ECON 105 Homework 2 KEY
Open Economy Macroeconomics
Due November 29

Instructions:

The purpose of this assignment it to integrate the explanations found in chapter 16 ok Kennedy with the AD-AS model and the Money demand (MD) – Money supply (MS) model developed in lecture.

You are to use flowcharts and graphic analysis to assess a macroeconomic scenario under three case's:

a) Closed Economy,
b) Flexible Exchange Rates
c) Fixed Exchange Rates

In each case, the starting point is for the economy to be in equilibrium. Equilibrium is defined as

(i) Aggregate Demand = Aggregate Supply (short-run),

(ii) Money demand = Money Supply, and

(iii) if it is an open economy, B of P = 0. the equivalent statement to BP = 0 is for Canadian interest rate = world interest rate.

The adjustment mechanism for the Balance of Payments is as follows:

If cdn r < world r (where r is the interest rate; don't worry about inflation)

Then

a) if Flexible ER:

=> CO rise, CI fall => ER falls

=> X rise, M fall => AD rises

=> Y and MD rise => cdn r rise (MD and AD shift right until cdn r = world r)

b) if Fixed ER:

=> Bank of Canada reduces MS until cdn r = world r

=> reduced MS and higher r causes AD to fall => Y to fall (AD shifts left)

(Further examples of this type of flow diagram process is found in Kennedy chapter 16)

If cdn r > world r, then you just reverse the directions in the flow chart

Regardless of the exchange rate regime, the final equilibrium requires that the Canadian interest rate equal the world interest rate. Either the MD curve or the MS curve will move until this equilibrium condition is met.

Using the flow diagrams found in Kennedy and the graphic analysis from lecture, you are to explain the adjustments to the Canadian economy for each scenario described below.

Here is the graphs of the goods and money markets in equilibrium. Note that the cdn r = world r; therefore the exchange rate is also in equilibrium (BP = 0). This is your starting point:

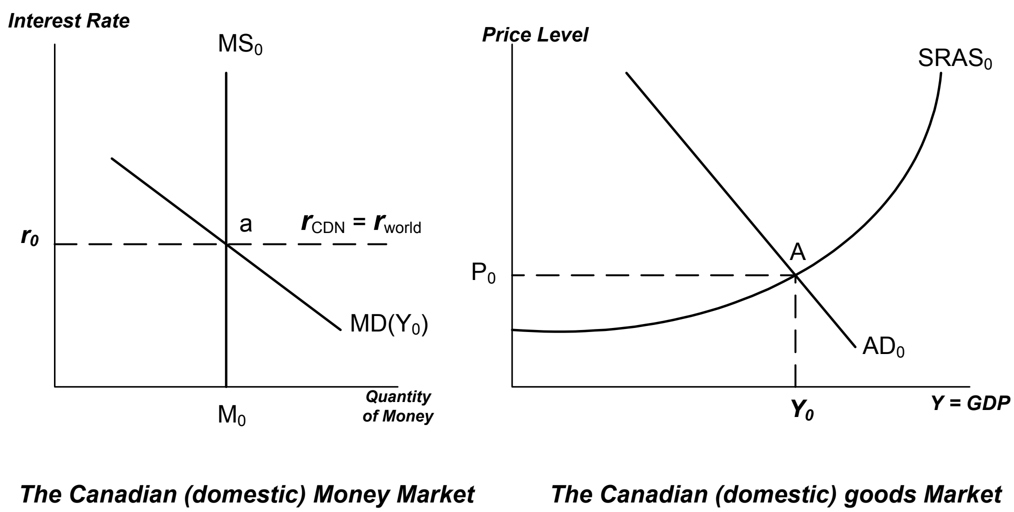


Figure 1: Initial Equilibrium

Using the above graph, illustrate the macroeconomic shock. An example of a negative shock is shown below:

