PART 3: LONG QUESTION (50 points).

This question contains two parts. In the first part we will test your understanding of the goods market model in an open economy. The second part incorporates financial markets. **You can answer the two parts independently**, so you may prefer to go to the second part first.

(A) Goods market equilibrium

In this question we want you to compare two economies, Economy A and Economy B. The difference between the two has to do only with the composition of their imports. Economy A has imports that are a function of total demand, so that the import function is given by

$$Q^A = Q(Y, \varepsilon).$$

However, Economy B imports only consumption goods. This economy produces all of its investment goods domestically and government expenditure falls only on domestically-produced goods. As a result, the import function has the form

$$Q^B = Q(C(Y - T), \varepsilon)$$

To make things easier, assume the following functional forms, which are **IDENTICAL** for both economies:

$$C = c_0 + c_1(Y - T), \quad c_0 > 0, \quad 0 < c_1 < 1$$

$$I = d_0 + d_1 Y - d_2 i, \quad d_1, d_2 > 0$$

$$G = \overline{G}$$

$$X = x_0 Y^* + x_1 \varepsilon$$

while imports are different for each economy:

$$Q^A = \alpha Y - \beta \varepsilon$$

$$Q^B = \phi C - \beta\varepsilon$$

Additionally, assume that $\alpha > \phi\ c_1$. Finally, Y^* is output from the rest of the world, which is the same for both economies.

1. Write the expression for the demand for domestic goods in the two economies.

2. Draw the demand for domestic goods for both economies on the same graph, for constant i, Y^*, ε. Label the demand curve for Economy A as ZZ^A and likewise for economy B. Indicate the equilibrium point in both economies. Which demand has a steeper slope? Explain why.

3. Write down the expression for net exports in each Economy.

4. Assume that Economy A is in balanced trade at the goods market equilibrium point. Draw the demand for domestic goods for both economies on the same graph, and directly below the previous graph plot net exports against income for both countries. Line up the graphs so that the x-axis of each measures the same amount of income. Which economy has a steeper net export schedule? What is the sign of net exports in economy B at the level of income at which Economy A has balanced trade? **(This one is HARD!)**

5. Write down the expression for the equilibrium level of output in each Economy

6. Suppose the government in each Economy implements an expansionary fiscal policy through higher G. For a given level of income, which demand schedule has a larger vertical shift? Which economy has a larger multiplier? Do net exports in each economy increase, stay the same, or decrease? **(HARD too!)**

(B) Financial markets

Lets now work with an economy similar to A. Assume that domestic and foreign price levels are fixed, and that there is no expected inflation. The expected future exchange rate is taken as given and equal to $\overline{E^e}$. This is a "well behaved" economy in the sense that it behaves according to the assumptions studied in class. There is also the "rest of the world" whose variables are labeled with a $*$. (if it helps, you can forget completely about the previous setting, you will not need it).

1. Write down the 3 equations for good market equilibrium, financial market equilibrium, and the interest parity condition. Do not solve for the equilibrium.

2. Suppose that the foreign country implements an expansionary monetary and fiscal policy so that i^* remains unchanged and Y^* increases. What is the impact on domestic output and domestic interest rate? What happens to the exchange rate? why? Show this graphically, do not solve for the equilibrium algebraically.