

Macroeconomics for Managers SØK1151 Fall2017 – Guide for examiners

a) Present the ISLM for an open economy.

The IS-relation looks like this:

$$(1) Y = C(Y - T) + I(Y, i) + G + NX(Y, Y^*, \varepsilon)$$

The LM- relation:

$$(2) \frac{M}{P} = YL(i)$$

The condition for uncovered interest parity:

$$(3) E = \frac{1+i}{1+i^*} E^e$$

The relationship between nominal and real exchange rates:

$$(4) \varepsilon = \frac{EP}{P^*}$$

The candidates should define the variables and provide explanations for the relations. They should emphasize the relations that are of special interest for a firm that sells its goods abroad, that is, the relation between the real exchange rate and exports should be explained (a depreciation implies that goods produced at home become cheaper abroad, leading to an increase in exports). Further, the condition for uncovered interest parity should be explained in some depth: start out by explaining the arbitrage condition, and continue by explaining the slope of the relation between the interest rate and the nominal exchange rate – importantly, the intuition behind the slope should be clearly conveyed.

Simplify by setting $P/P^*=1$. Substituting for the exchange rate in eq. (1) by using eq. 3. Then the IS- relation is:

$$(5) Y = C(Y - T) + I(Y, i) + G + NX\left(Y, Y^*, \frac{1+i}{1+i^*} E^e\right)$$

An additional, and acceptable, simplification is to assume a flexible currency.

The model contains both fiscal and monetary instruments and is suitable for discussing the problems given.

Figures with the ISLM curves and interest parity should be provided.

The discussion of expansionary fiscal policy is straightforward. Shifting the IS- curve outwards, without shifting the LM-curve leads to higher output and higher interest rate in the new equilibrium. A higher interest rate leads to an appreciation of the currency. From the perspective of the exporting firm, this policy is not helpful, primarily because the appreciation worsens competitiveness. Also, investments are likely to decrease.

- b) Importantly, monetary policy should be able to bring the interest rate back to a lower level. An expansionary monetary policy could do this. Increasing the money supply will lead to an outwards shift in the LM-curve, and a lower interest rate in the new equilibrium – which will lead to a depreciation and an increase in exports compared to the situation with expansionary fiscal policy. Which is good from the perspective of your firm! Consequences for the entire economy of a fiscal- monetary policy mix: Y increases due to both types of expansionary policy. Consumption increases much (multipliers at work), there will be small if any negative effects on investments from the interest rate, and a boost in investment from the increase in Y . Imports will increase, which dampens the expansionary effects of the policy. What happens to net exports? Assuming that the interest rate is kept constant by the fiscal-monetary mix, the exchange rate is unchanged. Exports is thus unchanged, while imports have increased quite a lot. The net exports is worsened.

Discussions that demonstrate clear understanding of the mechanism in the model are rewarded. Reasoning outside the model is ok if the candidate clearly indicates that he/she is aware of this. Reflections about arguments against a fiscal-monetary policy mix are somewhat rewarded: A nearby issue to discuss is what happens if inflation is taken into account?