

Macroeconomics

Solutions to exercises

8 + 11

Chapter 12.

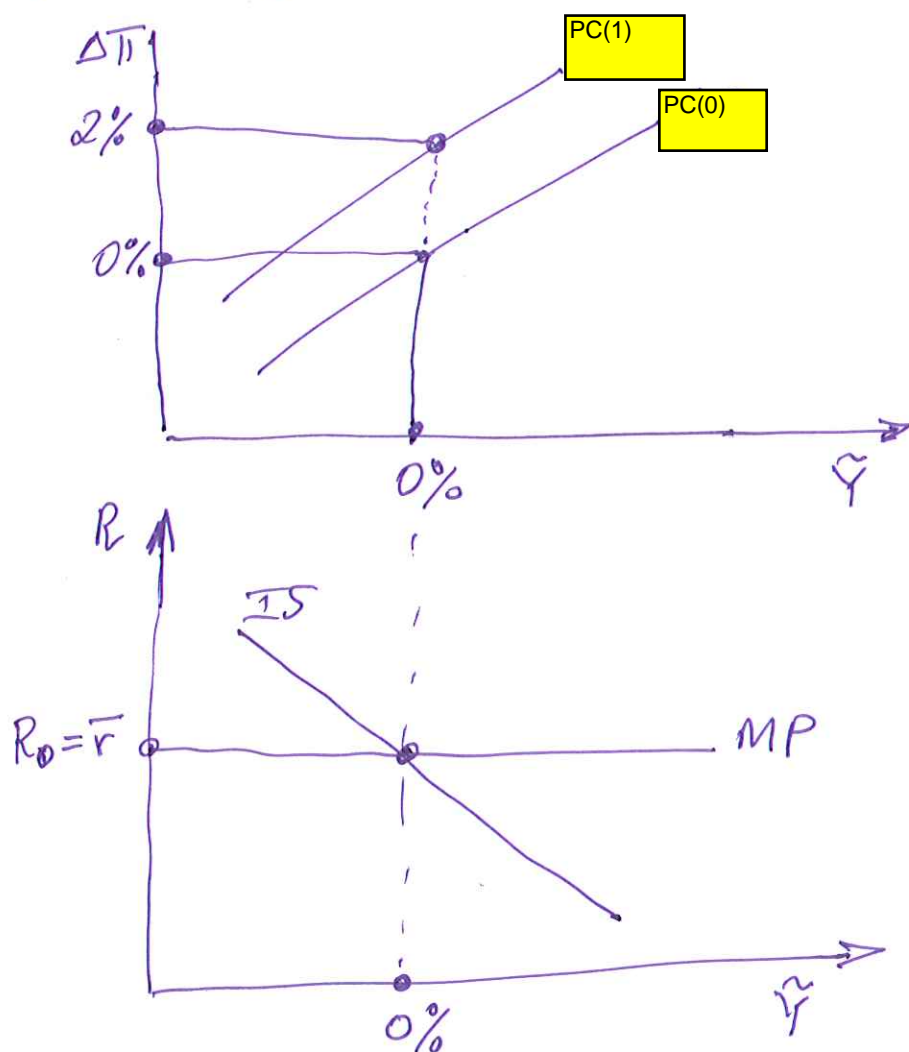
Václav Mendes

This version includes the correction of some typos in the solution to exercise 8.

Exercise 8

We know that there is oil price shock such that $\bar{\theta}$ increases. This implies that the AS curve will shift to the left (or upwards).

(a) The central bank does not react to this shock. So the solution will be like the following (an increase in π , i.e. $\Delta\pi = 2\%$)



Notice that if the Central Bank does not change its interest rate, then R will be the same (in the short run), and, therefore nothing changes in the MP/IS diagram.

