

Chapter 8 Exercises

2. As described in Box 8.2, many emerging economies had their domestic macroeconomic equilibria disrupted by sharp decreases in world interest rates in the early 1990s. Assuming that such countries maintained fixed exchange rates at the onset of the interest rate shock:

a. Explain what effect the fall in the foreign interest rate would have had on capital flows to/from such countries, on domestic real GDP, and on the current account of their balance of payments.

The reduction in the foreign interest rate would have caused the BB curve to shift to the right, leaving GM and MM unaffected on impact. Since the new BB would intersect GM below the MM curve, capital would flow in. Real output would rise and the domestic interest rate would fall (though by less than the foreign rate). With higher output and a lower domestic interest rate net exports would fall.

b. Describe three domestic policy instruments that these countries could have used to offset the effects of the shock on domestic real GDP, and explain how it would have worked (i.e., using diagrams).

Contractionary fiscal policy could have shifted the GM curve back to intersect the new BB above the old Y.

Sterilization would have prevented BB from shifting at all.

Exchange rate revaluation would have shifted both GM and BB to the left.

Perfectly effective capital controls would have produced financial autarky, completely insulating the economy from the foreign interest rate shock.

4. Under fixed exchange rates and with imperfect capital mobility, why would the central bank choose to sterilize the effects of balance of payments surpluses or deficits on the domestic money supply? Explain your answer using graphs and in the context of a concrete example.

The central bank may choose to sterilize to keep the economy on a stable MM curve. This may be desirable, for example, if the bank wants to stabilize GDP around its current value and the economy is subject to goods market shocks (that shift GM) or international financial shocks (that shift BB).

6. Consider two small open economies that maintain fixed exchange rates and are linked to world capital markets under conditions of imperfect capital mobility. Suppose that the two economies are otherwise identical, except that capital flows (portfolio allocations between domestic and foreign bonds) are more sensitive to interest rate differentials in economy A than in economy B. How would you expect the effectiveness of fiscal policy (its ability to affect real GDP) in the two countries to be influenced by this difference between them? Explain.

The BB curve is flatter in economy A, so changes in fiscal policy have smaller impacts on the domestic interest rate in this case, resulting in less crowding out and therefore making fiscal policy more powerful.

7. Assume that an economic expansion in the United States that is driven by expansionary monetary policy tends to be accompanied by low interest rates, while one that is driven by expansionary fiscal policies tends to be accompanied by high interest rates. From the perspective of a small developing country that maintains a fixed exchange rate against the US dollar and whose bonds are imperfect substitutes for US bonds show, using diagrams, what difference it makes for the impact on the small country's GDP whether an expansion in the US is driven by monetary or fiscal policy.

The US expansion is likely to drive up demand for the smaller country's exports, having an expansionary effect on that country's economy. But when the US expansion is driven by fiscal policy, US interest rates rise. This attracts funds from the smaller country, causing its BB curve to shift up and making the US expansion less expansionary, or even contractionary. When the US expansion is driven by monetary policy, US interest rates fall. This drives funds to the smaller country, causing its BB curve to shift down and making the US expansion even more expansionary in the small country.

Chapter 10 Exercises

1. In the early eighties, under the Reagan administration, macroeconomic policies in the United States were characterized by relatively expansionary fiscal policy (fueled by increased defense spending and tax cuts) and very tight monetary policy. Compared to an alternative policy mix which produced the same level of Y using more expansionary monetary policy and more contractionary fiscal policy, explain what effects you would expect such a policy mix to have on each of the following:

- a. Interest rates in the United States.
- b. The effective exchange rate of the U.S. dollar.
- c. The current account of the U.S. balance of payments.
- d. The nonreserve financial account of the U.S. balance of payments.

