Suggestive solution for

Written Exam for the B.Sc in Economics 2010-II-R

Macro B - New Syllabus

Competence description: This course builds on the part of Macro 1 explaining the economy in the short run and on some of the methods of analysis that are included in Macro 2. The focus is on describing and explaining the macroeconomic fluctuations in the short run, i.e. the business cycles around the long run growth trend. An important part is to also describe the economic mechanisms that tend to pull the economy back to the long run growth trend which is the subject in Macro 2.

Students are to learn the most important stylized facts about business cycles and to acquire knowledge about theoretical models aimed at explaining these facts. While Macro 1 mainly includes static models, students in Macro 3 are to learn how to use simple dynamic models which may describe the business cycle over time.

In connection with this, the aim is to make students familiar with the distinction between deterministic and stochastic models as well as the distinction between backward-looking and rational expectations. Furthermore students are to gain an understanding of the distinction between the impulses initiating a business cycle and the propagation mechanisms that give business cycles a systematic character.

Finally students are to learn how to use the models for analyzing the effects of macroeconomic stabilization policy under various assumptions w.r.t. expectations and exchange rate regime. The very good should at the end of the course be able to demonstrate full capability of using the techniques of analysis taught in the course as well as a thorough understanding of the mechanisms in the business cycle models for open and closed economies, including the ability to use relevant variants of the models in order to explain the effects of various shocks and the effects of macroeconomic stabilization policies under alternative monetary and exchange rate regimes.

0.1. Problem A.

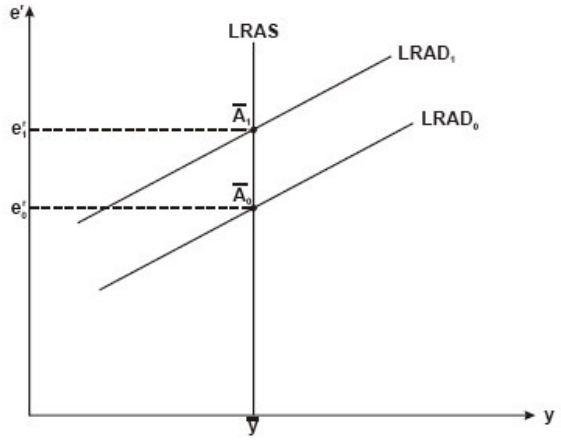
Question 1. The yield curve illustrates the relationship between the interest rates(effective yield) on securities with different terms to maturity and can be found in Figure 17,4 in the main text. It is important that the student explains, in the expectational approach, that the current long term interest rate depends on the current and the expected future short term interest rates. For instance when the investors are neutral, the current long term interest rate is a simple average of the current and the expected future short term interest rate. Furthermore, it is as important to examine the short term interest rate as the long term interest rate, as the central bank control the short term interest rate, it has as much an interest in steer the long term interest rate through expectation to the movements in the short term interest rate and the central bank's willingness to both inflation and output stability.

Question 2. In the union wage model, the imperfections in labor market is modeled as a monopoly on both sides. In the efficient wage theory, the imperfection is modeled as a cost to the firm for detecting the "shirking". However, in both models, the outside option plays a critical part in setting the wage level, and ultimately, the firm's response in hiring worker and thereby the production level. It suffices if the student explain in rough detail the two different approach and its final results. Since both models arrive at the same AS curve, they both effect our basic AS-AD model in the same qualitative way. One might add, for instance, that whereas the decision of offering labor is determined optimally from a worker's perspective in the efficient wage model, it is determined by the monopolized union, for all its members, in the union wage model.

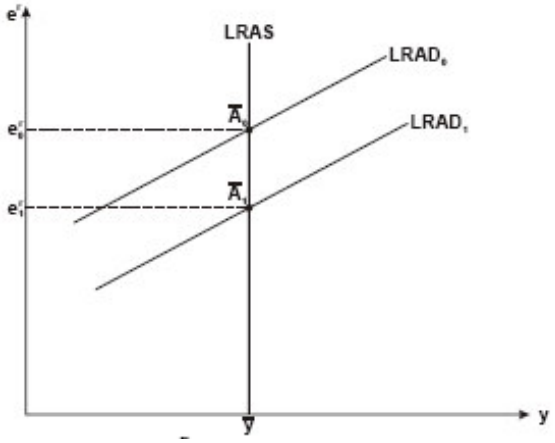
Question 3. It suffice if the student writes a 2 x 2 matrix detailing the preference for stability on one axis and the type of shocks on the other axis. The student must also note that there are no trade off when the economy is faced with solely demand shocks. However, trade off do exists when supply shock is at play. It also suffices when the student explains the mechanism behind the AS curve, this inverse relationship which is the root cause of the trade off. Finally, the student should also note that the choice of exchange regime does not affect the qualitative results of the trade off mechanism.