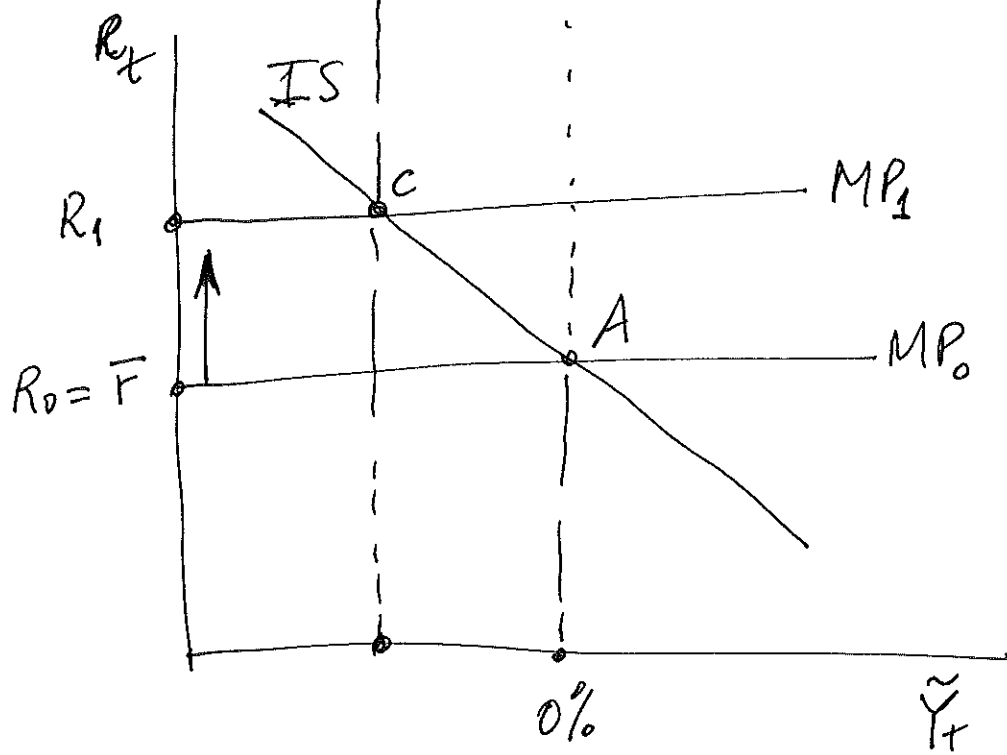
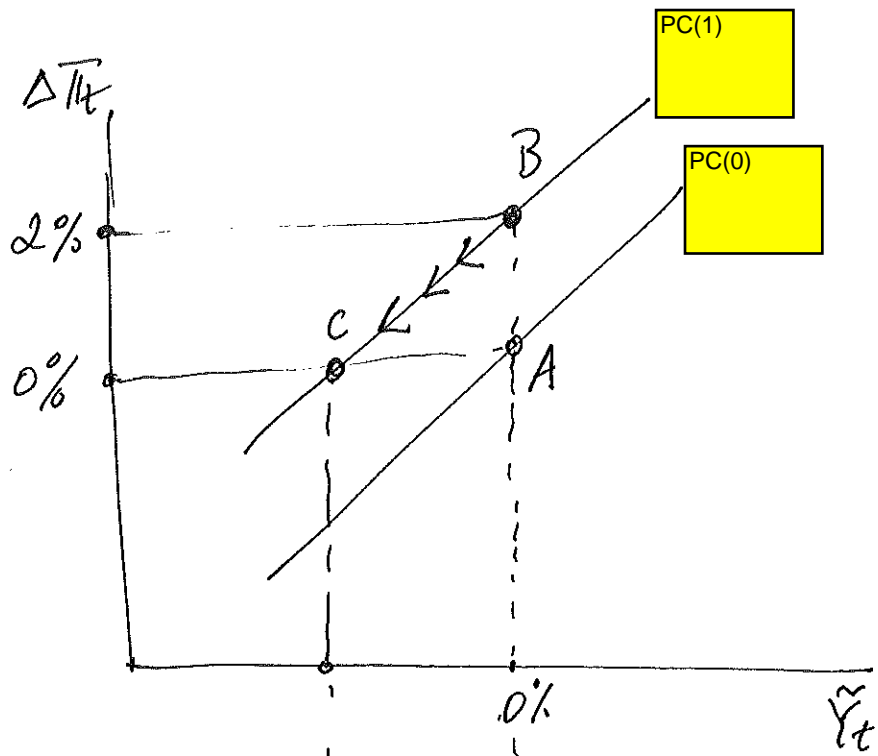
So $\tilde{Y}_t = 0$ and $\Delta\pi = 2\%$.

