QUESTIONS - CHAPTER 26 EXPECTATIONS AND STICKY PRICES

Question 26.1

26.1A In the Dornbusch model agents have rational expectations. Without uncertainty, this amounts to perfect foresight by agents. Can you explain why?

26.1B What causes the relative stickiness of prices?

26.1C Suppose you would augment the Dornbusch model and introduced flexible prices. Which theory of exchange rates would we then have?

26.1D Which two important empirical observations of exchange rates are illustrated below and can be explained by the Dornbusch model?

Source: IFS, IMF.

Question 26.2

26.2A Draw a phase diagram in which you indicate the exchange rate adjustment and the price adjustment equation. Indicate the long-run equilibrium point. What determines the slope of both curves?

26.2B Not all points in the phase diagram are valid combinations of the domestic price level and the exchange rate, because some points do not lead to a stable long-run equilibrium. Draw a line that indicates all valid combinations of the exchange rate and domestic price level in your diagram. What do we call this line?

26.2C In the short run, the domestic price level is fixed. Draw a line with all combinations of the exchange rate and the domestic price level in the short run after an economic shock.

26.2D Suppose now that the interest rate increases in the eurozone. Draw the consequences of this rate increase in your diagram and explain the economic intuition behind the dynamics.
Question 26.3
Suppose that you are chief economist at a bank and you are interviewed on live television about your currency views.

26.3A The journalist has heard something about overshooting, and he is curious to know whether recent labour market flexibilization measures in the US will have an exchange rate impact. Can you satisfy his curiosity and elaborate on this issue?

26.3B Delighted by your clear explanation of exchange rate economics, the journalist asks you to comment upon the impact of the booming US economy on the dollar-euro rate. Explain with the help of equation 26.A3.

26.3C Despite your clear analysis, the journalists still has doubts about the current dollar-euro exchange rate. Surely, economic theory and rational behaviour can tell us something about the equilibrium exchange rate. Comment on his remarks.

26.3D If financial markets are efficient, does it make sense for you to comment on exchange rate developments for the coming year?

26.3E In light of empirical research on exchange rates, what can you tell the journalist with a reasonable degree of confidence about the dollar exchange rate?

Question 26.4
Assume that there is no inflation, in the euro area and the US, both currently and in the (expected) future. Furthermore, interest rates in the euro area and the US are equal to each other.

26.4A What is the expected path of the euro-dollar exchange rate?

Suppose now that the US Federal Reserve announces an interest rate rise of 1%, for the coming four years, after which the interest rate will revert to its present rate. The outlook for euro area interest rates remains unchanged.

26.4B What is the percentage change in the euro-dollar exchange rate at the time of the announcement?

In the 1970s, when countries moved from fixed to flexible rate, many economists were surprised by the large fluctuations in exchange rates that followed. Many attributed these fluctuations to irrational financial markets.

26.4C How does the numerical exercise done at B shed light on this issue? Explain.
Question 26.5
You can use the Excel file for question 26.5 for this question. The simulation shows the monetary and goods market equilibria for the euro area.

26.5A  What is the interest rate differential between the euro area (home) and the rest of the world (foreign)?

The European central bank is worried that inflationary pressures are increasing. Retail sales have recently been strong and consumer and producer confidence have held up well. Financial markets do not believe that an interest rate rise is necessary, as consensus growth forecasts for the euro area are not that good. The monetary policy committee of the ECB meets and, after intense discussions, decides by a narrow margin that monetary conditions should be tightened, as the narrow majority believes that the risk of inflation is increasing. The money stock therefore goes down.

26.5B  What happens immediately after the euro exchange rate after the announcement? Explain.

26.5C  What happens to euro area prices immediately after the announcement? Explain.

The central bank decision’s impact on the exchange rate causes an outrage among politicians and business leaders. They feel that there is no need for a “strong” euro. Moreover, the unpredictability of the central bank actions has given markets a jolt.

26.5D  What lessons can the central bank draw from this critique?

Question 26.6

26.6A  How does the Dornbusch model (and other exchange rate models) perform when predicting exchange rates out-of-sample?

26.6B  Is it surprising that exchange rates exhibit a random walk?

26.6C  Can “rational bubbles” form part of the explanation for the performance power of exchange rate models?

Suppose you are an investor in a currency and in principle trade purely on fundamentals. However, the market is currently experiencing a rational bubble.

26.5D  Would it be rational for you to invest as if the future exchange rate will revert to its fundamental level?
Question 26.7

26.7A Calculate the equation for the $\dot{s} = 0$ curve in terms of $s(p_h)$

26.7B Calculate the equation for the $\dot{p}_h = 0$ curve in terms of $s(p_h)$

26.7C Calculate the long run equilibrium domestic price $p_h$ and exchange rate $s$ for the Dornbusch model.

26.7D Calculate the exchange rate $s_1$, which is the exchange rate directly after a monetary disturbance to the Dornbusch model. (Hint: define as $s_2$ the new long-run equilibrium exchange rate and note that $s_1 + \dot{s} = s_2$)