DEPARTMENT OF ECONOMICS | SPRING 2006
UNIVERSITY OF CALIFORNIA, BERKELEY | ECONOMICS 182

Suggested solutions to final exam

Part 1

1. A financial account inflow occurs when the country sells an asset (real or financial) to foreigners. This asset export is recorded as a credit (with a positive sign) in the financial account of the balance of payments.

2. The covered interest rate parity is $R = R^* + (F - E) / E$, where R is the domestic interest rate, R^* is the foreign interest rate, F is the forward exchange rate, and E is the spot exchange rate between domestic and foreign currency. The covered interest parity states that the interest rate difference between two countries' currencies is equal to the percentage difference between the forward exchange rate and the spot exchange rate. The parity condition assumes perfect capital mobility and perfect asset substitutability.

3. Sterilized foreign-exchange intervention occurs when the central bank carries out equal foreign and domestic asset transactions in opposite directions to nullify the impact of its foreign exchange operations on the domestic money supply. For example: China has been receiving large capital inflows. Due to the fixed rate nature of their currency system, China's central bank has to print RMB and accumulate foreign currency (USD) to avoid having an appreciation. However, China has been extensively sterilizing the capital inflow by issuing sterilization bonds. In this way the money supply that increased with the capital inflows is reduced with the sterilization leaving the money supply relatively unchanged after all.

4. The current account balance is the difference between a country's savings and its investment. It is defined by the sum of the trade balance and the net factor payments, where the trade balance is the difference between the value of exports and imports of goods and services and net factor payments is the difference between factor income received and paid.

5. The Fisher effect states that, all else equal, a rise in a country's expected inflation rate will eventually cause an equal rise in the interest rate that deposits of its currency offer. Similarly, a fall in the expected inflation rate will eventually cause a fall in the interest rate.

6. The theory of PPP states that the exchange rate between two countries' currencies equals the ratio of the countries' price levels. It therefore predicts that a fall (rise) in a currency's domestic purchasing power (that is, and increase in the domestic price level) will be associated with a proportional depreciation (appreciation) of the exchange rate.

Part 2

1. A permanent and unexpected devaluation of the currency can only result from a permanent and unexpected rise in money supply. When prices are flexible, the rise in money supply causes an immediate and proportional rise in the price level, meaning that real money supply is not affected. Because real money supply is not affected, the nominal interest rate also does not move. Real output, for its turn, remain at the full employment level.

In the AA-DD model, because prices are fixed in the short-run, when the exchange rate devalues, real exchange rate also devalues, causing output to rise. This is represented by a shift to the right in the AA schedule. In the long run, when prices already adjusted, both the AA and DD schedules shift back in, causing output to return to its full employment level and exchange rates to decrease to a level consistent with the proportional changes in prices and money supply (just as in the flexible price case).

2. The higher the fraction of "bananas"-goods in total output, the less effective is the function of the exchange rates as automatic stabilizers. An external real demand shock would result is a larger fall in output under fixed exchange rates than under floating exchange rates – this occurs because the resulting depreciation of the currency improves the current account and cushions some of the output fall. In contrast, if there are "bananas," a depreciation would lead to an increase in their price in domestic currency, which would lead to higher prices at home and cancel out the positive competition advantage from the nominal depreciation.

3. This is an example of the "N-1 problem," in which the US was the N^{th} country. Under the Bretton Woods system, the N-1 central banks (all central banks except the Fed) had to intervene when necessary to fix their exchange rates to the dollar. Thus the US never needed to intervene to keep the parity to other currencies. As a result, the US was in the privileged position of being able to use its monetary policy for domestic macroeconomic stabilization even though it had fixed exchange rates.

4. When E^e rises, the AA schedule shifts to the right. Because the central bank is not trying to peg the exchange rate, it will not alter money supply in response to the shift in E^e and both E and Y will rise. The rise in E reduces the expected depreciation of the currency, allowing for a lower interest rate than we would have if the exchange rate were fixed.

Part 3

Reasons for establishing the EMU or for being member of the EMU:

- Lower transaction costs which should lead to increased trade.
- Lower exchange rate uncertainty, which is especially important the more trade there is among countries and which should promote more trade.
- Importing credibility and reputation for inflation conservatism from the Bundesbank.

- More efficient allocation of financial funds.
- Political considerations.

Problems with the EMU:

- Loss of independent monetary policy – this loss increases with lower degree of economic integration. Economic integration means free flows and high mobility of factors of production (capital, labor, goods), which should lead to more synchronized business cycles. If countries' business cycles are well synchronized, they do not face idiosyncratic shocks and therefore they do not suffer much from not having an own monetary authority.
- In fact, labor mobility is very poor among European countries.
- Different growth trends – for example, Ireland or Greece or Central and Eastern European countries.
- Lack of federal fiscal problems. Instead, the Stability and Growth Pact is in place, which is very restrictive, countries do not respect it and it is not well enforced.
- Different inflation preferences.

Part 4

a. The price level in CFA countries will rise since the price of the imported goods increases with the devaluation.

b. By imposing a wage freeze, the governments are trying to keep inflation down since it would decrease their competitiveness and hence worsen the recession. Workers are upset because their real wage is going down as their income is fixed and the prices of the goods they consume are increasing.

c. CFA area's current account must have been in deficit before the devaluation. Since it was hard for these countries to finance this gap the French treasury stepped in and paid for the deficit of CFA countries.

d. Arguments in favor of an OCA include extensive trade between France and the CFA region, large French ownership stakes in CFA firms, large amount of aid from France, migration from France, etc. Reservations could arise if these two regions do not have similar business cycles, share external shocks, and a system of fiscal responsibility with transfers.

e. French manufacturers opposed the CFA franc devaluation because this is equivalent to a French franc revaluation. A revalued French franc makes French exports less attractive and hence the export sector is hurt.

f. Devaluations are usually considered to be expansionary. However, it is not clear that that was the case for CFA countries. Reasons include the high degree of pass-through of the devaluation to prices that make the improvements in competitiveness go away and the fact that CFA debt may have been denominated in French franc making it harder to service. Also, devaluations can hurt economies that rely heavily on imports and have little exports. On the other hand, a devalued CFA franc may be more in line with sustainable growth in the region after the initial turbulence fades away. Depending on how CFA countries stand with respect to these criteria they will benefit more or less with the devaluation.