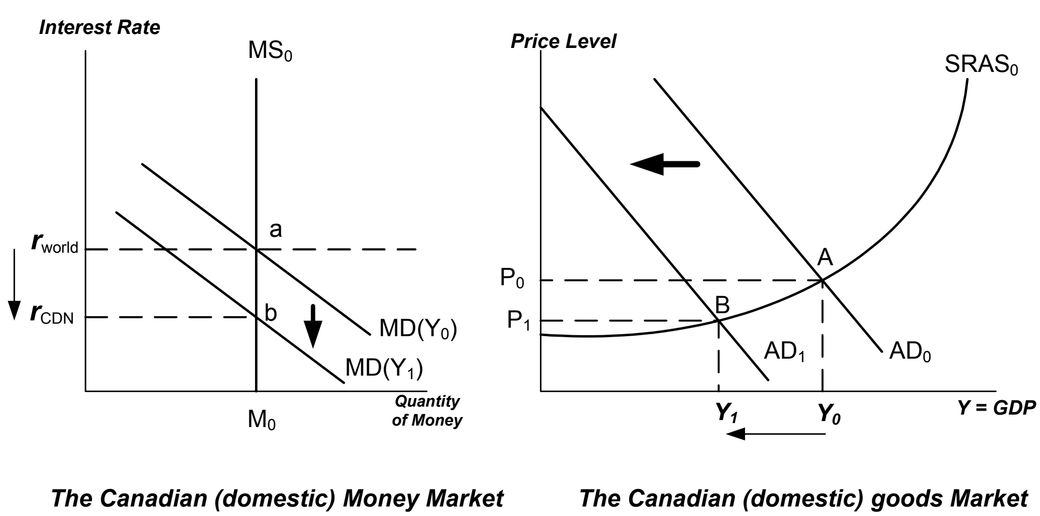
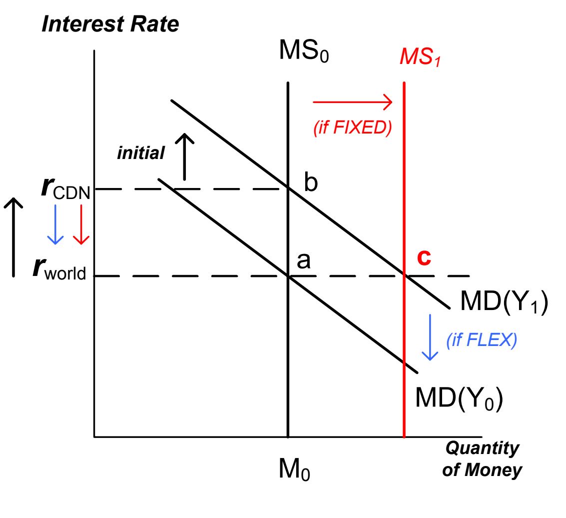


Figure 2: Example of a negative demand shock

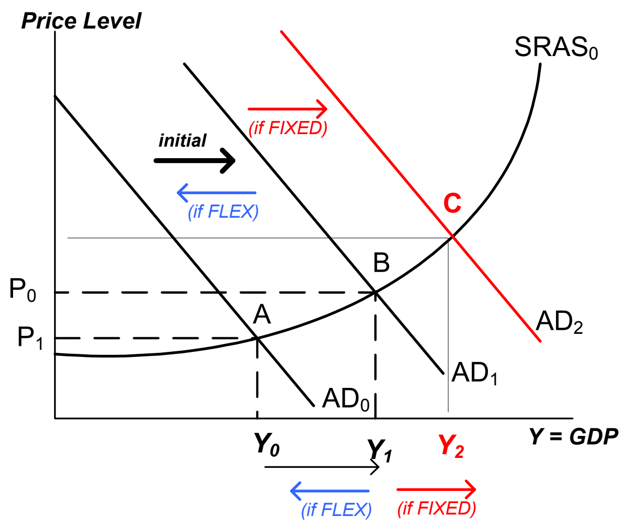
Then, for each case (closed economy, flexible ER, fixed ER) graphically illustrate the adjustment (if any) that follows the economic shock. With each graph, supply the corresponding flowchart (as per Kennedy chapter). In each scenario, make sure you identify what happens to GDP relative its initial position.

<u>Macroeconomic Scenario's</u>

Scenario One:



The Canadian (domestic) Money Market



The Canadian (domestic) goods Market

Mad Cow disease in Europe creates a new market for Canadian Beef. How does the Canadian goods and money market adjust under both a fixed and a flexible exchange rate.

