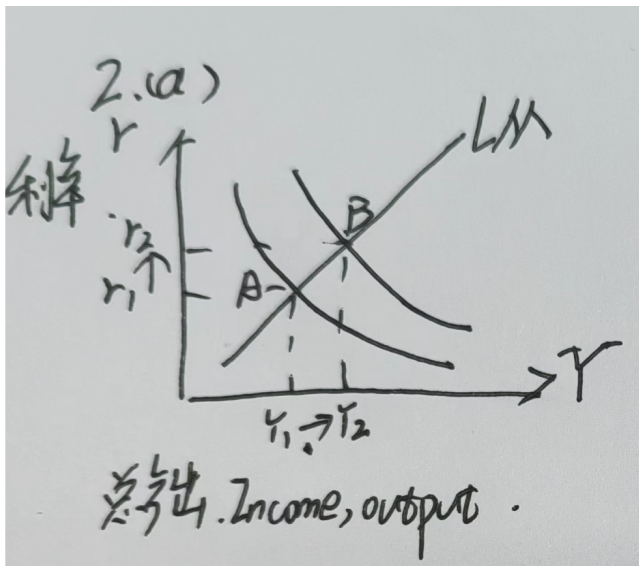


FIN204-Week11-Ch12-

12310903刘华杰

2. Use the IS-LM model to predict the short-run effects of each of the following shocks on income, the interest rate, consumption, and investment. In each case, explain what the Fed should do to keep income at its initial level. Be sure to use a graph in each of your answers.

a. After the invention of a new high-speed computer chip, many firms decide to upgrade their computer systems.

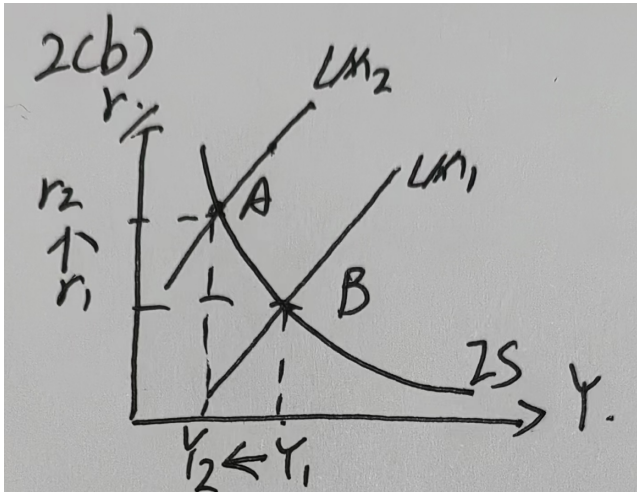


投资需求的增加导致收入增加，这也提高了利率。这是因为更高的收入增加了对货币的需求；由于货币供应量不变，为了在货币市场恢复均衡，利率必须上升。利率的上升部分抵消了投资需求的增加，因此产出不会完全按照IS曲线向右移动的幅度上升。总体而言，收入、利率、消费和投资都上升了。

如果美联储希望保持产出不变，那么它必须减少货币供应量并进一步提高利率，以抵消投资需求增加的影响。当美联储减少货币供应量时，LM曲线将向上和向左移动。产出将保持在同一水平，而利率会更高。利率将增加到足以完全抵消初始的投资。

b. A wave of credit card fraud increases the frequency with which people make transactions in cash.

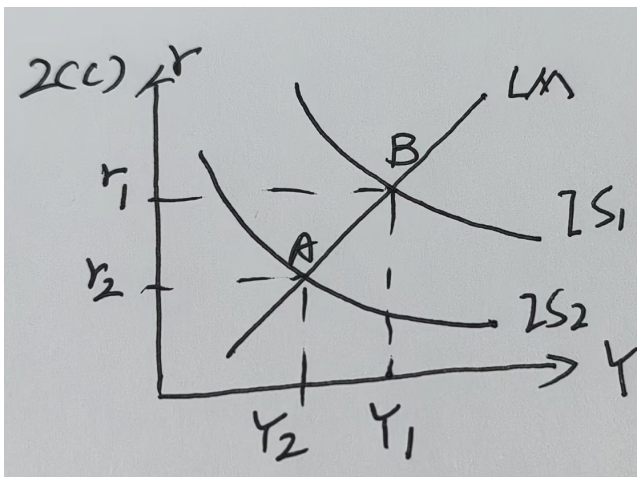
对现金需求的增加使LM曲线上移。这是因为在任何给定的收入和货币供应水平下，平衡货币市场所需的利率更高。LM曲线的上移降低了收入并提高了利率。消费下降是因为收入下降，投资下降是因为货币需求增加导致利率上升。



如果美联储希望保持产出不变，那么它必须增加货币供应量以降低利率，并将产出恢复到原始水平。LM曲线将向下和向右移动，并恢复到其旧位置。

c. A best-seller titled Retire Rich convinces the public to increase the percentage of their income devoted to saving.