0.2. Problem B.

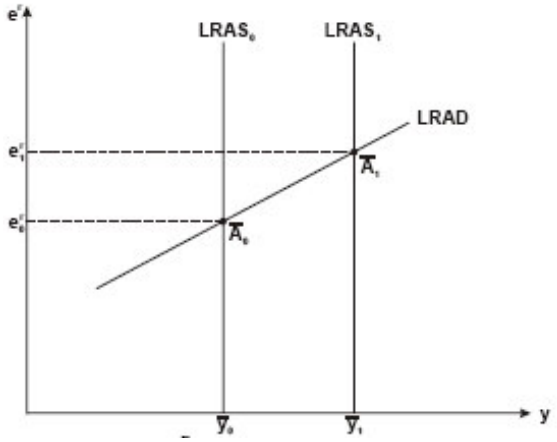
Question 1. The long-run effect of a permanent increase in the foreign real interest rate is illustrated in figure below. A rise in the foreign interest rate implies a drop in the demand shock variable z which causes an upward shift in the LRAD curve. Hence the real exchange rate must depreciate as the economy moves from the initial long-run equilibrium A_0 to the new equilibrium A_1. Thus, since the rise in the (foreign and domestic) real interest rate will ceteris paribus reduce aggregate demand at any given real exchange rate, the latter must depreciate sufficiently to generate an increase in net exports which can make up for the fall in consumption and investment demand so that aggregate demand for domestic goods is maintained at a level equal to the natural rate of output.



Question 2. The below figure shows the effect of a permanent increase in domestic government consumption, that will cause a downward (rightward) shift in the LRAD curve, so the real exchange rate must appreciate in the long run. Intuitively, since natural output is unaffected, the rise in government consumption must crowd out an equivalent amount of private spending on domestic goods. Since the domestic real interest rate is tied to the exogenous foreign real interest rate in the long run, crowding out cannot occur through a rise in the real interest rate which reduces private investment and consumption. Instead the crowding out comes about through a weakening of the domestic competitiveness which lowers net exports.



Question 3. As illustrated in the below figure, a permanent rise in domestic productivity will shift the LRAS curve to the right and cause a long-run real depreciation of the domestic currency. In other words, domestic competitiveness must improve to make sure that net exports increase by an amount equal to the rise in natural output so that a balance between aggregate demand and aggregate supply is maintained.



0.3. Problem C.

Question 1. The microeconomic benefits from a fully fixed exchange rate are discussed in Chapter 26. They include the fact that elimination of exchange rate risk reduces the riskiness of foreign trade and investment. If exchange rate stability is achieved through transition to a common currency, the microeconomic benefits also include a saving of transactions costs, as the need to exchange one currency into another is eliminated. Some observers have also argued that quoting international prices in the same currency will yield efficiency gains through more intensive international competition as cross-border comparison of prices becomes easier. Furthermore, the switch to a common currency may generate larger and more liquid (and hence more well-functioning) asset markets. The microeconomic benefits from exchange rate stability/a common currency increase with the relative importance of international economic transactions, since more agents and activities will be affected by exchange rate risk and international transactions costs the larger the ratio of international transactions to GDP.

Question 2. The macroeconomic costs of eliminating exchange rate flexibility are described in Chapter 26 as well. They stem from the fact that the nominal exchange rate can no longer help to absorb asymmetric shocks to the domestic economy, and that the country can no longer pursue an independent monetary stabilization policy, assuming free capital mobility. The macroeconomic costs of giving up exchange rate flexibility are declining with the ratio of international transactions to GDP for the following reasons: i) deeper integration with the international economy is likely to reduce the importance of asymmetric shocks, ii) the ability to change the real exchange rate through a change in the nominal exchange rate declines with the volume of foreign trade, and iii) greater economic integration also means more international labour mobility which reduces the need for real exchange rate adjustment as an absorber of asymmetric shocks. Finally, deeper economic integration may also create a greater political will to engage in international transfers in favour of countries hit by unfavorable shocks, again reducing the need for exchange rate adjustments.

Question 3. The argument is that elimination of exchange rate uncertainty/transition to a common currency will in itself promote economic integration, thereby increasing the microeconomic benefits and reducing the macroeconomic costs of giving up exchange rate flexibility. This is essentially an empirical issue, but the preliminary evidence as outlined in Chapter 26 suggests

that the creation of Economic and Monetary Union in Europe may have promoted trade among the EMU countries.

Question 4. This is of course a long debate. Some of the relevant evidence is reviewed in the paper by Barr, Breedon and Miles referred to in the note to Table 26.3 in Chapter 26. The evidence in that paper indicates that among the EU-15, the three non-EMU countries (Denmark, Sweden and the UK) are economically less integrated with the other EU countries than the EMU countries. The evidence also shows that economic integration within the EU increased during the 1990s. These observations suggest that Optimum Currency Area theory may help to explained why some EU countries decided to stay out of the EMU, and why the euro was not adopted earlier.