Answer: Graph show initial effect (short run) A to B (Goods) and a to b (money)

If Flex: higher cdn r => increased capital inflows => increase in value $C

- ⇨ net exports fall, income falls, Money demand falls
- ⇨ AD shifts back (B to A), MD shifts back (b to a)

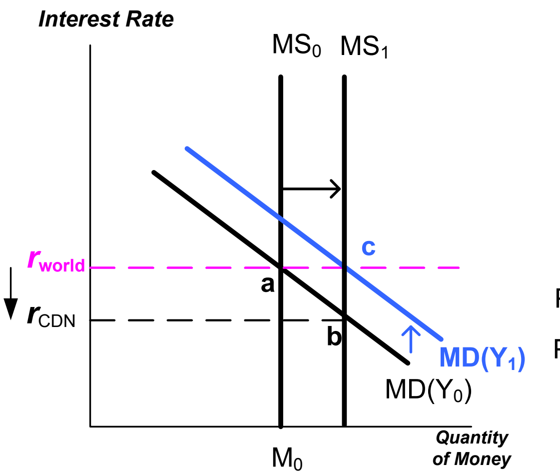
If Fixed: MS increases to lower cdn r and stop $C from rising in value (b to c)

Increase in MS => further stimulates AD (B to C)

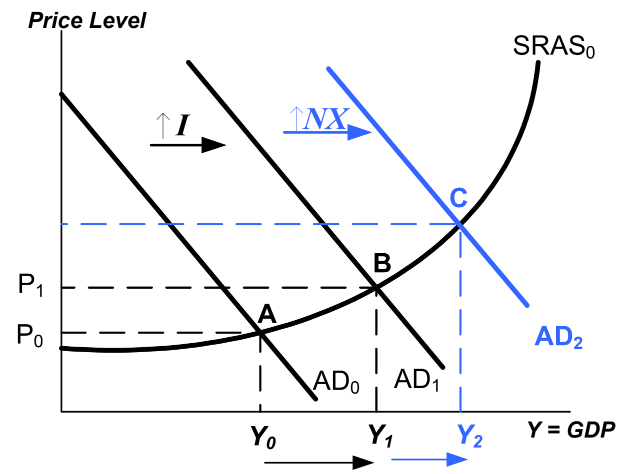
Scenario Two: Expansionary Fiscal Policy (increase G and/or decrease T)

Government has decided that the current GDP (Y_0) is less than full employment. The government decides to use expansionary Fiscal policy to stimulate the economy in hopes of increasing GDP. Illustrate and explain the process and the resulting equilibrium when it is a) a closed economy b) Fixed exchange rate c) flexible exchange rate.

Answer the same as Mad Cow (above) except in the closed economy case, there is only the initial effect.



The Canadian (domestic) Money Market



The Canadian (domestic) goods Market

Scenario Three:

The economy is in equilibrium as illustrated in figure One (above). However the government has decided that the current GDP (Y_0) is less than full employment. The government decides to use expansionary Monetary policy to stimulate the economy in hopes of increasing GDP. Illustrate and explain the process and the resulting equilibrium when it is a) a closed economy b) Fixed exchange rate c) flexible exchange rate.

Closed Economy: simply a to b in Money Mkt and A to B in Goods Mkt

Flex: a to b in Money Mkt and A to B in Goods Mkt (initial effect) then

Lower cdn r => capital outflows => fall in $C => increase AD (B to C)

=> rise in Y leads to rise in MD (b to c)

