

ECO 136 Quiz 2 April 21, 2009

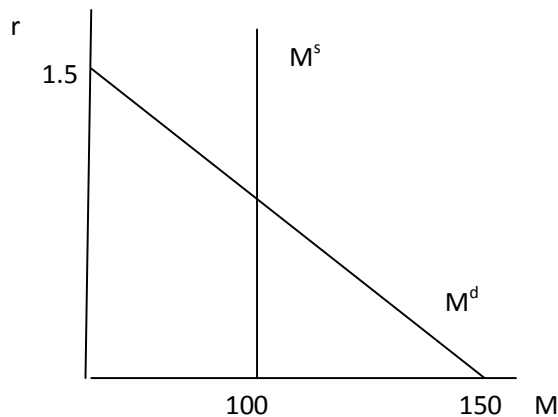
Consider only Money Market.

$$M^d = 100 - 100r + Y$$

$$M^s = 100$$

$$Y = 50$$

a. Graph  $M^d$  and  $M^s$  (M on X-axis, r on Y-axis).



- $M^d$  function is a **linear function** here.
- When you draw, draw an inverse demand function:  $r = 1.5 - (1/100)*M^d$
- If you are asked to draw a function given an equation, try to include at least y- and x-intercepts (if any).

b. Compute the equilibrium level of  $r^*$  and  $M^{d*}$

The equilibrium occurs where  $M^s = M^d$ . Since  $M^s = 100$ , simply plug  $M^d = 100$  into  $M^d$  function.  $r^* = 1.5 - 1/100*100 = 0.5$ ,  $M^{d*} = 100$

c. Y increased to 75 while  $M^s$  is fixed. ( $M^s = 100$ ). Compute new r and  $M^d$ .

$$M^d = 175 - 100r \Rightarrow r = 1.75 - (1/100)*M^d \Rightarrow \text{Since } M^s = 100, \text{ plug in } M^d = 100 \\ \Rightarrow r = 1.75 - (1/100)*100 = 0.75, M^{d*} = 100.$$

d. If the central bank targets  $r = 0.5$ , how much  $M^s$  should be changed given  $Y = 75$ ?

$$M^d = 175 - 100r \Rightarrow M^d = 175 - 100*0.5 = 175 - 50 = 125. \\ M^d = 125 = M^s \Rightarrow M^s \text{ should be } 125, \text{ an increase of } 25.$$

Most of you did really great! Keep up with your good work, and good luck for preparing for the 2<sup>nd</sup> midterm. Those who had some difficulties with this quiz or any other course materials, write me an e-mail or drop by during my office hour.