在任何给定的收入水平下，消费者现在希望储蓄更多，消费更少。也就是说消费函数的形态发生了变化，消费更少了，IS曲线向下移动。收入、利率和消费都下降，而投资上升。



收入下降是因为在每个利率水平下，计划支出下降。

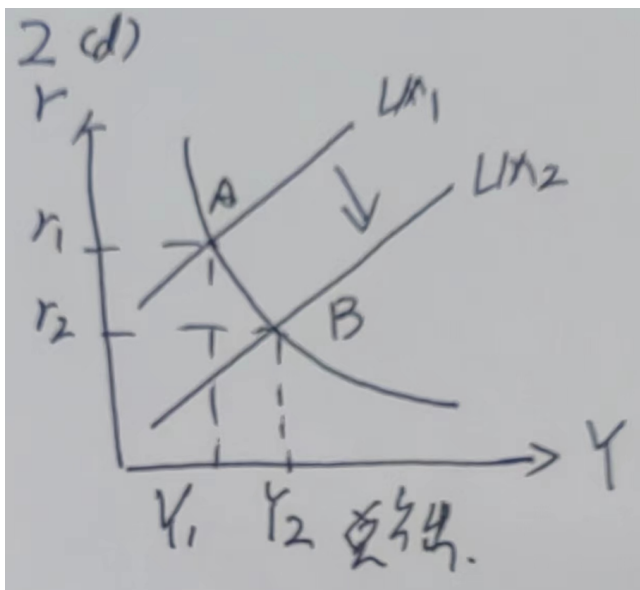
利率下降是因为收入下降减少了对货币的需求；由于货币供应量不变，利率必须下降。

消费下降既是因为消费函数的移动，也是因为收入下降。投资上升是因为利率较低，部分抵消了消费下降对产出的影响。

如果美联储希望保持产出不变，那么它必须增加货币供应量以降低利率。货币供应量的增加将使LM曲线向下和向右移动。消费将更低，投资将更高，利率将更低。

d. The appointment of a new “dovish” Federal Reserve chair increases expected inflation.

预期通货膨胀的增加将减少人们对货币的需求。这种对货币需求的下降将使LM曲线向下和向右移动，利率下降，而利率的下降将增加投资支出。均衡产出将上升，消费也会上升。



如果美联储希望保持产出不变，那么它必须减少货币供应量。

4. an economy is initially described by the following equations:

$$C = 500 + 0.75(Y - T)$$

$$I = 1,000 - 50r$$

$$M/P = Y - 200r$$

$$G = 1000$$

$$T = 1000$$

$$M = 6,000$$

$$P = 2$$

a. Derive and graph the IS curve and the LM curve. Calculate the equilibrium interest rate and level of income. Label that point A on your graph.

根据IS曲线的产品市场均衡：

$$Y = C + I + G$$

$$Y = 500 + 0.75(Y - 1000) + 1000 - 50r + 1000$$

$$Y = 7000 - 200r$$

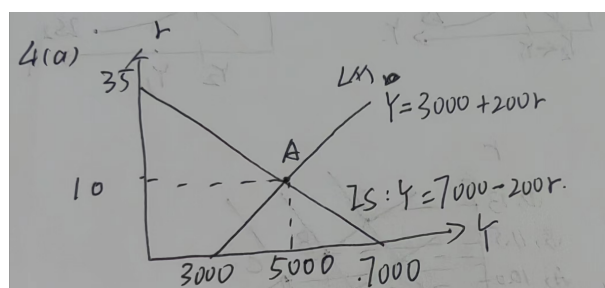
根据LM曲线的货币市场均衡：

$$\frac{M}{P} = 3000$$

$$3000 = Y - 200r$$

联立解得：

$$r = 10, Y = 5000$$



b. Suppose that a newly elected president cuts taxes by 20 percent. Assuming the money supply is held constant, what are the new equilibrium interest rate and level of income?

What is the tax multiplier?

税收减免20%， $T' = 800$

IS曲线：

$$Y = C + I + G$$

$$Y = 500 + 0.75(Y - 800) + 1000 - 50r + 1000$$

$$Y = 7600 - 200r$$

LM曲线：

$$3000 = Y - 200r$$

联立解得：

$$r = 11.5, Y = 5300$$

和题(a)中相比： $\Delta T = -200, \Delta Y = +300$

税收乘数为1.5

c. Now assume that the central bank adjusts the money supply to hold the interest rate constant. What is the new level of income? What must the new money supply be? What is the tax multiplier?

根据货币市场均衡：

$$Y = \frac{M}{2} + 200r$$

联立LM与IS曲线均衡条件：

$$\frac{M}{2} + 200r = 7600 - 200r$$

代入 $r = 10$ 解得： $M = 7200, Y = 5600$

和题(a)中相比： $\Delta T = -200, \Delta Y = +600$

税收乘数为3

d. Now assume that the central bank adjusts the money supply to hold the level of income constant. What is the new equilibrium interest rate? What must the money supply be? What is the tax multiplier?

计算均衡利率：

根据LM曲线：

$$r = \frac{Y}{200} - \frac{M}{400}$$

根据IS曲线：

$$r = 38 - \frac{Y}{200} = 13$$

带入 $Y = 5000$ 联立解得：

$$3800 - \frac{5000}{200} = \frac{5000}{200} - \frac{M}{400}$$

$$M = 4800, r = 13$$

新的货币供给量应该为4800，利率为13

由于总产出不变，税收乘数为0

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