

Consider the IS curve:

$$\tilde{Y}_t = a - b(R_t - r^*).$$

Suppose

$$a = 0, \quad b = 2, \quad R_t = r^* = 5\%.$$

1. What is the initial output gap?

Now suppose the central bank raises the real interest rate to

$$R_t = 6\%.$$

2. What is the new output gap?
3. Is the economy above or below potential output?
4. With $b = 2$, how much does output change when the real interest rate rises by 1 percentage point?
5. What would happen if b were larger? Explain the economic intuition.