow$
3.2)	 Y$\uparrow$ i remains e remains u$\downarrow$	 Y remains i remains e$\downarrow$ u remains

3.1) Since there is reduction in money supply, LM curve shift upward. Therefore, this economy face with Balance payment surplus. With fixed exchange rate system, there is excess USD supply. Therefore, Central bank print out THB and buy the excess USD. This will offset the excess USD money supply, but money supply of THB increase. LM curve shift downward until IS-LM-BOP are equalibrium. In flexible exchange rate system, real exchange rate is lower, THB apreciation. Thailand import more, export less leading to the decrease in current account as Y drop. IS shift to the left until IS-LM-BOP are equalibrium. So, Balance payment will equal to zero.

3.3 Since Thai government impose tax on imported product, This economy will face with Balance payment surplus

With fixed Exchange rate system, there is excess USD demand. So, Central bank sell USD from foreign reserve and they will sell USD until there is no excess supply for USD in economy. As government has to sell THB, they need more money supply, so $M_S \uparrow$, $\frac{M_S}{P} \uparrow$, LM will shift downward until it reaches equilibrium. For flexible rate, when BOP > 0, there will be more THB demand, THB appreciate, $\frac{eP^*}{P} \downarrow$, then Net export will decrease, as net export decrease, IS curve will shift left to the initial equilibrium.