(b) Now consider that the Central Bank reacts to the increase in inflation by raising its nominal interest rate. The Central Bank wants to get inflation to its original situation, and so it will cause a recession (see next figure) :

→ Central Bank raises i : $MP_0 \rightarrow MP_1$

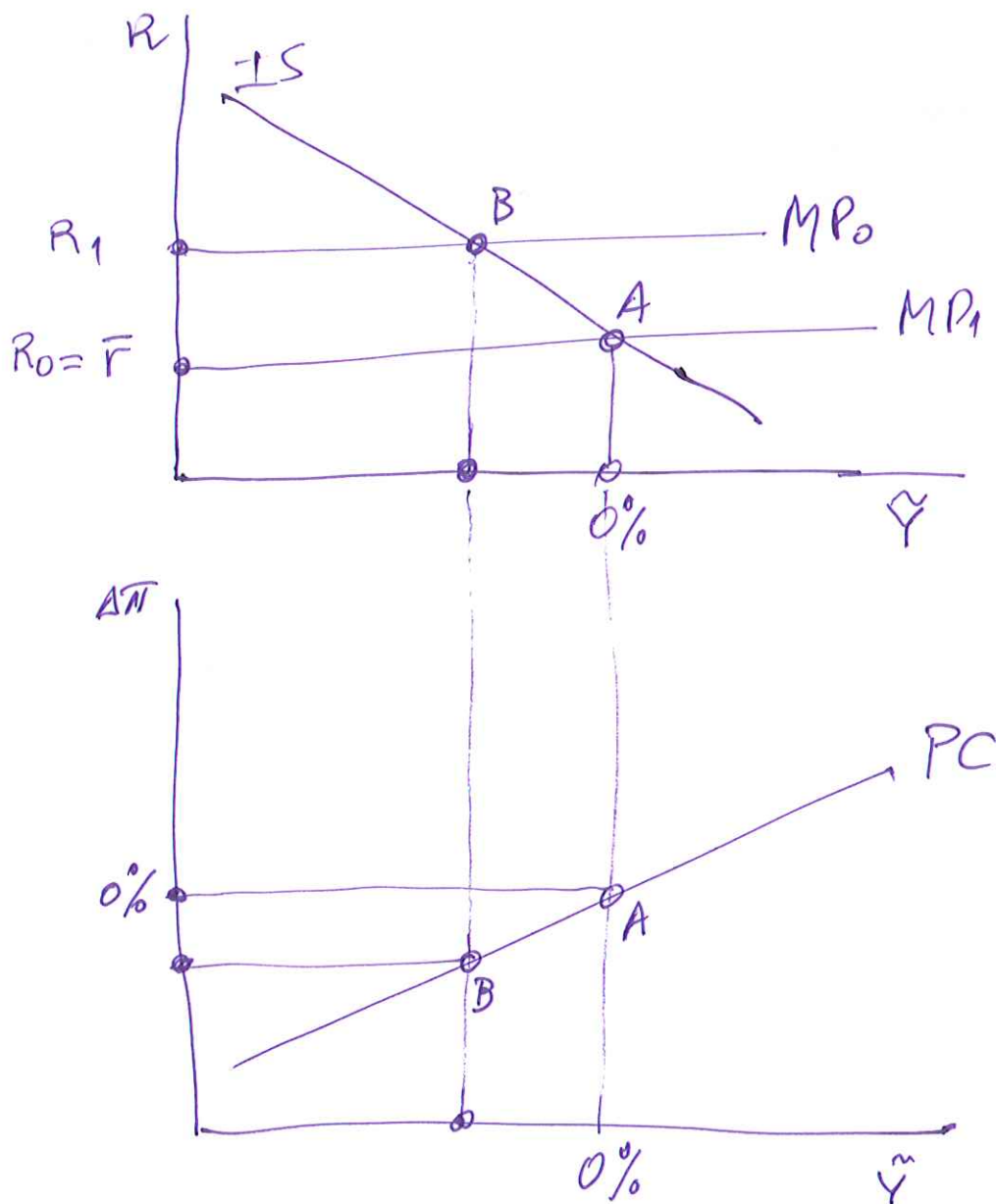
→ Higher R leads to a recession

→ The recession bring inflation back to its initial level.



Exercise 11

As you may remember for the slides, the Volker disinflation can be represented as the movement from point A to point B in the following figures.



Now consider a Phillips Curve that has a higher slope. What happens? The same increase in the short term interest rate by Volker would lead to a much larger reduction in inflation, as follows

