

## Macroeconomics – Homework 4

Due to 5.5.2015, at the beginning of the final exam

You can work in two

1. The economy is in a recession with high unemployment and low output.
  - a) Draw a graph of aggregate demand and aggregate supply to illustrate this situation.
  - b) Identify the open-market operation that would restore the economy to its natural rate.
  - c) Draw a graph of the money market to illustrate this effect of this open-market operation. Show the resulting change in interest rate.
  - d) Draw a graph similar to the one in part a) to show the effect of open-market operation on output and the price level.
  
2. Suppose economists observe that an increase in government spending of \$10 billion raises the total demand for goods and services by \$30 billion.
  - a) If these economists ignore the possibility of crowding out, what would they estimate the marginal propensity to consume (MPC) to be?
  - b) Now suppose economists allow for crowding out. Would their new estimate of the MPC be larger or smaller?
  
3. Suppose the economy is in a long-run equilibrium.
  - a) Draw both an aggregate-supply/aggregate-demand diagram and a Phillips-curve diagram with the economy's short-run and long-run Phillips curves.
  - b) Suppose a wave of business pessimism reduces aggregate demand. Show the effect of this shock on your diagrams. If the central bank undertakes expansionary monetary policy, can it turn the economy to its original inflation rate and original unemployment rate?
  - c) Now suppose the economy is back in long-run equilibrium, and the price of imported oil rises. Show the effect of this shock in new diagrams like those in part a). If the central bank undertakes expansionary monetary policy, can it turn the economy to its original inflation rate and original unemployment rate? If the central bank undertakes contractionary monetary policy, can it turn the economy to its original inflation rate and original unemployment rate? Explain why this situation differs from that in part b).