

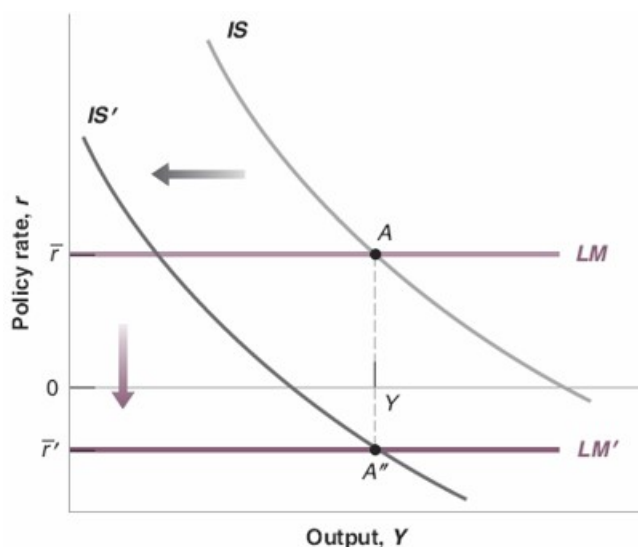
Nanyang Technological University  
School of Social Sciences

HE2002 Macroeconomics II AY23-24 SEMESTER 2

Tutorial 5

1. Chapter 6, Q5. The IS-LM view of the world with more complex financial markets

Consider an economy described by the Figure below.



- (a) What are the units on the vertical axis of the Figure?
  - (b) If the nominal policy interest rate is 5% and the expected rate of inflation is 3%, what is the value for the vertical intercept of the LM curve?
  - (c) Suppose the nominal policy interest rate is 5%. If expected inflation decreases from 3% to 2%, in order to keep the LM curve from shifting in the Figure, what must the central bank do to the nominal policy rate of interest?
  - (d) If the expected rate of inflation were to decrease from 3% to 2%, with the nominal policy rate unchanged, does the IS curve shift?
  - (e) If the expected rate of inflation were to decrease from 3% to 2%, does the LM curve shift?
  - (f) If the risk premium on risky bonds increases from 5% to 6%, does the LM curve shift?
  - (g) If the risk premium on risky bonds increases from 5% to 6%, does the IS curve shift?
  - (h) What are the fiscal policy options that prevent an increase in the risk premium on risky bonds from decreasing the level of output?
  - (i) What are the monetary policy options that prevent an increase in the risk premium on risky bonds from decreasing the level of output?
2. Chapter 6, Q9. Unconventional monetary policy: financial policy and quantitative easing

We have written the IS-LM model in the following terms:

IS relation:

$$Y = C(Y - T) + I(Y, r + x) + G$$

LM relation:

$$r = \bar{r}$$

Interpret the real policy rate as the federal funds rate adjusted for expected inflation. Assume that the rate at which firms can borrow is much higher than the federal funds rate, equivalently that the premium,  $x$ , in the IS equation is high.

- (a) Suppose that the government takes action to improve the solvency of the financial system. If the government's action is successful and banks become more willing to lend both to one another and to non-financial firms, what is likely to happen to the premium? What will happen to the IS-LM diagram based on the Figure shown previously? Can we consider financial policy as a kind of macroeconomic policy?
- (b) Faced with a zero nominal interest rate, suppose the Fed decides to purchase securities directly to facilitate the flow of credit in the financial markets. This policy is called quantitative easing. If quantitative easing is successful, so that it becomes easier for financial and non-financial firms to obtain credit, what is likely to happen to the premium? What effect will this have on the IS-LM diagram? If quantitative easing has some effect, is it true that the Fed has no policy options to stimulate the economy when the federal funds rate is zero?
- (c) We will see later in the course that one argument for quantitative easing is that it increases expected inflation. Suppose it does. How does that affect the LM curve in the Figure shown previously (faced with a zero nominal interest rate)?