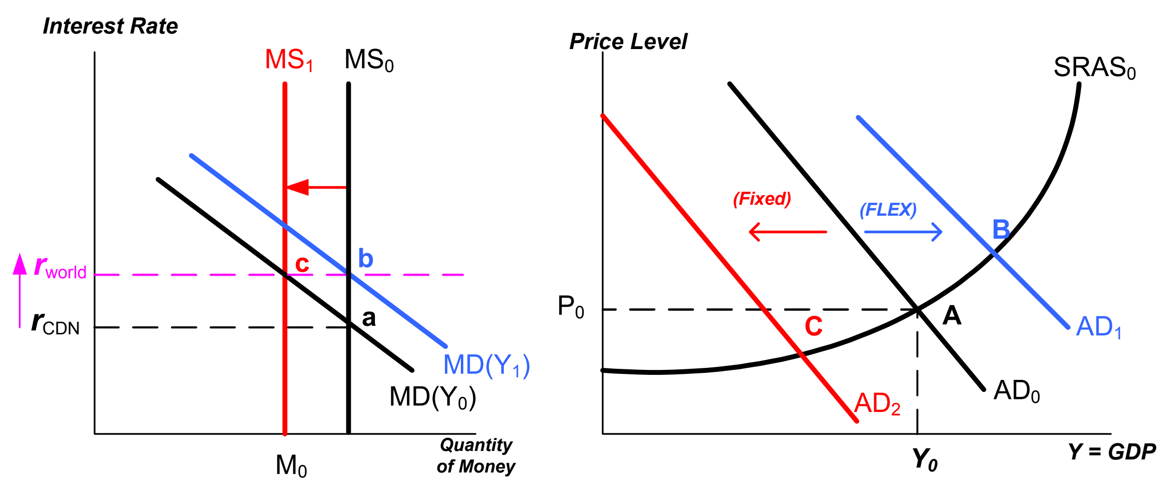
Fixed: Nothing! Bank of Canada cannot use discretionary monetary policy

Scenario Four:

Due to the uncertainty in the Middle East, interest rates in Europe and the USA suddenly rise, causing the world interest rate to rise above the Canadian interest rate. What happens if:

a) Government takes no action and Canada is under a flexible exchange rate.

b) Bank of Canada takes action under a fixed exchange rate.



The Canadian (domestic) Money Market ***The Canadian (domestic) goods Market***

If flex: capital outflows rise

=> cdn $ falls in value AD rises (A to B)

=> Y rises and MD rises (a to b)

If fixed: B of C reduces MS (a to c), lower MR raises cdn r and lowers AD (A to C)

NOTE that the effect on GDP (Y) is in opposite directions depending on ER rule

Supplemental Questions for Assignment #2
ANSWERS

Below is an article about the U.S. dollar falling in value and some of the reasons why. Within the context of the models and theory presented in the course, answer the following questions:

1. What are the "Twin Deficits"? Why do they arise? Be sure to explain the linkage.

BUDGET DEFICT LEADS TO TRADE DEFICIT. FOREIGNERS PREFER TO BUY HIGH INTEREST US BONDS RATHER THAN US GOODS.

2. From the quick facts:

a. If the U.S. Government had a balanced budget in 2005, What would be the approximate current account position of the U.S.? SIMPLE ANSWER IS THAT THERE WOULD BA APPROX $463 BILLION TRADE DEFICIT (782-319)

b. What does that suggest about the U.S. Economy. THE US ECONOMY IS NOT COMPETITIVE INTERNATIONALLY AND NEEDS TO BORROW TO FINANCE IMPORTS

3. What is meant by "the abuse" mentioned in the second paragraph? Be specific THE US FED HAS BEEN PRINTING TOO MUCH US CURRENCY

4. From paragraph three:

   a. How is the U.S. "Freeloading"? make sure you answer this in the context of the Balance of Payments for the U.S. EXPORTING MORE THAN IMPORTING – BORROWING TO PAY FOR IT

   b. What would be your estimate of the position Chinese Balance of Payments accounts: their current and capital accounts (surplus/deficit)? THE REVERSE OF US CURRENT AND CAPTIAL ACCOUNTS (OVERLY SIMPLE ASSUMPTION, BUT GOOD ENOUGH)

   c. Would you expect the Chinese currency to be overvalued or undervalued? What does this suggest about their overall balance of payments position (surplus or deficit)? CHINA IS PROBABLY RUNNING A BP SURPLUS AND HAS UNDERVALUED CURRENCY.

   d. Is the information in this paragraph about China consistent with a country running a balance of payments surplus? YES. GOVT OF CHINA LIKELY TRYING TO MAXIMIZE THE TRADE OPPORTUNITY WITH USA AND CREATE ECONOMIC GROWTH IN CHINA.

5. What are two things the U.S. government could do to stop the fall of the U.S. dollar? USE FOREIGN RESERVES AND GOLD TO PROP UP US DOLLAR (SHORT RUN ONLY). RAISE INTEREST RATES