Problem set 12
Inflation targeting

Suppose Fed policymakers follow an inflation targeting strategy. The target inflation rate π^T is 2 percent. Fed policymakers know, for sure, that the natural rate of interest r^* is one percent and the natural rate of unemployment (or NAIRU) u^* is five percent.

1) Suppose expected inflation π^e is 2 percent. Given the way the Fed will react to the situation,

a) What is the unemployment rate likely to be equal to? $E\pi = \pi^T$, set $r = r^*$ so $u = u^* = 5\%$

b) What is the target fed funds rate likely to be equal to? $i^T = r^T + E\pi = r^* + E\pi = 1 + 2 = 3\%$

2) Suppose expected inflation π^e is 4 percent. Given the way the Fed will react to the situation,

a) Is the unemployment rate likely to be less than, greater than or equal to 5 percent? Greater
$E\pi > \pi^T$ so want $r > r^*$ to make $u > u^*$

b) Is the target fed funds rate likely to be less than, greater than or equal to 3 percent? Greater
Want $r > r^*$ so $i^T > r^* + E\pi = 1 + 4$

3) Suppose expected inflation π^e is 0 percent. Given the way the Fed will react to the situation,
Opposite of above

a) Is the unemployment rate likely to be less than, greater than or equal to 5 percent? Less

b) Is the target fed funds rate likely to be less than, greater than or equal to 3 percent? Less

4) Suppose expected inflation π^e is equal to 2 percent. State whether each of the following pieces of incoming news is likely to cause the FOMC to raise, lower or not change the target fed funds rate.
Respond to expected shift of IS curve

a) Congress will raise taxes next year, without changing spending. Lowers IS, $r^* \downarrow$ so $i^T \downarrow$

b) Congress will raise spending next year, without changing taxes. IS $\uparrow$, $r^* \uparrow$, $i^T \uparrow$

c) The stock market is crashing. IS $\downarrow$, $r^* \downarrow$, $i^T \downarrow$

5) State whether each of the events listed in 4) is likely to be associated with a steepening, flattening, or unchanged yield curve, *assuming* that each economic development is expected to be temporary. (For example, the tax hike in a) is expected to be reversed eventually.)

a) Steepen b) Flatten c) Steepen