Compared to the alternative policies, this policy mix would shift the YY curve to the right and the AA curve to the left, causing them to intersect at the same level of Y , but a more appreciated value of the nominal exchange rate. The effective exchange rate of the U.S. dollar would therefore be more appreciated. Because the expected future exchange rate is unchanged, the nominal exchange rate must be expected to depreciate over time, which by UIP implies that the domestic interest rate must be higher. If private absorption is relatively insensitive to the interest rate, the more appreciated real exchange rate means that net exports would fall. In that case, if the country is neither an international net creditor nor debtor, the current account would deteriorate and the nonreserve financial account would improve.

2. Explain why the money supply could not be considered a policy variable in our open-economy macro model under fixed exchange rates, but it can under floating exchange rates.

To make the comparison, we should assume perfect capital mobility in both cases. The difference is that under fixed exchange rates any policy-induced changes in B_c would be offset by changes in sF_c due to the central bank's commitment to intervene in the foreign

exchange market to keep the exchange rate constant, while under floating exchange rate the central bank does not intervene, so sF_c is unchanged.

3. After its financial crisis in December of 1994, Mexico has operated under a system of floating exchange rates relative to the United States. Explain how, under such a system, the Mexican economy (specifically, real output, the real exchange rate, and the domestic interest rate) would be affected, in both the short run and the long run, by:

a. An increase in US real GDP.

An increase in U.S. GDP would tend to increase demand for Mexican exports (i.e., it would represent an increase in ϑ). In the short run, the Mexican YY curve would shift to the right, causing output to rise in Mexico and resulting in an appreciation in the Mexican peso, in both nominal and real terms. Because the expected future value of the peso is unchanged, UIP implies that the Mexican interest rate must rise.

b. An increase in US interest rates.

An increase in the U.S. interest rate would shift the Mexican AA curve upward by an amount sufficient to keep the Mexican interest rate constant. The Mexican YY curve would shift upward as well, but by a smaller amount. Consequently, Mexican output would rise, the peso would depreciate and the interest rate in Mexico would rise, but by an amount smaller than the increase in the U.S. interest rate.

4. Under what conditions would a temporary monetary expansion cause the current account of the balance of payments to improve (i.e., move into a smaller deficit or larger surplus)? Explain.

A monetary expansion shifts the AA curve upward, causing the exchange rate to depreciate, output to rise, and (by UIP) the domestic interest rate to fall. Using the absorption approach, the increase in output would tend to increase net exports, but the reduction in the domestic interest rate would tend to cause them to fall by increasing absorption. Net exports would therefore increase if interest rate effects on absorption are sufficiently weak.

5. Though uncovered interest parity is a reasonable approximation for industrial countries much of the time, in times of crisis a "risk premium" sometimes emerges that creates a gap between the domestic interest rate and the expected rate of return on foreign interest-bearing assets. Suppose that, because of a domestic political problem, such a risk premium suddenly emerges for some country, but is expected to be a temporary phenomenon. Explain what effect you would expect it to have while present on the affected economy's nominal exchange rate, level of output, and interest rate.

An increase in the risk premium would be equivalent to an increase in the foreign interest rate. The AA curve would shift upward by an amount sufficient to keep the domestic interest rate constant, while the YY curve would shift upward by a smaller amount. The domestic currency would depreciate, domestic output would rise, and the domestic interest rate would rise as well, though (because of an expected future appreciation of the domestic currency) by less than the increase in the risk premium.

6. For a small country that maintains a floating exchange rate, describe the effects of a temporary increase in foreign GDP on each of the following domestic variables:

- a. The nominal exchange rate.
- b. The nominal interest rate.
- c. The level of real GDP.
- d. The current account of the balance of payments.
- e. The capital account of the balance of payments.

An increase in foreign GDP can be represented in the model as an increase in the export demand parameter ϑ . The effect is to cause the YY curve to shift to the right. Thus the exchange rate appreciates and equilibrium real GDP increases. Through UIP, since the exchange rate must be expected to depreciate in the future, the domestic interest rate must rise. Because output and the interest rate both rise, the absorption approach implies that

net exports must increase. If the economy is neither an international net debtor nor creditor, the current account improves and the nonreserve financial account deteriorates.